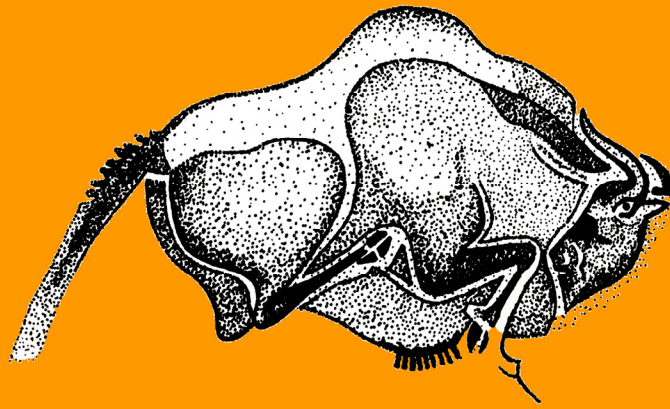


A Comprehensive
Introduction to Nostratic
Comparative Linguistics

*With Special Reference
To Indo-European*



Allan R. Bomhard



FIFTH EDITION

2023

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VOLUME 1

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By
Allan R. Bomhard

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By Allan R. Bomhard

(1) Nostratic Hypothesis; (2) Comparative Linguistics; (3) Proto-Indo-European. 2023.



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PREFACE

Reconstructing Proto-Nostratic: Comparative Phonology, Morphology, and Vocabulary

Research on this book can truly be said to have begun some forty years ago, when I first began exploring the possibility that Indo-European might be related to Semitic. I published the on-going development of my ideas in a series of articles, beginning in 1975 (for details, see the list of my works cited in the references at the end of this book). As time went on, I gradually expanded the scope of the investigation to include all of Afroasiatic (in this book, I use “Afrasian” as the designation for this language family, in accordance with a proposal made by Igor M. Diakonoff). The culmination of this phase of my research resulted in the publication of my 1984 book *Toward Proto-Nostratic: A New Approach to the Comparison of Proto-Indo-European and Proto-Afroasiatic* (Amsterdam: John Benjamins). Over the many years that it took me to develop the ideas that led to that book, I received support and feedback from Raimo Anttila, Martin Bernal, Henrik Birnbaum, John Colarusso, Thomas Gamkrelidze, Paul Hopper, and Saul Levin. Through the whole process, the encouragement I received from my friend, colleague, and collaborator on the *Kerns Gedenkschrift*, Yoël L. Arbeitman, was a constant source of inspiration, and the careful scrutiny that he gave my work saved me from making many foolish errors. I owe much to Konrad Koerner for courageously agreeing to accept the book for publication, for his editorial advice, and for guiding the work through the publication process. Paul J. Hopper kindly prepared the Foreword to that book. Finally, I would like to acknowledge the much-needed assistance I received from El Rabi Makki, who carefully reviewed the Arabic material found in that book, and Gilbert Davidowitz — looking back, it is hard to believe that well over thirty years have passed since Davidowitz suffered a fatal heart attack (on 21 July 1980).

After the publication of *Toward Proto-Nostratic*, I had intended to leave distant linguistic comparison behind for a while and move into other areas of research, particularly Indo-European morphology and syntax, which I felt needed a new synthesis to reflect current views. However, this was not to happen. Reviews of my book as well as personal correspondence and discussions with colleagues prompted me to begin taking a look at other language families. Here, I owe much to Vitaly Shevoroshkin — had he not been so critical of many aspects of my work, I probably would not have been motivated to devote the better part of the next decade to doing painstaking research into other language families with which Indo-European might be genetically related, but I needed to see for myself whether or not my views could hold up when the field of inquiry was expanded, and I needed to see whether or not there was any basis for Shevoroshkin’s criticisms. Needless to say, I was extremely pleased with what I found. And, as for Shevoroshkin, all I can say is “thank you, Vitaly”. Though Shevoroshkin continues to support Moscovite views on Nostratic and to be critical of my views, on a personal basis, he has turned out to be a warm,

friendly, and generous individual, and I am glad that I have had the opportunity to get to know him and his wife, Galina.

Unfortunately, in spite of my best efforts to get my hands on a copy of Illič-Svityč's dictionary so that I could consult it in preparing *Toward Proto-Nostratic*, I was unsuccessful. When I finally received volumes I and II of Illič-Svityč's dictionary from Dolgopolsky (on 22 August 1983), the camera-ready manuscript of the book had already been sent to the publisher. To those who wondered why Illič-Svityč was not given more credit in my 1984 book, the answer should now be obvious — one cannot cite nor comment upon what one has not seen. This unfortunate shortcoming has since been rectified in my subsequent work.

In addition to expressing my deepest gratitude to Aharon Dolgopolsky for his great kindness and generosity in giving me copies of his and Illič-Svityč's articles on Nostratic as well as copies of volumes I and II of Illič-Svityč's comparative Nostratic dictionary, I would also like to thank my friend Yoël L. Arbeitman for sending me a copy of the first fascicle of volume III of Illič-Svityč's dictionary.

In October 1985, I had the good fortune to come into contact with, and eventually to meet, John C. Kerns, who had sent me a copy of his book *Indo-European Prehistory*. When I read his book, I was struck by how closely his views coincided with mine. As I continued to work on gathering material for a book on the Nostratic languages, I realized that I needed help, or I would never get done — the material just kept becoming more and more voluminous. Therefore, I asked Kerns to assist me by writing the chapter on Nostratic morphology and syntax. This he agreed to do. This collaborative effort resulted in the publication (in 1994) of our joint monograph *The Nostratic Macrofamily: A Study in Distant Linguistic Relationship* (Berlin, New York, NY, and Amsterdam: Mouton de Gruyter). It is with great sadness that I must note here that Kerns passed away on 24 November 1995. I enjoyed working with him, and I regret that he was no longer here to help with the current book. No doubt, this book would have benefited tremendously from his keen intellect and vast knowledge.

There are others who offered their help when Kerns and I were preparing our joint monograph — the problems associated with working with so many different language families required consultation with and assistance from others more qualified than I in their respective areas of expertise. Thanks are due especially to Aimu Murtonen for reviewing the Afrasian material, to Karl Krippes for reviewing the Altaic material, and to Gyula Décsy for commenting on Uralic. Others offered overall support and critiques — here, an expression of appreciation is due Mykolas Palmaitis and Hal Fleming. Palmaitis, in particular, advised me not to rush into print before studying the other language families in greater detail. Moreover, the papers and letters he sent me contained many insightful and stimulating ideas along with much-needed criticism and advice. Fleming, on the other hand, helped me to network with others working on problems of distant linguistic relationship. He also was the source of many of my best ideas. Indeed, I will never be able to repay the enormous debt I owe him. And, as if that were not enough, in the process, he has become a friend. I am also grateful to Claude Boisson and Václav Blažek, who generously shared their work with me. Had it not been for Boisson's pioneering

studies, I would not have ventured into Sumerian, while Blažek's many articles on Nostratic have been a constant source of inspiration. Finally, I would like to express gratitude to Werner Winter for recommending that Mouton de Gruyter accept the book for publication in the Trends in Linguistics series.

In early 1994, Ken Jacobs, Department of Anthropology, University of Montreal, invited me to deliver a paper at a session on "Language, Culture, and Biology in Prehistoric Central Eurasia: (Re)establishing the Links" at the 1994 annual meeting of the American Anthropological Association to be held in Atlanta, GA, in December of that year. Jacobs charged participants to move beyond their specialties and interests and to approach the issues from a multidisciplinary perspective. Other participants included well-known linguists and anthropologists. It was at that meeting that I had the good fortune to meet John Colarusso for the first time. The original title that I selected for my paper was "Archeology and the Nostratic Hypothesis".

Then, later in that year, Kevin Tuite, a colleague of Jacobs, invited me to deliver a paper covering the same topics before faculty members and students of the Department of Anthropology, University of Montreal, which I did on 20 October 1994. By then, I had changed the title to "Indo-European and the Nostratic Hypothesis". Reaction to the paper was enthusiastic, and a lively discussion ensued, with many valuable comments being received from Marc Picard, Étienne Tiffou, Kevin Tuite, and others in attendance.

As time went on, I kept adding new material to the paper, which, as a result, grew to over eighty typed pages by the time I reached Atlanta.

When I was in Montreal in October 1994, Tuite suggested to me that it might be valuable to have a book on Nostratic that was aimed at a more general audience than my 1994 joint monograph *The Nostratic Macrofamily*. Tuite wanted a book that he could use in his classes — most of his students are anthropology majors. I liked Tuite's suggestion. The paper that I delivered first in Montreal and then in Atlanta seemed like a good place to start. Not only did it contain a summary of much that was in my 1994 book, it also contained, thanks to Jacobs, a discussion of homelands, which, by its very nature, incorporated a good deal of information derived from archeology and anthropology. Over the next few months, I reworked the paper, dividing it into chapters and adding much new material.

Then, in mid-1994, Joseph Greenberg sent me a draft of the manuscript for the volume on morphology (published in 2000) of his two-volume work *Indo-European and Its Closest Relatives: The Eurasiatic Language Family*. I learned much from it and revised the manuscript of my book accordingly. (Volume 2 of Greenberg's book, *Lexicon*, appeared in 2002.)

In the course of working on the book, valuable comments were received from Hal Fleming and, especially, the late Igor M. Diakonoff. Next, in December 1995, Alexis Manaster Ramer engaged me in a challenging on-line debate on Nostratic. At the same time, Manaster Ramer brought my attention to his many insightful articles on Nostratic. As a result of this debate and reading Manaster Ramer's articles, additional refinements were made. I would also like to thank Manaster Ramer for pointing out that two entries (the terms for the number 'seven' and 'bull, steer')

included in my earlier work could better be explained as borrowings — those entries have since been removed.

Finally, at the end of 1996, my book *Indo-European and the Nostratic Hypothesis* (Charleston, SC: SIGNUM Desktop Publishing) was published.

In July 1998, Fabrice Cavoto sent me the manuscript of a long work he had prepared entitled *Histoire du fennique et de l'ouralien dans la perspective des recherches nostratiques* [*History of Fennic and Uralic from the Perspective of Nostratic Research*]. This work is enormously important in clarifying many issues relating to the position of Uralic within Nostratic. To my knowledge, it has never been published.

The present book differs in many ways from previous works on the subject, including my own. The most important new feature is the inclusion of a comprehensive treatment of Nostratic morphology, which was treated rather superficially in my 1994 co-authored book *The Nostratic Macrofamily: A Study in Distant Linguistic Relationship*. This addresses one of the main criticisms often directed at the Nostratic Hypothesis, namely, the relative dearth of morphological evidence presented by its proponents. For the first time, all aspects of the putative proto-language are discussed in detail: phonology, morphology, vocabulary, syntax, and homelands. Lyle Campbell (among others) has repeatedly emphasized the need to include comparative morphology.

Two lengthy chapters are devoted to comparative Nostratic morphology. The first chapter lists the evidence, and the second chapter attempts a tentative reconstruction. To complement the chapters on Proto-Nostratic morphology, two additional chapters are devoted to Proto-Indo-European morphology. The first chapter deals with the traditional reconstruction of Proto-Indo-European morphology, while the second attempts to outline its prehistoric development.

Since the publication of *The Nostratic Macrofamily*, many advances have been made in each of the branches of Nostratic. New etymological dictionaries have appeared for Afrasian, Kartvelian, Altaic, Chukchi-Kamchatkan, and Eskimo-Aleut, as well as numerous comparative and descriptive grammars, articles, books, and dictionaries for the languages making up each branch (the individual languages/language families). As much as possible, this scholarship has been consulted and incorporated into the present book, and the works consulted have been included in the list of references.

Each Nostratic etymology proposed in *The Nostratic Macrofamily* has been carefully re-evaluated and, in the vast majority of cases, reworked — the supporting material has been augmented, and more copious references are given to the relevant literature. In several instances, the etymologies have been thoroughly rewritten, either to reflect current scholarship or as a result of criticism received from colleagues. Some less convincing etymologies have been removed, while about two hundred new etymologies have been added. As noted above, borrowings have been removed.

As I was finishing work on the manuscript for this book, I had the good fortune to obtain a copy of the draft of Dolgopolsky's *Nostratic Dictionary* (which became available on-line in 2008 at: <http://www.dspace.cam.ac.uk/handle/1810/196512>)

from the McDonald Institute for Archaeological Research, Cambridge University. I have added references to Dolgopolsky's dictionary where appropriate. I also made changes to several of the etymologies proposed in this book and added a significant number of new etymologies as a result of consulting this dictionary.

For the first time, a sizable amount of material has been included from Eskimo-Aleut and Chukchi-Kamchatkan.

The chapters on phonology have also been revised to take into consideration recent advances in the scholarship of each of the individual branches of Nostratic, while the reconstruction of the Proto-Nostratic phonological system has been refined, though there are still several rather bothersome problem areas. In particular, the reconstruction of the Proto-Nostratic vowels is vastly improved over what was posited in *The Nostratic Macrofamily*. Here, I would like to thank Patrick Ryan for bringing my attention to several potential problem areas with my previous views on Proto-Nostratic vocalism.

I have tried to design each chapter so that it is complete in itself. This means that a certain amount of redundancy has been purposely built into the book. Though this has added to the overall length of the book, it has the important advantage of having all of the relevant information about the topic(s) under discussion in one place. I have also tried to be generous in citing relevant literature. Considering the scope of this book, I cannot say that every work ever written on a particular subject has been consulted; nonetheless, the number of works cited is quite extensive, and enough is given so that interested readers can check my sources for themselves, can obtain additional or more in-depth information, and can also check what others have had to say about a particular matter, especially when there are differences of opinion within the scholarly community or when an alternative or controversial proposal has been made.

In the course of writing this book, I sent draft copies to numerous colleagues, soliciting their criticisms, comments, suggestions, etc. Valuable comments were received from Hal Fleming, Winfred P. Lehmann, Shamil Nafiqoff, Ed Robertson (who reviewed an earlier draft of the chapter on Etruscan), Panu Hakola, Harvey Mayer, Edgar Polomé, Paul Sidwell, George Starostin, among others. I would like to thank them for the time and effort they made to review and comment upon my work. Needless to say, I, alone, am responsible for any errors that may occur in this book. Special thanks are also due Irén Hegedűs and Paul Sidwell for inviting me to participate in the Nostratic Centennial Conference held at the University of Pécs, Hungary, on 21–23 August 2003.

Finally, I would like to express my gratitude to Liesbeth Kanis, Patricia Radder, and the staff at E. J. Brill for accepting the book for publication and for seeing it through the production process.

Allan R. Bomhard
Charleston, SC

PREFACE

*A Comprehensive Introduction to Nostratic Comparative Linguistics:
With Special Reference to Indo-European.*
First edition.

All of my work on Nostratic has been cumulative. Each new iteration incorporates, corrects, and expands upon everything that I have written before. This book is different in but one respect — it represents my final contribution to the subject (though I will continue to make corrections, as warranted).

The current iteration has given me the opportunity to correct a number of typographical and other errors that, unfortunately, appeared in the immediately previous iteration (*Reconstructing Proto-Nostratic*). However, even though I have tried to be extremely thorough, I am sure that there are still errors here and there that have escaped my attention. I will continue to correct any errors that I or others may come across.

Countless changes have been made throughout this new iteration on the basis of more recent scholarship. Moreover, over 100 new Nostratic etymologies have been added, new material has been incorporated into existing etymologies, and the list of references has been expanded. All of the Germanic, Italic, Albanian, Kartvelian, Elamite, North and Central Cushitic, Hebrew, and Geez material cited in Part Three, Comparative Vocabulary (Volumes 2 and 3), has been reviewed, corrected, and expanded. Hebrew and Geez forms are now cited in both their native scripts and in transliteration. Altogether, over 400 pages have been added to the current iteration. Every chapter has been modified — several quite extensively. Due to the increase in size, I have divided this new iteration into four volumes, and I have changed the title to *A Comprehensive Introduction to Nostratic Comparative Linguistics*.

I would like to thank Arnaud Fournet, Stefan Georg, and Simonetta Pelusi for their insightful reviews of *Reconstructing Proto-Nostratic*. I would also like to thank Pierre Bancel and David Appleyard for their comments and suggestions. Finally, I want to express my gratitude to Carla Breidenbach.

I owe an enormous debt to Arnaud Fournet. He proofread a draft of the entire manuscript of volume 1 of the current iteration and saved me from making many foolish mistakes. It goes without saying that I alone am responsible for any mistakes that remain.

In closing, it is gratifying to note that, as far back as 1933 (English translation 2011), Holger Pedersen had already hinted at many of the same conclusions reached in this book.

Allan R. Bomhard
Charleston, SC
February 2014

PREFACE

*A Comprehensive Introduction to Nostratic Comparative Linguistics:
With Special Reference to Indo-European.*
Second revised, corrected, and expanded edition.

This edition contains many corrections and updates. New material and references have been added to take into consideration the latest scholarship, and new sections have been added to several chapters as well. Chapter 7, A Sketch of Proto-Afrasian Phonology, has been reformatted and greatly expanded. I have added one new etymology, and I have added a great deal of additional material, especially from Berber and Yukaghir, to the existing etymologies. Finally, I have added many new items to the list of references, including recent theoretical works. References to and quotations from these works have been included where appropriate. All told, just over 300 pages have been added.

In this edition, I have paid special attention to addressing all of the doubts and criticisms that have been expressed to date against both the glottalic model of Proto-Indo-European consonantism and the Nostratic Hypothesis. Some of the misgivings were actually quite easy to refute, while others required careful reconsideration and a more nuanced refutation. In those cases where the criticisms were legitimate, the mandatory changes have been made.

Special thanks are due to Petr Hrubíš for bringing the work of Andrew Simpson to my attention.

Allan R. Bomhard
Charleston, SC
October 2015

PREFACE

*A Comprehensive Introduction to Nostratic Comparative Linguistics:
With Special Reference to Indo-European.*

Third revised, corrected, and expanded edition.

For the third edition of this book, I have added several new Nostratic etymologies in addition to new references to existing etymologies (volumes 2 and 3) — there are now 975 potential Nostratic etymologies. I have also modified many of the existing etymologies. I have added two chapters to volume 1: (1) Chapter 18: Nostratic Morphology III: Derivational Morphology and (2) Chapter 21: Language Contact: Indo-European and Northwest Caucasian. Every chapter of volume 1 has been modified to some extent to reflect the latest scholarship, while several of the chapters have been considerably expanded. Finally, a large number of new books and articles have been added to the list of references (volume 4).

Keeping in mind Ockham's razor, I have tried to keep my proposals as simple and straightforward as possible, carefully avoiding speculations not supported by the evidence. I have totally eschewed the use of Swadesh lists, lexicostatistics, and glottochronology.¹ The shortcomings of these methodologies have been discussed over and over again in the relevant literature (for the most recent criticism of these methodologies, cf. Roger Blench's 2014 paper "Language Levelling Challenges All Mathematical Methods of Language Classification"). Continued use of discredited methodologies such as Swadesh lists, lexicostatistics, and glottochronology by some scholars, mostly in Russia, does not inspire confidence in the conclusions reached. That is not to say that these methodologies are totally worthless. I put them in the same category as Greenberg's "mass comparison" / "multilateral comparison" — useful to a certain extent in the preliminary stage of testing hypotheses regarding possible genetic relationship among the languages being examined, but in no way a substitute for the Comparative Method and Internal Reconstruction. They are only as good as the assumptions upon which they are based — astonishingly, those assumptions keep changing as scholars struggle to refine these methodologies in response to criticisms and to correct inherent flaws. Sadly, the flaws are both too numerous and too deep-rooted to be overcome, some heroic efforts in that direction notwithstanding (cf. G. Starostin 2010) — as noted by Roy Andrew Miller (1980: 86):

For the historical linguist, the entire proposition of "basic vocabulary," including both the idea that some words in a language are, or should be, more resistant to historical change than others, and the idea that certain kinds of words are of special importance in helping to demonstrate a genetic relationship of languages in a convincing fashion, is unsupported, undemonstrable, and unscientific...

¹ A recent issue of *Diachronica* was devoted to a discussion of these methodologies: Søren Wichmann and Anthony Grant (eds.), *Quantitative Approaches to Linguistic Diversity: Commemorating the Centenary of the Birth of Morris Swadesh*. (= *Diachronica* XXVII/2, 2010.) Amsterdam and Philadelphia, PA: John Benjamins.

The damage that has been done to historical linguistics because of the mistaken application of the essentially erroneous thesis of “basic vocabulary,” particularly when some scholars have attempted to employ it for quasi-statistical purposes (“glottochronology” or “lexico-statistics”), has been immense.

One particularly powerful way to judge the validity of a genetic hypothesis is the predictive ability of that hypothesis. That is to say that, once correspondences have been established, can and do they lead to additional discoveries both about the languages being compared as well as about the proto-language from which they are alleged to have descended? Time and again, this is exactly what has happened with the version of the Nostratic Hypothesis presented in this book and in my previous works. Each iteration not only builds upon my previous findings, it also includes new discoveries that complement, enhance, and confirm those findings. A sufficient body of evidence has now been collected and systematically analyzed in accordance with established methodologies to dispel any lingering doubts about the overall validity of the Nostratic Hypothesis and to lay a concrete foundation for future research.

To reiterate and emphasize, we can and should judge the validity of a theory on the basis of its overall simplicity, its ability to make predictions, and its usefulness.

There was a time — not too long ago — when scholarly books and articles were often quite difficult to obtain. Such books were typically printed in small quantities and, in due course, became out of print, while important articles were more often than not published in highly specialized journals. Gaining access to these publications was particularly challenging, especially for those working on multiple languages and/or language families. With the advent of the Internet, this situation has changed dramatically. Now, there is so much literature available that it is overwhelming. Moreover, copyright protection seems to have little meaning in the digital age. New books are frequently available on one web site or another for free download almost as soon as they are published.

Allan R. Bomhard
Florence, SC
January 2018

PREFACE

*A Comprehensive Introduction to Nostratic Comparative Linguistics:
With Special Reference to Indo-European.*
Fourth revised, corrected, and expanded edition.

I have made numerous changes — mostly small, but some quite extensive — in the fourth edition of this book (2021) to reflect the most recent advances in each of the branches of Nostratic. Here, I have tried to be judicious — not every new proposal is mentioned or given equal consideration. In general, I have ignored research that is not pertinent to the topics discussed in this book or proposals that seem implausible to me.

I have not hesitated to discuss controversial issues when those issues have implications for the findings presented in this book (see especially the enhanced discussion of laryngeals in Proto-Indo-European in Chapter 4).

As is to be expected, the list of references at the end of this book has been enlarged to include the latest relevant literature (both published and unpublished).

The biggest change I have made in this edition is the inclusion of phonological, morphological, and lexical evidence from Gilyak / Nivkh, based upon the work of Michael Fortescue (2016). I have also added several new potential shared lexical items between Proto-Indo-European and Proto-Northwest Caucasian to bolster my claim that there is evidence for extensive and prolonged prehistorical language contact between these two language families (see Chapter 21 for details).

At the end of 2020, I upgraded from MS Office 2010 to MS Office 365, the latest version. When it came time to prepare the fourth edition of this book, I found that the upgrade resulted in numerous unexpected formatting changes to the MS Word files for the various chapters of this book. Correcting those changes proved to be quite challenging, especially given the size of this book. I have done my best to correct those changes and have proofread over and over. Nonetheless, I fully expect that some of the formatting changes caused by the software upgrade have escaped my attention. Consequently, feedback from readers is encouraged.

Once again, I would like to thank Arnaud Fournet for his continued interest in my work and for bringing to my attention several typographical and other errors in the previous edition of this book.

Allan R. Bomhard
Florence, SC
September 2021

PREFACE

*A Comprehensive Introduction to Nostratic Comparative Linguistics:
With Special Reference to Indo-European.*
Fifth revised, corrected, and expanded edition.

This is the fifth and final edition of my book on Nostratic, though I plan to make updates and improvements here and there as new research becomes available. This edition represents the culmination of well over 50 years of research and writing on this subject. Each iteration has benefited from feedback from other researchers, including those who have taken the time to prepare reviews.

So many changes, corrections, and additions have been made that it would be impossible to list them all. Every chapter of Volume 1 has been carefully reviewed and revised, where necessary, to reflect the most current research across multiple language families. This has proved to be quite a challenge, inasmuch as new books and articles keep appearing on a regular basis. New etymologies have been added to Volumes 2 and 3, and (mostly minor) changes have been made to established etymologies. New references have been added throughout. The list of works cited has accordingly been expanded in Volume 4, and the Indices have been revised.

Allan R. Bomhard
Florence, SC
May 2023

The Uralic etymologies were reviewed and updated in October 2023 to bring them into alignment with current research, especially by Ante Aikio and Mikhail Zhivlov. Other changes were made here and there at the same time.

PART ONE

INTRODUCTION,
COMPARATIVE PHONOLOGY,
HOMELANDS, ETC.

CHAPTER ONE

INTRODUCTION, HISTORY OF RESEARCH, AND METHODOLOGY

1.1. INTRODUCTION

Distant (or long-range) linguistic comparison seeks to investigate the possibility that certain languages or language families, not previously thought to be genetically related, at least not “closely” related, might indeed be part of still larger groupings, which may be called “macrofamilies”.

This book will focus on Indo-European. The purpose is to show that Indo-European is not genetically isolated but, rather, that it is distantly related to certain other language families of northern and central Eurasia, the Indian subcontinent, and the ancient Near East. Where appropriate, issues concerning the other language families with which Indo-European is most likely related will also be discussed.

1.2. HISTORY OF RESEARCH

From the very earliest days of Indo-European comparative linguistics, there have been speculations about the possible genetic relationship of Indo-European to other language families. Though, in the course of study, many striking similarities were noted between Indo-European and certain other language phyla, notably Uralic and Afrasian (formerly called Hamito-Semitic, Semito-Hamitic, Afroasiatic, Erythraic, and Lisramic), truly convincing evidence of distant linguistic relationship was simply not brought forth. Indeed, much of the early work was not of high quality and did more to discredit the attempt to discover possible relatives of Indo-European than to help. Gradually, the intellectual climate, especially in the United States of America and France, became hostile to long-range comparison, and Indo-European remained an orphan with no known relatives.

In the first half of the nineteenth century, no less a figure than one of the founders of Indo-European comparative grammar, Franz Bopp, investigated possible relationship of Indo-European with Kartvelian (in 1846 and 1847) on the one hand and with Malayo-Polynesian (in 1840) on the other. In the mid-1860's, Rudolf von Raumer (in 1863) and Graziadio Ascoli (in 1864) claimed that Indo-European and Semitic were related. At about the same time (in 1869), Vilhelm Thomsen proposed relationship between Indo-European and Finno-Ugrian. This proposal was later (in 1879) explored in depth by the Estonian Nicolai Anderson

and (in 1900) by the British phonetician Henry Sweet. Unfortunately, Anderson's work contained too many errors to be of lasting value. However, insightful and solid contributions were made concerning the possible relationship of Indo-European and Uralic during the twentieth century by the Swedish Uralicist Björn Collinder. Towards the end of the nineteenth century (1873), the Semiticist Friedrich Delitzsch investigated lexical parallels between Indo-European and Semitic. Then, at the beginning of the twentieth century, the Danish linguist Hermann Möller, in the course of several publications, attempted to show that Indo-European and Semitic might be related. Möller's work was later continued by the French linguist Albert Cuny, whose last publications date from the mid-1940's. Möller's and Cuny's efforts were generally not highly regarded by the scholarly community. One exception was Möller's student Holger Pedersen, who not only coined the term "Nostratic" but who also expanded the definition to include Indo-European, Semitic, Samoyed and Finno-Ugrian, Turkish, Mongolian, Manchu, Yukaghir, and Eskimo. Though Pedersen never published a systematic account of his views, he did make the following insightful observations (1931:335—338):

The question of the relationship among the Indo-European and foreign families of languages came up in the first period of comparative linguistics. Relationship between Semitic and Indo-European was asserted by Rudolf von Raumer, beginning in 1863, and by Ascoli from 1864 on. But convincing proof could not be expected at that time. Resemblances in the morphology of the two families are extremely few, and proof by means of vocabulary and the laws of sounds was not then understood. Schleicher denied most positively any relationship between the two, pointing to the great dissimilarity in the forms of the roots: in Semitic the roots consist of three syllables of very simple and uniform structure, as in Arabic *ḵatala* (root form and preterite of the verb 'to kill'), while in Indo-European the roots are monosyllabic and of widely varying — partly heavily compounded — form, as in Latin *ī-re* 'to go,' *stā-re* 'to stand,' *lub-et* 'it pleases,' *vert-ō* 'I turn,' *ed-ō* 'I eat,' and so on. At that time nobody could weaken this argument. And it might have been added, although Schleicher did not do so, that the phonetic systems of the two language families are extremely different, as may be seen from a single example: in Semitic there is an abundance of gutturals, whereas in Indo-European there is not one, not even the (to us) ordinary *h*. With this in view, one might feel tempted to assent to Schleicher's exclamation: "What weight have the few similarities in roots in the two language families against these sharp contrasts?" And one might well be disposed to neglect "the few similarities" which one could not help observing.

Nothing was changed in the problem by the first step in a systematic examination of the vocabulary which Friedrich Delitzsch took in his *Studien über indogermanisch-semitische Wurzelverwandschaft* (1873). But the development of Indo-European linguistics changed the problem greatly. The monosyllabic form of Indo-European roots turned out to be an entirely secondary phenomenon: in historical times the roots of the words for *heaven*, *god*, or *heart* may appear to be **diw-* or **kerd-*, but we have good reason to

believe that in the period older than that of the Indo-European parent language these roots had forms like **däyāwā-*, or **kārādā-* ..., and that the phonological system in this older period had quite a different appearance from that which we attribute to the Indo-European language.

With this background, there appeared in 1906 an extraordinarily important work by the Danish scholar Hermann Möller, *Semitisch und Indogermanisch*. This is a splendid attempt to discover the laws controlling the relationship between Indo-European and Semitic consonants — a successful attempt, although only the main lines of development are traced. Time alone will show how far we can advance by Möller's method. Certain it is, however, that the comparison of the two families can never be carried out so completely and in such detail as the comparison within the fields of the individual languages of one family.

But Indo-European has been brought into connection with other families besides Semitic. Vilhelm Thomsen, as early as 1869, indicated the possibility of a relationship with Finno-Ugrian, but he did not pursue the subject very far. In 1879, the Estonian Nicolai Anderson published an extensive work on the subject, the value of which is considerably impaired by its many errors. Great interest was awakened when the English scholar Henry Sweet advocated the relationship somewhat passionately in a little popular book, *The History of Language* (1900). However, among the individual similarities which Sweet mentions, some are incorrect, and his space was too limited to permit of actual proof. Trustworthy studies of some length by K. B. Wiklund and H. Paasonen appeared in 1906 and 1908. After these works it seemed unnecessary to doubt the relationship further.

Moreover, the inflectional systems show much greater relationships than in the case of Semitic. The original ending of the accusative case in Finno-Ugrian was *-m*, which in Finnish has changed to *-n*. The same ending is Indo-European:

<i>Finnish</i>	<i>Cheremissian</i>	<i>Latin</i>	<i>Greek</i>
Nominative <i>käsi</i> hand	<i>kit</i>	<i>vespera</i> evening	<i>hespérā</i>
Accusative <i>kāde-n</i>	<i>kið-əm</i>	<i>vespera-m</i>	<i>hespérā-n</i>

The similarities in the personal endings of verbs are especially striking:

<i>Finnish</i>	<i>Cheremissian</i>	<i>Greek</i>	<i>Sanskrit</i>
1st person sg. <i>kuolen</i> I die	<i>kole-m</i>	<i>é-phero-n</i> I carried	<i>a-bhara-m</i>
1st person pl. <i>kuole-mme</i> we die		<i>e-phéromen</i> we carried	
2nd person pl. <i>kuole-tte</i> you die		<i>e-phére-te</i> you carried	

Furthermore, there is an unmistakable similarity between the two families in a series of pronouns and in the negation 'not':

<i>Finnish</i>	<i>Latin</i>
<i>minä</i> I (Lappish <i>mon</i>)	<i>mē</i> me
<i>sinä</i> thou (<i>s</i> from <i>t</i> ; Lapp. <i>don</i>)	<i>tē</i> thee

	<i>Sanskrit</i>
<i>tā-mā</i> this	<i>ta-</i>
<i>jo-ka</i> who, which (relative)	<i>ya-</i>
<i>ku-ka</i> who? (interrogative)	<i>ka-</i>
<i>Hungarian</i>	<i>Old Norse</i>
<i>ne</i> not	<i>ne</i> not

It is impossible to regard all this as the result of accident. It is noteworthy, however, that the similarities hitherto pointed out in the more concrete part of the vocabulary are very few, although some of them are as striking as Finnish *nimi* 'name,' and Latin *nōmen*. Consideration of the problem whether sound-laws still unknown to us, or morphological developments not yet understood, have obliterated the originally more numerous points of similarity, or whether the vocabulary in one of the families was largely renewed after the period in common, we must postpone until later. But to deny relationship between the families would be overbold.

If we accept relationship, we are led yet further afield, not only to Samoyed, which cannot be separated from Finno-Ugrian, but throughout all of Northern Asia and across the Bering Strait, because similar, though fainter, resemblances like those here cited are found also in Turkish, Mongolian and Manchu, in Yukaghir, and even in Eskimo. If, on the other hand, we agree in the matter of relationship with Semitic, then we must also accept relationship with the far-flung Hamitic family, and perhaps with Basque. And squarely in the midst between our supposed Northern and Southern relatives stand the Caucasian languages, which we cannot ignore, and various extinct languages in Asia Minor and thereabout. It is not impossible that some of the non-Indo-European languages of antiquity in Asia Minor were once most closely related of all to the Indo-European family.

As a comprehensive designation for the families of languages which are related to Indo-European, we may employ the expression *Nostratian Languages* (from Latin *nostrās* 'our countryman'). The boundaries for the Nostratian world of languages cannot yet be determined, but the area is enormous, and includes such widely divergent races that one becomes almost dizzy at the thought.

In 1969, Linus Brunnar published a detailed comparison of the Indo-European and Semitic vocabularies, and this was followed in 1980 by a wider comparison of languages undertaken by Kalevi E. Koskinen. We should note also that, though the investigation of problems relating to distant linguistic comparison was generally ignored by the vast majority of mainstream linguists, the field was never completely dormant — a small but persistent group of scholars (Pentti Aalto, John Bengtson, Knut Bergsland, Václav Blažek, René Bonnerjea, Karl Bouda, Bojan Čop, Heinz Fähnrich, Joseph Greenberg, Panu Hakola, Carleton T. Hodge, Georgij A. Klimov, D. H. Koppelman, Frederik Kortlandt, Saul Levin, Karl H. Menges, Roy Andrew Miller, Shamil Nafiqoff, Mikolas Palmaitis, Stephen A. Tyler, Ants-Michael Uesson, C. C. Uhlenbeck, to name but a few of the many scholars working on long-

range comparison) has continued to work, throughout the better part of the twentieth century and on into the twenty-first century, on binary (or, in rare cases, wider) comparisons of various languages that are currently considered to belong to the Nostratic macrofamily. For comprehensive bibliographies listing publications dealing with distant linguistic comparison, cf. Hegedűs 1992a, Landsberg 1986, Bomhard—Kerns 1994:715—864, and the list of references contained in this book.

Beginning in the mid-1960's, the intellectual climate slowly began to turn around, and a growing number of linguists, especially in the former Soviet Union, have begun to turn attention toward investigating distant linguistic relationship. The revived interest was sparked by the work of Vladislav M. Illič-Svityč [Иллич-Свитыч] (1934—1966) and Aharon B. Dolgopolsky [Долгопольский] (1930—2012), who first started working independently and, at a later date, through the efforts of their mutual friend Vladimir Dybo [Дыбо], cooperatively. Their work, though not without its own shortcomings, was the first successful demonstration that certain language phyla of northern and central Eurasia, the Indian subcontinent, and the ancient Near East might be genetically related. Following a proposal first made in 1903 by Holger Pedersen, they employed the name “Nostratic” to designate this grouping of languages. In particular, Illič-Svityč, in the course of several publications, culminating in his posthumous comparative Nostratic dictionary (1971—1984), which, unfortunately, was never completed, included Afrasian (“Semito-Hamitic” [Семитохамитский]), Kartvelian, Indo-European, Uralic, Dravidian, and Altaic in his version of the Nostratic macrofamily. From his earliest writings, Dolgopolsky also included Chukchi-Kamchatkan and Eskimo-Aleut.

Before his tragic death in an automobile accident on 21 August 1966, Illič-Svityč had planned to prepare a comparative Nostratic dictionary listing over 600 Nostratic roots and tracing their development in detail in each of the daughter languages in which they were attested. He had published a preliminary report on his work in 1965 entitled (in English translation) “Materials for a Comparative Dictionary of the Nostratic Languages (Indo-European, Altaic, Uralic, Dravidian, Kartvelian, Hamito-Semitic)”. Working diligently, literally devoting all of his energy to the project, he had managed to prepare the entries for approximately 350 roots. After his death, Illič-Svityč's work was prepared for publication by the dedicated efforts of Rimma Bulatova, Vladimir Dybo, and Aharon Dolgopolsky, with the result that the first volume of the dictionary appeared in 1971, containing 245 entries. A second, smaller volume appeared in 1976, listing entries 246 through 353 and ending with an index — this completed all of the material prepared by Illič-Svityč himself (by the time this volume appeared, Dolgopolsky was in the process of emigrating to Israel). Finally, the first fascicle of volume three appeared in 1984, containing entries 354 through 378, none of which was prepared by Illič-Svityč — it represents the collective efforts of a team of scholars.

In the meantime, Dolgopolsky continued to make important contributions to Nostratic studies, especially a ground-breaking 1984 paper on Nostratic pronouns, and he worked virtually nonstop on his unpublished *Nostratic Dictionary* until his death in 2012. Fortunately, a draft of this dictionary was made available on-line in

2008. Other Russian scholars have also done important research into problems affecting Nostratic — mention should be made of the work of Alexandra Y. Aikhenvald, N. D. Andrejev, M. S. Andronov, Vladimir Dybo, Eugene Helimskij, Vjačeslav V. Ivanov, G. Kornilov, Oleg Mudrak, Vitaly V. Shevoroshkin, Sergej A. Starostin, V. A. Terent'jev, Vladimir N. Toporov, and V. L. Tsymburskij, among others. Though not Russian (but clearly someone who belongs to the “Moscow School”), special recognition must be given to the Czech scholar Václav Blažek, who has published many important papers, most of which deal with the common Nostratic lexicon. Others who should be noted include Alexis Manaster Ramer and Irén Hegedűs — each has published a number of interesting papers on Nostratic.

Beginning with an article that appeared in *Orbis* in 1975, I published several studies, culminating in a 1984 book entitled *Toward Proto-Nostratic: A New Approach to the Comparison of Proto-Indo-European and Proto-Afroasiatic*, in which I tried to show that Indo-European and Semitic (later expanded to include all of Afrasian) might be distantly related. Reviews of that book as well as discussions with colleagues prompted me to expand the scope of my research to include other language families. This resulted in the publication in 1994 of a joint monograph by myself and John C. Kerns entitled *The Nostratic Macrofamily: A Study in Distant Linguistic Relationship*. It was Kerns who prepared the chapter dealing with Nostratic morphology. That book supplied a great deal of lexical evidence from the Nostratic daughter languages to support the reconstruction of 601 Proto-Nostratic roots. In an article published in *Orbis* in 1995, I supplied material to support an additional 29 Proto-Nostratic roots, and another 21 etymologies were proposed in my 1996 book entitled *Indo-European and the Nostratic Hypothesis*. Afterwards, I continued collecting lexical data, with the result that an additional two hundred Nostratic etymologies were included in *Reconstructing Proto-Nostratic*, which was published in two volumes in 2008. It should be noted that my views on Nostratic differ somewhat from those of Illič-Svityč and Dolgopolsky (see §1.5 below).

Toward the end of his life, Joseph H. Greenberg prepared a two-volume work entitled *Indo-European and its Closest Relatives: The Eurasiatic Language Family*. The first volume, which was published at the beginning of 2000, deals with grammar, and the second, which was published at the beginning of 2002, deals with lexicon. Greenberg included Indo-European, Uralic-Yukaghir, Altaic (Mongolian, Chuvash-Turkic, and Manchu-Tungus), Japanese-Korean (Korean, Ainu, and Japanese-Ryukyuan [Japonic]), Gilyak (Nivkh), Chukchi-Kamchatkan, and Eskimo-Aleut in his Eurasiatic language family. Unlike Illič-Svityč, Dolgopolsky, and myself, Greenberg did not include Kartvelian, Afrasian, or Elamo-Dravidian — not because he believed that they are unrelated, but because he believed that these three language phyla are more distantly related to Indo-European than are the others, which, along with Indo-European, form a natural taxonomic subgrouping.

My own opinion is close to that of Greenberg. As I see the situation, Nostratic includes Afrasian, Kartvelian, and Elamo-Dravidian as well as Eurasiatic; in other words, I view Nostratic as a higher-level taxonomic entity. Afrasian stands apart as an extremely ancient, independent branch — it was the first branch of Nostratic to

separate from the rest of the Nostratic speech community. Younger are Kartvelian and Elamo-Dravidian. It is clear from an analysis of their vocabulary, pronominal stems, and morphological systems that Indo-European, Uralic-Yukaghir, Altaic, Gilyak (Nivkh), Chukchi-Kamchatkan, and Eskimo-Aleut are more closely related as a group than any one of them is to Afrasian, Kartvelian, and Elamo-Dravidian, and this is the reason that I follow Greenberg in setting up a distinct Eurasiatic subgroup within Nostratic. Finally, mention should be made of Sumerian, which I had investigated in previous works as a possible Nostratic daughter language. I now believe that Sumerian was not a Nostratic daughter language but that it is distantly related to Nostratic. It must be noted here that I have also changed my mind about the subgrouping of Kartvelian and Elamo-Dravidian. My present thinking is that Kartvelian is closer to Eurasiatic than what I indicated in my 1994 co-authored book and that the differences are due to the fact that Kartvelian became separated from Eurasiatic at a very early date. On the other hand, I now see Elamo-Dravidian as the second group (after Afrasian) to split from the rest of the Nostratic speech community. An attempt at subgrouping is shown in Chart 1 at the end of this chapter.

Interest in issues dealing with Nostratic has resulted in several conferences, the first of which was held in Moscow in 1972 to coincide with the publication of the first volume of Illič-Svityč's comparative Nostratic dictionary. This was followed by a series of gatherings in Russia. Another major conference was held in Ann Arbor, Michigan, at the end of 1988. Organized by Vitaly Shevoroshkin and Benjamin Stolz, this symposium brought together scholars from East and West. A series of volumes under the editorship of Shevoroshkin appeared as a result of this conference (published by Brockmeyer in Bochum, Germany). Shevoroshkin also organized several smaller-scale, follow-up conferences. At the end of 1993, a workshop with the theme "The Second Workshop on Comparative Linguistics. The Status of Nostratic: Evidence and Evaluation" was organized at Eastern Michigan University, Ypsilanti, Michigan. Papers from this workshop were subsequently published in a volume co-edited by Brian Joseph and Joe Salmons (1998). Several important papers on Nostratic also appear in the festschrift for Vitalij Shevoroshkin (1997). In December 1997, a workshop on distant linguistic relationship was held at the Santa Fe Institute in Santa Fe, New Mexico — participants included scholars from around the world.

In early 1998, Dolgopolsky's book entitled *The Nostratic Hypothesis and Linguistic Paleontology* was published. In this book, Dolgopolsky is mainly concerned with linguistic paleontology, and the focus of his attention, therefore, is on putative etyma pertaining to habitat, social organization, and material culture. Dolgopolsky's conclusions are supported by a sample of 125 proposed cognate sets. The book ends with a reconstruction of the Proto-Nostratic phonological system and the reflexes of the consonants (but not the vowels) in the major branches of Nostratic. This book was the focus of a two-day symposium held in July 1998 under the auspices of the McDonald Institute for Archaeological Research, Cambridge University, England. The symposium proceedings were published in mid-1999 in a volume co-edited by Colin Renfrew and Daniel Nettle.

A major conference on “Problems in the Study of Long-Range Linguistic Comparison at the Turn of the Third Millennium” was held at the Russian State University for the Humanities in Moscow from 29 May through 2 June 2000. The conference was organized by Sergej Starostin and covered a number of topics. The first day involved papers on Indo-European. The second day was devoted to Nostratic and included papers on lexical, morphological, and phonological comparisons, as well as more theoretical considerations. There was a session on Altaic, and Starostin gave an introduction to the Altaic etymological dictionary he was then preparing in collaboration with Anna Dybo and Oleg Mudrak (this dictionary has since been published [in 2003]). Another new etymological dictionary presented at the conference was the Semitic dictionary being prepared by Alexander Militarev and Leonid E. Kogan. Afrasian linguistics was also discussed in several papers at a session on comparative linguistics and ancient Near Eastern history held in memory of the late Igor M. Diakonoff. There was also a session on Sino-Tibetan and Caucasian linguistics.

In August 2003, a Nostratic Centennial Conference, marking one hundred years since the appearance of Pedersen’s bold hypothesis, was held at the University of Pécs, Hungary. The conference proceedings were published in 2004 in a volume co-edited by Irén Hegedűs and Paul Sidwell.

The Institute of Slavistics and the Department of History and Philology of the Russian Academy of Sciences sponsored a conference in Moscow honoring the 70th birthday of V. M. Illič-Svityč on 20–22 October 2004. The conference covered problems of the comparative-historical grammar of both Indo-European and Nostratic languages, of the remote relationship of languages, and of the history of Slavic and Baltic languages and their dialects.

Additional conferences and symposia have since occurred.

1.3. METHODOLOGY

Even though I have repeated the following points verbatim many times in previous works, I still read irresponsible statements being made in the literature to the effect that Nostraticists do not use “traditional methods” or that they use a “weakened form” of the Comparative Method. Nothing could be farther from the truth. Therefore, I will once again state the methodological principles used in distant linguistic comparison (cf. Bomhard—Kerns 1994:7–11; Bomhard 1996a:4–9 and 2008e.I:8–13).

The founders of Indo-European comparative linguistics placed great importance on the comparison of grammatical forms, and this bias continues to the present day in Indo-European studies and has even been carried over into the study of other language families. However, this overemphasis on the comparison of grammatical forms is far too restrictive and was the reason that the Celtic languages, which have developed many unique features, were not immediately recognized as Indo-European. As noted over eighty years ago by Pedersen (1931: 245) (these same points were made in 2008 by Anna Dybo and George Starostin):

That agreement in the inflectional system is an especially clear and striking proof of kinship, no one denies. But it is only an anachronism in theory, which has no significance in actual practice, when such an agreement is still designated as the only valid proof. No one doubted, after the first communication about Tocharian..., that the language was Indo-European, though at that time virtually no similarities in inflection had been pointed out. Such similarities have since been shown, but even where they are almost obliterated, proof of kinship could be adduced from the vocabulary and from sound-laws. Hardly any one will assert that it would be impossible to recognize the relationship between, say, English and Italian, even without the help of other related languages or older forms of these two languages themselves, although agreements between the inflectional systems are practically nonexistent.

From the modern point of view it must be said that proof of relationship between languages is adduced by a systematic comparison of languages in their entirety, vocabulary as well as grammar. The reason why earlier scholars felt they should disregard the vocabulary was that they knew of no method of systematic comparison in the field.

The approach to language comparison that I have followed in attempting to establish genetic relationship among the various Nostratic languages is derived, in part, from that advocated by Joseph H. Greenberg in the chapter entitled “Genetic Relationship among Languages” in his 1957 book *Essays in Linguistics* and, in part, from traditional methods of comparison and internal reconstruction. In my opinion, the combination of Greenberg’s methodology and more traditional methods of comparison can inform and further one another. The principles established by Greenberg are as follows: Greenberg notes that the only way to establish hypotheses about genetic relationship is by comparing languages. However, the problem is in knowing which languages to compare and in knowing what to compare since not all aspects of language are equally relevant to comparison. To be meaningful, comparison must strive to eliminate chance resemblances and to separate borrowings from native elements. This is often easier said than done; however, Greenberg lays out two main techniques for detecting borrowed lexical items. First, he notes that borrowing is most commonly confined to certain semantic spheres (for example, cultural items) and certain grammatical categories (nouns far more often than verbs). Second, borrowed words can be distinguished from native vocabulary by expanding the range of comparison to include additional languages. It may be noted that Militarev (2009:97) has prepared an excellent set of rules for detecting borrowings (see also Haspelmath 2009a).

The simplest way to establish genetic relationship is by identifying a large number of similar morphs (or allomorphs), especially irregularities, in similar environments in the languages being considered. Another significant indicator of probable genetic relationship is the presence of similar rules of combinability. Unfortunately, historical processes over the passage of time tend to bring about the gradual transformation and eventual elimination of such similarities. The longer the

period of separation, the lesser the chances will be that similarities of morphological forms and rules of combinability will be found.

Fortunately, there remain other factors that can be helpful in determining possible genetic relationship. One significant factor is the semantic resemblance of lexical forms. Here, it is important to be able to establish recurrent sound-meaning correspondences for a reasonably large sample of lexical material. Lexical forms with identical or similar meanings have the greatest value. Next in value come forms that, though divergent in meaning, can convincingly be derived, through widely-attested semantic shifts, from earlier forms of identical or similar meaning. The chances that lexical resemblances indicate genetic relationship increase dramatically when additional languages are brought into the comparison and when these new languages also exhibit a very large number of recurrent sound-meaning correspondences. Greenberg originally called this method “mass comparison” (subsequently, he changed this to “multilateral comparison”). He considers the comparison of basic vocabulary from a large number of languages from a specific, wide geographic area to be the quickest and most certain method to determine possible genetic relationship. To Greenberg, lexical data are of paramount importance in attempting to establish genetic relationship among languages, especially in the initial stages of comparison.

The basic principles underlying the Comparative Method may be summarized as follows: The first step involves the arduous task of data gathering, placing special attention on gathering the oldest data available. Once a large amount of lexical material has been gathered, it must be carefully analyzed to try to separate what is ancient from what is an innovation and from what is a borrowing. After the native lexical elements have been reasonably identified in each phylum, the material can be compared across phyla to determine potential cognates. Once a sufficient body of potential cognates has been identified, one can begin to work out the sound correspondences. Not only must the regular sound correspondences (that is, those that occur consistently and systematically) be defined, exceptions must also be explained. Here, widely-attested sound changes (palatalization, metathesis, syncope, assimilation, dissimilation, etc.) provide the key to understanding the origin of most exceptions. In other cases, the analysis of the influence that morphology has exerted provides an understanding of how particular exceptions came into being. Some exceptions, though clearly related, simply defy explanation. All of these must be noted. The final step involves the reconstruction of ancestral forms and the formulation of the sound laws leading to the forms in the descendant languages, identifying the laws that have produced the regular sound correspondences as well as the exceptions. The same principles apply to the reconstruction of grammatical forms and rules of combinability and to the identification of the historical transformations leading to the systems found in the daughter languages. Invariably, it takes the dedicated efforts of several generations of scholars to work out all of the details. Here, we may cite the case of Indo-European — as even the most casual reading of Lehmann’s 1993 book *Theoretical Bases of Indo-European Linguistics* shows, after two full centuries of research into what must surely be the most

thoroughly-studied language family on the face of the earth, there still remain many uncertainties about the reconstruction of the Indo-European parent language. The following are superb introductions to Comparative-Historical Linguistics: Arlotto 1972; Bynon 1977; L. Campbell 2013; Hock—Joseph 1996; Lehmann 1973 [1992]; Sihler 2000. More advanced are: Anttila 1972 and 1989; Hock 1986 [1991a]; Ringe—Eska 2013. See also Bowerman—Evans (eds.) 2014; Campbell—Mixco 2007; Hoenigswald 1960; Trask 1994, 1996, and 2010.

At this point, we may note that the description of the Comparative Method and Internal Reconstruction given by Schwink (1994:9) is virtually identical to the procedure outlined in the preceding paragraph:

Let us now proceed to the nuts and bolts of reconstruction. Winter (1970:149) describes the comparative method in the following terms. First one carries out “inspection”. This is looking at a number of languages for “a sufficient number of apparently recurrent correspondences”. One should look at the oldest stages of languages, judge which languages have the most archaic features or residues (Lehmann 1990). Inspection is followed by “sorting” which involves a complete listing of the correspondences discovered although without interpretation (Winter 1970:149). Thereafter comes the reduction of the material to major correspondence classes. If there are irregularities in distribution, one looks for specific factors which may condition the difference. This is now an interpretive procedure. The label chosen for an entity of a major correspondence class should have “a maximum of similarity with the items labeled” (p. 152). In this selection, the question of archaicity of daughter languages will be taken into account. After assumption that the label represents some earlier stage of the languages being looked at, an attempt may be made to look at the labels of parts of systems.

The comparative method does not produce temporal distinctions... It produces a proto-language which is a potpourri of features. It will be the job of internal analysis to sort out this proto-language.

As noted in the first paragraph of this section, it was necessary to discuss these issues in order to address concerns that have been raised about the applicability of traditional methods of comparison to long-range comparison. It must be made perfectly clear that the same principles are just as applicable to long-range comparison as they are to any other type of linguistic comparison. The fact is, these are the only tools we have. Moreover, they work — their efficacy has been proven over and over again.

Furthermore, claims that these methodologies break down when one tries to apply them beyond a certain time limit, say 5,000 to 10,000 years ago, can be shown, without a shadow of doubt, to be false. One can cite, for example, the case of the aboriginal languages of Australia. Archaeological evidence indicates that Australia has been inhabited by human beings for at least 40,000 years, and possibly even longer. Though there remain many unsettled questions, such as exactly when a putative Proto-Australian might have been spoken (probably at least 30,000 years ago), or about how the different languages should be subgrouped, and so on, it has

been suggested (though not proven) that all extant languages belong to the same family (cf. Ruhlen 1987:188), and comparative work on these languages is continuing apace (cf. McConwell—Bower 2011; Paul Black 2017). Another example is the Afrasian language family. Due to the extremely deep divisions among the six branches of Afrasian (Semitic, Egyptian, Berber, Omotic, Cushitic, and Chadic), which are far greater than those found, by way of comparison, among the earliest attested branches of Indo-European, the Afrasian parent language must be placed as far back as 10,000 BCE (cf. Diakonoff 1988:33, fn. 15), or perhaps even earlier, according to some scholars (Hodge [1993:99], for example, dates Proto-Afrasian [his Lisramic] at 13,000 BCE). This extremely ancient date notwithstanding, the major sound correspondences have been determined with great accuracy (cf. Diakonoff 1992), excellent progress is being made in reconstructing the common lexicon (to date, three main Afrasian etymological dictionaries have appeared: one by Vladimir E. Orël and Olga V. Stolbova [1995], one by a team of Russian scholars, and one by Christopher Ehret [1995]), and scholars are beginning to piece together the original morphological patterning, though progress here lags behind other areas. Comprehensive surveys of the Afrasian languages are: David Cohen (ed.), (in English translation) *Languages in the Ancient and Modern World: Hamito-Semitic Languages* (1988), and Zygmunt Frajzyngier and Erin Shay (eds.), *The Afroasiatic Languages* (2012). A good introduction — though now somewhat out of date — to Afrasian comparative phonology and morphology is *Afrasian Languages* (1988) by Igor M. Diakonoff. Finally, it should be noted that Edward Lipiński brings in a lot of data from related Afrasian languages in his *Semitic Languages: Outline of a Comparative Grammar* (1997; second edition 2001), as does Stefan Weninger (ed.), *The Semitic Languages* (2011).

One last point needs to be made: Reconstructed languages should be thought of as real languages in every sense of the term. Of course, our reconstructions are, in a sense, purely formulaic, and one can only hope to approximate, not fully recover, all of the features of the actual proto-language. Nevertheless, our reconstructions can be surprisingly accurate, as can be seen, for instance, when reconstructed Proto-Romance is contrasted with so-called “Vulgar Latin”. When we undertake the task of trying to recover the salient features of this or that proto-language, we must be very careful not to reconstruct anything that is not characteristic of language in general: our goal should be to strive for reality in our reconstructions (cf. Labov 1994:17). The prudent use of the insights gained from linguistic typology can be extremely valuable in helping to arrive at realistic reconstructions. Now, a few more conservative linguists have questioned the propriety of using typological data in Historical-Comparative Linguistics, their main argument running somewhat along the lines: “since we cannot possibly know all of the languages that currently exist or that have ever existed, we cannot say that such and such a type was impossible, unnatural, or has never existed” — that is to say, our “database” of linguistic systems will always be incomplete. Of course, there is no arguing with this line of reasoning. However, these linguists miss an important point: from all of the data that have been collected to date — from an extremely large sample of the world’s

languages — there emerge consistent, regular patterns that are repeated over and over again. There are, to be sure, typological rareties (cf. Wohlgemuth—Cysouw 2010), but these are less important (though no less interesting) from a statistical point of view. It is the regular patterning that has emerged from the analysis of the data from a great number of languages that is most important to Historical-Comparative Linguistics. These data are important in two respects: (A) they provide a control against which our reconstructions can be evaluated and (B), when part of a system has been reconstructed, they provide a means to deduce what the rest of the system might have been like, that is to say, they can be used as a discovery procedure by making use of “implicational universals”. Concerning the consistent, regular patterning that has been observed, it should be noted that the basis for some of this patterning is human physiology, and, in such cases, we can speak of true universals. Given this regular patterning, it is disturbing when our reconstructions contradict it, as in the case of one form of the traditional reconstruction of Proto-Indo-European, for instance. To say merely that “Indo-European was a unique type” or some such statement only means that the person making such a statement chooses not to confront the issues involved. We should not hesitate to use every means at our disposal to help us arrive at realistic reconstructions. To be sure, we should be fully cognizant of the work of our predecessors and adhere closely to the time-honored methodologies — the Comparative Method and Internal Reconstruction — that have served Comparative-Historical Linguistics well since the days of Bopp, Rask, and Grimm. However, we must not stop here — we must also make full use of advances in phonological theory that have broadened our understanding of sound change and of new insights gained from typological studies, and our proposals must be consistent with the data. For a superb overview of the relevancy of typological studies to diachronic linguistics, cf. Schwink 1994.

In attempting to determine whether or not particular lexical items from the various language families might be related, I have made extensive use of Carl Darling Buck’s *A Dictionary of Selected Synonyms in the Principal Indo-European Languages* as a control for the semantic development of the proposed lexical parallels. It may be noted that, in examining the lexicons of Kartvelian, Afrasian, Uralic-Yukaghir, Elamo-Dravidian, Altaic, and Eskimo-Aleut, semantic shifts similar to those described by Buck for the Indo-European languages are found over and over again in these other language families as well. I cannot emphasize strongly enough that, in order to gain a complete understanding of how I arrived at my proposals, Buck’s dictionary must be consulted.

One final note is necessary. In recent years, several scholars (most notably, Donald Ringe and Sheila Embleton) have proposed techniques based upon statistical modeling and probability analysis as a means to help us judge the validity of our proposals concerning possible genetic relationship. Properly used, these techniques can indeed provide another valuable tool, which may be used along with, but not as a replacement for, established methodologies. Moreover, these techniques have the important advantage of introducing an objective set of criteria against which our proposals can be evaluated.

1.4. THE COMPARATIVE METHOD

In the previous section, we discussed the methodologies used in long-range linguistic comparison and showed that these are the same methodologies used in any other type of linguistic comparison. In this section, we will explore the Comparative Method in greater detail, repeating and expanding upon what was said in the previous section and using data from the Nostratic daughter languages to illustrate the principles involved.

First, let us begin with a formal definition of the Comparative Method (cf. Kimball 1992:274):

COMPARATIVE METHOD examines items (e.g. phonemes, morphemes, or syntactic constructions) from two or more languages to establish genetic relationship and reconstruct ancestral forms. Unlike typological comparison, which ignores genetic affiliation, the comparative method assumes that the languages compared are (or may be) cognate languages: the descendants of a common ancestor.

Moreover, Hock (1991a:567) further defines the purpose of reconstruction:

The ultimate proof of genetic relationship, and to many linguists' minds the only real proof, lies in the successful reconstruction of the ancestral forms from which the systematically corresponding cognates can be derived. (Note that just as in courts of law, the terms 'proof', 'prove' here are used in the sense of 'establish beyond a reasonable doubt'. In fact, the general tenet of historical linguistics is that all hypotheses, whether they concern genetic relationship, 'language-internal' developments like sound change or analogy, or contact-induced changes, should be established beyond a reasonable doubt. It must be admitted, however, that this tenet is often ignored in practice.)

Hock's statement is extremely important and pinpoints the crux of the problem in attempts to establish genetic relationship, especially long-range genetic relationship — it seems that no one can agree on the threshold beyond which "reasonable doubt" has been dispelled (cf. Greenberg 2005e). For some, the threshold is set so low that highly unlikely proposals can slip by, while, for others, the threshold is set so high that even well-established language families have difficulty passing — that is to say, they set impossible standards.

Next, Kimball (1992:275) notes that "[t]he comparative method makes three assumptions":

- a) The relationship between sound and meaning is arbitrary; therefore, widespread similarity in form and meaning between two languages cannot be accidental.
- b) Corresponding features of cognate languages continue features inherited from an ancestral stage or proto-language.
- c) Completed sound changes are exceptionless.

As previously stated, the first step involves the arduous task of data gathering, placing special attention on gathering the oldest data available. Once a large amount of lexical material has been gathered, it must be carefully analyzed to try to separate what is ancient from what is an innovation and from what is a borrowing. This is not a simple task — the problem of borrowing is particularly acute within Altaic, for instance. Greenberg has addressed this problem by laying out two main techniques for detecting borrowed lexical items. First, he notes that borrowing is most commonly confined to certain semantic spheres (for example, cultural items) and certain grammatical categories (nouns far more often than verbs). Second, borrowed words can be distinguished from native vocabulary by expanding the range of comparison to include additional languages. Moreover, there are important clues that can assist us in identifying borrowings. First, a knowledge of the history or, in the case of reconstructed languages, the prehistory of a language can tell us which languages were in contact or might have been in contact with the language or languages under analysis at different stages in its history. Next, knowledge of the different levels of material culture achieved by population groups speaking these languages at particular times in their history will give us a clue about the probable direction of borrowings. Archeology can be of value here by providing us with a description of the artifacts of the material cultures in question, by giving us a glimpse of the salient characteristics of the societies using those artifacts, and by identifying probable trade routes and population movements.

Let us turn once again to Kimball (1992:275) to see what she has to say on this matter:

However, languages can resemble each other for other reasons. Onomatopoeic words, ‘baby-talk’, and words showing sound symbolism are excluded from consideration; in these, the relationship between sound and meaning is not entirely arbitrary. Similarity can result from borrowing and other effects of language contact, or even from sheer chance — factors which must be eliminated in a list of potential cognates.

Sometimes knowledge of the external history of a language allows us to exclude borrowing as a cause of similarity. For example, we know that many English words resemble French words because English has borrowed extensively from French since the 11th century. Where language contact is less well documented or prehistoric, similarity resulting from borrowing can be excluded with reasonable certainty by selecting items unlikely to have been borrowed. For instance, words referring to technology or material culture, which are often borrowed along with cultural or technological innovations, may make poor candidates for comparison. By contrast, basic vocabulary — kinship terms, numerals, pronouns, pre- and postpositions, and common verbs, adverbs, adjectives, and nouns — are less likely under most circumstances to be borrowed, and are usually more helpful to the comparativist.

After the native lexical elements have been reasonably identified in each phylum, the material can be compared across phyla to determine potential cognates. Once a

sufficient body of potential cognates have been identified, one can begin to work out the sound correspondences. Let us illustrate this by looking at a few cognates from the Nostratic languages (only the reconstructed forms will be given for each language group) — I have also included data from Sumerian:

1. Proto-Indo-European **b^hor-/b^hṛ-* ‘to bore, to pierce’; Proto-Afrasian **bur-* ‘to bore, to pierce’; Proto-Uralic **pura* ‘borer, auger’; Proto-Dravidian **pur-* ‘(vb.) to bore, to perforate; (n.) borer, gimlet’; Proto-Altaic **burV-* ‘to bore through, to pierce’. Cf. Sumerian *bùr* ‘to bore through, to pierce’.
2. Proto-Indo-European **b^her-, *b^hru-* ‘brown’; Proto-Afrasian **bor-* ‘dark-colored’; Proto-Altaic **bor^yV-* ‘gray, brown’ (< ‘dark-colored’).
3. Proto-Kartvelian **bur-* ‘to cover, to enclose’; Proto-Afrasian **bur-* ‘to cover, to wrap up’; Proto-Dravidian **pōr-* ‘(vb.) to wrap around (the body), to cover, to enclose; (n.) a cover, covering, wrapping’; Proto-Altaic **būri-* (~ *-iū-*, *-e*) ‘to cover, to enclose’.
4. Proto-Indo-European **b^hek’-/b^hok’-* ‘to cut or split apart, to break apart’; Proto-Afrasian **bak’-* ‘to cleave, to split, to break open’; Proto-Dravidian **pak-* ‘to split, to rend; to be split’; Uralic: Proto-Finno-Ugrian **pakka-* ‘to burst, to rend, to split’; Eskimo-Aleut: Proto-Inuit **pakak-* ‘to knock into’.

The correspondence, in initial position, of Proto-Indo-European **b^h-*, Proto-Kartvelian **b-*, Proto-Afrasian **b-*, Proto-Uralic **p-*, Proto-Dravidian **p-*, Proto-Altaic **b-*, and Proto-Eskimo **p-* allows us to reconstruct Proto-Nostratic **b-*.

1. Proto-Indo-European **p^her-/p^hor-/p^hṛ-* ‘to fly, to flee’; Proto-Kartvelian **par-, *pr-en-* ‘to fly’; Proto-Dravidian **par-* ‘to fly, to flee; to hasten, to hurry’.
2. Proto-Indo-European **p^her-/p^hṛ-* ‘to bear, to bring forth’; Proto-Afrasian **pir-* ‘to bring forth, to bear fruit’; Proto-Dravidian **per-* ‘to get, to beget, to bear’; Proto-Altaic **p^hūri* ‘seed, offspring’.
3. Proto-Indo-European **p^heth-/p^hoth-* ‘to fly, to rush, to pursue; to fall, to fall down’; Proto-Kartvelian **petk-* ‘to quiver, to tremble, to vibrate, to explode’; Proto-Afrasian **pat-* ‘to flutter, to quiver, to tremble; to fall down’; Proto-Dravidian **pat-* ‘to hurry; to flutter, to quiver, to shake; to be flurried, impatient, overhasty’; Proto-Eskimo **pattay-* ‘to clap or slap’.
4. Proto-Indo-European **p^hes-/p^hos-* ‘penis’; Uralic: Proto-Finno-Ugrian **pas^v3* ‘penis’; Proto-Dravidian **pā(y)-/pac-* ‘descendant, offspring’; Proto-Altaic **p^h[i]a^s-* (?) ‘male genitals’. Cf. Sumerian *peš* ‘sperm, semen’, *peš* ‘son, descendant, offspring’.

In these examples, the correspondence, in initial position, of Proto-Indo-European **p^h-*, Proto-Kartvelian **p-*, Proto-Afrasian **p-*, Proto-Uralic **p-*, Proto-Dravidian **p-*, Proto-Altaic **p^h-*, and Proto-Eskimo **p-* allows us to reconstruct Proto-Nostratic **p^h-*.

1. Proto-Indo-European **me-/mo-* 1st person personal pronoun stem (oblique cases); Proto-Kartvelian **me-*, **men-* 1st person personal pronoun stem; Proto-Afrasian **m[i]-* 1st person personal pronoun stem (only in Chadic, with relics in Cushitic); Proto-Uralic **me* 1st person singular personal pronoun stem: ‘I, me’, **me* 1st plural personal pronoun stem; Proto-Altaic (nom. sg.) (**mi >*) **bi* ‘I’, (oblique stem) **min-*; Proto-Chukchi-Kamchatkan **(kə)m* ‘I’ (**kə-* is a marker of independent pronouns); Eskimo-Aleut: West Greenlandic 1st sg. relative possessive suffix *-ma*. Note here also Etruscan *mi* ‘I’, *mini* ‘me’ and Sumerian (Emesal) *ma(-e)*, *me-a*, *me-e* ‘I’, (1st pl. possessive suffix) *-me* ‘our’.
2. Proto-Indo-European **mo-* demonstrative stem (preserved vestigially in Celtic); Proto-Kartvelian **ma-* demonstrative stem: ‘this, he’; Proto-Finno-Ugrian **mu* ‘other, another’; Altaic: Common-Turkic (nom. sg.) (**mū/*mō >*) **bū/*bō* ‘this’, (oblique stem) **mu-n-*; Mongolian *mōn* deictic word serving as a demonstrative pronoun, adjective, adverb, and copula.
3. Proto-Indo-European **me-/mo-* interrogative and relative pronoun stem (preserved in Hittite and Tocharian, with vestiges in Celtic); Proto-Kartvelian **mi-n-* interrogative pronoun, **ma-* ‘what’; Proto-Afrasian **ma- ~ *mi-* relative and interrogative pronoun stem; Proto-Uralic **mi* interrogative and relative pronoun stem; Proto-Altaic **mV* interrogative stem; Proto-Eskimo enclitic particle **mi* ‘what about?’. Cf. Sumerian *me-na-àm* ‘when?’, *me-a* ‘where?’, *me-šè* ‘where to?’.
4. Proto-Indo-European **mer-/mor-* ‘to twist, to turn’; Proto-Afrasian **m[u]r-* ‘to twist, to turn’; Proto-Dravidian **mur-* ‘to bend, to be bent, to turn round, to twist; (n.) rope, cord; bend, curve’, **mur-* ‘to twist, to twine, to tighten’; Proto-Altaic **mura-* ‘(vb.) to turn, to return; (adj.) round’.

Here, the correspondence, in initial position, of Proto-Indo-European **m-*, Proto-Kartvelian **m-*, Proto-Afrasian **m-*, Proto-Uralic **m-*, Proto-Dravidian **m-*, Proto-Altaic **m-*, and Proto-Eskimo **m-* allows us to reconstruct Proto-Nostratic **m-*.

These correspondences can be summarized as follows:

PN	PIE	PK	PAA	PU	PD	PA	PE
b-	b ^h -	b-	b-	p-	p-	b-	p-
p ^h -	p ^h -	p-	p-	p-	p-	p ^h -	p-
m-	m-	m-	m-	m-	m-	m-	m-

Abbreviations: PN = Proto-Nostratic; PIE = Proto-Indo-European; PK = Proto-Kartvelian; PAA = Proto-Afrasian; PU = Proto-Uralic; PD = Proto-Dravidian; PA = Proto-Altaic; PE = Proto-Eskimo.

Not only must the regular sound correspondences (that is, those that occur consistently and systematically) be defined (a full set of Nostratic sound correspondences can be

found at the end of Chapter 12), exceptions must also be explained. Here, widely-attested sound changes (palatalization, assimilation, metathesis, dissimilation, syncope, etc.) provide the key to understanding the origin of most exceptions. In other cases, the analysis of the influence that morphology has exerted provides an understanding of how particular exceptions came into being. Some exceptions, though clearly related, simply defy explanation. All of these must be noted. The final step involves the reconstruction of ancestral forms and the formulation of the sound laws leading to the forms in the descendant languages, identifying the laws that have produced the regular sound correspondences as well as the exceptions. The same principles apply to the reconstruction of grammatical forms and rules of combinability and to the identification of the historical transformations leading to the systems found in the daughter languages.

Let us now look at some exceptions to the regular sound correspondences that have been established and provide explanations for these exceptions:

1. Pre-Proto-Indo-European **k^hab-* > (with progressive voicing assimilation) Proto-Indo-European **k^hap^h-ro-* ‘he-goat, male sheep, buck, ram’ ~ Proto-Afrasian **kab-* ‘he-goat, male sheep, buck, ram’.

In this example, the correspondence of Proto-Indo-European **p^h-* ~ Proto-Afrasian **-b-* is irregular — instead, we would expect Proto-Indo-European **-b^h-* as the regular correspondence of Proto-Afrasian **-b-*. Now, it is well-known that Indo-European had a root-structure constraint against the appearance of both a voiced (aspirated) stop and a voiceless (aspirated) stop in a root, that is to say, that they had to agree in voicing (cf. Benveniste 1935:170; Lehmann 1952:17) — thus, **t^heb^h-* and **b^het^h-* (traditional **tebh-* and **bhet-*) were not allowed. However, comparison with the other Nostratic languages indicates that the forbidden root types must have once existed. Therefore, a rule of progressive voicing assimilation may be set up to account for the elimination of the forbidden root types. This means that **t^heb^h-* would have become **t^hep^h-*, and **b^het^h-* would have become **b^hed^h-*. This is confirmed by other examples, such as:

2. Pre-Proto-Indo-European **d^yə^{wh}-*/**d^yak^{wh}-* > (with progressive voicing assimilation and depalatalization of initial **d^y*) Proto-Indo-European **d^heg^{wh}-*/**d^hog^{wh}-* ‘to blaze, to burn’ ~ Proto-Afrasian **d^yak^w-* ‘to blaze, to be bright’.

Another exception is found in the following examples:

3. Proto-Indo-European **(s)t^hek’-/*(s)t^hok’-* ‘to cover’ ~ Proto-Kartvelian **t’q’aw-* ‘skin, hide’; Proto-Afrasian **t’ak’-* ‘to cover, to obscure’.
4. Proto-Indo-European **t^hek’-/*t^hok’-* ‘to knock, to beat, to strike’ ~ Proto-Kartvelian **t’k’ač-* ‘to hit, to strike’; Proto-Afrasian **t’uk’-*, **t’ok’-* ‘to knock, to beat, to strike, to pound’; Proto-Finno-Ugrian **tuk3-* (**tuγ3-*) ‘to break, to crush’; Proto-Dravidian **tuk-* ‘to tread down, to trample on, to step on; to beat,

to strike, to pound, to mash', **tukk-* 'to push, to shove'. Cf. Sumerian *dug₄-ga* 'to strike, to beat, to hit, to smite, to kill'.

In these examples, the correspondence of Proto-Indo-European **t^h-* ~ Proto-Kartvelian **t'-* and Afrasian **t'-* is irregular — instead, we would expect Proto-Indo-European **t'-* as the regular correspondence of Proto-Kartvelian **t'-* and Proto-Afrasian **t'-*. In traditional terms, Proto-Indo-European had a constraint against the appearance of two plain voiced stops within a root (cf. Benveniste 1935:170; Lehmann 1952:17), that is to say that a root could not both begin and end with a plain voiced stop. In terms of the Glottalic Theory (see Chapter 3, §3.4, for a discussion of the Glottalic Theory), this constraint is reinterpreted as a restriction against the co-occurrence of two glottalics in a root. This means that roots of the type **t'ek'-* (**deg-* in traditional terms) are not allowed. It may be noted that a similar constraint is found in a number of other languages having glottalics. However, comparison with the other Nostratic languages indicates that the forbidden root types must have once existed. Therefore, a rule of regressive deglottalization may be set up to account for the elimination of the forbidden root types in Proto-Indo-European. This means, for example, that **t'ek'-* would have become **t^hek'-*. This rule finds a close parallel in Geers' Law in Akkadian (for details on Geers' Law, cf. Ungnad—Matouš 1969:27 and 1992:26—27). It may be noted that Geers' Law also operated in Eblaite (cf. Zemánek 1998:56).

Now, up until this point, we have been using mostly reconstructed forms to illustrate the principles involved in the Comparative Method. However, reconstructed forms contain a sufficiently high enough margin of error by their very nature to render such comparisons suspect. This means that, ultimately, we must base our conclusions about possible genetic relationship on an examination and analysis of the actual attested forms found in each daughter language. It is my contention that a comparison based on the actual attested forms alone, without recourse to the reconstructed forms, is sufficient to demonstrate the genetic relationship of the various Nostratic daughter languages. Let us illustrate this by looking at the data which support the reconstructions given in several of the examples above — we will look at one from each set.

First, let us look again at the words for 'to bore, to pierce':

1. a) Proto-Indo-European **b^hor-/b^hṛ-* 'to bore, to pierce';
- b) Proto-Afrasian **bur-* 'to bore, to pierce';
- c) Proto-Uralic **pura* 'borer, auger';
- d) Proto-Dravidian **pur-* '(vb.) to bore, to perforate; (n.) borer, gimlet';
- e) Proto-Altaic **burV-* 'to bore through, to pierce'.

Here are some of the attested data from within each language family to support this example (for a more complete set of data, cf. Chapter 22, §22.2):

- a) Indo-European: Old English *borian* ‘to bore, to pierce’; Old High German *boro* ‘auger’; Latin *forō* ‘to bore, to pierce’ (Latin *f*- < **b^h*-); Greek *φάρω*, *φάράω* ‘to plow’.
- b) Afrasian: Aramaic *b̄araz* ‘to bore, to pierce’; Tigre (reduplicated) *b̄arab̄ara* ‘to pierce’; Geez / Ethiopic *barra* [ባረ], *barara* [ባረረ] ‘to pierce, to penetrate, to go through’; Somali *burur* ‘broken piece’; Saho *burūr* ‘broken piece’.
- c) Uralic: Finnish *pura* ‘borer, auger, (big) awl’; Vogul / Mansi *pore*, *porä* ‘awl’; Ostyak / Xanty *pōr* ‘borer, auger’; Hungarian *fūr-* ‘to bore, to drill’; Yurak Samoyed / Nenets *parō* ‘borer, auger’; Selkup Samoyed *pur* ‘borer, auger’.
- d) Dravidian: Tamil *purai* ‘tubular hollow, tube, pipe, windpipe’; Tuḷu *perevuni* ‘to be bored, to be perforated’, *perepini* ‘to bore to perforate’, *burma*, *burmu* ‘a gimlet’, *berpuri* ‘borer, auger’.
- e) Mongolian *buryui-* ‘a piece of wire used to clean a smoking pipe’; Turkish *bur-* ‘to bore a hole’; Tatar *borau* ‘borer, auger’.

Cf. Sumerian *būr* ‘to bore through, to pierce’.

The second example which we will explore in depth is the words for ‘to flee, to fly’:

2. a) Proto-Indo-European **p^her-*/**p^hor-*/**p^hṛ-* ‘to fly, to flee’;
- b) Proto-Kartvelian **par-*, **pr-en-* ‘to fly’;
- c) Proto-Dravidian **paṛ-* ‘to fly, to flee; to hasten, to hurry’.

Here are some of the attested data from within each language family to support this example (for a more complete set of data, cf. Chapter 22, §22.3):

- a) Indo-European: Sanskrit *parṇá-h* ‘wing, feather’; Hittite *pár-aš-zi* ‘to flee’; Russian Church Slavic *perq*, *p̄rati* ‘to fly’, *pero* ‘feather’; Czech *perchnouti* ‘to flee’; Polish *pierzchnąć* ‘to flee’; Serbo-Croatian *prhati* ‘to fly up’; Russian *porxát* [порхать] ‘to flit, flutter, to fly about’.
- b) Kartvelian: Georgian *pr-ena* ‘to fly’, (*m*)*prinveli* ‘bird’; Mingrelian *purin-* ‘to fly’; Laz *purtin-* ‘to fly’.
- c) Dravidian: Tamil *para* ‘to fly, to hover, to flutter, to move swiftly, to hasten, to be in a hurry; to be greatly agitated; to be scattered, dispersed; to disappear’, (reduplicated) *parapara* ‘to hasten, to hurry’, *paravai* ‘bird, wing, feather, bee’; Malayalam *parakka* ‘to fly, to flee’; Kannada *pari*, *paru* ‘flying, running swiftly’; Tuḷu *pāruni* ‘to run, to fly, to escape’; Telugu *paracu* ‘to run away, to flee, to flow; to cause to escape’, *pāru* ‘to run, to flow’.

The final example is the words for ‘I, me’:

3. a) Proto-Indo-European **me-/mo-* 1st person personal pronoun stem (oblique cases);
- b) Proto-Kartvelian **me-*, **men-* 1st person personal pronoun stem;
- c) Proto-Afrasian **m[i]-* 1st person personal pronoun stem (only in Chadic, with relics in Cushitic);
- d) Proto-Uralic **me* 1st person singular personal pronoun stem: 'I, me', **me* 1st plural personal pronoun stem;
- e) Proto-Altaic (nom. sg.) (**mi >*) **bi* 'I', (oblique stem) **min-*;
- f) Proto-Chukchi-Kamchatkan **(kə-)m* 'I' (**kə-* is a marker of independent pronouns);
- g) Etruscan *mi* 'I', *mini* 'me'.

Here are some of the attested data from within each language family to support this example (for a more complete set of data, cf. Chapter 22, §22.43):

- a) Indo-European: Sanskrit (acc. sg.) *mā, mām* 'me'; Greek (acc. sg.) *με, ἐμέ* 'me'; Latin (acc.-abl. sg.) *mē* 'me'; Gothic (acc. sg.) *mik* 'me'; Lithuanian (acc. sg.) *manę* 'me'; Old Church Slavic (acc. sg.) *mę, mene* 'me'.
- b) Kartvelian: Old Georgian *me* 'I'; Mingrelian *ma-* 'I'; Laz *ma, man* 'I'; Svan *mi* 'I'.
- c) Afrasian: Chadic: Hausa (pl.) *maa* 'we', (indirect object pl.) *manà* 'us, to us, for us', (pl.) *muu* 'we, us, our', (past tense subj. pl.) *mun* 'we', (continuous tense subj. pl.) *munàa* 'we'; (indirect object sg.) *mini* 'me, to me, for me'; Kotoko *mi* 'we, us'; Mandara *ma* 'we, us'; Musgu *mi* 'we, us', *mu* 'I, me'; Bole *mu* 'we, us'.
- d) Uralic: Finnish *minä/minus-* 'I, me'; Lapp / Saami *mon/mú-* 'I, me'; Mordvin *mon* 'I, me'; Zyrian / Komi *me* 'I', (acc.) *menõ* 'me'; Selkup Samoyed *man, mat* 'I, me'; Kamassian *man* 'I, me'; Yukaghir *met* 'I, me'.
- e) Altaic: Mongolian (nom. sg.) *bi* 'I', (gen. sg.) *minu* 'my, of me', (gen. pl. exclusive) *manu* 'our, of us'; Manchu *bi* 'I, me', (gen. sg.) *mini* 'my'; Old Turkish (nom. sg.) *mān* (rarely *bān*) 'I', (acc. sg.) *māni* 'me'.
- f) Chukchi *γə-m* 'I' (in predication: *-iγəm ~ -eγəm*).
- g) Etruscan *mi* 'I', *mini* 'me'.

Cf. Sumerian (Emesal) *ma(-e), me-a, me-e* 'I', (1st pl. possessive suffix) *-me* 'our'.

It is thus perfectly clear that we are able to establish phonological correspondences on the basis of an analysis of the actual attested data from the individual Nostratic daughter languages alone, without recourse to reconstructions. Moreover, not only are we able to establish the regular sound correspondences by such an analysis, we are also able to identify and explain exceptions. And, it is on this basis as well that we are able to reconstruct the Proto-Nostratic forms. This is identical to what was done in Indo-European and which continues to be done in Comparative-Historical

Linguistics — the Indo-European parent language was reconstructed on the basis of a direct comparison of the actual attested data from the individual Indo-European daughter languages without recourse to reconstructed Proto-Indo-Iranian, Proto-Italic, Proto-Greek, Proto-Germanic, etc. That is to say that it was not necessary to reconstruct every intermediary level before one could tackle the problems of reconstructing the Indo-European parent language. Of course, reconstruction is still both important and necessary. Reconstruction, including the reconstruction of intermediary levels, allows us to make powerful statements about the (pre)historical development of each daughter language, especially about how and why particular features came into being or became extinct. Finally, the understanding of what has taken place historically in one daughter language often provides an explanation of what has taken place in another daughter language.

In any attempt to establish genetic relationship, one is going to come across chance resemblances. By “chance resemblances”, one means unexpected, and sometimes rather striking, instances of identical or nearly identical vocabulary items or, in rare cases, even grammatical forms in two or more totally unrelated languages or in languages that, if they are related, are distant enough apart to make it otherwise unlikely that they would share such items. The example that Kimball (1992:275) gives is the word for ‘man’, *wiro*, in the extinct Timucua language, formerly spoken in northern Florida and southeastern Georgia, which resembles Latin *vir* ‘man’. Chance resemblances of this type do occur and, it goes without saying, do not indicate genetic relationship. Chance resemblances can range from a mere handful of examples up to several dozen depending upon how much latitude one is willing to allow in both forms and meanings. As noted above, one of the main assumptions of the Comparative Method is that “the relationship between sound and meaning is arbitrary; therefore, widespread similarity in form and meaning between two languages cannot be accidental”. Thus, when the languages under analysis exhibit a large number of recurrent sound-meaning correspondences, we are not dealing with chance resemblances.

1.5. CRITIQUE OF MOSCOVITE VIEWS ON NOSTRATIC

Let me begin by stating unequivocally that I have the highest admiration for what Moscovite scholarship (especially the work of V. M. Illič-Svityč and A. B. Dolgopolsky — some of the work done by other Russian scholars is not on the same level) on Nostratic has achieved. Their research has opened up new and exciting possibilities and given Nostratic studies new respectability. However, this does not mean that I agree with everything they say. I regard their work as a pioneering effort and, as such, subject to modification in light of advances in linguistic theory, in light of new data from the Nostratic daughter languages, and in light of findings from typological studies that give us a better understanding of the kind of patterning that is found in natural languages as well as a better understanding of what is characteristic of language in general, including language change.

Let us begin by looking at phonology: In 1972 and 1973, the Georgian scholar Thomas V. Gamkrelidze and the Russian scholar Vjačeslav V. Ivanov jointly proposed a radical reinterpretation of the Proto-Indo-European stop system. According to their reinterpretation, the Proto-Indo-European stop system was characterized by the three-way contrast glottalized ~ voiceless (aspirated) ~ voiced (aspirated). In this revised interpretation, aspiration is viewed as a redundant feature, and the phonemes in question could also be realized as allophonic variants without aspiration. Paul J. Hopper made a similar proposal at about the same time (Hopper 1973). I should point out here that, even though I support the revisions proposed by Gamkrelidze, Hopper, and Ivanov, my views are not dependent upon any particular reconstruction of the Proto-Indo-European stop system — the sound correspondences I have proposed can be maintained using the traditional reconstruction as well. What the new views of Proto-Indo-European consonantism did was bring to light the implausibility of certain Nostratic sound correspondences established by Illič-Svityč and Dolgopolsky (see below for details). Moreover, this new interpretation opened new possibilities for comparing Proto-Indo-European with the other Nostratic daughter languages, especially Proto-Kartvelian and Proto-Afrasian, each of which had a similar three-way contrast. The simplest and most straightforward assumption would be that the glottalized stops posited by Gamkrelidze, Hopper, and Ivanov for Proto-Indo-European would correspond to glottalized stops in Proto-Kartvelian and Proto-Afrasian, while the voiceless stops would correspond to voiceless stops and voiced stops to voiced stops. This, however, is quite different from the correspondences proposed by Illič-Svityč and Dolgopolsky. They see the glottalized stops of Proto-Kartvelian and Proto-Afrasian as corresponding to the traditional plain voiceless stops of Proto-Indo-European, while the voiceless stops in the former two branches are seen as corresponding to the traditional plain voiced stops of Proto-Indo-European, and, finally, the voiced stops to the traditional voiced aspirates of Proto-Indo-European. Illič-Svityč and Dolgopolsky then reconstruct the Proto-Nostratic phonological system on the model of Kartvelian and Afrasian, with the three-way contrast glottalized ~ voiceless ~ voiced in the series of stops and affricates.

The mistake that Illič-Svityč and Dolgopolsky made was in trying to equate the glottalized stops of Proto-Kartvelian and Proto-Afrasian with the traditional plain voiceless stops of Proto-Indo-European. Their reconstruction would make the glottalized stops the least marked members in the Proto-Nostratic bilabial series and the most marked in the velar series. Such a reconstruction is thus in contradiction to typological evidence, according to which glottalized stops uniformly have the opposite frequency distribution (most marked in the bilabial series and least marked in the velar series [for details, cf. Gamkrelidze 1978]). The reason that Illič-Svityč's and Dolgopolsky's reconstruction contradicts the typological evidence is as follows: Illič-Svityč and Dolgopolsky posit glottalics for Proto-Nostratic on the basis of a small number of seemingly solid examples in which glottalics in Proto-Afrasian and/or Proto-Kartvelian appear to correspond to traditional plain voiceless stops in Proto-Indo-European. On the basis of these examples, they assume that, whenever

there is a voiceless stop in the Proto-Indo-European examples they cite, a glottalic is to be reconstructed for Proto-Nostratic, even when there are no glottalics in the corresponding Kartvelian and Afrasian forms! This means that the Proto-Nostratic glottalics have the same frequency distribution as the Proto-Indo-European plain voiceless stops. Clearly, this cannot be correct. The main consequence of the mistaken comparison of the glottalized stops of Proto-Kartvelian and Proto-Afrasian with the traditional plain voiceless stops of Proto-Indo-European is that Illič-Svityč and Dolgopolsky are led to posit forms for Proto-Nostratic on the basis of theoretical considerations but for which there is absolutely no evidence in any of the daughter languages. The following examples illustrate the ad hoc nature of these reconstructions:

1. Dolgopolsky (1998:17) reconstructs a second singular personal pronoun **tū* > **ti* ‘thou’, with an initial glottalized dental, on the basis of data from Indo-European, Afrasian, Uralic, and Mongolian. When one looks at the attested forms in the daughter languages, one cannot find a single form anywhere that begins with a glottalized consonant. Indeed, in natural languages having glottalized consonants, these sounds tend to be underrepresented in pronoun stems and inflectional affixes. What, then, is the basis for the reconstruction **tū*? — nothing more than an ad hoc rule set up by Illič-Svityč.
2. Dolgopolsky (1998:17) also reconstructs an interrogative stem **ko-* ‘who?’ (see also Illič-Svityč 1971—1984.I:355—356, no. 232, **Ko* ‘who’). As in the preceding example, there is no evidence in any of the Nostratic daughter languages to support the reconstruction of an initial glottalized velar here.

Do these criticisms completely invalidate the cognate sets proposed by Illič-Svityč and Dolgopolsky in which glottalics in Kartvelian and Afrasian appear to correspond to plain voiceless stops in Indo-European? Well, no, not exactly — it is not quite that simple. In some cases, the etymologies are correct, but the Proto-Nostratic reconstructions are wrong. This applies to the examples cited above — for the second person personal pronoun, I would reconstruct Proto-Nostratic **tʰi*, and, in place of **ko-* ‘who?’, I would reconstruct Proto-Nostratic **kʷhɑ-*. Other examples adduced by Illič-Svityč and Dolgopolsky admit alternative explanations, while still others are questionable from a semantic point of view and should be abandoned. Once the questionable examples are removed, there is an extremely small number (no more than a handful) left over that appear to support their position. However, compared to the massive counter-evidence in which glottalized stops in Kartvelian and Afrasian correspond to similar sounds (the traditional plain voiced stops) in Proto-Indo-European, even these residual examples become suspect (they may be borrowings or simply false cognates). Finally, there are even some examples where Dolgopolsky’s and Illič-Svityč’s comparison of glottalized stops in Proto-Kartvelian and Proto-Afrasian with plain voiceless stops in Proto-Indo-European is correct. This occurs in the cases where two glottalics originally appeared in a Proto-Nostratic root: **C’VC’-*. Such roots are preserved without change in Proto-

Kartvelian and Proto-Afrasian, while in Proto-Indo-European, they have been subject to a rule of regressive deglottalization: $*C'VC' \rightarrow *CVC'$.

Another major shortcoming is in Illič-Svityč's reconstruction of the Proto-Nostratic vowel system, which, according to him, is essentially that of modern Finnish. It simply stretches credibility beyond reasonable bounds to assume that the Proto-Nostratic vowel system could have been preserved unchanged in Finnish, especially considering the many millennia that must have passed between the dissolution of the Nostratic parent language and the emergence of Finnish (Serebrennikov 1986:75 makes the same point). No doubt, this erroneous reconstruction came about as a result of Illič-Svityč's failure to deal with the question of subgrouping. The Uralic-Yukaghir phylum, of which Finnish is a member, belongs to the Eurasiatic branch of Nostratic. Now, Eurasiatic is several millennia younger than Afrasian, which appears to be the oldest branch of Nostratic. Therefore, Afrasian must play a key role in the reconstruction of the Proto-Nostratic vowel system, and the Uralic-Yukaghir vowel system must be considered a later development that cannot possibly represent the original state of affairs. For a critical review of Illič-Svityč's Nostratic Dictionary, see the Appendices at the end of volume 4 of this book

In closing, we may note that Alexis Manaster Ramer (1997:94—96) arrived at the same conclusions reached here regarding the need to reexamine the Nostratic sound correspondences proposed by Illič-Svityč (and, by implication, Dolgopolsky as well) in light of typological considerations. Specifically, he writes:

6.1. Finally, quite recently, I decided to see what would happen if one counted up the occurrences of the different stops (voiceless vs. voiced vs. glottalized as well as labial vs. coronal vs. velar) reconstructed for Nostratic by Illich-Svitych. I only performed the experiment on root-initial stops, with the following results: (they are given as approximations because there is a problem arriving at exact figures given that there [are] some cases where it is difficult to tell whether one is dealing with a single Nostratic form or two, or whether a particular form should begin with this or that stop):

$*b$ 50+	$*d$ 20+	$*g$ 40+
$*p$ 15+	$*t$ 15+	$*k$ 50+
$*p'$ 40+	$*t'$ 30+	$*k'$ 60+

The first observation (see Manaster Ramer in press a) was that ... the relative frequencies of the three phonation types (voiced, voiceless, glottalized) posited for Proto-Nostratic stops, as reflected in the sets of cognates compiled by Illich-Svitych, seem to be inconsistent with typological predictions. Specifically, at least in initial position, the series of stops reconstructed as glottalized is much more frequent at all points of articulation than the series reconstructed as (plain) voiceless.

Since one expects glottalized stops to be more marked and hence less frequent than plain voiceless, in particular, something was amiss. However, just as in the case of the clusters and affricates discussed above, the solution turned

out to be quite simple. Given the markedness considerations, I would suggest that the “glottalized” series was actually plain voiceless in Proto-Nostratic, while the “voiceless” series represented some more marked phonation type, glottalized or perhaps aspirated. This is consistent with the fact that the Nostratic series Illich-Svitych wrote as “glottalized” is in fact realized as glottalized only in parts of Afro-Asiatic and in Kartvelian, and in the latter it is easy to imagine that this could be a contact-induced development.

This reinterpretation of Nostratic ... naturally calls to mind the glottalic theory of Indo-European. As it happens, the stop series reconstructed by Illich-Svitych as plain voiceless and by me as glottalized (or aspirated) comes out in Proto-Indo-European as that series of stops which is traditionally reconstructed as voiced (media) but which many scholars have recently interpreted as glottalized.

Nostratic (Illich-Svitych)	Nostratic (Manaster Ramer)	Indo-European (Traditional)	Indo-European (Glottalic)
*t	*t' (or *tʰ)	*d	*t'
*t'	*t	*t	*t
*d	*d	*dh	*d

Totally unexpectedly, typological considerations provide us with arguments for reinterpreting the Nostratic stop series in a way that fits quite well with the glottalic theory of Indo-European. Of course, there is no reason in general to expect the phonetics of related languages and proto-languages to agree in this way, and such a convergence cannot be regarded as a criterion or an argument for relatedness among languages, since that would entail the “misuse of similarity” which Hamp (1992) cautions against. But it is not an unwelcome development when it occurs.

1.6. EVIDENCE FOR NOSTRATIC

The following evidence provides the basis for setting up a Nostratic macrofamily:

1. First and foremost, the descendant languages can be shown to share a large common vocabulary. In an article published in 1965, Illič-Svityč listed 607 possible common Nostratic roots, but only 378 etymologies were included in his posthumous comparative Nostratic dictionary. It should be noted that there are differences between the etymologies proposed in 1965 and the items included in the later dictionary: first, some of the items listed in 1965 do not appear in the dictionary; next, minor changes were made to several of the earlier etymologies. At the time of his death, Dolgopolsky had gathered data to support a little over 3,000 common Nostratic roots in his *Nostratic Dictionary* (a draft of which is now available on-line). In the joint monograph (1994) by myself and John C. Kerns, entitled *The Nostratic Macrofamily: A Study in*

Distant Linguistic Relationship, I supplied a great deal of lexical material from the Nostratic daughter languages to support 601 common Nostratic roots — there are 964 in the previous edition of this book. It should be noted as well that, in Volume 2 (2002) of his book *Indo-European and Its Closest Relatives: The Eurasiatic Language Family*, Greenberg presents a substantial body of lexical material, though Greenberg's Eurasiatic is not the same as Nostratic.

2. As is to be expected, the various branches of Nostratic investigated to date exhibit regular sound correspondences (see the table of Nostratic sound correspondences at the end of Chapter 12 for details), though, it should be mentioned, there are differences in interpretation between Illič-Svityč and Dolgopolsky on the one hand and myself on the other.
3. Finally, a substantial number of common grammatical formants have now been recovered — many of these are listed in Illič-Svityč's comparative Nostratic dictionary; see also Bomhard—Kerns 1994:141—190; Greenberg 2000; Dybo 2004; Bomhard 2002a, 2004c, 2015a; Dolgopolsky 2005 and 2008. Some of these formants are also examined in Fortescue 1998 and 2011 and Kortlandt 2010a (various papers). The grammatical formants that have been recovered to date are discussed in Chapter 16 of this book, while a systematic reconstruction of Proto-Nostratic morphology is attempted in Chapters 17 and 18.

Notable among the lexical items uncovered by Illič-Svityč, Dolgopolsky, Greenberg, and myself is a solid core of common pronominal stems (these are listed below in Table 1 at the end of this chapter, though only the stems represented in Indo-European are given — the Proto-Nostratic reconstructions are given according to my system; for information on other pronoun stems, cf. Dolgopolsky 1984). These pronominal stems have particular importance, since, as forcefully demonstrated by John C. Kerns (1985:9—50), pronouns, being among the most stable elements of a language, are a particularly strong indicator of genetic relationship (Ruhlen 1994a:92—93 makes the same point). Kerns (1985:48) concludes:

The results are overwhelming. We are forced to conclude that the pronominal agreements between Indo-European and Uralic, between Uralic and Altaic, and between Indo-European and Altaic, did not develop independently, but instead were CAUSED by some UNIQUE historical circumstance. In short, it is extremely unlikely that the three pronominal systems could have evolved independently.

Likewise, Collinder (1966:200):

It has been said that identical pronouns do not even give an indication of affinity, because you will find such identities anywhere, even if you compare two manifestly unrelated languages. The random checks I have made seem to indicate that this does not hold good. Outside the nostratic group, there are identities, but only a few, from one to four. Within the nostratic group the number of identities varies from, let us say, seven to ten. As the probability of

mere chance decreases in geometric, not in arithmetic, proportion to the increasing number of identities, seven to ten identities means quite another level of probability than one to four.

The conclusion seems inescapable that the consistent, regular phonological correspondences that can be shown to exist among the Nostratic daughter languages as well as the agreements in vocabulary and grammatical formants that have been uncovered to date cannot be explained as due to linguistic borrowing or mere chance but can only be accounted for in terms of common origin, that is, genetic relationship. To assume any other possibility would be tantamount to denying the efficacy of the Comparative Method. This does not mean that all problems have been solved. On the contrary, there remain many issues to be investigated and many details to be worked out, but the future looks extremely exciting and promising.

At this stage of research, we can confidently say that the following languages/language families are to be included in the Nostratic macrofamily: Afrasian, Elamo-Dravidian, Kartvelian, and Eurasiatic. Eurasiatic, in turn, includes the following: Tyrrhenian, Indo-European, Uralic-Yukaghir, Altaic, Chukchi-Kamchatkan, Gilyak (Nivkh), and Eskimo-Aleut. Each of these languages/language families will be discussed in more detail in Chapter 2. The Nostratic family tree may be represented as follows (note here, for comparison, the computer-generated family tree given by Starostin [1999c:66]):

CHART 1: THE NOSTRATIC MACROFAMILY

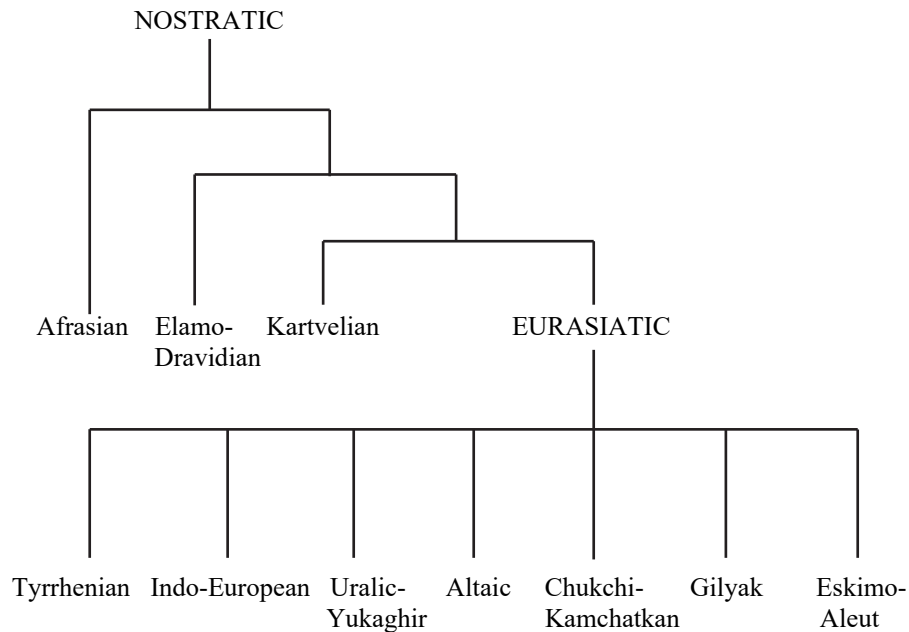


TABLE 1: THE DISTRIBUTION OF NOSTRATIC PRONOUN STEMS

A. PERSONAL PRONOUN STEMS

Proto-Nostratic	Proto-IE	Proto-Kartv.	Proto-Afrasian	Proto-Uralic	Proto-Dravid.	Proto-Altaic	Sum.
*mi-/ *me- (1st sg.)	*me-/ *mo-	*me-, *men-	*m[i]-	*me		*mi (> *bi)	ma(e), me-a, me-e
*ma-/ *mǝ- (1st pl. incl.)	*-me-/ *-mo-		*ma-	*me		*ma- (> *ba-)	-me
*wa-/ *wǝ- (1st pl.)	*we-/ *wo-; *wey-		*wa-				
*na-/ *nǝ- (1st pl.)	*ne- /*no-; *n-s-		*na-		*nǎm-		
*thi-/ *the- (2nd sg.)	*thū, *the-		*ti-	*te		*thi, *tha	za-e, -zu

Notes:

1. Indo-European: The 1st sg. stem *mi-/ *me- is used in the oblique cases (except in the Celtic branch, where it has spread into the nominative as well); the 1st pl. inclusive stem *ma-/ *mǝ- is preserved in 1st person plural verb endings; the 1st pl. stem *wa-/ *wǝ- is preserved as an independent 1st person plural pronoun stem and in 1st person dual and/or plural verb endings; the 2nd sg. reconstructions *thū, *the- ‘thou, you’ represent later, Post-Anatolian forms — the forms found in the Anatolian languages are based upon *thi- ‘thou, you’.
2. Kartvelian: The 1st pl. stem *na-/ *nǝ- is found in Svan *nǎj* ‘we’.
3. Afrasian: The 1st sg. stem *mi-/ *me- and 1st pl. inclusive stem *ma-/ *mǝ- are found only in Chadic as independent pronouns; the 1st sg. stem *mi-/ *me- serves as the basis of the 1st sg. verbal suffix in Highland East Cushitic; the 1st pl. stem *wa-/ *wǝ- is found in Egyptian and Chadic (in Egyptian, *wy* means ‘I, me’).
4. Elamo-Dravidian: The 2nd sg. stem *thi-/ *the- is found in Elamite in the 2nd sg. and pl. personal class marker *-t(i/a)* (cf. Khačikjan 1998:34) and in Dravidian in, for example, the Parji appositional marker *-t* of the 2nd sg. in pronominalized nouns and as a verb suffix of the 2nd sg.
5. Altaic: The 1st sg. stem *mi- has become *bi ‘I’ in the Altaic daughter languages, while the 1st pl. stem *ma- has become *ba* in Mongolian (= 1st pl.

exclusive); the initial **m-* is preserved in the oblique cases, however; the 2nd sg. stem **thi-* has become *či* ‘you’ in Mongolian.

6. Chukchi-Kamchatkan: The pronouns of the 1st and 2nd persons sg. and pl. are as follows in Chukchi:

	Singular	Plural
1	<i>γə-m</i>	<i>mu-ri</i>
2	<i>γə-t</i>	<i>tu-ri</i>

7. Gilyak / Nivkh: The 1st pl. inclusive stem **ma-/mə-* is preserved in the 1st pl. inclusive pronoun *me-r*, *mi-r* ‘we’ (note also 1st dual *me-ge*, *me-gi*); the 1st plural stem **na-/nə-* is found in the 1st pl. exclusive pronoun *ńyŋ* ‘we’; the 2nd sg. stem **thi-/the-* is preserved in the 2nd sg. pronoun *či* ‘you’. (The forms cited are from the Amur dialect [cf. Gruzdeva 1998:25—26].)
8. Eskimo-Aleut: The 1st sg. stem **mi-/me-* is preserved in the West Greenlandic 1st sg. relative possessive suffix *-ma*, while the 2nd sg. stem **thi-/the-* is preserved in the 2nd sg. absolutive possessive suffix *-(i)t*. The plural forms are *-ma* and *-tit* respectively.
9. Etruscan: The 1st sg. stem **mi-/me-* is preserved in (nominative) *mi* ‘I’, (accusative) *mini* ‘me’; the 2nd sg. stem may be preserved in the pronoun stem *θi*, but this is uncertain since the meaning of the Etruscan form is unknown — however, the 2nd sg. stem **thi-/the-* is clearly reflected in the Etruscan verbal imperative endings *-ti*, *-θ*, *-θi*.
10. Sumerian: *ma(-e)*, *me-a*, *me-e* ‘I’ are Emesal forms; *-me* is a 1st pl. possessive suffix, ‘our’; *-zu* is a 2nd sg. possessive suffix, ‘your’.

B. DEMONSTRATIVE PRONOUN STEMS

Proto-Nostratic	Proto-IE	Proto-Kartv.	Proto-Afrasian	Proto-Uralic	Proto-Dravid.	Proto-Altaic	Sum.
*sa-/sə-	*so-	*š- (*s _l -)		*sä			
*t ^h a-/ *t ^h ə- proximate	*t ^h o-		*ta-	*ta, *tä	*tān-	*t ^h a- (*t ^h e-)	
*t ^h u-/ *t ^h o- distant	*t ^h o-		*tu	*to			
*k ^h a-/ *k ^h ə-	*k ^h e-, *k ^h o-, *k ^h i-	*-k-	*ka-				
*d ^v i-/ *d ^v e-	*-d ^h e		*d ^v i-	*t ^v i-/ *t ^v e-			
*ɣi-/ɣe-	*ɣe-/ɣo-; *ɣey-/ *ɣoy-/ɣi-	*i-, *e- distant		*e	*ĩ- prox.	*i-, *e- prox.	
*ɣa-/ɣə-	*ɣe-/ɣo-	*a-, *e- prox.			*ā- distant	*a- distant	
*na-/nə-, *ni-/ne-, *nu-/no-	*ne-/no-		*na-	*na, *nä *no			ne-en, ne(-e)

Notes:

1. Indo-European: The stem *d^vi-/d^ve- is only preserved as a suffixed particle *-d^he; the stem *ne-/no- has a derivative *ɣe-no-/ɣo-no-.
2. Altaic: The stem *t^ha-/t^hə- is used as the distant demonstrative in Altaic: Mongolian (nom. sg.) *tere* (< *te-r-e) ‘that’, (nom. pl.) *tede* (< *te-d-e) ‘those’; Tungus (Solon) *tari* ‘that’; Manchu *tere* ‘that’.
3. Eskimo-Aleut: The stem *t^ha-/t^hə- is preserved in the Inuit (also called Inupiaq) prefix *ta-*, which may be added to any demonstrative form whose coreferent has already been focused.
4. Etruscan: The proximate stem *t^ha-/t^hə- is preserved in *ita*, *ta* ‘this’; the stem *k^ha-/k^hə- is preserved in *eca* (archaic *ika*), *ca* ‘this’.
5. Sumerian: The demonstrative stem *ɣi-/ɣe- is found in *e* ‘hither, here’.

C. RELATIVE AND INTERROGATIVE STEMS

Proto-Nostratic	Proto-IE	Proto-Kartv.	Proto-Afrasian	Proto-Uralic	Proto-Dravid.	Proto-Altaic
* <i>kwhi</i> -/ * <i>kwe</i> - relative	* <i>kwe</i> -/ * <i>kwo</i> -/ * <i>khi</i> -			* <i>ki</i> , * <i>ke</i>		* <i>ka</i> (y)-
* <i>kwha</i> -/ * <i>kwhə</i> - interrog.	* <i>kwe</i> -/ * <i>kwo</i> -/ * <i>khi</i> -		* <i>ka</i> -	* <i>ku</i> , * <i>ko</i>		(* <i>ka</i> [y]-)
* <i>mi</i> -/* <i>me</i> - interrog.	* <i>me</i> -/ * <i>mo</i> -	* <i>mi</i> -, * <i>min</i> -	* <i>mi</i> -	* <i>mi</i>		
* <i>ma</i> -/ * <i>mə</i> - relative	* <i>me</i> -/ * <i>mo</i> -	* <i>ma</i> -	* <i>ma</i>	(* <i>mi</i>)		
* <i>ɣay</i> -, * <i>ɣa</i> - relative & interrog.	* <i>ɣo</i> -		* <i>ɣa</i> (y)-	* <i>yo</i>	* <i>yā</i> -	* <i>yā</i> -

Notes:

1. Indo-European: The Proto-Indo-European interrogative/relative stem **me*-/**mo*- is preserved in Celtic, Tocharian, and Anatolian.
2. Kartvelian: The relative/interrogative stem **ɣa*- is found in Svan (interrogative) *jär* ‘who?’, (relative) *jerwāj* ‘who’, (indefinite) *jer* ‘somebody, something’.
3. Uralic: The relative stem **yo* is Finno-Volgaic. It is found in: Finnish *jo*- in *joka* ‘who, which’, *joku* ‘someone, anyone’, *jos* ‘when’; Lapp / Saami *juokkē* ‘each, every’; Mordvin *ju*- in *juza toza* ‘to and fro, back and forth’; Cheremis / Mari (Western) *juž*, (Eastern) *južâ* ‘someone, anyone’.
4. Altaic: The interrogative stem **mi*-/**me*- is found in the Turkish interrogative particles *mi*, *mī*, *mu*, *mü* and in the Middle Mongolian suffixed interrogative particle *-mu*, *-mī*.
5. Chukchi-Kamchatkan: The interrogative stem **mi*-/**me*- is preserved in *me-in* ‘who?’.
6. Eskimo-Aleut: The interrogative stem **kwha*-/**kwhə*- is preserved in the Proto-Eskimo interrogative pronoun **ki*(*na*) ‘who?’ and in **qaya* ‘when?’, **qavcit* ‘how many?’, **qaku* ‘when (in future)?’. The interrogative stem **mi*-/**me*- is preserved in the Proto-Eskimo enclitic particle **mi* ‘what about?’.
7. Sumerian: The interrogative stem **mi*-/**me*- occurs in *me-na-àm* ‘when?’, *me-a* ‘where?’, *me-šè* ‘where to?’.

CHAPTER TWO

A SURVEY OF THE NOSTRATIC LANGUAGES

2.1. INDO-EUROPEAN

The Indo-European (in German, *Indogermanisch* — occasionally translated as “Indo-Germanic” in older works) language family includes the following branches: Anatolian (Hittite-Luwian), Italic, Celtic, Germanic, Tocharian, Greek, Baltic, Slavic, Albanian, Armenian, and Indo-Iranian. There are also a number of poorly-attested Indo-European daughter languages such as Thracian, Phrygian, Venetic, Illyrian, Ligurian, and several others. Phrygian may be the ancestor of Armenian, but this is not absolutely certain. Indo-European languages cover all of Europe except for Basque (found in northern Spain and the southwestern corner of France), Turkish (found in the Balkans), and Uralic (Finnish, Estonian, Hungarian, and several others with fewer speakers), modern Iran, parts of Central Asia north of Iran, Afghanistan, and northern and central India. European colonization has also spread Indo-European languages to the New World, where they have mostly supplanted Native American languages, to Australia and New Zealand, and to large parts of Africa and Asia, where they are used as languages of administration and/or learning. The extinct Hittite and Luwian (along with Palaic, Hieroglyphic Luwian, Lycian, Lydian, Carian, and several other poorly-attested dialects and/or languages) were spoken in what is now Turkey (Türkiye), while the Tocharian dialects, which are also extinct, were spoken in what is now the Xīnjiāng (Sinkiang; formerly called Chinese Turkestan) Uighur Autonomous Region (Xīnjiāng Wéiwú'ěr Zìzhìqū) of the People's Republic of China (Zhōnghuá Rénmín Gònghéguó).

The Indo-European language family has been subjected to thorough study for the past two centuries, and there is broad agreement among scholars on essentials, which is not to say that all problems have been resolved or that there are still not controversial issues. Several languages have extremely old records and/or literatures, such as Hittite, whose earliest records go back to around 1800 BCE, though the majority of documents date from 1500 to 1200 BCE; Mycenaean Greek, whose earliest inscriptions date from 1300 BCE; Sanskrit, with the oldest part of the Rig-Veda (composed in an archaic dialect of Old Indic) probably going back as far as 1200 BCE; Avestan, the liturgical language of Zoroastrianism, whose most ancient scriptures date from about 600 BCE; Old Persian, which begins with the Achaemenid Records from about 500 to 400 BCE; and Italic, with the oldest Latin inscription dating from the sixth century BCE, and with the earliest Oscan-Umbrian records dating from about the fifth century BCE. Records do not begin to appear for the other Indo-European daughter languages until the middle to later half of the first millennium CE.

Two large dialect groups are often recognized, especially in older works: (A) the so-called “centum” languages and (B) the so-called “satəm” languages. This dialectal division is based upon the different treatment of the gutturals in each group. In the satəm languages, sibilants (*s* and *z*), palato-alveolar fricatives (*š* and *ž*), and affricates correspond to velars in the centum languages, while velars and affricates in the former group correspond to reflexes of earlier labiovelars in the latter group. There are other correspondences as well, found in a small number of examples, in which velars in the centum languages correspond to velars in the satəm languages. Though much attention has been devoted in the literature to this division, its significance is greatly overrated.

Morphologically, Proto-Indo-European was a highly inflected language — except for particles, conjunctions, and certain quasi-adverbial forms, all words were inflected. The basic structure of inflected words was as follows: root + suffix (one or more) + inflectional ending. A notable morphophonemic characteristic was the extensive use of a system of vocalic alternations (“Ablaut” in German) as a means to mark morphological distinctions. Verbs were strongly differentiated from nouns. For nouns and adjectives, three genders, three numbers, and as many as eight cases have been reconstructed (mainly on the basis of what is found in Classical Sanskrit), though it is doubtful that all of these features were ancient — it is indeed possible to discern several chronological layers of development. The traditional reconstruction of the Proto-Indo-European verbal system sets up two voices, four moods, and as many as six tenses. Syntactically, Proto-Indo-European seems to have had many of the characteristics of an SOV language, though there must, no doubt, have been a great deal of flexibility in basic word order patterning. Proto-Indo-European morphology is discussed at length in Chapter 19 of this book, while earlier developments are discussed in Chapter 20.

It is generally agreed that the homeland of the Indo-Europeans is to be located to the north of and between the Black and Caspian Seas (cf. Anthony 2007). Alternative proposals are far less convincing. See Chapter 13 for more information about homelands.

The subgrouping of the Indo-European daughter languages has long been controversial. Though Sturtevant (following a suggestion by Emil Forrer) attempted to show that the Anatolian languages were the first to split off from the remainder of the Indo-European speech community, up until recently, most Indo-Europeanists did not follow him on this (a notable exception being Warren Cowgill). Sturtevant renamed the parent language “Indo-Hittite” to reflect this early split. The question about whether Baltic and Slavic are two independent branches or whether they are descended from a common Balto-Slavic is still contentious, as is the question of Italo-Celtic unity. In 1998, the problem of subgrouping was addressed by Donald Ringe and a group of linguists from the University of Pennsylvania. By using a computational cladistic model, they arrived at the following conclusions (Ringe—Warnow—Taylor—Michailov—Levison 1998:406—407):

The important features of this tree can be summarized as follows. The Indo-Hittite hypothesis, according to which Anatolian is one first-order subgroup of

the IE family and *all other branches together* are the other first-order subgroup is supported — but by only one character, the presence of a thematic aorist in the verb system... The satem core emerges as an extremely robust subgroup, always with the traditional internal structure (which is not surprising). More interestingly, there is always a subgroup including Greek and Armenian, as has been suspected in the past... Most interesting of all, Italo-Celtic emerges as a robust subgroup, as suggested by Jasanoff 1994.

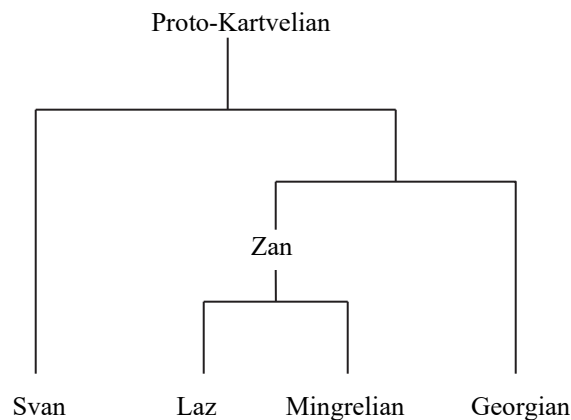
They further note that Tocharian also split off from the rest of the speech community at a very early date — it was the next branch to break away after Anatolian. Finally, they conclude that Germanic was originally part of the dialect continuum that included Balto-Slavic but that it later was in contact with and shared several common developments with Pre-Proto-Celtic and Pre-Proto-Italic.

The conclusions reached by Ringe and his colleagues are both sober and persuasive. Consequently, it is their views on the subgrouping of the Indo-European daughter languages that are followed in this book.

2.2. KARTVELIAN

Kartvelian (also referred to as South Caucasian), which is one of the three indigenous language families of the Caucasus Mountains, includes the following languages: Georgian, Mingrelian, Laz, and Svan. These languages fall into two main groupings, namely, Svan, on the one hand, and Georgian, Laz, and Mingrelian, on the other. Laz and Mingrelian, in turn, form the Zan subbranch. Svan preserves many archaic features. Except for Laz, which is spoken in Turkey (Türkiye), and the Ingilouri dialect of Georgian, which is spoken in Azerbaijan, the Kartvelian languages are spoken in the westernmost parts of the Caucasus Mountains within the borders of the Republic of Georgia (საქართველო).

The Kartvelian family tree may be represented as follows (cf. Tuite 1997:4; Schmidt 1962:13; Hewitt 1995:2; Gamkrelidze—Mačavariani 1982:20; Fähnrich—Sardshveladse 1995:5; Fähnrich 2007:5; Klimov 1969:46):



Georgian, which has its own distinctive alphabet, has a literary tradition going back 1500 years, the earliest text being a translation of the Bible dating from the 5th century CE, only fragments of which still exist. The early literature was exclusively religious, and it was only with the so-called “Golden Age” (12th century CE) that secular literature began to appear. There are a number of Georgian dialects, which differ not only in vocabulary and phonology but also in morphology and syntax.

A notable feature of Kartvelian phonology is the existence of complex consonant clusters — Georgian, for example, tolerates 740 initial clusters, which can have upwards of six members (Fähnrich 1993:20 lists eight), and 244 final clusters. In Svan, on the other hand, initial consonant clusters are far less complex than in Georgian, while final clusters can be far more complex. Old Georgian had both voiceless and glottalized uvular stops, but only the glottalized member is retained in Modern Georgian. Both are still found in Svan. Unlike Georgian, Svan does not distinguish /v/ and /w/ as distinct phonemes — it only has /w/.

Morphologically, the Kartvelian languages are all highly inflected; Georgian, for example, has six basic grammatical cases as well as eleven secondary cases. A notable characteristic of noun declension is the distinction of ergative and absolutive cases; the ergative case is used to mark the subject of transitive verbs, while the absolutive case is used to mark direct objects and the subject of intransitive verbs. It is the dative case, however, that is used to mark the subject of so-called “inverted verbs”. There are several other departures from canonical ergative-type constructions, so much so in Mingrelian, for instance, that this language no longer possesses any true ergative features. Adjectives normally precede the nouns they modify. Postpositions are the rule. Verb morphology is particularly complicated — for example, Tuite (2004:978—981) lists thirteen distinctive functional elements that may be arrayed around a given verb root in Early Georgian, though they may not all appear simultaneously (Fähnrich 1994:78 lists twenty-three elements, including the root); the overall scheme is as follows:

1. Preverb with more or less predictable directional meaning
2. Preverb *mo-* (‘hither’)
3. Preverbal clitic
4. Morphological object prefix
5. Morphological subject prefix
6. Character or version vowel (German *Charaktervokal*)

ROOT

7. Passive/inchoative or causative suffix
8. Plural absolutive suffix
9. Series marker (or “present/future stem formant”)
10. Imperfect stem suffix
11. Tense/mood vowel
12. Person/number suffix
13. Postposed clitics

Syntactically, the predominant word order is SOV, though SVO is not uncommon.

2.3. AFRASIAN

Afrasian (also called Afroasiatic, Hamito-Semitic, Semito-Hamitic, Erythraic, and Lisramic) includes the following branches: Semitic, Egyptian, (Libyco-)Berber, Cushitic, Omotic, Chadic, and Ongota (for an attempt at subgrouping, see Chapter 7, §7.15, of this book). Except for Semitic, all of the Afrasian languages are found in northern and eastern Africa. In ancient times, Semitic was primarily located in the Near East, but Muslim conquests beginning in the 7th century CE have spread a single Semitic language, namely, Arabic, across the greater part of northern Africa, where it has totally replaced Egyptian (Coptic) as a spoken language and has greatly restricted, but has not totally supplanted Berber, which is still spoken in pockets across northern Africa (see the map facing page 1 in D. Cohen [ed.] 1988). Though, as just noted, Coptic is no longer a spoken language, it is still used as the liturgical language of the Christian Coptic Church in Egypt. It is estimated that there are at least 375 languages in the family, including several important extinct languages.

The following chronology may be established for the branching off of the various branches of Afrasian (cf. Ehret 1995:483—490): Omotic, which appears to contain many distinctive features, must have been the first branch to split from the rest of the Afrasian speech community. The next split was between Cushitic on the one hand and Chadic, Egyptian, Berber, and Semitic on the other. Finally, Chadic split off, followed by Egyptian and Berber (cf. Blažek to appear for details). Within Semitic, Akkadian is the most archaic language as a whole, though Arabic preserves the original phonological structure better than any of the other Semitic languages. Tuareg is usually viewed as the most conservative Berber language, as are Beja (also called Beḍawye) and Saho-Afar within Cushitic.

The study of Afrasian as a whole is still not far advanced. Several branches, such as Semitic and Egyptian, for example, have written records going back many millennia and have been scientifically investigated rather thoroughly, while other Afrasian languages are scarcely even known. Egyptian, whose earliest inscriptions date from about 3400 BCE, and Akkadian, whose earliest inscription dates from the reign of King Lugalzagesi of Uruk (roughly 2352 to 2327 BCE), were the languages of great civilizations of antiquity, while Hebrew and Arabic are the liturgical languages of Judaism and Islam respectively. The Semitic languages exhibit great internal consistency as a group, with fairly straightforward correspondences in morphology, with close resemblance in their phonological systems, and with a large common vocabulary. In contrast, the internal divisions in the other branches, except for Egyptian, of course, which is a single language, are far more pronounced.

Proto-Afrasian was most likely highly inflected. It is simply not possible, however, given the present level of knowledge, to reconstruct the morphological structure of the parent language in detail, though some common features (such as the distinction of grammatical gender, the existence of two verbal conjugation systems, at least one of which, namely, the prefix conjugation, probably goes back to Proto-Afrasian, and a common set of pronominal stems) have been noted.

The Afrasian daughter languages are extremely diverse typologically. Some have complex phonological systems, including tones, while others do not. Some

have intricate inflectional systems, while others do not. Syntactically, the classical Semitic languages, Egyptian, and the Berber languages are VSO, the majority of the Cushitic languages are SOV, and most Chadic languages are SVO. For more information, cf. especially Frajzyngier—Shay (eds.) 2012 and D. Cohen (ed.) 1988.

2.4. URALIC-YUKAGHIR

As the name implies, Uralic-Yukaghir has two divisions, namely, Uralic and Yukaghir. Yukaghir consists of a single branch, while Uralic is divided into Finno-Ugrian (also called Finno-Ugric) and Samoyed. There are about 30 Uralic languages. The internal subgrouping of the Uralic languages is still not fully settled. Finno-Ugrian is thought to have become separated from Samoyed some time between 4,000 to 2,000 BCE. Yukaghir is located in northeastern Siberia, while Uralic languages are spread across northern Eurasia, from Scandinavia and central Europe in the west to north-central Siberia east of the Ural Mountains in the east.

Hungarian is the first Uralic language for which there are written records. Though the first printed text did not appear until 1527, Hungarian words are cited as early as the 9th and 10th centuries CE in Arabic and Byzantine documents. Finnish literature did not begin until 1548, with a translation of the Bible. An Estonian translation of the Bible first appeared in 1632. Yukaghir has no written literature.

Morphologically, the Uralic languages are predominantly agglutinating, though many of the modern languages, especially Estonian, which has innovated considerably, have deviated from the original type. Proto-Uralic nominal inflection had at least three numbers (singular, dual, and plural), two grammatical cases (accusative and genitive), and three local cases (dative, locative, and ablative). Verb morphology distinguished two conjugational types, namely, subjective and objective. A large number of suffixes existed, each with its own distinctive morphological function. The original syntactic structure seems to have been SOV, and this is fairly well preserved in the modern Samoyed and Ob-Ugric languages (Ostyak [Xanty] and Vogul [Mansi]) and Cheremis (Mari). The basic word order in the other languages is SVO, though, as a general rule, word order in all of the Uralic languages is rather flexible. Hungarian stands apart, word order being determined here more by topic-comment considerations than in the other Uralic languages, so that neither SOV nor SVO can be said to be dominant.

Yukaghir is also basically agglutinating, though a certain amount of fusion has taken place in the verb. There are few prefixes but numerous suffixes. Postpositions are the rule. Syntactically, the basic word order is SOV.

2.5. ELAMO-DRAVIDIAN

Dravidian has four branches: South Dravidian, South-Central Dravidian, Central Dravidian, and North Dravidian. Though the vast majority of Dravidian languages are concentrated in southern India, there are also pockets of Dravidian in northern

India, in Pakistan, in Nepal, in northern and eastern Sri Lanka, and on the Maldiv Islands. At least 25 Dravidian languages are spoken. There is still uncertainty over the subgrouping of several languages. Elamite, which is now extinct, was located primarily in southwestern Iran in the vicinity of the Zagros Mountains as well as the adjacent plains of Khuzistan and to the south along the coast of the Persian Gulf. There is good reason to believe that Elamite once occupied all or nearly all of the Iranian plateau. The inscriptions of the Indus Valley (Harappan) Civilization may have been written in an early Dravidian language (cf. Bonta 2010 and 2015; Fairservis 1992:14–23; Parpola 1994; A. Robinson 2015, Chapter 10; but see Zide—Zvelebil [eds.] 1976 for a critical assessment of attempts to decipher the Indus Valley script), though other possibilities cannot be entirely ruled out (cf. Witzel 1999; Farmer—Sproat—Witzel 2004).

The earliest Elamite text is the “Treaty of *Narām-Sin*”, which dates from before 2200 BCE. After that, only cuneiform texts composed in a slightly deviant form of Akkadian are found until around 1300 BCE, when Elamite cuneiform texts begin to appear. The literature of the Dravidian languages, especially Tamil, is enormous. In addition to Tamil, Malayalam, Kannaḍa, and Telugu are fully-developed literary languages, while the remaining Dravidian languages have extensive oral traditions. The oldest Tamil literature probably dates from around the 2nd or 3rd centuries CE.

Morphologically, the Dravidian languages are agglutinating. The basic root type was monosyllabic, though there is some indication that an extremely small number of bisyllabic roots may have to be reconstructed at the Proto-Dravidian level as well. This is, however, by no means certain, and it is best at present to regard Proto-Dravidian roots as being exclusively monosyllabic. Inflectional categorization was achieved by means of suffixes added directly to the lexical roots or to the lexical roots extended by means of derivational suffixes. Prefixes were not used. Any vowel, long or short, could appear in a root, but only *a*, *i*, or *u* could appear in a suffix. Two basic parts of speech were differentiated in Proto-Dravidian: (A) nominals, which included nouns and adjectives, and (B) verbs. Nouns were inflected for case, person, number, and gender. Eight cases (nominative, accusative, sociative, dative, genitive, instrumental, locative, and ablative), two numbers (singular and plural), and two genders (animate and inanimate) are assumed to have existed in Proto-Dravidian. There were separate first person plural inclusive and exclusive pronouns. Verbs were inflected for tense and person. There were two tenses (past and non-past) and two moods (modal and indicative). Indeclinables existed as a separate stem type distinct from nouns and verbs. Syntactically, the basic word order was SOV.

Elamite was also agglutinating. Three basic parts of speech were differentiated: (A) verbs, (B) nominals, and (C) indeclinables. The basic verbal stem form was (C)VC(V). Grammatical categorization was achieved by means of suffixation. In the nominal stems, case relationships were mostly indicated by the use of postpositions. Verb morphology was extremely simple. Word order structure was SOV. Cf. Grillot-Susini 1987; Hinz—Koch 1987; Khačikjan 1998; Paper 1955; McAlpin 1981; Reiner 1969; Stolper 2004.

Recently, David McAlpin (2022) has attempted to show that Brahui is not, in fact, a Dravidian daughter language. According to McAlpin, it is to be reclassified as Modern Colloquial Eastern Elamite, related to but not descended from classical Elamite.

2.6. ALTAIC

Altaic has at least three branches: Mongolian, (Manchu-)Tungus, and (Chuvash-)Turkic. Mongolian languages are spoken in Mongolia proper, in northern China in the so-called “Inner Mongolian Autonomous Region”, in eastern Siberia in areas bordering on Mongolia, (Kalmyk) in Russia on the northwestern shores of the Caspian Sea, and (Moghol) in Afghanistan; (Manchu-)Tungus languages are spoken in eastern Siberia and (Manchu) in northeastern China in what was formerly known as Manchuria, but which is now divided between the provinces of Hēilóngjiāng, Jílín, and Liáoníng and the Inner Mongolia Autonomous Region (Nèi Měngǔ Zìzhìqū) and is populated mostly by ethnic Chinese (Hàn); and (Chuvash-)Turkic languages are spoken in a large, discontinuous band, stretching from Turkey (Türkiye) in the west, across Central Asia and western China in the middle, and on to northeastern Siberia in the east. Some specialists consider Korean and Japanese-Ryukyuan (Japonic) to be related to the above languages. The term “Transeurasian” has recently been coined to take into account Korean and Japanese-Ryukyuan.

The oldest Turkic texts are the Orkhon inscriptions of the Kül-Tegin stele, written in a type of runic and dating from 735 CE. The earliest Mongolian inscription is only five lines long and mentions the nephew of the warrior-ruler Genghis Khan (Chinggis Qagan) (1162—1227 CE). The longest early literary work in Mongolian is *The Secret History of the Mongols* (*Mongγol-un niγuča tobčayan*), an imperial chronicle written in Uighur script and thought to date from around 1240 CE. Few documents in Mongolian have survived from the period between the composition of that chronicle and the 17th century. Beginning with the 17th century, however, a rich Buddhist and historical literature began to appear. The language of that literature is known as Written Mongolian. There is an extensive literature in Manchu, but most of it is of relatively late origin and consists mainly of translations from Chinese sources.

The phonological systems of the Altaic languages are comparatively uncomplicated. Vowel harmony is a common phonological characteristic, though in the (Chuvash-)Turkic and Mongolian branches, it is based on a front ~ back contrast, while in the (Manchu-)Tungus branch, it is based on a high ~ low contrast. It is difficult to reconstruct the common Altaic morphological system in detail since there are deep differences among the descendant languages (the resemblances are more observable in vocabulary and syntax), though there are indeed a few common morphological elements, and all of the Altaic languages belong to the same type. Morphologically, the Altaic languages are typically agglutinating in structure. Though all Altaic languages make extensive use of suffixes, only a few of them are common to all three branches, one notable common feature here being the use of

possessive suffixes. Nouns and verbs are clearly differentiated, though not as sharply as in Indo-European. There is a common stock of pronominal stems, and all Altaic languages use postpositions. Syntactically, the original structure was SOV, and this is well preserved in the modern languages, especially the Turkic languages, which are fairly strict in this regard, while more flexibility is found in the Mongolian and (Manchu-)Tungus languages.

2.7. CHUKCHI-KAMCHATKAN

The Chukchi-Kamchatkan family includes the following languages: Chukchi, Koryak, Kerek, Alyutor, and Kamchadal (also called Itelmen or Itelmic). Koryak, Kerek, and Alyutor are extremely close as a group, and these, in turn, are close to Chukchi. Kamchadal, which is now on the verge of extinction, stands apart from the others. The Chukchi-Kamchatkan languages are found in the extreme northeast corner of Siberia in the Chukotka and Kamchatka peninsulas. Though written languages were developed for Chukchi, Koryak, and Kamchadal in the 1930's, only Chukchi is still being used in publications and education.

Chukchi consonantism is fairly simple, there being only 14 distinct consonant phonemes, while that of Koryak is more complex than Chukchi, and that of Kamchadal is even more complex than either Chukchi or Koryak, containing both plain and glottalized stops, voiced and voiceless fricatives, and three lateral phonemes. A notable characteristic of Chukchi phonology is a system of vowel harmony based on a height contrast. In this system, vowels are classified as either “dominant” (*e, a, o*) or “recessive” (*i, e, u*) — note that the vowel *e* appears in both series. The presence of a dominant vowel in any morpheme in a word conditions the change of any recessive vowels in the word to their corresponding dominant counterparts. A similar system is partially preserved in Koryak.

The Chukchi-Kamchatkan languages are agglutinating. In Chukchi, however, some fusion has occurred, particularly in the verb. Chukchi nouns distinguish singular from plural. There are relatively few cases. Typical of the Chukotian branch is case marking of subjects and direct objects on the basis of an ergative-absolutive system (cf. Fortescue 2005:426). Chukchi and Koryak also exhibit a certain degree of incorporation, though it is not as extensively used as in Eskimo-Aleut. Verbs clearly distinguish between transitive and intransitive, with the ergative being used in conjunction with transitive verbs. Chukchi employs postpositions exclusively. Chukchi word order is rather free, with OV being slightly more predominant than VO.

2.8. GILYAK

Gilyak (also called Nivkh) is usually considered to be a single language, but the two main dialects, namely, the Amur dialect, on the one hand, and the Sakhalin (or Eastern) dialect, on the other, are not mutually intelligible. Of the two, the Sakhalin

dialect is more archaic. The Gilyaks are found on the lower reaches of the Amur River and on Sakhalin Island. Though a written language was developed for the Amur dialect in the 1930's, next to nothing has appeared in it.

Gilyak tolerates highly complex consonant clusters. Furthermore, initial consonants undergo various alternations, which are conditioned both by the final segment of the preceding word and by syntactical considerations. In contrast, the vowel system is fairly simple.

Gilyak morphology is typologically similar to that found in the Altaic languages. Noun morphology is uncomplicated. Only a few cases are distinguished, including several basic spatial cases. Singular and plural are also distinguished. A system of numeral classifiers has been developed. In the pronouns, there are separate forms for first person dual and plural, while the first person plural, in turn, has a distinction between inclusive (*mer*) and exclusive (*ñəŋ*). Verb morphology is also simple, though one notable feature worth mentioning is the wide range of non-finite gerunds that can occur. Gilyak possesses postpositions but no prepositions. Basic word order structure is SOV.

2.9. ESKIMO-ALEUT

As the name implies, Eskimo-Aleut has two branches: Eskimo and Aleut. The Aleut dialects are mutually intelligible. However, this is not the case with the Eskimo dialects. Two main Eskimo dialect groups are distinguished, namely, Yupik and Inuit (also called Inupiaq). Yupik speakers are concentrated in southwestern Alaska, beginning at Norton Sound and extending southward along the western and southern coasts and inland. An extremely small enclave of Yupik speakers is found in northeastern Siberia as well. Inuit speakers are found north of Norton Sound all the way to the northern coast of Alaska and extending eastward across all of the northernmost parts of Canada and on into Greenland. Aleut is spoken on the Aleutian Islands and the Commander Islands.

The Proto-Eskimo vowel system was relatively simple (Proto-Eskimo had only four vowels: **i*, **a*, **u*, **ə* — phonemic length probably did not exist), while the consonant system resembled that of Proto-Uralic. The phonological systems found in the Eskimo dialects are far more complex than that of Proto-Eskimo. In contrast, Aleut phonology is less complicated. Nouns differentiate between singular, dual, and plural. The case system is reminiscent of that found in Chukchi-Kamchatkan, though it differs by using suffixes to indicate the plural. The verb makes no tense distinctions but has four moods and separate transitive and intransitive conjugations. The absolutive case is used as the subject of intransitive verbs and as the direct object of transitive verbs, while a different case is used as the subject of transitive verbs. Conjunctions and other particles are absent in most Eskimo dialects. A notable characteristic is that incorporation has been developed to such an extent that whole phrases may be expressed in a single word.

2.10. ETRUSCAN

Etruscan was spoken in central and northern Italy. Its earliest texts date from the 7th century BCE, and it probably ceased to be a spoken language around the first half of the first century CE, being replaced by Latin. It was written in a special alphabet derived from Greek. There are about 13,000 Etruscan inscriptions currently known, most of which are found on tombs and sarcophagi or on artifacts. These inscriptions are extremely short, repetitive, and formulaic in nature. A few longer texts also exist, such as the Pyrgi quasi-bilingual (Etruscan and Phoenician) discovered in 1964. Unfortunately, no literary texts have survived. Though there still remain problems, the majority of what has survived can be read and understood. Several developmental stages and regional variants can be observed in the texts.

Etruscan is now known to be related to the poorly-attested Lemnian (spoken on the island of Lemnos) and to Raetic (spoken in northeastern Italy in present-day Tyrol). Together, they form the Tyrrhenian language family.

The Etruscan phonological system was composed of plain voiceless stops, voiceless aspirates, and fricatives, as well as two nasals (*m* and *n*), two liquids (*l* and *r*), and *h*. There were no voiced stops. There were only four vowels (*a*, *e*, *i*, *u*).

Etruscan was an inflectional language. Though there probably was no grammatical gender, special suffixes were used to indicate females. Etruscan nouns and adjectives distinguished several cases as well as two numbers (singular and plural). Verb morphology is not as well known due to the nature of the material that has survived.

2.11. SUMERIAN

Sumerian, which is now extinct, was spoken in southern Iraq, extending from around Babylon in its northernmost limits to the tip of the Persian Gulf in the south. From the time of the earliest texts, several dialects can be distinguished — the two most important dialects are called *eme-ĝir*₁₇ and *eme-sal* (*eme* means ‘speech, language’) by the Sumerians themselves. Moreover, during the three thousand or so years in which Sumerian was recorded, several distinct stages of development can be discerned — Old Sumerian, Neo-Sumerian, Old Babylonian Sumerian, etc. As noted in the previous chapter, Sumerian is not a Nostratic daughter language but is distantly related to Nostratic.

The earliest Sumerian inscriptions date from around 3200 BCE, though the oldest intelligible literary texts date from about 2600 BCE, and the language was probably still spoken as late as the 3rd century BCE. The Sumerian writing system was based exclusively on the cuneiform syllabary, which exhibits several marked stages of development over the course of Sumerian literary history.

Though the Sumerian phonological system was simple, there are still many uncertainties about underlying phonemic distinctions. For example, the traditional transcription shows a voiced ~ voiceless contrast in the stops, but this may well have been a voiceless unaspirated ~ voiceless aspirated contrast instead. There is

still not, even after more than a century of intensive study, widespread agreement among experts in the field on many fundamental questions of Sumerian grammar. Nevertheless, the overall structure is reasonably clear. Morphologically, Sumerian was an agglutinating language. Three word classes were distinguished: (A) nouns, (B) verbs, and (C) adjectives. Though grammatical gender in the strictest sense did not exist, nouns fell into two classes, namely, animate and inanimate, which were only differentiated in 3rd person actor verbal and possessive pronoun affixes and in the relative pronoun. Ten cases and two numbers (singular and plural) were distinguished. The plural was indicated either by means of the suffix *-ene*, which was used only with animate nouns, or by reduplication. In later texts, the plural could also be indicated by the form *hi-a*, which was used with inanimate nouns and which was originally an independent word meaning ‘mixed, various, unspecified’, or by *-me-eš*, which was properly the enclitic copula with plural suffix. Sumerian differentiated between ergative and absolutive in nouns. In pronouns, however, the patterning was that of a nominative-accusative system. Sumerian verbs were formed by adding various prefixes and/or affixes directly to the verbal root. Verbal constructions fell into one of two categories, namely, finite forms or non-finite forms. Finite verbal stems distinguished three conjugational types: (A) the intransitive conjugation, (B) the transitive *hamtu* conjugation, and (C) the transitive *marû* conjugation. Intransitive forms were noted by means of pronominal suffixes, while transitive forms were noted by means of either prefixes, suffixes, or both. The basic word order structure was SOV.

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References:

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- Afrasian: Bergsträsser 1928 and 1983; Bomhard 2014b; Brockelmann 1908—1913; Bynon—Bynon (eds.) 1975; D. Cohen (ed.) 1988; Diakonoff 1965, 1988, and

- 1992; Ehret 1995; Frajzyngier—Shay (eds.) 2012; Hetzron (ed.) 1997; Garbini 1972; Lipiński 1997 and 2001; Rubin 2010; Weninger (ed.) 2011.
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- Gilyak / Nivkh: Comrie (ed.) 1981:266—272; Fortescue 2016; Gruzdeva 1998; Kortlandt 2004.
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CHAPTER THREE

A BRIEF HISTORY OF THE RECONSTRUCTION OF THE PROTO-INDO-EUROPEAN PHONOLOGICAL SYSTEM

3.1. AUGUST SCHLEICHER

Although the comparative-historical study of the Indo-European languages did not begin with August Schleicher, he was the first to attempt, in the first volume (1861 [4th edition 1876]) of his (in English translation) *Compendium of the Comparative Grammar of the Indo-European Languages*, to reconstruct the phonological system of the Indo-European parent language. Earlier scholars — especially Rasmus Rask and Jacob Grimm — had worked out the fundamental sound correspondences between the various daughter languages, and the need to reconstruct the phonological system of the parent language had been recognized as early as 1837 by Theodor Benfey, but no one prior to Schleicher had actually undertaken the task. Schleicher's reconstruction is as follows (1876:10 and 11):

	unaspirated	aspirated	spirants	nasals	<i>r</i> -sound
	voiceless	voiced	voiceless	voiced	voiced
Guttural	k	g	gh		
Palatal			j		
Lingual					r
Dental	t	d	dh	s	n
Bilabial	p	b	bh	v	m

	Original Vowel	First Increment	Second Increment
a-grade	a	a + a = aa	a + aa = āa
i-grade	i	a + i = ai	a + ai = āi
u-grade	u	a + u = au	a + au = āu

3.2. THE NEOGRAMMARIAN PERIOD

Schleicher's reconstruction remained the accepted standard until the late 1870's, when a series of brilliant discoveries were made in rapid succession (cf. Delbrück 1974:55—61; Pedersen 1931:277—310):

1. First, there was the discovery of “The Law of Palatals” (*Das Palatalgesetz*) (cf. Collinge 1985:133—142; Pedersen 1931:277—282), which established the antiquity of the vowel systems found in Greek and Latin and recognized, for the first time, that the Sanskrit vowel system was an innovation in which earlier **ē̃*, **ō̃*, **ā̃* had merged into *ā̃*. This realization also led to the reconstruction of three distinct series of tectals (gutturals) in Proto-Indo-European: (1) palatals: **k̂*, **ġ*, **ġh*; (2) the so-called “pure velars”: **q*, **g*, **gh*; and (3) labiovelars: **qʷ*, **gʷ*, **gʷh*.
2. The next major discovery was that Proto-Indo-European had syllabic nasals and liquids: **m̥*, **n̥*, **ṇ̥*, **l̥*, **r̥* (cf. Pedersen 1931:283—285).
3. Following these discoveries, the system of vowel gradation (*Ablaut*) became clear, and the original patterning was worked out in precise detail (cf. Pedersen 1931:285—290; Fortson 2004:73—76 and 2010:79—83; Meillet 1964:153—168; Beekes 1995:164—167 and 2011:174—178; Hübschmann 1885:71—180; Brugmann 1904:138—150; Szemerényi 1990:86—97; Clackson 2007:71—75).
4. Finally, Verner’s Law (cf. Collinge 1985:203—216; Pedersen 1931:282—283) explained several annoying exceptions to the expected developments of the earlier voiceless stops in Proto-Germanic. First, the voiceless stops became voiceless fricatives in Proto-Germanic: **p*, **t*, **k*, **kʷ* > **f*, **þ*, **χ*, **χʷ*. Then, at a later date, these voiceless fricatives became the voiced fricatives **b*, **ð*, **ǵ*, **ǵʷ* respectively except (A) initially and (B), in some cases, medially between vowels. The problem was that both voiceless and voiced fricatives appeared medially between vowels, and the choice between voiceless fricatives, on the one hand, and voiced fricatives, on the other hand, appeared to be entirely random. What Verner figured out was that the patterning was tied to the original position of the accent — the voiceless fricatives appeared medially between vowels when the accent had originally fallen on the contiguous preceding syllable. If the accent had originally fallen on any other syllable, however, voiced fricatives appeared.

By the end of the nineteenth century, the phonological system reconstructed by the Neogrammarians was widely accepted as being a fairly accurate representation of what had existed in Proto-Indo-European. To this day, the Neogrammarian system, or slightly modified versions thereof, commands a great deal of respect and has many defenders.

The Neogrammarian reconstruction of the Proto-Indo-European phonological system, which was arrived at through strict adherence to the principle that sound laws admit no exceptions, was notable for its large inventory of stops and its extremely small inventory of fricatives. The stop system consists of a four-way contrast of (A) plain voiceless stops ~ (B) voiceless aspirated stops ~ (C) plain voiced stops ~ (D) voiced aspirated stops. This system is extremely close to the phonological system of Old Indic (cf., for example, Gonda 1966:9; Mayrhofer 1972:17). Actually, there were two competing versions of the Proto-Indo-European phonological system at this time: (A) the German system (cf. Brugmann 1904:52; Hirt 1921—1927.I:198—337, II:1—230), which was phonetically based, and (B)

the French system (cf. Meillet 1964:82—145), which was phonologically based (cf. Szemerényi 1972:122). It must be pointed out that, in spite of its wide acceptance, a small group of scholars has, from time to time, questioned the validity of the Neogrammarian reconstruction, at least in part (for a discussion of some of the opposing views, cf. Hopper 1977b:57—72 and Szemerényi 1972:122—136).

Brugmann's (1897:92—93, 1904:52, and 1905:54) reconstruction is as follows:

Monophthongs:	e	o	a	i	u	ə	
	ē	ō	ā	ī	ū		
Diphthongs:	eī	oi	aī	əī	eu	ou	au
	ēī	ōī	āī		ēu	ōu	āu
Semivowels:		ī	u	(j ?)			
Liquids and Nasals:			l	r	m	n	ñ
							ṇ
Syllabic Liquids and Nasals:			l̥	r̥	m̥	n̥	ñ̥
			l̥̄	r̥̄	m̥̄	n̥̄	ñ̥̄
Occlusives:	p	ph	b	bh	(bilabial)		
	t	th	d	dh	(dental)		
	ḱ	ḱh	ǵ	ǵh	(palatal)		
	q	qh	g	gh	(pure velar)		
	qʷ	qʷh	gʷ	gʷh	(labiovelar)		
Spirants:	s	sh	z	zh	þ	þh	ð
							ðh

Brugmann reconstructed five short vowels and five long vowels plus a reduced vowel, the so-called “schwa indogermanicum” (also called “schwa primum”), written *ə, which alternated with so-called “original” long vowels. A full set of diphthongs was posited as well. Finally, the system contained the semivowels *j and *u, a series of plain and aspirated spirants, several nasals, and the liquids *l and *r. The nasals and liquids were unique in their ability to function as syllabics or nonsyllabics, depending upon their environment. They were nonsyllabic (A) when between vowels or initially before vowels, (B) when preceded by a vowel and followed by a consonant, and (C) when preceded by a consonant and followed by a vowel. The syllabic forms arose in early Proto-Indo-European when the stress-conditioned loss of former contiguous vowels left them between two nonsyllabics.

It should be noted here that the Proto-Indo-European vowels were subject to various alternations that were partially correlated with the positioning of the accent within a word. These vowel alternations served to indicate different types of grammatical formations. The most common alternation was the interchange between the vowels *e and *o in a given syllable. There was also an alternation among lengthened-grade vowels, normal-grade vowels, and reduced-grade and/or

except that **kh* appears to have become *x* in a small number of examples in Slavic — however, these examples are better explained as borrowings from Iranian rather than as due to regular developments in Slavic (cf. Carlton 1991:95). As early as 1891, in a paper read before the Société de Linguistique de Paris, the Swiss scholar Ferdinand de Saussure suggested that the voiceless aspirates might have had a secondary origin, arising from earlier clusters of plain voiceless stop plus a following “coefficient sonantique”. This idea was taken up by Meillet (1964:90—91), who pointed out the great rarity of the voiceless aspirates, noting in particular that the dental voiceless aspirate **th* often appears to be the result of aspiration of a plain voiceless dental by a following **ə*: **t + *ə > *th*, at least in Sanskrit. Current thinking on the part of the overwhelming majority of linguists is that the series of voiceless aspirates (**ph*, **th*, **kh*, **qh*, **qʰh*) reconstructed by Brugmann and other Neogrammarians for the Indo-European parent language should be removed, being secondarily derived in the individual daughter languages (cf. Bomhard—Kerns 1994:39 for references). The main opponent of this view was Oswald Szemerényi, who argued for the reinstatement of the voiceless aspirates and, consequently, for a return to the four-stop system (plain voiceless ~ voiceless aspirated ~ plain voiced ~ voiced aspirated) of the Neogrammarians. We will return to this problem later.

Especially noteworthy is Meillet’s (1964:105—126) treatment of the resonants. Here, he considers **i* and **u* to be the syllabic allophones of **y* (Brugmann’s **ĭ*) and **w* (Brugmann’s **u*) respectively and classes them with the resonants, thus: **i/*y*, **u/*w*, **m/*m*, **n/*n*, **r/*r*, **l/*l*, that is to say that he does not consider **i* and **u* to be independent phonemic entities. The diphthongs are analyzed by Meillet (1964:110—118) as clusters of (A) vowel plus nonsyllabic resonant and (B) nonsyllabic resonant plus vowel.

Meillet’s (1964:82—145) reconstruction may be represented as follows:

Vowels:	e	o	a			
	ē	ō	ā			
Resonants:	i/y	u/w	m/m	n/n	r/r	l/l ə
Occlusives:	p	ph	b	bh	(bilabial)	
	t	th	d	dh	(dental)	
	k _l	k _l h	g _l	g _l h	(palatal)	
	k ^w	k ^w h	g ^w	g ^w h	(labiovelar)	
Sibilant:	s					

3.3. THE TWENTIETH CENTURY TO 1970

In 1878, Ferdinand de Saussure attempted to show that so-called “original” long vowels were to be derived from earlier sequences of short vowel plus a following “coefficient sonantique”. In 1927, Jerzy Kuryłowicz and Albert Cuny separately

demonstrated that reflexes of de Saussure's "coefficients sonantiques" were preserved in Hittite. On this basis, a series of consonantal phonemes, commonly called "laryngeals", was then posited for Proto-Indo-European. Kuryłowicz, in particular, set up four laryngeals, which he wrote $*\mathfrak{z}_1$, $*\mathfrak{z}_2$, $*\mathfrak{z}_3$, $*\mathfrak{z}_4$. The vast majority of scholars currently accept some form of this theory, though there is still no general agreement on the number of laryngeals to be reconstructed for Proto-Indo-European or on their probable phonetic values (for information about the Laryngeal Theory, cf. Bammesberger 1984; Jonsson 1978; Keiler 1970; Kellens 1990; Lindeman 1997; Sturtevant 1942; Winter [ed.] 1965; Vennemann [ed.] 1989). The following phonetic values may be assigned to the laryngeals (for details, cf. Chapter 4, §4.1):

$*\mathfrak{z}_1$	=	Glottal stop /ʔ/
$*\mathfrak{z}_2$	=	Voiceless and voiced multiply-articulated pharyngeal/laryngeal fricatives /ħh/ and /ʕf/
$*\mathfrak{z}_3$	=	Voiceless and voiced multiply-articulated pharyngeal/laryngeal fricatives /ħh/ and /ʕf/
$*\mathfrak{z}_4$	=	Voiceless glottal fricative /h/

With the reduction of the gutturals to two series, the removal of the traditional voiceless aspirates, the reanalysis of the diphthongs as clusters of vowel plus nonsyllabic resonant and nonsyllabic resonant plus vowel, and the addition of laryngeals, we arrive at the system of Lehmann (1952:99):

1. Obstruents:	p	t	k	k ^w
	b	d	g	g ^w
	b ^h	d ^h	g ^h	g ^{wh}
		s		
2. Resonants:	m	n		
	w	r	l	y
3. Vowels:		e	a	o
	i	e	a	o
			u	
4. Laryngeals:		x	γ	h
				ʔ

Now, the removal of the traditional voiceless aspirates creates a problem from a typological point of view. Data collected from the study of a great number of the world's languages have failed to turn up any systems in which voiced aspirates are added to the pair plain voiceless stop ~ plain voiced stop unless there are also corresponding voiceless aspirated stops in the system (cf. Jakobson 1971[1957]: 528; Martinet 1970:115; Pericliev 2008). This is an important point, affecting the entire structure of the traditional reconstruction. In order to explain this imbalance, several scholars have sought typological parallels with systems such as those found, for example, in the Indonesian language Javanese. In these rare systems, there is a three-way contrast, sometimes described as (A) plain (unaspirated) voiceless ~ (B) voiced ~ (C) "voiced aspirated": /T/ ~ /D/ ~ /D^h/. However, this interpretation is

based upon a lack of understanding of the phonetics involved. Series (C) in such systems is, in reality, voiceless with breathy release — something like /tʰi/ — and not true “voiced aspirated” (cf. Maddieson 1984:207; Weiss 2009b:23). Regarding the so-called “voiced aspirates” of Bario Kelabit, Blust (2013:183) notes:

Bario Kelabit has a second series of voiced obstruents *b^h*, *d^h*, *g^h* that begin voiced and end voiceless, with variable voiceless onset to the following vowel, as in *təb^huh* [təb^huh] ‘sugarcane’, *id^huŋ* [ʔid^huŋ] ‘nose’, or *uɡ^həŋ* [ʔuɡ^həŋ] ‘spin without wobbling, of a top’. These segments thus differ from the fully voiced murmured stops of Hindi or other Indo Aryan languages that are still sometimes called ‘voiced aspirates’. Phonetically the Kelabit voiced aspirates occur only word-medially following a stressed vowel.

As we have seen from the preceding discussion, Lehmann’s reconstruction is problematical from a typological point of view. However, from a purely structural point of view, it presents an accurate analysis of Proto-Indo-European phonological patterning.

The reconstructions of the Proto-Indo-European consonant system found in most of the standard handbooks are based upon Lehmann’s system (cf. Adrados—Bernabé—Mendoza 2010.I:148; Clackson 2007:34; Clackson—Horrocks 2007:7; Fortson 2010:56; Kapović 2017b:13; Lejeune 1972:28; Mallory—Adams 1997:459; Meier-Brügger 2010:202; Meiser 2006:27; Melchert 1994a:46; Ringe 2006:6; Rix 1992:29; Schmitt-Brandt 1998:75—91; Shevelov 1964:26; Sihler 1995:135; Tichy 2006:23; Watkins 1998:34; Weiss 2009a:33; etc.):

	Labial	Dental	Palatal	Velar	Labiovelar
Voiceless	*p	*t	*k̑	*k	*k ^w
Voiced	*b	*d	*ġ	*g	*g ^w
Voiced aspirated	*bh	*dh	*ġh	*gh	*g ^w h

Several scholars have proposed various solutions in an attempt to eliminate the problems caused by the removal of the traditional voiceless aspirates. For example, Jerzy Kuryłowicz (1964b:13) tried to show that the voiced aspirates were not phonemically voiced. However, this interpretation seems unlikely in view of the fact that the daughter languages are nearly unanimous in pointing to voicing in this series in the Indo-European parent language (for correspondences and examples, cf. Meillet 1964:86—88). The main exceptions are Tocharian and possibly Hittite (at least according to some scholars). In each case, however, it is known that the voicing contrast was eliminated and that the reflexes found in these daughter languages do not represent the original state. The Greek and Italic developments are a little more complicated: in these daughter languages, the traditional voiced aspirates were devoiced, thus becoming voiceless aspirates. Then, in Italic, the resulting voiceless aspirates became voiceless fricatives:

$$b^h, d^h, g^h, g^{wh} > p^h, t^h, k^h, k^{wh} > f, \theta, \chi, \chi^w$$

According to Eduard Prokosch (1933:26—27 and 1939:39—41), on the other hand, the voiced aspirates of traditional grammar were really the voiceless fricatives $*\varphi$, $*\theta$, $*\chi$, $*\chi^w$ ($= *bh$, $*dh$, $*gh$, $*g^wh$ respectively). This interpretation seems unlikely for two reasons: (A) as noted above, the daughter languages point to voicing in this series in Proto-Indo-European, and (B) the daughter languages point to stops as the original mode of articulation and not fricatives. This latter objection may also be raised against the theory — advocated by Alois Walde (1897:491) and Johann Knobloch (1965:163) — that the voiced aspirates may have been the voiced fricatives $*\beta$, $*\delta$, $*\gamma$, $*\gamma^w$ ($= *bh$, $*dh$, $*gh$, $*g^wh$ respectively).

Next, there is the theory put forth by Louis Hammerich (1967:839—849) that the voiced aspirates may have been emphatics. Hammerich does not define what he means by the term “emphatics” but implies that they are to be equated with the emphatics of Semitic grammar. Now, in Arabic, the emphatics have been described as either uvularized (cf. Catford 1977b:193) or pharyngealized (cf. Al-Ani 1970:44—58; Catford 1977b:193; Chomsky—Halle 1968:306). Lipiński (1997:105) describes the pronunciation of the Arabic emphatics as follows:

In Arabic, instead, the characteristic articulatory feature of all the emphatic phonemes is the contraction of the upper pharynx, accompanied by a velarization; the latter can be seen by means of a radioscopy which shows how the emphatic phonemes are articulated with a raising of the back part of the tongue in the region of the velum. This velarization gives them, and the surrounding vowels, a sombre *u*-quality that tends to spread over the whole word.

As in the Arabic example just cited, such sounds are always accompanied by backing of adjacent vowels wherever they occur (cf. Dolgopolsky 1977:1—13; Hyman 1975:49; Ladefoged 1971:63—64; Laver 1994:328) — in Arabic, this is called *tafḥīm* “emphasis spread” (cf. Ryding 2014:19; J. Watson 2002:268—286).

In Proto-Indo-European, all vowels were found in the neighborhood of the voiced aspirates, and there is no indication that any of these sounds had different allophones here than when contiguous with other sounds. Had the voiced aspirates been emphatics such as those found in Arabic, they would have caused backing of contiguous vowels, and this would be reflected in the daughter languages in some manner. However, this is not the case. If, on the other hand, the emphatics had been ejectives such as those found in the Modern South Arabian languages, the Semitic languages of Ethiopia, and several Eastern Neo-Aramaic dialects (such as, for instance, Urmian Nestorian Neo-Aramaic and Kurdistan Jewish Neo-Aramaic), the question arises as to how these sounds could have developed into the voiced aspirates needed to explain the developments in Indo-Iranian, Greek, Italic, and Armenian.

Oswald Szemerényi (1967:65—99) was one of the first to bring typological data to bear on the problem of reconstructing the Proto-Indo-European phonological system. Taking note of Jakobson’s (1971[1957]:528) remark that:

... no language adds to the pair $/t/ \sim /d/$ a voiced aspirate $/d^h/$ without having its voiceless counterpart $/t^h/$...

Szemerényi reasoned that, since Proto-Indo-European had voiced aspirates, it must also have had voiceless aspirates (Elbourne 1998 makes the same point). Though on the surface this reasoning appears sound, it puts too much emphasis on the typological data and too little on the data from the Indo-European daughter languages. As mentioned above, there are very cogent reasons for removing the traditional voiceless aspirates from Proto-Indo-European, and these reasons are not easily dismissed. Szemerényi also tried to show that Proto-Indo-European had only one laryngeal, namely, the voiceless glottal fricative /h/. Szemerényi's (1967:96—97 and 1996:37—70, especially pp. 69—70) reconstruction is as follows:

p	t	k'	k	k ^w	
p ^h	t ^h	k' ^h	k ^h	k ^w ^h	
b	d	g'	g	g ^w	
b ^h	d ^h	g' ^h	g ^h	g ^w ^h	
		y	w		
	l	r	m	n	
		s	h		
a	e	o	i	u	ə
ā	ē	ō	ī	ū	

(also the sequences ah eh oh ih uh)

Szemerényi does not include diphthongs in his reconstruction since their “phonemic status is disputed”.

Szemerényi's reconstruction is in fact typologically natural, and he defended it strongly right up through his last major work (cf. Szemerényi 1996:37—70). His system — as well as that of the Neogrammarians, it may be added — is merely a projection backward in time of the Old Indic phonological system (cf. Mayrhofer 1972:17—29; Gonda 1966:9—19). In certain dialects of “Disintegrating Indo-European” (specifically, in the early development of Pre-Indo-Iranian, Pre-Greek, and Pre-Italic), such a system no doubt existed in point of fact (cf. Bomhard 2019c; Joseph—Wallace 1994).

Next, there are the proposals put forth by Joseph Emonds (1972). According to Emonds, the plain voiced stops of traditional Proto-Indo-European are to be reinterpreted as plain lax voiceless stops, while the traditional plain voiceless stops are taken to have been tense and aspirated:

Lehmann					Emonds			
p	t	k	k ^w	=	ph	th	kh	kh ^w
b	d	g	g ^w	=	p	t	k	k ^w
b ^h	d ^h	g ^h	g ^w ^h	=	bh	dh	gh	gh ^w

Emonds regards the voicing of the lax stops as common to a Central innovating area and the appearance of voiceless stops in Germanic, Armenian, and Hittite as relics.

Similar proposals were put forth by Toby D. Griffen (1988:162—189). According to Griffen, Proto-Indo-European had a three-member stop system, which he represents as (using the dentals for illustration) *[d], *[t], *[tʰ] (media, tenuis, aspirata). While this system was maintained in Germanic with only minor changes, a series of sound-shifts in the other Indo-European daughter languages completely restructured the inherited system. Thus, Germanic emerges as the most conservative daughter language in its treatment of the Indo-European stop system.

There are other problems with the traditional reconstruction besides the typological difficulties caused by the removal of the voiceless aspirates. Another problem, noted in most of the standard handbooks (cf., for example, Adrados 1975.I:108; Burrow 1973:73; Krause 1968:116—117; Lehmann 1952:109; Meillet 1964:84 and 89), is the statistically low frequency of occurrence — perhaps total absence — of the traditional voiced bilabial stop **b*. We may cite Meillet's (1964: 89) comments on this matter:

b is relatively rare; it does not occur in any important suffix nor in any ending; it is secondary in some of the words where it is found, thus, Skt. *pībāmi* 'I drink', OIr. *ibim* 'I drink', Lat. *bibō* (with initial *b* through assimilation) is an ancient reduplicated form in view of Skt. *pāhi* 'drink', Gk. *πῖθι*, OCS. *piti* 'to drink', Lat. *pōculum* 'cup'; ...other words are imitative, thus Gk. *βάβραρος*, Lat. *balbus*, etc.; still others are limited to a few languages and give the impression of being recent borrowings.

The marginal status of **b* is difficult to understand from a typological viewpoint and is totally unexplainable within the traditional framework. This problem was investigated in 1951 by the Danish scholar Holger Pedersen. Pedersen noted that, in natural languages having a voicing contrast in stops, if there is a missing member in the bilabial series, it is /p/ that is missing and not /b/. This observation led Pedersen to suggest that the traditional plain voiced stops might originally have been plain voiceless stops, while the traditional plain voiceless stops might have been plain voiced stops:

Brugmann						Pedersen				
b	d	ḡ	g	g ^u	=	Ø	t	ḡ	k	k ^w
p	t	k	q	q ^u	=	b	d	ḡ	g	g ^w

Later shifts would have changed the earlier plain voiced stops into the traditional plain voiceless stops and the earlier plain voiceless stops into the traditional plain voiced stops. In a footnote in his 1953 *BSL* article entitled "Remarques sur le consonantisme sémitique", André Martinet (1975[1953]:251—252, fn. 1) objected to this "musical chairs" rearrangement:

Since there are extremely few examples of the Common Indo-European phoneme reconstructed “analogically” as **b*, it is tempting to diagnose a gap there as well, as the late Holger Pedersen did in *Die gemeinindoeuropäischen und die vorindoeuropäischen Verschlusslaute*, pp. 10-16. But, instead of assuming, as did Pedersen, the loss of a Pre-Indo-European **p* followed by a musical-chairs [rearrangement] of *mediae* and *tenues*, one should be able to see in the series **d*, **g*, **g^w* the result of evolution from an earlier series of glottalics, without bilabial representative.

Though hinted at as early as 1939 by Nikolaj Trubetzkoy, this appears to be the first time that anyone had explicitly proposed reinterpreting the plain voiced stops of traditional Proto-Indo-European as glottalics. Gamkrelidze devotes a whole paper (2001a) to discussing Martinet’s important role in the development of the Glottalic Theory.

In the preceding discussion, only the more well-known counterproposals were mentioned, and only the briefest of explanations were given. More details could easily have been given. Insights gained from typological studies, for example, could have been used to strengthen the arguments: no phoneme stands alone; it is, rather, an integral part of the total system. Each and every phoneme is tied to the other phonemes in the system by discrete interrelationships — to disturb one phoneme is to disturb (at least potentially) the entire system. This is basically the message that Jakobson and Martinet were trying to bring home. All too often, this message is ignored. Moreover, the interrelationships are not only synchronic, they are diachronic as well.

3.4. THE GLOTTALIC THEORY

Discovery — perhaps “rediscovery” would be a better term since Martinet’s insightful remarks first appeared in 1953 — of what has come to be known as the “Glottalic Theory” came from two separate sources, each working independently. On the one-hand, the British-born American Germanist Paul J. Hopper hit upon the notion that Proto-Indo-European may have had a series of glottalized stops while he was a student at the University of Texas and taking a course in Kabardian from Aert Kuipers. Hopper went on about other business after graduation, waiting five years before putting his ideas into writing. On the other hand, the Georgian Indo-Europeanist Thomas V. Gamkrelidze, a native speaker of a language containing glottalics (Georgian [ქართული ენა]), had been investigating the typological similarities between Proto-Kartvelian and Proto-Indo-European (cf. Gamkrelidze 1966 and 1967). It did not take Gamkrelidze long to realize the possibility that Proto-Indo-European might also have had glottalized stops. Gamkrelidze, in a joint article with the Russian Indo-Europeanist Vjačeslav V. Ivanov, was the first to make it into print (Gamkrelidze—Ivanov 1972). Hopper might have beat them into print had his paper on the subject not been rejected by the journal *Language*. He was then obliged to search for another journal willing to publish his views, which

finally happened in 1973. Then, in 1973, Gamkrelidze and Ivanov published a German language version of their 1972 paper.

Hopper (1973:141—166) proposed reinterpreting the plain voiced stops of traditional Proto-Indo-European — Lehmann's **b*, **d*, **g*, **g^w* — as glottalized stops (ejectives), that is, (**p'*), (**t'*), (**k'*), (**k'^w*) respectively, because the traditional plain voiced stops ...

show many of the typological characteristics of glottalized stops (ejectives), e.g. they are excluded from inflectional affixes, they may not cooccur with another in the same root, etc.

Hopper also reinterpreted the traditional voiced aspirates as murmured stops.

Gamkrelidze—Ivanov (1972:15—18 and 1973:150—156) also reinterpreted the traditional plain voiced stops as ejectives, but, unlike Hopper, they reinterpreted the traditional plain voiceless stops as voiceless aspirates. They made no changes to the traditional voiced aspirates. They pointed out, however, that the feature of aspiration is phonemically irrelevant in a system of this type. In a later article, Gamkrelidze (1976:403) gives the following reconstruction:

Lehmann				Gamkrelidze		
b	b ^h	p	=	p'	bh/b	ph/p
d	d ^h	t	=	t'	dh/d	th/t
g	g ^h	k	=	k'	gh/g	kh/k
g ^w	g ^{wh}	k ^w	=	k' ^u	g ^u h/g ^u	k ^u h/k ^u

According to Gamkrelidze (1981:607), such a system exists in several modern Eastern Armenian dialects (however, this is challenged by Jahukyan 1990:7—8).

Many of the points discussed above by Gamkrelidze were also noted by Hopper, in particular the root structure constraint laws (cf. Hopper 1973:158—161). Hopper also discusses possible trajectories of the new system in various Indo-European daughter languages.

The Glottalic Model has several clear advantages over the traditional reconstruction of the Proto-Indo-European stop system:

1. The reinterpretation of the traditional plain voiced stops as glottalics (ejectives) makes it easy to account for the fact that the phoneme traditionally reconstructed as **b* was highly marked in the system, being characterized by an extremely low frequency of occurrence (if it even existed at all). Such a low frequency distribution is extremely uncharacteristic of the patterning of the voiced bilabial stop /b/ in natural languages having a voicing contrast in stops, but it is fully characteristic of the patterning of the bilabial ejective /p'/ (cf. Gamkrelidze 1981:605—606; Gamkrelidze—Ivanov 1995.I:9—12; Greenberg 1970:127; Hopper 1973:155).

2. Not only does the reinterpretation of the traditional voiced stops as ejectives easily account for the frequency distribution of these sounds, it also explains the fact that they were used only very infrequently in inflectional affixes and pronouns, since this type of patterning is characteristic of the way ejectives behave in natural languages having such sounds.
3. For the first time, the root structure constraint laws can be credibly explained. These constraints turn out to be a simple voicing agreement rule with the corollary that two glottalics cannot cooccur in a root. Hopper (1973:160) cites Hausa, Yucatec Mayan, and Quechua as examples of natural languages exhibiting a similar constraint against the cooccurrence of two glottalics. Akkadian may be added to this list as well if we take Geers' Law (cf. Bomhard 1984b:135; Ungnad—Matouš 1969:27 and 1992:26—27) to be a manifestation of such a constraint.
4. The so-called Germanic and Armenian “consonant shifts” (in German, *Lautverschiebungen*), which can only be accounted for very awkwardly within the traditional framework (cf. Emonds 1972:108—122), turn out to be mirages. Under the revised reconstruction, these branches (together with the poorly-attested Phrygian — for details on Phrygian, cf. Diakonoff—Neroznak 1985: 2—8) turn out to be relic areas. For an excellent and insightful discussion of the Germanic and Armenian consonant shifts along traditional lines, cf. Meillet 1967a:116—124 and 1984:89—96. See also Bomhard 2019c.

Moreover, the reinterpretation of the traditional plain voiceless stops ($*p$, $*t$, $*k$, $*q$, $*q^h$) as voiceless aspirates, with aspirated ~ unaspirated allophones, overcomes the problems caused by the removal of the traditional voiceless aspirates.

In 1984, Gamkrelidze and Ivanov published their monumental joint monograph entitled *Индоевропейский язык и индоевропейцы: Реконструкция и историко-типологический анализ праязыка и протокультуры* [*Indo-European and the Indo-Europeans: A Reconstruction and Historical Typological Analysis of a Protolanguage and a Proto-Culture*]. As is to be expected, this massive work (2 volumes, 1,328 pages) contains the most detailed discussion of the Glottalic Theory that has yet appeared. Gamkrelidze and Ivanov's book also contains trajectories of the revised Proto-Indo-European phonological system in the various Indo-European daughter languages, original proposals concerning the morphological structure of the Indo-European parent language (they propose that, at an earlier stage of development, Proto-Indo-European was an active language [strong support for these views is expressed by Lehmann 1995 and 2002, among others]), an exhaustive treatment of the Proto-Indo-European lexicon, and a new theory about the homeland of the Indo-Europeans (they argue that the Indo-European homeland was located in eastern Anatolia in the vicinity of Lake Van). One of the most novel proposals put forth in the book is that Proto-Indo-European may have had labialized dentals and a labialized sibilant. Gamkrelidze—Ivanov also posit postvelars for Proto-Indo-European. Their complete reconstruction is as follows (cf. Gamkrelidze—Ivanov 1984.I:134 and 1995.I:116):

	I.	II.	III.									
1.	(p')	b[h]	p[h]									
2.	t'	d[h]	t[h]				t'°	d[h]°	t[h]°			
3.	k'	g[h]	k[h]	ĥ'	ĝ[h]	ĥ[h]	k'°	g[h]°	k[h]°	s	š	ś°
4.	q'	-	q[h]									

Note: The consonants enclosed in the box are considered to be the most reliably reconstructed.

It is not surprising that the new look of Proto-Indo-European consonantism proposed by Gamkrelidze—Ivanov has a distinctly Caucasian appearance about it.

Though the Glottalic Theory has attracted a good deal of attention over the past four decades and has gained a modicum of acceptance (cf. Salmons 1993; Schwink 1994:59—61 and 62—64; Vennemann [ed.] 1989), especially among scholars who belong to the so-called “Leiden School”, it should be noted that there is still some disagreement about the make-up of the traditional voiceless stops and voiced aspirates. Hopper (1973:141—166), for example, reinterprets the traditional voiced aspirates as murmured stops, making no changes to the traditional plain voiceless stops. His system is as follows:

Lehmann					Hopper				
p	t	k	k ^w	=	p	t	k	k ^w	
b	d	g	g ^w	=	p'	t'	k'	k' ^w	
b ^h	d ^h	g ^h	g ^{wh}	=	<u>b</u>	<u>d</u>	<u>g</u>	<u>g^w</u>	

This differs from the views of Gamkrelidze—Ivanov, who, as noted above, regard the traditional plain voiceless stops as voiceless aspirates, while making no changes to the traditional voiced aspirates. Moreover, they consider the feature of aspiration to phonemically irrelevant, with the choice between the aspirated and unaspirated variants being mechanically determined by the paradigmatic alternations of root morphemes.

In his last major work, Lehmann (2002:198—202, 211—214) accepts a form of the Glottalic Theory. Lehmann (2002:200) reinterprets *b, *d, *g, *g^w of traditional Indo-European as *'p, *'t, *'k, *'k^w respectively, with preglottalization. However, in the chart on p. 201, he writes *p', *t', *k', *k'^w. In view of the chart on p. 218, I take this to be a typographical error, and, therefore, I have changed the representation of the obstruents in the chart on the following page to reflect this. Furthermore, Lehmann (2002:200) reinterprets the traditional plain voiceless stops and voiced aspirates as voiceless and voiced respectively with aspirated and

unaspirated allophones (this is not reflected in the chart on p. 201 of his book). As in his earlier work (1952:100—102), he (2002:214—216) posits only palato-velars and labio-velars, assuming a secondary status for the plain velars reconstructed by the Neogrammarians. Lehmann reconstructs the following four laryngeals: $*\text{ʔ}$, $*h$, $*\chi$, $*\gamma$. Lehmann (2002:201) assumes that $*\chi$ and $*\gamma$ were voiceless and voiced velar fricatives respectively and that $*\gamma$ may have had a w -offglide. Lehmann's revised system is as follows (2002:201):

Vowels									
		\bar{i}						\bar{u}	
		e	\bar{e}	ə		o	\bar{o}		
			a	\bar{a}					
Consonants									
	Obstruents			Resonants				Fricatives	
Bilabial:	p	'p	b ^h		m		w		
Dental:	t	't	d ^h		n	r	l	y	s
Palato-velar:	k	'k	g ^h						
Labio-velar:	k ^w	'k ^w	g ^{wh}						
Laryngeal:		ʔ							χ γ h

Mention should be made here of Rudolf Normier's (1977:172) system, which is close to that of Gamkrelidze—Ivanov. Normier reinterprets the plain voiced stops of traditional grammar as glottalized stops and the traditional plain voiceless stops as voiceless aspirates, while making no changes to the traditional voiced aspirates. His reconstruction is as follows:

Occlusives				Fricatives
	Voiceless Aspirated	Voiced Aspirated	Glottalized	
Bilabial:	ph /ph/	bh /bf/	ḑ /p'/	
Dental:	th /th/	dh /df/	ṭ /t'/	
Alveolar:				s /s/
Velar:	kh /kh/	gh /gf/	ḱ /k'/	x /x/
Labiovelar:	k ^{wh} /k ^h /	g ^{wh} /gf/	ḱ ^w /k'/	x ^w /x/
Uvular:	qh /qh/	ch /cf/	ḳ /q'/	
Laryngeal:				h /f/

Frederik Kortlandt (1978b:107), on the other hand, proposes the following system (using the dentals for illustration):

	Aspirated	Plain	Glottalic
Lenis:	dh		d
Fortis:		t	

Kortlandt notes (1978b:107—108):

Though it would be more correct to write t :, t' , t' instead of t , d , dh , I will stick with the traditional transcription. A similar system must be reconstructed for the labial, postvelar, and labiovelar orders.

According to Martin Kümmel (2012:305—306), the stop system developed from Early Proto-Indo-European to Late Proto-Indo-European as follows (a somewhat similar system is reconstructed for Proto-Indo-European by Pooth 2015a:11 [Pooth gives the traditional reconstruction on p. 14]):

	labial	coronal	“palatal” = velar	labiovelar	“velar” = uvular
voiceless	*p	*t	*k	*k ^w	(*q ?)
voiced > breathy	*b > b ^{fi}	*d > d ^{fi}	*g > g ^{fi}	*g ^w > g ^{wfi}	(*g > g ^{fi} ?)
implosive > voiced	*ɓ > b	*ɗ > d	*ɟ > g	*ɟ ^w > g ^w	(*ɠ > g ?)

While the vowels developed from Pre-Proto-Indo-European to Early Proto-Indo-European to Late Proto-Indo-European as follows (Kümmel 2012:306):

Late PIE	Early PIE	Pre-PIE
i u	i u	i u
e o	< ε ɔ	<
a	[a]	æ—a ɒ

My own view is that it is necessary to recognize several distinct stages of development within Proto-Indo-European (see the Appendix to Chapter 4 of this book for details) and that the traditional voiced aspirates were a relatively late development (cf. D. G. Miller 1977b:385) — in fact, it is probably only necessary to reconstruct them in the Disintegrating Indo-European ancestors of Indo-Iranian, Armenian, Greek, and Italic (cf. Bomhard 2019c). The voiceless aspirates (the traditional plain voiceless stops), on the other hand, seem to be fairly ancient and were most likely inherited by Proto-Indo-European from Proto-Nostratic.

For the latest period of development (“Disintegrating Indo-European”), I would reconstruct the Proto-Indo-European phonological system as follows (this is the reconstruction used throughout this book):

Obstruents:	I	p ^h	t ^h	k ^y ^h	k ^h	k ^{wh}
	II	b ^h	d ^h	g ^y ^h	g ^h	g ^{wh}
	III	(p')	t'	k'y	k'	k'w
			s			
Laryngeals:	ʔ	h	ḥ			
			ḥ			
	ʔ ^w		ḥ ^w			
Resonants:		m/ṃ	n/ṇ	l/ḷ	r/ṛ	w/u y/i
Vowels:		e	o	a	(i)	(u)
		ē	ō	ā	ī	ū

Notes:

1. Series I is voiceless aspirated; series II is voiced aspirated; and series III is glottalized (ejectives).
2. Voiced aspirates (series II) may have already developed, or at least started to develop, at this stage, but this is uncertain. They are really only needed in order to account for developments in Armenian, Indo-Iranian, Greek, and Italic.
3. The glottalics (series III) became deglottalized just prior to the emergence of the non-Anatolian Indo-European daughter languages. The resulting system was as follows:

Obstruents:	I	p ^h	t ^h	k ^y ^h	k ^h	k ^{wh}
	II	b ^h	d ^h	g ^y ^h	g ^h	g ^{wh}
	III	(p)	t	k ^y	k	k ^w

4. The palatalovelars may already have started to become phonemic at this stage, at least in the ancestors of those daughter languages (the “*satəm*” languages) in which the labiovelars were delabialized. They did not become phonemic in the ancestors of the so-called “*centum*” daughter languages.
5. In the final stage of “Disintegrating Indo-European”, the laryngeals had been mostly lost (see Chapter 4 for details).

An important consideration needs to be mentioned at this point. While it seems probable that the glottalics were originally post-glottalized in all positions in Proto-Indo-European, there is evidence from some of the daughter languages (such as Winter’s Law [cf. Collinge 1985:225—227; Birnbaum 1985], the West Scandinavian pre-aspiration, and the Danish *stød*, for example [cf. Kortlandt 1981c, 1988b, 1988c, 1989b, 1998, 1999, 2007, and 2012; but cf. Rießler 2004 for an opposing view]) that there may have been dialectal variation in the timing of glottalization before their ultimate loss. This seems to be what Kloekhorst (2016:226—228) is implying regarding the development of the glottalics in Anatolian. The typological

parallel that I have in mind here as a possible model for what timing of glottalization rules may have been like in some dialects of “Disintegrating Indo-European” is the Native American language *S̥malgyax* (Coast Tsimshian) spoken in northwestern British Columbia and southeastern Alaska, as described by Dunn (1995, Part II, 4):

If a glottalized segment occurs before a vowel, the glottalic closure coincides with the consonant closure and the vocal cords are released after the consonant is released (*k'*, *k̥*, *p'*, *t'*). If the glottalized segment occurs after a vowel, the glottalic closure occurs before the consonant closure (*'k*, *'k̥*, *'p*, *'t*); if such a glottalized segment is word final, the vocal cords are unreleased thruout the production of the consonant sound. When a glottalized segment occurs between vowels, it is of the former type (*k'*, *p'*, *t'*) if the second of the two vowels has the greater stress; it is of the latter type (*'k*, *'p*, *'t*) when the first of the two vowels has the greater stress.

Such a scenario is hinted at by Salmons (1993:24) but not elaborated upon.

Thus, in accordance with the example of the *S̥malgyax* patterning just outlined above, the following timing of glottalization rules may tentatively be postulated for at least some dialects of Proto-Indo-European:

1. If a glottalized segment occurs before a vowel, it is post-glottalized: $\dot{C}/ \rightarrow [C']/__V$.
2. If a glottalized segment occurs after a vowel, it is pre-glottalized: $\dot{C}/ \rightarrow [{}^hC]/V__$.
3. If a glottalized segment occurs word final before pause, it is deglottalized and unreleased: $\dot{C}/ \rightarrow [C^h]/__ \#$.
4. If a glottalized segment occurs between vowels, it is post-glottalized if the accent falls on the second vowel: $\dot{C}/ \rightarrow [C']/V__ \acute{V}$.
5. If a glottalized segment occurs between vowels, it is pre-glottalized if the accent falls on the first vowel: $\dot{C}/ \rightarrow [{}^hC]/\acute{V}__ V$.

Notes:

1. \dot{C} = any glottalic (*/p'/, /t'/, /k'/, /k'w/*).
2. Rule no. 2 would account for Winter’s Law in Balto-Slavic.
3. Rule no. 2 would account for the “*vestjysk stød*” in the western dialects of Danish and preaspiration in West Scandinavian.
4. Kloekhorst has recently (2016:226—228) proposed that the glottalics became pre-glottalized in Proto-Anatolian and that the glottalization was eventually lost: $*t', *k', *k'^w \rightarrow *{}^ht, *{}^hk, *{}^hk'^w \rightarrow *t, *k, *k^w$. The above rules would account for Kloekhorst’s views.

The Glottalic Theory has not escaped criticism (cf., for example, Szemerényi 1996: 151—153). One of the sharpest criticisms concerns the alleged implausibility of the changes that would be required to arrive at the plain voiced stops found in the majority of the daughter languages. This issue has been dealt with at length by Paul

D. Fallon in Chapter 6, Ejective Voicing, of his 2002 book *The Synchronic and Diachronic Phonology of Ejectives*. Here, Fallon provides empirical support for the Glottalic Theory of Proto-Indo-European consonantism. After presenting and discussing in great detail evidence from a number of languages, Fallon (2002:278—285, §6.7) examines and evaluates the plausibility of various paths for ejective voicing, as follows:

1. Direct Voicing: Fallon describes the process of direct voicing of ejectives as the spread of [voice] from a vowel, “a rather direct change which telescopes what historically may have been a series of minute changes. The results will often be a change to a pulmonic voiced consonant with loss of glottal constriction...” On the other hand, “we can express this as indirect voicing in two parts, as the delinking of the laryngeal feature [c.g.], followed by default fill-in (or spreading).”
2. Indirect Voicing: “The indirect voicing of ejectives involves their loss of distinct glottalization and the subsequent voicing of the voiceless unaspirated series.” This is the scenario that I believe best explains the Indo-European developments (see Chapter 5 for details; same conclusion by Arrick 2013).
3. Laryngealization: “Another commonly posited path of development from ejective to voiced is via laryngealization.”
4. Implosivization: “Many linguists now believe that PIE ejectives became implosive.” As an example, a little later on, Fallon suggests that, within the Quichean languages, ejectives may have become implosives as follows:

Voiceless ejective > voiceless implosive > voiced implosive

At a later date, the implosives would have been changed to plain voiced stops. This is the scenario favored by Kümmel (2012:303—306).

Fallon (2002:285) summarizes his findings by noting:

In sum, we have seen that there is a tremendous amount of variation in the production of ejectives, both cross-linguistically and individually. I have discussed four possible directions of change from ejective to voiced: direct and indirect voicing, laryngealization, and implosivization... Creaky or laryngealized voicing seems to be fairly common, as we have seen in Kabardian, for example. And implosivization has occurred independently in a number of African and Central American languages. I feel that these changes are valid possibilities, and that given dialectal variation, they both could be paths of ejective development. And I hope that I have shown that we should not ... automatically rule out the possibility of direct phonetic or phonological change.

And further (2002:288):

... I also hope that I have dispelled the myth of implausibility of ejective voicing. The data gathered here do not by any means validate the Ejective

Model — such validation will require careful study and reassessment of almost 200 years of assumptions (such as the papers in Vennemann 1989). However, they do help rebut some of the Glottalic Theory's sharpest criticisms and should breathe new life into the debate. Garrett (1991: 803) said the Glottalic Theory "was an exciting proposal...one whose time has come and gone". But like Mark Twain, I think rumors of its death are greatly exaggerated.

For additional information on the patterning of glottalics, see especially Greenberg 1970 and Wedekind 1990a. It should be mentioned that Wedekind finds no support from the Semitic languages of Ethiopia for the types of root structure constraints involving glottalics posited for Proto-Indo-European. But, Gamkrelidze (2010:170, fn. 2) rightly points out that these constraints are a common phonetic *tendency*, not a universal (see also Salmons 1993:36).

Another criticism of the Glottalic Theory revolves around Germanic **rīk-* 'ruler', which is universally considered to be a loanword from Celtic **rīg-* (cf. Old Irish *rí* 'king'; Old Welsh *ri* 'king'; Gaulish *rigo-* in the toponym *Rigomagus*; etc.). The objection here is that **rīk-* requires a consonant shift from voiced to voiceless within Germanic, which is not possible within the framework of the Glottalic Theory. However, a careful examination shows that there is no basis for this objection. The form that was borrowed was undoubtedly **rīks* (with devoicing of [g] to [k] before [s] already in Celtic [cf. Gaulish *-rīx* in personal names, such as *Dumnorīx*, *Vercingetorīx*, etc.]) (cf. Gothic *reiks* '[n.] prince, ruler; [adj.] mighty, honorable, powerful'; Old Icelandic *ríkr* 'mighty, powerful' [cf. Orēl 2003:305 Proto-Germanic **rīkz*; Kroonen 2013:412–413 Proto-Germanic **rīk-* 'ruler, king'; Feist 1939:396–397; Lehmann 1986:283; De Vries 1977:446]). The derivative forms found in Germanic (such as Gothic *reiki* 'rule, power, authority', *reikinōn* 'to rule, to govern', etc.) were then built on the stem **rīk-* (cf. Lehmann 1986:283; Orēl 2003:305). We should note that there are loanwords in which consonants are clearly not shifted in Germanic, for instance, Old High German *kellari* 'cellar' (New High German *Keller*), Old Saxon *kelleri* 'cellar', Middle Dutch *kelre* 'cellar' (Dutch *kelder*), etc., borrowed from Latin *cellārium* 'relating to a store-room' by Germanic tribes around the end of the first century BCE (cf. Ramat 1998:388; Kluge—Mitzka 1967:363–364; Kluge—Seebold 1989:365; Vercoullie 1898:133).

Two additional criticisms have been directed against the Glottalic Theory. The first concerns the example of Javanese, which is alleged to have a typologically rare series of voiced aspirates, together with modally voiced and tenuis consonants but without an accompanying series of voiceless aspirates, thus violating Jakobson's famous observation, noted above, that data collected from the study of a great number of the world's languages have failed to turn up any systems in which voiced aspirates are added to the pair plain voiceless stop ~ plain voiced stop unless there are also corresponding voiceless aspirated stops in the system (cf. Jakobson 1971[1957]:528; Martinet 1970:115). Even if the description of the Javanese phonemic inventory turns out to be correct (itself in doubt [see above]), everything about it (syllable structure, phonotactic constraints, suprasegmentals, etc.) is so utterly different from what is assumed to have existed in Proto-Indo-European (cf. Byrd 2010) that Javanese serves as an extremely poor model on which to base ideas

about the Proto-Indo-European phonological system — especially when Javanese is considered within the context of related Austronesian languages (for an excellent introduction to the Indonesian language, including its history and relationship to other Austronesian and Malayic languages, cf. Sneddon 2003; see also William D. Davies 2010, in which Javanese is discussed and compared with Madurese and Indonesian, and Adelaar—Himmelman [eds.] 2004 for detailed descriptions of the principal Austronesian languages of Asia and Madagascar [Javanese is discussed in Chapter 21]). Moreover, the discovery of a single alleged counter-example still does not invalidate Jakobson's observation but merely becomes a footnote to it. Unique types do indeed exist, but they are anomalies and are not exemplary of language in general. Accordingly, the conventional reconstruction of the Proto-Indo-European stop system, with plain voiceless, plain voiced, and voiced aspirated stops, without corresponding voiceless aspirates, remains typologically improbable. To reiterate the obvious: When there are two competing reconstructions for a given proto-language, the one that has the greatest typological support should be favored.

The final criticism concerns the claim that no attested Indo-European daughter language has preserved a series of glottalized stops (ejectives). However, this criticism is baseless. Glottalics are, in fact, preserved in several Modern Armenian dialects (for details, cf. Fleming 2000; Martirosyan 2019:51—60; Vaux 1998). We may note in passing that this very same objection was raised against de Saussure's "coefficients sonantiques" prior to the identification of one of them in Hittite in 1927 by Cuny and Kuryłowicz. Moreover, in light of Fallon's work, this criticism hardly needs to be taken seriously — ejectives can and do change, though they can also remain stable. If the ejectives were lost early enough, it is not at all surprising that none of the daughter languages except Armenian has preserved them as such. Fortunately, there are enough clues in what has survived to substantiate the Glottalic Model. Details on how the revised Proto-Indo-European phonological system developed into the phonological systems found in the various Indo-European daughter languages are discussed in Chapter 5.

CHAPTER FOUR

THE RECONSTRUCTION OF THE PROTO-INDO-EUROPEAN PHONOLOGICAL SYSTEM

4.1. THE PROTO-INDO-EUROPEAN LARYNGEALS

Let us start by summarizing the core tenants of the “Laryngeal Theory”. Beginning with an article published in 1927 and culminating in the theory presented in Chapter 2 in his 1935 book *Études indoeuropéennes I [Indo-European Studies I]*, the Polish Indo-Europeanist Jerzy Kuryłowicz (1895—1978), attempted to demonstrate that the so-called “original long vowels” reconstructed by the Neogrammarians for Proto-Indo-European were the result of a contraction of short vowels with certain consonantal elements, upon their loss. Kuryłowicz (1935:28) called these elements “consonantal ə (schwa)”, which he wrote $*\varrho$. Kuryłowicz made additional discoveries as a result of his investigations, eventually developing the core tenets of the Laryngeal Theory, which remain to the present day. In his 1935 book (1935: 28—30), Kuryłowicz summarized his findings as follows:

1. Every Proto-Indo-European original long vowel (that is to say, not arising through analogical lengthening nor through the contraction of two short vowels) is a contraction of a short vowel with one of three following consonantal elements ($*\varrho_1$, $*\varrho_2$, $*\varrho_3$), thus: $*e + *\varrho_1 > *\bar{e}$, $*e + *\varrho_2 > *\bar{a}$, $*e + *\varrho_3 > *\bar{o}$; $*o$ (derived from $*e$ through qualitative Ablaut) $+ *\varrho_1 > *\bar{o}$. Notes: (1) Kuryłowicz was uncertain about whether $*o + *\varrho_2 > *\bar{o}$, due to the lack of positive examples. He was also unable to ascertain whether $*\bar{o}$ was the result of $*o + *\varrho_1$ or of $*e + *\varrho_3$. (2) According to Sturtevant (1942:27 and 1951:49—51), $*\varrho_3$ did not change a contiguous $*e$ to $*o$.
2. When $*\varrho$ was found between vowels, it disappeared. The resulting vowels were then contracted, thus: $*a^x\varrho a^x > *a^x a^x > *\bar{a}^x$.
3. When $*\varrho$ was found between two consonants, it disappeared without a trace, except in Greek.
4. When $*\varrho$ was found between a consonant and an immediately following vowel, it also disappeared. However, in Indo-Iranian, $*k$, $*t$, $*p +$ prevocalic $*\varrho > *kh$, $*th$, $*ph$. The sound which the Neogrammarians designated as vocalic $*\varrho$ is the reduced vowel $*e$, which remained after the disappearance of the consonant $*\varrho$.
5. Every Proto-Indo-European word beginning with a vowel has lost an initial $*\varrho$. The character of the lost $*\varrho$ is revealed by the quality of the remaining vowel, thus: $*e- < *\varrho_1 e-$, $*a- < *\varrho_2 e-$, $*o- < *\varrho_3 e-$ (provided that “original $*o$ ” is involved and not an Ablaut grade of $*e$). On the other hand, there were also certain roots beginning with a consonant that were derived from an earlier sequence of $*\varrho +$ consonant. Such roots were simplified by the simple loss of

- * ϱ , except in Greek and Armenian. In composition (and also in *sandhi*), after a preceding short vowel, the loss of initial preconsonantal * ϱ resulted in the lengthening of that vowel: * $V + * \varrho C > \text{long vowel } (*\bar{V}) + *C$ (* V = vowel; * C = consonant — Kurylowicz writes * $E [= *V]$ and * $T [= *C]$, respectively).
6. In Hittite words of Indo-European origin, *h* seems to continue * ϱ_2 . However, there is also a group of Indo-European words with * \tilde{a} in which *h* is missing in Hittite. These seem to be due to a different cause than a neighboring * ϱ_2 . These can be attributed to the presence of a fourth type of * ϱ in Proto-Indo-European, namely, * ϱ_4 (* H_4) which was lost in Hittite.

Kurylowicz correlated his theory of “consonantal *a* (schwa)” with the “coefficients sonantiques” posited in 1878 by the young Ferdinand de Saussure and with the “laryngeals” posited by Hermann Möller (1917) on the basis of his comparative work on Indo-European and Semitic. Möller’s term has stuck.

Though there have been many refinements in the Laryngeal Theory since 1935, Kurylowicz’s presentation remains the foundation of the theory. Nevertheless, though the Laryngeal Theory has now gained universal acceptance, the exact number and phonetic character of the laryngeals are still being debated.

To recapitulate and expand upon the preceding:

1. The Indo-European parent language possessed one or more laryngeals (note: the term “laryngeals” refers to these sounds as a class and says nothing about their phonetic make-up [cf. Laroche 1986:134]). Most specialists posit either three (Beekes, Benveniste, Burrow, Clackson, Couvreur, Cowgill, Eichner, Fortson, Keiler, Lejeune, Meier-Brügger, Watkins) or four distinct laryngeals (Bomhard, Kerns—Schwartz, Kurylowicz, Lehmann, Sapir, Mallory—Adams, Sturtevant, Swiggers). Collinge, Hammerich, Szemerényi, Vaillant, and Zgusta posit just one laryngeal. Martinet (1975[1967]:127), on the other hand, posits as many as ten, while Puhvel (1965:97) posits six.
2. The laryngeals were lost as independent phonemes in all branches of Indo-European except for Anatolian (cf. Bomhard 1976:222—231 and 1984b:119—131; Lehmann 1952:25—28; Puhvel 1965:79—92; Sturtevant 1942:35—65 and 1951:47—55) and Armenian, where the laryngeal * ϱ_2 (* H_2) appears as *h* initially before vowels in a small number of words (cf. Austin 1942:22—25; Bomhard 1976:231—232 and 1984b:82—84; Sturtevant 1942:29—30; Greppin 1981:120—122; Winter 1965b:102).
3. The loss of preconsonantal laryngeals after short vowels caused the compensatory lengthening of these vowels (cf. Benveniste 1935:149; Bomhard 1984b:17; Kurylowicz 1935:28; Lehmann 1952:85—86; Lindeman 1970:17, 1987:21 and 50—59; Sturtevant 1942:66—71).
4. One or more of the laryngeals had an assimilatory effect on contiguous vowels — it is usually assumed that * ϱ_2 (* H_2) and * ϱ_4 (* H_4) changed a contiguous **e* to **a* and that * ϱ_3 (* H_3) changed a contiguous **e* to **o* (cf. Benveniste

- 1935:149; Couvreur 1937:69; Lindeman 1970:17 and 1987:22; Sturtevant 1942:35—46).
5. The so-called “long syllabic resonants” ($*\bar{\eta}$, $*\bar{\eta}$, $*\bar{l}$, $*\bar{l}$) are to be reinterpreted as sequences of $*\eta$, $*\eta$, $*l$, $*l$ plus laryngeal, that is, $*\eta H$, $*\eta H$, $*l H$, $*l H$ (cf. Burrow 1973:87; Lehmann 1952:86—90; Lindeman 1987:21—22; Sturtevant 1942:69—71).
 6. Some examples of voiceless aspirates in Indo-Aryan owe their origin to the former presence of a laryngeal between an immediately preceding plain voiceless stop and an immediately following vowel: $*pH$, $*tH$, $*kH > ph$, th , kh (cf. Kuryłowicz 1935:29; Lehmann 1952:80—84; Lindeman 1970:77—81 and 1987:88—91; Sturtevant 1942:83—86).
 7. Proto-Indo-European had no initial vowels; in every instance where initial vowels had been reconstructed for Proto-Indo-European by the Neogrammarians, a preceding laryngeal has been lost (cf. Kuryłowicz 1935:29).
 8. The laryngeals could have both syllabic and non-syllabic allophones depending upon their environment (cf. Benveniste 1935:149; Couvreur 1937:303—309; Keiler 1970:70—86). That is to say that the patterning of the laryngeals was similar to that usually assumed for the resonants. The syllabic form of the laryngeals is commonly associated with the schwa primum ($*\bar{\epsilon}$) reconstructed for Proto-Indo-European by the Neogrammarians.

At first glance, the form of the Laryngeal Theory that would seem to conform best to the evidence found in the daughter languages would appear to be that which assumes four laryngeals for the Indo-European parent language. Specifically, four laryngeals seem to be needed for Pre-Anatolian Proto-Indo-European and for that form of Proto-Indo-European existing immediately after the separation of the Anatolian languages from the main speech community. However, for the Indo-European antecedent of the non-Anatolian daughter languages (“Disintegrating Indo-European”), only one laryngeal is to be reconstructed (cf. Polomé 1987a:167).

Disintegrating Indo-European must have had the full complement of long and short vowels traditionally reconstructed (cf. Szemerényi 1967:67—87). Furthermore, Disintegrating Indo-European must have had initial vowels — to assume otherwise would be to ignore the evidence of the non-Anatolian daughter languages as well as to deny the efficacy of the Comparative Method. This can only mean that the vowel-lengthening and vowel-coloring effects customarily attributed to the laryngeals must have taken place prior to the Disintegrating Indo-European period. On the surface, it would thus appear as if one could almost get by without positing any laryngeals at all for this period. At least one laryngeal must be reconstructed for Disintegrating Indo-European, however, to account for developments in the non-Anatolian daughter languages such as:

1. The Indo-Aryan voiceless aspirates (cf. Lehmann 1952:80—84).
2. The Greek prothetic vowels (cf. Austin 1941:83—92; Beekes 1969:18—74; Cowgill 1965:151—153; Lejeune 1972:204).

3. The Greek rough breathing, in part (cf. Sapir 1938:248—274; Sturtevant 1942:76—78).
4. Armenian initial *h*, in part (cf. Austin 1942:22—25; Bomhard 1984b:82—84; Greppin 1981:120—122; Sturtevant 1942:29—30; Winter 1965b:102).
5. Some aspects of the Balto-Slavic intonations (cf. Vaillant 1950:241—246).
6. The Germanic Verschärfung (also known as “Holtzmann’s Law”) (cf. Jasanoff 1978a:77—90; Lehmann 1952:36—46 and 1965:213—215; Lindeman 1964).

No doubt, it was this single laryngeal of Disintegrating Indo-European that had a syllabic allophone, the traditional schwa primum (**ə*).

For Pre-Anatolian Proto-Indo-European, at least four laryngeals would seem to be needed to account for:

1. Disintegrating Indo-European **e* without a corresponding Anatolian laryngeal reflex (this is Kurylowicz’s **ǵ*₁, Sturtevant’s **ʔ*).
2. Disintegrating Indo-European **a* with a corresponding Anatolian laryngeal reflex (this is Kurylowicz’s **ǵ*₂, Sturtevant’s **x*).
3. Disintegrating Indo-European **e* and/or **o* with a corresponding Anatolian laryngeal reflex (this is Kurylowicz’s **ǵ*₃, Sturtevant’s **γ*). It should be noted that Kurylowicz assumes that this laryngeal changed a contiguous **e* to **o*, while Sturtevant (1938:104—111 and 1942:20) assumes that this laryngeal did not color contiguous vowels.
4. Disintegrating Indo-European **a* without a corresponding Anatolian laryngeal reflex (this is Kurylowicz’s **ǵ*₄, Sturtevant’s **ʔ*: [in later works, Sturtevant writes **h*]).

One of the most difficult riddles to solve has been and continues to be the determination of the probable phonetic values of the various laryngeals (cf. Kessler no date):

1. Sturtevant (1942:19), following Sapir (1938), assigns the following phonetic values to the laryngeals: **ǵ*₁ (**H*₁) = a glottal stop with frontal timbre (Sturtevant writes **ʔ*); **ǵ*₄ (**H*₄) = a glottal stop with velar timbre (Sturtevant writes **ʔ*: [in later works, Sturtevant writes **h*]); **ǵ*₂ (**H*₂) = a voiceless velar spirant (Sturtevant writes **x*); **ǵ*₃ (**H*₃) = a voiced velar spirant (Sturtevant writes **γ*).
2. According to Lehmann (1952:103—108), **ǵ*₁ (**H*₁) was either a weakly aspirated glottal fricative (Lehmann writes **ʔ*) or a pharyngeal fricative; **ǵ*₄ (**H*₄) was apparently a glottal aspirated fricative (Lehmann writes **h*); **ǵ*₂ (**H*₂) was a voiceless velar fricative (Lehmann writes **x*); and **ǵ*₃ (**H*₃) was a rounded voiced velar fricative *[*ɣ*^w] (Lehmann writes **γ*).
3. Keiler (1970:68) posits the following values: **ǵ*₁ (**H*₁) = a voiceless glottal fricative *[*h*]; **ǵ*₂ (**H*₂) = a voiceless pharyngeal fricative *[*ħ*]; and **ǵ*₃ (**H*₃) = a voiced pharyngeal fricative *[*ʕ*]. Couvreur (1937) assigns the same values to the laryngeals **ǵ*₂ (**H*₂) and **ǵ*₃ (**H*₃) as does Keiler.

4. Finally, Colarusso (1981:550) assigns the following values: $*_{\mathcal{Z}_1}(*H_1)$ = either a glottal stop $*[ʔ]$ or voiceless and voiced pharyngealized velar fricatives, $*[x^ʕ]$ and $*[ɣ^ʕ]$ (Colarusso writes $*\bar{x}/$ and $*\bar{\gamma}/$, respectively); $*_{\mathcal{Z}_2}(*H_2)$ = voiceless and voiced pharyngeal fricatives, $*[ħ]$ (Colarusso writes $*\bar{h}/$) and $*[ʕ]$, respectively; $*_{\mathcal{Z}_3}(*H_3)$ = either labialized voiceless and voiced pharyngeal fricatives, $*[ħ^w]$ (Colarusso writes $*\bar{h}^w/$) and $*[ʕ^w]$, respectively) or a labialized glottal stop $*[ʔ^w]$; and $*_{\mathcal{Z}_4}(*H_4)$ = a voiceless glottal fricative $*[h]$.

According to Colarusso (1981:512), Couvreur (1937:264), Fortson (2004:58 and 2010:64), Messing (1947:223—225), Sturtevant (1942:19 and 1951:54), and Pooth (2015a:11), $*H_1$ was a glottal stop $/ʔ/$. The interpretation of $*H_1$ as a glottal stop explains why this laryngeal did not color contiguous vowels. As noted by Catford (1977b:105): “simple glottal stop has no influence on the quality of contiguous vowels”. This is verifiable from both Northwest Caucasian and Arabic, where glottal stops have no effect on vowel quality (cf. Colarusso 1981:511 for Northwest Caucasian and Al-Ani 1970:60—62 for Arabic). Moreover, loss of a glottal stop between an immediately preceding short vowel and an immediately following non-syllabic causes compensatory lengthening of the vowel in Akkadian and Arabic (cf. Cantineau 1960:79; Couvreur 1937:288—289; Moscati [ed.] 1964: 61—64; J. Watson 2002:18—19). Note the following examples from Akkadian (these are taken from Couvreur 1937:288—289):

1. Akkadian $*raʔšu > rāšu$ (later $rēšu$) ‘head’; Hebrew $rōʔš$ [רֹאשׁ] ‘head’; Aramaic $rēšā$ ‘head’; Phoenician $rʔš$ ‘head’; Arabic $raʔs$ ‘head’; Epigraphic South Arabian $rʔs$ ‘head’; Šheri / Jibbāli $rēs/rés$ ‘head’; Soqotri riy ‘head’; Ugaritic $riš$ ‘head’; Geez / Ethiopic $rəʔas$ ‘head’ [ርእስ]; Tigrinya $rəʔsi$ ‘head’; Tigre $rāʔas$ ‘head’; Amharic ras ‘head’. Cf. Militarev 2011:75, no. 38.
2. Akkadian $*raḫmu > *reḫmu > *reʔmu > rēmu$ ‘grace, mercy’; Hebrew $raḫūm$ [רחום] ‘compassionate’; Arabic $raḫīma$ ‘to have mercy, compassion’, $raḫma$ ‘pity, compassion’; Šheri / Jibbāli $raḫām$ ‘to be kind’; Mehri $rəḫām$ ‘to be kind to someone’; Ḥarsūsi $reḫam$ ‘to pity’; Ugaritic $rḫm$ ‘to be kind’; Tigre $rāḫama$ ‘to have pity on’ (Arabic loan).
3. Akkadian $*baʕlu > *beʕlu > *beʔlu > bēlu$ ‘owner, lord’; Hebrew $baʕal$ [בַּעַל] ‘lord, owner’; Ugaritic $bʕl$ ‘owner of the house’; Arabic $baʕl$ ‘husband, master, owner’; Epigraphic South Arabian $bʕl$ ‘master, owner’; Ḥarsūsi $bāl$ ‘master, lord’; Mehri $bāl$ ‘owner, possessor’; Šheri / Jibbāli $báʕal$ ‘person owning’; Soqotri $baʕl$ ‘master, lord’; Geez / Ethiopic $baʕāl$ [ባዕል] ‘owner, master’; Tigre $bāʕal$ ‘master’; Tigrinya $bāʕal$, $baʕal$ ‘master’; Amharic bal ‘master’.

Identical developments are assumed for $*H_1$ in Proto-Indo-European. This laryngeal is not directly attested in any of the Indo-European daughter languages, including Hittite (so Sturtevant 1942:53 and 1951:154 and others, but cf. Kloekhorst 2022).

Additional confirmation that $*H_1$ was a glottal stop is provided by Sanskrit (3rd sg.) *pibati* ‘drinks’, Latin *bibit* ‘drinks’, Old Irish *ibid* ‘drinks’. The Proto-Indo-European antecedent would have been the reduplicated 3rd sg. verbal form $*pʰi-$

$p^h H_1$ - $et^h i$ ‘drinks’ (or, in traditional terms, $*pi-p_2 i$ - eti), that is, $*p^h i$ - $p^h 2$ - $et^h i$. Now, according to Gamkrelidze, Hopper, and Ivanov, glottalized stops become voiced stops in Sanskrit, Latin, and Old Irish. Likewise, we would expect the cluster $*-p^h 2$ - to become /b/ in these languages, and this is exactly what we do in fact find. The following developments may be assumed (cf. Gamkrelidze—Ivanov 1995.1:856): $*p^h i$ - $p^h 2$ - $et^h i$ > (with deaspiration of $*-p^h$ - in the cluster $*-p^h 2$ -) $*p^h i$ - p_2 - $et^h i$ > (with reanalysis of $*-p_2$ - as $*-p$ ’) $*p^h i$ - p ’- $et^h i$ > (with deglottalization) $*p^h i$ - p - $et^h i$ > (with voicing of medial $*p$) $*p^h i$ - b - $et^h i$ > (with deaspiration of voiceless aspirates) $*pi$ - b - eti > Sanskrit *pibati* ‘drinks’, Latin *bibit* ‘drinks’, Old Irish *ibid* ‘drinks’.

Kurylowicz (1935:29—30) sets up $*2_4$ ($*H_4$) to account for those cases in which an *a* in the non-Anatolian daughter languages corresponds to an *a* in Hittite, and Hittite lacks a contiguous laryngeal reflex. That is to say that $*H_4$ is not directly attested in Hittite or in any of the other daughter languages (cf. Bomhard 1976:230; Sturtevant 1942:42 and 1951:51—52), though its former presence can be determined by the fact that it changed a contiguous $*e$ to $*a$ and by the fact that it caused compensatory vowel lengthening when lost between an immediately preceding short vowel and an immediately following non-syllabic. According to Hopper (1977a:49—50), typological evidence implies that the voiceless laryngeal fricative /h/ should be added to the Proto-Indo-European phonemic inventory, and this coincides with the phonetic value assigned to $*H_4$ by Colarusso (1981:512), Lehmann (1952:108), and (apparently) Sturtevant (1951:52). In terms of distinctive feature theory, /h/ is [+cons, +low, -voice, +cont, +grave]. As far as we are concerned, the most important feature is [low]. According to Chomsky—Halle (1968:305), the articulatory gesture behind the feature [low] is a “lowering [of] the body of the tongue below the level it occupies in the neutral position”, while Colarusso (1981:509) defines it as “an opening of the oral cavity to enhance resonance”. It was the presence of this feature that was responsible for the lowering of a contiguous $*e$ to $*a$. Finally, we may note that developments similar to those assumed for $*H_4$ in Proto-Indo-European are found in Ubykh and in the Circassian languages, where /h/ (and /h^w/) lowers and colors contiguous vowels and also causes compensatory vowel lengthening when lost (cf. Colarusso 1975:396).

Reflexes of $*2_2$ ($*H_2$) are found in Hittite and the other older Anatolian languages (that is, Palaic and Cuneiform and Hieroglyphic Luwian), where they are written (h) h (cf. Fortson 2010:178; Simon 2014; Sturtevant 1942:35 and 1951:47). This laryngeal also survives in Lycian, where it is written χ . Like $*H_4$, $*H_2$ lowers a contiguous $*e$ to $*a$. On this basis, we would expect $*H_2$ also to be characterized by the presence of the feature [low]. Good candidates to assign as the phonetic values of $*H_2$ would be the multiply-articulated pharyngeal/laryngeals / h^h / and / ʕ^h / (they could also have been adytals [+CP, +low]). Not only are these sounds marked by the presence of the feature [low], which accounts for the lowering of adjacent vowels, but they also make it easy to account for the fact that $*H_2$ appears as *h* in Armenian before full-grade vowels. We can envision a change of $*\text{h}^h$ into $*h$ and of $*\text{ʕ}^h$ first into $*h$ and then into $*h$ similar to what is found in the Ashkharwa dialect of Abkhaz (cf. Colarusso 1981:516). The resulting $*h$ would have subsequently been lost in all of the non-Anatolian daughter languages except Pre-Armenian. As

in Ashkharwa, we may venture a guess that **h̥h* and **ʕh̥* developed from the earlier pharyngeals **h̥* and **ʕ* respectively in Pre-Anatolian Proto-Indo-European. Indeed, support for such an assumption comes from the lexical parallels between Proto-Indo-European and Proto-Afrasian discussed in this book, where Proto-Indo-European **H₂* corresponds to Proto-Afrasian **h̥* (traditionally written **h*) and **x* (traditionally written **h*). Finally, we should take note of Jakobson's (1971[1956]:518—520) description of similar sounds in Arabic (see also J. Watson 2002:44—45):

... /h/ is essentially a pharyngealized laryngeal. Of the two phonemes of this type, /h/ is usually produced without voice and /ʕ/ with voice. Since a considerable part of the air used with /ʕ/ is consumed by voicing alone, this phoneme is a lenis, in contradistinction to the fortis /h/. Thanks to the pharyngeal contraction, the voice-pitch in /ʕ/ and the whisper-pitch in /h/ are very low: "In passing to /ʕ/ from a preceding vowel the voice has to descend rapidly, often through more than an octave, and is cut off at its lowest pitch. If a vowel *follows*, the pitch begins at its lowest level and rises quickly, through a similar interval, to normal vowel pitch." (1971[1956]:518—519)

As to the influence upon the adjacent vowels, the componential analysis of a phoneme cannot proceed from the contextual variants of neighboring phonemes: often the variation is due not to a single feature but to a combination of concurrent features. Furthermore, in many instances the pharyngeals modify adjacent vowels in the same direction as pharyngealized buccals. In colloquial Egyptian both the pharyngealized buccals and the pharyngeals appear to exert a modifying retracting influence on preceding and following a-vowels (Gairdner, p. 46f.). In the dialect of El-Hamma, Cantineau observes that the /a:/ is pronounced "entre *a* et *o* ouvert" in contact with pharyngealized dentals, while in contact with pharyngeals it is realized as "*a* moyen français", in contact with velars it oscillates between the two positions mentioned, and in other contexts it is a front vowel. In the same dialect the phoneme /u:/ is shifted towards the closed *o* in the neighborhood of pharyngealized dentals, velars, and pharyngeals (1951, p. 78f.). (1971[1956]: 520)

It is more difficult to determine the phonetic value of **h̥₃* (**H₃*) than of any of the other laryngeals. Reflexes of **h̥₃* (**H₃*) are also found in the older Anatolian languages (cf. Bomhard 1976:228—230; Fortson 2010:178; Sturtevant 1942:44 and 1951:49—51). Kurylowicz (1935:28—30) tried to show that **h̥₃* (**H₃*) changed a contiguous **e* to **o*, but Sturtevant (1938:104—111 and 1942:20) has argued against such an assumption. The majority of scholars are inclined to accept Kurylowicz's interpretation. Now, several scholars (Sturtevant, Lehmann, Keiler, and others) have suggested that **h̥₃* (**H₃*) was the voiced counterpart of **h̥₂* (**H₂*). Consequently, we can speculate that **h̥₃* (**H₃*) was a voiced multiply-articulated pharyngeal/laryngeal **ʕh̥* (as with **h̥h̥*, it could also have been an adytal [+CP, +low]). Now, a more careful examination indicates that **h̥₃* and **h̥₂* may actually have had the same vowel-coloring effects. As we shall see from the examples given below, **h̥₂* lowered and colored a contiguous **e* to **a*, original **i* to *e*, and original

**u* to **o*. As in the Arabic case discussed by Jakobson above, we would expect * \mathcal{Z}_3 to have had a similar effect on these vowels in early Proto-Indo-European. That is to say that we would expect * \mathcal{Z}_3 to have lowered and colored a contiguous **e* to **a*, original **i* to *e*, and original **u* to **o*. In fact, there is some evidence — albeit controversial — within Indo-European itself to support this, as the following examples involving * \mathcal{Z}_2 illustrate:

1. Early Proto-Indo-European * \mathcal{Z}_2ink^h - > later Proto-Indo-European * \mathcal{Z}_2enk^h - ‘to reach, to come to, to arrive at’ (Pokorny 1959:316—318 reconstructs **enek*-, **nek*-, **enk*-, **ηk*-): Hittite (3rd sg.) *hi-in-ik-zi* ‘to present, to deliver, to offer, to allot’; Sanskrit *ásnóti* ‘to reach, to come to, to arrive at, to get, to obtain; to master; to offer’; Latin *nancior* ‘to get, to gain, to obtain’, *nanciscor* ‘to get, to gain, to receive, to meet’; Tocharian A *ents*-, B *enk*- ‘to seize, to take’. Cf. Puhvel 1984— .3:289—292; Melchert 1994a:143—144. The Hittite form directly attests * \mathcal{Z}_2ink^h -. Note: That the transition from **i* to **e* was already taking place as early as Hittite is shown by forms such as (nom.-acc. sg.) *hé-en-gur* ‘consignment, offering, oblation, gift, tribute’ beside (nom.-acc. sg.) *hi-in-ku-wa-ar*. The same variation occurs in (nom.-acc. sg.) *hé-en-kan* ‘death, doom, deadly, disease, plague’ alongside (nom.-acc. sg.) *hi-in-kán*.
2. Early Proto-Indo-European * \mathcal{Z}_2ul - > later Proto-Indo-European * \mathcal{Z}_2ol - ‘to destroy’ (Pokorny 1959:777 reconstructs **ol*-[*e*]-): Hittite (3rd sg.) *hu-ul-la-a-i* ‘to smite, to destroy, to defeat’; Latin *ab-oleō* ‘to destroy’; Greek ὀλλῶμι ‘to destroy’. Cf. Couvreur 1937:143—144; Cowgill 1965:146—147 and 157 (Cowgill derives the Greek form from **Ol-ne-O-mi* and considers the *o* to be a replacement for original *α* — nonetheless, Cowgill accepts the comparison with Hittite *hu-ul-la-a-i*). The Hittite form directly attests * \mathcal{Z}_2ul -. Note: Kloekhorst 2008b:358—360; Melchert 1994a:55—56, 65—66, and 82; Polomé 1965:18; and Puhvel 1984— .3:368 reject this etymology.
3. Early Proto-Indo-European * \mathcal{Z}_2um - > later Proto-Indo-European * \mathcal{Z}_2om - ‘all, whole’: Hittite (nom. sg.) *hu-u-ma-an-za* ‘all, whole’; Latin *omnis* ‘all, every, whole’. Cf. Couvreur 1937:144—146; Kronasser 1956:41; Pedersen 1938:165. The Hittite form directly attests * \mathcal{Z}_2um -. Note: Polomé (1965:18) and Puhvel (1984— .3:380) reject this etymology — Puhvel derives Latin *omnis* from **opnis* (as does de Vaan 2008:428). Ernout—Meillet (1979:461—462) state that there is “nothing similar elsewhere” (“Aucun mot pareil ailleurs”) to Latin *omnis*. On the other hand, Walde—Hofmann (1965—1972.II:209—210) mention Oscan *úmbn*, which points to earlier **omb-nis* and not **opnis* as the source of both the Oscan form and Latin *omnis*. **omb-nis* may contain an epenthetic *b*, in which case the original form would have been **om-ni-s*. Here, *-ni-* is a suffix. Likewise, in Hittite *hu-u-ma-an-za*, the stem is **hum*-, and the *-anz(a)* is a suffix (< **-onts* or **-nts*). Thus, this etymology can be revived if we consider the original form to have been * \mathcal{Z}_2um -, which later became * \mathcal{Z}_2om -, with *-o-* from earlier *-u-* under the influence of the preceding laryngeal. Such an explanation overcomes the objections raised against this etymology based upon the irregular correspondence of Hittite *u* and Latin *o*.

As for $*\mathfrak{z}_3$, there is a strong probability that the change of $*i$ to $*e$ under the influence of $*\mathfrak{z}_3$ can be observed in Hittite (nom.-acc. sg.) $\check{s}e-e-\check{h}ur$, $\check{s}e-e-\check{h}u-ur$, $\check{s}e-e-\check{h}u-wa-ar$ ‘urine’, (nom. sg.) $\check{s}e-e-\check{h}u-ga-ni-ya-u-wa-an-za$ ‘besmeared with urine’, and (3rd sg. pret. act.) $\check{s}e-e-\check{h}u-ri-ya-[a]t$ ‘to urinate’ (all derived from $*se\mathfrak{z}_3-ur-$, earlier $*si\mathfrak{z}_3-ur-$ ‘urine’), discussed in detail below

This explains the origin of at least some cases of so-called “non-apophonic” $*e$ and $*o$. At a later date, secondary e - or o -grade forms (corresponding to original non-apophonic $*o$ and $*e$ respectively) may have developed in accordance with the regular $*e \sim *o$ Ablaut patterning. Where secondary e - or o -grade forms did not develop, we would have examples of non-apophonic $*e$ or $*o$, as the case may be. An important point needs to be made here: $*i$ and $*u$ had more than one origin in Proto-Indo-European. In some cases, $*i$ and $*u$ were original (that is to say, inherited from Proto-Nostratic), while, in other cases, they resulted from the stress-conditioned weakening of $*Vj$ and $*Vw$ respectively. Only original $*i$ and $*u$ were lowered and colored to $*e$ and $*o$ respectively when contiguous with $*\mathfrak{z}_2$ (and $*\mathfrak{z}_3$) and $*\mathfrak{z}_4$. When $*i$ and $*u$ resulted from the stress-conditioned weakening of $*Vj$ and $*Vw$, however, they were not lowered to $*e$ and $*o$ respectively in the neighborhood of $*\mathfrak{z}_2$ (and $*\mathfrak{z}_3$) and $*\mathfrak{z}_4$, since such a change would have disrupted the integrity of the Ablaut relationship.

The question of whether or not labialized laryngeals should be reconstructed for Proto-Indo-European will not be considered here, though there is at least circumstantial evidence that one or more labialized laryngeals may have existed in the Indo-European parent language (cf. the Appendix at the end of this chapter for more information as well as: Colarusso 1981:503—552; Adrados 1961, 1981b, and 1981c; Martinet 1970:212—234 and 1975[1967]:114—143; Puhvel 1965:86—92; Watkins 1965b:89). We may note in passing that there is even some evidence that Proto-Indo-European may also have had labialized dentals as well as a labialized sibilant (cf. Gamkrelidze—Ivanov 1984.I:122—134 and 1995.I:111—115).

We may summarize our findings by setting up the following matrix:

	$*\mathfrak{?}$	$*h$	$*\check{h}h$	$*\mathfrak{?}\check{h}$
Traditional $*\mathfrak{z}_1$ ($*H_1$)	+	-	-	-
Traditional $*\mathfrak{z}_4$ ($*H_4$)	-	+	-	-
Traditional $*\mathfrak{z}_2$ ($*H_2$)	-	-	+	-
Traditional $*\mathfrak{z}_3$ ($*H_3$)	-	-	-	+
e lowered and colored to a	-	+	+	+
i lowered and colored to e	-	+	+	+
u lowered and colored to o	-	+	+	+
Preserved in Anatolian	-	-	+	+
Partially preserved in Armenian	-	-	+	+

Now that we have determined the probable phonetic values of the Proto-Indo-European laryngeals, we can turn to the question of their prehistoric development.

On the basis of comparison with other Nostratic languages, especially Proto-Afrasian, the following laryngeals may be posited for Pre-Proto-Indo-European:

		Plain	Labialized
Glottal stops:		*ʔ	*ʔ ^w
Glottal fricative:		*h	
Velar fricatives:	voiceless:	*x	*x ^w
	voiced:	*ɣ	
Pharyngeal fricatives:	voiceless:	*ħ	*ħ ^w
	voiced:	*ʕ	

It seems likely that these phonemes remained into the “Phonemic Pitch Stage” of Proto-Indo-European (also called “Proto-Indo-Anatolian”, formerly called “Proto-Indo-Hittite”), except that */h/ and */ʕ/ became the multiply-articulated voiceless and voiced pharyngeal/laryngeal fricatives */ħh/ and */ʕʕ/, respectively. Prior to these changes, these laryngeals had no “vowel coloring” effects on contiguous vowels. After these changes, however, these sounds lowered contiguous vowels: *e > *a, original *i > *e and original *u > *o. This is extremely important, since I maintain that the Anatolian branch became separated from the main speech community at the end of the “Phonemic Pitch Stage” of Proto-Indo-European. In Pre-Anatolian, */ħh/ and */x/ merged into */x/, while */ʕʕ/ and */ɣ/ merged into */ɣ/. (At the same time, */ʔ/ [= *ʔ₁] and */h/ [= *ʔ₄] were lost.) This accounts for the reflexes found in the older Anatolian daughter languages. Things were different, however, in the Indo-European ancestor of the non-Anatolian daughter languages. Here, */ħh/ and */x/ merged into */ħh/, while */ʕʕ/ and */ɣ/ merged into */ʕʕ/. Then, in the stage of development which I have called “Disintegrating Indo-European”, the laryngeals were mostly lost. First, the laryngeals */ʔ/ and */h/ were lost initially before vowels. In all other environments, */ʔ/ and */h/ merged into */h/. Then, the laryngeals */ħh/ and */ʕʕ/ became */h/ (*ħh/ > */h/; *ʕʕ/ > */h/ > */h/). At this time, the single remaining laryngeal */h/ had no vowel-coloring effects on contiguous vowels. Finally, this */h/ was lost initially before vowels (except in pre-Armenian) and medially between an immediately preceding vowel and a following non-syllabic. This latter change caused compensatory lengthening of preceding short vowels:

eHC	>	ēC
oHC	>	ōC
aHC	>	āC
iHC	>	īC
uHC	>	ūC

I assume that the single remaining laryngeal, *h, was, at first, preserved in all other positions and that it had a syllabic allophone when between two non-syllabics — this may be written *h̥. It is on the basis of the Armenian evidence that I assume this single remaining laryngeal to have been the voiceless laryngeal fricative [h̥].

Szemerényi (1967:89—90), Vaillant (1950:241—246), and Zgusta (1951:428—472) also agree that, in its final stage of development, Proto-Indo-European had only a single laryngeal and that that laryngeal was a voiceless laryngeal fricative. See also Collinge 1970b:67—101; Hammerich 1948; Kessler no date, p. 23. Note: */h/ may have been simply lost without a trace in certain contexts (cf. Byrd 2010).

The following table compares the symbols used in this book (1) to represent the laryngeals with the symbols used by various other scholars: (2) Kuryłowicz 1935; (3) Benveniste 1935, Watkins 2000; (4) Couvreur 1937, Messing 1947; (5) Sapir 1938, Sturtevant 1942 (note the table on p. 22); (6) Lehmann 1952; (7) Beekes 1995 and 2011, Clackson 2007, Fortson 2004 and 2010, Meier-Brügger 2003, Watkins 1998; (8) Mallory—Adams 1997; (9) Keiler 1970; (10) De Saussure 1878:

1	2	3	4	5	6	7	8	9	10
ʔ	ǵ ₁	ǵ ₁	ʾ	ʾ	ʔ	h ₁	h ₁	H ₁	A
ḥ	ǵ ₂	ǵ ₂	ḥ	x	x	h ₂	h ₂	H ₂	A
ḥ̥	ǵ ₃	ǵ ₃	ḥ̥	γ	γ	h ₃	h ₃	H ₃	A
h	ǵ ₄			h	h		h ₄		Q

In closing, we may note that many of the developments posited here for the Proto-Indo-European laryngeals are similar to developments found in Coptic, as analyzed by Greenberg (1969:183—184). For more information on the Coptic developments, cf. Loprieno 1995:40—50; Peust 1999; Vergote 1945 and 1973.Ib:12—101.

4.2. THE ANATOLIAN EVIDENCE

At the time when Kuryłowicz wrote (1935), the remaining Anatolian daughter languages (Cuneiform and Hieroglyphic Luwian, Palaic, Kalasmaic, Lycian, Milyan, Lydian, Carian, Pisidian, and Sidetic — Pisidian and Sidetic will not be considered here due to the paucity of evidence) were not sufficiently known to be included in the discussion. That situation has since been rectified, though not all questions have been answered. In the following sections, the evidence from the Anatolian daughter languages will be included. Kuryłowicz's symbols (*ǵ₁, *ǵ₂, *ǵ₃, *ǵ₄) will be used in this part of the discussion when referring to the Proto-Indo-European laryngeals (other notational conventions are found in the relevant literature: *H₁, *H₂, *H₃, *H₄; *h₁, *h₂, *h₃, *h₄; etc.). Also, the Proto-Indo-European reconstructions will be given in accordance with the Glottalic Model of Proto-Indo-European consonantism (cf. Bomhard 2016a; Salmons 1993) — when different, they will be immediately followed, in brackets, by the traditional reconstructions found in the standard etymological dictionaries and comparative grammars. Finally, at this point, I will not address the question of subgrouping, though I have long supported the view that the Anatolian branch was the first to split off from the main Indo-European speech community — this view has now gained wide acceptance.

I would like to emphasize that not every issue will be addressed, and not every point of view or proposed explanation will be considered. Instead, I will be stressing

what seem to me to be the principal developments of the laryngeals in the Anatolian daughter languages — that is to say, the developments that seem to be best supported by the available evidence.

4.2.1. HITTITE

Hittite texts date from the 16th to the 13th centuries BCE and number well over 30,000 tablets. Thus, Hittite is the best attested Anatolian daughter language. During that period of time, Hittite went through several stages of development (Old Hittite, Middle Hittite, and New or Neo-Hittite) and changes in its writing system (old ductus, new ductus).

Throughout its recorded history, Hittite was written in a form of cuneiform syllabary, which was ultimately created to record Sumerian — a small number of texts were also written in Hieroglyphs. Indeed, Sumerian logograms (so-called “Sumerograms”) regularly occur in Hittite texts (for a detailed description of Hittite writing conventions, cf. Hoffner—Melchert 2008:9—24). Due to the writing of Sumerograms for several common words, the underlying Hittite words are unknown. Finally, the cuneiform syllabary was an imperfect medium for writing Hittite, and, as a result, uncertainties remain concerning important aspects of Hittite phonology. For information on the origin of cuneiform writing in general, cf. Walker 1998; Woods 2020.

According to Yakubovich (2020:227), the Hittite phonological system was most likely as follows:

Stops:	/p(p)/	/t(t)/	/k(k)/	/k(k) ^w /
	/b/	/d/	/g/	/g ^w /
Affricate:		/ts/		
Fricatives:		/s/	/x/	/x ^w /
			/ʃ/	/ʃ ^w /
Nasals:	/m/	/n/		
Liquids:		/r/, /l/		
Glides:	/w/	/j/		
Vowels:	/i/, /i:/		/u/, /u:/	
		/e/, /e:/	/o/, /o:/	
		/a/, /a:/		

Regarding the laryngeals, Yakubovich (2020:227—229) states:

A peculiarity that sets Hittite phonologically apart from the non-Anatolian Indo-European languages is the presence of so-called “laryngeals”, namely, /x/, /ʃ/, /x^w/, and /ʃ^w/ . They are rendered in Hittite by the same signs <ḫa>, <ḫi>, <ḫu>, etc. as those used for combinations involving the Akkadian fricative /ḫ/. The system of four contrasting “laryngeals” proposed above is based on

Kloekhorst (2008, 27), while certain other reconstructions assume fewer elements belonging to this class. The precise phonetic realization of Hittite laryngeals is subject to much debate, but the renderings of the phoneme /x/ in Egyptian and Ugaritic converge in the interpretation of its counterparts in the first millennium Anatolian languages leading to the conclusion that its most likely articulation in Hittite was a velar or uvular fricative (cf. Weiss 2016). This appears to agree with the assumed value of /ħ/ in Akkadian (cf. Chapter 7).

The ancient Indo-European languages outside Anatolian are commonly assumed to have lost their “laryngeals” with secondary phonological effects, such as compensatory lengthening and change in vowel quality. For example, **peh₂s-* ‘to pasture, protect’ is thought to have yielded Hittite *paḥš-* and **pās-* in many Indo-European groups outside Anatolia, as in Latin *pās-tor* ‘shepherd’ (Kimball 1999, 402). Nevertheless, the hypothesis that the loss of “laryngeals” represents a classifying innovation of non-Anatolian Indo-European, although vehemently defended in (Lehrman 1998), is now a minority view. Most Indo-Europeanists are convinced that the “laryngeals” /h₁/, /h₂/, and /h₃/ are independently required in order to explain non-trivial correspondences between non-Anatolian Indo-European languages, e.g. Sanskrit *guru-* ~ Greek βαρύς ~ Latin *grāvis* ‘heavy’, which are commonly reconstructed as PIE **g^uryh₂u-* ‘heavy’. The set of such beliefs, which had begun to develop long before the decipherment of Hittite, is known as the Laryngeal Theory.

At the same time, the frequently advanced claim that Hittite data provided a definite confirmation to the validity of the Laryngeal Theory is inaccurate, because the number and distribution of “laryngeals” in Hittite is different from what is typically reconstructed for Proto-Indo-European. In fact, the precise pattern of correspondence between the reconstructed Indo-European and Anatolian “laryngeals” represents one of the most controversial aspects of Anatolian historical phonology. In order to appreciate the extent of existing differences of opinion, it should suffice to compare the accounts of Melchert (1994, 64—74, 122), on the one hand, and Kloekhorst (2006, 77—95), on the other hand.

For our purposes, the following transliterated cuneiform signs were available in Hittite to write laryngeals (cf. Sturtevant 1951:13—14):

ah	ha	hat	saḥ
iḥ	hal	hé	taḥ
uḥ	har	hi	túḥ
daḥ	hur	hu	
duḥ	haš	maḥ	

These signs were ultimately taken over from Akkadian. As noted in the quotation above from Yakubovich, *h* represents a voiceless velar fricative (IPA [x]) in Akkadian (cf. von Soden 1995:31).

As with the writing of stops, medial single as opposed to medial double writing of laryngeals is usually taken to indicate some sort of phonemic contrast. The

laryngeals $*\mathfrak{z}_2$ and $*\mathfrak{z}_3$ are assumed to have been preserved in Hittite (and Anatolian in general), while $*\mathfrak{z}_1$ and $*\mathfrak{z}_4$ are assumed to have been lost.

4.2.2. PALAIC

Palaic is very poorly documented. It is only found in a small number of cuneiform texts preserved in the Hittite national archives at Hattusas. The texts deal with cultic/ritualistic matters. Palaic had ceased to be a spoken language by the Neo-Hittite period (14th—13th centuries BCE), perhaps even earlier.

According to Melchert (2004b:586), the Palaic phonological system included at least the following consonants:

/p/	/t/	/k/	/k ^w /
/b/	/d/	/g/	/g ^w /
	/ts/		
/f/	/s/	/ʒ/	/x/
			/ɣ/
/m/	/n/		
	/l/	/r/	
/w/		/y/	

Notes:

1. I have added the voiceless and voiced labiovelars /k^w/ and /g^w/ to the table. They are missing in the original, though Melchert (2004b:586) does mention that there is “a good chance” that they should be included.
2. /f/ is found in Hattic loanwords.
3. /ʒ/ may represent a weak palatal fricative, though this is not entirely certain.
4. Melchert interprets the laryngeals as voiceless and voiced pharyngeal fricatives (/ħ/ [= $*\mathfrak{z}_2$] and /ʕ/ [= $*\mathfrak{z}_3$]). However, he notes that they could have been voiceless and voiced velar fricatives (/x/ and /ɣ/) instead. The interpretation of the Palaic laryngeals as velar fricatives is now the prevailing view.

According to Melchert (2004b:587), Palaic had the following vowels:

/i/, /i:/	/u/, /u:/
/e/, /e:/	
/a/, /a:/	

4.2.3. CUNEIFORM LUWIAN

Cuneiform Luwian is much better documented than Palaic. As the name suggests, it is the form of Luwian written in the cuneiform syllabary. It is found first in an extensive body of texts preserved in the Hittite national archives at Hattusas. The texts are primarily ritualistic in nature, and most date from the Neo-Hittite period (14th—13th centuries BCE). In addition to the specifically Cuneiform Luwian

documents, a number of Luwian words are scattered here and there throughout Hittite texts, where they are indicated as such by so-called “Glossenkeil” — distinguishing wedges placed before the words in question. Lastly, there are a number of Luwian loanwords in Hittite.

According to Melchert (2020:247—248), the Cuneiform Luwian phonological system was most likely as follows (see also Melchert 2004a:579—580):

Stops:	/p/	/t/	/k/	/k ^w /
	/b/	/d/	/g/	/g ^w /
Affricate:		/ts/		
Fricatives:		/s/	/x/	/x ^w /
			/ɣ/	/ɣ ^w /
Nasals:	/m/	/n/		
Liquids:		/r/, /l/		
Glides:	/w/	/j/		
Vowels:	/i/, /i:/		/u/, /u:/	
		/o/, /o:/		
		/a/, /a:/		

Note: Whether Luwian (and Hittite) had the vowels /o/ and /o:/ is quite uncertain.

4.2.4. HIEROGLYPHIC LUWIAN

As the name implies, Hieroglyphic Luwian is the form of Luwian written in a native hieroglyphic script. The script was used to inscribe writings on stone monuments and seals. The hieroglyphic inscriptions begin to appear from the 13th century BCE, though some writings may actually be older. The script contains over 500 signs (cf. Laroche 1960), some of which have more than one value. The ultimate origin of the script is unknown.

No doubt, the phonological system given above for Cuneiform Luwian came close to what existed in Hieroglyphic Luwian. However, due to the limitations of the Hieroglyphic script only the following vowels and consonants were represented in the writing system — these are rendered in accordance with the conventional transcription:

Vowels:	a	i	u
Consonants:	p	t	k
		z	
		s	h
	m	n	
		r, l	
	w	y	

4.2.5. LYCIAN AND MILYAN

Lycian and Milyan are closely-related dialects. They are written in an alphabet derived from or close to Greek. Both are considered to belong to the Luwian branch of Anatolian. The Lycian corpus is represented by a little over 150 stone inscriptions as well as over 200 coins. Only two of the extant texts are written in Milyan. In certain aspects, Milyan appears to be more archaic than Lycian.

According to Melchert (2004c:592), the Lycian phonological system included the following consonants (the transcription given here is slightly different from that used by Melchert):

Stops:	/p/	/t/	/c/	/k/	/k ^w /
Affricate:		/ts/			
Fricatives:		/θ/	/s/	/h/	/x/
	/β/	/ð/			/χ/
Nasals:	/m/	/n/			
Liquids:		/r/, /l/			
Glides:	/w/			/y/	

Notes:

1. The stops have voiceless and voiced allophones. According to Melchert (2004c:593), the voiced allophones occur after nasals and nasalized vowels, while the voiceless allophones occur elsewhere.
2. Proto-Anatolian **k^w* becomes *t* in Lycian before *i* and possibly *e*.
3. /c/, /θ/, and /h/ are only found in Lycian, not in Milyan.
4. /k^w/ is found only in Milyan in personal names.
5. /ts/ is traditionally transcribed as *z*.
6. /h/ is due to a change of /s/ to /h/ in Lycian — this change did not occur in Milyan.
7. /x/ (traditionally transcribed as χ) appears as *q* in the name of the Storm-God *trqqñt-*. It probably represents a labialized /x/, that is, /x^w/.

Lycian had the following vowels (cf. Melchert 2004c:595—596):

/i/	/u/
/e/	
	/a/

Each vowel had contrasting nasalized varieties, though separate letters exist for only /ã/ and /ẽ/. Lycian vowels were subject to a widespread vowel assimilation rule — Melchert (2004c:595) renders this rule as follows: V [-high] > V [α back] / __C₀V [α back]. Melchert points out that there are many exceptions to this rule. As a final point, it should be mentioned that prehistoric syncope was widespread in Lycian (cf. Melchert 2004c:596).

4.2.6. LYDIAN

Lydian is rather poorly documented and still not completely understood. There are only a little over 100 extant texts, less than 30 of which contain more than just a few words. For details on the current status of Lydian studies, cf. Yakubovich 2022a.

Lydian is written in an alphabet derived from or close to Greek. According to Melchert (2004d:603), the Lydian phonological system included the following consonants (see also Gusmani 2000—2002:21—23):

Stops:	/p/	/t/	/k/	/k ^w /
Affricates:		/ts/ (?)		
		/dz/ (?)		
Fricatives:	/f/	/s/	/ç/	
	/v/	/ð/ (?)		
Nasals:	/m/	/n/, /v/		
Liquids:		/l/	/r/, /λ/	

Notes:

1. Though underlyingly voiceless, Lydian stops may have had voiced allophones in certain environments, though this is not normally indicated in the writing.
2. /s/ is traditionally transliterated as *ś*.
3. /ç/ is traditionally transliterated as *s*.
4. The phonetic value of the letter transcribed as *v* is uncertain.
5. /λ/ is probably the result of the prehistoric palatalization of /l/.

Lydian probably had the following vowels (cf. Melchert 2004d:604):

/i/	/u/
/e/	/o/
/a/	

There were also two nasalized vowels, though their phonetic values are uncertain.

4.2.7. CARIAN

The Carian corpus is extremely limited. The extant texts can be dated approximately to the fourth to the third centuries BCE.

Though there has been substantial progress over the past forty years in the interpretation of the values of the Carian letters, there are still unresolved problems and disagreements. As noted by Melchert (2004e:609—610) concerning the decipherment and interpretation of the values of the Carian letters:

A new era began in 1981 when John Ray first successfully exploited the evidence of the Carian-Egyptian bilingual tomb inscriptions to establish radically new values for several Carian letters, as well as to confirm the values of others. Additional investigation, notably by Ray, Ignacio Adiego, and Dieter

Schürr, has led to further revisions and refinements of the new system. The basic validity of this approach was shown by its correct prediction of Carian personal names which have subsequently appeared in Greek sources. Nevertheless, many uncertainties and unsolved problems remained, and several reputable experts were skeptical of the new interpretation of the Carian alphabet.

Melchert (2004c:610) gives the following table of a subset of characters of the Carian alphabet:

Table 23.1 A subset of characters of the Carian alphabet	
Character	Transcription
Α	a
ϸ	d
Δ	l
Ϸ	ù
ϸ	r
Ι	λ
⊕	q
Γ	b
Λ	m
Ο	o
Ϸ	t
ϸ	š
Λ	s
Υ	u
Χ	x
Υ	n
ΔΔ	p
⊕	ś
⊕	i
⊕	e
⊕	w
∇	k
Π	ú
Η	í
↑	τ
⊕	w

Three of the letters in this table are of particular importance to our understanding of the development of laryngeals in Anatolian under investigation here, namely, the letters transcribed by Melchert as /q/, /x/, and /k/. Adiego (2004:242—245) assigns slightly different values for two of the letters, namely, /k/ = Melchert's /x/ and /k̥/ =

Melchert's /k/. Both Adiego and Melchert agree on /q/. Several scholars (Kloekhorst, Schürr, and Simon) have adopted the new values in recent work on Carian and Anatolian, in general — Brosch (no date) provides an excellent summary of the views of these scholars, while Simon (2021) lists the lexical evidence. However, Adiego's arguments in favor of the values he assigns to these letters are highly conjectural and based upon conflicting evidence. When one takes into consideration etymological factors, it can be observed that Carian /k/ (Melchert) ~ /k̄/ (Adiego) corresponds etymologically to /k/ in older Anatolian languages (Hittite, Palaic, and Cuneiform and Hieroglyphic Luwian), while /x/ (Melchert) ~ /k/ (Adiego) corresponds etymologically to /ḫ/ in older Anatolian languages. /q/, on the other hand, appears to represent /x^w/, just as in Lycian. In my opinion, this speaks in favor of the values given by Melchert in the above table and against the values assigned by Adiego.

4.2.8. PROTO-ANATOLIAN

In a paper published in *Wekwos* in 2019 (Bomhard 2019g), I proposed that the Proto-Anatolian stop system be reconstructed as follows:

Stops:	Bilabial	Dental	Velar	Labiovelar
Voiceless aspirated:	/p ^h /	/t ^h /	/k ^h /	/k ^{wh} /
Glottalized (ejectives):	/p'/	/t'/	/k'/	/k' ^w /
Plain voiced:	/b/	/d/	/g/	/g ^w /

Notes:

1. The velar series may be assumed to have had non-phonemic palatalized allophones in certain environments in Proto-Anatolian. These allophones became phonemic in Luwian (cf. Melchert 2017:176) as well as in several of the non-Anatolian Indo-European daughter languages — the so-called “satəm” languages.
2. Kloekhorst (2016:226—228) considers the glottalized series to have been pre-glottalized in pre-Anatolian.

In addition, the following phonemes must be reconstructed for Proto-Anatolian:

Affricate:	/tʂ ^h /			
Fricatives:		/s/	/x/	/x ^w /
			/ç/	/ç ^w /
Nasals:	/m/	/n/		
Liquids:			/r/, /l/	
Glides:	/w/		/y/	

According to Kimball (2017:249—251), the following vowels are to be reconstructed for Proto-Anatolian (see also Melchert 2017:176; Kloekhorst 2008b: 17 — Kloekhorst does not reconstruct Proto-Anatolian */æ:/):

/i/, /i:/	/u/, /u:/
/e/, /e:/	/o/, /o:/
/æ:/	/a/, /a:/

I would reconstruct an identical set of vowels for Proto-Anatolian, except for */æ:/. Kimball maintains that */æ:/ developed from earlier *e₂ (see also Melchert 2017: 176). Kimball does not provide justification for reconstructing */o/, */o:/ for Proto-Anatolian. However, Melchert (1992:186, 1994a:291—294, and 2017:176) justifies the reconstruction of Proto-Anatolian */o/, */o:/ on the basis of developments in Lycian. Melchert claims that Lycian /e/ comes, in part, from earlier */o/ and provides several examples. In my opinion, we are dealing with specific Lycian developments here, inasmuch as there is absolutely no evidence from Cuneiform and Hieroglyphic Luwian for /o/ distinct from /a/, claims to the contrary notwithstanding — the much later Lycian belongs to the Luwian branch of Anatolian. The vowels */a/ and */o/ merged in Hittite and Palaic (*a, *o > a), while */e/, */a/, and */o/ merged in Luwian (*e, *a, *o > a).

4.2.9. EXAMPLES

The following select examples illustrate the representation of laryngeals in Anatolian (the forms, meanings, and etymologies are taken from the following: Kimball 1999; Kloekhorst 2008b; Puhvel 1984 — ; Tischler 1977 — ; Sturtevant 1951; Melchert 1984 and 1994a — these works, as well as the other etymological dictionaries listed in the references at the end of this book, must be consulted for additional information). The Hittite, Palaic, Cuneiform Luwian, and Hieroglyphic Luwian forms are given in plene writing:

A. *₂ > Ø in Anatolian:

Hittite (1st sg. pres. act.) *e-eš-mi* ‘to be’ (< *₂*es-mi*); Cuneiform Luwian (3rd sg. pres. act.) *a-aš-ti* ‘to be’; Palaic (3rd sg. imptv. act.) *a-aš-du* ‘to be’; Hieroglyphic Luwian (3rd sg. pres. act.) *a-sa-ti*, *á-sa-ti* ‘to be’; Lycian (3rd sg. pres. act.) *esi* ‘to be’ ~ Sanskrit *ásti* ‘to be’; Greek *ἐστί* ‘to be’; Latin *est* ‘to be’; Gothic *ist* ‘to be’; Old High German *ist* ‘to be’; Old Lithuanian *ėsti* ‘to be’; Old Church Slavic *jesti* ‘to be’.

Hittite (1st sg. pres. act.) *e-id-mi* ‘to eat’ (< *₂*et-mi* [**H₁ed-mi*]); Palaic (3rd pl. pres. act.) *a-ta-a-an-ti*, *a-da-a-an[-ti]* ‘to eat’; Cuneiform Luwian (3rd pl. imptv. act.) *a-da-an-du* ‘to eat’; Hieroglyphic Luwian (3rd pl. imptv. act.) *á-tà-tu-u* ‘to eat’ ~ Sanskrit *ádmi* ‘to eat, to consume, to devour’; Greek *ἔδω*, *ἔδομαι* ‘to eat, to devour; (of worms) to gnaw’; Armenian *utem* ‘to eat’; Latin *edō* ‘to eat’; Gothic *itan* ‘to eat’; Old Icelandic *eta* ‘to eat’;

Norwegian *eta* ‘to eat’; Swedish *äta* ‘to eat’; Old English *etan* ‘to eat’; Old Frisian *eta*, *īta* ‘to eat’; Old Saxon *etan* ‘to eat’; Dutch *eten* ‘to eat’; Old High German *ezzan* ‘to eat’ (New High German *essen*); Lithuanian *ėdu*, *ėsti* ‘to eat’, *ėda* ‘food’; Latvian *ēst* ‘to eat’; Old Prussian *īst* ‘to eat’; Old Church Slavic *jasti* ‘to eat’; Russian *jest’* [естъ] ‘to eat’; Polish *jeść* ‘to eat’; Czech *jísti* ‘to eat’.

Hittite (1st sg. pres. mid.) *e-eš-ḫa-ḫa-ri* ‘to sit down, to seat oneself; to sit; (act.) to sit, to reside; (trans.) to settle’ (< $*_{21}e_{21}s-$); Hieroglyphic Luwian (3rd pl. pret. act.) ^{SOLIUM} *á-sa-ta* ‘to be seated, to dwell’, *i-sà-nu-wa/i-* ‘to seat, to cause to sit’, *i-sà-tara/i-tá-* ‘throne’ ~ Sanskrit *āsmi* ‘to sit’ (< $*_{21}e_{21}s-mi$).

Hittite (nom.-acc. sg.) *e-eš-ḫar*, *iš-ḫar* ‘blood; bloodshed’ (< $*_{21}es_{21}r$); Cuneiform Luwian (nom.-acc. sg.) *a-aš-ḫar-ša* ‘blood’; Hieroglyphic Luwian *á-sa-ha+ra/i-mi-sà* (n.) ‘blood offering’ ~ Sanskrit *āsṛk* ‘blood’ (the Sanskrit form contains an epenthetic *k*); Tocharian A *ysār* ‘blood’; Greek *ἔαρ* ‘blood’; Latin *assy* ‘blood’. Note: *ḫ* is sometimes missing in Hittite, as in (nom.-acc. sg.) *e-eš-šar* (= *e-eš-ḫar*) and (gen. sg.) *e-eš-na-aš* (= *e-eš-ḫa-na-aš*). According to Kloekhorst (2008b:258), these forms represent scribal errors, while Kimball (1999:379—380) considers the loss of *ḫ* in these forms to be an archaism.

Hittite (nom. sg.) *at-ta-aš*, *ad-da-aš* ‘father’ (< $*_{21}ath^{th}a$ [$*H_1atta$]) ~ Greek *ἄρτα* ‘daddy’; Latin *atta* ‘father’; Gothic *atta* ‘father’; Old Frisian *aththa* ‘father’; Old High German *atto* ‘father’ (Middle High German *atte*, *ätte* ‘father’); Albanian *atë* ‘father’; Old Church Slavic *otъcъ* ‘father’; Russian *otéc* [отец] ‘father’; Sanskrit (f.) *attā* ‘mother’ ($*atta-$ ‘father’ is unattested, but note the following: Assamese *ātā* form of address to a respectable older man; Gujarati *ātāji* ‘grandfather’; Sinhalese *ātā* ‘grandfather’; Sindhi *ado* ‘brother’; Lahndi *addā* ‘father’; etc.). Note: This is a nursery word. Assuming that there was an initial laryngeal here, the only acceptable candidate is $*_{21}$ (cf. Hamp 1965a:136 $*_{21}at(t)-??$) — and original $*a$.

Hittite (nom.-acc. sg. n.) *a-iš*, *a-i-iš* ‘mouth’ (< $*_{21}o_{21}es-$); Cuneiform Luwian (nom.-acc. sg.) *a-a-aš-ša* ‘mouth’ and, perhaps, (3rd sg. pret.) *a-aš-ša-at-ta* ‘to say’; Hieroglyphic Luwian (3rd sg. pres. act.) *á-sa-s-za-ta* ‘to speak’ ~ Sanskrit *āś-* ‘mouth’; Latin *ōs* ‘mouth’. Notes: (1) The reconstruction of the Proto-Indo-European form as either $*h_3oh_1-os-$, $-es-$ (cf. De Vaan 2008:436; Mayrhofer 1986—2001.1:81—82) or $*h_1oh_3-es-$ (cf. Kloekhorst 2008b:166—167), with $*_{21}$ in either initial or medial position, is impossible since $*_{21}$ is preserved in Hittite. (2) Sturtevant (1951: 36, §61c) reconstructs Proto-Indo-Hittite $*Aōys$, $*Aysos$ ‘mouth’, while Puhvel (1984— .1/2:15—17) reconstructs Proto-Indo-European (nom.-acc. sg.) $*A_1^{w}éE_1-es$ (> $*ōyes$ > $*āyes$ > $*āyis$ > Hittite *a-iš*, *a-i-iš*), etc.

Hittite (nom. sg. c.) *a-aš-šu-uš* ‘good; dear; favorable’ (< $*_{21}osu-s$ [cf. Melchert 1994a:63 $*ósu-$]), (n.) (nom.-acc. sg.) *a-aš-šu* ‘good(ness), good things; goods, possessions’ ~ Greek *εὖς* ‘good, brave, noble’; Sanskrit *sú*, *su-*

‘good’. Note: Kloekhorst (2008b:223—225) reconstructs Proto-Indo-European **h₁oh₁s-u-* (?), in part to account for the Greek variant form ἡύς ‘good, brave’ as if from **ǵ₁eh₁s-u-*. However, the initial ἡ- in this form is usually attributed to metrical lengthening (cf. Beekes 2010.I:484—485; Chantraine 1968—1980.I:388; Frisk 1970—1973.I: 594—595; Wodtko—Irslinger—Schneider 2008:246, note 6).

Hittite (3rd sg. pres. act.) *pa-a-ši*, *pa-aš-zi* ‘to swallow, to gulp down’ (< **p^hoǵ₁-s-* [**poH₃s-*]); Cuneiform Luwian (3rd sg. pret. act.) *pa-aš-ta* ‘to swallow’ ~ Sanskrit (reduplicated) *pībati* ‘to drink’; Greek πίνω ‘to drink’; Latin (reduplicated) *bibō* ‘to drink’; Old Church Slavonic *piti* ‘to drink’. Note: The Proto-Indo-European root is typically reconstructed as **poǵ₃-* with **ǵ₃*, the thinking here being that, since **ǵ₃* was a voiced laryngeal, it must be reconstructed here to account for the voicing of medial **p* to **b* in, for example, the Sanskrit and Latin forms cited above. However, **ǵ₃* is preserved in Anatolian, and a laryngeal reflex is missing in both Hittite and Cuneiform Luwian. Now, according to the Glottalic Model of Proto-Indo-European consonantism, the laryngeal in question in this example is not **ǵ₃* but **ǵ₁*, thus avoiding having to reconstruct a laryngeal (**ǵ₃*) for which there is no evidence in either Hittite or Cuneiform Luwian. The Proto-Indo-European form leading to the Sanskrit and Latin derivatives would thus have been (reduplicated) **p^hi-p^hǵ₁-e-ti* > **pi-be-ti*, assuming here that **ǵ₁* was a glottal stop (**ʔ*), which is now the common view (see below), and also assuming, consistent with the postulations of the Glottalic Model, that **-p^hʔ-* > **-b-* (cf. Hopper 1977b:70).

Hittite enclitic demonstrative particle (nom. sg.) *-aš*, (acc. sg.) *-an*, (n. sg.) *-at* ‘he, she, it’; (nom. sg. c.) *a-ši*, *a-ši-iš* ‘that (one)’, (dat. sg.) *e-di*, *i-di*, *e-da-ni* ‘to or for him, her, it’ (< **ǵ₁e-*) ~ Sanskrit *ayám* ‘this’ (gen. sg. m./n. *a-syá*, *á-sya*; f. *a-syáḥ*), *idám* ‘this’, (f.) *iyám* ‘she, this’, *á-taḥ* ‘from this, hence’ (< **ǵ₁e-t^ho-s* [**H₁e-to-s*]), (n.) *e-tát* ‘this, this here’, *ihá* ‘here’, *e-šá* (f. *e-šā*) ‘this’; Old Persian *a-* ‘this’, *aita-* ‘this’, *ima-* ‘this’, *iyam* ‘this’, *idā* ‘here’; Avestan *a-* ‘this’, *aētaṭ* ‘this’, *ima-* ‘this’, *iḍa* ‘here’; Latin *is*, *ea*, *id* ‘he, she, it; this or that person or thing’; Oscan *eiso-* ‘this’; Umbrian (dat. sg.) *esmei* ‘to this, to it’; Old Irish *é* ‘he, they’, *ed* ‘it’; Gothic anaphoric pronoun *is* ‘he’, *ita* ‘it’; Old Icelandic relative particle *es* (later *er*) ‘who, which, what’; Old Saxon *et*, *it* ‘it’; Old High German *er*, *ir* ‘he’, *ez*, *iz* ‘it’; Lithuanian *jis* (< **is*) ‘he’. Note: Various extended forms must be reconstructed in Proto-Indo-European to account for developments in the individual daughter languages: **ǵ₁e-/***ǵ₁o-+y/i-* > **ǵ₁ey-/***ǵ₁oy-/***ǵ₁i-*; **ǵ₁e-/***ǵ₁o-+t^ho-*; etc.

Hittite (nom. sg.) *an-na-aš* ‘mother’ (< **ǵ₂an(n)-o-s*); Cuneiform Luwian (nom. sg.) *an-ni-iš*, *a-an-ni-iš* ‘mother’; Palaic (nom. sg.) *an-na-aš* ‘mother’; Lycian (nom. sg.) *ēni* ‘mother’; Lydian (nom. sg.) *ēnaš* ‘mother’ ~ Latin *anna* ‘foster-mother’; (?) Greek (Hesychius) ἀννίς ‘grandmother’. Notes: (1) Hieroglyphic Luwian ^{MATER}*-nat/i* ‘mother’ may be read as /anna(i)-/ (cf. Kloekhorst 2008b:174). (2) The Proto-Indo-European ancestor of these

forms is regularly reconstructed as **₂en(n)-* or the like to account for the initial *a-* (cf., for example, Beekes 2010.I:107 **h₂en-* — Kloekhorst 2008b:174 reconstructs Proto-Anatolian **Honno-*). However, this is a nursery word, for which **₂an(n)-*, with initial **₂-* and original **a*, seems to be the most plausible reconstruction.

Hittite (3rd sg. pres. act.) *i-ya-(az-)zi*, *i-e-iz-zi* ‘to do, to make, to treat, to beget, to perform (duty, ritual), to celebrate (deity, feast)’ (< Proto-Anatolian **iya-* ~ **aya-* ~ **ya-/yē-* ‘to do, to make, to perform, etc.’ < **₂(e)yo-* originally an interrogative verb stem meaning ‘to do what?, to act in what manner?’, later simply ‘to do, to make, to perform’); Cuneiform Luwian (3rd sg. pres. pass.) *a-a-ya-ri* ‘to make’; Hieroglyphic Luwian *a(i)a-* ‘to make’; Lycian (3rd sg. pres.) *ati* (< **ayati*) ‘to make’; Lydian *i-* ‘to make’ ~ Tocharian A/B *yām-* ‘to do, to make, to commit, to effect’.

Hittite (imptv.) *i-it* ‘go!’ (< **₂ey-/₂oy-/₂i-* ‘to go’); Cuneiform Luwian (3rd sg. pres.) *i-ti* ‘goes’ ~ Greek (1st sg. pres.) εἶμι ‘I go’, (1st pl. pres.) ἴμεν ‘we go’; Sanskrit (1st sg. pres.) *émi* ‘I go’, (3rd sg. pres.) *éti* ‘goes’, (1st pl. pres.) *imáh* ‘we go’, (3rd pl. pres.) *yánti* ‘they go’; Avestan (3rd sg. pres.) *aēiti* ‘goes’; Old Persian (3rd sg. pres.) *aitiy* ‘goes’; Latin (1st sg. pres.) *eō* ‘I go’; Old Lithuanian (1st sg. pres.) *eīmi* ‘I go’, (3rd sg. pres.) *eīti* ‘goes’; Old Church Slavic *idō, iti* ‘to go’; Tocharian A (1st pl.) *ymās* ‘we go’, B (1st sg.) *yam, yam* ‘I go’.

Hittite */*ekku-* ‘horse’ (< **₂ekhu-* [**H₁éku-*] [in Anatolian]; **H₁ekhw-o-s* ‘horse’ [**H₁ékūo-*] [in the non-Anatolian daughter languages] [literally, ‘the spirited, violent, fiery, or wild one’]); Cuneiform Luwian */*āššu-* ‘horse’; Hieroglyphic Luwian *á-sù-wa-* /*ásu-* ‘horse’; Lycian *esbe-* ‘horse’ ~ Sanskrit *áśva-h* ‘horse’; Avestan *aspa-* ‘horse’; Greek ἵππος ‘horse’; Mycenaean *i-qo* (*hiqqo-*) ‘horse’; Latin *equus* ‘horse’; Old Irish *ech* ‘horse’; Gothic **aihva-* ‘horse’ in **aihuatundi* ‘bramble, prickly bush’ (literally, ‘horse-thorn’); Old Icelandic *jór* (< **exwar* < **exwaz*) ‘stallion, steed’; Old English *eoh* ‘horse’; Old Saxon *ehu-* ‘horse’ in *ehu-skalk* ‘horse-servant’; Lithuanian (f.) *ašvā* (Old Lithuanian *ešva*) ‘mare’; Tocharian A *yuk*, B *yakwe* ‘horse’, B *yākwāške* ‘little horse’. Notes: (1) Kloekhorst (2008b:237—239) reconstructs Proto-Anatolian **₂ekū-* ‘horse’. (2) There are no attested *o*-grade forms. (3) The Proto-Indo-European word for ‘horse’ is not in any way, shape, or form related to the Proto-Indo-European word for ‘swift’ (**ōku-*, according to Watkins 1985:45).

Hittite (3rd sg. pres.) *a-ri* ‘to arrive, to come’, (3rd sg. pres.) *a-ra-(a-)i* ‘to (a)rise, to lift, to raise; to (a)rouse’, (3rd sg. pres.) *a-ar-aš-ki-iz-zi* ‘to be arriving’, (3rd sg. pres.) *ar-nu-(uz-)zi* ‘to move along, to make go; to stir, to raise; to transport, to deport, to remove; to bring, to transmit, to deliver, to produce; to further, to promote’, (3rd sg. pres.) *(a-)ar-aš-zi* ‘to flow’ (< **₂or-/₂r-* ‘to move, to set in motion; to arise, to rise; to raise’) ~ Sanskrit *ārṣati* ‘to flow’, *ārṇa-h* ‘undulating, surging; wave’, *ṛcchāti* ‘to go, to move, to send’, *ṛṇóti* ‘to go, to move, to arise’; Avestan *ar-* ‘to go, to move, to come’, *aurva-*, *aurvant-* ‘rapid, quick’, *arənaoiti* ‘to set in

motion'; Old Persian *ar-* 'to move, to go or come toward', *aruvā* 'action', *aruvā-* 'rapid, quick'; Greek ὀρνύμι 'to urge on, to incite, to move, to stir oneself, to make to arise'; Latin *orior* 'to rise, to arise'.

Hittite (3rd sg. pres. act.) *a-ar-ki* 'to mount, to copulate (with)', (nom. pl.) *ar-ki-i-e-eš* 'testicles' (< **₂orgh-/***₂rg^h-* 'to mount, to copulate (with)', **₂orgh^hi-s* 'testicle') ~ Avestan *arəzi* 'scrotum'; Greek ὄρχις 'testicle'; Armenian *orjikh* 'testicles', *orj* 'male'; Old Irish *uirge* 'testicle'; Old Icelandic *argr* 'unmanly, effeminate, cowardly; passive homosexual', *ergi* 'lust, lewdness'; Old English *earg* 'cowardly; bad, depraved'; Old Frisian *erch* (also *erg*, *arch*) 'angry, evil; wrong, bad, disgraceful; severe (wounds)', *erg* 'mean, cowardly'; Old Saxon *arug* 'mean, cowardly'; Old High German *arg*, *arag* 'mean, cowardly'; Lithuanian *aržūs* 'lusty', *ežžilas* (dial. *aržilas*) 'stallion'; Albanian *herdhë* 'testicle'. Note: Kloekhorst (2008b:203—204) reconstructs Proto-Indo-European **h₃rg^h-o*, **h₃órg^hei*, with initial **₂*. However, the Hittite evidence does not support such a reconstruction.

Comments:

1. One of the things that I see quite often in the literature involving laryngeals is that theory is allowed to take precedence over evidence, acting as a kind of intellectual "straitjacket" — critical thinking requires that we free ourselves from any and all preconceived notions. This does not mean, however, that every proposal warrants equal consideration, nor does it mean that we suspend sound judgment. Ideas that are patently false should be unequivocally rejected. An example of the approach under discussion here is the Hittite word for 'mouth' (*a-iš*, *a-i-iš*) cited above. The thinking here seems to be that non-apophonic **o* in Indo-European always implies the presence of **₂*, even when corroborating Hittite evidence is lacking. Other, more frequent examples involve the reconstruction of **₂* to indicate the "coloring" of **e* to **a*, even when corroborating Hittite evidence is lacking. (To his credit, Kurylowicz got around this latter conundrum quite nicely by positing **₄* — Sturtevant, Lehmann, Mallory—Adams, and Bomhard, among others, accept Kurylowicz's view in this matter.) This approach places the scholars reconstructing these laryngeals in the awkward position of having to explain why the laryngeals in question (**₂* and **₃*) are sometimes present in the Hittite data and sometimes not — in other words, of having to specify the conditioning factors leading either to the retention or to the loss of these laryngeals in identical environments. This is rarely, if ever, done, and when explanations are offered, they often seem rather ad hoc. That is not to say that these laryngeals are never lost in Hittite — that is quite a different thing than reconstructing these laryngeals without sufficient evidence. I reject this approach — in my opinion, the evidence should always take precedence over theory and should never be altered to fit the theory. When anomalies occur, they require careful

analysis and viable explanations, even if it means amending or abandoning the theory or the questionable reconstructions resulting from the erroneous generalization/application of the theory — as noted by Kimball (1999: 386): “Commonly cited examples of loss can usually be explained in other ways”, and she gives several examples to illustrate this point. It should thus be perfectly clear from the examples listed above, as well as the examples listed by Kimball, that credible alternative explanations are almost always available to the faulty reconstructions found in the relevant literature.

2. Returning to the laryngeal under discussion in this section, as we have seen from the examples given above, $*\varrho_1$ was found in the vicinity of all vowels, $*e$, $*a$, $*o$ traditionally reconstructed for Proto-Indo-European. Moreover, $*\varrho_1$ did not change the quality of contiguous vowels in any way, shape, or form at the Proto-Indo-European level.
 3. $*o$ and $*a$ of traditional Proto-Indo-European appear as a in Hittite and Palaic, while $*e$, $*o$, and $*a$ of traditional Proto-Indo-European appear as a in Cuneiform and Hieroglyphic Luwian. Further afield, Common Luwian a appears mostly as e in Lycian.
- B. $*\varrho_2 > (1) \text{ } h\text{-}$ (initially), $-h(h)\text{-}$ (medially) in Hittite, Palaic, Cuneiform Luwian, and Hieroglyphic Luwian (written $h\text{-}$, $-h(h)\text{-}$); $> (2) \text{ } \chi\text{-}$ (initially), $-\chi\text{-}$ (medially), $-q\text{-}$ ($< */x^w/$) in Lycian:

Hittite (nom. sg.) *hu-uh-ha-aš* ‘grandfather’ ($< *\varrho_2ew\varrho_2os$); Hieroglyphic Luwian (nom. pl.) ^{AVUS}*hu-ha-zi* ‘grandfather’; Cuneiform Luwian (abl.-instr.) *hu-u-ha-ti* ‘grandfather’, also found in the anthroponyms *Huhhazitis*, *Hūhananis* (not in Kloekhorst 2008b, but cf. Puhvel 1984— .3:355—358); Lycian *χuga-* ‘grandfather’, also found in the anthroponyms *Epñχuxa* and *Κουγας* — Melchert (1994a:289) considers the second χ in the name *Epñχuxa* to be secondary; perhaps Carian *quq-* ‘grandfather’ ~ Latin *avus* ‘grandfather’; Old Irish *áue* ‘grandson’; Armenian *haw* ‘grandfather’; Gothic *awō* (f.) ‘grandmother’. Note: According to Kloekhorst (2008b: 353):

Since Sturtevant (1928c: 163), these words are generally connected with Lat. *avus*, Arm. *haw*, etc. ‘grandfather’. It is clear that Lat. $a\text{-}$ and Arm. $ha\text{-}$ must reflect $*h_2e\text{-}$, which corresponds to Hitt. $h\text{-}$. The second $-hh\text{-}$ in Hittite corresponds to the acute intonation in SCr. *ījāk* which points to a laryngeal. Since $*h_3$ was lost intervocalically (cf. Melchert 1987b: 23f), it is likely that we must reconstruct $*h_2$ here as well. Thus, we arrive at $*h_2euh_2\text{-}$. The question remains why Hittite shows geminated $-hh\text{-}$ where the Luwian languages show single $-h\text{-}$. In my view, this problem can only be solved by assuming that this word originally was a root noun. If we reconstruct $*h_2éuh_2\text{-}s$, $*h_2éuh_2\text{-}m$, $*h_2uh_2\text{-}ós$, we can explain that on the one hand we find the thematicized stem $*h_2éuh_2\text{-}o\text{-}$ in CLuw. *hūha-*, Lyc. *χuge-*, and also Lat. *avus*, Arm. *haw*, Goth. *awo*, etc., but on the other a thematicized

stem **h₂uh₂-ó-* which regularly yields Hitt. *huhha-* without lenition of **-h₂-*. Compare *šūhh-*, *šuhha-* for a similar thematicization.

It should be noted, however, that medial single writing of *h* is also found in Hittite in the derivatives (nom. pl.) *hu-u-ha-an-te-iš* (alongside *hu-uh-ha-an-te-iš*, with medial double writing) ‘(great)grandfather’ and (nom.-acc. pl. n.) *hu-u-ha-da-al-la* ‘grandfatherly’ (this is probably a Luwian form, cf. Melchert 1993b:71). In view of these Hittite forms, as well as the Luwian anthroponyms cited above, Kloekhorst’s conjecture cannot be considered the final word on this matter.

Hittite (nom.-acc. sg.) *pa-aḥ-hur*, *pa-aḥ-hu-ur*, *pa-a-aḥ-hu-ur* ‘fire’ (< **p^he₂-ur* [**peh₂-wr*: Adams, Kimball, Melchert, Yates], [**peh₂-ur*: Kloekhorst], [**péxwr*: Sturtevant]); Cuneiform Luwian (nom.-acc. sg.) *pa-a-hu-u-ur* ‘fire’ and, perhaps, (3rd sg. pret.) *pa-wa-ar-it-ta* ‘to light a fire’, without *-h-* ~ Greek πῦρ ‘fire’; Armenian *hur* ‘fire’; Old Icelandic *fýrr*, *fúrr* ‘fire’; Old English *fȳr* ‘fire’; Tocharian A *por*, B *pūwar* ‘fire’. Notes: (1) Kloekhorst (2008b:613—614) speculates that a labialized laryngeal may be involved here: **páH^wr*, **paH^wénas*. (2) The Luwian verb *pa-wa-ar-it-ta* ‘to light a fire’ may not be derived from or in any way related to *pa-a-hu-u-ur* ‘fire’. It may tentatively be compared with Greek φαύζειν ‘to roast, to fry, to parch’ and φαῦσιγξ ‘blister from burning, any blister’, provided these are not Pre-Greek loans (cf. Beekes 2010.II:1559). Boisacq (1950:1018), on the other hand, assumes Indo-European origin for the Greek forms cited here and compares φωΐς ‘blister on the skin, caused by a burn’ (< **bhōu-*). Hofmann (1966:393) agrees with Boisacq. However, this etymology is rejected by Chantraine (1968—1980.II:1183), but later, Chantraine (1968—1980.II:1036) reconstructs **bhō-w-* as the source of Greek (f. pl.) φωΐδες ‘blisters’. Frisk (1970—1973.II:998 and II:1057) does not really clarify the situation. Finally, Mann (1984—1987:68) brings in Low German *bāuten* ‘to make fire’ (pt. *bōdd*, pp. *bōtt*) (cf. Middle Low German *boten*, *buten* ‘to make fire’; East Frisian *bōten* ‘to make fire, to heat’) and reconstructs Proto-Indo-European **bhaudō*, *-jō* ‘(to make) fire, (to) burn’ (> Proto-Germanic **bautan* ‘to make fire’). On the basis of the above forms from Cuneiform Luwian, Greek, and West Germanic, we can cautiously reconstruct a Proto-Indo-European stem **b^he₂-w/u-*/**b^ho₂-w/u-* ‘to light a fire’— an extended form of the root **b^he₂-*/**b^ho₂-* (> **b^hā-*/**b^hō-*) (not with **₂*) ‘to be bright, shining; to bring to light, to cause to appear; to make clear’ found in: Sanskrit *bhāti* ‘to shine, to be bright, to be luminous; to be splendid or beautiful; to be conspicuous or eminent; to appear, to seem; to show one’s self, to manifest any feeling; to be, to exist’; Avestan *bānu-* ‘splendor’; Greek φάω ‘to give light, to shine’, φάινω ‘light, bright, joyous’, φαίνω ‘to bring to light, to cause to appear; to make known, to reveal, to disclose; to make clear; to show forth, to display; to set forth, to expound; to inform against one, to denounce; to give light, to shine; to come to light, to be visible, to appear; to come into

being; to come about; to appear to be’, φάος, φῶς ‘light, daylight; light of the eyes’ (pl. φάεα ‘eyes’); Old Irish *bán* ‘white’; Old English *bōnian* ‘to polish’; New High German *bohlen* ‘to polish, to wax (floor)’ (cf. Rix 2001:68—69 **b^heh₂-*/**b^hh₂-* ‘to glisten, to shine’; Pokorny 1959:104—105 **bhā-*, **bhō-*, **bhə-* ‘to glisten’; Walde 1927—1932.II:122—123 **bhā-*; Mallory—Adams 1997:513 **bheh₂-* ‘to shine’; Wodtko—Irslinger—Schneider 2008:7—11 **b^heh₂-*; Watkins (ed.) 2000:7 **bhā-* ‘to shine’ (oldest form **bhe₂-*, colored to *bha₂-*, contracted to **bhā-*); Chantraine 1968—1980.II:1168—1170 **bhā-* (= **bhe₂-*) and II:1170—1172; Beekes 2010.II:1545—1546 **bheh₂-* ‘to light, to shine’, II:1551—1552; Boisacq 1950:1010—1011 **bhā-* and 1014—1015; Frisk 1970—1973.II:992—994 and II:989—991; Hofmann 1966:389—390 **bhā-*; Mayrhofer 1956—1980.II:493—494 **bhā-*). Needless to say, this is all quite speculative.

Hittite (1st sg. pres. act.) *pa-aḥ-ḥa-aš-ḥi*, (1st sg. pres. mid.) *pa-aḥ-ḥa-aš-ḥa* ‘to protect, to guard, to defend; to observe (agreements), to keep (oaths), to obey (commands), to keep (a secret)’ (< **p^heh₂s-* [**peH₂s-*]); (with medial single writing) (1st sg. pres. act.) *pa-aḥ-ša-nu-mi* (causative); (?) Cuneiform Luwian (3rd sg. impvtv.) *pa-ad-du* ‘to protect’ (meaning uncertain), without a laryngeal ~ Sanskrit (Vedic) *pāti* ‘to protect, to preserve, to keep’; Tocharian A *pās-*, B *pāsk-* ‘to guard, to protect; to practice (moral behavior), to obey (rules)’, B *-pāšše* ‘behavior’. Notes: (1) The Anatolian forms are also commonly compared with the following: Latin *pāscō* ‘to cause to eat, to feed, to pasture, to drive to pasture’; Old Church Slavic *pasti* ‘to pasture, to feed, to herd’; Serbo-Croatian *pāsti* ‘to pasture, to look after’. (2) Kloekhorst points out that the form (1st pres. act.) *pa-aḥ-ḥa-aš-mi* occurs only once. He assumes that the active verb originally belonged to the *ḥi*-conjugation.

Hittite (3rd sg. pres. act.) *la-a-ḥu-i*, *la-a-ḥu-u-i*, *la-ḥu-i*, *la-a-ḥu-wa-i*, etc.; also *la-aḥ-ḥu-uz-zi*, *la-ḥu-uz-zi*, etc. ‘(tr.) to pour, to cast (objects from metal); (intr.) ‘to (over)flow’; (nom. sg.) *la-aḥ-ḥu-uš* ‘container’, (instr. sg.) *la-aḥ-ḥu-e-eš-ni-it* ‘pouring cup’ (< **le₂-w/u-*/**lo₂-w/u-*); Cuneiform Luwian (1st sg. pret. act.) *la-ḥu-ni-i-ḥa* ‘to wash away’; (without *ḥ*) (part.) *la-a-ú-na-i-mi-iš()*, *la-ú-na-i-[mi-iš()]* ‘poured’, (3rd pl. pret.) *lu-u-wa-an-da* ‘to pour’, (2nd sg. impv.) *li-lu-u-wa(-a)* ‘pour!’ ~ Greek ληνός (Doric λᾱνός) ‘anything shaped like a tub or a trough: a wine-vat, a trough (for watering cattle), a watering place’ (< **lā-no-s* < **le₂-no-s*). Note: The Anatolian forms are not related to Greek λούω ‘to wash, to bathe’, Latin *lavō* ‘to wash, to bathe’, etc., which must be derived from Proto-Indo-European **lew₂-*/**low₂-* ‘to wash, to bathe’ (cf. Kloekhorst 2008b:512—513).

Hittite (nom. sg.) *ḥa-at-ta-an-za* (< **ḥakt-ant-*) ‘intelligent, clever, wise’, *ḥattahḥ-* ‘to make clever, to instruct’, (nom. sg.) *ḥa-at-ta-a-tar* ‘intelligence, (wise) counsel, wisdom’ (< **₂ek^h-t^h-* [**H₂ek-t-*]) ~ Gothic *aha* ‘mind, understanding’, *ahjan* ‘to think’, *ahma* ‘spirit’, **ahmateins* ‘inspiration’, **ahmeins* ‘spiritual’; Old Icelandic *ætla* (< **axtilōn*) ‘to

think, to mean, to suppose’, *ætlan* ‘thought, meaning, opinion’; Old Frisian *achte* ‘consideration’, *achtia* ‘to consider’; Old English *eaht* ‘council, deliberation, consideration’, *eahtian* ‘to watch over, to hold council, to deliberate, to consider’; Old High German *ahhta* ‘consideration’ (New High German *Acht*), *ahhtōn* ‘to consider’ (New High German *achten*). Notes: This etymology is taken from Puhvel 1984— .3: 260—263.

Hittite (gen. sg.) *hal-lu-wa-aš* ‘hollow, pit’, (gen. sg.) *hal-lu-u-wa-aš* ‘hollow, deep’, (denominative verb, 3rd sg. pret. act.) *hal-lu-wa-nu-ut* ‘to put down (deep), to lower, to let deteriorate’ (< **₂el-wo-*) ~ Latin *alvus* ‘belly, womb’, *alveus* ‘a hollow, cavity’. Note: This etymology is taken from Puhvel 1984— .3:47—49.

Hittite (reduplicated) (1st sg. pres. act.) [*h*]*a-ma-an-ga-aḫ-ḫi*, *ḫa-ma-an-ga-mi* ‘to tie, to bind, to betroth’ (< **ḫam-ang-* < **ḫan-ang-*, through dissimilation [cf. Greek ἀνάγκη ‘force, constraint’, ἀναγκάζω ‘to force, to compel; to constrain’]) (< **₂eng^h-*) ~ Sanskrit *amhú-h* ‘narrow’; Greek ἄγγω ‘to compress, to press tight; to strangle’; Latin *angō* ‘to press tightly; to strangle, to throttle; to hurt, to distress’, *angor* ‘mental distress, anguish, trouble’; Gothic *aggwus* ‘narrow’; Old Icelandic *öngur* ‘narrow’; Old English *enge* ‘narrow; causing anxiety, painful, severe’; Old Saxon *engi* ‘narrow’; Dutch *eng* ‘narrow’; Old High German *angi*, *engi* ‘narrow’ (New High German *eng* ‘narrow, cramped, tight, confined’); Old Church Slavic *ozъ-kъ* ‘narrow’; Lithuanian *aĩkštas* ‘narrow, cramped, tight’.

Hittite (n.) (nom. sg.) *ḫa-ap-pí-na-az* ‘wealth’; (adj.) (nom. sg.) *ḫa-ap-pí-na-an-za* ‘wealthy, rich’ (< **₂op^h-en-o-* [**H₃ep-en-o-*]); Cuneiform Luwian *ḫa-ap-pí-na-at-ta-an-za* ‘wealth, riches’ ~ Sanskrit *ápnas-* ‘possession, property’; Avestan *afnah-vant-* ‘rich in possessions’; Latin *opulens* (< **open-ont-*) ‘rich, wealthy’, *ops* ‘might, power’, *opēs* ‘resources, means, wealth’, *Ops* ‘the goddess of abundance’. Note: Proto-Indo-European **₂op^h-* probably originally meant ‘to gather, to collect’, specifically, ‘to gather wealth’.

Hittite (3rd sg. pres. act.) *ḫar-aš-zi* ‘to till (the soil)’, (nom.-acc. sg.) *ḫar-ša-u-wa-ar*, *ḫar-ša-a-u-ar* ‘tilled land’ (< **₂er(ə)-*) ~ Greek ἀρόω ‘to plow’; Latin *arō* ‘to plow’; Old Irish *airim* ‘to plow’; Gothic *arjan* ‘to plow’; Old Icelandic *erja* ‘to plow’; Old English *erian* ‘to plow’, *ierp* ‘plowing’; Old High German *erran* ‘to plow’; Lithuanian *ariù*, *árti* ‘to plow, to till’; Old Church Slavic *ralu* ‘a plow’, *orjō*, *orati* ‘to plow’; Tocharian A *āre* ‘a plow’. Note: Kloekhorst (2008b:312—314) reconstructs Proto-Indo-European **h₂órh₃-s-ei* / **h₂rh₃-s-énti*.

Hittite (acc. sg.) *ḫa-aš-ša-an* ‘hearth’, (nom. sg.) *ḫa-a-aš*, *ḫa-aš-ša-aš* ‘ash(es); soda ash, potash, soap’ (< **₂es-*) ~ (?) Greek ἄζω ‘to be dry’; Latin *āra* ‘altar’ (Old Latin *āsa*); Umbrian (dat. sg.) *ase* ‘altar’; Gothic *azgō* ‘cinder, ashes’; Old Icelandic *aska* ‘ashes’; Swedish *aska* ‘ashes’; Danish *aske* ‘ashes’; Old English *asce*, *æsce* ‘ashes’; Dutch *asch* ‘ashes’; Old High German *asca* ‘ashes’ (New High German *Asche*); Czech *ozd* ‘parched malt’, *ozditi* ‘to dry malt’; Tocharian B *ās-* ‘to become dry, to dry out, to

dry up, to parch', *asāre* 'dry'. Notes: (1) Kloekhorst (2008b:318—319 and 322—323) reconstructs Proto-Indo-European **h₂éh₁-s-* to account for the long initial *ā* in Latin (and Hittite), while acknowledging that a short initial *ā* is found in the Germanic cognates. However, Lindeman (1997:57) points out that lengthened-grade is also possible (**ǵ₂ēs-* [phonetically **ǵ₂ās-*]). (2) Boisacq (1950: 16) and Frisk (1970—1973.I:25—26) derive Greek ἄζω 'to be dry' from **azd-*, extended form of **āš-*, while Beekes (2010.I:26—27), among others, derives it from **h₂ed-*.

Hittite (nom. sg.) ^(GIŠ)*ha-aš-ši-ka-aš*, ^(GIŠ)*ha-ši-ik-ka-aš* 'a tree and its fruit' (< **ǵ₂es-*, **ǵ₂ōš-*) ~ Greek ὄξυη (< **ōsk[ε]σ-* ?) 'a kind of beech-tree'; Armenian *haçi* 'ash-tree'; Albanian *ah* (< **oskā*) 'beech-tree', *ashe* 'holly'; Ligurian *᾽Οσκίλα* 'ash forest'; Latin *ornus* (< **os-en-os*) 'mountain-ash'; Old Irish *(h)uinn-ius* 'ash-tree'; Welsh *onn-en* 'ash-tree'; Breton *ounn-enn* 'ash-tree'; Old Icelandic *askr* 'ash-tree', *eski* 'ashen box'; Swedish *ask* 'ash-tree'; Old English *æsc* 'ash-tree'; North Frisian *esk* 'ash-tree'; Dutch *esch* 'ash-tree'; Old High German *ask* 'ash-tree' (New High German *Esche*); Old Prussian *woasis* 'ash-tree'; Lithuanian *úosis* (< **ōs-*) 'ash-tree'; Russian *jásen'* [ясень] 'ash-tree'.

Hittite (nom. sg.) *ha-tu-ga-aš* 'terrible, baleful, fearsome, awesome', (nom.-acc. sg.) *ha-tu-ga-tar* 'terror, awesomeness', (3rd sg. pres. act.) *ha-tu-ki-iš-zi* 'to become terrible', (3rd pl. pres. act.) (?) *ha-tu-ga-nu-wa-an-[zi]* 'to terrify' (< **ǵ₂(e)t'-*, **ǵ₂(e)t'-* [**H₂(e)d-*, **H₂(e)d-*]) ~ Greek ὀδύσσομαι 'to be wroth against, to be angry with, to hate', Ὀδυσσεύς 'Ulysses, Odysseus' (< 'Fearsome'); Latin *ōdī* 'to hate', *ōdium* 'hatred, grudge, ill will, animosity, enmity, aversion', *odiōsus* 'hateful, odious, vexatious, offensive, unpleasant, disagreeable, annoying, troublesome'; Armenian *ateam* 'to hate', *ateli* 'hated, hostile'; Crimean Gothic *atochta* 'bad'; Old Icelandic *atall* 'fierce'; Old English *atol* 'terrible, dire, loathsome, horrid'; Breton *æz* 'horror', *æzi* 'to be terrified'. Cf. Puhvel 1984— :3:274—277. Note: Kloekhorst (2008b:336—337) compares Greek ἀτύζομαι 'to be distraught from fear, bewildered; to be distraught with grief; to be amazed at; to strike with terror or amazement' instead. Beekes (2010.I:167) and Chantraine (1968—1980.I:126—137) support Kloekhorst's etymology. However, as noted by Kloekhorst, *-t-* is never written double in the Hittite forms under discussion here. In my opinion, this speaks in favor of the alternative etymology given above and suggests that Greek ἀτύζομαι may be a later borrowing and not inherited from Proto-Indo-European. Older etymologies found, for example in Boisacq (1950:99), Prellwitz (1905:64), etc., are no longer accepted (cf. Frisk 1970—1973.I:183).

Hittite (3rd sg. pres.) *hi-in-ik-zi*, *hi-in-ga-zi*, *hi-ni-ik-zi* 'to present, to deliver, to offer, to allot' (< **ǵ₂ink^h-* [**H₂nek-*]) ~ Sanskrit *āśnóti* 'to reach, to come to, to arrive at, to get, to obtain; to master, to become master of; to offer'; Latin *nancior* 'to get, to obtain', *nanciscor* 'to get, to gain, to receive, to meet'; Tocharian A *ents-*, B *enk-* 'to seize, to take', B *enkalñe* 'grasping or clinging to existence; assumption, taking to oneself', B *enkāl* 'feeling,

passion'. The following may belong here as well: Hittite (nom.-acc. sg.) *he-en-ka-an*, *hi-in-kán*, *hi-in-ga-an*, *he-e-en-kán* 'death, doom, deadly disease, plague'. Note: I assume that, not only did $*_{22}$ lower a contiguous $*e$ to $*a$ in Proto-Indo-European, it also lowered a contiguous $*i$ to $*e$ and a contiguous $*u$ to $*o$. This explains examples of *he-* and *-eh(h)-* in Hittite, where $h < *_{22}$. It appears that these changes were still in progress at the time when the Anatolian branch separated from the main speech community, as evident in the fluctuation between *hi-* and *-ih(h)-* and *he-* and *-eh(h)-* in Hittite (cf. Kloekhorst 2008b:339—340: "Already in the oldest texts (OS and OH/MS) we find spellings *hi-in-k°*, *he-en-k°*, *hé-en-k°* besides each other"; Puhvel 1984— .3:296—300). The opposing theory, according to which e became i in this environment, is phonetically improbable, regardless of what may have happened elsewhere. An important point needs to be made here: $*i$ and $*u$ had more than one origin in Proto-Indo-European. In some cases, $*i$ and $*u$ were original (that is to say, they were inherited from Proto-Nostratic), while, in other cases, they resulted from the stress-conditioned weakening of $*ey/*oy$ (or $*ye/*yo$) and $*ew/*ow$ (or $*we/*wo$), respectively. Only original $*i$ and $*u$ were lowered to $*e$ and $*o$, respectively, when contiguous with $*_{22}$. When $*i$ and $*u$ resulted from the stress-conditioned weakening of $*ey/*oy$ (or $*ye/*yo$) and $*ew/*ow$ (or $*we/*wo$), however, they were not lowered to $*e$ and $*o$, respectively, under the influence of $*_{22}$, since such a change would have disrupted the integrity of the Ablaut relationship. On the other hand, it is possible to envision a scenario in which $*_{22}$ originally did have an assimilatory effect on $*i$ and $*u$ resulting from the stress-conditioned weakening of $*ey/*oy$ (or $*ye/*yo$) and $*ew/*ow$ (or $*we/*wo$) as well, but where $*i$ and $*u$ were later analogically restored. No doubt, we are dealing with chronologically distinct developments here, with Ablaut being older.

Hittite (nom.-sg.) *ha-an-za* 'front, front part', (nom. sg.) *ha-an-te-iz-zi-iš* 'forward, front, first; first-born, earliest; foremost', *ha-an-ti* 'in front of, before' ($< *_{22}ent^h$ [$*H_2ent$]); Cuneiform Luwian (nom. sg.) *ha-an-te-le-eš* 'first, foremost', (acc. sg.) *ha-an-da-wa-te-en* 'leader, chief'; Hieroglyphic Luwian *hant-* 'face, forehead', *hantil(i)-* 'first, former', *hanti* 'against'; Lycian (3rd sg. pret. act.) *χñtawate*, *χñtewete* 'to lead, to direct, to rule', *χñtawata-* 'leader, chief' ~ Sanskrit *ánti* 'before', *ántya-h* 'last (in time, place, or order)', *ánta-h* 'end, limit, boundary'; Greek *ἀντί* 'opposite', *ἄντα* 'over, against, face to face'; Latin *ante* 'before'; Oscan *ant* 'till'; Gothic *and* 'along, throughout, towards', *andeis* 'end'; Old Icelandic (prefix) *and-* 'opposite, against, towards', *endi*, *endir* 'end', *endr* 'in times past, formerly', *enda* 'to end, to bring to an end'; Old English (prefix) *and-*, *ond-* 'opposite, against, towards', *ende* 'end, limit, border'; Old Frisian *enda* 'end'; Old Saxon (prefix) *and-*, *ant-* 'opposite, against, towards', *endi* 'end'; Dutch *einde* 'end'; Old High German (prefix) *ant-*, *int-*, *ent-* 'opposite, against, towards' (New High German *ant-*, *ent-*), *anti*, *enti* 'end'

(New High German *Ende*); Lithuanian *añt* (earlier *antà*) ‘on, upon’; Tocharian A *ānt*, B *ānte* ‘surface, forehead’.

Hittite (3rd sg. pres.) *ḫu-ul-la-a-i* ‘to smite, to destroy’, (ptc.) *ḫu-ul-ḫu-li-ya-an-te-eš* ‘smitten’, *ḫu-ul-la-an-za-iš* ‘battle’ (< **ḫ₂ul-*) ~ Greek ὄλλωμι ‘to destroy, to make an end of’, ὄλεθρος ‘ruin, destruction, death’; Latin *ab-oleō* ‘to destroy’. Note: So far as I can determine, this etymology was first suggested by Couvreur (1937:144—146), but it was subsequently rejected by most other scholars on the basis of the difference between the stem vowels of Hittite, on the one hand, and Greek and Latin, on the other hand — Cowgill (1965:146—147 and 157), for one, accepts the comparison of the Hittite and Greek and Latin forms. However, this comparison can be revived if we consider the original form to have been **ḫ₂ul-*, which later became **ḫ₂ol-*, with **-o-* from earlier **-u-* under the influence of the preceding laryngeal.

Hittite (3rd sg. pres.) *ḫa-at-zi*, *ḫa-at-ta-i*, *ḫa-at-ta-a-i*, *ḫa-ad-da-i*; *ḫa-az-zi-zi*, *ḫa-az-zi-az-zi* ‘to make a hole (in), to pierce, to prick, to stab, to slash, to perforate, to penetrate, to stick (as a means of killing), to hit (a target), to strike (especially a musical instrument), to engrave (a tablet)’, (1st sg. pres.) *ḫa-at-ta-ra-a-mi* ‘to prick, to incise, to engrave, to inscribe’, (nom.-acc. sg.) *ḫa-at-tal-la-an* ‘club, mace’, (nom.-acc. sg.) *ḫa-at-ta-ra-a[n]* ‘prick, awl’, (nom. sg.) *ḫa-at-tal-ki-iš-na-aš* ‘thorn-bush’ (< **ḫ₂et’-ḫ-* [**H₂ed-H-*]); (3rd sg. pres.) *ḫa-at-ra-a-iz-zi* ‘to write, to send written word (about), to report, to order, to dispatch’, (nom.-acc. sg.) *ḫa-at-ri-eš-šar* ‘written message, decree’ (< **ḫ₂et’-ro-* [**H₂ed-ro-*]); Hieroglyphic Luwian *ha-tu+ra/i-à-s* ‘letter’, (imptv.) *ha-tu+ra/i+à* ‘write!’; Cuneiform Luwian (3rd sg. pret.) *ḫa-at-ta-ri-it-ta* ‘to prick, to pierce’, (acc. sg.) *ḫa-at-ta-ra-an* ‘prick’; Lycian *χttadi* ‘to hurt, to damage’, *χdrīna* (?) ‘inscription’ (?) ~ Armenian *hatanem* ‘to cut’, *hat* ‘piece, cut, slice’; Avestan *ađu* ‘water-course, brook, canal’. Note: Though the comparison of Armenian *hatanem* with the Anatolian forms is semantically flawless, there are problems with the phonology, since double writing of the dental stop in Hittite points to original **-t^h-* [**-t-*], while the Armenian form points to original **-t’-* [**-d-*]. However, double writing of medial stops in Hittite can also indicate the former presence of a laryngeal as in (nom. sg.) *me-ik-ki-iš* ‘large’, which is to be derived from earlier **mek’-* plus the suffix **-ḫi-* > **mek’ḫi-* > Hittite *me-ik-ki-iš*. Thus, comparison of Armenian *hatanem* with the Anatolian forms having medial double writing can be maintained if we derive the Anatolian forms from earlier **ḫ₂et’-ḫ-* (traditional **H₂ed-H-*), which would yield Hittite *ḫatta-* as the regular outcome. Support for this interpretation may be found in Hittite *ḫatrai-*, which has consistent single writing. Thus, it is possible to envision a Pre-Anatolian root **ḫ₂et’-*, which was then extended by two separate suffixes in Proto-Anatolian proper: (A) **ḫ₂et’-ḫo-*, yielding Hittite *ḫatta-* upon loss of the medial laryngeal, and (B) **ḫ₂et’-ro-*, yielding Hittite *ḫatra-*. Stem (A) was further extended by a suffix *-ra-*, giving the attested agent noun *ḫattara-* ‘prick, awl’, which, in

turn, served as the basis of the denominative verb *ḥattarai-*. Other derivatives of stem (A) are *ḥattatta-* ‘club, mace’ and *ḥattalkešna-* ‘thorn-bush’. The agent noun **ḥatra-*, from stem (B) and from which the denominative verb *ḥatrai-* is derived, is unattested in Hittite.

Hittite (nom. sg.) *ḥu-u-ma-an-za* ‘all, whole’ (< **ḡ₂um-*) ~ Latin *omnis* ‘all, every, whole’ (cf. Cuvreur 1937:144—146; Kronasser 1956:41; Pedersen 1938:165). Note: Both Polomé (1965:18) and Puhvel (1984— .3:380) reject this etymology — Puhvel derives Latin *omnis* from **opnis*. On the other hand, Walde—Hofmann (1965—1972.II:209—210) mention Oscan *úmbn*, which points to earlier **omb-nis* and not **opnis* as the source of both the Oscan form and Latin *omnis*. **omb-nis* may contain an epenthetic *b*, in which case the original form would have been **om-ni-s*. Here, *-ni-* is a suffix. Likewise, in Hittite *ḥu-u-ma-an-za*, the stem is **ḡ₂um-*, and the *-anz(a)* is a suffix. Thus, this comparison can be revived if we consider the original form to have been **ḡ₂um-*, which later became **ḡ₂om-*, with **-o-* from earlier **-u-* under the influence of the preceding laryngeal. Such an explanation overcomes the objections raised against this etymology based upon the irregular correspondence of Hittite *u* and Latin *o*.

Hittite (1st sg. pres. act.) *na-aḥ-mi*, (3rd sg. pres. act.) *na-aḥ-ša-ri-ya-az-zi*, (1st sg. pret. act.) *na-aḥ-ḥu-un*, *na-a-ḥu-un* ‘to fear, to be or become afraid; to be respectful, to be careful’, (nom. sg.) *na-aḥ-ša-ra-az* ‘fear, fright; respect, reverence, awe; frightfulness’ (< **neḡ₂-*); Cuneiform Luwian (nom. pl.) *na-aḥ-ḥu-wa-aš-ši-en<zi>* ‘fearful’ or ‘fearsome’ (?), (3rd sg. pret. act.) *na-aḥ-ḥu-u-wa-i* ‘to be afraid, worried’ (impersonal) ~ Old Irish *nár* (< **nāsros*) ‘modest, bashful’.

Hittite (3rd sg. pres. act.) *ḥu-iš-zi* ‘to live, to survive’ (< **ḡ₂w-es-*); Hieroglyphic Luwian (nom.-acc. sg.) ^{BESTIA}*HWT-sà+ra/i-sa*, ^{BESTIA}*HWT-sa₅+ra/i* /*hwisar*/ ‘game, wild beasts’ ~ Sanskrit *vásati* ‘to dwell, to live, to inhabit; to dwell in, to abide in; to dwell or live near’; Greek (aor.) *ἄεσα* ‘to spend the night’; Middle Irish *fóaid* ‘to pass the night, to dwell’; Gothic *wisan* ‘to be, to remain’; Old Icelandic *vesa* ‘to be’; Old English *wesan* ‘to be, to happen’; Old High German *wesan* ‘to be’; Tocharian B *wäs-* ‘to dwell, to abide, to remain, to lie (on)’. Note: Curiously, Cuneiform Luwian has (nom.-acc. sg.) *ḥu-u-i-tar-ša* ‘wild animal’.

Hittite (nom.-acc. sg.) *me-e-ḥu-ur*, *me-e-ḥur*, *me-ḥur* ‘time’ (< **meḡ₂-* < **miḡ₂-*) ~ Sanskrit *māti-ḥ* ‘measure, accurate knowledge’, *māti*, *mīmāti* ‘to measure, to mete out, to mark off’; Latin *mētor* ‘to measure’; Gothic *mēl* ‘time’; Old Icelandic *mál* ‘measure; time, high time; meal’; Old English *mæþ* ‘measure, degree, proportion’, *mæł* ‘measure; (appointed) time, occasion; time for eating, meal’; Old Frisian *mēl* ‘time, mealtime’; Dutch *maal* ‘(n.) meal; (m.) time’; Old High German *māl* ‘time’ (New High German *Mal*). Note: In spite of consistent single writing of *ḥ* in Hittite, the laryngeal involved here is **ḡ₂*, as reconstructed, for example, by Kloekhorst (2008b:567—568). I consider this to be another example of the

change of original **i* to **e* under the influence of **₂*. Puhvel (1984— .6: 108—112) sardonically notes:

The enormous, aporia-studded amount of attention expended on the etymology of *mehur* (see the account by Tischler, *Glossar L—M* 171—4; cf. Neu, *IBS* 52:184 [1987]) is a prime example of preconceptions and “theory” dragooning and hamstringing data. Derivation from IE **mē-* has been around since Hrozný (*SH* 70) but has typically stumbled on the doctrines of “trilaryngealism” (e-vocalism incompatible with Hittite *h*), so that Rieken (*Stammbildung* 340) could still claim in 1999 that “all attempts to connect *mēhur* with IE **mē-* founder thereon.”

Puhvel supports derivation from (traditional) **mē-* ‘to measure’, as do I. Hittite (3rd sg. pres. act.) *ta-ru-uḫ-zi*, *tar-uḫ-zi*, *tar-ru-uḫ-zi*, *tar-ḫu-uz-zi*, etc. ‘to prevail, to conquer, to be powerful, to be able’, (nom.-acc. sg.) *tar-ḫu-u-i-li* ‘strong, powerful’, **Tarḫunna-* name of the Storm God (< **t^her₂₂-w/u-* [**terH₂-w/u-*]); Cuneiform Luwian *ᵀTarḫunt-* / *ᵀTarḫuwant-* name of the Storm God; Hieroglyphic Luwian *Tarḫunt-*, *Tarḫunza-* name of the Storm God; Lycian / Milyan *Trqqñt-* name of the Storm God; Lydian (?) *tarvtalli-* ‘of Tarvra’ (nom. sg. *tarvtallis*); Carian *trq(u)δ-* name of the Storm God ~ Sanskrit *tūrvati* ‘to overpower, to overcome, to excel’. Note: Kloekhorst (2008b:838) derives Lycian *Trqqñt-* first from Proto-Anatolian **trHwent-* but later, on the same page, from (Proto-Indo-European) **trh₂uent-*.

Hittite (nom. sg.) *ḫa-a-ra-aš*, (gen. sg.) *ḫa-ra-na-aš* ‘eagle’; Palaic *ḫa-ra-a-aš* ‘eagle’ (< **₂or-/²₂r-*) ~ Greek ὄρνις ‘bird’; Armenian *oror* ‘kite, gull’; Welsh *eryr* ‘eagle’; Gothic *ara* ‘eagle’; Old Icelandic (poet.) *ari*, *örn* (< **arnu-*) (gen. sg. *arnar*, acc. *örnu*, pl. *ernir*) ‘eagle’; Old English *earn* ‘eagle’ (Middle English *ern(e)*, *earn*); Old High German *aro*, *arn* ‘eagle’ (New High German [poetic] *Aar*); Lithuanian *erēlis* (dial. *arēlis*) ‘eagle’; Latvian *ērglis* ‘eagle’; Old Prussian *arelie* ‘eagle’; Old Church Slavic *orьlъ* ‘eagle’; Russian *orël* [орѣл] ‘eagle’; Czech *orel* ‘eagle’; Polish *orzel* ‘eagle’; Upper Sorbian *worjoł* ‘eagle’; Lower Sorbian *jerjoł*, *jerjel* ‘eagle’; Bulgarian *orél* ‘eagle’; Serbo-Croatian *órao* ‘eagle’. Notes: (1) Pokorny (1959:325—326) reconstructs Proto-Indo-European **er-* on the basis of Lithuanian *erēlis*, but Cowgill (1965:146, fn. 2) questions the validity of this reconstruction since he takes Lithuanian *erēlis* to be assimilated from the dialectal form *arēlis*. Cowgill points out that the relative antiquity of the Lithuanian dialectal form is confirmed by Old Prussian *arelie*. Finally, he points out that Latvian *ērglis* has undergone even more remodeling. (2) This is yet another example of the change of **u* to **o* under the influence of **₂*.

- C. $*_{2_3} > (1) \text{ } h\text{-}$ (initially), $-h\text{-}$ (medially) in Hittite, Palaic, Cuneiform Luwian, and Hieroglyphic Luwian (written $h\text{-}$, $-h\text{-}$); $> (2) \chi\text{-}$ (initially), $-\chi\text{-}/-g\text{-}$ (medially), $-q\text{-}$ ($< */\chi^w/$) in Lycian:

As noted by Kimball (1987), the reconstruction of $*_{2_3}$ is one of the most challenging problems in Indo-European comparative linguistics, due to the ambiguity of the available evidence (see also Melchert 1994a:71, §4.1.3.3). I agree with Melchert's (1994a:72) statement: "I share the view of Normier (1980a: 58), Watkins (1982c: 457), Bernabé (1983: 39ff), Kimball (1983 & 1987a) and others that $*/h_3/$ is preserved initially as $h\text{-}$ in Hittite, Palaic and Cuneiform Luwian." Beyond that, scholars differ greatly in their opinions regarding which words are to be reconstruct with $*_{2_3}$. The one thing that seems certain, though, is that $*_{2_2}$ and $*_{2_3}$ were phonetically distinct. $*_{2_3}$ is usually interpreted as the voiced counterpart of $*_{2_2}$. I have only included a few examples below — those that seem certain to me based mostly upon my work on distant linguistic relationship (this book and its predecessors).

Hittite (nom. pl. ?) *ha-a-u-e-eš* 'sheep' ($< *_{2_3}owi-s$); Hieroglyphic Luwian (nom. sg.) *OVIS.ANIMAL-há-wá/i-i-sá* /hawis/ 'sheep'; Cuneiform Luwian (nom. sg.) *ha-a-ú-i-iš* 'sheep'; Lycian (acc. sg.) *χawā* 'sheep' ~ Sanskrit *ávi-h* 'sheep'; Greek *óĩς*, *oĩς* 'sheep'; Latin *ovis* 'sheep'; Armenian *hov-iw* 'shepherd'; Old Irish *oí* 'sheep'; Gothic *awēpi* 'herd of sheep'; Old English *ēow*, *ēaw*, *ēw* 'sheep', *ēowu*, *ēowe* 'ewe', *ēowd*, *ēowde* 'herd of sheep'; Old Frisian *ei* 'ewe'; Old Saxon *ewwi* 'ewe'; Dutch *ooi* 'ewe'; Old High German *ouwi*, *ou* 'ewe', *ewit*, *owiti* 'herd of sheep'; Lithuanian *avis* 'sheep'; Latvian *avs* 'sheep'; Old Church Slavic *ovьca* ($< *owi-kā$) 'sheep'; Tocharian B *eye* 'sheep', *ā(u)w* 'ewe', *aiyye* 'ovine, pertaining to sheep'. Notes: (1) Kimball (1999:142) reconstructs initial $*h_2\text{-}$, but this interpretation is rejected by Kortlandt (2001:2). Kloekhorst (2008b:337—338) reconstructs $*h_3eui\text{-}$ with initial $*_{2_3}$ as do Beekes (2010.II:1060—1061) and Derksen (2008:384 and 2015:74). (2) In my opinion, the $*-o\text{-}$ is original here, that is to say, it is inherited from Proto-Nostratic. (3) Lycian (acc. sg.) *χavā* 'sheep' shows that initial $*_{2_3}$ becomes χ in Lycian. However, according to Kimball (1987) and Melchert (1994a:72), initial $*_{2_3}$ is lost in Lycian.

Hittite (nom.-acc. sg.) *ha-aš-ta-a-i*, *ha-aš-ta-i*, *ha-aš-da-i*, [*h*]a-aš-da-a-i 'bone(s)' ($< *_{2_3}osth\text{-}$ [$*H_3ost\text{-}$]); Cuneiform Luwian (nom.-acc. sg.) *ha-a-aš-ša*, *ha-aš-ša* 'bone' ~ Sanskrit *ásthi*, (gen. sg.) *asthnāḥ* 'bone'; Greek *ὀστέον* 'bone'; Latin *os* 'bone'; Albanian *asht*, *ashti* 'bone'. Notes: (1) The following is also found in Hittite: (nom.-acc. sg.) *É hé-eš-ta-a*, (gen. sg.) *É hi-iš-ta-a-aš*, *É hi-iš-ta-aš*, *É hé-eš-ta-a-aš*, *É hé-eš-ta-aš* 'mausoleum?'. Most scholars connect this form with *ha-aš-ta-a-i* 'bone(s)' as 'bone-house' $>$ 'sepulcher, mausoleum', but Kloekhorst (2008b:346—347) prefers to see it as a borrowing ("foreignism"). Kloekhorst does not identify the source of the borrowing, but, given the fact that the paradigm

“hardly shows any inflected forms” and given the specialized cultic/ritualistic meaning, I am inclined to accept Kloekhorst’s views. (2) The Sanskrit form requires a laryngeal suffix to account for the aspiration: *ásthi* ‘bone’ < $*_{\mathcal{Q}_3}ost^h\text{-}\mathcal{Q}\text{-}$ [$*H_3ost\text{-}H\text{-}$].

Hittite (3rd sg. pres. act.) *ḫar-ap-zi* ‘to separate oneself and (re)associate oneself elsewhere’ (< $*_{\mathcal{Q}_3}or\text{-}b^h\text{-}$) ~ Sanskrit *árbha-h* ‘little, small; child’; Armenian *orb* ‘orphan’; Greek ὀρφανός ‘orphan, without parents, fatherless; (metaph.) abandoned, bereft’; Latin *orbus* ‘bereft, deprived by death of a relative or other dear one; bereaved (of); childless; an orphan’; Old Irish *orb* ‘heir’, *orb(b)e*, *orpe* ‘inheritance’; Gothic *arbi* ‘inheritance’, *arbja* ‘heir’ (f. *arbjō* ‘heiress’); Old Icelandic *arfi* ‘heir, heiress’, *arfr* ‘inheritance, patrimony’, *erfa* ‘to inherit’, *erfð* ‘inheritance’; Old Swedish *arve*, *arver* ‘heir’; Danish *arv* ‘heir’; Norwegian *arv* ‘heir’; Old English *ierfa*, *irfa* ‘heir’, *ierfe* ‘inheritance, bequest, property’, *erfe*, *irfe*, *yrfe* ‘inheritance, (inherited) property’, *irfan*, *yrfan* ‘to inherit’; Old Frisian *erva* ‘heir’, *erve* ‘inheritance, inherited land, landed property’; Old Saxon *erbi* ‘inheritance’; Middle Dutch *erve* ‘heir’; Old High German *arbi*, *erbi* ‘inheritance’, *arbeo*, *erbo* ‘heir’ (New High German *Erbe* ‘inheritance; heir’); Old Church Slavonic *rabъ* ‘servant, slave’; Russian *rab* [paб] ‘slave, serf, bondsman’ (f. *rabá* [paба] ‘slave, serf, bondmaid’).

Hittite (nom.-acc. sg.) *še-e-ḫur*, *še-e-ḫu-ur*, *še-e-ḫu-wa-ar* ‘urine’, (3rd sg. pret. act.) *še-e-ḫu-ri-ya-[a]t* ‘to urinate’, (nom. sg.) *še-e-ḫu-ga-ni-ya-u-wa-an-za* ‘besmeared with urine’ (< $*se_{\mathcal{Q}_3}\text{-}ur$ < $*si_{\mathcal{Q}_3}\text{-}ur$). Notes: (1) There are no known cognates, either in the other Anatolian languages or in the non-Anatolian Indo-European daughter languages. (2) Given the ambiguities involved, derivation of Hittite (nom.-acc. sg.) *še-e-ḫur*, *še-e-ḫu-ur*, *še-e-ḫu-wa-ar* ‘urine’ from $*se_{\mathcal{Q}_2}\text{-}ur$ (< $*si_{\mathcal{Q}_2}\text{-}ur$), with $*_{\mathcal{Q}_2}$ instead of $*_{\mathcal{Q}_3}$, is also a possibility. (3) As observed by Kloekhorst (2008b:741—742): “The noun shows the same inflection as *mēḫur* / *mēḫun-* ‘time’.” (4) Kloekhorst’s conjecture that Hittite *še-e-ḫur* may be a loan from Palaic cannot be proven inasmuch as the word does not occur in the extant Palaic corpus. (5) Sturtevant (1951:50, §75) also reconstructed $*_{\mathcal{Q}_3}$ here (Proto-Indo-Hittite $*se\gamma wr$), but for different reasons.

D. $*_{\mathcal{Q}_4} > \emptyset$ in Anatolian:

Hittite (nom. sg.) *al-pa-aš*, *al-pa-a-aš* ‘(storm) cloud’ (< $*_{\mathcal{Q}_4}el\text{-}b^ho\text{-}s$) ~ (?) Greek ἄλφος ‘whiteness, white leprosy’; Latin *albus* ‘white’; Umbrian *alfu* ‘white’; Old Icelandic *elptr* ‘swan’ (named for its white color); Old English *iefetu* ‘swan’; Old High German *albiz* ‘swan’; Old Church Slavonic *lebedъ* ‘swan’ (< Proto-Slavic $*olb\check{e}dъ$; $*old\check{e}tъ$; $*elbedъ$; $*elb\check{e}tъ$ ‘swan’ [cf. Derksen 2008:365—366]); Polish *labędź* ‘swan’; Czech *labud* ‘swan’; Russian *lébed’* [лебедь] ‘swan’. Note: This etymology is rejected by Kloekhorst (2008b:169), mainly on semantic grounds. However, he also points out that he has “no better IE etymology for this word.” See also

Puhvel (1984— .1/2:37—38), who also questions this etymology on semantic grounds. However, the proposed alternative etymologies mentioned by Puhvel fare even worse (cf. R. Woodhouse 2012:226—227).

Hittite (adv.; postpos.) *a-ap-pa* ‘behind, afterwards; back, again, further’, *a-ap-pa-an* (adv.) ‘behind, after(wards)’ (< * \mathcal{Z}_4ep^ho [* H_4epo]); Cuneiform Luwian *a-ap-pa* ‘back, again, after’, *a-ap-pa-an*, *ap-pa-an* ‘behind, after’; Hieroglyphic Luwian *á-pa-na* ‘after, behind, again’; Lycian (adv.) *epñ* ‘afterwards’, *epñte* (adv.) ‘thereafter’, *epre/i-* (adj.) ‘back-, rear-’ ~ Sanskrit *ápa* ‘away, forth, back’; Old Persian (prefix) *apa-* ‘away’; Greek *ἀπο*, *ἀπό* ‘off, away, back’; Latin *ab* ‘away from’; Gothic *af* ‘of, from, by, away from’; Old Icelandic *af* ‘off, from’; Old English *of* ‘from, away from’; Old Frisian *af*, *of* ‘off, from, away from’; Old Saxon *af* ‘off, from, away from’; Dutch *af* ‘off, down’; Old High German *ab*, *aba* ‘off, from, away from’ (New High German *ab*).

Hittite (nom.-acc. sg.) *a-ra-a-u-(wa)-aš* ‘free’, (1st sg. pres.) *a-ra-wa-aḥ-ḫi* ‘to set free, to make free’ (< * $\mathcal{Z}_4er-wo-/^*\mathcal{Z}_4or-wo-$); Lycian *arawa* ‘free’, *arawā* ‘exempt from tax’, *Ἐρεῦας* /**erewa-* ‘free(city)’ ~ Lithuanian *árvas* ‘free’. Notes: (1) Puhvel’s (1984— .1/2:119—121) rejection notwithstanding, the most convincing Indo-European cognate remains Lithuanian *árvas* ‘free’. See also Tischler 1977— :53—55. (2) This etymology is accepted by Gamkrelidze—Ivanov (1995.I:397—398 and I:781), who reconstruct **arw-* (I:397) and **arwo-* ‘free agriculturalist’ (I:781). However, the putative Latin, Middle Irish, Greek, and Armenian cognates adduced by Gamkrelidze—Ivanov do not belong here.

Hittite (nom. sg.) *ta-ya-az-zi-il* ‘theft’, (3rd sg. pres. act.) *ta-a-i-ez-zi*, *ta-i-ez-zi*, etc. ‘to steal (from)’ (< *(s)*thē* \mathcal{Z}_4 -ye/o- [**(s)teH* \mathcal{Z}_2 -ye/o-]) ~ Sanskrit *tāyú-ḥ* ‘theft’, *stená-ḥ* ‘thief, robber’, *stāyát* ‘in secret’; Avestan *tāyuš* ‘thief’; Greek *τητάω* ‘to rob’; Old Irish *táid* ‘thief’; Old Church Slavic *tatb* ‘thief’. Note: The Sanskrit forms show so-called “movable *s*” or “mobile *s*”.

Hittite (acc. sg.) *ma-ak-la-an-ta-an* ‘thin, meager, slim (of animals)’ (< **me* \mathcal{Z}_4k^h -lo-*nt*^h- [**meH* \mathcal{Z}_2k^h -lo-*nt*-]) ~ Greek *μήκος* (Doric *μᾶκος*) ‘length’, *μακρός* ‘long, tall’; Latin *macer* ‘thin’; Old Icelandic *magr* ‘lean’; Old English *mæger* ‘lean, meager’; Old High German *magar* ‘thin, meager’ (New High German *mager*).

Hittite (1st sg. pres. act.) *ti-ya-mi* ‘to step, to go stand, to place oneself, to set in’ (< *(s)*th(e)* \mathcal{Z}_4 -ye/o- [**(s)t(e)H* \mathcal{Z}_2 -ye/o-]; Cuneiform Luwian (3rd sg. pres. act.) *ta-a-i* ‘to come to stand’; Hieroglyphic Luwian (3rd sg. pres. act.) *ta-i* ‘to come to stand’ ~ Sanskrit (reduplicated) *tístṭhati* ‘to stand’; Greek (reduplicated) *ἵστημι* ‘to make to stand; to stand’, *στατός* ‘placed, standing’; Latin (reduplicated) *sistō* ‘to cause to stand, to set, to place’; Gothic *standan* ‘to stand’; Old Icelandic *standa* ‘to stand’; Old English *standan* ‘to stand’; Old Frisian *stonda*, *stān* ‘to stand’; Old Saxon *standan*, *stān*, *stēn* ‘to stand’; Old High German *stantan*, *stān*, *stēn* ‘to stand’ (New High German *stehen*); Lithuanian *stóti* ‘to stand’; Old Church Slavic *stati* ‘to stand, to become’. Notes: (1) The Proto-Indo-European root contains

so-called “movable *s*” or “mobile *s*”. (2) As noted by Kloekhorst (2008b: 879—880):

From the beginning of Hittite studies it has been in debate whether *tije/a-zi* goes back to the PIE root **d^heh₁-* ‘to put’ or **steh₂-* ‘to stand’. The former root would be possible in view of the meaning ‘to place oneself’ and the NH merger of *tije/a-zi* with *dai-i / ti-*, which clearly must reflect **d^heh₁-*. An etymological connection with **steh₂-* would much better fit the meaning ‘to step, to go stand’, however, which cannot easily be derived from an original meaning ‘to put, to place’.

Kloekhorst reconstructs Proto-Indo-European **(s)th₂-je/o-*.

4.2.10. LABIALIZED LARYNGEALS

Adrados, Kloekhorst, Martinet, and Puhvel, among others, have proposed that one or more labialized laryngeals should be reconstructed for Proto-Indo-European, and, indeed, there is some evidence to support such a view:

Proto-Indo-European **ǵ₂^wel-/ǵ₂^wol-/ǵ₂^wl̥-* ‘to draw, to pull, to tear out’: Avestan (in compounds) *varək-* ‘to draw’; Latin *vellō* ‘to pluck, to pull, to tear out’; Lithuanian *velkù, vilkti* ‘to drag, to pull’; Old Church Slavonic *vlěko, vlěsti* ‘to draw, to drag’; Gothic *wilwan* ‘to rob, to plunder’, *wilwa* ‘robber’. Note: There may be a connection here with the words for ‘wool’ in the sense ‘to pluck (wool)’, in which case, we can add the following: Hittite (dat.-loc. sg.) *hu-u-la[n(i)]* ‘wool’ (< **ǵ₂^w(e)l̥₂-n-*); Cuneiform Luwian **hulana/i-* ‘wool’ ~ Sanskrit *úrṇa-h* ‘wool’; Greek *λῆνος* ‘wool’; Latin *lāna* ‘wool’; Welsh *gwlan* ‘wool’; Gothic *wulla* ‘wool’; Old Icelandic *ull* ‘wool’; Old English *wull* ‘wool’; Old High German *wolla* ‘wool’ (New High German *Wolle*); Russian *vólna* [волна] ‘fleece, wool’; Lithuanian *vilna* ‘wool’. For the semantics, cf. Buck 1949:400, no. 6.22 wool: “... prob. the same as Lat. *vellere*, etc. ‘tear, pluck’.”

Proto-Indo-European **ǵ₂^wet-* [**H₂^wed-*] ‘to say, to speak’: Sanskrit *vāda-h* ‘speech, discourse, talk, utterance, statement’, *vādati* ‘to speak, to say, to utter, to tell, to report, to speak to, to talk with, to address’; Greek (?) *ᾠείδω* (< **ǵ₂^wet̥* < **awe-ud-*) ‘to sing’, *αὐδάω* ‘to utter sounds, to speak’, *αὐδή* (Doric *αὐδά*) ‘the human voice, speech’, (?) *ἄηδω, ἄηδών* ‘nightingale’; Lithuanian *vadinti, vadinti* ‘to call, to name’. Note: There are no known Anatolian cognates.

Proto-Indo-European **ǵ₂^wer-k^h-* [**H₂^wer-k-*] ‘to cry, to squeal’: Old Church Slavonic *vrěsto, vrěstati* ‘to cry, to squeal’; Czech *vřískat, vřeštět* ‘to cry, to whimper’; Lithuanian *verkiù, verkti* ‘to weep, to cry’, *verkšnà* ‘cry-baby’, *verkšmas* ‘weeping, crying’. Note: There are no known Anatolian cognates.

For more information about the above examples, cf. Part III, §22.39, of this book.

4.2.11. OLD LETTERS, NEW VALUES

Earlier in this chapter, under the discussion of Carian phonology, I mentioned that new values have been assigned to several Carian letters. I want to stress that the evidence upon which the new values are based has not changed. What is new is the *interpretation*. Brosch (no date) lists the Carian vocabulary typically interpreted as containing reflexes of the laryngeals — remember that the *k* in these forms represents the Carian letter formerly interpreted as χ (= Melchert's *x*):

1. The element $k\delta^\circ$ 'former, first' in the name $k\delta-u\acute{s}ol\acute{s}$ and the controversial $k\delta ou$ - 'king' (?), which have been compared with Lycian $\chi\acute{n}tawat(i)$ - 'ruler, sovereign' (< $*h_2ent$ -).
2. p/bik° (mostly Greek *Pig*^o) 'light' in various proper names (< $*b^h\bar{e}h_2$ -).
3. kb - 'river, stream' in the place names $kbid$ - 'Kaunos' and kbo - 'Keramos' (< $*h_2eb(h)-o/n$ -).
4. $ksbo$ 'ankle' in personal names (< $*h_2emsu-+-\bar{a}$) (cf. Lycian $\chi ahba$).
5. Place name $ki\delta b$ - (< *Hinduwa*).
6. The Greek gloss $\kappa\acute{o}ov$ 'sheep', perhaps also in the title $ko\acute{i}o\lambda$ (< $*h_3eyi$ -) (cf. Lycian $\chi aw\tilde{a}$).
7. Proper name quq - (Greek *Gýgēs*, *Gugos*), also in proper names $dquq$ (Greek *Idagygos*) (< $*h_2eyh_2o/eh_2$ - 'grandfather') (cf. Lycian χuge).
8. Name of the Storm God $trq(u)\delta$ - (< $*t^rh_2unt$ -) (cf. Lycian $Trqq\acute{n}t$ -).
9. $qdar'rou$ - 'servant' in personal names (cf. Cuneiform Luwian $\acute{h}utarl\bar{a}$ -).
10. Conjunction = q 'and' (< $*=h_3e$ or $*=h_2o$ or $*=k^we$?).
11. Probably the pronoun $\chi i\chi$ (= Lycian *tike*, Milyan *kike*; Cuneiform Luwian $kui\acute{s}ha$).

Brosch mentions that there are several other items without etymologies.

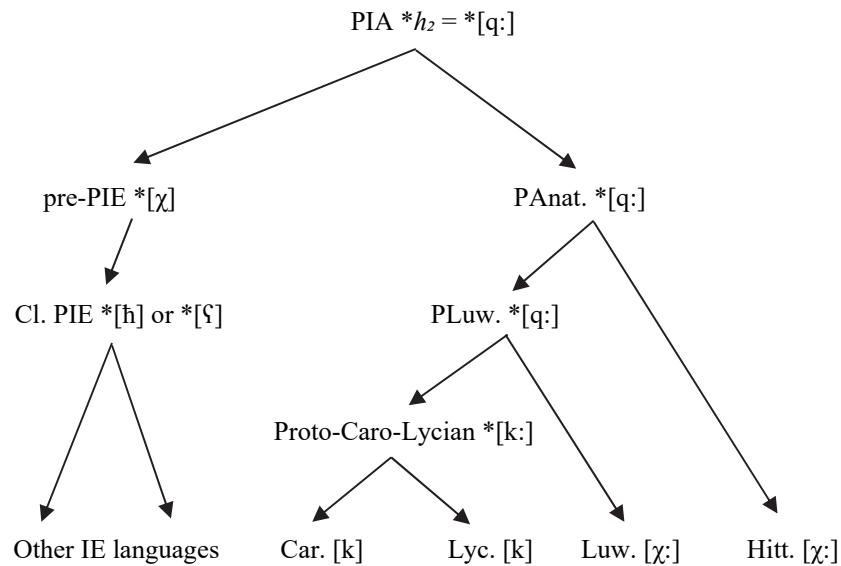
Were this all, it would not be a major issue, given the extremely small size of the Carian corpus and the uncertainty surrounding the alleged reflexes of the laryngeals, and the debate on the values of these letters could have been confined to Carian, without too much damage. However, the new interpretation has spread to Lycian as well, and this is important. Brosch summarizes the new interpretation in the following table:

Proto-Anatolian	Hittite, Palaic, CLuw.	Lycian	Carian				
			Simon (2011)	Kloekhorst (2008b)	Adiego (2007)	Schürr (2001)	Adiego (1995)
* <i>H</i> -	<i>ḫ</i> -	χ [k]	<i>k</i> [k], <i>q</i> [q]/ <i>u</i>	<i>k</i> [k]	<i>k</i> [k], <i>q</i> [q]	<i>k</i> [k], <i>q</i> [q]	?
*- <i>H</i> -	- <i>ḫḫ</i> -	χ [k]	<i>k</i> [k]				
*- <i>h</i> -	- <i>ḫ</i> -	g [ɣ]	<i>q</i> [q]	?			<i>k</i> [k]
*(-) <i>H</i> ^w -	(- <i>ḫ</i>) <i>ḫu</i> -	<i>q</i> [k ^w]	<i>qu</i> [qu] < * <i>h</i> ₂ <i>u</i>	<i>q</i> [k ^w]			

The final step in the evolution of these ideas is the proposal that the laryngeals preserved in Anatolian (namely, $*\varrho_2$ and $*\varrho_3$) were actually uvular stops in pre-Anatolian (cf. Kloekhorst 2018). The thinking is that they would have been preserved as stops in Lycian and Carian but changed to uvular fricatives in Hittite, Palaic, and Cuneiform and Hieroglyphic Luwian. Kloekhorst (2018:79) concludes regarding $*\varrho_2$:

We have seen that, typologically, it is difficult to understand how Lycian and Carian [k] could have been the outcome of $*h_2$ if the latter sound originally was a uvular fricative. Instead, Lyc./Car. [k] is much better explained from a uvular stop, which can also account for the uvular fricative as found in Hittite and Luwian. Moreover, there are additional arguments to be given in favour of such a reconstruction, especially the fact that $*h_2$ yields a fortis (long) consonant in Hittite and CLuwian.

All in all, I want to propose the following values for $*h_2$ in the different language stages:



The interpretation of the laryngeals $*\varrho_2$ and $*\varrho_3$ as uvular stops in pre-Anatolian Proto-Indo-European (Proto-Indo-Anatolian) has major implications for the basic tenets of the Laryngeal Theory listed at the beginning of this chapter. First, there is the question of the vowel-coloring effects traditionally attributed to the laryngeals. The vowel-coloring effects must have already begun in pre-Anatolian Proto-Indo-European, since they can clearly be observed in the Anatolian daughter languages. As noted by Colarusso (1981), plain uvular stops and fricatives cannot have produced these effects. Colarusso discusses, in detail, typological parallels with Northwest Caucasian, Northeast Caucasian, and Semitic to illustrate this point. Consequently, plain uvular stops and fricatives can be ruled out at the Proto-Indo-

European level on this basis alone. Next, the plain pharyngeal fricatives reconstructed by Kloekhorst for the Proto-Indo-European precursor of the non-Anatolian daughter languages also cannot have produced the vowel-coloring effects traditionally attributed to the laryngeals — additional phonetic features and developments are required. This was illustrated above in the table of Semitic developments originally prepared by Couvreur (1937:288—289) and is also discussed by Colarusso (1981) — instructive here as well are the typological parallels between the development of the “laryngeals” in Coptic, on the one hand, and in Proto-Indo-European, on the other hand, discussed by Greenberg (1969: 175—184). It may also be noted that the laryngeals do not pattern as stops during any period of development. Moreover, my work on distant linguistic relationship does not support these views. Finally, my 2019 *Journal of Indo-European Studies* paper entitled “The Origins of Proto-Indo-European: The Caucasian Substrate Hypothesis”, in which I present evidence of prehistoric language contact between the precursors of Proto-Indo-European and Proto-Northwest Caucasian, does not support these views (see Chapter 21 of this book for details). In sum, these theories are simply not supported by the cumulative evidence.

It seems to me that the initial mistake began with the interpretation of the Carian reflexes of the laryngeals preserved in Anatolian as stops, though no one author can be singled out as the source of these ideas — several scholars contributed in various ways. Be this as it may, this line of reasoning simply cannot be correct. Likewise, the interpretation of the Lycian reflexes of these laryngeals as stops cannot be correct. Hence, I urge that these theories be abandoned and that the earlier values assigned to the letters in question in Carian (χ) and Lycian (χ) be reinstated.

4.3. THE TRADITIONAL VOICELESS ASPIRATES

According to the Neogrammarian reconstruction of the Proto-Indo-European phonological system, the stop system was characterized by a four-way contrast of (1) plain (that is, unaspirated) voiceless stops, (2) aspirated voiceless stops, (3) plain (that is, unaspirated) voiced stops, and (4) aspirated voiced stops (cf. Brugmann 1904:52 and 1905:54), thus:

1	2	3	4	
p	ph	b	bh	(bilabial)
t	th	d	dh	(dental)
\hat{k}	$\hat{k}h$	\hat{g}	$\hat{g}h$	(palatal)
q	qh	g	gh	(pure velar)
q ^u	q ^u h	g ^u	g ^u h	(labiovelar)

The traditional voiceless aspirates (series 2 above) were originally posited by the Neogrammarians on the basis of the following correspondences from Indo-Iranian, Armenian, and Greek:

Sanskrit	Avestan	Iranian	Armenian	Greek
ph	f	f	p ^h	φ
th	θ	θ	t ^h	τ
kh	x	x	x	χ

In the remaining daughter languages, the traditional voiceless aspirates and plain (unaspirated) voiceless stops have the same treatment. In Slavic, there are a small number of examples in which **k^h* appears to become **x*. These examples are best explained as borrowings, most likely from Iranian (cf. Carlton 1991:95). In Armenian, the dental voiceless aspirate and plain voiceless dental stop have the same treatment (except after *r*), and the same appears to have also been the case in Greek, at least superficially.

Current thinking on the part of the vast majority of Indo-Europeanists is that the traditional voiceless aspirates are not to be reconstructed for the Indo-European parent language, being secondarily derived in the daughter languages, and, in a great many cases, it is clear that the reflexes found in the daughter languages can indeed be secondarily derived from earlier clusters of voiceless stop plus a following laryngeal (as first suggested in 1891 by Ferdinand de Saussure in a paper read before the Société de Linguistique de Paris [cf. de Saussure 1892 and 1922:603; Sturtevant 1942:83, §78]).

<i>*p^h</i>	>	Sanskrit <i>ph</i> , etc.
<i>*t^h</i>	>	Sanskrit <i>th</i> , etc.
<i>*k^h</i>	>	Sanskrit <i>kh</i> , etc.

As far as the alleged Greek reflex of the traditional dental voiceless aspirate is concerned, we are mostly dealing, in the available Greek examples, with forms in which an earlier laryngeal did not occur in the position directly following the dental stop. In the Sanskrit cognates, on the other hand, there was an earlier laryngeal in this position, and this has left a trace in the form of aspiration. A couple of examples will illustrate the difference between Greek and Sanskrit here:

1. Greek πλατύς ‘wide, broad, flat, level’ (< Pre-Greek **p^hlú-s*) versus Sanskrit *prthú-ḥ* ‘wide, broad’ (< Pre-Sanskrit **p^hlHú-s*). There simply was no laryngeal in the Pre-Greek ancestor of the Greek form, and, hence, there is no aspiration in Greek. Cf. Burrow 1973:72.
2. Greek (Doric) ἵσταμι ‘I stand’ (< Pre-Greek **si-steA-mi* **[si-staA-mi]*) versus Sanskrit *tīṣṭhati* ‘stands’ (< Pre-Sanskrit **(s)ti-stA-eti*). Here, Greek has full-grade of the root, and Sanskrit has zero-grade. Cf. Burrow 1973:72; Cowgill 1965:172; Sturtevant 1942:83, §78a.

There is, however, at least one example in which Greek θ corresponds to Sanskrit *th*, namely, the second singular perfect ending found, for instance, in Greek (F)οῖσ-θα ‘you know’, Sanskrit *vét-tha* ‘you know’ from earlier **-tAe* **[-tAa]*. Cf. Beekes

1969:181; Cowgill 1965:171—172 and 172—173; Sturtevant 1942:46, §42f, and 83, §78a.

Unfortunately, the laryngeal explanation does not account for the origin of all examples of voiceless aspirates in the daughter languages. There are several words of onomatopoeic origin that contain reflexes of earlier voiceless aspirates. Among these are (cf. Meillet 1984:80—81):

1. Sanskrit *kákhati* ‘laughs’; Armenian *xaxank^h* ‘guffaw’; Greek *καχάζω* ‘I laugh’; Old Church Slavic *xoxotъ* ‘guffaw’; Latin *cachinnō* ‘I laugh’.
2. Sanskrit *phūt-karoti* ‘puffs, blows’; Armenian *p^huk^h* ‘breath, puff’; Greek *φῦσα* (< *φῦτια) ‘a pair of bellows’; Lithuanian *pūsti* ‘to blow (air)’; Old Church Slavic **pyxati* ‘to blow’ (Old Czech *puchati* ‘to swell’; Polish *puchać* ‘to blow’; Slovenian *púhati* ‘to snort, to puff, to blow’).

A laryngeal explanation is to be ruled out here. Even though laryngeals cannot account for the presence of aspiration in these forms, the treatment is identical to that occurring in the examples where the reflexes of earlier voiceless aspirates are to be derived, at the Proto-Indo-European level, from clusters of voiceless stop plus a following laryngeal.

Since there is no evidence that the traditional voiceless aspirates were involved in marking distinctive contrasts at the Proto-Indo-European level and since these sounds can be mostly secondarily derived in the Indo-European daughter languages, there is little justification for reconstructing the traditional voiceless aspirates as a separate series in the Indo-European parent language. Cf. Adrados—Bernabé—Mendoza (1995—1998.I:197—202) for similar views on the voiceless aspirates.

4.4. THE TRADITIONAL PLAIN (UNASPIRATED) VOICELESS STOPS

On the basis of the reflexes found in Sanskrit, Greek, Latin, Baltic, and Slavic, The Neogrammarians (as well as August Schleicher before them) posited a series of plain (unaspirated) voiceless stops for series 1 at the Proto-Indo-European level. The evidence of Germanic, Celtic, and Armenian (along with the poorly-attested Phrygian), however, points to the presence of aspiration in this series in Proto-Indo-European. Two explanations were available to the Neogrammarians to account for the reflexes found in the various daughter languages: (A) loss of aspiration in Sanskrit, Greek, Latin, Baltic, and Slavic or (B) secondary development of aspiration in Germanic, Celtic, Armenian, and Phrygian. The Neogrammarians chose the second alternative (cf., for example, Meillet 1967:118—119 and 1984:91—92), and this view has been followed by most scholars until fairly recently. However, the first alternative should not be so quickly dismissed. Let us take a closer look at the developments found in the daughter languages.

In Germanic, the traditional plain voiceless stops are represented by voiceless fricatives, which are assumed to have developed from earlier voiceless aspirates (cf. Meillet 1984:91; Prokosch 1939:59—60; Streitberg 1963:105—113), thus:

Traditional Indo-European		Pre- Germanic		Proto- Germanic
p	>	p ^h	>	f
t	>	t ^h	>	þ
k̂	>	k̂ ^h	>	χ
q	>	q ^h	>	χ
q ^u	>	q ^{uh}	>	χw

It should be noted that the traditional plain voiceless stops were retained unchanged in Germanic when preceded by *s: *sp, *st, *sk > *sp, *st, *sk. *t was also retained unchanged when preceded by another voiceless stop (> fricative): *pt, *kt > *ft, *χt.

At a later date, medial (and final) *f, *þ, *χ, *χw, together with *s, became the voiced fricatives *b̥, *ð̥, *ð̥, *ð̥w, and *z respectively except between vowels when the accent fell on the contiguous preceding syllable (Verner's Law).

In Celtic, the traditional plain voiceless stops are assumed to have developed into voiceless aspirates (Lewis—Pedersen 1937:40—48), thus:

Traditional Indo-European		Proto- Celtic
p	>	p ^h
t	>	t ^h
k̂	>	k̂ ^h
q	>	q ^h
q ^u	>	q ^{uh}

The bilabial member was eventually lost (cf. Fortson 2004:275 and 2010:310; Lewis—Pedersen 1937:26—27; Morris Jones 1913:124—126), thus:

$$p^h > h > \emptyset$$

The Armenian developments can be explained by assuming that in Pre-Armenian Proto-Indo-European, series 1 was voiceless and aspirated, series 2 were clusters of voiceless stop plus a following laryngeal, series 3 was glottalized, and series 4 was voiced and aspirated (cf. Godel 1975:73—77; Meillet 1936:23—38):

Pre-Armenian					Armenian			
1	2	3	4		1	2	3	4
p ^h	pH	p'	b ^h	>	h (w, Ø)	p ^h	p	b (w)
t ^h	tH	t'	d ^h	>	t ^h	t ^h	t	d
k ^y h		k'y	g ^y h	>	s		c	j (z)
k ^h	kH	k'	g ^h	>	k ^h	x	k	g (j, ž)

In Armenian, some of the reflexes of series 1 merged with the reflexes of series 2. This happened in the case of the onomatopoeic terms discussed above, where, for example, earlier **p^h* and **k^h* became *p^h* and *x* respectively in Armenian as if from earlier **pH* and **kH* (this also occurred for all reflexes of series 1 in Sanskrit and Greek). In like manner, the aspiration of series 1 was preserved in Armenian after initial *s-*. **t^h* and **tH* have mostly merged in Armenian, though earlier **rt^h* became *rd*, while **rtH* became *rt^h* (cf. Meillet 1984:79).

Thus, the Germanic, Celtic, and Armenian developments can be explained by assuming that series 1 was voiceless and aspirated at the Proto-Indo-European level, that is to say, it is not necessary to posit earlier plain voiceless stops to account for the developments in these branches. Armenian is particularly important in that it has preserved the contrast between the older voiceless aspirates (series 1) and those that developed at a later date from former clusters of voiceless stop plus a following laryngeal (series 2).

In Sanskrit, Greek, Latin, Baltic, and Slavic, series 1 is represented by plain (unaspirated) voiceless stops. This, however, is not the original patterning but is, rather, an innovation. Here, Armenian provides the key to understanding the developments in these branches. On the basis of the Armenian (along with Germanic and Celtic) evidence, series 1 may be assumed to have originally been voiceless and aspirated. Furthermore, following the views of Gamkrelidze—Ivanov, it may be assumed that the aspiration was phonemically non-distinctive. There were thus two allophones, one with aspiration, and one without:

<i>p^h</i>	~	<i>p</i>
<i>t^h</i>	~	<i>t</i>
<i>k^h</i>	~	<i>k</i>
<i>k^{wh}</i>	~	<i>k^w</i>

In Sanskrit, the allophones of series 1 became phonemic — the aspirated allophones (**p^h*, **t^h*, **k^h*, **k^{wh}*) appeared in onomatopoeia and after initial *s-*, while the plain (unaspirated) allophones (**p*, **t*, **k*, **k^w*) appeared in all other environments. A few examples will illustrate the treatment of series 1 after *s-* in Sanskrit:

1. Sanskrit *sphuráti* ‘to dart, to bound, to rebound, to spring; to tremble, to throb, to quiver, to palpitate, to twitch (as nerves of the arm), to struggle’, *spharati* ‘to expand, to diffuse widely’: Armenian *sp^hrem* ‘to spread, to scatter’, *p^harat* ‘scattered’.
2. Sanskrit *sthágati* ‘to cover, to hide, to conceal’: Greek *στέγω* (and *τέγω*) ‘to cover closely (so as to keep water either out or in)’; Latin *tegō* ‘to cover’.
3. Sanskrit *skhálāmi* ‘to stumble, to stick fast, to go wrong’: Armenian *sxalim* ‘to go wrong, to stumble, to err, to sin’.

Emonds (1972:120) also assumes that the voiceless aspirates found in Indic, Greek, and Armenian have developed from series 1:

Finally, NIE [New Indo-European] allows us to view the development of the tense, voiceless aspirates in Indic and Greek in new light. I am not denying, however, that credible theories about their origin have been advanced in terms of TIE [Traditional Indo-European] (by the introduction of laryngeals, etc.). However, the presence of voiceless aspirates in NIE (the *ph*-series) suggests as one possibility an imperfect operation of LAX or Z2 in just those languages where some laxing took place, but in which all aspirated stops were not eliminated by CG. (By “imperfect operation”, I mean the existence of a dialect in which the rule failed to operate, the dialect later dying out after contributing a number of “exceptions” to the previously completed historical change.)

If such imperfect operation of Z2 took place, it would account for Indic and Greek *ph*'s that correspond to *p*'s in the central group and *ph*'s in Germanic... The fact that the *ph*'s and *x*'s that occur in Armenian (and Slavic) examples do not correspond to the regular development of NIE *ph* and *kh* in those languages supports the notion that “imperfect operation” of Z2 should be reinterpreted as reintroduction of words from a dialect that did not undergo Z2 (or other rules that affected Armenian and Slavic development of *ph* and *kh*).

Whereas Emonds sees the voiceless aspirated reflexes of series 1 (instead of the expected plain voiceless stops) that appear in Sanskrit, Greek, and Armenian as due to borrowings, I see them as the natural result of the phonemicization of the allophones of this series in each of these dialects themselves.

Correspondences:

Proto-Indo-European	*p ^h	*t ^h	*k ^y ^h	*k ^h	*k ^{wh}
Sanskrit	p	t	ś	k c	k c
Avestan	p	t	s	k č	k č
Albanian	p	t	th s	k q	k q s
Armenian	h w Ø	t ^h	s	k ^h	k ^h
Old Church Slavic	p	t	s	k č c	k č c
Lithuanian	p	t	š	k	k
Gothic	f b	þ d	h g	h g	hw h
Old Irish	Ø	t th	c ch	c ch	c ch
Oscan	p	t	c k	c k	p
Latin	p	t	c	c	qu c
Greek	π	τ	κ	κ	π τ κ
Tocharian	p	t c ts	k ɕ	k ɕ	ku k ɕ

We can now return to the question of the choices that were available to the Neogrammarians: (A) loss of aspiration in Sanskrit, Greek, Latin, Baltic, and Slavic or (B) secondary development of aspiration in Germanic, Celtic, and Armenian. In view of the theory proposed by Gamkrelidze—Ivanov, it is not so much a question of loss or retention as it is of the phonemicization and generalization of the

allophones of series 1 in the various daughter languages, though Germanic, Celtic, and Armenian come closer to the original patterning than do those daughter languages in which series 1 is represented by plain voiceless stops, since the aspirated allophones seem to have been primary at the Proto-Indo-European level. In this sense, Sanskrit, Greek, Latin, Baltic, and Slavic have innovated by generalizing the unaspirated allophones of series 1 (for details on the developments leading to loss of aspiration in these daughter languages, cf. Suzuki 1985a:285–294; see also Gamkrelidze—Ivanov 1984.I:35–80 and 1995.I:31–70).

4.5. THE TRADITIONAL VOICED ASPIRATES

According to the traditional reconstruction, series 4 is assumed to have been voiced and aspirated in Proto-Indo-European. The evidence for voicing is overwhelming (Indo-Iranian, Albanian, Armenian, Germanic, Celtic, Baltic, and Slavic), while that for aspiration is limited, coming from Indo-Aryan, Greek, Italic, and Armenian. Indeed, for this last group of languages, the assumption that this series was voiced and aspirated in their immediate ancestors is the only reasonable way to account for later developments in each of them (cf. Joseph—Wallace 1994). For the remaining daughter languages, however, it is not necessary to set up voiced aspirates in their immediate ancestors since later developments in these languages can be accounted for by setting up earlier plain (unaspirated) voiced stops. In view of these considerations, I assume that voiced aspirates appeared at a very late stage and that they arose only in the Disintegrating Indo-European dialects that developed into Indo-Iranian, Greek, Italic, and Armenian. Similar views are expressed by Kümmel 2012:304.

Gamkrelidze—Ivanov assume that series 4 was voiced and aspirated in Proto-Indo-European. They point out, however, that the feature of aspiration was phonemically irrelevant and that this series could appear either with or without aspiration depending upon the paradigmatic alternation of root morphemes. Specifically, the distributional patterning of the allophones was as follows (cf. Gamkrelidze 1976:404), though only in Indo-Iranian (Indo-Aryan) and Greek — Grassmann’s Law did not operate elsewhere (cf. Hamp 1989:210–211; Hamp states that Grassmann’s Law arose independently in Greek, on the one hand, and in Indic [but not Iranian], on the other, and points out that it did not occur in Armenian):

In particular, when phonemes of [series 4] co-occurred in a root, one of the units was realized as an aspirate, the other as a non-aspirate. Thus, e.g., a root morpheme */*b^heyd^h-/* would be manifested as [**beyd^h-*] or [**b^heyd-*] according to the paradigmatic alternations of the morpheme. Grassmann’s Law should be accordingly interpreted not as a deaspiration rule operating independently in Indo-Iranian and Greek, but as a rule of allophonic variations, still at the Proto-Indo-European level, of the phonemes of [series 4].

The same assumption could easily, and in a natural way, account for the phenomena described by Bartholomae’s Law. A morphemic sequence of */*b^hud^h-/* and */*-t^ho-/* would be realized as [**bud^h-*] + [**-t^ho-*] > [**bud^ht^ho-*] (in

accordance with the rule of non-cooccurrence in a sequence, either distant or in contact, of two aspirated allophones), this yielding Old Indian *buddha*, by progressive assimilation on the feature of voice.

In Italic, however, the development of series 4 differs from what is found in Sanskrit and Greek. As in Greek, the voiced aspirates were, at first, devoiced, resulting in voiceless aspirates. Then, these voiceless aspirates became voiceless fricatives, thus (cf. Sihler 1995:139—141; Buck 1933:118; Palmer 1954:227—230; Lindsay 1894:279—302; Clackson—Horrocks 2007:8—9 and 50—52):

b ^h	>	p ^h	>	φ	>	f
d ^h	>	t ^h	>	θ	>	f
g ^h	>	k ^h	>	χ	>	h
g ^{wh}	>	k ^{wh}	>	χ ^w	>	f

In Latin (but not Oscan and Umbrian), the voiceless fricatives were preserved initially, but, medially, they first developed into the corresponding voiced fricatives, which then yielded voiced stops (cf. Gamkrelidze—Ivanov 1984.I:64—65 and 1995.I:57—58).

Correspondences:

Proto-Indo-European	*b ^h	*d ^h	*g ^{yh}	*g ^h	*g ^{wh}
Sanskrit	bh	dh	h	gh h	gh h
Avestan	b	d	z	g γ j̥ z	g γ j̥ z
Albanian	b	d dh	z dh d	g gj	g gj z
Armenian	b w	d	j z	g j̥ ž	g j̥ ž
Old Church Slavic	b	d	z	g ž dz	g ž dz
Lithuanian	b	d	ž	g	g
Gothic	b	d	g	g	w
Old Irish	b	d	g	g	g
Oscan	f	f	h	h	f
Latin	f b	f d	h g f	h g f	f v gu
Greek	φ	θ	χ	χ	φ θ χ
Tocharian	p	t c ts	k ɕ	k ɕ	ku k ɕ

4.6. THE TRADITIONAL PLAIN (UNASPIRATED) VOICED STOPS

In an important study on the hierarchical correlation of elements in a phonological system, Gamkrelidze (1978:9—46) has shown that stops and fricatives arrange themselves into definite hierarchical relationships based upon their relative frequency of occurrence. The more common, more usual, more frequent a sound,

the *less* marked it is in relationship to other sounds, which are less common, less usual, less frequent, that is, *more* marked. The various hierarchies established by Gamkrelidze were arrived at by investigating the frequency distribution of sounds in a great number of languages. These hierarchical relationships are found to be characteristic of language in general and not language specific, the underlying reasons being phonetic — the distinctive features making up the unmarked sounds simply combine with each other into simultaneous bundles more easily than do the distinctive features making up marked sounds. Finally, Gamkrelidze notes that, when there are gaps or empty slots in a system, they invariably occur at the point of articulation of the most highly marked member in the hierarchy.

Following are three of the hierarchies established by Gamkrelidze:

Least Marked				Most Marked			
(1)	/b/	→	/p/	→	/p ^h /	→	/p'/ (bilabial)
(2)	/k'/	→	/k ^h /	→	/k/	→	/g/ (velar)
(3)	/q'/	→	/q ^h /	→	/q/	→	/g/ (postvelar)

The arrows indicate the direction of greater markedness. In the first hierarchy, /b/ is the most common, most usual, most frequent, hence, least marked member; /p/ is less common than /b/ but more common than /p^h/ and /p'/; /p^h/ is less common than /b/ and /p/ but more common than /p'/; finally, /p'/ is the least common, hence, most marked member. Since gaps occur at the position of the mostly highly marked member, if there is a gap in this series, it will be /p'/ that will be missing. In the second hierarchy, on the other hand, the markedness relationship is reversed: /k'/ is the most common, most usual, most frequent, hence, least marked member; /k^h/ is less common than /k'/ but more common than /k/ and /g/; /k/ is less common than /k^h/ and /k'/ but more common than /g/; finally, /g/ is the least common, hence, most marked member. Since gaps occur at the position of the mostly highly marked member, if there is a gap in this series, it will be /g/ that will be missing here. As can be seen, the postvelar series (number 3 above) has the same markedness correlation as the velar series.

Gamkrelidze's findings have important implications for Proto-Indo-European. As pointed out in the standard handbooks, the phoneme traditionally reconstructed as **b* was a marginal sound of extremely limited occurrence, if it even existed at all. As we have seen from the typological evidence discussed above, such a frequency distribution is not at all characteristic of /b/. Rather, the frequency distribution points to the original *non-voiced* character of this sound in Proto-Indo-European.

Further investigation reveals other anomalies in the whole series traditionally reconstructed as plain voiced stops (series 3 in the chart of the Neogrammarian reconstruction of the Proto-Indo-European stop system given above [§4.2]). First, the frequency distribution of all of the traditional plain voiced stops (**b*, **d*, **g*, **g^h*) points to the non-voiced character of the entire series when viewed from a typological perspective. Next, the plain voiced stops are rarely found in inflectional endings and pronouns. Finally, two plain voiced stops could not cooccur in a root.

The frequency distribution of these sounds plus their limited role in the system in general makes the traditional reconstruction highly suspect from a typological point of view.

These are the observations that led Gamkrelidze—Ivanov, as well as Hopper, to reinterpret the traditional plain voiced stops as glottalics (ejectives). Not only does such a reinterpretation easily account for the frequency distribution of these sounds, it also explains the fact that they were used only very infrequently in inflectional affixes and pronouns, since this type of patterning is characteristic of the way ejectives behave in natural languages having such sounds. Finally, the root structure constraint against the cooccurrence of two ejectives in a root is found in a number of languages with ejectives (cf. Hopper 1973:160).

There is no uniform treatment of the ejectives in the Indo-European daughter languages. In some cases, plain voiceless stops are found, while in others, there are plain voiced stops. To understand the types of changes ejectives can undergo, the developments found in the Afrasian daughter languages may be looked at. The following developments are attested (using the dentals for purposes of illustration):

1. Deglottalization: $*t' > t$ (Neo-Aramaic dialect of Tūr-ʿAbdīn and Ancient Egyptian).
2. Voicing: $*t' > *d' > *d > d$ (initially in the Southern Cushitic languages Iraqw, Burunge, Alagwa, and Kʿwadza and medially in the East Chadic language Tumak).
3. Retention: $*t' > t'$ (modern South Arabian languages and the Semitic languages of Ethiopia).
4. Pharyngealization: $*t' > t^s, d^s$ (Arabic and the Berber languages).
5. Voicing to implosive: $*t' > d'$ (Proto-Chadic and Proto-East Cushitic).
6. Voicing to retroflex: $*t' > *d' > ɖ$ (Somali).

According to Colarusso (1975:82—83 and 1981:479—480), in some dialects of the Northwest Caucasian language Abaza, plain voiced stops correspond to ejectives in Standard Abaza. Colarusso suggests that the ejectives may have passed through the following progression: glottalized > creaky voice > full voice (see also Gamkrelidze—Ivanov 1973:154). In support of this suggestion, Colarusso notes that the ejective series has creaky voicing in Kabardian. For more information on the major phonological processes involving ejectives, cf. Fallon 2002. Fallon devotes a whole chapter to a discussion of ejective voicing (Chapter 6). Here, he also provides empirical support for the Glottalic Theory of Proto-Indo-European consonantism.

The Germanic, Armenian, Tocharian, and Anatolian developments are straightforward: deglottalization. In Baltic, Slavic, Celtic, and Albanian, the glottalics merged with the traditional voiced aspirates. In Indo-Iranian, Greek, and Italic, however, the glottalics became plain voiced stops but did not merge with the voiced aspirates (that is, series 3 and 4 remained distinct in these branches). The developments in the individual daughter languages are discussed in detail in Chapter 5 of this book.

Correspondences:

Proto-Indo-European	*p'	*t'	*k'y	*k'	*k'w
Sanskrit	b	d	d	g j	g j
Avestan	b	d	z	g γ ĵ z	g γ ĵ z
Albanian	b	d dh	z dh d	g gj	g gj z
Armenian	p	t	c	k	k
Old Church Slavic	b	d	z	g ž dz	g ž dz
Lithuanian	b	d	ž	g	g
Gothic	p	t	k	k	q k
Old Irish	b	d	g	g	b g
Oscan	b	d	g	g	b
Latin	b	d	g	g	v gu g
Greek	β	δ	γ	γ	β δ γ
Tocharian	p	t c ts	k ɕ	k ɕ	ku k ɕ

As noted above, the sound traditionally reconstructed as **b* may have been non-existent in Proto-Indo-European. Under the revised interpretation, this would have been a bilabial ejective **p'*. Had this sound existed in the Indo-European parent language, it would have developed into *b* in those daughter languages that have changed the ejectives into voiced stops. In the case of Sanskrit (3rd sg.) *pībati* ‘drinks’, Latin *bibit* ‘drinks’, Old Irish *ibid* ‘drinks’, from Proto-Indo-European **p^{hi}-p^{h2}-et^{hi}* (traditional **pi-p₂-eti*) (cf. Gamkrelidze—Ivanov 1995.I:856), there is direct evidence for such a development. While it is common for languages having ejectives to have a gap at the point of articulation of the bilabial member, no known natural language with a voicing contrast in stops has a gap at the point of articulation of the voiced bilabial. Since the normal development of the Disintegrating Indo-European phonological system in Greek, Italic, and Indo-Iranian would have created such a gap, a voiced bilabial was introduced in these branches by various means. In Greek, the glottalized labiovelar **k'w* developed into *b* (written β) under certain conditions. This is the regular development in Oscan and Umbrian. In Latin, *b* arose from medial **f* and from earlier **θ* when before or after *r*, before *l*, or after *u*. In Indo-Aryan, *b* arose from *bh* through the change described by Grassmann’s Law. Finally, the gap was also filled in all three branches through borrowings.

Under the traditional reconstruction, the Germanic and Armenian “sound shifts” are anomalous (for discussion, cf. Meillet 1967:116—124 and 1984:89—96). Nothing quite the same exists in any of the other daughter languages (except the poorly-attested Phrygian). There is, of course, Tocharian, but the changes there are different in that the opposition between the traditional plain voiceless, plain voiced, and voiced aspirated stops is completely eliminated (cf. Adams 1988:36—43; Fortson 2004:353—354 and 2010:402—404; Krause—Thomas 1960:64; Van Windekens 1976—1982.I:76), while in Germanic and Armenian, the opposition

remains intact. The Germanic and Armenian developments cannot have been due to a common innovation since there is no indication that these two branches were ever in contact. Under the new reconstruction proposed by Gamkrelidze, Hopper, and Ivanov, these branches are to be seen as relic areas. In fact, they provide a key piece of evidence in support of the Glottalic Theory.

4.7. THE GUTTURALS (TECTALS)

Pre-divisional Proto-Indo-European may be assumed to have had two types of gutturals: (A) plain velars and (B) labiovelars. The latter type was characterized by a secondary articulation of labialization that served to maximize the distinction between this series and the plain velars.

It has often been assumed that Proto-Indo-European had three guttural series: (A) palatals (palatovelars), (B) velars, and (C) labiovelars. This theory, however, needs to be reconsidered. In the first place, such a theory would force us to assume that there was a common innovation in the Proto-Indo-European antecedent of the centum languages in which the palatals merged with the velars. There is absolutely no evidence whatsoever that such a merger has taken place. Furthermore, the palatals can be shown to have become phonemic only in the Proto-Indo-European antecedent of the satəm languages (cf. Lehmann 1952:8; Meillet 1964:94—95). Finally, it is not necessary to set up a third series to account for cases in which velars in the satəm languages correspond to velars in the centum languages, since these examples can be accounted for equally well by assuming just two series (cf. Burrow 1973:76—77). This subject is discussed with great lucidity by Meillet (1894 and 1964:93—94), who notes that the cases in which velars in the centum languages correspond to velars in the satəm languages occur in certain specific environments: (A) before **a*; (B) before **r*; (C) after **s*; and (D) at the end of roots, especially after **u*. Meillet sums up his discussion of the gutturals by noting that the velars were simply preserved in certain positions and palatalized in others.

In his cross-linguistic study of palatalization, Bhat (1978:60—67) discusses palatalizing environments. He notes:

The most prominent environment that could induce palatalization in a consonant is a following front vowel (especially the high- and mid-front unrounded vowels *i* and *e*), and a following palatal semivowel (*yod*). These are reported to be effective in palatalizing a preceding consonant in almost all of the languages examined by us. A following *yod* is more effective on apicals, whereas a following vowel, especially stressed, is more effective on velars...

Velars may also be palatalized by a following low front vowel, as for example, in ENGLISH (before *æ*, *æ̃*) and in FRENCH (dialectally before *æ*...). In RUSSIAN, all consonants were palatalized before *æ*... Similarly, the apicals may be palatalized by a following high back vowel or semivowel as seen in PAPAGO, TEPEHUAN, BASQUE, and others...

There are only a limited number of instances in which a front vowel (or high back vowel) is reported to have palatalized a following consonant.

That is to say that, while the palatalization of *following* consonants by front vowels (or high back vowels) does in fact occur (Bhat discusses several examples), it is a far less frequently attested phenomenon than the palatalization of *preceding* consonants. Bhat (1978:66—67) also discusses the fact that certain environments may block palatalization:

- a. We have noted only two environments that could be specified as capable of blocking palatalization. They are (A) an apical trill or tap, and (2) a retroflex consonant. Both these could prevent palatalization of a velar consonant, that is, they could block the tongue fronting tendency of a given environment...
- b. However, in the case of apical sibilants, *r* appears to induce palatalization (rising)...
- c. There are a few additional environments that appear to block palatalization, as for example, a following uvular fricative in EASTERN ARMENIAN..., a following *t* or *s* in AKAN..., or the occurrence of initial position in AMHARIC...

Palatalization of velars is an extremely common phenomenon and can be observed in the historical development of many languages. We can take the developments in the Romance languages as an example. Classical Latin had the following gutturals:

Velars:	c, k /k/	g /g/
Labiovelars:	qu /k ^w /	gu /g ^w /

Somewhere around the beginning of the third century CE, /k/ and /g/ were palatalized to /k^y/ and /g^y/ respectively before, *a*, *ae*, *ē*, *i*, and *ī* (cf. Elcock 1960:53—55). /k^y/ and /g^y/ then became /t^y/ and /d^y/ respectively and then /t^s^y/ and /d^z^y/. /t^s^y/ developed into French /s/, Spanish (Castilian) /θ/ (dialectal /s/), Portuguese /s/, Italian /tʃ/, and Romanian /tʃ/. It should be noted that Sardinian is a relic area in which /k/ and /g/ were not palatalized. /d^z^y/ developed into French /ʒ/, Spanish /j/, Portuguese /ʒ/, Italian /dʒ/, and Romanian /dʒ/.

There has also been a general delabialization of /k^w/ and /g^w/ in the Romance languages, especially before front vowels. For details about the development of the gutturals in the Romance languages, cf. Elcock 1960:52—55; Mendeloff 1969:16—31; Posner 1996:110—115; Harris—Vincent (eds.) 1988:38—40 and 1997:38—40.

The comparative evidence allows us to reconstruct the following phonemic gutturals for Pre-divisional Proto-Indo-European:

Plain velars:	k ^h	k'	g ^h
Labiovelars:	k ^{wh}	k' ^w	g ^{wh}

The Anatolian data — especially the Hittite data — are particularly important here. Hittite shows no trace of either palatalization of the velars or of delabialization of the labiovelars (cf. Kronasser 1956:64—68 and Sturtevant 1951:55—59, §§78—81, for examples). There is some evidence from the Luwian branch, however, that the velars may have had non-phonemic palatalized allophones in certain environments

in Proto-Anatolian (cf. Melchert 1994a:251—252 [for Luwian] and 303 [for Lycian]). That these allophones were not phonemic in Proto-Anatolian is shown by their reflexes in Hittite as opposed to Luwian. In Hittite, the gutturals have the same treatment regardless of their environment. The developments found in the Luwian branch, then, may be regarded as an innovation specific to that branch and not representative of the Proto-Anatolian situation (cf. Melchert 2017:176). On this basis, we can say with some confidence that Pre-Anatolian Proto-Indo-European had only two phonemic guttural series and that the phonemicization of a separate palatal series and the delabialization of the labiovelars must have taken place after the separation of the Anatolian languages from the main speech community.

The gutturals probably developed as follows: At an early date, possibly even before the separation of the Anatolian languages from the main speech community, the velars developed non-phonemic palatalized allophones when contiguous with front vowels as well as before **y*. At a later date, these allophones were analogically extended to the environment of apophonic **o* as well (and perhaps in some cases even to **a*). In the Disintegrating Indo-European antecedent of the satəm languages, the labiovelars were — perhaps only partially at first — delabialized. The newly delabialized labiovelars merged with the unpalatalized allophones of the plain velars. This change brought about the phonemicization of the palatalized allophones of the plain velars since both palatalized and unpalatalized velars (the latter from earlier labiovelars) were now found in the vicinity of front vowels, apophonic **o*, and **y*. Thus, the Disintegrating Indo-European antecedent of the satəm languages had the following gutturals:

Palatals (palatovelars):	ky ^h	k'y	g ^y ^h
Plain velars:	k ^h	k'	g ^h
Labiovelars:	k ^{wh}	k'w	g ^{wh}

These changes probably began in the Disintegrating Indo-European antecedent of Indo-Iranian and then spread outward to Pre-Baltic, Pre-Slavic, Pre-Armenian, and Pre-Albanian (cf. Szemerényi 1972a:129). The fact that the various satəm languages sometimes show a different treatment for the labiovelars as opposed to the plain velars seems to indicate that the delabialization of the labiovelars may not have been carried through to completion until after the emergence of the individual satəm daughter languages (cf. Szemerényi 1972a:128). Since the labiovelars did not become delabialized in the Disintegrating Indo-European antecedents of the centum languages, there was no impetus for the phonemicization of the palatals in these languages.

Even though the Guttural Theory outlined above cannot explain every example, it has, nevertheless, the advantage of being able to account for the greatest number of developments. Moreover, it is fully compatible with everything we know about sound change and has historically-attested parallels in natural languages. Cf. Pulju 1995:22—43, Meillet 1964:91—95 and 1967:68—73, Kurylowicz 1971, Georgiev 1966:22—34 and 1981:41—62, Lehmann 1952:100—102 and 1993:100—101,

Adrados—Bernabé—Mendoza 1995—1998.I:188—193 and 2010.I:122—128, and Woodhouse 1998 for essentially the same conclusions.

Postvelars (or uvulars) have also been posited for Proto-Indo-European by several prominent scholars, such as, for example, Normier (1977:174—175) and Gamkrelidze—Ivanov (1984.I:129—134 and 1995.I:111—114). In my opinion, these theories are not without merit. However, since I do not at present believe that there were more than three guttural series — palatovelars, plain velars and labiovelars — at any time in the prehistory of Proto-Indo-European that can be recovered by a comparison of the extant daughter languages, the postvelars, if they ever existed, must have been lost at some time well before the earliest period of Proto-Indo-European proper.

4.8. RESONANTS

Traditionally, the semivowels, liquids, and nasals are included in this class (cf. Watkins 1998:44—46). However, only the liquids and nasals will be dealt with here. The semivowels **y* (**ĵ*) and **w* (**ǵ*) will be discussed below in the section dealing with the vowels and diphthongs.

According to Brugmann (1904:52 and 109—138), the following resonants are to be reconstructed for Proto-Indo-European:

Non-syllabic:	l	r	m	n	ñ	ṛ
Syllabic:	ḷ	ṛ̥	m̥	n̥	ñ̥	ṛ̥
	ḷ̥	ṛ̥	m̥	n̥	ñ̥	ṛ̥

The resonants could function as syllabics or non-syllabics depending upon their environment. They were non-syllabic (1) when between vowels or initially before vowels, (2) when preceded by a vowel and followed by a consonant, and (3) when preceded by a consonant and followed by a vowel.

The syllabic allophones of the resonants arose at an early stage of development within the Proto-Indo-European parent language when the stress-conditioned loss of former contiguous vowels left them between two non-syllabics:

$$CVRCV̇ > CəRCV̇ > CṛCV̇$$

Finally, it should be mentioned that the long syllabic resonants reconstructed by the Neogrammarians are now universally thought to have been clusters of short syllabic resonant plus laryngeal: ṛ̥H.

For a fuller discussion of the patterning of the resonants, cf. Adrados 1975.I: 263—289; Beekes 1995:135—137; Clackson 2007:34—36; Gamkrelidze—Ivanov 1995.I:167—170; Edgerton 1943 and 1962; Fortson 2010:60—62; Horowitz 1974; Lehmann 1952:10—14; Meillet 1964:105—126; Szemerényi 1996:105—110.

Correspondences:

Proto-Indo-European	*m	*n	*l	*r
Sanskrit	m	n	r l	r
Avestan	m	n	r	r
Albanian	m	n	l	r
Armenian	m	n	l ɫ	r ɾ
Old Church Slavic	m	n	l	r
Lithuanian	m	n	l	r
Gothic	m -n	n	l	r
Old Irish	m	n	l	r
Oscan	m	n	l	r
Latin	m	n	l	r
Greek	μ -ν	ν	λ	ρ
Tocharian	m ɱ	n ñ ɱ	l ly	r

4.9. THE VOWELS AND DIPHTHONGS

The first attempt to reconstruct the Proto-Indo-European vowel system was made by August Schleicher. Schleicher's system was as follows (1876:11):

	Original Vowel	First Increment	Second Increment
a-grade	a	a + a = aa	a + aa = āa
i-grade	i	a + i = ai	a + ai = āi
u-grade	u	a + u = au	a + au = āu

Even though Schleicher's system, which was modeled after that of Old Indic, was able to account for many of the developments found in the daughter languages, there remained many unsolved problems, and his system did not endure the onslaughts of a series of brilliant discoveries made in the seventies of the nineteenth century by a younger generation of scholars, the so-called "Neogrammarians" (Junggrammatiker).

Perhaps the most important discovery of the Neogrammarian period was the "Law of Palatals" (cf. Collinge 1985:133—142), according to which an original **k*, for example, developed into *c* in Old Indic under the influence of a following **ē*, **ī*, or **y*. This discovery firmly established the primacy of the vowel systems found in the European daughter languages and proved that the Indo-Iranian system had resulted from an innovation in which original **ē*, **ō*, and **ā* had merged into **ā*. Also important was the demonstration by the Neogrammarians that the Indo-European parent language had syllabic liquids and nasals.

According to the Neogrammarians (cf. Hübschmann 1885; Brugmann 1904:52 and 66—99), Proto-Indo-European had the following vowel system:

Monophthongs:	e	o	a	i	u	ə		
	ē	ō	ā	ī	ū			
Diphthongs:	eĭ	oĭ	aĭ	əĭ	eu	ou	au	əu
	ēĭ	ōĭ	āĭ		ēu	ōu	āu	
Semivowels:	ĭ	ṽ	(j ?)					

Brugmann (1904:52) also reconstructs the following syllabic liquids and nasals:

l̥	r̥	m̥	ɳ̥	ŋ̥	ʁ̥
l̄	r̄	m̄	ɳ̄	ŋ̄	ʁ̄

Throughout the greater part of the twentieth century, the Neogrammarian view was steadily attacked. It was dealt its first major blow in 1927 with Kuryłowicz's demonstration that one of de Saussure's "coefficients sonantiques" was preserved in Hittite. In one fell swoop, the so-called "original" long vowels (as well as the long syllabic liquids and nasals) were eliminated as was **a*, which was taken to result from **e* when next to an "a-coloring" laryngeal. The next to go were the diphthongs, which were reanalyzed as clusters of vowel plus non-syllabic resonant and non-syllabic resonant plus vowel (cf. Lehmann 1952:10—14). The independent status of **i* and **u* had early been questioned by Meillet (1964:118—122), who regarded them as the syllabic forms of **y* (**ĭ*) and **w* (**ṽ*), respectively. Finally, a strict adherence to Hirt's Ablaut and accentuation theories made it possible to eliminate apophonic **o*, which was taken to result from an earlier **e* when the accent was shifted from the **e* to another syllable (cf. Burrow 1973:112—113; Hirt 1921:173—179; Lehmann 1952:109—110). By applying all of these theories, it became possible to reduce the Proto-Indo-European vowel system to a single member: **e*.

It should be made clear that this extreme view was never universally accepted. In fact, it was vigorously attacked by several scholars, including Roman Jakobson (1971[1957]:528), who soberly noted: "The one-vowel picture of Proto-Indo-European finds no support in the recorded languages of the world." See also Trubetzkoy 1969:96.

In 1967, Szemerényi, relying heavily on typological data to support his arguments, reinstated all of the vowels reconstructed by the Neogrammarians:

e	o	a	i	u	ə
ē	ō	ā	ī	ū	

Szemerényi (1967:97, fn. 91), however, ignores the diphthongs, "whose phonemic status is disputed". I fully support Szemerényi's views on the vowels and would

reconstruct an identical system for the Proto-Indo-European antecedent of the non-Anatolian daughter languages (cf. Bomhard 1979a:72).

Proto-Indo-European, as also, for example, Proto-Kartvelian, Northwest Caucasian, and Proto-Semitic, was characterized by an interchange of vocalic elements that could occur in any syllable. This interchange, which is commonly called “Ablaut” or “vowel gradation”, was partially correlated with the position of the accent and with distinctions between grammatical relationships (cf. Burrow 1973:108—117). The fundamental vowel was **e*, which could be changed to **o* under certain conditions. Under other conditions, however, the vowel could either be reduced or even lost altogether. Finally, the position of the fundamental vowel could change — this type of alternation is known as “Schwebeablaut” (for details, cf. Anttila 1969). An example here would be **k'en-u* ‘knee’ (cf. Hittite *gi-e-nu* ‘knee’; Latin *genu* ‘knee’), as opposed to **k'n-ew-* also ‘knee’ (cf. Gothic *kniu* ‘knee’; Old Icelandic *kné* ‘knee’; Old English *cnēo* ‘knee’; Old Frisian *knīu*, *knē*, *knī* ‘knee’; Old Saxon *knio* ‘knee’; Old High German *kneo*, *knio* ‘knee’).

Several gradation series are traditionally distinguished, and the general scheme may be represented as follows (cf. Beekes 1995:164—167; Brugmann 1904:138—150; Buck 1933:106—117; Clackson 2007:71—75; Fortson 2004:73—76 and 2010:79—83; Hirt 1900 and 1921; Hübschmann 1885:71—180; Kurylowicz 1956 and 1968:199—333; Meier-Brügger 2003:144—152; Meillet 1964:153—168; Sihler 1995:108—135; Szemerényi 1996:83—93; Watkins 1998:51—53):

I. Short Vowel Gradation:

	Lengthened-Grade	Normal-Grade	Reduced-Grade	Zero-Grade
A.	$\bar{e} \sim \bar{o}$	$e \sim o$	ə	\emptyset
B.	$\bar{e}y \sim \bar{o}y$	$ey \sim oy$	$i, \text{əyV} (> iyV)$	y
	$\bar{e}w \sim \bar{o}w$	$ew \sim ow$	$u, \text{əwV} (> uwV)$	w
	$\bar{e}m \sim \bar{o}m$	$em \sim om$	$\text{ŋ}, \text{əmV} (\text{ŋmV})$	m
	$\bar{e}n \sim \bar{o}n$	$en \sim on$	$\text{ŋ}, \text{ənV} (\text{ŋnV})$	n
	$\bar{e}l \sim \bar{o}l$	$el \sim ol$	$\text{ɫ}, \text{əlV} (\text{ɫV})$	l
	$\bar{e}r \sim \bar{o}r$	$er \sim or$	$\text{r}, \text{ərV} (\text{rV})$	r
C.		$a \sim o$	ə	\emptyset
D.		ay	$i, \text{əyV} (> iyV)$	y
		aw	$u, \text{əwV} (> uwV)$	w

II. Long Vowel Gradation:

E.	$\bar{e} \sim \bar{o}$	h
F.	\bar{o}	h
G.	$\bar{a} \sim \bar{o}$	h

The most common vowel was **e*, and the most common gradation pattern was the **e* ~ **o* contrast. The vowel **a* was of relatively low statistical frequency and, at

least according to Meillet (1964:154), did not take part in the regular gradation patterning. It should be pointed out, however, that several rare examples of an **a* ~ **o* contrast are attested in the non-Anatolian daughter languages, one probable example being:

Greek ἄγω ‘to lead, to carry, to convey, to bring’
ὄγμος ‘any straight line: a furrow, path, etc.’

Colarusso (1981:499) has astutely observed: “...the PIE vowel system **e* ~ **o* is typologically utterly bizarre. Even adding **a* to this system does not change this fact.” Perhaps the most typologically unusual thing about the Proto-Indo-European vowel system as traditionally reconstructed is indeed the great importance of the **e* ~ **o* Ablaut and the concomitant marginality of **a*. Adding laryngeals only makes the system even more unusual since **a* then becomes mostly (but not in every case!) a positional variant of **e*. Rather, we would expect the relationship to be reversed. All languages surveyed by Crothers (1978:93—152) have the vowel /a/, and this vowel is consistently characterized by a high frequency of occurrence (cf., for example, the frequency counts given in Greenberg 1966a:18—19). Moreover, in the Kartvelian languages, Northwest Caucasian languages, and Semitic languages, which also exhibit Ablaut either as an active process or as a relic of an earlier, fully functioning Ablaut process, the vowel /a/ is an integral part of the Ablaut system (cf. Gamkrelidze 1966:80—81 for Kartvelian; Colarusso 1981:499—502 for Northwest Caucasian; and Kuryłowicz 1962 for Semitic). Clearly, if typological evidence is to have any meaning, there is something wrong with the traditional reconstruction of the Proto-Indo-European vowel system. Yet, if the Comparative Method is to have any validity, there must be some truth to that reconstruction.

This seeming conflict can be resolved quite easily, I believe. We can consider the traditional reconstruction to be mainly correct, but only for that form of Proto-Indo-European spoken immediately prior to the emergence of the non-Anatolian daughter languages, that is, what I call “Disintegrating Indo-European”. The vowel system of this form of Proto-Indo-European is by no means ancient and is the end product of a long, complicated evolution.

The earliest Proto-Indo-European vowel system may have been as follows:

Vowels: i (~ e) u (~ o)
 e o
 (ə ~) a

Also the sequences: iy (~ ey) uy (~ oy) ey oy (əy ~) ay
 iw (~ ew) uw (~ ow) ew ow (əw ~) aw

I follow Pulleyblank (1965a:86—101) in his reinterpretation of the **e* ~ **o* Ablaut of traditional Proto-Indo-European as an **ə* ~ **a* Ablaut. Pulleyblank mentions that a similar Ablaut pattern exists in Kabardian. Colarusso (1981:499—501) proposes a

similar interpretation and also discusses possible typological parallels with the Northwest Caucasian languages.

According to Hirt (1921:172—199) and those who follow his theories (Burrow and Lehmann, for example), the oldest Ablaut alternation was the full-grade ~ zero-grade contrast. This alternation is assumed to have arisen at a time when the Proto-Indo-European phonological system was characterized by a strong stress accent. This accent caused the weakening and loss of the vowels of unstressed syllables. This period may be called the Phonemic Stress Stage of Proto-Indo-European (cf. Lehmann 1952:111—112). At a later date, stress became phonemically non-distinctive, and Proto-Indo-European was characterized by an accent system based on pitch. This period may be called the Phonemic Pitch Stage of Proto-Indo-European (cf. Lehmann 1952:109—110). It was supposedly during this period that the **e* ~ **o* contrast came into being. **e* is assumed to have been changed to **o* when the accent was shifted from the **e* to another syllable. These theories find support in the fact that the position of the accent is partially correlated with Ablaut patterning in both Greek and Old Indic. Counter-examples are usually explained as due to analogical developments or as later forms that came into being after the accent lost its ability to influence the vowels (cf. Burrow 1973:112).

Though Kuryłowicz originally adhered to Hirt's theories as well, he later (1956:36—96 and 1964b:52) tried to show that the **e* ~ **o* contrast existed prior to the development of the full-grade ~ zero-grade contrast. Kuryłowicz argues that the numerous counter-examples with accented **o* indicate that qualitative Ablaut was a morphological device in its own right and only superficially connected with the positioning of the accent. Moreover, he notes that, while vowel weakening and loss are closely tied to the accent, a change in vowel quality is primarily due to the environment — in other words, there is no cause-and-effect relationship between qualitative Ablaut and accentuation. These are convincing arguments and are the primary basis for my belief that qualitative Ablaut existed at the earliest reconstructable period of Proto-Indo-European. Moreover, Kuryłowicz's views find support in the data from the other Nostratic languages (note here especially Greenberg 1990a:125: "... the Indo-European *e:o* (i.e. *e:a*) Ablaut is very old and is part of a larger system of alternations which has correspondences in a number of other branches of Eurasiatic").

The development of **ə* into **e*, which must have occurred fairly early since it is already found in Hittite, is relatively easy to explain: **e* was the normal allophone of **ə* under stress. John Colarusso (personal correspondence) has informed me of a similar development in Ubykh and Circassian, where accented /ə/ > [e].

We may assume that **a* had a rounded allophone in certain phonetic environments (cf. Colarusso 1981:500), perhaps next to labiovelars as well as when next to **w*. In late Disintegrating Indo-European, these allophones were reapportioned, and apophonic **a* was rephonemicized as **o*. That this is an extremely late development is shown (A) by the fact that it had not yet occurred in the Anatolian languages and (B) by the widespread tendency of **a* and **o* to have identical reflexes in several of the non-Anatolian daughter languages. No doubt, the phonemicization of apophonic **o* was facilitated by the presence of non-apophonic

**o* in the system. This does not mean, however, that **a* was totally eliminated. In fact, the vowel **a* must be reconstructed as an independent phoneme distinct from **o* for Disintegrating Indo-European (cf. Szemerényi 1964a:2—9, 1967:83—84, and 1996:135—136). Disintegrating Indo-European **a* had several sources: First, it arose from the lowering and coloring of **e* (< **ǵ*) when next to *a*-coloring laryngeals. Next, it was found in a small number of relic forms that somehow escaped conversion to the regular **e* ~ **o* Ablaut patterning. Finally, it was retained in loanwords from other languages. (Cf. Kümmel 2012:306—310 for a somewhat different approach; see also Hovers 2021.)

The origin of the Proto-Indo-European long vowels has always been enigmatic. Many theories have been proposed, none of which has been completely convincing. One thing seems certain, though: the long vowels developed over a long period of time and had several causes.

The evidence for the existence of original long vowels is meager at best, and there seems little reason to suppose that long vowels existed in Pre-Proto-Indo-European. Rather, long vowels may be assumed to have arisen solely in Proto-Indo-European proper. First, long vowels arose from the contraction of two short vowels. Though probably not frequent in the earlier stages of development, contraction became increasingly important, especially in the later stages of the Indo-European parent language and the earlier stages of the non-Anatolian daughter languages, when the upheavals caused by the loss of whole classes of phonemes — such as the laryngeals, for example — often brought two or more previously separated vowels into contact. Long vowels also arose from the monophthongization of diphthongs and from the lengthening of short vowels to compensate for the loss of a following phoneme. The most important cause of compensatory lengthening was the loss of preconsantal laryngeals after short vowels in Disintegrating Indo-European. Finally, long vowels arose by means of the analogical process known as “vr̥ddhi” (cf. Burrow 1973:199—291; Kuryłowicz 1968:298—307).

In reconstructing the Proto-Indo-European phonological system, the vowels **i* and **u* are usually treated as allophones of **y* (**ĭ*) and **w* (**u*) respectively and are classed with the resonants **m*/**ṃ*, **n*/**ṇ*, **l*/**ḷ*, **r*/**ṛ* (cf. Lehmann 1952:10—14; Meillet 1964:105—126). However, as pointed out by Szemerényi (1967:82), the patterning of these sounds is not entirely parallel. For the earliest form of Proto-Indo-European, **i* and **u* should, in fact, be considered as independent phonemic entities and should be classed with the vowels rather than the resonants. The glides **y* and **w* should also be considered as independent phonemes during the early stages of development within Proto-Indo-European. At a later date, however, after various sound changes had taken place, the patterning had been modified in such a way that **i* ~ **y* and **u* ~ **w* were mostly in complementary distribution. Cf. Schmitt-Brandt 1973:79—91; Gamkrelidze—Ivanov 1984.I:160—161 and 1995.I:137—138; Szemerényi 1996:136. As further noted by Gamkrelidze—Ivanov (1984.I:164—165 and 1995.I:141—142), the changes alluded to above brought about a major restructuring of the functional role of the high vowels **i* and **u* (this version differs slightly from the English translation made by Johanna Nichols — here, the term “resonant” has been substituted for “sonant” [Russian *соант*]):

These phonetic and phonemic changes inevitably led to a split of the consonants into consonants proper and resonants (*j, y, r, l, m, n*). The resonants had syllabic and non-syllabic allophones depending on context, while the consonants proper had only non-syllabic allophones (and the vowels were exclusively syllabic in all positions). Consequently, resonants had the feature value [\pm syllabic], in contrast to consonants proper [-syllabic] and vowels [+syllabic].

These changes produced a major restructuring of the vowel system. The original high vowels *i* and *u* became identified with the syllabic allophones of *j* and *y*. Hence, they acquired the status of resonants, specifically, the syllabic allophones of resonants. These vowels had not formerly been in alternation with non-syllabic elements but were now pulled into the system of resonant alternations, which severed their connection to the class of vowels.

This reanalysis of original *i* and *u* led, in some cases, to secondary full-grade formations, with *V* being inserted into roots in which *i* or *u* had originally been root vowels but which were now interpreted as zero-grade resonants. This apparently took place in the parallel markers of the Indo-European locative **-i/*-ej*. Of the two locative forms, the stressed **-i* is clearly the older and reflects the ancient full-grade vowel **i*: Gk. *ποδ-í*, Skt. *pad-í* ‘in the foot’, *dat-í* ‘in the tooth’, *janas-í* ‘in birth’, Hitt. *nepiš-i* ‘in the sky’, beside the later Slavic *nebes-i* ‘in the sky’. Other full-grade forms in which the diphthongs *ej* and *eu* correspond to *i* and *u* in the zero-grade, often adduced as illustration of the full-grade ~ zero-grade alternation, may well represent later formations from roots with original **i* and **u* which were secondarily identified with syllabic resonants and reinterpreted as zero-grade.

According to the traditional reconstruction, Proto-Indo-European is assumed to have had the following short diphthongs:

eĭ	oi	ai	əi
eu	ou	au	əu

In the reduced-grade, the semivowels alone appear:

i
u

Szemerényi (1990:148 and 1996:141) notes that, while this looks good on paper, it is difficult to imagine the process that would have led to **i* and **u* in the reduced-grade. He points out that it most certainly could not have been due to a simple loss of **e*, **o*, and **a*. The actual process leading to the appearance of **i* and **u* in the reduced-grade was probably along the following lines:

- A. After phonemicization of a strong stress accent, stress-conditioned weakening of the vowel to **ə* in unstressed syllables.
- B. Assimilation of **ə* to **i* before **y* and to **u* before **w*.
- C. Passage of **iy* to **ī* and of **uw* to **ū*.

D. Shortening of $*\bar{i}$ to $*i$ and of $*\bar{u}$ to $*u$, thus:

A		B		C		D
$\bar{a}yC$	>	iyC	>	$\bar{i}C$	>	iC
$\bar{a}wC$	>	uwC	>	$\bar{u}C$	>	uC

A typological parallel exists in Riffian Berber, where *itawi-d* ‘he brings’ developed from earlier **yattawəy-dd*, with both $*y\bar{a}$ and $*\bar{a}y > i$ (cf. Kossmann 2012:28). The same development may be observed in Kabardian (cf. Chirikba 1996a:52).

This is only part of the story, however, since it focuses primarily on the developments affecting the Pre-Proto-Indo-European $*\bar{a}y \sim *ay$ and $*\bar{a}w \sim *aw$. Pre-Proto-Indo-European also had the following sequences: $*i\bar{y} \sim *ey$, $*u\bar{y} \sim *oy$, $*i\bar{w} \sim *ew$, and $*u\bar{w} \sim *ow$, and these need to be considered as well. A summary of the developments is given below (only the beginning and end points are shown):

$\bar{a}yC$	>	eyC	when stressed
$\bar{a}yC$	>	ayC	when stressed and preceded by an <i>a</i> -coloring laryngeal
$\bar{a}yV$	>	eyV	when stressed
$\bar{a}yV$	>	ayV	when stressed and preceded by an <i>a</i> -coloring laryngeal
$\bar{a}yC$	>	iC	when unstressed
$\bar{a}yV$	>	iyV	when unstressed
ayC	>	oyC	when stressed
ayV	>	oyV	when stressed
ayC	>	iC	when unstressed
ayV	>	iyV	when unstressed
iyC	>	$\bar{i}C$	when stressed
iyC	>	$\bar{e}C$	when stressed and preceded by an <i>a</i> -coloring laryngeal
iyV	>	iyV	when stressed
iyV	>	eyV	when stressed and preceded by an <i>a</i> -coloring laryngeal
iyC	>	iC	when unstressed
iyV	>	iyV	when unstressed
eyC	>	$\bar{e}C$	when stressed
eyV	>	eyV	when stressed
eyC	>	iC	when unstressed
eyV	>	iyV	when unstressed
uyC	>	$\bar{i}C ?$	when stressed
uyC	>	$\bar{e}C ?$	when stressed and preceded by an <i>a</i> -coloring laryngeal
uyV	>	$iyV ?$	when stressed
uyV	>	$eyV ?$	when stressed and preceded by an <i>a</i> -coloring laryngeal
uyC	>	iC	when unstressed

uyV	>	iyV	when unstressed
oyC	>	oyC	when stressed
oyV	>	oyV	when stressed
oyC	>	iC	when unstressed
oyV	>	iyV	when unstressed
əwC	>	ewC	when stressed
əwC	>	awC	when stressed and preceded by an <i>a</i> -coloring laryngeal
əwV	>	ewV	when stressed
əwV	>	awV	when stressed and preceded by an <i>a</i> -coloring laryngeal
əwC	>	uC	when unstressed
əwV	>	uwV	when unstressed
awC	>	owC	when stressed
awV	>	owV	when stressed
awC	>	uC	when unstressed
awV	>	uwV	when unstressed
uwC	>	ūC	when stressed
uwC	>	ōC	when stressed and preceded by an <i>a</i> -coloring laryngeal
uwV	>	uwV	when stressed
uwV	>	owV	when stressed and preceded by an <i>a</i> -coloring laryngeal
uwC	>	uC	when unstressed
uwV	>	uwV	when unstressed
owC	>	ōC	when stressed
owV	>	owV	when stressed
owC	>	uC	when unstressed
owV	>	uwV	when unstressed
iwC	>	ūC ?	when stressed
iwC	>	ōC ?	when stressed and preceded by an <i>a</i> -coloring laryngeal
iwV	>	uwV ?	when stressed
iwV	>	owV ?	when stressed and preceded by an <i>a</i> -coloring laryngeal
iwC	>	uC	when unstressed
iwV	>	uwV	when unstressed
ewC	>	ewC	when stressed
ewV	>	ewV	when stressed
ewC	>	uC	when unstressed
ewV	>	uwV	when unstressed

In addition to the sequences of vowel plus **y* and **w*, the earliest form of Proto-Indo-European also had sequences of **y* and **w* plus vowel. In unstressed positions,

the vowel was first reduced to **ə*. **ə* was then assimilated to **i* after **y*, and the preceding **y* was lost, while after **w*, it was assimilated to **u*, and the preceding **w* was lost:

$$\begin{array}{ccccc} yəC & > & yiC & > & iC \\ wəC & > & wuC & > & uC \end{array}$$

The vowels **i* and **u* were converted into the corresponding glides **y* and **w* respectively when directly followed by another vowel:

$$\begin{array}{ccc} iV & > & yV \\ uV & > & wV \end{array}$$

In a 1967 book devoted to the study of the Indo-European vowel system, Robert Schmitt-Brandt (1967:8—31 [2nd edition 1973]) concludes that it is necessary to assume a fundamental form in **i* and **u* for certain kinds of roots in Proto-Indo-European and to view the full-grade forms as secondary. This conclusion is reached on the basis of the observation that, as a general rule, when diphthongs are “reduced”, long monophthongs result and not, as traditionally assumed, short monophthongs. Support for this conclusion is to be found in root-nouns, which appear in the reduced-grade (Schmitt-Brandt cites **dik-*, **wik-*, and **duk-* [I would write **t'ikh-*, **wikh-*, and **t'ukh-*] as examples), this being their original form. To have it the other way around, with **ey*, **ew*, etc. as the original forms, would lead, in his opinion, to reduced-grade forms with **ī* and **ū*: **deyk-* > **dīk-*, **weyk-* > **wīk-*, and **dewk-* > **dūk-*, etc. Schmitt-Brandt thus posits **i* and **u* as independent vowels in Proto-Indo-European and explains the full-grade forms in **ey*, **ew*, etc. as due to analogy. Finally, Schmitt-Brandt (1967:79—91) explains that, in an earlier period of Proto-Indo-European, **y* and **w* (he writes **j* and **u*) were consonants in their own right and were not connected with the independent vowels **i* and **u*. Somewhat similar views are expressed by William F. Wyatt (1970:58 and fn. 24).

The parts of Schmitt-Brandt's theories outlined in the preceding paragraph make a lot of sense, at least on the surface. Other parts of his theories, however, have purposely been left out of the discussion since, at least in my opinion, they are less convincing (see here the review of Schmitt-Brandt's book by Kuryłowicz 1969:41—49). What Schmitt-Brandt has correctly identified is the fact that, in certain specific instances, it is necessary to assume secondary full-grade forms. Schmitt-Brandt is also correct in seeing the vowels **i* and **u* as independent phonemic entities at an early stage of development within Proto-Indo-European. Where his theories are mistaken, however, is in the assumption that the reduction of diphthongs can only lead to long monophthongs. While this is indeed a very common development, it is not the only possible outcome. Here, we can cite developments in the Romance languages: Classical Latin had both long vowels and short vowels along with three diphthongs, namely, *ae*, *oe* and *au*. In Vulgar Latin, length distinctions were lost, and the earlier long vowels were realized as closed vowels, while the earlier short vowels were realized as open vowels. At the same

time, *ae* > open *e* [ɛ], *oe* > closed *e* [e], and *au* > closed *o* [ɔ] (though there is actually a great deal of variation in the development of *au*). In Balkan Romance, unstressed front vowels merged into [ɛ], and unstressed back vowels merged into [u], except for [a] and [i] (closed [i] < Classical Latin *ī*), which remained intact. (Cf. Mendeloff 1969:4–16 for details about the development of the vowels and diphthongs in the Romance languages.) Another problem with Schmitt-Brandt's theories concerns the failure to recognize the fact that the latest period of Proto-Indo-European contained the remnants of multiple successive earlier periods of development. The reduction of diphthongs in unaccented syllables had a different outcome in the earliest period than in later periods — in the earliest period, short monophthongs resulted from the stress-conditioned weakening of diphthongs in unstressed syllables, while in later periods, when stress was no longer phonemically distinctive, long monophthongs resulted.

In Post-Anatolian Proto-Indo-European, secondary diphthongs arose as follows: By this time, the **e* ~ **o* Ablaut patterning had assumed an important role in the emerging morphological system of Proto-Indo-European — all of the older non-Anatolian daughter languages attest to this. In order to bring stems such as **t'ik^h-*, **wik^h-*, and **t'uk^h-* (traditional **dik^h-*, **wik^h-*, and **duk^h-*), and the like into line with the regular **e* ~ **o* Ablaut patterning, **e* and **o* were inserted before accented **i* and **u*, thus creating secondary diphthongs:

$$\emptyset > e \text{ and } o / ___ \left\{ \begin{array}{c} \acute{i} \\ \acute{u} \end{array} \right\} \quad \text{in } *t'ik^h-, *wik^h-, *t'uk^h-, \text{ yielding } *t'éykh-, *wéykh-, \\ *t'éwkh-, \text{ etc.}$$

The development of secondary diphthongs was restricted to certain specific grammatical environments (such as the singular indicative verbal forms) — that is to say, not every accented **i* and **u* was affected (cf., for example, forms such as Sanskrit nom. sg. *agní-h* ‘fire’ and *sūnú-h* ‘son’ or Hittite nom. sg. *šal-li-iš* ‘glorious’ and *a-aš-šu-uš* ‘good’, which must always have had **i* and **u*). We may note at this point that secondary full-grade forms could also be created from syllabic resonant stems when the accent was shifted to the stem from another syllable (**Cḡ- > *Cém-*, **Cḡ- > *Cén-*, **Cḡ- > *Cél-*, **Cḡ- > *Cér-*).

The picture is still not complete, though, for we must also consider how laryngeals fit into the picture: The loss of laryngeals in sequences such as **eHiC*, **eHuC*, and the like resulted in short diphthongs when accented (**éHiC > *eyC* and **éHuC > *ewC*, etc.) — the preceding vowel was definitely not lengthened — but long monophthongs when unaccented (**əHiC > *əyC > *īC* and **əHuC > *əwC > *ūC*, etc.). Since these changes were later than the changes previously described and since stress was no longer phonemically distinctive, the resulting long monophthongs were not shortened to **i* and **u* respectively. In sequences such as **eHa^xC* and the like, the loss of the intervocalic laryngeal first produced a sequence of two short vowels. These vowels were then contracted to form a long vowel: **eHa^xC > *ea^xC > *ēC*, **oHa^xC > *oa^xC > *ōC*, **aHa^xC > *aa^xC > *āC*.

We may close this section by mentioning one last point. The numerous cases of $v\ddot{r}ddhied$ stems in the non-Anatolian daughter languages — especially Old Indic — appear to represent a contamination of types $*C\bar{e}C$ and $*C\bar{o}C$ with types $*CeyV-/$ $*CoyV-$ and $*CewV-/$ $*CowV-$, producing the new types $*C\bar{e}yV-/$ $*C\bar{o}yV-$ and $*C\bar{e}wV-/$ $*C\bar{o}wV-$ (cf. Schmalstieg 1973b:108).

4.10. ACCENTUATION AND ABLAUT IN PROTO-INDO-EUROPEAN

Disintegrating Indo-European was a *stress-accent* language (for details on accentuation in Proto-Indo-European, cf. Adrados 1975.I:311—323; Bubenik 1979:90—106; Burrow 1973:113—117; Fortson 2010:68; Hirt 1895; Halle—Kiparsky 1977:209—238; Lubotsky 1988; Meier-Brügger 2003:152—158; Meillet 1964:140—143; Sihler 1995:233—234; Szemerényi 1996:73—82; for a good general discussion of stress and *stress-accent* systems, cf. Hyman 1975:204—212, especially p. 207, and for *pitch-accent* systems, pp. 230—233). Correlating with the stress was changing pitch: rising from an unstressed syllable to a stressed syllable and falling from a stressed syllable to an unstressed syllable. Every word, except when used clitically, bore an accent. However, each word had only one accented syllable. (It should be noted here that there was a rule by which the surface accent appeared on the leftmost syllable when more than one inherently accented syllable existed in a word [cf. Lundquist—Yates 2018:2125].) The position of the accent was morphologically conditioned, accentuation being one of the means by which Proto-Indo-European distinguished grammatical relationships. Though originally not restricted to a particular syllable, there was a tendency to level out the paradigm and fix the position of the accent on the same syllable throughout (cf. Adrados 1975.I:317; Kurylowicz 1964a:207—208). This tendency began in Disintegrating Indo-European and continued into the individual non-Anatolian daughter languages. Therefore, the Disintegrating Indo-European system is only imperfectly preserved in even the most conservative of the daughter languages, Vedic Sanskrit.

Fortson (2010:119—122) recognizes four distinct types of athematic stems in later (pre-divisional or “Disintegrating”) Proto-Indo-European, determined by the position of the accent as well as the position of the full-grade (or lengthened-grade) vowel (Fortson notes that additional types developed in individual daughter languages) (see also Watkins 1998:61—62; Beekes 1985:1 and 1995:174—176):

1. Acrostatic: fixed accent on the stem throughout the paradigm, but with Ablaut changes between the strong and weak cases.
2. Proterokinetic (or proterodynamic): the stem is accented and in full-grade vowel in the strong cases, but both accent and full-grade vowel are shifted to the suffix in the weak cases.
3. Amphikinetic (or holokinetic or amphidynamic): the stem is accented in the strong cases, while the case ending is accented in the weak cases. Typically, the suffix is characterized by a lengthened *o*-grade vowel in the nominative singular and a short *o*-grade vowel in the accusative singular.

4. Hysterokinetic (or hysterodynamic): the suffix is accented in the strong cases, and the case ending in the weak.

Szemerényi (1996:162) adds a fifth type:

5. Mesostatic: the accent is on the suffix throughout the paradigm.

An even more elaborate system is set up by Meier-Brügger (2003:205—218).

The rules governing the position of the accent in early Disintegrating Indo-European may be stated rather simply (this was later replaced by the more elaborate system just described):

1. Neuter action nouns were accented on the stem in the so-called “strong” cases but on the ending in the so-called “weak” cases (cf. Burrow 1973:220—226).
2. Common gender agent noun/adjectives were accented on the suffix throughout the paradigm (cf. Burrow 1973:119).
3. Athematic verbs were accented on the stem in the singular but on the ending in the plural (and dual) in the indicative but on the ending throughout the middle (cf. Burrow 1973:303).

The thematic formations require special comment. It seems that thematic agent noun/adjectives were originally accented on the ending in the strong cases and on the stem in the weak cases. This pattern is the exact opposite of what is found in the neuter action nouns. The original form of the nominative singular consisted of the accented thematic vowel alone. It is this ending that is still found in the vocative singular in the daughter languages and in relic forms such as the word for the number ‘five’, **p^henk^{wh}e* (**penq^ue* in Brugmann’s transcription). The nominative singular in **-os* is a later formation and has the same origin as the genitive singular (cf. Szemerényi 1972a:156; Van Wijk 1902).

The system of accentuation found in Disintegrating Indo-European was by no means ancient. The earliest period of Proto-Indo-European that can be reconstructed appears to have been characterized by a strong stress accent (cf. Burrow 1973:108—112; Lehmann 1952:111—112, §15.4, and 1993:131—132; Szemerényi 1996:111—113) — following Lehmann, this period may be called the Phonemic Stress Stage. This accent caused the weakening and/or loss of the vowels of unaccented syllables. There was a contrast between those syllables with stress and those syllables without stress. Stress was used as an internal grammatical morpheme, the stressed syllable being the morphologically distinctive syllable. The phonemicization of a strong stress accent in Early Proto-Indo-European caused a major restructuring of the inherited vowel system and brought about the development of syllabic liquids and nasals (cf. Lehmann 1993:138).

In the latest period of Proto-Indo-European, quantitative Ablaut was no longer a productive process. Had there been a strong stress accent at this time, each Proto-Indo-European word could have had only one syllable with full-grade vowel, the vowels of the unstressed syllables having all been eliminated. However, since the

majority of reconstructed Proto-Indo-European words have more than one full-grade vowel, the stress accent must have become non-distinctive at some point prior to the latest stage of development.

TO SUMMARIZE: The earliest form of Proto-Indo-European was characterized by a system of vowel gradation in which the normal-grade contrasted with either the reduced-grade or the zero-grade (the choice between the reduced-grade on the one hand or the zero-grade on the other depended upon the relationship of the unstressed syllable to the stressed syllable — functionally, reduced-grade and zero-grade were equivalent). The normal-grade was found in all strongly stressed, morphologically significant syllables, while the reduced-grade or zero-grade were found in all syllables that were morphologically non-distinctive and, therefore, unstressed. The lengthened-grade was a later development and was functionally equivalent to the normal-grade. During the Phonemic Stress Stage of Proto-Indo-European, the basic rule was that no more than one morpheme could have a full-grade vowel in a given polymorphic form, the other morphemes in the syntagmatic sequence being in either zero-grade or reduced-grade.

Proto-Indo-European also made extensive use of inflectional endings as a means to indicate grammatical relationships. The rule that no more than one morpheme could have a full-grade vowel in a given polymorphic form must have caused conflicts between the system of indicating grammatical relationships based upon the positioning of the accent versus that based upon the use of inflectional endings. In other words, it must often have happened that more than one syllable of a word was considered morphologically significant. For example, according to the rules of derivation and inflection, the initial syllable of a word may have received the stress. At the same time, an inflectional ending may have been added, and this ending, in order not to be morphologically ambiguous may also have had a full-grade vowel in addition to that found in the stressed syllable. By the same token, when the shift of accent from, say, the stem to the ending would have produced unpronounceable consonant clusters, the vowel of the stem was retained.

It is likely that the Proto-Indo-European stress was pronounced with special intonations that helped make the accented syllable more discernable. When words with more than one full-grade vowel came into being, stress ceased to be phonemically distinctive. Phonemic pitch then replaced stress as the primary suprasegmental indicator of morphologically distinctive syllables (cf. Burrow 1973:112—113; Lehmann 1952:109—110, §1.53 and 1993:132 and 139), and the accent lost its ability to weaken and/or eliminate the vowels of unaccented syllables — following Lehmann, this period may be called the Phonemic Pitch Stage. The primary contrast was then between morphologically distinctive syllables with full-grade vowel and high pitch and morphologically non-distinctive syllables with full-grade vowel and low pitch.

Concurrent with the morphologically-conditioned development of the system of vowel gradation, another method of indicating grammatical relationships was developing, that being the use of inflectional endings. Some of these markers were inherited by Pre-Proto-Indo-European (for remarks on the prehistoric development

of these markers, see Chapter 20), while others — the majority — arose after Proto-Indo-European had assumed its own independent identity (cf. Blažek 2014). No doubt, the phonemicization of a strong stress accent and the rule that no more than one morpheme could have a full-grade vowel in a given polymorphic form must have wrecked havoc with the original system. Gradually, the vast majority of the earlier markers were replaced by newer forms, and the use of inflectional endings became the primary means of indicating grammatical relationships, with the result that vowel gradation and accentuation became mostly unnecessary and redundant features. It was not long before the earlier system of vowel gradation began to break down as analogical leveling took place. Also, in its later stages, Proto-Indo-European, as well as the individual daughter languages, it may be noted, continued to create new formations that, unlike older formations, were not affected by the causes of vowel gradation. Therefore, the patterns of vowel gradation are only imperfectly preserved in the final stage of the Indo-European parent language and in the daughter languages.

4.11. ROOT STRUCTURE PATTERNING IN PROTO-INDO-EUROPEAN

Before beginning, it is necessary to define several key terms. A “root” may be defined as the base form of a word. It carries the basic meaning, and it cannot be further analyzed without loss of identity (cf. Crystal 2003:402). A “stem”, on the other hand, may be defined as an inflectional base. A stem may or may not be coequal with a root. Cf. Crystal 2003:433.

There have been several attempts to formulate the rules governing the structural patterning of roots in Proto-Indo-European. Without going into details, it may simply be noted that none of the proposals advanced to date has escaped criticism, including the theories of Émile Benveniste (1935:147—173, especially pp. 170—171). The problem is complicated by the fact that the form of Proto-Indo-European traditionally reconstructed — what I call “Disintegrating Indo-European” — is the product of a very long, complicated evolution. As already noted, Disintegrating Indo-European contained the remnants of earlier successive periods of development.

For Disintegrating Indo-European, Jerzy Kuryłowicz’s (1935:121) description is adequate:

... the root is the part of the word (it is a question of only the simple word) made up of (1) the initial consonant or consonantal group, (2) the fundamental vowel, (3) the final consonant or consonantal group. — The final group can consist of no more than two consonantal elements, the first of which has greater syllabicity than the second. In other words, the first consonantal element is *j*, *u*, *r*, *l*, *n*, *m*, while the second is a consonant in the strictest sense of the term: stop, *s*, or laryngeal (*ǵ*₁, *ǵ*₂, *ǵ*₃).

A careful analysis of the root structure patterning led Benveniste to the discovery of the basic laws governing that patterning. According to Benveniste (1935:170—171), these laws may be stated as follows (see also Lehmann 1952:17—18):

1. The Indo-European root is monosyllabic, composed of the fundamental vowel *ē* between two different consonants.
2. In this constant scheme: consonant plus *e* plus consonant, the consonants can be of any order provided that they are different: however, the cooccurrence of both a voiceless stop and an aspirated voiced stop is forbidden.
3. The addition of a suffix to the root gives rise to two alternating stem types: Type I: root in full grade and accented, suffix in zero-grade; Type II: root in zero-grade, suffix in full-grade and accented.
4. A single determinative can be added to the suffix, either after the suffix of stem Type II, or, if *n*, inserted between the root element and the suffix of stem Type II.
5. Further addition of determinatives or suffixes points to a nominal stem.

Benveniste's views are not necessarily incompatible with those of Kuryłowicz. These theories can be reconciled by assuming that they describe the root structure patterning at different chronological stages.

Now, comparison of Proto-Indo-European with the other Nostratic languages, especially Proto-Kartvelian and Proto-Afrasian, allows us to refine Benveniste's theories. The most ancient patterning was probably as follows:

1. There were no initial vowels in the earliest form of Proto-Indo-European. Therefore, every root began with a consonant.
2. Originally, there were no initial consonant clusters either. Consequently, every root began with one and only one consonant.
3. Two basic syllable types existed: (A) **CV* and (B) **CVC*, where *C* = any non-syllabic and *V* = any vowel. Permissible root forms coincided exactly with these two syllable types.
4. A verbal stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: **CVC-VC-*. Any consonant could serve as a suffix.
5. Nominal stems, on the other hand, could be further extended by additional suffixes.

In the earliest form of Proto-Indo-European, there were three fundamental stem types: (A) verbal stems, (B) nominal and adjectival stems, and (C) pronominal and indeclinable stems.

The phonemicization of a strong stress accent in Early Proto-Indo-European disrupted the patterning outlined above. The positioning of the stress was morphologically distinctive, serving as a means to differentiate grammatical relationships. All vowels were retained when stressed but were either weakened (= "reduced-grade") or totally eliminated altogether (= "zero-grade") when unstressed:

the choice between the reduced-grade versus the zero-grade depended upon the position of the unstressed syllable relative to the stressed syllable as well as upon the laws of syllabicity in effect at that time. Finally, it was at this stage of development that the syllabic allophones of the resonants came into being.

The stress-conditioned Ablaut alternations gave rise to two distinct forms of extended stems:

Type 1: Root in full-grade and accented, suffix in zero-grade: **CṼCC-*.

Type 2: Root in zero-grade, suffix in full-grade and accented: **CCṼC-*.

When used as a verbal stem, Type 1 could undergo no further extension. However, Type 2 could be further extended by means of a “determinative”. Further addition of a determinative or suffixes pointed to a nominal stem (cf. Benveniste 1935:171; Lehmann 1952:17). According to Benveniste (1935:148), a “suffix” was characterized by two alternating forms (**-et-/*-t-*, **-en-/*-n-*, **-ek-/*-k-*, etc.), while a “determinative” was characterized by a fixed consonantal form (**-t-*, **-n-*, **-k-*, etc.). Finally, Benveniste (1935:164) notes:

... in the numerous cases where the initial [consonant group has been reconstructed in the shape] **(s)k-*, **(s)t-*, **(s)p-*, etc., with unstable sibilant, it is generally a question of prefixation, and it may be observed that the root begins with the [plain] consonant [alone excluding the sibilant].

In the earliest form of Proto-Indo-European, Ablaut was merely a phonological alternation. During the course of its development, however, Proto-Indo-European gradually grammaticalized these Ablaut alternations.

Proto-Indo-European had constraints on permissible root structure sequences. In traditional terms, the root structure constraints may be stated as follows (cf. Szemerényi 1996:99—100; see also Fortson 2004:54, 72, and 2010:59, 78; Meillet 1964:173—174; Lehmann 1952:17; Watkins 1998:53) (Szemerényi’s notation has been retained):

Possible	Impossible
1. Voiced-voiced aspirate (<i>*bedh-</i>)	I. Voiced-voiced (<i>*bed-</i>)
2. Voiced-voiceless (<i>*dek-</i>)	II. Voiced aspirate-voiceless (<i>*bhet-</i>)
3. Voiced aspirate-voiced (<i>*bheid-</i>)	III. Voiceless-voiced aspirate (<i>*tebh-</i>); III is, however, possible after <i>*s-</i> : <i>*steigh-</i> ‘to go up’
4. Voiced aspirate-voiced aspirate (<i>*bheidh-</i>)	
5. Voiceless-voiced (<i>*ped-</i>)	
6. Voiceless-voiceless (<i>*pet-</i>)	

From a typological perspective, the first forbidden root type (**bed-*) is rather odd. Roots of this type are widespread among the world’s languages, and there is

absolutely nothing to suggest that such a root type could not or should not exist in Proto-Indo-European. The only reasonable conclusion is that there is something wrong with the traditional reconstruction of the Proto-Indo-European stop system, specifically the plain voiced stops. This is, in part, what led to the suggestion that the traditional plain voiced stops may have been glottalics, since a constraint against the co-occurrence of two glottalics in a root is a recurrent feature in languages having glottalics (though not a universal). The substitution of glottalics for the traditional plain voiced stops allows for a rather straightforward reformulation of the root structure constraint rules (cf. Gamkrelidze 1976:404—405 and 1981:608—609; Hopper 1973:158—161, §3.2.6; Corbeau 2013):

1. Each root had to contain at least one non-glottalic consonant.
2. When both obstruents were non-glottalic, they had to agree in voicing.

The Proto-Indo-European root structure constraint laws thus become merely a voicing agreement rule with the corollary that two glottalics cannot cooccur in a root. Comparison with the other Nostratic languages indicates, however, that the forbidden root types must have once existed. Two rules may be formulated to account for the elimination of the forbidden types:

1. A rule of progressive voicing assimilation may be set up to account for the elimination of roots whose consonantal elements originally did not agree in voicing: $*T \sim *B > *T \sim *P$, $*B \sim *T > *B \sim *D$, etc.
2. A rule of regressive deglottalization may be set up to account for the elimination of roots containing two glottalics: $*C'VC' - > *CVC' -$. This rule finds a close parallel in Geers' Law in Akkadian (cf. Ungnad—Matouš 1969:27).

According to Gamkrelidze (1976:405 and 1981:608), Bartholomae's Law is a later manifestation of the progressive voicing assimilation rule, applied to contact sequences (for details on Bartholomae's Law, cf. Burrow 1973:90; Collinge 1985: 7—11 and 263—264; Szemerényi 1996:102—103).

APPENDIX:
THE PREHISTORIC DEVELOPMENT OF THE
PROTO-INDO-EUROPEAN PHONOLOGICAL SYSTEM

At the end of Chapter 2 in my co-authored book *The Nostratic Macrofamily* (1994, pp. 132—140), I traced the prehistoric development of the Proto-Indo-European phonological system from Proto-Nostratic to what I call “Disintegrating Indo-European”, which is the form of Proto-Indo-European that may be assumed to have existed directly prior to the emergence of the non-Anatolian Indo-European daughter languages. Basically, I recognized four stages of development:

1. Pre-Indo-European
2. Phonemic Stress Stage of Proto-Indo-European
3. Phonemic Pitch Stage of Proto-Indo-European (= Proto-Indo-Anatolian)
4. Disintegrating Indo-European

These stages are similar to what Lehmann sets up in Chapter 15, “The Development of the PIE Phonemic System”, of his 1952 book *Proto-Indo-European Phonology*.

The Proto-Nostratic phonological system may be reconstructed as follows (see Chapter 12 in this book for details):

Stops and Affricates:

p ^h	t ^h	c ^h	č ^h	tʰ ^y	tʰ ^ɬ	k ^h	k ^{wh}	q ^h	q ^{wh}		
b	d	ɟ	ž	dʲ	ɬɟ (?)	g	g ^w	ɣ	ɣ ^w		
pʼ	tʼ	cʼ	čʼ	tʲ ^y	tʰ ^ɬ ʼ	kʼ	kʷ	qʼ	qʷ	ʔ	ʔ ^w

Fricatives:

s	š	sʲ	x	x ^w	h	ħ	ħ ^w
z	ž (?)	zʲ (?)	ɣ			ʕ	

Glides:

w	y
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Nasals and Liquids:

m	n	nʲ	ŋ
	l	lʲ	
	r	rʲ	

Vowels:

i (~ e)	u (~ o)
e	o
(ə ~) a	

Also the sequences:	iy (~ ey)	uy (~ oy)	ey	oy	(əy ~) ay
	iw (~ ew)	uw (~ ow)	ew	ow	(əw ~) aw

The correspondences between the Proto-Indo-European bilabial, dental, and velar stops as well as the glides, nasals, and liquids, on the one hand, and those of the other Nostratic languages, on the other hand, are fairly straightforward and require no further comment.

Lateralized affricates have been reconstructed for Proto-Nostratic primarily on the basis of the Afrasian evidence. Steiner (1977:40), citing a 1922 article by Trubetzkoy, mentions that the development of lateralized affricates into palatal, velar, or uvular stops (or affricates) is a common development in the Northeast Caucasian languages, thus:

<u>t</u> ʰ	>	<u>k</u> ʰ	>	<u>k</u> xʰ	>	kʰ
voiceless		voiceless		voiceless		voiceless
alveolar		velar		velar		velar
lateralized		lateralized		affricate		stop
affricate		affricate				
<u>t</u> ʰ'	>	<u>k</u> ʰ'	>	<u>k</u> x'	>	k'
glottalized		glottalized		glottalized		glottalized
alveolar		velar		velar		velar
lateralized		lateralized		affricate		stop
affricate		affricate				

A shift of lateralized affricates into velar stops, similar to that shown above, may be posited for Pre-Proto-Indo-European.

The palatalized alveolar stops, palato-alveolar affricates, and dental affricates posited for Proto-Nostratic correspond to dental stops in Proto-Indo-European. Two explanations are possible to account for this correspondence: (A) Proto-Indo-European retained the original value, and the palatalized alveolar stops, palato-alveolar affricates, and dental affricates were secondarily derived from earlier dental stops in the other languages, or (B) the other languages reflect the original patterning, and the Indo-European developments are secondary. The data from the other Nostratic languages unequivocally favors the second alternative. Typological considerations also point in this direction. In general, a contrast between velars and labiovelars, such as that posited for Proto-Indo-European, implies a frontal contrast of some kind.

It may thus be assumed that the palatalized alveolar stops, palato-alveolar affricates, and dental affricates were inherited by Pre-Proto-Indo-European from Proto-Nostratic. However, since these sounds are not found in any of the daughter languages, they must have been eliminated at some point within Proto-Indo-European proper.

The first change that may be assumed to have taken place was the merger of the inherited dental affricates with the inherited palato-alveolar affricates: $*c^h, *ʒ, *c' > *c^h, *ʒ, *c'$. This change actually occurred in Proto-Eurasiatic (see the Appendix to Chapter 12).

Next, the palatalized sounds were depalatalized and merged with their non-palatalized counterparts in all positions (as has happened, for example, in the case of Aramaic, where Proto-Semitic $*d^y, *t^y, *ʔ^y$ have become Aramaic $d, t, ʔ$, respectively [cf. Moscati 1964:29—39, §9.18 — Moscati posits interdental fricatives for Proto-Semitic, but see Ehret 1995:251—254 on the possibility that this series may have been palatalized alveolars instead — note especially the table of correspondences on p. 253], and in Ancient Egyptian, where \underline{t} [≡] and \underline{d} [≡] were sometimes depalatalized to t [≡] and d [≡], respectively, under unknown conditions [cf. J. P. Allen 2013:49]). Within Indo-European, the same phenomenon may be observed in modern Polabian, Czech, Slovak, Bulgarian, and Ukrainian, where the inherited palatalized consonants were depalatalized before front vowels, “where palatalization was automatic or nearly so..., i.e. devoid of phonemic function” (cf. Shevelov 1964:494). Thus, the developments were as follows:

Pre-Proto-Indo-European		Early Proto-Indo-European
d^y	>	d
t^yh	>	t^h
t'^y	>	t'
n^y	>	n
l^y	>	l
r^y	>	r

Pre-Proto-Indo-European was followed by the Phonemic Stress Stage of Proto-Indo-European, which is the earliest stage of Proto-Indo-European proper that can be recovered. This stage was characterized by the phonemicization of a strong stress accent that caused the reduction and elimination of the vowels of unaccented syllables — that is to say that the phonemicization of a strong stress accent was responsible for the development of quantitative vowel gradation. This change was the first in a long series of changes that brought about the grammaticalization of what began as a purely phonological alternation (cf. Fortson 2004:74 and 2010:81), and which resulted in a major restructuring of the earlier, Pre-Proto-Indo-European vocalic patterning. This restructuring of the vowel system was a continuous process, which maintained vitality throughout the long, slowly-evolving prehistory of the Indo-European parent language itself and even into the early stages of some of the daughter languages. On grammaticalization in general, cf. C. Lehmann 2015.

It was during the Phonemic Stress Stage of Proto-Indo-European that the syllabic resonants came into being. Lengthened-grade vowels may also have first appeared during this stage of development.

The phonological system of the Phonemic Stress Stage of Proto-Indo-European may be reconstructed as follows:

Obstruents:	p ^h b p'	t ^h d t'	č ^h ž č'	k ^h g k'	k ^{wh} g ^w k' ^w	(q ^h) (g) (q')	(q' ^w)	ʔ	ʔ ^w
		s		x ɣ	x ^w ɣ ^w	ħ ʕ	ħ ^w	h	
Glides:	w(/u)		y(/i)						
Nasals and Liquids:	m/ṁ	n/ṇ	l/ḷ	r/ṛ					
Vowels:	i	e			o	u			
			ə						
			e ~ a						
	ī	ē			ō	ū			
			ē ~ ā						
Also the sequences:	iy ~ ey iw ~ ew		uy ~ oy uw ~ ow		ey ~ ay ew ~ aw	əy əw			
	īy ~ ēy īw ~ ēw		ūy ~ ōy ūw ~ ōw		ēy ~ āy ēw ~ āw				

Note: *ə > *e under stress.

Phonemic analysis:

- A. Obstruents: always non-syllabic.
- B. Resonants (glides, nasals, and liquids): syllabicity determined by surroundings: the resonants were syllabic when between two non-syllabics and non-syllabic when either preceded or followed by a vowel.
- C. Vowels: always syllabic.

Suprasegmentals:

- A. Stress: applied only to vowels; its position in a word was used as a means to indicate grammatical relationships.
- B. Pitch: non-distinctive.

In the latest period of development (what I call “Disintegrating Indo-European”), quantitative Ablaut was no longer a productive process. Had there been a strong stress accent at this time, each Proto-Indo-European word could have had only one syllable with full-grade vowel, the vowels of unstressed syllables being either

weakened (= “reduced-grade”) or lost altogether (= “zero-grade”). However, since the majority of reconstructed Proto-Indo-European words have more than one full-grade vowel, the stress accent must have become non-distinctive at some point prior to the latest stage of development.

In the Phonemic Pitch Stage of Proto-Indo-European, pitch accent replaced stress accent, and the accent lost its ability to weaken or eliminate the vowels of unaccented syllables, that is to say, Proto-Indo-European changed from a “stress-accent” language to a “pitch-accent” language. Here, the basic rule was that morphologically significant syllables were marked by high pitch, while morphologically nonsignificant syllables were marked by low pitch.

During the Phonemic Pitch Stage of Proto-Indo-European, the palato-alveolar affricates underwent deaffricatization and merged with the dental stops ($*\check{c}^h$, $*\check{z}$, $*\check{c}' > *t^h$, $*d$, $*t'$) (a similar development has taken place, for instance, in Finnic (in part), where $*\check{c} > t$ or h [cf. Collinder 1960:88], and Samoyed within Uralic, where $*\check{c} > *t$ [cf. Janhunen 1998a:462], and in Toda within Dravidian, where initial $*c-$ [tʃ] $> t-$ [cf. Krishnamurti 2003:124—125]); also worth noting is the development of the Proto-Semitic glottalized dental affricate $*c'$ [traditional ʃ] in Amharic, Gurage, Harari, Gafat, and Argobba, where $*c' > t$ [cf. Leslau 1987:xxv—xxvi]).

The final changes that must be assigned to the Phonetic Pitch Stage of Proto-Indo-European were: (A) the merger of the earlier postvelars with the plain velars, (B) the merger of the earlier velar fricatives with the pharyngeal fricatives, and (C) the development of the pharyngeal fricatives into the corresponding multiply-articulated pharyngeal/laryngeal fricatives: $*h > *h̥h$ and $*ʕ > *ʕh̥$.

The phonological system of the Phonemic Pitch Stage of Proto-Indo-European may be reconstructed as follows:

Obstruents:	p^h	t^h	k^h	k^{wh}		
	b	d	g	g^w		
	(p')	t'	k'	k'^w		
		s				
Laryngeals:	$ʔ$	h	x	x^w	$h̥h$	$ʔ^w$
			γ	γ^w	$ʕh̥$	
Nasals and Liquids:	$m/\text{ṃ}$	$n/\text{ṇ}$	$l/\text{ḷ}$	$r/\text{ṛ}$		
Glides:	$w(/u)$	$y(/i)$				
Vowels:	e	o	a	i	u	ə
	\bar{e}	\bar{o}	\bar{a}	\bar{i}	\bar{u}	

Notes:

1. High vowels had non-phonemic low variants when contiguous with so-called “*a*-coloring” laryngeals ($*h$, $*h̥h$ and $*ʕh̥$), while the vowel $*e$ was lowered and colored to $*a$ in the same environment.

2. Apophonic **o* had not yet developed. It arose later in Disintegrating Indo-European from apophonic **a*. However, already during this stage, and even earlier, in the Phonemic Stress Stage of Proto-Indo-European and in Pre-Proto-Indo-European, there was a non-apophonic **o* that had been inherited from Proto-Nostratic.
3. The velar stops developed non-phonemic palatalized allophones when contiguous with front vowels and **y*.
4. There were no voiced aspirates at this time. They developed later in Disintegrating Indo-European from earlier plain voiced stops.
5. It was probably at the end of the Phonemic Pitch Stage that the Anatolian languages became separated from the main speech community.
6. Some palato-alveolar affricates may have been preserved initially in Hittite in a small number of relic forms (see Part Two, Comparative Vocabulary, §22.13 and §22.14, for possible examples).

Phonemic analysis: unchanged.

Suprasegmentals:

- A. Stress: non-distinctive.
- B. Pitch: distribution morphologically conditioned: high pitch was applied to morphologically-distinctive vowels, while low pitch was applied to morphologically-non-distinctive vowels.

During the Phonemic Pitch Stage of development, the system of vowel gradation assumed the following form:

	Lengthened-Grade	Normal-Grade	Reduced-Grade	Zero-Grade
A.	$\bar{e} \sim \bar{a}$	$e \sim a$	ə	\emptyset
B.	$\bar{e}y \sim \bar{a}y$	$ey \sim ay$	$i, \text{əyV}$	y
	$\bar{e}w \sim \bar{a}w$	$ew \sim aw$	$u, \text{əwV}$	w
	$\bar{e}m \sim \bar{a}m$	$em \sim am$	$\text{ŋ}, \text{əmV}$	m
	$\bar{e}n \sim \bar{a}n$	$en \sim an$	$\text{ŋ}, \text{ənV}$	n
	$\bar{e}l \sim \bar{a}l$	$el \sim al$	$\text{ɫ}, \text{əlV}$	l
	$\bar{e}r \sim \bar{a}r$	$er \sim ar$	$\text{ɾ}, \text{ərV}$	r
C.		$Ae [Aa] \sim Aa$	$A\text{ə}$	A
D.		$Aey [Aay]$	$Ai, A\text{əyV}$	Ay
		$Aew [Aaw]$	$Au, A\text{əwV}$	Aw

Notes:

1. Long vowel gradation did not exist during this period of development. It arose later, in Disintegrating Indo-European, when the loss of preconsonantal laryngeals caused the compensatory lengthening of preceding short vowels.

2. The symbol *ə is used here to indicate the reduced-grade vowel corresponding to normal-grade *e and *a. This is the so-called “schwa secundum” of traditional Indo-European grammar. It is usually written *b.

The Phonemic Pitch Stage of Proto-Indo-European was followed by Disintegrating Indo-European, which may be defined as the stage of development existing between the separation of the Anatolian languages from the main speech community and the emergence of the non-Anatolian daughter languages.

In Disintegrating Indo-European, the voiced stops became voiced aspirates (at least in some dialects), and the laryngeals were mostly lost. First, the laryngeals *ʔ and *h were lost initially before vowels. In all other environments, *ʔ and *h merged into *h. Then, the laryngeals *hh and *ʔh became *h. Later, the single remaining laryngeal *h was lost initially before vowels (except in Pre-Proto-Armenian) and medially between an immediately preceding vowel and a following non-syllabic. This latter change caused compensatory lengthening of preceding short vowels (*eHC, *oHC, *aHC, *iHC, *uHC > *ēC, *ōC, *āC, *īC, *ūC). Note: *h may have been simply lost without a trace in certain contexts (cf. Byrd 2010).

The palatovelars became phonemic in the Disintegrating Indo-European antecedent of the satəm languages but remained subphonemic in the Disintegrating Indo-European antecedent of centum languages. Pulju (1995:43) summarizes the developments of the gutturals in the Indo-European daughter languages as follows:

A three-way distinction between palatovelars, plain velars, and labiovelars is unavoidable for PIE, though it grew out of a Pre-PIE two-way distinction between plain velars and labiovelars. Moreover, the distinction between the rare plain velars and the other series in PIE carried a low functional load. Hence, the PIE system was usually reduced to post-PIE systems with only a two-way distinction, always preserving the functionally most important palatovelar vs. labiovelar difference. Plain velars merged structurally with either palatovelars or labiovelars in all languages but Albanian; there is no solid basis for making these two types of merger diagnostic of a split of PIE into so-called centum and satem dialects.

For late Disintegrating Indo-European, the Proto-Indo-European phonological system may be reconstructed as follows (the phonemes in the first column are voiceless aspirated, the second are glottalized, and the third are voiced aspirated):

Obstruents:	p ^h	pʼ	b ^h	(bilabial)
	t ^h	tʼ	d ^h	(dental)
	k ^y h	kʼy	g ^y h	(palatovelar)
	k ^h	kʼ	g ^h	(velar)
	k ^{wh}	kʼw	g ^{wh}	(labiovelar)
		s		
Laryngeals:		h/h̥		

Resonants:	m/ṁ	n/ṇ	l/ḷ	r/ṛ	w/u	y/i
Vowels:	e ē	o ō	a ā	(i) ī	(u) ū	ə

Notes:

1. The palatovelars ($*k^{yh}$, $*g^{yh}$, $*k^{'y}$) are traditionally written $*\hat{k}$, $*\hat{g}h$, $*\hat{g}$ or $*\hat{k}$, $*\hat{g}h$, $*\hat{g}$, occasionally even $*\acute{k}$, $*\acute{g}h$, $*\acute{g}$, respectively.
2. The above reconstruction is a composite — details about developments in the individual daughter languages are given in Chapter 5.

During the Disintegrating Indo-European period of development, the system of vowel gradation appeared as follows:

I. Short Vowel Gradation:

	Lengthened-Grade	Normal-Grade	Reduced-Grade	Zero-Grade
A.	ē ~ ō	e ~ o	ə	Ø
B.	ēy ~ ōy	ey ~ oy	i, əyV (> iyV)	y
	ēw ~ ōw	ew ~ ow	u, əwV (> uwV)	w
	ēm ~ ōm	em ~ om	ṁ, əmV (ṁmV)	m
	ēn ~ ōn	en ~ on	ṇ, ənV (ṇnV)	n
	ēl ~ ōl	el ~ ol	ḷ, əlV (ḷlV)	l
	ēr ~ ōr	er ~ or	ṛ, ərV (ṛrV)	r
C.		a ~ o	ə	Ø
D.		ay	i, əyV (> iyV)	y
		aw	u, əwV (> uwV)	w

II. Long Vowel Gradation:

E.	ē ~ ō	ḥ
F.	ō	ḥ
G.	ā ~ ō	ḥ

Note: The symbol $*ḥ$ is used here to indicate the syllabic form of the one remaining laryngeal, $*h$. This is the so-called “schwa primum” of traditional Indo-European grammar. It is usually written $*ə$.

CHAPTER FIVE

AN OUTLINE OF THE DEVELOPMENT OF THE PROTO-INDO-EUROPEAN PHONOLOGICAL SYSTEM IN THE INDO-EUROPEAN DAUGHTER LANGUAGES

5.1. ANATOLIAN

The Proto-Anatolian system of stops may be reconstructed as follows, with the three-way contrast (1) voiceless aspirated ~ (2) glottalized (ejectives) ~ (3) plain voiced:

	1	2	3
Bilabial:	p ^h	pʼ	b
Dental:	t ^h	tʼ	d
Velar:	k ^h	kʼ	g
Labiovelar:	k ^{wh}	kʼ ^w	g ^w

References: Bomhard 1986a, 1992c, 2019g, and 2024; J. Friedrich 1960:25—37; Gamkrelidze 1982; Gamkrelidze—Ivanov 1995.I:40—43; Held—Schmalstieg 1969; Hoffner—Melchert 2008:24—50; Kimball 1999 and 2017; Kloekhorst 2008b:15—101 and 2016; Kronasser 1956:35—96; Melchert 1984, 1992c, 1994a (Melchert tentatively assumes that column 2 was voiced), 1997, and 2017:176—177; Patri 2009 and 2019; Simon 2020; Sturtevant 1951:29—66.

5.1.1. DOUBLE WRITING OF MEDIAL STOPS IN HITTITE

“Sturtevant’s Law” is the name given to the Hittite scribal convention according to which double writing of medial stops (though only when the cuneiform syllabary makes this possible, and even then not consistently [cf. Melchert 1994a:14]) in certain words contrasts with single writing of medial stops in certain other words. This writing convention is interpreted under Sturtevant’s Law to be the method by which the Hittite scribes indicated some sort of phonemic contrast, usually taken to be a contrast between medial voiceless stops on the one hand and medial voiced stops on the other (cf. Sturtevant 1951:26—28, §53). This interpretation is based upon the observation that words exhibiting medial double writing of stops generally correspond etymologically to words in other Indo-European languages with medial voiceless stops (or their equivalents), while words exhibiting medial single writing of stops generally correspond etymologically to words in other Indo-European languages with medial voiced stops (or their equivalents), the latter being derived from what has traditionally been reconstructed as either plain voiced stops or as

voiced aspirated stops at the Proto-Indo-European level. The following examples illustrate the general patterning (the Proto-Indo-European reconstructions represent the Phonemic Pitch Stage of Proto-Indo-European [Pre-Anatolian Proto-Indo-European or Proto-Indo-Anatolian], which was the stage of development just before the separation of the Anatolian daughter languages from the main speech community):

Medial Double Writing:

- A. Hittite (3 pl. pres.) *li-ip-pa-an-zi* ‘they smear’ (also written *li-pa-a-an-zi*) ~ Sanskrit *liptá-h* ‘smeared, anointed’; Greek λιπαρός ‘oily, greasy’, λίπος ‘fat, oil’ < Proto-Indo-European **lip^h*-.
- B. Hittite *a-ap-pa* ‘afterwards, back, again’ ~ Sanskrit *ápa* ‘away, from, off’; Greek ἄπο, ἀπό ‘from, away from, far from, apart from, away, off, back again’ < Proto-Indo-European **hep^ha-* [*hap^ha-] (later **hep^ho-* [*hap^ho-]).
- C. Hittite (3 sg. mid.) *ki-it-ta(-ri)* ‘lies’ ~ Sanskrit (3 sg. mid. impf.) *á-śeta* ‘lay’, (3 sg. mid. pres.) *śéte* ‘lies’; Avestan *saēte* ‘lies’; Greek (3 sg. impf.) ἔκειτο ‘lay’, (3 sg. pres.) κεῖται ‘lies’ < Proto-Indo-European 3 sg. mid. ending **-t^ha-* (later **-t^ho-*).
- D. Hittite (acc. sg.) *ú-it-ta-an* ‘year’ ~ Greek ἔτος ‘year’; Latin *vetus* ‘old’ < Proto-Indo-European **wet^h*-.
- E. Hittite (3 sg. pres.) *lu-uk-ki-iz-zi* ‘kindles, grows light’ (also written *lu-uk-zi*) ~ Greek λευκός ‘light, bright, brilliant, white’; Latin *lūceō* ‘to shine’ < Proto-Indo-European **luk^h*-, **lew^hk^h*-.

Medial Single Writing:

- A. Hittite (nom.-acc. sg.) *ne-pí-iš* ‘heaven, sky’ ~ Sanskrit *nábhas-* ‘sky, cloud, mist’; Greek νέφος ‘cloud’; Old Church Slavic *nebo* ‘sky’ < Proto-Indo-European **nebas-* (later **neb^hos-*).
- B. Hittite (nom.-acc. sg.) *pí-e-da-an* ‘place’ ~ Sanskrit *padám* ‘step, footstep, position, site’; Greek πέδον ‘the ground, earth’ < Proto-Indo-European **p^het’am* (later **p^het’om*).
- C. Hittite (nom.-acc. sg.) *wa-a-tar* ‘water’ ~ Sanskrit *udán-* ‘water’; Greek ὕδωρ ‘water’; Gothic *watō* ‘water’; Old Church Slavic *voda* ‘water’ < Proto-Indo-European **wet’-/*wat’-/*ut’-* (later **wet’-/*wot’-/*ut’-*).
- D. Hittite (1 sg. pres.) *e-it-mi* ‘I eat’ ~ Sanskrit *ádmi* ‘I eat’; Greek ἔδομαι ‘I eat’; Latin *edō* ‘I eat’ < Proto-Indo-European **ʔet’-*.
- E. Hittite (nom.-acc. sg.) *i-ú-kán*, *i-ú-ga-an* ‘yoke’ ~ Sanskrit *yugám* ‘yoke’; Greek ζυγόν ‘yoke’; Latin *iugum* ‘yoke’; Gothic *juk* ‘yoke’; Old Church Slavic *igo* (< **j^hgo*) ‘yoke’ < Proto-Indo-European **yuk’am* (later **yuk’om*).
- F. Hittite (nom. sg.) *ḫar-ki-iš* ‘white’ ~ Sanskrit *árjuna-h* ‘white, bright’; Greek ἀργός ‘shining, bright, glistening’; Latin *argentum* ‘silver’ < Proto-Indo-European **ḫherk’-* [**ḫhark’-*].
- G. Hittite (nom. sg.) *pár-ku-uš* ‘high’ ~ Armenian *barjr* ‘high’; Sanskrit *bṛhánt-* ‘high’ < Proto-Indo-European **brg-* (later **b^hrg^h*-).

- H. Hittite (nom.-acc. sg.) *hé-kur*, *hé-gur* ‘summit, peak’ ~ Sanskrit *ágram* ‘point, tip, summit’ < Proto-Indo-European **Hek^wr-*.

There also exist several well-known exceptions to Sturtevant’s Law, in which words exhibiting medial double writing of stops in Hittite correspond etymologically to words in other Indo-European daughter languages with medial voiced stops. Examples include (cf. Kronasser 1966:14; Bomhard 1984b:116):

- A. Hittite *ú-uk-ga* ‘I’ (also written *ú-uk*, *ú-ga*; Melchert [1994a:7] considers the *u* to be analogical after the 2 sg. personal pronoun *tu-uk*, *tu-ga* ‘you’, while Kloekhorst [2008b:112—114] considers it to be from the Proto-Anatolian oblique form **ʔMúg*) ~ Latin *egō*, *egō* ‘I’; Greek *ἐγώ(v)* ‘I’ < Proto-Indo-European **ʔek^h-aH* (later **ʔek^h-oH*).
- B. Hittite 2 pl. mediopassive primary ending *-dduma* in, for example, *i-ya-at-du-ma* ‘you go’ ~ Sanskrit 2 pl. mid. secondary ending *-dhvam*; Avestan 2 pl. mid. secondary ending *-δwəm*; Greek 2 dual mid. primary and secondary ending *-σθον* (< **-zd^hwom*), 2 pl. mid. ending *-σθε* < Proto-Indo-European **-dwem/***-dwam/***-dum* (later **-d^hwem/***-d^hwom/***-d^hum*).
- C. Hittite (3 sg. pres.) *píd-da-i*, *pád-da-i* ‘to dig’ ~ Latin *fodiō* ‘to dig’; Lithuanian *bedù*, *bèsti* ‘to dig, to bury’; Gaulish *bedo-* ‘canal, ditch’; Old Church Slavic *bodq*, *bosti* ‘to stick, to prick’ < Proto-Indo-European **bed-/***bad-* (later **b^hed^h-/***b^hod^h-*).
- D. Hittite (acc.-dat. sg.) *am-mu-uk-ga* ‘to me’ (also written *am-mu-uk*, *am-mu-ug-ga*, *am-mu-uq-qa*, *am-mu-uk-qa*) ~ Greek (acc. sg.) *ἐμε-γε* ‘me’ < Proto-Indo-European **-k^he*.
- E. Hittite (nom. sg.) *me-ik-ki-iš* ‘large’ ~ Greek *μέγας* ‘great’ < Proto-Indo-European **mek^h-*.

It is these exceptions that previously led me to question the validity of Sturtevant’s Law (cf. Bomhard 1984b:116—119).

5.1.2. THE RECONSTRUCTION OF THE PROTO-INDO-EUROPEAN STOP SYSTEM

At the beginning of the twentieth century, the Neogrammarian reconstruction of the Proto-Indo-European phonological system, which was based upon the principle that sound laws admit no exceptions, was widely accepted as being a fairly accurate representation of what had existed in the Indo-European parent language. To this day, the Neogrammarian reconstruction (or variations of that reconstruction) enjoys widespread support among Indo-Europeanists. The Neogrammarian reconstruction of the Proto-Indo-European stop system, which was modeled after the phonological system found in Old Indo-Aryan (represented by Vedic and Classical Sanskrit) consisted of a four-way contrast of (1) plain voiceless stops, (2) voiceless aspirated stops, (3) plain voiced stops, and (4) voiced aspirated stops, thus (cf. Brugmann 1904:52; see also Szemerényi 1996:54—69; Burrow 1973:67):

1	2	3	4	
p	ph	b	bh	(bilabial)
t	th	d	dh	(dental)
\hat{k}	$\hat{k}h$	\hat{g}	$\hat{g}h$	(palatal)
q	qh	g	gh	(pure velar)
q ^u	q ^u h	g ^u	g ^u h	(labiovelar)

During the last century, it became widely accepted that the traditional voiceless aspirates (column 2) should be removed from the Proto-Indo-European phonological inventory (cf. Bomhard 1986a:69—71 for details). The problem with removing the voiceless aspirates, however, is that the resulting system has no typological parallels among the known languages of the world (cf. Jakobson 1971[1957]:528; Martinet 1970:115). And yet, on structural grounds, positing a three-way contrast (without the voiceless aspirates) for Proto-Indo-European instead of the four-way contrast (with the voiceless aspirates) posited by the Neogrammarians seems fully justified.

There are also problems involving the traditional plain voiced stops (column 3). One such problem, which is usually mentioned in the standard handbooks, is the unexpected statistically low frequency of occurrence of the traditional plain voiced bilabial stop **b*. Such a frequency distribution is not at all characteristic of /b/ in natural languages having a voicing contrast in stops (for details, cf. Gamkrelidze 1978:9—46). Rather, the frequency distribution points to the original *non-voiced* character of this sound in Proto-Indo-European. Indeed, the frequency distribution of all of the traditional plain voiced stops (**b*, **d*, **ĝ*, **g*, **g^u*) points to the non-voiced character of the entire series when viewed from a typological perspective. Moreover, the traditional plain voiced stops are rarely found in pronouns and in inflectional affixes. Finally, there is the problem of the root structure constraint that prohibits the co-occurrence of two plain voiced stops in a given root.

It was in trying to find solutions to these problems in particular that the Georgian scholar Thomas V. Gamkrelidze and the Russian scholar Vjačeslav V. Ivanov, on the one hand, and the British-born American scholar Paul J. Hopper, on the other, working independently, were led to propose, in the early 1970's, a radical revision of the Proto-Indo-European stop system. Observing that the traditional plain voiced stops seemed to exhibit many of the typological characteristics of glottalized stops (ejectives), they proposed reinterpreting this series as ejectives. In their version of what has now come to be known as the "Glottalic Theory", Gamkrelidze and Ivanov made no changes to the traditional voiced aspirates, but they reinterpreted the traditional plain voiceless stops as voiceless aspirates. In this revised interpretation, aspiration is viewed as a redundant feature, and the phonemes in question could be realized as allophonic variants with or without aspiration depending upon the paradigmatic alternation of root phonemes. The system of Gamkrelidze and Ivanov may be represented as follows (cf. Gamkrelidze 1976:403 and 2001a:84):

1	2	3	4	
ph/p	-	(p')	bh/b	(bilabial)
th/t	-	t'	dh/d	(dental)
kh/k	-	k'	gh/g	(palatal)
kh/k	-	k'	gh/g	(pure velar)
k ^u h/k ^u	-	k' ^u	g ^u h/g ^u	(labiovelar)

The revisions proposed by Gamkrelidze, Hopper, and Ivanov provide typologically natural explanations for the problems mentioned above, specifically:

- A. By reinterpreting the traditional plain voiceless stops (column 1) as voiceless aspirates, there is no longer a problem, from a typological point of view, with positing a series of voiced aspirates (column 4) for Proto-Indo-European, since the imbalance caused by the removal of the traditional voiceless aspirates (column 2) is eliminated.
- B. Reinterpretation of the traditional plain voiced stops (column 3) as glottalics makes it easy to account for the statistically low frequency of occurrence of the traditional plain voiced bilabial stop **b* (which becomes a bilabial ejective **p'* in the revised system), since the glottalic member is always characterized by a low frequency of occurrence (there often being a total absence at this point of articulation) in the bilabial series in attested languages having ejectives.
- C. In languages having ejectives, it is common for ejectives to be either excluded from or underrepresented in inflectional affixes and pronouns.
- D. Several languages with ejectives have a constraint against the co-occurrence of two ejectives in a root. Thus, reinterpretation of the traditional plain voiced stops as glottalics provides a typologically natural explanation for the root structure constraint prohibiting the co-occurrence of two (traditional) plain voiced stops in a given root.

Moreover, the revisions proposed by Gamkrelidze, Hopper, and Ivanov provide new insights into the underlying principles governing Grassmann's Law and Barthomomae's Law. Finally, it may be noted that strong support for the changes proposed by Gamkrelidze, Hopper, and Ivanov is to be found in Germanic, Armenian, and (the poorly-attested) Phrygian (cf. Diakonoff—Neroznak 1985:5). According to the traditional interpretation, Germanic, Armenian, and Phrygian had been thought to have undergone "sound shifts" (in German, *Lautverschiebungen*). Under the revised interpretation, however, they are rightly seen as relic areas.

The Proto-Indo-European stop system reconstructed above may be viewed as reflecting a late stage of development. For Pre-Anatolian Proto-Indo-European (= Proto-Indo-Anatolian), I have argued elsewhere that the traditional voiced aspirates are to be reconstructed as plain voiced stops and that the development of this series into voiced aspirates is a later development (cf. Bomhard 1984b:31—34; 1996a:50 and 54). That this series was not aspirated in Pre-Anatolian Proto-Indo-European will be demonstrated below.

5.1.3. FROM PROTO-INDO-EUROPEAN TO PROTO-ANATOLIAN

The three series reconstructed for Proto-Indo-European in the preceding section were preserved as separate series in Proto-Anatolian. This is clear, for instance, from the different treatment of the voiced and voiceless velar stops before high front vowels in the Luwian branch of Anatolian (Hieroglyphic and Cuneiform Luwian along with the later Lycian). Here, the voiceless members are preserved, while the voiced member is lost; for example:

- A. Cuneiform Luwian *kiša-* ‘to comb, to card’ ~ Hittite *kišai-* ‘to comb’ < Proto-Anatolian **k^hes-* ‘to comb, to card’ < Pre-Anatolian Proto-Indo-European **k^hes-*. Probable non-Anatolian cognates include Greek κέσκεον (< **k^hes-k^hes-* [reduplicated]) ‘tow, oakum’; Old Church Slavic *češō, česati* ‘to comb, to pull off’; Russian *česát’* [чесать] ‘to comb, to card’; Lithuanian *kasù, kàsti* ‘to dig, to rake’.
- B. Cuneiform Luwian (nom. sg.) *(i-)iš-ša-ri-iš* ‘hand’; Hieroglyphic Luwian (dat. sg.) *istri* ‘hand’; Lycian *izri-* ‘hand’ (all with loss of an earlier initial voiced velar before high front vowel) ~ Hittite (nom.-acc. sg.) *ki-eš-šar* ‘hand’ < Proto-Anatolian **gēsar* ‘hand’ < Pre-Anatolian Proto-Indo-European **gēs-*. Non-Anatolian cognates include Sanskrit *hāsta-h* ‘hand’; Old Persian *dasta-* ‘hand’; Avestan *zasta-* ‘hand’; Latin *praestō* (< **prae-hestōd*) ‘at hand, ready’. Note: The Hieroglyphic Luwian form contains an epenthetic *t*.

More evidence is possibly to be found in the treatment of dentals initially before high front vowels and **y* in Hittite. In this case, the voiceless aspirated and plain voiced members are preserved (though **t^h-* later becomes *z-* (= /ts/) in this environment in Hittite, but not in the other older Anatolian languages), while the plain voiceless (from earlier glottalized) member becomes *š*, as shown in the following examples (cf. Melchert 1994a:118):

- A. Hittite (dat.-loc. sg.) *šiwatti* ‘day’ ~ Palaic (nom. sg.) *Ti-ya-az(-)* name of the sun-god; Cuneiform Luwian (nom. sg.) *Ti-wa-az* name of the sun-god; Hieroglyphic Luwian *Tiwat-* name of the sun-god, (adj.) *tiwatami-* ‘bright, sunny’ < Proto-Anatolian **tyēwat-* < Pre-Anatolian Proto-Indo-European **t^yēw-*. Non-Anatolian cognates include: Sanskrit *dyáu-h* ‘heaven, sky, day’; Armenian *tiv* ‘day’; Latin *diēs* ‘day’; Old Irish *dīe, dīa* ‘day’.
- B. Hittite (gen. sg.) *ši-(i)-ú-na-aš* ‘god’ < Proto-Anatolian **tyū-* < Pre-Anatolian Proto-Indo-European **t^yēw-* (cf. Melchert 1994a:150). Non-Anatolian cognates include Greek Ζεύς ‘Zeus’, δῖος ‘god-like, divine’; Sanskrit *devá-h* ‘god’; Latin *deus* ‘god’.

There may be additional evidence from the later Lycian and Lydian, as Shevoroshkin (1988) has tried to show. Shevoroshkin claims, for instance, that the (traditional) Proto-Indo-European stop system developed as follows in Lycian:

Proto-Indo-European	Milyan Initially	Milyan Medially	Lycian Initially	Lycian Medially
t	t-	-t-	t-	-t-
d	d-	-d-	dd-	-d-
dh	t-	-d-	t-	-d-

Some of the evidence that Shevoroshkin adduces to support his views, however, is questionable and is to be treated with the utmost caution. Moreover, there is other Lycian evidence, not cited by Shevoroshkin, that points to alternative interpretations (note especially Melchert's [1994a:53—54] critical assessment of Shevoroshkin's views).

There are enough clues within the Anatolian daughter languages to support the contention that the three series of stops reconstructed for the phonological system of the Indo-European parent language maintained their separate identity in Proto-Anatolian. It is not possible to tell, however, whether or not series 3 was glottalized at the Proto-Anatolian level, though there is nothing to indicate that it was. I assume that series 3 was not glottalized in Proto-Anatolian. The most important point to bear in mind is that it is series 3 and 4 that are represented by medial single writing in Hittite and that it is series 1 that is represented by medial double writing. Thus, the Proto-Anatolian stop system is probably to be reconstructed as follows:

1	2	3	4
p ^h	-	p	b
t ^h	-	t	d
k ^h	-	k	g
k ^{wh}	-	k ^w	g ^w

Note: Melchert (1994a:53) assumes that series 3 and 4 merged in Proto-Anatolian. He further assumes (1994a:21) that the earlier voicing contrast was replaced by a fortis ~ lenis opposition in the older Anatolian daughter languages.

5.1.4. HITTITE

Hittite was written in a cuneiform syllabary derived from a form of Old Akkadian cuneiform in use in Northern Syria in the beginning of the second millennium BCE (cf. Gamkrelidze 1968:91—92). Now, the older cuneiform writing system, which was developed by the Sumerians, was not suited to rendering Akkadian, much less Hittite. In Old Akkadian, voiceless, voiced, and emphatic consonants were not differentiated in the writing system, though methods were gradually developed to represent most of the Akkadian phonological distinctions. This is important, for no attempt was ever made, even after Akkadian had introduced separate syllabograms to differentiate voiceless, voiced, and emphatic consonants, to modify the Hittite writing practices to make use of the same methods to note a voicing contrast in

stops. We must conclude, therefore, that the Hittite scribes did not feel that it was worthy of noting such a contrast, regardless of what the underlying phonetics may have been.

What then, if anything, does medial double writing of stops indicate if not a voicing contrast? The answer to this question can be ascertained by looking closely at the Proto-Anatolian stop system reconstructed above. Series 1 is differentiated from series 3 by the presence of aspiration and from series 4 by the absence of voicing, while series 3 and 4 are differentiated from each other by a contrast in voicing. Since it is only series 1 that is represented by medial double writing, it must have been the feature of aspiration that was considered significant by the Hittite scribes. This means that series 4 cannot have been aspirated since it, too, would have been represented by medial double writing. It also means that the opposition of medial double writing and medial single writing cannot have indicated a voicing contrast, since, if that had been the case, then series 3 would also have been represented by medial double writing, which is clearly not the case, both series 3 and 4 being represented by medial single writing. It should be noted here that Gamkrelidze (1968:94) was the first to suggest that medial double writing of stops in Hittite was used as a means to indicate the presence of aspiration (Patri 2009 reaches the same conclusion):

The aspirated stops were rendered in Hittite cuneiform by double writing of consonants, whereas single writing was used to represent plain stops.

Gamkrelidze devotes two later articles (1982 and 2008) to a detailed analysis of Hittite consonantism, noting specifically in the first article (1982:78—79):

In light of these facts, Sturtevant's rule acquires a completely different significance: The graphic reduplication of plosives is used to denote not the simple voiceless plosives but the corresponding aspirated phonemes, while their single writing was used for non-aspirated consonants.

Thus we can reach the conclusion that the Hittite phonological system was characterized by two series of plosives: aspirated ones denoted by the graphic reduplication of the relevant consonant on the one hand, and non-aspirated ones on the other, denoted by single writing of the corresponding consonant.

Three series of Proto-Indo-European plosives: 1) glottalized, 2) voiced (aspirated), and 3) voiceless (aspirated) were reduced in the Hittite phonological system into two series opposed to each other by virtue of aspiration. The differentiating feature for the phonological opposition of plosives is only the factor of aspiration (tenseness), regardless of the original voiced/unvoiced opposition of the plosives, which had phonemic significance in the Proto-Indo-European system. The correlation of Proto-Indo-European plosives depending upon whether they were voiced, voiceless or glottalized was replaced in the Hittite phonological system by the correlation on the basis of "aspiration" (tenseness).

The feature of aspiration, which had been phonologically irrelevant with the phonemes of series 2) and 3) in Proto-Indo-European, became a phonologically significant feature in the Hittite system of plosives. In the process, the Proto-Indo-European series 1) and 2) merged into a general series

of non-aspirated plosives as opposed to the series of aspirated ones, which derives from the Proto-Indo-European series 3) of voiceless (aspirated) plosives.

With the adoption of the Akkadian cuneiform writing, the two series of Hittite plosives — the simple and the aspirated — were written not by the signs for voiced and voiceless plosives, as these were not differentiated in the early Akkadian writing system, but with the single and double writing of the respective consonants. Accordingly, the *single* writing of a consonant was used to express *simple* plosives, while for the Hittite *aspirated* (tense) plosives a new means of denotation was found, that is the *reduplication* of the consonant in question, by which was solved the problem of how to differentiate graphically between simple plosive and the corresponding aspirated consonant.

This does not explain the whole picture, however, for we must still account for the exceptions to Sturtevant's Law. Since the exceptions exhibit medial double writing of stops in Hittite words which correspond etymologically to words in other Indo-European languages with medial voiced stops (or their equivalents, these being derived from either earlier glottalized stops or earlier voiced aspirates at the Proto-Indo-European level), the distinguishing characteristic cannot have been aspiration. Let us take a look at each of the exceptions listed previously (as above, the Proto-Indo-European reconstructions represent the Phonemic Pitch Stage of Proto-Indo-European ["Pre-Anatolian Proto-Indo-European"]):

- A. Hittite *ú-uk-ga* 'I': in this case, we are dealing with a particle added to the stem (cf. Sturtevant 1951:103, §170a), so that, in fact, we have gemination: Proto-Indo-European **ʔek'-+k'e/a* > Proto-Anatolian **ek+ka* > Hittite (with analogical *u*) **uk+ka*. The particle appears in Greek as -γε (dialectal -γα).
- B. Hittite 2 pl. mediopassive ending *-dduma* in, for example, *i-ya-at-du-ma* 'you go': here, the verb stem is probably to be reconstructed as **ʔy-eh-* [**ʔy-ah-*] (so Sturtevant 1951:34, §61; Puhvel 1984—.1/2:334—335, however, considers *iya-* to be a thematic stem comparable to Vedic 3 sg. pres. *ayate* and derives it from earlier **eyo-*), to which the ending **-dum-* has been added. Most likely, the second laryngeal (**h*), which was lost as an independent phoneme in Hittite, has merged with the following dental, producing a geminate. Thus, double writing here indicates former presence of a laryngeal, which has left a trace in the gemination of the following stop.
- C. Hittite (3 sg. pres.) *píd-da-i*, *pád-da-i* 'to dig': here, we are dealing with a Proto-Indo-European stem **bed-/bad-*, to which a laryngeal suffix has been added: **bed-+H-*. In this case, the laryngeal has merged with the preceding stop, producing a geminate.
- D. Hittite (acc.-dat. sg.) *am-mu-uk-ga* 'to me' (also written *am-mu-uk*, *am-mu-ug-ga*, *am-mu-uq-qa*, *am-mu-uk-qa*): as in the first example, we are dealing with a particle that has been added to the stem, thus producing gemination.
- E. Hittite (nom. sg.) *me-ik-ki-iš* 'large': this is similar to the third example in that a laryngeal suffix has merged with a preceding stop, producing a geminate: Proto-Indo-European **mek'-+Hi-* > Hittite **mekkis* (cf. Kimball 1999:261).

5.1.5. CONCLUSIONS

Thus, Sturtevant's Law is to be reinterpreted as follows: double writing of medial stops indicates stop plus something additional, that is, either aspiration or gemination, while single writing of medial stops indicates a plain stop pure and simple. It does not indicate a voicing contrast as traditionally assumed. Kloekhorst (2014b:544—547) likewise interprets the contrast as one of length.

According to Melchert (1994a:21), medial double writing of stops in Hittite indicates fortis (= long) articulation, while single writing indicates lenis (= short) articulation. Similar views are expressed by Kimball (1999:94—95); see also Jäntti 2017. Specifically, Melchert (1994a:117) notes:

I assume that the PA [= Proto-Anatolian] contrast of voiceless/voiced stops has been reanalyzed in Hittite as one of fortis/lenis, with the realization in medial position being that of long/short. I retain the standard symbols for voiceless and voiced stops for convenience. One important contributing factor in this reanalysis was the devoicing of voiced stops in word-initial position.

Melchert's views are not necessarily incompatible with the conclusions reached here. On fortis/lenis articulation, cf. Laver (1994:344) and Ladefoged—Maddieson (1995:95—99). Both Laver and Ladefoged—Maddieson caution against the careless use of these terms.

5.2. DISINTEGRATING INDO-EUROPEAN

We can say with a reasonable amount of certainty that the form of Proto-Indo-European spoken immediately prior to the emergence of the historically-attested non-Anatolian daughter languages was not a unitary language but, rather, a speech area composed of several closely-related dialect groups (cf. Anthony 2007:39—58; Burrow 1973:12—18; Georgiev 1966:382—396). For excellent summaries of the changes that have occurred in the individual Indo-European daughter languages, cf. Bader [ed.] 1994; Baldi 1983; Birnbaum—Puhvel [eds.] 1966; Fortson 2010:170—471; Lockwood 1970; Ramat—Ramat [eds.] 1998; Voyles—Barrack 2009. For discussions relating to specific problem areas, cf. Meillet 1967a and 1984.

The following changes were common to all of the Disintegrating Indo-European dialects (except where noted):

1. The laryngeals $*ʔ$ and $*h$ were lost initially before vowels, while $*\underline{h}h > *h$ and $*\zeta h > *h > *h$ in the same environment.
2. Next, all medial and final laryngeals merged into $*h$.
3. The single remaining laryngeal $*h$ was then lost initially before vowels (except in Pre-Armenian) and medially between an immediately preceding vowel and a following non-syllabic. This latter change caused compensatory lengthening of preceding short vowels.

4. **h* was preserved in all other positions. **h* had a syllabic allophone, **h̥*, when between two non-syllabics. This syllabic allophone is the traditional schwa primum (**ə*).
5. Glottalization was probably lost in late Disintegrating Indo-European itself just as the individual non-Anatolian daughter languages were beginning to emerge.

The velars developed palatalized allophones when contiguous with front vowels, apophonic **o*, and **y*. The beginnings were probably much earlier, before the separation of the Anatolian dialect group from the main speech community. What is certain here is that the palatovelars were fully established in Disintegrating Indo-European. In a central, innovating area, the labiovelars were (probably only partially at first) delabialized. The newly-delabialized labiovelars merged with the unpalatalized allophones of the velars. This change brought about the phonemicization of the palatals since both palatalized velars (from earlier plain velars) and unpalatalized velars (from earlier labiovelars) were now found in the vicinity of front vowels, apophonic **o*, and **y*. It was from this central, innovating area that the so-called “satəm” daughter languages developed.

The phonological system of the Disintegrating Indo-European antecedent of the satəm daughter languages may be reconstructed as follows (column 1 is voiceless aspirated, column 2 is glottalized, and column 3 is voiced aspirated):

	1	2	3	
Obstruents:	p ^h t ^h k ^y ^h k ^h k ^{wh}	p' t' k' ^y k' k' ^w s	b ^h d ^h g ^y ^h g ^h g ^{wh}	(bilabial) (dental) (palatovelar) (velar) (labiovelar)
Laryngeals:		h/h̥		
Resonants:	m/m̥	n/n̥	l/l̥	r/r̥ w/u y/i
Vowels:	e ē	o ō	a ā	(i) (u) ə ī ū

The most significant difference between the phonological system of the Disintegrating Indo-European antecedent of the satəm dialects and that of the centum dialects was in the treatment of the gutturals. In the centum dialects, the labiovelars did not become delabialized, and the palatovelars remained subphonemic.

The phonological system of the Disintegrating Indo-European antecedent of the centum daughter languages may be reconstructed as follows (column 1 is voiceless aspirated, column 2 is glottalized, and column 3 is voiced aspirated):

	1	2	3	
Obstruents:	p ^h t ^h k ^h k ^{wh}	p' t' k' k' ^w s	b ^h d ^h g ^h g ^{wh}	(bilabial) (dental) (velar) (labiovelar)
Laryngeals:		h/h̥		
Resonants:	m/m̥	n/n̥	l/l̥	r/r̥ w/u y/i
Vowels:	e ē	o ō	a ā	(i) (u) ə ī ū

It has traditionally been assumed that column 3 is to be reconstructed as a series of voiced aspirates, and I have chosen to follow the traditional reconstruction. However, it is really only necessary to posit voiced aspirates for Pre-Armenian, Pre-Indo-Iranian, Pre-Greek, and Pre-Italic — the developments in the remaining daughter languages can be accounted for quite nicely by assuming plain voiced stops, as will become apparent by following the developments outlined below. Clearly, the voiced aspirates, regardless of whether they existed in all or merely some of the dialects of Disintegrating Indo-European, are not ancient — they arose in late Disintegrating Indo-European from earlier plain voiced stops.

5.3. TOCHARIAN

In Tocharian, the distinction between voiceless, glottalized, and voiced (traditional voiceless, voiced, and voiced aspirated) stops was eliminated. However, Tocharian originally preserved the older contrast. While this contrast still existed, **t'* was lost before non-syllabic resonants (cf. Van Windekens 1976—1982.I:82—83, §241), while **t^h* and **d* remained. The elimination of the older contrast must, therefore, have taken place after the loss of **t'* before non-syllabic resonants.

1. No doubt, the first step involved the deaspiration of the voiceless aspirates.
2. This was followed by the deglottalization of **p'*, **t'*, **k'*, and **k'^w* and their merger with the voiceless stops **p*, **t*, **k*, and **k^w*, respectively. This is shown by the fact that **mp* remained *mp*, while **mb* became *m* (cf. Van Windekens 1976—1982.I:79), and by the fact that **t* and **t'* had the same treatment before front vowels, namely, palatalization to *c*, while **d* went its own way under the same conditions — palatalization to **dz* > *ts* (cf. Van Windekens 1976—1982.I:83—84).
3. Last, the voiced stops were devoiced and merged with the plain voiceless stops.

These developments may be summarized as follows:

I Pre-Tocharian	II deaspiration	III deglottalization	IV devoicing
p ^h , p', b	> p, p', b	> p, b	> p (w)
t ^h , t', d	> t, t', d	> t, d	> t (c, ts)
k ^h , k', g	> k, k', g	> k, g	> k (ç)
k ^{wh} , k' ^w , g ^w	> k ^w , k' ^w , g ^w	> k ^w , g ^w	> k(w/u) (k, ç)

*s usually remained but was palatalized to ʃ before front vowels. The non-syllabic resonants generally remained.

The Disintegrating Indo-European vowels and diphthongs were greatly modified.

References: Adams 1988:36—42 and 2017a:458—461; Anreiter 1984; Fellner 2006; Gamkrelidze—Ivanov 1995.I:43—44; Hackstein 2017; Krause 1952 and 1955; Krause—Thomas 1960.I:61—68; Malzahn 2010:1—22; Ringe 1996; Van Windekens 1976—1982.I:76—94.

5.4. GERMANIC

Germanic, like Armenian, is extremely conservative in its phonology — the Disintegrating Indo-European consonant system is preserved better in these two branches than in any of the other daughter languages. Unlike Armenian, however, Germanic preserves the older contrast between velars and labiovelars, though, in the course of development, they first became voiceless fricatives and then, at a later date and under certain specific conditions, voiced fricatives (see below for details). Armenian, on the other hand, belongs to the satəm group of languages and is, therefore, descended from that form of Disintegrating Indo-European in which this contrast was replaced by a contrast between palatovelars and plain velars.

In Pre-Proto-Germanic (as in Pre-Proto-Anatolian), the glottalics were deglottalized, resulting in the following system, with the three-way contrast (1) voiceless aspirated ~ (2) plain (unaspirated) voiceless ~ (3) plain voiced:

	1	2	3
Bilabial:	p ^h	p	b
Dental:	t ^h	t	d
Velar:	k ^h	k	g
Labiovelar:	k ^{wh}	k ^w	g ^w

1. The voiceless aspirates (series 1) become voiceless fricatives: *p^h, *t^h, *k^h, *k^{wh} > *f, *p, *χ, *χ^w, except after *s-.

2. Later, the resulting voiceless fricatives became the voiced fricatives **b̥*, **d̥*, **g̥*, and **g̥w*, respectively, except (A) initially and (B) medially between vowels when the accent fell on the contiguous preceding syllable (Verner's Law). **s* was also changed to **z* under the same conditions.
3. **b* remained initially, in gemination, and after nasals; **d* initially, in gemination, and after nasals, **l*, **z*, and **g*; and **g* only in gemination and after nasals. In other positions, however, **b*, **d*, **g* were changed into the voiced fricatives **b̥*, **d̥*, **g̥*, respectively. **g̥w* became **g̥w̥* initially and **w̥* medially (cf. Wright—Wright 1925:131).

The resulting Proto-Germanic consonant system may be reconstructed as follows:

	Stops		Fricatives	
Bilabial:	p	b	f	ɸ
Dental:	t	d	þ	ð
Velar:	k	g	χ	ǯ
Labiovelar:	kw	(gw)	χw	(ǯw)

In Germanic, **a* and **o* merged into **a*, and **ā* and **ō* merged into **ō*. **e* become **i* (A) before a nasal plus consonant (**eNC > *iNC*) and (B) when **i*, **ī*, or **y* followed. **ey* became **ī*. **i* was changed to **e* and **u* to **o* when **a*, **o*, or **e* appeared in the following syllable except when a nasal plus consonant intervened. In the sequences **anχ*, **inχ*, and **unχ*, the *n* was lost, and the vowels were lengthened. **m̥*, **n̥*, **l̥*, and **r̥* developed into **um*, **un*, **ul*, and **ur*, respectively.

The Proto-Germanic vowels and diphthongs may be reconstructed as follows:

Vowels:	i	u	ī	ū
	e		ē	ō
	a			
Diphthongs:	ay	aw	ew	

The consonantal resonants remained unchanged except that final **m* became **n*. This change is also found in Anatolian, Greek, Celtic, and probably Balto-Slavic.

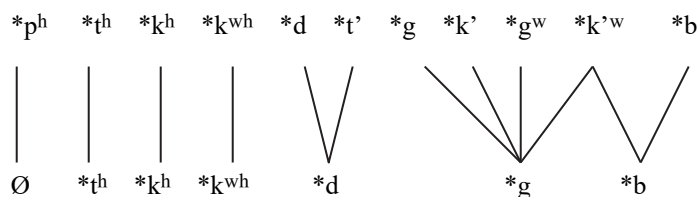
References: Árnason 2011; Bousquette—Salmons 2017:391—398; Gamkrelidze—Ivanov 1995.I:31—36; Harbert 2007:41—88; Hirt 1931—1934.I:79—118; Hutterer 1975; Jasanoff 1978a; König—Van Der Auwera (eds.) 1994; Krahe—Meid 1966—1967.I:79—123; Krause 1968:72—134; Kroonen 2013:xv—xli; Lass 1994:17—29; Lehmann 1952:36—55; Lindeman 1964; Meillet 1967a:116—124, 1970:15—29, and 1984:89—96; Moulton 1972:141—173; Noreen 1894; Normier 1977; Perridon 2008; Prokosch 1939:36—90; Ramat 1998; Fulk 2018:43—137; Ringe 2006; Stiles 2017; Streitberg 1963:97—153; Van Coetsem—Kufner (eds.) 1972; Vennemann 1984; J. Wright 1907:10—164 and 1954:16—83; Wright—Wright 1925:111—134.

5.5. CELTIC

The discussion will be confined to Old Irish; only the major developments will be discussed. For information on developments in the other Celtic daughter languages, the references listed at the end of this section should be consulted.

1. The earlier dental and velar ejectives ($*t'$ and $*k'$) merged completely with the plain voiced stops ($*d$ and $*g$) in Pre-Proto-Celtic. The developments may be assumed to have been ejective > plain voiceless stop (through deglottalization) > voiced stop (through voicing): $*t' > *t > *d$ and $*k' > *k > *g$. There is no evidence in Proto-Celtic for an earlier bilabial ejective $*p'$.
2. Next, the voiced labiovelar $*g^w$ was delabialized and merged with $*g$.
3. Then, the glottalized labiovelar $*k'^w$ developed (A) into $*b$ initially and medially after consonants and (B) into $*g$ initially before $*u$ and medially between vowels and before consonants.
4. Original $*p^h$ was lost in all of the Celtic languages: $*p^h > *h > *Ø$. However, p has been reintroduced into Old Irish through loanwords.

The Celtic developments may be summarized as follows:



The consonants developed positional allophones under various conditions:

1. Palatal allophones developed in the vicinity of original $*i$, $*ī$, $*e$, and $*ē$.
2. Velar allophones developed in the vicinity of original $*u$ and $*ū$.
3. Neutral allophones were found in the vicinity of original $*a$, $*ā$, $*o$, and $*ō$.

In Old Irish, the palatal and velar allophones were indicated as such in writing by surrounding vowels. Unpronounced vowels were often introduced to indicate the quality of the following consonant. /p, t, c, b, d, g/ became the fricatives /f, θ, χ, v, ð, γ/ (written *ph, th, ch, b, d, g*), respectively, initially after words that end or that formerly ended in a vowel and medially between vowels. /m, n, l, r/ became /μ, ν, λ, ρ/ (written *m, n, l, r*), respectively, and /s/ became /h/ under the same conditions. /μ/ was probably a nasalized /v/, while /ν, λ, ρ/ were lax variants of /n, l, r/. Consonants were changed as follows initially when the preceding word ended or formerly ended in a nasal:

1. /p, t, c/ became /b, d, g/ (written *p, t, c*)
2. /b, d/ first became /mb, nd/ and then /mm, nn/

3. /f/ became /v/ (written *b*)
4. /n/ was written before vowels
5. /s, r, l, m, n/ were doubled when they followed a proclitic vowel

Old Irish thus had the following system of consonants (the written form is given first followed by the allophones in slashes):

p	/p, b/	t	/t, d/	c	/k, g/
ph	/f/	th	/θ/	ch	/χ/
f	/f/	s	/s/		
b	/b, v/	d	/d, ð/	g	/g, ɣ/
m	/m, μ/	n	/n, v/	[n]	/ŋ/
		l	/l, λ/	r	/r, ρ/
		h	/h/		

Except for the merger of **ō* and **ā* into *á* and of **ī* and **ē* into *í*, the long and short vowels were mostly preserved in accented syllables. In unaccented syllables, vowels were either lost or subject to various modifications governed by a complicated set of rules. **i* and **u* became *e* and *o*, respectively, under the influence of *a* or *o* in the following syllable. **ew* and **ow* merged into *ó/úa*, **ey* became *é/ía*, **oy* became *óe/oí*, and **ay* became *ái/áe* in accented syllables. The Old Irish vowel system was as follows:

Vowels:	i	e	a	o	u
	í	é	á	ó	ú
Diphthongs:	íu	ía		úa	uí
		éu/éo		oí/óe	
		áu		ái/áe	

**y* was lost. **w* became *f* initially and *b* /v/ after *r, l, d*. **m*, **n*, **l*, **r* were preserved except that final **m* became *n*. In the sequences **Vnt*, **Vnc(h)*, and **Vns*, the **n* was lost, and the preceding vowel was lengthened. The developments of the syllabic nasals and liquids were complicated, though, in general, **ṁ*, **ṇ*, **ḷ*, **ṛ* became *am*, *an*, *al*, *ar*, respectively, before vowels and *em*, *en*, *li* (*le*), *ri* (*re*), respectively, elsewhere.

References: Old Irish: Lehmann—Lehmann 1975; Lewis—Pedersen 1937:26—56; Thurneysen 1946:74—153; Vendryès 1908:17—36; Windisch 1882:1—39. Welsh: Morris Jones 1913:18—30 and 122—191. British Celtic: Schrijver 1995. Gaulish: Dottin 1920; Whatmough 1970. Celtic: Gamkrelidze—Ivanov 1995.I:66—67; Lewis—Pedersen 1937:1—157; MacAulay (ed.) 1992; Matasović 2009:4—11 and 14—16; Pedersen 1909—1913.I; P. de Bernardo Stempel 1987; Zair 2012. General: Ball—Müller 2009; Eska 2004; P. Sims-Williams 2017:361—367; Stifter 2017.

5.6. SLAVIC

In Pre-Slavic, Pre-Baltic, Pre-Indo-Iranian, Pre-Armenian, and Pre-Albanian (the so-called “satəm” languages), the velars developed palatalized allophones when contiguous with front vowels, apophonic **o*, and **y*. In the early prehistory of these branches, the labiovelars were (perhaps only partially at first) delabialized. The newly delabialized (labio)velars merged with the unpalatalized allophones of the velars. This change brought about the phonemicization of the palatals since both palatalized velars (from earlier plain velars) and unpalatalized velars (from earlier labiovelars) were now found in the vicinity of front vowels, apophonic **o*, and **y*.

The phonological system of Pre-Proto-Slavic may thus be reconstructed as follows (cf. Shevelov 1964:26):

	1	2	3
Bilabial:	p ^h	p'	b
Dental:	t ^h	t'	d
Palatal:	k ^y ^h	k' ^y	g ^y
Velar:	k ^h	k'	g
(Labiovelar:	k ^{wh}	k ^w	g ^w)

1. The ejectives merged completely with the plain voiced stops (**b*, **d*, **g^y*, and **g*) in Pre-Proto-Slavic. The development may be assumed to have been ejective > plain voiceless stop (through deglottalization) > voiced stop (through voicing): **p'* > **p* > **b*, **t'* > **t* > **d*, **k'^y* > **k^y* > **g^y*, and **k'* > **k* > **g*. The loss of glottalization caused lengthening of preceding contiguous short vowels (Winter's Law [cf. Collinge 1985:225—227]).
2. Then, the voiceless aspirates were deaspirated: **p^h*, **t^h*, **k^y^h*, **k^h* > **p*, **t*, **k^y*, **k*. Note: there are a small number of examples in which **k^h* appears to become **x* in Proto-Slavic. These are best explained as borrowings, probably from Iranian (cf. Carlton 1991:95).
3. After **k*, **r*, **i*, **u*, **s* became **x* (> **š* before front vowels). A similar change is found in Indo-Iranian.
4. **k^y* and **g^y* became **s* and **z*, respectively. No doubt, the developments were as follows: **k^y* > **t^y* > **t^s* > **s* and **g^y* > **d^y* > **d^z* > **z*.
5. **k* and **g* were palatalized to **č* and **ž*, respectively, before front vowels and **y*.
6. The syllabic resonants **m*, **n*, **l*, **r* developed into **i* (or **u*) plus **m*, **n*, **l*, **r*, thus: **m*, **n*, **l*, **r* > **im*, **in*, **il*, **ir*.
7. At a later date, **k* and **g* were palatalized to **c* and **dz*, respectively, before **ě* (< **oy*). **t*, **d*, **n*, **l*, **r* plus the semivowel **y* became **t^y*, **d^y*, **n^y*, **l^y*, **r^y*, respectively, while **s* became **š* under the same conditions.
8. **p*, **b*, **m*, **v* plus **y* became **p^{ly}*, **b^{ly}*, **m^{ly}*, **v^{ly}*, respectively.
9. **a* and **o* merged into **o*, and **ā* and **ō* merged into **a*. **ey* and **ī* both became **i*, and **oy* (< **ay* and **oy*) and **ē* became **ě*. **ū* became **y*, **i*

became **b*, and **u* became **b*. **e* plus a nasal became **ɛ* and **o* plus a nasal became **ɔ*. **ow* (< **aw* and **ow*) became **u*.

The Common Slavic phonological system may be reconstructed as follows (cf. M. Greenberg 2017:523 and 533):

Stops:	p	t	tʲ	k
	b	d	dʲ	g
Fricatives:	f	s	š	x
		z	ž	(ɣ)
Affricates:		c		
Nasals:	m	n	nʲ	
Liquids:		r	rʲ	
		l	lʲ	
Semivowels:	v		j	
Vowels:			i	y
			u	
	ɪ	ʊ		
	e	o		
			ě	a
				ɛ
				ɔ

References: Bidwell 1963; Birnbaum 1975b:84—149; Bomhard 1984b:80—81; Carlton 1991; Collins 2018; Comrie—Corbett (eds.) 1993; De Bray 1969, 1980a, 1980b, and 1980c; Derksen 2008:2—22; Entwistle—Morison 1964:71—101; Kortlandt 1994; Leskien 1969:10—64; Lunt 2001:29—51 and 181—221; Meillet 1965a:20—45, 86—102, and 126—157; Schmalstieg 1976a:31—55; Shevelov 1964; Sussex—Cubberley 2006:25—40; Vaillant 1950—1966.I:23—103; Vondrák 1900:32—148 and 1906—1908.I:18—393; Šefčík 2013; M. Greenberg 2017:522—533.

5.7. BALTIC

The Baltic developments were fairly similar to the early Slavic developments, except that **kʲ* and **gʲ* became **š* and **ž*, respectively. As in Pre-Proto-Slavic, the ejectives merged completely with the plain voiced stops in Pre-Proto-Baltic. Lithuanian shows the change of **s* to **š* after **k* and **r* but not after **i* and **u* as in Slavic and Indo-Iranian. The syllabic resonants **m̥*, **n̥*, **l̥*, **r̥* developed into **i* (or **u*) plus **m*, **n*, **l*, **r*, thus: **m̥*, **n̥*, **l̥*, **r̥* > **im*, **in*, **il*, **ir*. In Lithuanian, *t* plus *j* (= *y*) and *d* plus *j* (= *y*) became *či* and *dži*, respectively; *t* plus *l* and *d* plus *l* became *kl* and *gl*, respectively.

Except for the merger of **a* and **o* into **a*, **ay* and **oy* into **ai*, and **aw* and **ow* into **au*, the vowel system remained reasonably faithful to that of Disintegrating Indo-European. Unlike Slavic and Germanic, Baltic did not merge Disintegrating Indo-European **ā* and **ō*.

The Common Baltic phonological system may be reconstructed as follows (cf. Stang 1966:89; S. Young 2017b:496):

p	b	m	
t	d	n	
k	g	[ŋ]	
kʸ (?)	gʸ (?)	[nʸ] (?)	
š	ž		
s	(z)		
r	l	y	w

Note: Stang writes *j* and *u* for *y* and *w*, respectively.

References: Dini 2014:102—133; Endzelins 1971:48—76; Petit 2018a; Senn 1957—1966:83—90; Stang 1966:88—120; S. Young 2017b:489—499. Baltic developments are also discussed in Meillet 1965a, Shevelov 1964, and Vaillant 1950—1966. For Old Prussian, cf. Schmalstieg 1974a:8—28 and Mažiulis 2004. For Balto-Slavic, cf. Gamkrelidze—Ivanov 1995.I:67—70 and S. Young 2017a.

5.8. ARMENIAN

Armenian is particularly important in that it provides the key to understanding the developments in Pre-Indo-Iranian, Pre-Greek, and Pre-Italic. In the early prehistory of Pre-Armenian, Pre-Indo-Iranian, Pre-Greek, and Pre-Italic, the glottalics first became plain voiceless stops (through deglottalization), and the plain voiced stops then became voiced aspirates. Next, at a later date, in Pre-Indo-Iranian, Pre-Greek, and Pre-Italic, but not in Pre-Armenian, the plain voiceless stops became voiced stops. Armenian, however, preserves the first stage of this shift — that is to say, the plain voiceless stops remained as such and were not changed to voiced stops. Thus, the Classical Armenian phonological system directly attests the three-way contrast (1) voiceless aspirated ~ (2) plain voiceless ~ (3) voiced aspirated in its occlusive system.

1. In Pre-Armenian (as in Pre-Slavic, Pre-Baltic, Pre-Albanian, and Pre-Indo-Iranian), the velars developed palatalized allophones when contiguous with front vowels, apophonic **o*, and **y*. Next, the labiovelars were (perhaps only partially at first) delabialized. The newly delabialized (labio)velars then merged with the unpalatalized allophones of the velars. This change brought about the phonemicization of the palatals since both palatalized velars (from earlier plain velars) and unpalatalized velars (from earlier labiovelars) were now found in the vicinity of front vowels, apophonic **o*, and **y*.
2. Next, the glottalics were deglottalized: **p'*, **t'*, **k'y*, **k' > *p*, **t*, **k'y*, **k*. Note: there are no examples of **p'* in Armenian.

3. Then, the plain voiced stops became voiced aspirates: $*b, *d, *g^y, *g > *b^h, *d^h, *g^{yh}, *g^h$. This was a context-free development. On the interpretation of the sounds traditionally transcribed as /b/, /d/, /g/, /j/, and /j/ as voiced aspirates, cf. Godel 1975:9—10; Garrett 1998; Schirru 2012. It should be noted that Grassmann's Law did not operate in Armenian (cf. Vennemann 1989:239).
4. The Pre-Armenian voiced aspirates remained except that, medially between vowels, $*b^h > w$, $*g^{yh} > *j^h / d\check{z}^h / > z$, and $*g^h > \check{z}$, while $*g^h$ remained initially before back vowels but was changed to $\check{j} / d\check{z}^h /$ before front vowels.
5. The syllabic resonants $*m, *n, *l, *r$ developed into $*a$ plus $*m, *n, *l, *r$, thus: $*m, *n, *l, *r > am, an, al, ar$ (ar before n).
6. l became l before consonants.
7. $*w$ became g or v .
8. $*s$ became h or \emptyset initially before vowels.
9. As in Indo-Iranian, Slavic, and Lithuanian, $*s$ became \check{s} after r .
10. $*sk$ and $*ks$ became \check{c} .
11. The short vowels remained unchanged, but $*\bar{e}$ became i , $*\bar{o}$ became u , and $*\bar{a}$ became a . $*i / *i$ and $*u / *u$ lost any distinction of length. $*ew$ and $*ow$ became oy , $*ay$ became ay , $*aw$ became aw , and $*ey$ and $*oy$ became \bar{e} .

The Armenian developments may be summarized as follows:

I palatalization of velars and delabialization of labiovelars	II deglootalization of ejectives	III development of voiced aspirates	IV Classical Armenian (traditional transcription)
$p^h, (p'), b >$	$p^h, p, b >$	$p^h, p, b^h >$	$h (w, \emptyset), -, b (w)$
$t^h, t', d >$	$t^h, t, d >$	$t^h, t, d^h >$	t^h, t, d
$k^{yh}, k'y, g^y >$	$k^{yh}, k^y, g^y >$	$k^{yh}, k^y, g^{yh} >$	$s, c, j (z)$
$k^h, k', g >$	$k^h, k, g >$	$k^h, k, g^h >$	$k^h, k, g (\check{j}, \check{z})$

At a later date, earlier clusters of voiceless stop plus laryngeal developed as follows:

pH	$>$	p^h
tH	$>$	t^h
kH	$>$	x

In Armenian, some of the reflexes of the original voiceless aspirates merged with the reflexes of the new voiceless aspirates. This happened in the case of certain onomatopoeic terms, where, for example, original $*p^h$ and $*k^h$ appear as p^h and x , respectively, as if they were from earlier $*pH$ and $*kH$. In like manner, the aspiration of the original voiceless aspirates was preserved in Armenian after initial $*s$ - (a similar development took place in Indo-Iranian). Finally, $*t^h$ and $*tH$ have

mostly merged in Armenian, though earlier **rt^h* has become *rd*, while **rtH* has become *rt^h* (cf. Meillet 1967a:104—105 and 1984:78—79).

Armenian is the only non-Anatolian daughter language that has preserved a trace of a consonantal laryngeal. Kuryłowicz's **₂* (Sturtevant's **x*) appears as *h* initially before full-grade vowels in a small number of words (cf. Austin 1942:22—25; Bomhard 1976:231—232, 1979a:87—88, and 1984b:82—83; Greppin 1981:120—122; Polomé 1980:17—33; Sturtevant 1942:29—30; Winter 1965b:102). The following examples have cognates in the Anatolian languages:

1. Armenian *hav* 'grandfather' (< Pre-Armenian **hawhos*): Hittite *ḫu-uh-ḫa-aš* 'grandfather'; Hieroglyphic Luwian *huhas* 'grandfather'; Lycian *ḫuga-* 'grandfather'. Cf. Latin *avus* 'grandfather'; Gothic *awō* (f.) 'grandmother'; Old Irish *áue* 'grandson'; Lithuanian *avýnas* 'uncle'. Puhvel 1984— .3:355—358; Kloekhorst 2008b:352—353.
2. Armenian *hoviw* 'shepherd' (< Pre-Armenian **howi-pā-*): Hittite (nom. sg. or pl. ?) *ḫa-a-u-e-eš* 'sheep'; Luwian *ḫa-a-ú-i-iš* 'sheep'; Hieroglyphic Luwian *hawis* 'sheep'; Lycian *ḫava* 'sheep'. Cf. Sanskrit *ávi-h* 'sheep'; Greek *ὄϊς*, *οἶς* 'sheep'; Latin *ovis* 'sheep'; Lithuanian *avis* 'sheep'. Puhvel 1984— .3:279—280; Kloekhorst 2008b:337—338.
3. Armenian *haravunk^h* 'arable land' (< Pre-Armenian **har-* 'to plow'): Hittite *ḫar-aš-zi* 'to plow'. Cf. Greek *ἀρόω* 'to plow, to till'; Latin *arō* 'to plow, to till'; Gothic *arjan* 'to plow'; Lithuanian *ariù* 'to plow, to till'; Tocharian B *āre* 'plow'. But note Armenian *arawr* 'plow' without initial *h*. On the other hand, Puhvel (1984— .3:184—185) derives the Hittite form from Akkadian *ḫarāšu* 'to plant' or *ḫarāšu* 'to dig a furrow'; but cf. Tischler 1977— :182—183; Kloekhorst 2008b:312—314.
4. Armenian *hogi* 'wind, spirit' (< Pre-Armenian **howyo-*), *hov* 'wind', *hovem* 'to let air in': Hittite *ḫu-wa-an-za* 'wind'. Cf. Sanskrit *vāti* 'to blow'; Greek *ἄημι* 'to blow, to breathe'; Latin *ventus* 'wind'; Gothic *winds* 'wind'; Tocharian A *want* 'wind'; Lithuanian *vėjas* 'wind'. Puhvel 1984— .3:428—429; Kloekhorst 2008b:368.
5. Armenian *han* 'grandmother' (< Pre-Armenian **hano-s*): Hittite (gen. pl.) *ḫa-an-na-aš* 'grandmother'; Lycian *ḫñna-* or *ḫñni-* 'grandmother'. Cf. Old High German *ana* 'grandmother'; Latin *anus* 'old woman'; Old Prussian *ane* 'grandmother'. Puhvel 1984— .3:84—86; Kloekhorst 2008b:285—286.
6. Armenian *harkanem* 'to split, to fell' (< Pre-Armenian **hark'-*): Hittite *ḫa-ar-ak-zi* 'to be destroyed', *ḫar-ga-aš* 'destruction, ruin'. Cf. Old Irish *orgaim* 'to strike, to destroy'. This etymology is rejected by Puhvel 1984— .3:157—168; but cf. Kloekhorst 2008b:306—307; Benveniste 1935:162.
7. Armenian *haçi* 'ash-tree' (< Pre-Armenian **hask^{vo}-*): Hittite ^{GIŠ}*ḫa-aš-ši-ka-aš* 'a tree and its fruit (?)'. Cf. Old Icelandic *askr* 'ash-tree'; Old High German *ask* 'ash-tree'. This comparison is not mentioned in Puhvel 1984— .3:232; but cf. Tischler 1977— :200—201; Kloekhorst 2008b:324.
8. Armenian *Hay* 'Armenian': Hittite *Ḫayaša* the name of a region (cf. Meillet 1936:9). No doubt this term has been borrowed by Armenian.

The following examples have no known Anatolian cognates:

1. Armenian *hav* ‘bird’ (< Pre-Armenian **hawī-s*): Latin *avis* ‘bird’; Sanskrit *vī-ḥ* ‘bird’.
2. Armenian *hot* ‘smell’ (< Pre-Armenian **hot’os-*): Latin *odor* ‘smell’; Greek ὄζω ‘to smell’.
3. Armenian *hum* ‘raw’ (< Pre-Armenian **hōmo-s*): Sanskrit *āmá-ḥ* ‘raw’; Greek ὠμός ‘raw’.

The Armenian material is not without problems, however. Both Meillet (1936:38) and Winter (1965b:102) point out that initial *h* is unstable. This means that the same word sometimes has two alternates, one with *h-* and one without — Meillet’s example is *hogi* ‘wind, spirit’ beside *ogi*. Furthermore, *h-* is sometimes missing where the Hittite cognate unequivocally points to original **h₁h* (= **ǵ₂*) such as in Armenian *arcat^h* ‘silver’ beside Hittite *ḫarkiš* ‘white’ (other cognates include Greek ἀργός ‘bright, white’ and Latin *argentum* ‘silver’). Consequently, the Armenian material, though extremely valuable, must be used with caution.

The Neogrammarians and their followers — with the exception of Ferdinand de Saussure — did not reconstruct laryngeals as part of the Proto-Indo-European phonological system. However, they had all of the tools at their disposal to do so. First of all, as early as 1878, de Saussure had posited his now famous “coefficients sonantiques” solely on the basis of an analysis of the patterns of vowel gradation. Secondly, Armenian has a clear reflex of one of de Saussure’s “coefficients”. Unfortunately, the Armenian evidence escaped detection until after the discovery in 1927 by Kuryłowicz that one of de Saussure’s “coefficients” was preserved in Hittite. It was only then that the Armenian material was re-examined by Austin (1942:22—25) and the laryngeal reflex found. It should be noted that Albert Cuny made the same discovery at the same time (1927) as Kuryłowicz.

References: Bomhard 2019c; Gamkrelidze—Ivanov 1995.I:36—40; Garrett 1998; Godel 1975:9—10 and 61—91; Macak 2017; Meillet 1936:23—40; Olsen 2017a:423—434; Ravnæs 1991; Schirru 2012; Winter 1965a:109—115; Schmitt 1981:34—79; Vaux 1998; Fleming 2000.

5.9. INDO-IRANIAN

The changes leading from Proto-Indo-European to Proto-Indo-Iranian are rather complicated. The first three steps are identical to what is assumed to have happened in Pre-Armenian.

1. In Pre-Indo-Iranian (as in Pre-Slavic, Pre-Baltic, Pre-Albanian, and Pre-Armenian), the velars developed palatalized allophones when contiguous with front vowels, apophonic **o*, and **y*. Next, the labiovelars were (perhaps only partially at first) delabialized. The newly delabialized (labio)velars then merged

with the unpalatalized allophones of the velars. This change brought about the phonemicization of the palatals since both palatalized velars (from earlier plain velars) and unpalatalized velars (from earlier labiovelars) were now found in the vicinity of front vowels, apophonic **o*, and **y*.

2. Next, the glottalics were deglottalized: **p'*, **t'*, **k'y*, **k'* > **p*, **t*, **k^y*, **k*.
3. Then, the plain voiced stops became voiced aspirates: **b*, **d*, **g^y*, **g* > **b^h*, **d^h*, **g^{yh}*, **g^h*. This was a context-free development. This was the stage reached by Armenian.
4. When two voiced aspirates cooccurred in a root, the first was deaspirated (Grassmann's Law). It should be noted that Grassmann's Law only appears in Indo-Aryan. In Iranian (Old Persian and Avestan), the plain voiced stops and the voiced aspirates have the same treatment (cf. Kent 1953:29).
5. In Pre-Indo-Iranian (and in Pre-Greek and Pre-Italic), but unlike Pre-Armenian, the plain (unaspirated) voiceless stops (from earlier glottalics) developed into plain (unaspirated) voiced stops: **p*, **t*, **k^y*, **k* > **b*, **d*, **g^y*, **g*. This was a context-free development. (An identical change has taken place in Kabardian.)
6. The imbalance caused by the voicing of the plain voiceless stops caused the voiceless aspirates to be partially deaspirated. The deaspiration took place everywhere except (A) after initial **s-* and (B) in onomatopoeia (cf. Bomhard 1986a:73). However, aspiration was lost in the clusters **sp^h-*, **st^h-*, **sk^h-* when an earlier laryngeal followed in the stem or when another aspirated stop followed in the stem: **(s)th^eHy-* > **(s)teHy-* > **(s)tāy-* (cf. Sanskrit *stāyati* 'he, she steals', *stāyú-h*, *tāyú-h* 'thief, robber'); **(s)th^eHi-* > **(s)teHi-* > **(s)tai-* (cf. Sanskrit *stená-h* 'thief', *stéya-h* 'theft, robbery'). **(s)th^enH-* > **(s)tenH-* > **(s)ten-* (cf. Sanskrit *stanati* 'resounds, reverberates'). Note: Apparent exceptions to these rules appear to be due to the generalization of variant forms of the stems in question, or, in some cases, they are due to borrowing.
7. Additional voiceless aspirates arose from earlier clusters of voiceless stop plus laryngeal: **pH*, **tH*, **kH* > **p^h*, **t^h*, **k^h*, respectively.
8. **s* was changed into **š* after **k*, **r*, **i*, **u*. A similar change is also found in Slavic.
9. **k^y*, **g^y*, **g^{yh}* were affricated to **tš*, **dž*, **dž^h*, respectively (cf. Burrow 1973:74).
10. Following that, the velars **k*, **g*, **g^h* were palatalized to **k^y*, **g^y*, **g^{yh}*, respectively, before **ē*, **ī*, and **y* (cf. Mayrhofer 1972:24). Note: **k^h* was not palatalized.
11. After the palatalization of the velars had taken place, the short vowels merged into **a*, and the long vowels merged into **ā*. Original **o* became *ā* in open syllables (Brugmann's Law).
12. The syllabic nasals became *a*, and the syllabic laryngeal (**ḥ*) partially merged with *i*.
13. **h* was then lost after *a* (< **ḡ* and **ḥ*) with compensatory lengthening.
14. **r* and **l* merged into *r*, and **ṛ* and **ḷ* merged into *r*.

The developments outlined above may be summarized as follows:

I palatalization of velars and delabialization of labiovelars			II deglossalization of ejectives			III development of voiced aspirates					
Bilabial:	p ^h , p', b	>	p ^h , p, b	>	p ^h , p, b ^h	>					
Dental:	t ^h , t', d	>	t ^h , t, d	>	t ^h , t, d ^h	>					
Palatal:	k ^y ^h , k'y, g ^y	>	k ^y ^h , k ^y , g ^y	>	k ^y ^h , k ^y , g ^y ^h	>					
Velar:	k ^h , k', g	>	k ^h , k, g	>	k ^h , k, g ^h	>					
IV voicing of plain (unaspirated) voiceless stops			V partial deaspiration of voiceless aspirates			VI palatals become affricates			VII partial palatalization of velars		
p ^h , b, b ^h >			p, p ^h , b, b ^h >			p, p ^h , b, b ^h >			p, p ^h , b, b ^h		
t ^h , d, d ^h >			t, t ^h , d, d ^h >			t, t ^h , d, d ^h >			t, t ^h , d, d ^h		
k ^y ^h , g ^y , g ^y ^h >			k ^y , k ^y ^h , g ^y , g ^y ^h >			t͡s, -, d͡z, d͡z ^h >			t͡s, -, d͡z, d͡z ^h		
k ^h , g, g ^h >			k, k ^h , g, g ^h >			k, k ^h , g, g ^h >			k ^y , -, g ^y , g ^y ^h		
									(before *č̣, *č̣̣, *y)		
									k, k ^h , g, g ^h		
									(elsewhere)		

In Avestan and Old Persian, the plain and aspirated voiced stops merged. The voiceless aspirates became fricatives except after a sibilant, where they were deaspirated. The plain voiceless stops developed into fricatives when immediately followed by a consonant unless a sibilant preceded.

In Old Indic (Vedic and Classical Sanskrit), *d͡z and *g^y merged into *j*, and *d͡z^h and *g^y^h merged into *h*.

The Old Indic phonological system was as follows (cf. Burrow 1973:67—117; Ghatage 1962:71; Gonda 1966:9—10; Mayrhofer 1972:17; Thumb 1958—1959. I/1:188—197; Whitney 1889:2—3):

Velar:	k क	kh ख	g ग	gh घ	ṅ ङ
Palatal:	c च	ch छ	j ज	jh झ	ñ ण
Retroflex:	ṭ ट	ṭh ठ	ḍ ड	ḍh ढ	ṇ ण
Dental:	t त	th थ	d द	dh ध	n न
Bilabial:	p प	ph फ	b ब	bh भ	m म
Semivowels:	y य	r र	l ल	v व	
Sibilants:	ś श	ṣ ष	s स		
Aspirate:	h ह				
Visarga:	ḥ ः				
Anusvāra:	m̐ ँ				

Vowels:	a अ	i इ	u उ	ṛ ऋ	ḷ ᳚	e ए	o ओ
	ā आ	ī ई	ū ऊ	ṛ ऋ			
Diphthongs:	ai ऐ	au औ					

Once the above system was established, it remained remarkably stable for well over three thousand years — the phonological systems of the modern Indo-Aryan languages remain to this day similar in structure to the phonological system of Old Indic (cf. Bloch 1965:96—97; see Ghatage 1962 for examples). This fact raises an interesting question about the phonological system reconstructed for the Indo-European parent language by the Neogrammarians: The Neogrammarian reconstruction is extremely close to the phonological system of Old Indic. If the Neogrammarian system were in fact an accurate representation of what had existed in Proto-Indo-European, one may legitimately ask why it, too, did not remain stable in the majority, if not all, of the Indo-European daughter languages. It thus seems to be a fair conclusion that the Proto-Indo-European phonological system was not in fact similar to that of Old Indic and that the Old Indic system was an innovation.

References: Indo-Iranian: Gray 1902; Kuz'mina 2007. Indo-Aryan: W. S. Allen 1953; Burrow 1973:67—117 and 1979; Cardona—Jain (eds.) 2003; Edgerton 1946; Ghatage 1962; Gonda 1966:9—19; Katre 1968; Kobayashi 2004 and 2017; Kulikov 2017b:221—229; MacDonell 1916:1—47; Masica 1991; Mayrhofer 1972:20—29; Renou 1952:23—68; Thumb 1958—1959.I/1:276—315; Ulhenbeck 1898; Whitney 1889:1—73; Wackernagel 1896; Zoller 2023. Iranian: Beekes 1988a:70—103 and 1997:1—26; Cantera 2017; De Vaan 2003; De Vaan—Lubotsky 2012; Jackson 1968:1—61; Meillet 1915; Johnson 1917:67—89; Kent 1953:29—42; Testen 1997; Martínez—De Vaan 2014:7—37; N. Sims-Williams 2017:266—274; Skjærvø 2007.

5.10. GREEK

Many of the early Pre-Greek developments were similar to what is assumed to have happened in Pre-Armenian and Pre-Indo-Iranian. However, Greek is a so-called “centum” language, which means that it initially preserved the original contrast between velars and labiovelars. Unlike Pre-Armenian and Pre-Indo-Iranian, but similar to Italic, Greek changed the voiced aspirates into voiceless aspirates.

1. First, the glottalics were deglottalized: $*p', *t', *k', *k'^w > *p, *t, *k, *k^w$.
2. Then, the plain voiced stops became voiced aspirates: $*b, *d, *g, *g^w > *b^h, *d^h, *g^h, *g^wh$. This was a context-free development.
3. As in Old Indic (but not Iranian), when two voiced aspirates cooccurred in a root, the first was deaspirated (Grassmann's Law).
4. In Pre-Greek (and in Pre-Indo-Iranian and Pre-Italic), but unlike Pre-Armenian, the plain (unaspirated) voiceless stops (from earlier glottalics) developed into plain (unaspirated) voiced stops: $*p, *t, *k, *k^w > *b, *d, *g, *g^w$ (cf. Gamkrelidze—Ivanov 1995.I:52—57). This was a context-free development.

5. The imbalance caused by the voicing of the plain voiceless stops caused the voiceless aspirates to be partially deaspirated. Note: Emonds (1972:120) also assumes that some of the examples of voiceless aspirates found in Indo-Iranian, Greek, and Armenian are derived from the original voiceless aspirates, that is to say, they failed to undergo the expected deaspiration. Edmonds accounts for this by “reintroduction from a dialect that did not undergo Z2 [deaspiration]”. In other words, he sees them as borrowings. While this may be true in some cases, I prefer to see them mostly as the natural result of developments within these branches themselves.
6. Additional voiceless aspirates arose from earlier clusters of voiceless stop plus laryngeal: $*pH, *tH, *kH > *p^h, *t^h, *k^h$, respectively.
7. At a later date, the voiced aspirates were devoiced — the unaspirated allophones became plain (unaspirated) voiceless stops, and the aspirated allophones became voiceless aspirates: $*b \sim *b^h, *d \sim *d^h, *g \sim *g^h, *g^w \sim *g^{wh} > *p \sim *p^h, *t \sim *t^h, *k \sim *k^h, *k^w \sim *k^{wh}$. The newly-formed plain and aspirated voiceless stops merged completely with the previously-existing plain and aspirated voiceless stops. As a typological parallel, it may be noted that similar devoicing of earlier voiced aspirates took place in Romany (cf. Meillet 1967a:100 and 1984:76).

The Greek developments may be summarized as follows:

	I deglootalization of ejectives	II development of voiced aspirates	III voicing of plain (unaspirated) voiced stops
Bilabial:	p^h, p, b	$> p^h, p, b^h$	$> p^h, b, b^h$
Dental:	t^h, t, d	$> t^h, t, d^h$	$> t^h, d, d^h$
Velar:	k^h, k, g	$> k^h, k, g^h$	$> k^h, g, g^h$
Labiovelar:	k^{wh}, k^w, g^w	$> k^{wh}, k^w, g^{wh}$	$> k^{wh}, g^w, g^{wh}$
	IV partial deaspiration of voiceless aspirates		V devoicing of voiced aspirates
	p, p^h, b, b^h	$>$	p, p^h, b
	t, t^h, d, d^h	$>$	t, t^h, d
	k, k^h, g, g^h	$>$	k, k^h, g
	k^w, k^{wh}, g^w, g^{wh}	$>$	k^w, k^{wh}, g^w

The labiovelars were eliminated in Greek in historic times. The process of elimination probably occurred in several stages. Since the labiovelars mostly remain

in Mycenaean, their elimination can reasonably be placed between the Mycenaean period and the beginning of the alphabetic period, that is, between about 1400—900 BCE (cf. Lejeune 1972:43—53). The developments were as follows:

1. Before or after *u*, **k^w*, **k^{wh}*, and **g^w* were delabialized, and the resulting phonemes merged with *k*, *k^h*, and *g* (written κ, χ, and γ), respectively.
2. Next, **k^w*, **k^{wh}*, and **g^w* were palatalized before *ē* and *ī*. The resulting sounds then merged with *t*, *t^h*, and *d* (written τ, θ, and δ), respectively, in the majority of Greek dialects.
3. Finally, all remaining labiovelars became bilabials: **k^w*, **k^{wh}*, and **g^w* > *p*, *p^h*, and *b* (written π, φ, and β).

**m*, **n*, **l*, **r* generally remained in Greek except that final **-m* became *-n* (written ν) as in Anatolian, Germanic, Celtic, and probably Baltic and Slavic. **m*, **n*, **l*, **r* developed into αμ, αν, αλ, αρ, respectively, before vowels. Before consonants, **m* and **n* merged into α, while **l* and **r* became αλ/λα and αρ/ρα, respectively.

**s*, **y*, and **w* were lost medially between vowels. Initially before vowels, **s* became *h* (written ς), **y* became either *h* or *z* (written ς and ζ, respectively), while **w* was lost in Attic-Ionic. **s* remained when final and when before or after voiceless stops.

The vowels and diphthongs were well-preserved in all of the Greek dialects. The most important change was that of *ā* to η in Attic-Ionic. Additional changes worth mentioning include the compensatory lengthening of short vowels, the shortening of long vowels, and the development of new long vowels through contraction. For details about these developments, cf. Lejeune 1972:187—263.

References: W. S. Allen 1974; Bubenik 2017; Brugmann 1900:23—159; Buck 1933:78—161; Gamkrelidze—Ivanov 1995.I:52—57; Giannakis (ed.) 2014; Grammont 1948; Hirt 1902:43—200; Horrocks 2010; Lejeune 1972; Meillet—Vendryès 1968:40—68; Palmer 1980:223—241; Rix 1992:29—97; Schwyzler 1953.I:169—371; Sturtevant 1940; Sihler 1995:35—242; Thompson 2017:291—297; J. Wright 1912:5—116.

5.11. ITALIC

Italic is divided into two distinct branches, namely, Oscan-Umbrian (also called Sabellian or Sabellic) and Latin-Faliscan. The Oscan-Umbrian branch includes a number of poorly-attested languages besides Oscan and Umbrian — these include Aequian, Marrucinian, Marsian, Paelignian, Sabinian, Southern Picenian, Vestinian, and Volscian (cf. Sihler 1995:14). The differences between Oscan-Umbrian, on the one hand, and Latin-Faliscan, on the other, are extremely pronounced, so much so that some scholars deny any special relationship between these two groups and see them instead as two separate branches of Indo-European (for a discussion of the issues involved, cf. Beeler 1966:51—58).

Many of the early Pre-Italic developments were similar to what is assumed to have happened in Pre-Greek. Like Greek, Italic belonged to the so-called “centum” languages, which means that it initially preserved the original contrast between velars and labiovelars.

1. First, the glottalics were deglottalized: $*p', *t', *k', *k'^w > *p, *t, *k, *k^w$.
2. Then, the plain voiced stops became voiced aspirates: $*b, *d, *g, *g^w > *b^h, *d^h, *g^h, *g^{wh}$. This was a context-free development. Note: Grassmann’s Law did not operate in Italic.
3. In Pre-Italic (and in Pre-Indo-Iranian and Pre-Greek), but unlike Pre-Armenian, the plain (unaspirated) voiceless stops (from earlier glottalics) developed into plain (unaspirated) voiced stops: $*p, *t, *k, *k^w > *b, *d, *g, *g^w$ (cf. Gamkrelidze—Ivanov 1995.I:57—65). This was a context-free development.
4. The imbalance caused by the voicing of the plain voiceless stops caused the voiceless aspirates to be partially deaspirated.
5. Additional voiceless aspirates arose from earlier clusters of voiceless stop plus laryngeal: $*pH, *tH, *kH > *p^h, *t^h, *k^h$, respectively.
6. At a later date, the voiced aspirates were devoiced: $*b^h, *d^h, *g^h, *g^{wh} > *p^h, *t^h, *k^h, *k^{wh}$. The newly-formed aspirated voiceless stops merged completely with the previously-existing aspirated voiceless stops.
7. Finally, the voiceless aspirates (from earlier voiced aspirates as well as from clusters of voiceless stop plus laryngeal) became voiceless fricatives.

The Italic developments may be summarized as follows:

	I deglottalization of ejectives		II development of voiced aspirates		III voicing of plain (unaspirated) voiced stops
Bilabial:	p ^h , p, b	>	p ^h , p, b ^h	>	p ^h , b, b ^h
Dental:	t ^h , t, d	>	t ^h , t, d ^h	>	t ^h , d, d ^h
Velar:	k ^h , k, g	>	k ^h , k, g ^h	>	k ^h , g, g ^h
Labiovelar:	k ^{wh} , k ^w , g ^w	>	k ^{wh} , k ^w , g ^{wh}	>	k ^{wh} , g ^w , g ^{wh}
	IV partial deaspiration of voiceless aspirates		V devoicing of voiced aspirates		VI voiceless aspirates become voiceless fricatives
	p, p ^h , b, b ^h	>	p, p ^h , b	>	p, f, b
	t, t ^h , d, d ^h	>	t, t ^h , d	>	t, θ, d
	k, k ^h , g, g ^h	>	k, k ^h , g	>	k, χ, g
	k ^w , k ^{wh} , g ^w , g ^{wh}	>	k ^w , k ^{wh} , g ^w	>	k ^w , χ ^w , g ^w

In Oscan and Umbrian, **f*, **θ*, and **χ^w* merged into *f*, while **χ* became *h*. In Latin, the merger of **f*, **θ*, and **χ^w* into *f* only took place initially. **f* became *b* medially; **θ* became (A) *d* medially but (B) *b* before or after *r*, before *l*, or after *u*; and **χ^w* became (A) *v* between vowels, (B) *gu* after *n*, but (C) *g* before consonants or *u*. **χ* became (A) *h* initially in Latin but (B) *g* when before or after consonants and (C) *f* when before *u*.

**m*, **n*, **l*, **r* were preserved. **y* remained initially in Latin (written *i*) but was lost between vowels, while **w* (written *v*) was unchanged. **m*, **n*, **l*, **r* developed into *a* plus *m*, *n*, *l*, *r*, respectively, before vowels. Elsewhere, **l* and **r* became *ol* and *or*, respectively, and **m* and **n* became *em* and *en*, respectively.

**s* generally remained, though it was voiced to *z* between vowels. The *z* was retained in Oscan but was changed to *r* in Umbrian and Latin.

The vowels generally remained in accented syllables but were weakened or lost in unaccented syllables. The vowels underwent the following modifications in Latin (cf. Buck 1933:78–117). Final *i* became *e*. *e* became *i* before *ng*, *gn*, *nc*, and *ngu*. *e* became *o* before or after *w* and before *l*. *o* became *u* (1) before *nc*, *ngu*, *mb*, and before *l* plus a consonant, (2) in final syllables ending in a consonant, and (3) medially before *l* or before two consonants. *vo* became *ve* before *r* plus a consonant, before *s* plus a consonant, and before *t*. *ov* became *av*.

The diphthongs were preserved in Oscan but underwent various changes in Umbrian and Latin. *ei* became *ī*, and *oi*, *eu*, and *ou* became *ū* in Latin.

References: Italic: Baldi—Johnston-Staver 1989; Gamkrelidze—Ivanov 1995.I: 57–65; Stuart-Smith 2004. Latin: W. S. Allen 1978; Baldi 1999; Buck 1933:78–161 (Greek and Latin); Kurzová 1993; Leumann—Hoffmann—Szantyr 1963—1965.I:55–180; Lindsay 1894:219–315; Meillet—Vendryès 1968:69–93 (Greek and Latin); Meiser 1998, 2006, 2010, and 2017; Nierdermann 1906; Palmer 1954:211–232; Sihler 1995:35–242 (Greek and Latin); Solmsen 1894; Sommer 1902:34–336; Sturtevant 1940 (Greek and Latin); Wallace 2017:325–329; Weiss 2009a. Oscan and Umbrian: Buck 1928:22–112; Conway 1897; Poultney 1959: 25–84; Von Planta 1892–1897.I:41–600; Wallace 2004a and 2007. Romance languages: Alkire—Rosen 2010; Elcock 1960; Harris—Vincent (eds.) 1988 and 1997; Mendeloff 1969; Meyer-Lübke 1901; Posner 1996. General: Devoto 1978.

5.12. ALBANIAN

Though the Albanian developments are still not completely understood, some tentative conclusions are possible.

1. In Pre-Albanian (as in Pre-Slavic, Pre-Baltic, Pre-Indo-Iranian, and Pre-Armenian), the velars developed palatalized allophones when contiguous with front vowels, apophonic **o*, and **y*. In the early prehistory of these branches, the labiovelars were (perhaps only partially at first) delabialized. The newly delabialized (labio)velars merged with the unpalatalized allophones of the

velars. This change brought about the phonemicization of the palatals since both palatalized velars (from earlier plain velars) and unpalatalized velars (from earlier labiovelars) were now found in the vicinity of front vowels, apophonic **o*, and **y*. Note: Albanian provides the strongest evidence for the existence of three distinct guttural series in its Disintegrating Indo-European ancestor: the labiovelars are distinguished from the plain velars by the fact that the former are palatalized to sibilants before front vowels, while the latter are not (cf. Mann 1977:24—25 and 34—35).

2. The ejectives were deglottalized: **p'*, **t'*, **k'y*, **k'*, **k'w* > **p*, **t*, **k^y*, **k*, **k^w*.
3. Then, the palatals became palatalized alveolars: **k^{yh}*, **k^y*, **g^y* > **t^{yh}*, **t^y*, **d^y*. These later developed into voiceless and voiced interdental fricatives.
4. Next, the plain voiceless stops (from earlier ejectives) became plain voiced stops: **p*, **t*, **k^y*, **k*, **k^w* > **b*, **d*, **g^y*, **g*, **g^w*. In general, the developments of the plain voiced stops and the former ejectives are identical, though initial **g^y* (> **d^y*) appears as *d*, while initial **k'y* appears as *dh* (cf. Mann 1977:33). This seems to indicate that the bilabial and dental stops may have developed ahead of and slightly differently from the palatal, velar, and labiovelar stops.
5. Finally, the voiceless aspirates were deaspirated: **p^h*, **t^h*, **t^{yh}*, **k^h* > **p*, **t*, **t^y*, **k*.

The Albanian developments may be summarized as follows:

	I palatalization of velars and (partial) delabialization of labiovelars	II deglottalization of ejectives	III palatals become palatalized alveolars
Bilabial:	<i>p^h</i> , (<i>p'</i>), <i>b</i> >	<i>p^h</i> , <i>p</i> , <i>b</i> >	<i>p^h</i> , <i>p</i> , <i>b</i> >
Dental:	<i>t^h</i> , <i>t'</i> , <i>d</i> >	<i>t^h</i> , <i>t</i> , <i>d</i> >	<i>t^h</i> , <i>t</i> , <i>d</i> >
Palatal:	<i>k^{yh}</i> , <i>k'y</i> , <i>g^y</i> >	<i>k^{yh}</i> , <i>k^y</i> , <i>g^y</i> >	<i>t^{yh}</i> , <i>t^y</i> , <i>d^y</i> >
Velar:	<i>k^h</i> , <i>k'</i> , <i>g</i> >	<i>k^h</i> , <i>k</i> , <i>g</i> >	<i>k^h</i> , <i>k</i> , <i>g</i> >
Labiovelar:	<i>k^{wh}</i> , <i>k'w</i> , <i>g^w</i> >	<i>k^{wh}</i> , <i>k^w</i> , <i>g^w</i> >	<i>k^{wh}</i> , <i>k^w</i> , <i>g^w</i> >
	IV voicing of voiceless stops	V deaspiration of voiceless aspirates	VI Albanian
	<i>p^h</i> , <i>b</i> >	<i>p</i> , <i>b</i> >	<i>p</i> , <i>b</i>
	<i>t^h</i> , <i>d</i> >	<i>t</i> , <i>d</i> >	<i>t</i> , <i>d</i>
	<i>t^{yh}</i> , <i>d^y₁</i> , <i>d^y₂</i> >	<i>t^y</i> , <i>d^y₁</i> , <i>d^y₂</i> >	<i>th</i> , <i>d</i> (<i>dh</i>), <i>dh</i>
	<i>k^h</i> , <i>g</i> >	<i>k</i> , <i>g</i> >	<i>k</i> (<i>q</i>), <i>g</i> (<i>gj</i>)
	<i>k^{wh}</i> , <i>g^w</i> >	<i>k^w</i> , <i>g^w</i> >	<i>k</i> (<i>q</i> , <i>s</i>), <i>g</i> (<i>gj</i> , <i>z</i>)

References: Camaj 1984:1—8; De Vaan 2018; Hamp 1965a; Huld 1984:138—157; Mann 1977:24—25 and 32—36; Orël 2000:1—122; Rusakov 2017:560—572; Vermeer 2008.

5.13. PHRYGIAN AND THRACIAN

Like Germanic and Armenian, Phrygian is usually assumed to be a relic area in which the Proto-Indo-European stop system is better preserved than it is in the remaining daughter languages (cf. Gamkrelidze—Ivanov 1995.I:804—805). Unfortunately, the Phrygian corpus is so small that it is not possible to trace all of the developments. However, the following developments are clear (except as noted) (cf. Diakonoff—Neroznak 1985:5—6; Fortson 2010:461—462; Georgiev 1981:131—132; Ligorio—Lubotsky 2013:184—187 and 2018:1821—1824; Neroznak 1992:272—274; R. Woodhouse 2006 and 2010; Obrador-Cursach 2020:62—76):

Proto-Indo-European		Phrygian
b	>	b
p ^h	>	p (also ph)
d	>	d
t ^h	>	t (also th)
tʼ	>	t
g, g ^w	>	g
k ^h , k ^{wh}	>	k (also kh)
kʼ, kʼ ^w	>	k
g ^y	>	z (?)
k ^y	>	s (?)
kʼ ^y	>	z (?)

Note: The reflexes of the palatovelars are unclear. According to Fortson (2010:461) and Obrador-Cursach (2020:70), Phrygian was a centum language, as was most certainly Thraco-Dacian (cf. Vinereanu 2023).

As can be seen, the voiced stops remained unchanged. The voiceless aspirates also remained unchanged, though the aspiration is usually not indicated in the writing. Finally, the glottalics were simply deglottalized. It should be mentioned, however, that this interpretation is challenged by Brixhe (1994:171—172 and 2004:782).

Phrygian had five short vowels (*a, e, i, o, u*) and at least four long vowels (*ā, ī, ō, ū*), though the long vowels were not indicated in the writing. Proto-Indo-European **ē* and **ā* merged into *ā* in Phrygian. Cf. Obrador-Cursach 2020:62.

The Thracian developments appear to be similar to those given above for Phrygian (cf. Georgiev 1981:118—119; see also Brixhe—Panayotou 1994a:198—199; Katičić 1976.I:128—153), though this interpretation has recently been called into question by the work of Svetlana Yanakijeva.

5.14. ACCENTUATION IN THE DAUGHTER LANGUAGES

- A. SANSKRIT: Vedic Sanskrit (Old Indic), like Ancient Greek, had a system of accentuation in which pitch (*svara*- ‘accent, pitch, tone’) was dominant. Every word, except certain enclitics, bore an accent; however, there was only one accented syllable per word. The accented syllable had high pitch (*udātta*- ‘raised, elevated, high’). All other syllables had low pitch (*anudātta*- ‘not raised’) except (1) the syllable directly preceding the *udātta*-, which was pronounced lower than normal (*sannatara*- ‘lower’ or *anudāttatara*- ‘lower than *anudātta*-), and (2) the syllable directly following the *udātta*- (provided there was no *udātta*- or *svarita*- in the syllable following that), which began at the high level of *udātta*- and then slowly fell to the level of *anudātta*-. The accent of this syllable was called the “enclitic (or dependent) *svarita*-”. A so-called “independent *svarita*-” also existed, but this was always of secondary derivation, having arisen from the contraction of two syllables, the first of which had high pitch and the second low pitch, into a single syllable. The independent *svarita*- was thus a compound intonation comparable to the Greek circumflex. The enclitic *svarita*- differed from the independent *svarita*- in that the former could never appear alone, being totally dependent on a preceding *udātta*- for its existence, while the latter could appear alone as the main accent of a word. Also, the enclitic *svarita*- was a falling intonation, while the independent *svarita*- was a compound, rising-falling intonation.

Phonemically, Sanskrit had level pitches, with the main contrast being between the high pitch of the accented syllable and the low pitch of the other syllables. However, the voice did not rise abruptly from low pitch to high pitch or fall abruptly from high pitch to low pitch, but, rather, both ascent and descent were characterized by clearly audible glides. Thus, the pitch of the accented syllable began at the low level of the positionally-conditioned *sannatara*- and quickly rose to the level of *udātta*-. The pitch was then maintained at a high level until the end of the syllable. Similarly, the pitch of the syllable following the accented syllable began at the high level of *udātta*- and quickly fell to the level of *anudātta*-.

The native grammarians say nothing about stress, and there is nothing to indicate, such as, for example, vowel weakenings or losses, that the language of the Vedas possessed a strong stress accent. There are, however, remnants of an earlier, Indo-European system, manifest in the quantitative vowel gradation, in which stress played an important part. Stress replaced pitch in the spoken language (Classical Sanskrit) only when the latter became extinct in the first centuries CE (cf. Burrow 1973:115; Mayrhofer 1972:29—30).

The Sanskrit accent was free (mobile), that is, not tied to a particular syllable, as, for example, in Czech with its fixed initial accent or Polish with its fixed penultimate accent, but able to fall on any syllable, initial, medial, or final. The position of the accent was morphologically-conditioned, its place in a word having been used as a means to differentiate grammatical relationships. However, the accent was seldom so used alone but, rather, in conjunction with

vowel gradation and/or inflectional endings. Take, for example, the declension of *pad-* ‘foot’: in the singular, the strong cases are differentiated from the weak cases both by the position of the accent and by changes in the vowel grade of the stem. Furthermore, each case is characterized by a special ending:

Strong Cases		Weak Cases	
Nominative	<i>pāt</i>	Instrumental	<i>pad-ā</i>
Accusative	<i>pād-am</i>	Dative	<i>pad-é</i>
		Genitive-Ablative	<i>pad-ás</i>
		Locative	<i>pad-í</i>

The following were used enclitically and had no accent of their own, being dependent upon the words with which they were in combination for accent: (1) certain particles such as *iva*, *u*, *ca*, *vā*, etc.; (2) the personal pronouns *mā*, *me*, *nau*, *nas*, *tvā*, *te*, *vām*, and *vas*; (3) the demonstrative pronouns *ena-* and *tva-*; and (4) the indefinite pronoun *sama-*. Loss of accent also occurred in verbs in an independent clause, unless they stood at the beginning of the clause, and in nouns in the vocative case, unless they stood at the beginning of a sentence.

References: Bally 1908; Burrow 1973:113—117; Kuryłowicz 1968:194—197; MacDonell 1916:448—469; Whitney 1889:28—34; Mayrhofer 1972:29—30; Renou 1952:68—76; Hirt 1895:20—24; Thumb 1958—1959.I:207—211.

- B. GREEK: Greek, too, had a system of accentuation based on variations in pitch. As in Sanskrit, every word bore an intonation except certain proclitics and enclitics; however, each word normally had only one accented syllable. The accented syllable had either the acute accent (ὀξεῖα), which was one of high pitch (cf. Sanskrit *udātta-*), or the circumflex accent (περισπωμένη, δίτονος, ὀξυβαρεῖα), which was a combination of rising-falling pitch (cf. Sanskrit independent *svarita-*). The circumflex could fall only on long vowels and diphthongs, while the acute could fall on any vowel regardless of quantity. All unaccented syllables had the grave accent (βαρεῖα), which was one of low pitch (cf. Sanskrit *anudātta-*), except for the syllable directly following the accented syllable, which had a falling intonation comparable to the enclitic *svarita-* in Sanskrit. The grammarian Tyrannion (1st century BCE) referred to the accent of this syllable as μέσος ‘middle’, that is, midway between acute and grave.

Unlike the Sanskrit accent, which could fall on any syllable, the Greek accent was restricted to one of the final three syllables of a word. This restriction was a Greek innovation and was not inherited from Proto-Indo-European. Furthermore, the position of the accent within the final three syllables was regulated by the length of the ultima. These developments affected the distribution of the pitch thus: the acute could fall only on one of the last three syllables of a word if the ultima were short or on one of the last two syllables if the ultima were long, while the circumflex could fall only on

long vowels and diphthongs in the penultimate syllable if the ultima were short or on the ultima itself if it were long. To state things slightly differently, and more accurately, the position of the accent could be no further back from the end of the word than three morae if the ultima contained two morae. However, if the ultima contained only one mora, the position of the accent could be as far back as the the last mora of the antepenult. In the latter case, the number of morae in the penult was irrelevant, either one or two being permissible. This means that the following patterns were possible:

ύ|υ|υ; υύ|υ|υ; ύ|υυ|υ; υύ|υυ|υ; ύ|υυ; υύ|υυ

The grave accent, which was originally considered as the regular intonation of unmarked syllables, was later used in writing as a replacement for the acute on the last syllable of a word when standing before another word in the same sentence.

Since the Greek accent could fall only on one of the final three syllables, an accent originally falling on any other syllable was moved forward to fall on either the antepenult or the penult, depending upon the length of the ultima. However, if an accent originally fell on one of the last three syllables, its position was usually maintained, the exception being the widespread shift of the accent from the ultima to the penult in words ending in a dactyl (–υυ): ποικίλος < *ποικιλός (cf. Sanskrit *peśalá-h*); ἀγκύλος < *ἀγκυλός (cf. Sanskrit *āṅkurá-h*).

On verbs, regardless of its original position, the accent was thrown back as far toward the front of the word as the rules of accentuation would allow.

Even though the ancient ability of the accent to fall on any syllable was restricted in Greek, the ancient function of accentuation was maintained. As in Sanskrit, the position of the accent within a word was used as a means to indicate grammatical relationships. For example, in the declension of πούς ‘foot’ (cf. Sanskrit *pāt* ‘foot’), the accent falls on the base in the strong cases but on the ending in the weak cases:

	Singular	Dual	Plural
Nominative	πούς		πόδ-ες
Accusative	πόδ-α		πόδ-ας
Genitive(-Ablative)	ποδ-ός	ποδ-οῖν	ποδ-ῶν
Dative	ποδ-ί		(Homeric) ποσ-σί (Attic) ποσί

Greek possessed a certain number of words that had no accent of their own. These words were used in combination with other words. Some of the unaccented words were inherited from Proto-Indo-European, while others arose in Greek itself. They fall into two categories: (1) the proclitics, which were

combined with a following word, and (2) the enclitics, which were combined with a preceding word. The procitics include: (1) the forms of the definite article ὁ, ἡ, οἱ, αἱ; (2) certain prepositions such as ἐν, ἐκ, πρὸ, ἀνά, περὶ, μετὰ, etc.; (3) certain conjunctions; and (4) the negative adverbs οὐ, οὐκ, οὐχ, μή. The enclitics include: (1) certain particles such as τε, γε, νυ, etc.; (2) the personal pronouns μου, μοι, σου, σοι, σε, οὐ, οἱ, ἐ, etc.; (3) the indefinite pronoun τις, τι; (4) certain indefinite adverbs; and (5) certain forms of the verb εἶμι ‘to be’ and φημι ‘to say’.

Notwithstanding the limitations mentioned above for Greek and several other minor modifications on one side or the other, the position of the Greek accent corresponds in the main to the position of the Sanskrit accent. Moreover, both agree (1) in having accent systems characterized by contrasts in pitch rather than differences in stress, though stress eventually replaced pitch in both; (2) in the fact that accent played an important role in morphology; and (3) in the fact that accent and meter were independent of each other. These similarities clearly indicate that both the Greek and Sanskrit systems of accentuation must have had a common origin.

References: W. S. Allen 1974:106—124; Bally 1908; Brugmann 1900:150—159; Buck 1933:162—165; M. Bloomfield 1883 and 1888; Collinge 1985:85—87 (Hirt’s Law II) and 221—223 (Wheeler’s Law); Grammont 1948:387—415; Kuryłowicz 1958:106—161, and 1968:83—110; Lejeune 1972:293—300; Hirt 1895:24—41 and 1902:185—200; Palmer 1980:243—245; Probert 2006; Rix 1992:1—45; Schwyzler 1953.I:371—395; Sihler 1995:235—239; Smyth 1956:37—42; Sturtevant 1940:94—105; Vendryès 1904; J. Wright 1912:10—18.

- C. GERMANIC: From the earliest period of development that can be reconstructed, the Germanic system of word accentuation was characterized by stress, there being no indication that pitch was relevant. Though the tonal character of the Proto-Indo-European accent was lost, the position of the accent, as established by the correspondence of Sanskrit and Greek, was originally preserved in Proto-Germanic. This is confirmed by Verner’s Law (cf. Collinge 1985:203—216), according to which the position of the accent influenced the development of the voiceless stops. First, the voiceless aspirates (traditional plain voiceless stops) became voiceless fricatives: $*p^h, *t^h, *k^h, *k^{wh} > *f, *b, *χ, *χ^w$, except after $*s-$. Then, medial (and final) $*f, *b, *χ, *χ^w$, together with $*s$, became $*b, *d, *g, *g^w$, and $*z$, respectively, except (1) before $*s$ or $*t$ and (2) between vowels when the accent fell on the contiguous preceding syllable. Thus, if the accent followed or fell on a noncontiguous preceding syllable, the fricatives became voiced. The following examples illustrate these developments:

Proto-Indo-European $*p^h >$ Proto-Germanic $*f$:

- A. Sanskrit *pāñca* ‘five’; Greek (Attic) *πέντε*, (Aeolian) *πέμπε* ‘five’;
Latin *quīnque* ‘five’; Lithuanian *penkì* ‘five’ $<$ Proto-Indo-European

- *phénkwhe* ‘five’ > Proto-Germanic (**fēmfe* >) **fīmfi* ‘five’ > Gothic *fimf* ‘five’; Old Icelandic *fimm* ‘five’; Faroese *fimm* ‘five’; Swedish *fem* ‘five’; Norwegian *fem* ‘five’; Danish *fem* ‘five’; Old English *fif* ‘five’; Old Frisian *fif* ‘five’; Old Saxon *fif* ‘five’; Dutch *vijf* ‘five’; Old High German *fimf*, *finf*, *funf* ‘five’ (New High German *fünf*). Cf. Orël 2003:98 **fenfe*; Kroonen 2013:140; Feist 1939:154; Lehmann 1986:117; De Vries 1977:120; Falk—Torp 1903—1906.I:153 **fimf* (< **pempe*); Onions 1966:358 **fimfi* (< **pempe* < **penqwe*); Klein 1971:283; Boutkan—Siebinga 2005:113 **finfe*; Kluge—Mitzka 1967:224 **fēmfe(e)*; Kluge—Seebold 1989:236 **femf(e)*; Vercoulie 1898:307.
- B. Sanskrit *nápāt* ‘grandson, descendant’; Avestan *napāt-* ‘grandson’; Old Persian *napāt-* ‘grandson’; Latin *nepōs*, *-tis* ‘grandson’ < Proto-Indo-European **néph-ōth-* ‘grandson, nephew’ > Proto-Germanic **néfōð* ‘nephew’ > Old Icelandic *nefi* ‘nephew’; Old English *nefa* ‘nephew, grandson, stepson’; Old Frisian *neva* ‘nephew’; Old Saxon *nebo* ‘nephew’; Middle Dutch *neve* ‘nephew’ (Dutch *neef*); Old High German *nevo* ‘nephew’ (New High German *Neffe*). Cf. Orël 2003:283 **nefōd(z)*; Kroonen 2013:386; De Vries 1977:406; Kluge—Mitzka 1967:506; Kluge—Seebold 1989:500—501; Vercoulie 1898:200.

Proto-Indo-European **th* > Proto-Germanic **þ*:

- A. Sanskrit *tráyah* ‘three’; Greek *τρεις* ‘three’; Latin *trēs* ‘three’; Old Church Slavic *trъje* ‘three’; Lithuanian *trys* ‘three’ < Proto-Indo-European **hréyes* ‘three’ > Proto-Germanic (**préyez* >) **þrýiz* ‘three’ > Gothic *þreis* ‘three’; Old Icelandic (m.) *þrír*, (f.) *þrjár*, (n.) *þrjú* ‘three’; Faroese *tríggir* ‘three’; Norwegian *tri* ‘three’; Swedish *tre* ‘three’; Danish *tre* ‘three’; Old English (m.) *þrī(e)*, (f./n.) *þrēo* ‘three’; Old Frisian (m.) *thrē*, (f.) *thriā*, (n.) *thriū* ‘three’; Old Saxon (m.) *thria*, *thrie*, (f.) *threa*, (n.) *thriu*, *thrū* ‘three’; Dutch *drie* ‘three’; Old High German (m.) *drī*, (f.) *drīo*, (n.) *driu* ‘three’ (New High German *drei*). Orël 2003:425 **prejēz*; Kroonen 2013:546—547; Lehmann 1986:365—366; Feist 1939:502; De Vries 1977:622; Falk—Torp 1903—1906.II:377; Boutkan—Siebinga 2005:403; Onions 1966:919 **þrijiz*; Klein 1971:763; Kluge—Mitzka 1967:141—142 **þrijiz*; Kluge—Seebold 1989:154 **þrej(ez)*; Vercoulie 1898:63.
- B. Sanskrit *bhrātar-* ‘brother’; Greek (Doric) *φράτερ-* ‘a member of a brotherhood, fraternity, clan’; Latin *frāter* ‘brother’; Old Irish *bráthir* ‘brother’ < Proto-Indo-European **bhrāther-* ‘brother’ (< **bhréA-ther-* [**bhráA-ther-*]) > Proto-Germanic **brōþēr* ‘brother’ > Gothic *brōþar* ‘brother’; Old English *brōþor* ‘brother’; Old Frisian *brōther* ‘brother’; Old Saxon *brōther* ‘brother’; Old Dutch *bruother* ‘brother’. Orël 2003:57—58 **brōþēr*; Kroonen 2013:79; Lehmann 1986:81; Feist 1939:106—107; Boutkan—Siebinga 2005:64 **brōþēr*; Onions 1966:121 **brōþar*; Klein 1971:97.

Proto-Indo-European $*k^h >$ Proto-Germanic $*\chi$:

- A. Sanskrit *śatám* ‘hundred’; Avestan *satəm* ‘hundred’; Greek *ἐκατόν* ‘hundred’; Latin *centum* ‘hundred’; Old Irish *cét* ‘hundred’; Tocharian A *känt*, B *kante* ‘hundred’; Lithuanian *šim̃tas* ‘hundred’; Old Church Slavic *sѣto* ‘hundred’ < Proto-Indo-European $*k^h\eta\theta\acute{o}-m$ ‘hundred’ > Proto-Germanic $*\chi un\acute{o}án$ ‘hundred’ (compound $*\chi un\acute{o}a-ra\acute{d}a-$) > Gothic *hunda* ‘hundred’; Old Icelandic *hundrað* ‘hundred’; Faroese *hundrað* ‘hundred’; Swedish *hundra* ‘hundred’; Norwegian *hundra* ‘hundred’; Danish *hundred* ‘hundred’; Old English *hund*, *hundred* ‘hundred’; Old Frisian *hund*, *hundred* ‘hundred’; Old Saxon *hund*, *hunderod* ‘hundred’; Dutch *honderd* ‘hundred’; Old High German *hunt*, *hundert* ‘hundred’ (New High German *hundert*). Orël 2003:193 $*xundan$, 193 $*xunda-ra\acute{d}an$; Kroonen 2013:256; Feist 1939:375—376; Lehmann 1986:194—195; De Vries 1977:267; Falk—Torp 1903—1906.I:308; Onions 1966:452—453 $*\chi undam$; Klein 1971:356; Boutkan—Siebinga 2005:184—185 $*hunda-ra\acute{p}a-$; Kluge—Mitzka 1967:321; Kluge—Seebold 1989:320 $*hunda-$; Vercoulie 1898:114.
- B. Sanskrit *páśu* ‘cattle’; Avestan *pasu-* ‘cattle’; Latin *pecū*, *pecus* ‘flock, herd’; Lithuanian *pẽkus* ‘cattle’ < Proto-Indo-European $*phékh\upsilon-$ ‘cattle’ > Proto-Germanic $*fexu$ ‘cattle, goods’ > Gothic *faihu* ‘cattle, property, money’; Old Icelandic *fé* ‘cattle; sheep’; Faroese *fæ* ‘cattle’; Swedish *få* ‘beast, brute’; Norwegian *fe* ‘cattle, goods’; Danish *fæ* ‘beast, brute, cattle’; Old English *feoh* ‘cattle; money’; Old Frisian *fīa* ‘movables, personal property’; Old Saxon *fēhu*, *fēho* ‘cattle; money’; Middle Dutch *ve(e)*, *veeh*, *vie(h)*, *veede* ‘cattle’ (Dutch *vee*); Old High German *fihu*, *fīho* ‘cattle, livestock’ (New High German *Vieh*). Orël 2003:97 $*fexu$; Kroonen 2013:134; De Vries 1977:114; Falk—Torp 1903—1906.I:206; Feist 1939:135—136; Lehmann 1986:102—103; Onions 1966:349; Klein 1971:276; Skeat 1898:205; Boutkan—Siebinga 2005:110 $*fēhu$; Vercoulie 1898:301—302; Kluge—Mitzka 1967:820—821; Kluge—Seebold 1989:765.

Proto-Indo-European $*k^wh >$ Proto-Germanic $*\chi w$:

- A. Sanskrit *ká-h* ‘who?’; Latin *quī* ‘in what manner?, how?’; Lithuanian *kàs* ‘who?’ < Proto-Indo-European $*k^wh\acute{o}-$ ‘who?’ > Proto-Germanic $*\chi wa-$ ‘who?’ > Gothic *has* ‘who?’; Old Icelandic *hverr* ‘who?, which?, what?’; Faroese *hwø* ‘who?’; Danish *hvo*, *hvem* ‘who?’; Swedish *vem* ‘who?’; Norwegian (Bokmål) *hvem* ‘who?’; (Nynorsk) *kven* ‘who?’; Old English *hwā* ‘who?’; Old Frisian *hwā* ‘who?’; Old Saxon *hwē*, *hwie* ‘who?’; Dutch *wie* ‘who?’; Old High German *(h)wer* ‘who?’ (New High German *wer*). Kroonen 2013:261; Orël 2003:199 $*xwaz \sim *xwez$; Feist 1939:282 $*hwa-$; Lehmann 1986:198; De Vries 1977:272; Falk—Torp 1903—1906.I:314; Onions 1966:1004; Klein

1971:827 *hwa-, *hwe-; Cummins 1881:42; Vercoulie 1898:325; Kluge—Mitzka 1967:853; Kluge—Seebold 1989:787.

- B. Greek λείπω ‘to leave’; Old Irish léicid ‘to let loose, to let fly, to let go, to dismiss’; Armenian lkhanem ‘to leave, to let go, to release, to abandon’; Lithuanian liekù ‘to stay, to remain, to be left over’ < Proto-Indo-European *léyk^{wh}ō (< *léyk^{wh}oH) ‘to leave’ > Proto-Germanic (inf.) *līχwan ‘to lend’ > Gothic leihvan ‘to lend’; Old Icelandic ljá ‘to lend something to someone’; Old Swedish lea ‘to lend’; Old English on-leōn ‘to lend, to grant’; Old Frisian liā ‘to lend’; Old Saxon līhan ‘to lend’; Old High German līhan ‘to lend’ (New High German leihen). Orël 2003:247 *līxwanan; Kroonen 2013:336; Lehmann 1986:230; Feist 1939:327; De Vries 1977:359 *līhwan; Kluge—Mitzka 1967:434; Kluge—Seebold 1989:437.

Proto-Indo-European *p^h > Proto-Germanic *b̥:

Sanskrit sapṭá ‘seven’; Greek ἑπτά ‘seven’; Latin septem ‘seven’ < Proto-Indo-European *sephthh₁ ‘seven’ > Pre-Germanic *seph^hh₁ ‘seven’ > Proto-Germanic *sebūn ‘seven’ > Gothic sibun ‘seven’; Old Icelandic sjau (< *sjöbu) ‘seven’; Faroese sjei ‘seven’; Norwegian sjau ‘seven’; Danish syv ‘seven’; Swedish sju ‘seven’; Old English seofon (< *sebun) ‘seven’; Old Frisian soven, sigun (the g is from ni(u)gun ‘nine’), siugun, sogen, sav(e)n ‘seven’; Old Saxon sibun ‘seven’; Dutch zeven ‘seven’; Old High German sibun ‘seven’ (New High German sieben). Kroonen 2013:429; Orël 2003:321 *sebun; Feist 1939:417; Lehmann 1986:300—301; Falk—Torp 1903—1906.II:340—341; De Vries 1977:478; Onions 1966:813 *sebun; Klein 1971:676; Boutkan—Siebinga 2005:339 *sebun; Kluge—Mitzka 1967:706—707 *sebun; Kluge—Seebold 1989:671 *sebun; Vercoulie 1898:336.

Proto-Indo-European *t^h > Proto-Germanic *ð:

Sanskrit pitár- ‘father’; Greek πατέρ- ‘father’; Latin pater ‘father’ < Proto-Indo-European *p^hh₁tér- ‘father’ > Proto-Germanic faðér- ‘father’ > Gothic fadar ‘father’; Old Icelandic faðir ‘father’; Faroese faðir ‘father’; Swedish fader ‘father’; Danish fader ‘father’; Norwegian fader ‘father’; Old English fæder ‘father’; Old Frisian feder, fader ‘father’; Old Saxon fadar ‘father’; Dutch vader ‘father’; Old High German fater ‘father’ (New High German Vater). Orël 2003:88 *faðēr; Kroonen 2013:121; Feist 1939:133; Lehmann 1986:101; De Vries 1977:109; Falk—Torp 1903—1906.I:144 *faðēr; Onions 1966:347 *faðēr; Klein 1971:275; Boutkan—Siebinga 2005:102 *faðēr; Kluge—Mitzka 1967:810 *faðēr (< *pātér); Kluge—Seebold 1989:756 *fader (< *pātēr); Vercoulie 1898:300.

Proto-Indo-European *k^h > Proto-Germanic *g̊:

Sanskrit *śvaśrū-* ‘mother-in-law’ < Proto-Indo-European **swek^hrū-* (< **swek^hrūH-*) ‘mother-in-law’ > Proto-Germanic **sweǵrō-* ‘mother-in-law’ > Old English *sweger* ‘mother-in-law’; Middle Dutch *sweger* ‘mother-in-law’; Old High German *swigar* ‘mother-in-law’ (New High German *Schwieger*). Orël 2003:393 **sweǵrō*; Kroonen 2013:498; Kluge—Mitzka 1967:693; Kluge—Seebold 1989:661 **sweǵrō*. Cf. also Feist 1939:462; Lehmann 1986:332; De Vries 1977:571.

Proto-Indo-European **k^{wh}* > Proto-Germanic **ǵw*:

Proto-Indo-European **sek^{wh}-ní-s* ‘sight’ > Proto-Germanic **seǵw-ní-s* ‘sight’ > Gothic *siuns* ‘form, face, countenance’; Old Icelandic *sjón* ‘sight, eyesight’, *sýn* ‘sight’; Faroese *sjón* ‘sight’; Norwegian *sjon* ‘sight’; Old Danish *siun* ‘sight’; Old English *on-sēon* ‘to see’, *sīn*, *sȳn* ‘sight, vision’, *sīen* ‘power of seeing, sight, vision; pupil, eye’; Old Saxon *siun* ‘sight’; Old Frisian *siōne*, *siūne* ‘sight’. Kroonen 2013:434—435 **seuni-*; Orël 2003:322 **seǵwniz*; De Vries 1977:479 **seǵu-ni-* and 573; Feist 1939:426 **seǵw-ni-*; Lehmann 1986:307 **seǵw-ni-*; Boutkan—Siebinga 2005:343.

Proto-Indo-European **s* > Proto-Germanic **z*:

Sanskrit *snuṣā* ‘daughter-in-law’ < Proto-Indo-European **snusā* (< **snusāA*) ‘daughter-in-law’ > Proto-Germanic **snuzō* ‘daughter-in-law’ > Old Icelandic *snor*, *snör* ‘daughter-in-law’; Old English *snoru* ‘daughter-in-law’; Old Frisian *snore* ‘daughter-in-law’; Middle Low German *snoere*, *snorre* ‘daughter-in-law’; Old High German *snura* ‘daughter-in-law’ (New High German *Schnur*). Orël 2003:359 **snuzō(n)*; Kroonen 2013:463; De Vries 1977:528; Kluge—Mitzka 1967:673; Kluge—Seebold 1989:649.

After the sound changes described by Verner’s Law had taken place, many Germanic nouns and verbs were characterized by a paradigmatic alternation between forms with voiceless fricatives and forms with voiced fricatives. Even though there was a tendency in the Germanic daughter languages to level out the paradigm, numerous traces of the former alternation remain, especially in the verbs. Take, for example, the verb **wérþan* ‘to become’ (cf. Prokosch 1939:65; Hirt 1931—1934.I:76; Krause 1968:127):

Proto-Germanic	<i>*wérþō</i>	<i>*wárþa</i>	<i>*wurðumí</i>	<i>*wurðaná-z</i>
Gothic	<i>wairþa</i>	<i>warþ</i>	<i>waurþum</i>	<i>waurþans</i>
Old Icelandic	<i>verða</i>	<i>varð</i>	<i>urðom</i>	<i>orðenn</i>
Old English	<i>weorþe</i>	<i>wearþ</i>	<i>wurdon</i>	<i>worden</i>
Old Frisian	<i>werthe</i>	<i>warth</i>	<i>wurdon</i>	<i>worden</i>
Old Saxon	<i>wirthu</i>	<i>warth</i>	<i>wurdun</i>	<i>gi-wordan</i>
Old High German	<i>wirdu</i>	<i>ward</i>	<i>wurtum</i>	<i>gi-wortan</i>
New High German	<i>werde</i>	<i>ward (wurde)</i>	<i>wurden</i>	<i>ge-worden</i>

Compare the Sanskrit verb *ṽrt-* ‘to turn’:

vārtāmi *va-vārta* *va-ṽrtimá* *ṽrtaná-ḥ*

Toward the end of the Proto-Germanic period, the old mobile accent was lost, and the stress became fixed on the initial syllable. This new fixed initial stress characterized (1) simple nominal forms, (2) simple verbal forms, and (3) compound nominal forms. Compound verbal forms were accented differently, however. In compound verbal forms, the stress fell on the first syllable of the second member. The verbal compounds, apparently later formations than the nominal compounds, were not strongly joined together, and, therefore, the accent was not shifted to the preverb. The independent nature of the two members of the verbal compounds was still preserved in Gothic, where the enclitic copula *-uh-* ‘and’ could be placed between the preverb and the verb. If a nominal compound were composed of two substantives, the initial syllable of the first member had primary stress, and the initial syllable of the following member had secondary stress. The foregoing system of accentuation still prevails in the modern West Germanic languages.

Both Swedish and Norwegian make considerable use of pitch. However, the use of pitch in these two languages has arisen in historical times and does not go back to either Proto-Indo-European or Proto-Germanic.

References: W. H. Bennett 1972; Collinge 1985:63—76 (Grimm’s Law) and 203—216 (Verner’s Law); Fortson 2010:339—342; Harbert 2007:79—84; Hirt 1931—1934.I:89—91 (Verner’s Law) and 143—161; Kurylowicz 1968:191—194; Meillet 1970:24—29 and 37—42; Prokosch 1939:60—68, §20 (Verner’s Law); Ringe 2006:93—105; Fulk 2018:35—42 and 107—110 (Verner’s Law); Streitberg 1963:163—191.

- D. SLAVIC: No theory has yet been proposed that can account completely for all of the data relative to the development of accentuation in the Slavic languages. This is due in part to the fact that all knowledge concerning accentuation is drawn solely from the modern languages, that is to say, from about the fourteenth century on, and in part to the fact that the older patterns have been greatly disrupted by subsequent changes. The following discussion closely follows that of Shevelov (1964:38—80).

That Proto-Indo-European had a system of accentuation characterized by contrasts in pitch is confirmed by the evidence of Sanskrit and Greek. Stress was nondistinctive, each syllable being pronounced with more or less equal intensity. The Indo-European dialect from which Proto-Slavic (and Proto-Baltic) descended preserved the tonal character of the accent. However, the position of the accent underwent a systematic displacement.

In the Disintegrating Indo-European dialect that gave rise to Balto-Slavic, the rising pitch was shifted to long monophthongs and long diphthongs. The shift of rising pitch to these positions left falling pitch on all other syllables (cf.

Shevelov 1964:70, §4.14A). No doubt, the loss of laryngeals was the cause of both the accent shift and compensatory vowel lengthening. Eventually, long monophthongs and diphthongs of whatever origin (except when due to contractions) received rising pitch under the influence of the intonation of long monophthongs and diphthongs resulting from the loss of laryngeals. The intonations were not phonemic at this time, depending solely on vowel quantity for their distribution.

The earliest form of Proto-Slavic was probably characterized by a weak fixed penultimate stress (cf. Shevelov 1964:70—71, §4.14B). In addition, Proto-Slavic had rising pitch and falling pitch, but these intonations were not phonemic; rising pitch characterized long monophthongs and long diphthongs, and falling pitch characterized short diphthongs and contractions. Short monophthongs were apparently tonally nondistinctive (cf. Bidwell 1963:9; Shevelov 1964:45—46, §4.6). However, Stang (1965:173) maintains that, while short monophthongs were originally tonally nondistinctive, they later had falling pitch in initial syllables and rising pitch elsewhere. The intonation became phonemic when, at a later date, the long diphthongs underwent shortening and merged with the short diphthongs. Even though the former long diphthongs had been shortened, they retained rising pitch. Thus, the original short diphthongs had falling pitch, while short diphthongs from original long diphthongs had rising pitch.

After the shortening of long diphthongs had taken place, stress was shifted from a penultimate syllable with falling pitch or short monophthong to a contiguous preceding syllable with rising pitch (cf. Shevelov 1974:71—75, §4.14C; Vaillant 1950.I:246—252, §99). Stress was not shifted in those words that had either rising pitch or falling pitch only on every syllable.

Thus, the Proto-Slavic system of accentuation was dominated by pitch. Even though each syllable had its characteristic pitch, however, it was only under stress that pitch became distinctive. The stress usually fell on the penultimate syllable but was shifted to a contiguous preceding syllable with rising pitch or to a following syllable with rising pitch when the penult contained either falling pitch or a short monophthong. A stressed penult could have either rising pitch or falling pitch depending upon the original quantity of the vowel segment.

When Proto-Slavic began to split up into dialects, the system of accentuation outlined above was destroyed. Two events caused the disruption of the old accent system: First, there was a widespread shortening of long vowels. Next, there was a series of stress shifts. In the South Slavic dialects, the stress shifts were accompanied by shifts in vowel quantity and pitch. It was in the South Slavic area that the so-called “new rising pitch” and “new falling pitch” arose (cf. Shevelov 1964:563—569, §§33.14—33.15). The other Slavic dialects, some of which also underwent shifts in quantity, give no evidence of any pitch mutations. Indeed, phonemic pitch was probably lost in the East and West Slavic languages at the time of the stress shifts (cf. Shevelov 1964:563—569, §33.14, and 574—578, §33.17).

The various Slavic daughter languages underwent further phonological and morphological developments that affected accentuation. Therefore, none of the modern languages preserve the earlier system of accentuation. Only Serbo-Croatian and Slovene still have phonemic pitch. As far as the other daughter languages go, the former distribution of pitch is indicated in Czech by the opposition of long vowels and short vowels, in Bulgarian by the position of the stress, and in East Slavic by the accentuation of the groups *oro*, *ere*, *olo*, *ele*.

References: Bethin 1998; Collinge 1985:29—30 (Dolobko's Law), 31—33 (Dybo's Law), 30—36 (Ebeling's Law), 41—46 (Fortunatov's Law I), 77—79 (Hartmann's Law), 81—83 (Hirt's Law I), 89—91 (Hjelmslev's Law), 103—104 (Illič-Svityč's Law), 147—148 (Pedersen's Law II), 149—152 (Saussure's Law), 179 (Stang's Law), 197—198 (Van Wijk's Law), 225—227 (Winter's Law), 271—277 (Appendix III: Laws of Accentuation in Balto-Slavic); Collins 2018:1500—1514; Derksen 2004; Garde 1976; Halle 1997; Halle—Kiparsky 1977 and 1981; Illič-Svityč 1979; Jasanoff 2017a; Kurylowicz 1956:162—356 and 1968:111—190; Olander 2009; Shevelov 1964; Stang 1965; Sukač 2013; Vaillant 1950.I:221—283.

- E. CELTIC: The accentuation of Old Irish was remarkably similar to that of Late Proto-Germanic. Old Irish had a stress accent that normally fell on the first syllable of a word, the main exception being, as in Germanic, in compound verbal forms, where the stress fell on the first syllable of the second member except in the imperative. The stress caused the weakening and loss of unaccented vowels.

In all of the modern Brythonic languages, with the exception of the Vannetais dialect of Breton, the stress falls on the penult. In Vannetais, the stress falls on the ultima. Old Welsh was accented on the ultima, and it is probable that this was the original position of the accent in all of the Brythonic languages.

References: Lewis—Pedersen 1937:68—80; Pedersen 1909—1913.I:255—291; Thurneysen 1884 and 1946:27—31; Morris Jones 1913:47—65.

- F. ITALIC: In Early Latin, as well as in Oscan and Umbrian, the accent fell on the first syllable of a word. That the accent was one of stress is shown by the effect it had on unaccented vowels. The vowel of the initial syllable was never modified, but the vowels of the unaccented syllables were regularly weakened or lost. The syllable directly following the initial syllable underwent the greatest modification, often being completely lost: for example, Latin *aetās* 'age' < **avitās*.

Between Early Latin and Classical Latin, the position of the accent was shifted. In Classical Latin, the accent fell on the penult if this were long or on the antepenult if the penult were short. Words with four or more syllables had a

secondary accent on the first syllable: for example, (acc. sg.) *tēmpestātem* ‘a space or period of time; weather’.

References: W. S. Allen 1978:83—88; Buck 1933:165—167; Collitz 1897; De Vaan 2008:9—10; Lindsay 1894:148—218; L. Palmer 1954:211—214; Sihler 1995:239—242; Sturtevant 1911, 1921, and 1940:183—189; Westaway 1913.

- G. ARMENIAN: In Classical Armenian, the accent fell on what had originally been the penultimate syllable. That the accent was one of stress is shown by the widespread reduction and elimination of unaccented syllables.

References: Godel 1975:12 and 72; Meillet 1936:19—23.

- H. SUMMARY: The Old Indic system of accentuation remained the most faithful to that of Disintegrating Indo-European. The accent limitation rule found in Greek is clearly an innovation. Likewise, the development of the circumflex probably arose, at least in part, as the result of contractions in the early prehistory of Greek itself (cf. Kuryłowicz 1958:106—113 and 1968:83—90). Baltic and Slavic have innovated even more than Greek. Unlike Disintegrating Indo-European and Old Indic, which had register-type systems, Baltic and Slavic had contour-type systems. Moreover, the position of the accent has undergone a systematic displacement. The accentuation of Disintegrating Indo-European and Old Indic was syllable oriented, while that of Greek, Baltic, and Slavic was mora oriented. None of the remaining daughter languages supply any information either about the distribution or about the quality of the accent in the parent language except for Germanic, which supplies some information about the original position of the accent.

References: Adrados—Bernabé—Mendoza 1995—1998.I:393—402; Beekes 1995:148—154 and 2011:153—159; Brugmann 1904:52—66; Fortson 2004: 62 and 2010:68; Halle—Kiparsky 1977; Hirt 1895; Kuryłowicz 1956 and 1968; Lubotsky 1988; Meier-Brügger 2003:152—158; Meillet 1964:140—143; Szemerényi 1996:73—82.

5.15. METER

Comparison of Sanskrit and Greek indicates that poetic meter in Disintegrating Indo-European was quantitative, being based upon the regular repetition of long and short syllables. Though the original patterning has sometimes been obscured, the rule is clear that open syllables ending in a short vowel were metrically short, while open syllables ending in a long vowel and closed syllables were metrically long.

References: W. S. Allen 1973; Devine—Stephens 1994; Fitzhugh 1912; Jasanoff 2004b; Lehmann 1952:19—20, §2.4; Masqueray 1899; Meillet 1923 and 1964: 143—144; Sievers 1893; Watkins 1995; West 1973, 1987, and 2007.

CHAPTER SIX

A SKETCH OF PROTO-KARTVELIAN PHONOLOGY

6.1. STOPS, AFFRICATES, AND FRICATIVES

Proto-Kartvelian had a rich system of stops, affricates, and fricatives. Each stop and affricate series was characterized by the three-way contrast (1) voiceless (aspirated), (2) voiced, and (3) glottalized. Thomas V. Gamkrelidze and Givi Mačavariani (1982:18) reconstruct three separate series of affricates and fricatives, namely, a front series (**c*, **c'*, **ɟ*, **s*, **z*), a mid series (**c*₁, **c'*₁, **ɟ*₁, **s*₁, **z*₁), and a back series (**č*, **č'*, **ʃ*, **š*, **ž*) on the basis of the following correspondences:

Proto-Kartvelian		Georgian		Zan and Svan
* <i>c</i> , * <i>c'</i> , * <i>ɟ</i> , * <i>s</i> , * <i>z</i>	=	<i>c</i> , <i>c'</i> , <i>ɟ</i> , <i>s</i> , <i>z</i>	=	<i>c</i> , <i>c'</i> , <i>ɟ</i> , <i>s</i> , <i>z</i>
* <i>c</i> ₁ , * <i>c'</i> ₁ , * <i>ɟ</i> ₁ , * <i>s</i> ₁ , * <i>z</i> ₁	=	<i>c</i> , <i>c'</i> , <i>ɟ</i> , <i>s</i> , <i>z</i>	=	<i>č</i> , <i>č'</i> , <i>ʃ</i> , <i>š</i> , <i>ž</i>
* <i>č</i> , * <i>č'</i> , * <i>ʃ</i> , * <i>š</i> , * <i>ž</i>	=	<i>č</i> , <i>č'</i> , <i>ʃ</i> , <i>š</i> , <i>ž</i>	=	<i>čk</i> , <i>č'k'</i> , <i>ʃg</i> , <i>šk</i> , <i>žg</i>

Both Klimov (1964 and 1998) and Fähnrich—Sardshweladse (1995) follow Gamkrelidze and Mačavariani. However, Karl Horst Schmidt (1962:54—67) reconstructs only two series — Schmidt considers the reflexes found in Zan (Mingrelian and Laz) and Svan to represent the original patterning, and those found in Georgian to be an innovation. It is the views of Schmidt that are followed in this book (Georg 2002 also supports Schmidt's views). Thus, according to Schmidt, the following affricates and sibilants are to be reconstructed for Proto-Kartvelian:

I	II	III
Dental Affricates	Palato-alveolar Affricates	Clusters
* <i>c</i> , * <i>c'</i> , * <i>ɟ</i> , * <i>s</i> , * <i>z</i>	* <i>č</i> , * <i>č'</i> , * <i>ʃ</i> , * <i>š</i> , * <i>ž</i>	* <i>čk</i> , * <i>č'k'</i> , * <i>ʃg</i> , * <i>šk</i> , * <i>žg</i>

Comparison with other Nostratic languages indicates that series III developed from earlier palatalized alveolar stops and sibilants: **ɮ*, **t'ɮ*, **dɮ*, **sɮ*, (**zɮ*) respectively. In pre-Proto-Kartvelian, the palatalized alveolars were first reanalyzed as geminates: **čč*, **č'č'*, **ʃʃ*, **šš*, (**žž*). Subsequently, the geminates dissimilated into **čɮ*, **č't'ɮ*, **ʃdɮ*, **šɮ*, (**ždɮ*), which then became **čɮ*, **č't'ɮ*, **ʃdɮ*, **šɮ*, (**ždɮ*). These developments are similar to what happened to Proto-Slavic **ɮ* and **dɮ* in Bulgarian and Old Church Slavic and to **dɮ* in certain Greek dialects, within Indo-European. The final change in Proto-Kartvelian was the further dissimilation into the clusters **čk*, **č'k'*, **ʃg*, **šk*, (**žg*) respectively. These clusters were preserved in Svan and Zan but were simplified into palato-alveolar affricates in Georgian (no

doubt after the original palato-alveolar affricates had been lost — they appear as dental affricates in Georgian). For Georgian phonology, cf. Aronson 1997.

The Proto-Kartvelian phonological system may be reconstructed as follows (cf. Fähnrich—Sardshweladse 1995:25; Fähnrich 2007:26; Gamkrelidze—Mačavariani 1982:25—61; Gamkrelidze 1967:709; Schmidt 1962:60):

Obstruents:	p	t	c	č	k	q
	b	d	ɟ	ǰ	g	g
	p'	t'	c'	č'	k'	q'
			s	š	x	h
			z	(ž)	ɣ	
Resonants:	m/ɱ	n/ɳ	l/ɭ	r/ɾ	y/i	w/u
Vowels:		e, ē	o, ō	a, ā		

Notes:

1. The voiceless stops and affricates were aspirated (**p^h*, **t^h*, **c^h*, **č^h*, **k^h*, **q^h*). The aspiration was phonemically non-distinctive.
2. Fähnrich (2007:15) reconstructs several additional phonemes for Proto-Kartvelian. These new phonemes are highly controversial and, therefore, are not included here.

The reconstruction of a voiced postvelar **g* in Proto-Kartvelian is controversial. In Georgian, the glottalized postvelar was preserved, while the voiceless (aspirated) and voiced postvelars merged with *x* and *ɣ* respectively:

Proto-Kartvelian		Georgian
*q	>	x
*g	>	ɣ
*q'	>	q'

A notable feature of Kartvelian phonology is the existence of complex consonant clusters (cf. Aronson 1997:935—938) — Georgian, for example, tolerates 740 initial clusters, which can have upwards of six members (Fähnrich 1993:20 lists eight — his example is *gvprckvnis* ‘er läßt uns [finanziell] zur Ader’ / ‘he is bleeding us dry [financially]; he is sucking the blood out of us [financially]’), and 244 final clusters (cf. Hewitt 1995:19—20). In Svan, on the other hand, initial consonant clusters are far less complex than in Georgian, while final clusters can be far more complex (cf. Tuite 1997:7—8).

Unlike Georgian, Svan does not distinguish /v/ and /w/ as distinct phonemes — it only has /w/.

6.2. RESONANTS

The Proto-Kartvelian resonants could function as syllabics or non-syllabics depending upon their environment. The patterning is strikingly similar to what is assumed to have existed in Proto-Indo-European. According to Gamkrelidze (1966:71—73 and 1967:709—711), the distributional patterning was as follows: The resonants were syllabic (A) after a consonant and before a pause, $*C_{\text{R}}\#$; (B) in stem-final position after a consonant, $*-C_{\text{R}}$; (C) between consonants, $*C_{\text{R}}C$; and (D) after pause and before a consonant, $*\#C$. They were non-syllabic (A) after pause and before a vowel, $*\#RV$; (B) after a vowel and before pause, $*VR\#$; (C) between a vowel and a consonant, $*VRC$; and (D) between vowels, $*VRV$. However, when found between a consonant and a vowel, $*CRV$, there appears to have been free variation, at the Proto-Kartvelian level, between the syllabic and non-syllabic allophones, $*C_{\text{R}}V \sim *CRV$ — Mingrelian, Laz, and Svan point to earlier syllabic resonants, while Georgian points to earlier non-syllabic resonants. Finally, when two resonants were in contact, one was syllabic and the other non-syllabic — the choice of one or the other allophone appears to have been completely flexible, so that $*RRV$, for example, could be realized as either $*R_{\text{R}}RV$; or $*RRV$. Due to various sound changes, the resonants no longer function as a separate class in any of the Kartvelian daughter languages.

6.3. VOWELS

Three short vowels and three long vowels are usually reconstructed for Proto-Kartvelian: $*e$, $*\bar{e}$; $*o$, $*\bar{o}$; $*a$, $*\bar{a}$. These vowels were not evenly distributed — the vowel $*o$ in particular was of a fairly low statistical frequency of occurrence in comparison with $*e$ and $*a$. As in Proto-Indo-European, the vowels underwent various ablaut changes. These vowel alternations served to indicate different types of grammatical formations (cf. Tuite 2023:20—21, §3). The most common alternation was the interchange between the vowels $*e$ and $*a$ in a given syllable. There was also an alternation among lengthened-grade vowels, normal-grade vowels, and reduced- and/or zero-grade vowels. Reduced-grade was functionally a variant of zero-grade, while lengthened-grade was functionally a variant of normal-grade. The lengthened-grade, which was found mostly in the system of primary verbs and was a fundamental morphological component of a group of verbal stems with thematic aorist (cf. Gamkrelidze 1967:712), appears to have been a late creation (cf. Gamkrelidze 1966:82). The basic rule was that no more than one morpheme could have a full-grade vowel in a given polymorphic form, the other morphemes in the syntagmatic sequence being in either zero-grade or reduced-grade.

The vowel system of Pre-Proto-Kartvelian may have been as follows:

Vowels:	i (~ e)	u (~ o)
	e	o
	(ə ~) a	

Also the sequences: iy (~ ey) uy (~ oy) ey oy (əy ~) ay
 iw (~ ew) uw (~ ow) ew ow (əw ~) aw

This is identical to the vowel system reconstructed for the earliest form of Proto-Indo-European. As with Proto-Indo-European, I assume that the qualitative ablaut alternations are very old and that they preceded the quantitative alternations.

Proto-Kartvelian proper began with the phonemicization of a strong stress accent (cf. Gamkrelidze 1966:81, §3.4; Gamkrelidze—Mačavariani 1982:95—96; Schmidt 1962:41). This accent caused the weakening and/or loss of the vowels of unaccented syllables. There was a contrast between those syllables with stress and those syllables without stress. As in Proto-Indo-European, stress positioning appears to have functioned as a means of indicating different grammatical relationships. The phonemicization of a strong stress accent in early Proto-Kartvelian caused a restructuring of the inherited vowel system and brought about the development of syllabic nasals and liquids and may also have ultimately been responsible for the creation of the so-called “introvertive (decessive) harmonic consonant clusters”.

When stressed, *ə became *e, while, when unstressed, it became *i. The vowels *o and *a remained unchanged when stressed, but became *Ø when unstressed (cf. Gamkrelidze—Mačavariani 1982:96).

Though Proto-Indo-European and Proto-Kartvelian may be assumed to have undergone similar developments in their early prehistory, the resulting systems were not identical (cf. Harris 1990:90—92). For example, Proto-Kartvelian did not rephonemicize apophonic *a as *o as did Proto-Indo-European, while, in the reduced-grade, *e was realized as *i in Proto-Kartvelian and not as *ə (traditional “schwa secundum”, usually written *ɐ), which appears to have been the regular development in Proto-Indo-European. Moreover, though a rule similar to that found in Proto-Kartvelian prohibiting more than one full-grade vowel in any given polymorphemic form must have also characterized an early stage of Proto-Indo-European, in its later stages of development, this rule was no longer operative.

The sound systems of the Kartvelian daughter languages are relatively similar, with only the vowel systems exhibiting major differences. In addition to the vowels *a*, *e*, *i*, *o*, *u*, which exist in all of the daughter languages, the various Svan dialects have *ä*, *ö*, *ü*, and *ə*. Each of these vowels also has a lengthened counterpart, thus giving a total of eighteen distinctive vowels in some dialects of Svan. Vowel length is not distinctive in the other Kartvelian daughter languages.

6.4. ROOT STRUCTURE PATTERNING

Comparison of Proto-Kartvelian with other Nostratic languages, especially Proto-Indo-European and Proto-Afrasian, makes it seem probable that the root structure patterning developed as follows (cf. Aronson 1997:938):

1. There were no initial vowels in the earliest form of Pre-Proto-Kartvelian. Therefore, every root began with a consonant. (At a later stage of development, however, loss of laryngeals resulted in roots with initial vowels: **HVC-* > **VC-*. Similar developments occurred in later Proto-Indo-European.)
2. Though originally not permitted, later changes led to the development of initial consonant clusters.
3. Two basic syllable types existed: (A) open syllables (**V* and **CV*) and (B) closed syllables (**VC* and **CVC*). Permissible root forms coincided exactly with these two syllable types. Loss of laryngeals and vowel syncope in early Proto-Kartvelian led to new roots in the form **C-*.
4. A verbal stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: **CVC-VC-*. Any consonant could serve as a suffix. (Inflectional endings could be of the form **-V*, as in the case of the 3rd singular aorist ending **-a*.)
5. Similar patterns occurred in nominal stems.

At this time, there were three fundamental stem types: (A) verbal stems, (B) nominal and adjectival stems, and (C) pronominal and indeclinable stems. That this distinction remained in Proto-Kartvelian proper is shown by the fact that prefixes mostly maintained their original structural identity, being only partially involved in the system of vowel gradation (cf. Gamkrelidze 1967:715) as well as by the fact that nominal stems were sharply distinguished from verbal stems in that they had the same ablaut state throughout the paradigm, while extended (that is, bimorphemic) verbal stems had alternating ablaut states according to the paradigmatic pattern (cf. Gamkrelidze 1967:714—715).

The phonemicization of a strong stress accent in Early Proto-Kartvelian disrupted the patterning outlined above. The positioning of the stress was morphologically distinctive, serving as a means to differentiate grammatical relationships. All vowels were retained when stressed but were either weakened (= “reduced-grade”) or totally eliminated altogether (= “zero-grade”) when unstressed: the choice between the reduced-grade versus the zero-grade depended upon the position of the unstressed syllable relative to the stressed syllable as well as upon the laws of syllabicity in effect at that time. Finally, it was at the end of this stage of development that the syllabic allophones of the resonants came into being and possibly the introvertive harmonic consonant clusters as well.

The stress-conditioned ablaut alternations gave rise to two distinct forms of extended stems:

State 1: Root in full-grade and accented, suffix in zero-grade: **C^ˈVC-*.

State 2: Root in zero-grade, suffix in full-grade and accented: **CC^ˈVC-*.

These alternating patterns, which characterize the bimorphemic verbal stems, may be illustrated by the following examples (these are taken from Gamkrelidze 1966:74 and 1967:714):

State 1
Intransitive

**der-k'*- 'to bend, to stoop'
 **šker-t'*- 'to go out'
 **k'er-b-* 'to gather'

State 2
Transitive

**dr-ek'*- 'to bend'
 **škr-et'*- 'to extinguish'
 **k'r-eb-* 'to collect'

When a full-grade suffix was added to such stems, the preceding full-grade vowel was replaced by either reduced-grade or zero-grade:

State 1

**der-k'*- > **dṛ-k'-a*
 **šker-t'*- > **škṛ-t'-a*
 **k'er-b-* > **k'ṛ-b-a*

State 2

**dr-ek'*- > **dr-ik'-e*
 **škr-et'*- > **škr-it'-e*
 **k'r-eb-* > **k'r-ib-e*

Nominal stems also displayed these patterns, though, unlike the bimorphemic verbal stems, the same ablaut state was fixed throughout the paradigm (these examples are from Gamkrelidze 1967:714):

State 1

**šax-l̥*- 'house'
 **žax-l̥*- 'dog'
 **k'wen-ṛ*- 'marten'

State 2

**km-ar-* 'husband'
 **cm-el-* 'fat'
 **žm-ar-* 'vinegar'

6.5. GEORGIAN ALPHABET (MXEDRULI)

a ა	v ვ	k' კ	o ო	t' ტ	γ ლ	ჰ ძ	ჭ ჯ
b ბ	z ზ	l ლ	p' პ	wi ჳ	q' ყ	c' ც	h ჰ
g გ	ē ე	m მ	ž ჟ	u უ	š შ	č' ჩ	ō ო
d დ	t თ	n ნ	r რ	p გ	č ზ	x ბ	
e ე	i ი	j ო	s ს	k ქ	c ც	q ჯ	

Note: The following are no longer in use: ē (ე), j (ი), wi (ჳ), q (ჴ), ო (ო).

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The table of correspondences on the following pages is based upon Fähnrich—Sardshweladse 1995:14; Fähnrich 2007:14—15; Klimov 1964:20—25; Schmidt 1962; Gamkrelidze—Mačavariani 1982. See also Butskhrikidze 2002.

6.6. CORRESPONDENCES

Vowels:

Proto-Kartvelian	Georgian	Mingrelian	Laz	Svan
*a	a	o	o	a
*e	e	a	a	e
*i	i	i	i	i
*o	o	o	o	o
*u	u	u	u	u

Note: Long vowels are not included in the above table (for a discussion about the problems connected with the reconstruction of long vowels in Proto-Kartvelian and their development in the individual Kartvelian daughter languages, cf. Schmidt 1962:39—41).

Bilabials:

*b	b	b	b	b
*p	p	p	p	p
*p'	p'	p'	p'	p'

Dentals:

*d	d	d	d	d
*t	t	t	t	t
*t'	t'	t'	t'	t'

Velars:

*g	g	g	g	g
*k	k	k	k	k
*k'	k'	k'	k'	k'

Postvelars:

*ɣ	ɣ	ɣ	ɣ	ɣ
*q	x	x	x	q
*q'	q'	' [ʔ] q'	q' k'	q'

Glide:

*w	v	v	v	w
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Dental Affricates and Sibilants:

Proto-Kartvelian	Georgian	Mingrelian	Laz	Svan
*ʒ (*ʒ)	ʒ	ʒ	ʒ	ʒ
*c (*c)	c	c	c	c
*c' (*c')	c'	c'	c'	c'
*z (*z)	z	z	z	z
*s (*s)	s	s	s	s

Palato-alveolar Affricates and Sibilants:

*ʒ̥ (*ʒ̥ ₁)	ʒ̥	ʒ̥	ʒ̥	ʒ̥
*č (*č)	č	č	č	č
*č' (*č')	č'	č'	č'	č'
*ž (*ž ₁)	ž	ž	ž	ž
*š (*š ₁)	s	š	š	š

Palato-alveolar/Velar Clusters:

*ʒg (*ʒg)	ʒ̥	ʒ̥g	ʒ̥g	ʒ̥g
*čk (*čk)	č̥	č̥k	č̥k	č̥k
*č'k' (*č'k')	č'	č'k'	č'k'	č'k'
*šk (*šk)	š̥	šk	šk	šk

Laryngeal and Velar Fricatives:

*h	Ø	Ø	h Ø	Ø
*ɣ	ɣ	ɣ	ɣ	ɣ
*x	x	x	x	x

Nasals and Liquids:

*m	m	m	m	m
*n	n	n	n	n
*l	l	l	l	l
*r	r	r	r	r

APPENDIX:
THE PHONOLOGICAL SYSTEM OF MODERN GEORGIAN

The consonant system of Georgian is as follows (cf. Aronson 1990:20 and 1997: 929—931; Butskhrikidze 2002:85—88 and 101—102; Comrie [ed.] 1981:201; Vogt 1971:9):

Bilabial	b	p	p'	m							
Labial-dental								v			
Alveolar	d	t	t'	n	ʒ	c	c'	z	s	l	r
Palato-alveolar					ʒ̣	č	č'	ž	š		
Velar	g	k	k'					ɣ	x		
Uvular			q'								
Laryngeal/Glottal									h		

The vowels are (cf. Aronson 1997:931; Butskhrikidze 2002:81; Vogt 1971:7—8):

i		u
e		o
	a	

There are two sets of homorganic consonant clusters in Georgian (cf. Butskhrikidze 2002:103—105; Butskhrikidze—van Heuven 2001; Fähnrich 1993:20—21; Vogt 1971:14). The homorganic consonant clusters function as single segments. Note: These can also be classed as (1) clusters of stops, affricates, and fricatives with velar stops and (2) clusters of stops, affricates, and fricatives with velar fricatives.

Labial/dorsal homorganic consonant clusters:

bg-	pk-	p'k'
bɣ-	px-	p'q'

Alveolar ~ Palato-Alveolar/dorsal homorganic consonant clusters:

dg	dɣ	tk	tx	t'k'	t'q'
ʒg	ʒɣ	ck	cx	c'k'	c'q'
ʒ̣g	ʒ̣ɣ	čk	čx	č'k'	č'q'

The following are sometimes treated as homorganic consonant clusters as well:

zy	sx
žy	šx

There are also decessive consonant clusters, such as: *t'b-*, *t'k'b-*, *q'b-*, *grk'-*, *drk'-*, *xvd-*, *xd-*, etc.

THE PHONOLOGICAL SYSTEM OF MODERN SVAN

The consonant system of Svan is as follows (cf. Tuite 1997:7):

	Obstruents			Fricatives		Nasals	Sonants	
	voiced	aspirate	ejective	voiced	voiceless			
Labial	b	p	p'	(v)		m	w	
Dental	d	t	t'			n		
Alveolar	ʒ [dz]	c [ts]	c' [ts']	z	s		r	l
Palatal	ʒ̣ [dʒ]	č [tʃ]	č' [tʃ']	ʒ̣ [ʒ]	š [ʃ]		j	
Velar	g	k	k'					
Uvular		q	q'	ɣ [ʁ]	x [χ]			
Glottal					h			

Notes:

1. Unlike Georgian, Svan has /w/, while /v/ is missing.
2. The uvular obstruents /q/ and /q'/ are often pronounced as affricates (/qχ/ and /q'χ/, respectively).

The vowels are (cf. Tuite 1997:7):

Dialect	Short				Long			
Upper Bal	ä, e, i	ö, ü	a, ə	o, u	ā, ē, ī	ō, ū	ā, ē	ō, ū
Lower Bal	ä, e, i	ö, ü	a, ə	o, u				
Lent'ex	ä, e, i	ö, ü	a, ə	o, u				
Cholur	ä, e, i	ö, ü	a, ə	o, u	ā, ē, ī	ō, ū	ā, ē	ō, ū
Lashx	e, i		a, ə	o, u	ē, ī		ā, ē	ō, ū

Notes:

1. /ä/ = [æ], /ö/ = [œ], /a/ = [ɑ], /ü/ = [y].
2. Phonologically distinct long vowels are found in the Upper Bal, Cholur, and Lashx dialects of Svan.
3. The front rounded vowels /ö/ and /ü/ are often realized as diphthongs (/we/ and /wi/, respectively).
4. The vowel /ä/ causes preceding velar stops to be palatalized.

Although Svan imposes strict limitations on word initial consonant clusters, final consonant clusters can be quite complicated (cf. Tuite 1997:7—8).

CHAPTER SEVEN

A SKETCH OF PROTO-AFRASIAN PHONOLOGY

7.1. THE PROTO-AFRASIAN PHONOLOGICAL SYSTEM

Unlike the comparative-historical study of the Indo-European language family, which has a long history, the comparative-historical study of the Afrasian language family is still not far advanced, though enormous progress has been made in recent years. Even though the Semitic and Egyptian branches have been scientifically investigated rather thoroughly, several of the other branches are only now being examined, and there remain many modern Afrasian languages that are scarcely even known. Moreover, while a few of the daughter languages have written records going back many millennia, most of the daughter languages are only known from recent times. Given this state of affairs, it is not yet possible to reconstruct the Proto-Afrasian phonological system with absolute certainty in all areas. Though some series (labials, dentals, velars, etc.) are fairly well established, the sibilants (cf. R. Steiner 1982; Schneider 2022), affricates (cf. Kogan 2011a:61—71), and fricative laterals (cf. R. Steiner 1977; Kogan 2011a:71—80), in particular, are far from being fully understood, and the reconstruction of labiovelars and postvelars is strongly contested. There are even more problems concerning the reconstruction of the vowels, though the Cushitic languages, especially East Cushitic, appear to have preserved the original system better than the other branches.

In general, I have followed the views of André Martinet (1975[1953]:248—261), David Cohen (1968:1299—1306), and Igor M. Diakonoff (1992:5—35), though I have made minor adjustments to their proposals (for example, the reconstruction of a series of palatalized velar stops for Proto-North Erythraean — see below, §7.9) on the basis of my own research.

One of the most notable characteristics of Afrasian consonantism is the system of triads found in the stops and affricates — each series (except the lateralized affricates) is composed of three contrasting members: (1) voiceless (aspirated), (2) voiced, and (3) glottalized (that is, ejectives — these are the so-called “emphatics” of Semitic grammar). The lateralized affricate series probably lacked a voiced member. Another significant characteristic is the presence of a glottal stop, a voiceless laryngeal fricative, voiced and voiceless velar fricatives, and voiced and voiceless pharyngeal fricatives. Proto-Afrasian may also have had a series of postvelars (**q*, **q*_ʕ, **q*^ʕ).

The Proto-Afrasian phonological system may tentatively be reconstructed as follows (cf. Diakonoff—Porxomovsky—Stolbova 1987:9—29, especially p. 12; Diakonoff 1965:18—29, 1984, 1988:34—41, and 1992:5—35, especially p. 6; D. Cohen 1968:1300—1306; Orël—Stolbova 1995:xv—xxvii, especially p. xvi; Ehret 1995; Takács 2011a):

Stops and Affricates:

p	t	c	tʸ	tʈ	k	kʷ	(q)		
b	d	ʒ	dʸ	dʈ	g	gʷ	(g)	(gʷ)	
pʻ	tʻ	cʻ	tʻʸ	tʈʻ	kʻ	kʻʷ	(qʻ)	(qʻʷ)	ʔ

Fricatives:

f		s	sʸ		x	xʷ		h	ħ
		z			ɣ	(ɣʷ)			ʕ
		sʻ							

Glides: w y

Nasals and Liquids: m n ŋ l r

Vowels: i e a o u
ii ee aa oo uu

Note: The voiceless stops and affricates were non-phonemically aspirated.

According to Diakonoff (1975:134—136), Proto-Afrasian had a vertical vowel system of *ə and *a as well as a series of syllabic resonants. In my opinion, the evidence from the non-Semitic branches of Afrasian does not appear to support the reconstruction of syllabic resonants for Proto-Afrasian. Diakonoff does not reconstruct long vowels for Proto-Afrasian.

In their *Hamito-Semitic Etymological Dictionary*, Orël—Stolbova (1995:xvi) reconstruct a slightly reduced phonological system for Proto-Afrasian. They do not reconstruct a series of labialized velars, while they substitute the affricates *č, *čʻ (= *čʰ), *ž for my *tʰ, *tʸ, *dʸ, respectively. On the other hand, they posit a full set of vowels (Orël—Stolbova 1995:xxi), as does Ehret (1995:55—57) — though, unlike Orël—Stolbova, Ehret posits phonemic long vowels as well:

Orël—Stolbova	i	ü			u
		e			o
			a		
Ehret	i, ii				u, uu
		e, ee		o, oo	
			a, aa		

Other sounds have also been posited for Proto-Afrasian by several scholars — these include prenasalized labials (cf. Greenberg 1958:295—302 and 1965:88—92), postvelar stops, affricates, and/or fricatives (cf. Diakonoff 1974:595 and 1988:34, 39), and additional sibilants (Diakonoff 1965:21). Though it is by no means

impossible that some of these sounds may have belonged to the Proto-Afrasian phonological system, in my opinion, the arguments advanced so far to support their reconstruction are not entirely convincing.

7.2. THE EMPHATICS

In the Semitic branch, the so-called “emphatics” have three different realizations: (A) in Arabic, the emphatics have been described in the relevant literature as either uvularized (cf. Catford 1977b:193) or pharyngealized consonants (cf. Al-Ani 1970:44—58; Catford 1977b:193; Chomsky—Halle 1968:306); (B) in the Modern South Arabian languages (cf. Johnstone 1975:6—7, §2.1.2), the Semitic languages of Ethiopia (cf. Moscati 1964:23—24, §8.2), and several Eastern Neo-Aramaic dialects (such as, for example, Urmian Nestorian Neo-Aramaic and Kurdistan Jewish Neo-Aramaic), the emphatics are glottalized — the glottalization is weak in Urmian Nestorian Neo-Aramaic; and (C) in several other Neo-Aramaic dialects (such as, for example, Tūr-‘Abdīn), the emphatics are realized as unaspirated voiceless stops (cf. Dolgopolsky 1977:1) — here, the non-emphatic voiceless stops are distinguished from the emphatics by the presence of the feature of aspiration.

Circumstantial evidence indicates that the emphatics may also have been glottalized in Akkadian, Ancient Hebrew (cf. Rendsburg 1997:73), and the oldest Aramaic: (A) In Akkadian, when two emphatics cooccurred in a root, one of them was changed into the corresponding non-emphatic (Geers’ Law), thus: $t \sim k/s > t \sim k/s$; $k \sim s > k \sim s$; $k \sim t > k \sim t$ (cf. Ungnad—Matouš 1969:27). Now, a constraint similar to that described by Geers’ Law is a recurrent phenomenon in languages having ejectives (cf. Hopper 1973:160—161). According to this constraint, two ejectives cannot cooccur in a root. Thus, if we take the emphatics of Akkadian to have been ejectives, then Geers’ Law finds a perfectly natural explanation as a manifestation of this constraint. (B) Pharyngealization is not incompatible with voicing, but glottalization is (cf. Greenberg 1970:125—127, §2.2). Thus, Arabic has voiced as well as voiceless emphatics (cf. Al-Ani 1970:44—58; Ambros 1977:8—10 and 13—14). In Hebrew and Aramaic, however, the emphatics are never voiced (cf. Cantineau 1952:93; Moscati 1964:23—24), and the same is most likely true for Akkadian and Ugaritic as well. (C) Pharyngealization is always accompanied by the backing of contiguous vowels (cf. Hyman 1975:49; Ladefoged 1971:63—64). Similar backing is sometimes also found in conjunction with glottalization. Indeed, in all of the Neo-Aramaic dialects mentioned above, vowels are always backed when next to emphatic consonants, regardless of how the emphatics are realized. However, while backing of adjacent vowels is a mandatory corollary of pharyngealization, it is optional with glottalization. Therefore, since the emphatics of Arabic are pharyngealized, contiguous vowels are always backed (cf. Al-Ani 1970:23—24; Cantineau 1952:92; Martinet 1975[1959]:237; Bellem 2007:43—47). No such backing is observable in either Akkadian or Hebrew (cf. Cantineau 1952:93; Martinet 1975[1959]:237—238; Moscati 1964:23—24).

Both Greenberg (1970:127) and Martinet (1975[1959]:251) have pointed out that it is common for languages having ejectives to lack the bilabial member (cf. also Gamkrelidze 1978:17 and 1981:587—589). Now, it is extremely unlikely that Proto-Semitic possessed a bilabial emphatic (cf. Cantineau 1952:80—81; Moscati 1964:25). A gap at this point of articulation would be easy to understand if the emphatics had been ejectives in Proto-Semitic. Though an emphatic bilabial must be reconstructed for Proto-Afrasian, it was extremely rare (cf. Ehret 1995:77). Such a low frequency of occurrence agrees fully with the distributional patterning of bilabial ejectives in attested languages having such sounds.

The cumulative evidence leaves little doubt that the emphatics were glottalized (ejectives) in Proto-Semitic and not pharyngealized as in Arabic. Cf. Bellem (2007), Bergsträsser (1928:5 and 1983:4), Cantineau (1952:91—94), Del Olmo Lete (2003:89), Hasselbach (2017:96), Huehnergard (2005:165—166), Kogan (2011a:59—61), Kouwenberg (2003), Martinet (1975[1959]:238 and 1975[1953]:250—252), Rubin (2010:24), Steiner (1977:155), R. Stempel (1999:64—67), and Zemánek (1990 and 1996:50—53), among others. Lipiński (1997:105—106), however, supports the view that pharyngealization was primary. According to Dolgopolsky (1977:1—13), the pharyngealized emphatics of Arabic developed from earlier ejectives as follows:

1. The earliest Arabic inherited the triple contrast voiceless aspirated ~ voiced ~ glottalized from Proto-Semitic.
2. First, vowels were backed when next to emphatic consonants.
3. Next, the glottalization was weakened and eventually lost. Non-emphatic voiceless consonants were then distinguished from emphatics by the presence of the feature of aspiration. Furthermore, vowels were backed when next to emphatics but not when next to non-emphatics. (This is the stage of development reached by the Neo-Aramaic dialect of Ṭūr-ʿAbdīn.)
4. Lastly, aspiration was lost, and the emphatics were distinguished from the non-emphatic voiceless consonants solely by backing (that is, pharyngealization).

The evidence from the other branches of Afrasian supports the contention that the emphatics were ejectives not only in Proto-Semitic but in Proto-Afrasian as well (cf. D. Cohen 1968:1301—1303; Diakonoff 1988:35).

The emphatics were lost as a separate series in Ancient Egyptian (cf. Loprieno 1995:32; Vergote 1971:43). The velar emphatic **kʼ* became the voiceless postvelar stop *q*, while the remaining emphatics merged with the plain (unaspirated) voiceless consonants. The developments probably went as follows:

1. The earliest Egyptian inherited the triple contrast voiceless aspirated ~ voiced ~ glottalized from Proto-Afrasian.
2. First, the voiced consonants became devoiced. The resulting system had the contrast voiceless aspirated ~ voiceless unaspirated ~ glottalized.
3. Next, the emphatics other than **kʼ* became deglottalized and merged with the voiceless unaspirated stops. It is not difficult to understand why **kʼ* would have

remained longer than the other emphatics since back articulation (velar and postvelar) is the unmarked point of articulation for ejectives (cf. Greenberg 1970:127—129, §2.3).

4. Finally, **k'* became *q*. (We may note that a similar development is found in several East Cushitic languages, Somali being one example.)

In the modern Berber languages, the emphatics are pharyngealized as in Arabic (cf. D. Cohen 1968:1302; Penchoen 1973:7, §2.3.1[a]; Lipiński 1997:105; Kossmann—Stroomer 1997:464; Kossmann 2012:25; Frajzyngier 2012:509). Both voiced and voiceless emphatics exist. We may assume that the pharyngealized emphatics found in the Berber languages are due to secondary developments. No doubt, the emphatics developed in Berber in much the same way as they did in Arabic.

Of the modern Chadic languages, Angas, Dangaleat, Ga'anda, Higi, Margi, Tera, and Sayanci, for instance, have implosives, while Hausa has implosives in the bilabial and dental series but ejectives in the sibilant and velar series corresponding to the Semitic emphatics (for details, cf. Ruhlen 1975). According to Newman (1977:9, §2.1), a series of implosives is to be reconstructed here for Proto-Chadic: **ɓ*, **ɗ*, **ɠ* (Newman writes **'J*). Jungraithmayr—Shimizu (1981:19—20), however, reconstruct a system for Proto-Chadic similar to what is found in Hausa, with bilabial and dental implosives and sibilant and velar ejectives. Orël—Stolbova (1995:xviii) reconstruct ejectives for Common Chadic: **t'*, **k'* (they write **t*, **k*, respectively; they do not reconstruct a bilabial member). Finally, Ehret (1995) mostly follows Jungraithmayr—Shimizu. Martinet (1970:113, §4.28) notes that ejectives can develop into implosives through a process of anticipation of the voice of the following vowel, thus (see also Fallon 2002:281—284):

$$p' \ t' \ k' > ɓ \ ɗ \ ɠ$$

Thus, if we follow Martinet, as I think we must, the implosives found in various Chadic daughter languages can be seen as having developed from earlier ejectives at the Proto-Chadic level.

The Cushitic and Omotic languages provide the strongest evidence in favor of interpreting the emphatics of Proto-Afrasian as ejectives. The Cushitic languages Awngi (Awiya) and Galab possess neither implosives nor ejectives and can, therefore, be left out of consideration since they do not represent the original state of affairs. Of the remaining Cushitic languages, Beja (Bedawye), for example, has the voiceless and voiced retroflexes *t* and *d* (cf. Maddieson 1984:316, no. 261; Ruhlen 1975:167); Oromo (Galla) has the implosive *ɗ* plus the ejectives *p'*, *t'*, *ɕ'*, *k'* (*t'* is found in loanwords or in roots of a descriptive nature [cf. Sasse 1979:26]) (cf. Ruhlen 1975:197 — Ruhlen gives long and short retroflex implosives); Bilin has the ejectives *t'*, *ɕ'*, *k'* (cf. Ruhlen 1975:169); Somali has the retroflex *d* (from earlier **d*) and the voiceless postvelar *q* (uvular stop with voiced, voiceless, and fricative allophones, all from earlier **k'*) (cf. Maddieson 1984:314, no. 258 — Maddieson gives long and short laryngealized voiced retroflexes; Ruhlen 1975:269 — Ruhlen gives long and short dental implosives; Sasse 1979:25 and 47); and Iraqw has the

affricate ejective c' and the voiceless postvelars q and q^w (from earlier $*k'$ and $*k^w$, respectively) plus, marginally, b and d' (cf. Maddieson 1984:315, no. 260; Ruhlen 1975:210); Dahalo has the ejectives p' , t' , c' , $tʃ'$, $(č')$, k' , and k^w (cf. Ehret 1980:126). For information on the East Cushitic languages, cf. Sasse 1979 and Hudson 1989; for the Southern Cushitic languages, cf. Ehret 1980.

Of the modern Omotic languages, Kafa (Kefa) has the ejectives p' , t' , c' , k' (cf. Maddieson 1984:317, no. 264; Ruhlen 1975:219); Dizi has the ejectives t' , $č'$, k' (cf. Maddieson 1984:317, no. 263); Welamo has the ejectives p' , t' , c' , k^y , k' , s' (cf. Ruhlen 1975:288); while Hamar (Hamer) has the velar ejective k' plus the implosives b , d , and g (cf. Maddieson 1984:318, no. 265). For additional information on Kafa, Dizi, and Hamar, see Bender (ed.) 1976; for other Omotic languages, cf. Hayward (ed.) 1990 and Amha 2012:434–438. For details about the development of the emphatics in the Afrasian daughter languages as a group, cf. Diakonoff 1965:18–29, 1988:34–41, and 1992:56–64; D. Cohen 1968:1301–1303.

7.3. BILABIALS

There can be no question that Proto-Semitic contained $*p$, $*b$, and $*m$. The f found in Arabic, South Arabian, and Ethiopian Semitic is an innovation and can easily be derived from earlier $*p$ (cf. Moscati 1964:24–25, §8.6; O'Leary 1923:62; Lipiński 1997:109). Several modern Eastern Arabic dialects have p in loanwords (cf. Lipiński 1997:109). In Hebrew and Aramaic, /p/ and /b/ have the non-phonemic allophones /p̥/ and /β/, respectively (cf. Bergsträsser 1928:37–38 and 62, 1983:51 and 79; Lipiński 1997:113–114; Moscati 1964:26–27, §8.10; O'Leary 1923:88–89; Rendsburg 1997:74–75). Ethiopian Semitic languages have a voiceless bilabial emphatic p' , but this is most likely of Cushitic origin and is not an inherited phoneme (cf. Lipiński 1997:110).

Semitic correspondences (cf. Bergsträsser 1928:4 and 1983:3; Gray 1934:10–11; Kogan 2011a:55; Lipiński 1997:109–116; Moscati 1964:24–27 and 43–45; O'Leary 1923:62–63; R. Stempel 1999:44–45; Brockelmann 1908–1913.I:136):

Proto-Semitic	*p	*b	*m
Akkadian	p	b	m
Ugaritic	p	b	m
Hebrew	פ /p/	ב /b/	מ /m/
Aramaic	פ /p/	ב /b/	מ /m/
Arabic	ف /f/	ب /b/	م /m/
Epigraphic South Arabian	f	b	m
Geez / Ethiopic	f	b	m

Notes:

1. Each language is given in traditional transcription.
2. Hebrew, Aramaic (= Hebrew), and Arabic scripts are included in this as well as in the following tables in addition to transliterations.
3. The voiceless stops were probably voiceless aspirates (that is, /p^h/, /t^h/, /k^h/) in both Proto-Semitic (cf. Cantineau 1952:90—91; Martinet 1975[1953]:250) and Proto-Afrasian (cf. D. Cohen 1968:1303). The aspiration was phonemically non-distinctive.

The material from the other Afrasian branches supports the assumption that Proto-Afrasian also had the bilabials **p*, **b*, and **m*.

Diakonoff (1965:20) reconstructs an emphatic bilabial, which he writes **ḑ*, for Proto-Semitic. However, as he himself admits, the evidence for this sound is extremely weak. It is best to agree with Cantineau (1952:80—81) and Moscati (1964:25, §8.7) that an emphatic bilabial should not be reconstructed for Proto-Semitic. However, a glottalized bilabial must be reconstructed for Proto-Afrasian (cf. Diakonoff 1988:35; Ehret 1995:77). This sound was characterized by an extremely low frequency of occurrence.

According to Greenberg (1958:295—302 and 1965:88—92), two additional labials should be reconstructed for Proto-Afrasian: **f* and **^mb*. While he has made a strong case for **f* separate from **p*, his theories concerning **^mb* are not convincing and have been successfully argued against by Illič-Svityč (1966a:9—34). Illič-Svityč considers **^mb* to contain a prefix **m-*.

Afrasian correspondences (cf. Diakonoff 1988:35 and 1992:10—13; Ehret 1995:77—79; Orël—Stolbova 1995:xviii—xix and xx; Takács 2011a:98):

Proto-Afrasian	<i>*p</i>	<i>*b</i>	<i>*p'</i>	<i>*f</i>	<i>*m</i>
Proto-Semitic	<i>*p</i>	<i>*b</i>	<i>*b</i>	<i>*p</i>	<i>*m</i>
Ancient Egyptian	p □	b 𓂏	b 𓂏	f 𓂏	m 𓂏
Proto-Berber	<i>*f</i>	<i>*ḑ</i> (?)	?	<i>*f</i>	<i>*m</i>
Proto-East Cushitic	<i>*f</i>	<i>*b</i>	?	<i>*f</i>	<i>*m</i>
Proto-Southern	<i>*p</i>	<i>*b</i>	<i>*p'</i>	<i>*f</i>	<i>*m</i>
Proto-Chadic	<i>*p</i>	<i>*b</i>	<i>*p'</i>	<i>*f</i>	<i>*m</i>

Note: Ancient Egyptian is given in traditional transcription. It should be noted, however, that the phonemes traditionally transcribed as /b/, /d/, /ḏ/, /g/, /q/ were probably the voiceless unaspirated consonants /p/, /t/, /č/, /k/, /q/, respectively, while the phonemes traditionally transcribed as /p/, /t/, /ṭ/, /k/ were probably the voiceless aspirated consonants /p^h/, /t^h/, /č^h/, /k^h/, respectively (cf. J. P. Allen 2013:37—56 and 2020; Loprieno 1995:32—34 [Loprieno interprets the traditional voiced stops as ejectives]; Vergote 1971: 43; Peust 1999:83—84). The most comprehensive treatments of Egyptian phonology are Peust 1999 and J. P. Allen 2020.

7.4. DENTALS

It is quite evident from the following correspondences that Proto-Semitic had **t*, **d*, **t'*, and **n*. In Hebrew and Aramaic, /t/ and /d/ have the non-phonemic allophones /θ/ and /ð/, respectively (cf. Moscati 1964:26—27, §8.10). In Akkadian, Hebrew, and Epigraphic South Arabian, *n* becomes *m* in mimation (cf. Diakonoff 1965:28, note 2, and 61—62; Moscati 1964:96—100).

Semitic correspondences (cf. Moscati 1964:43—45; Lipiński 1997:116—117):

Proto-Semitic	*t	*d	*t'	*n
Akkadian	t	d	ṭ	n
Ugaritic	t	d	ṭ	n
Hebrew	ת /t/	ד /d/	ט /t'/	נ /n/
Aramaic	ת /t/	ד /d/	ט /t'/	נ /n/
Arabic	ت /t/	د /d/	ط /t'/	ن /n/
Epigraphic South Arabian	t	d	ṭ	n
Geez / Ethiopic	t	d	ṭ	n

The data from the remaining Afrasian branches leave no doubt that Proto-Afrasian also had the dentals **t*, **d*, **t'*, and **n*. Secondary palatalization of the dentals before front vowels is a widespread phenomenon, being especially common in the Semitic languages of Ethiopia and in Chadic.

Afrasian correspondences (cf. Diakonoff 1988:35 and 1992:13—14; Ehret 1995:120—124; Orël—Stolbova 1995:xviii—xix and xx; Takács 2011a:98):

Proto-Afrasian	*t	*d	*t'	*n
Proto-Semitic	*t	*d	*t'	*n
Ancient Egyptian	t 𓂏	d 𓂐	d 𓂐	n 𓂑
Proto-Berber	*t	*d	*t' *ḏ	*n
Proto-East Cushitic	*t	*d	*d'	*n
Proto-Southern Cushitic	*t *ṭ	*d	*d' *t'	*n
Proto-Chadic	*t	*d	*t'	*n

Note: The reconstruction of Proto-Berber is not very advanced. Consequently, the reflexes given in this and other tables should be considered provisional.

7.5. DENTAL AFFRICATES

On the surface, the Semitic correspondences appear to indicate that a series of sibilants should be reconstructed here for Proto-Semitic, and, as a matter of fact,

sibilants are posited in the standard handbooks (cf. Bergsträsser 1928:4 and 1983:3; Brockelmann 1908—1913.I:128—136; O’Leary 1923:53—62; Gray 1934:8; Moscati 1964:33—37; W. Wright 1890:57—64). There is some evidence, however, that at least some examples involving this series were originally composed of dental affricates instead (cf. M. Cohen 1947:141, 143, and 145; Diakonoff 1965:20—21, 1974:595, and 1992:16—22, 36—55; Faber 1981:233—262; Kogan 2011a:65—69; Martinet 1975[1953]:253—254; Takács 2011a:21—26): **c* /t͡s/, **z* /d͡z/, and **c’* /t͡s’/. This does not mean that the independent existence of sibilants in the Semitic parent language is to be excluded. On the contrary, in addition to the dental affricates, Proto-Semitic may also have had a full set of sibilants, namely, **s*, **z*, **s’*, and **sʷ* (traditional **s*, **z*, **š*, and **š*), though opinions differ on this matter.

The primary evidence for earlier dental affricates comes from Hebrew and Akkadian (cf. Diakonoff 1965:20—21). First the emphatic sibilant, ʕ /ʕ/, is traditionally pronounced as a dental affricate in Hebrew, and, as noted by Cantineau (1952:83), this pronunciation is not a recent or secondary development. Next, it is now known that the Hittite cuneiform syllabary was borrowed at the beginning of the second millennium BCE directly from the form of Old Akkadian then written in Northern Syria (cf. Gamkrelidze 1968:91—92) and not from Hurrian as previously thought (cf. Sturtevant 1951:2—3, §5). The Hittite syllabary contains signs that are transliterated with a *z* but which, in fact, represent the dental affricate /t͡s/ (cf. Sturtevant 1951:14—15, §25). This seems to indicate that the <z> of Old Akkadian was pronounced as an affricate (cf. Martinet 1975[1953]:254). Also worth noting is the fact that the Hittite scribes employed the cuneiform signs containing <š> to represent /s/ (cf. Sturtevant 1951:25, §50). Since the Akkadian cuneiform syllabary contained signs traditionally transliterated as *s* in addition to those transliterated as *š*, we must conclude that the Hittite scribes chose the latter signs because they were closer to their sibilant than the former. We may venture a guess that the Hittites chose the *š*-signs because the *s*-signs represented affricates in Akkadian at the time when they adopted the cuneiform writing system. This conclusion is supported by the Hurrian evidence, where, according to Diakonoff (1965:21), the cuneiform signs with <z> and <s> are used to denote affricates (see also Diakonoff—Starostin 1986:13—15 for a discussion of Hurrian phonology and 1986:11—13 for a discussion of the closely-related Urartian; see also Speiser 1941:50—68).

Additional evidence for affricate pronunciation comes from Egyptian material dating from the second millennium BCE. In transcribing Semitic words and names, Egyptian fairly consistently uses ʕ (= /č/ or, better, /čʰ/) for (traditional) *s* in the Semitic words and ʕ (= /ž/ or, better, /ž/) for (traditional) *z* and *š* in the Semitic words (cf. Diakonoff 1988:36; for examples, cf. Albright 1934:33—67).

Finally, Cantineau (1952:83) and M. Cohen (1947:145) briefly mention the fact that Proto-Semitic **c’* (traditional **š*) is mostly pronounced as either an affricate or a dental stop in the Semitic languages of Ethiopia.

For details on the developments in the Semitic daughter languages, see Diakonoff 1992:36—55.

Note David Cohen’s (1968:1304) remarks, which summarize the above points rather nicely:

As for the three phonemes that are, at the present time, realized everywhere as sibilants, it seems necessary to assume that they were formerly realized as affricates. Such a pronunciation, at least for the emphatic member, is traditional among certain Jews in reading Biblical Hebrew. Furthermore, it is attested in Ethiopic. There are important arguments in favor [of such an interpretation] on the basis of external evidence: in particular, the Hittite use of the Akkadian sign interpreted as *z* to indicate an affricate.

Semitic correspondences (cf. Kogan 2011a:55; Lipiński 1997:122—126; Moscati 1964:43—45):

Proto-Semitic	*c	*ʕ	*c'
Akkadian	s	z	š
Ugaritic	s	z	š
Hebrew	ס /s/	ז /z/	ש /š/
Aramaic	ס /s/	ז /z/	ש /š/
Arabic	س /s/	ز /z/	ص /š/
Epigraphic South Arabian	s ³	z	š
Geez / Ethiopic	s	z	š

In the other branches of Afrasian, sibilants, affricates, and dentals correspond to Proto-Semitic *c /ts/, *ʕ /dz/, and *c' /tʃ/ (cf. M. Cohen 1947:141—147; Ehret 1995:251—254; Diakonoff 1965:26). The developments found in all branches of Afrasian can best be accounted for by reconstructing a series of dental affricates for Proto-Afrasian (cf. D. Cohen 1968:1304; Diakonoff 1988:36—39). It may be noted that this series is well preserved in Southern Cushitic and that it has even endured to the present day in Dahalo (cf. Ehret 1980:33). Finally, it should be mentioned here that affricates have arisen through secondary developments in all branches of Afrasian.

Afrasian correspondences (cf. Diakonoff 1988:36—39 and 1992:16—22, 36—55; Ehret 1995:251—254; Orël—Stolbova 1995:xix; Takács 2011a:98):

Proto-Afrasian	*c	*ʕ	*c'
Proto-Semitic	*c	*ʕ	*c'
Ancient Egyptian	s	z —	d 𓆎
Proto-Berber	*s	*z	*d *z
Proto-East Cushitic	*s	*z	*d ₁
Proto-Southern Cushitic	*c	*ʕ	*c'
Proto-Chadic	*c	*ʕ	*c'

Note: Ehret (1980) writes *ts, *dz, *ts' for Proto-Southern Cushitic.

7.6. PALATALIZED ALVEOLARS

Opinions differ as to whether a series of palato-alveolar affricates (that is, **č* /tʃ/, **č̣* /dʒ/, and **č'* /tʃ'/) or palatalized alveolars (that is, **tʲ*, **dʲ*, **t'ʲ*) are to be reconstructed for Proto-Afrasian. Diakonoff (1988:34 and 36—39), for example, favors palato-alveolar affricates, which he writes **č*, **č̣*, **č'*, as do Kogan (2011a), Ehret (1995:251—254), Takács (2011a:27—31), and Orël—Stolbova (1995:xvi), while David Cohen (1968:1304) favors palatalized alveolars — Cohen notes:

There is a problem with the series generally defined, based upon [the evidence of] Arabic, as consisting of interdental. But, outside of Common Arabic, these sounds are represented, depending upon the language, sometimes as palato-alveolar fricatives, sometimes as sibilants, and sometimes as plain dental stops. Such correspondences can only be explained clearly if the series in question is considered to have been in Proto-Hamito-Semitic, as well as in Proto-Semitic, made up of palatals.

Moscatti (1964:27—30) reconstructs interdentals (IPA [θ], [ð], and [θ']) for Proto-Semitic on the basis of the Arabic reflexes, and this is the reconstruction found in all of the standard handbooks (cf. Bergsträsser 1928:4 and 1983:3; Brockelmann 1916:53—54; Gragg—Hoberman 2012:153; Gray 1934:8—10; O'Leary 1923:53—60; Lipiński 1997:117—122). Cantineau (1952:81—82), however, reconstructs earlier (palato-)alveolars (*apicales «à pointe basse»*) — he notes:

But it is difficult to determine whether it is a question at the Semitic level of true fricatives or of affricates...

Martinet (1975[1953]:257—258) posits palatalized alveolar stops for Proto-Semitic. Martinet's reconstructions, which have as their basis not only the data from the Semitic daughter languages but also Martinet's extensive knowledge of phonology in general, this knowledge being derived from the study of a wide variety of languages from different language families, surely comes closest to the truth. Thus, the developments found in the Semitic daughter languages can best be explained by reconstructing a series of palatalized alveolar stops for Proto-Semitic: **tʲ*, **dʲ*, **t'ʲ*. R. Stempel (1999:46—50) also posits palatalized alveolars here. Ehret (1995:251—254, especially the charts on pp. 251 and 253) reconstructs interdentals for Proto-Semitic but leaves open the possibility that this series may have been composed of palatalized alveolars instead.

The oldest Akkadian may have preserved this series. According to Gelb (1961:35—39), Old Akkadian *š₃* corresponds to Hebrew *š* and Arabic *ʃ* (from Proto-Semitic **tʲ*, traditional **t̪*), while *š₄* may correspond to Hebrew *z* and Arabic *ḏ* (from Proto-Semitic **dʲ*, traditional **d̪*). *š₃* and *š₄* are distinct from *š₁* and *š₂*, which represent Proto-Semitic **š* and **tʃ* (traditional **š* [Diakonoff 1988:34 writes **ṣ̌*]), respectively (cf. Gelb 1961:35). Cf. here also Diakonoff 1965:21, note 25, and 1992:36—55.

Semitic correspondences (cf. Moscati 1964:43—45; Lipiński 1997:117—122; R. Stempel 1999:46—50; Kogan 2011a:55):

Proto-Semitic	*tʸ	*dʸ	*tʸy
Akkadian	š	z	ṣ
Ugaritic	𐎲	𐎠	𐎲
Hebrew	ש /š/	ז /z/	צ /s/
Aramaic	ܬ /t/	ܕ /d/	ܨ /tʸ/
Arabic	س /s/	ذ /d/	ظ /z/
Epigraphic South Arabian	𐩦	𐩤	𐩦
Geez / Ethiopic	s	z	ṣ

Note: In Epigraphic South Arabian, Proto-Semitic *tʸy became an interdental emphatic (cf. R. Stempel 1999:46—50; Lipiński 1997:117—122; Kogan—Korotayev 1997:222). This is transcribed as both /z/ and /tʸ/ in the literature.

In the other branches of Afrasian, palato-alveolar affricates, dentals, and palatalized alveolar stops correspond to Proto-Semitic *pʸ, *dʸ, *tʸy. The correspondences from all branches of Afrasian can more effectively be explained by setting up a series of palatalized alveolar stops for the Afrasian parent language than by setting up a series of palato-alveolar affricates (cf. D. Cohen 1968:1304) — note that, in addition to Proto-Semitic, such a reconstruction is strongly supported by Proto-Southern Cushitic. On this basis, in addition to other evidence, Ehret (1995:251) favors such an interpretation as well — Ehret writes *c, *j, *c' (= *pʸ, *dʸ, *tʸy).

Afrasian correspondences (cf. Diakonoff 1988:36—39, 1992:16—22 and 36—55; Ehret 1995:251—254; Orël—Stolbova 1995:xix; Takács 2011a:98):

Proto-Afrasian	*tʸ	*dʸ	*tʸy
Proto-Semitic	*tʸ	*dʸ	*tʸy
Ancient Egyptian	𓂏	𓂏	𓂏
Proto-Berber	*s	*z	*d *z
Proto-East Cushitic	*t	*d	*d₁
Proto-Southern Cushitic	*tʸ	*dʸ	*tʸy
Proto-Chadic	*č	*ž	*čʸ

7.7. SIBILANTS

The Semitic sibilants have been the subject of much controversy (cf. especially Beeston 1962:222—231; Buccellati 1997b:18—22; Faber 1981:233—262; Murtonen 1966:135—150). Though there are many points of agreement among

Semiticists, there is still no consensus on the number of sibilants to be reconstructed for Proto-Semitic. The sibilants remain one of the most perplexing problems in both Semitic and Afrasian comparative phonology.

According to the traditional reconstruction, Proto-Semitic is assumed to have had the following sibilants (cf. Moscati 1964:33—37; Lipiński 1997:122—129): *s, *z, *š, *ṣ, and *ś, to which Diakonoff (1965:21) tried to add *ṣ. *s and *š merged into s in Classical Arabic (cf. Moscati 1964:36; Lipiński 1997:124) and Ethiopian Semitic (cf. Moscati 1964:37, §8.37; Lipiński 1997:125—126). However, ṣ has reappeared in modern Arabic dialects and modern Ethiopian Semitic languages through secondary developments (cf. Lipiński 1997:125—126).

As noted in the discussion of the dental affricates, it seems fairly certain that the traditional *s, *z, and *š are to be at least partially reinterpreted as the dental affricates *c, *ʒ, and *c', respectively, at the Proto-Semitic level.

Next, following Martinet (1975[1953]:253), *ś is to be reinterpreted as a voiceless lateralized affricate *tʃ (see also Steiner 1977, though Steiner prefers a fricative lateral *ʈ over an affricate).

Finally, it may be noted that Diakonoff's (1965:21) attempt to reconstruct an additional sibilant for Proto-Semitic, which he writes *ṣ, has received little support from fellow Semiticists. Diakonoff set up this sibilant on a purely theoretical basis, noting that it was not preserved in any of the Afrasian daughter languages, with the possible exception of the most ancient stage of Old Akkadian, where it is alleged to have become š [ś].

Semitic correspondences (cf. O'Leary 1923:53; Gray 1934:11; Moscati 1964: 44—45; R. Stempel 1999:51—56; Kogan 2011a:55):

Proto-Semitic	*s	*z	*s'	*sʷ
Akkadian	s	z	ṣ	š
Ugaritic	s	z	ṣ	š
Hebrew	ס /s/	ז /z/	צ /ṣ/	ש /š/
Aramaic	ס /s/	ז /z/	צ /ṣ/	ש /š/
Arabic	س /s/	ز /z/	ص /ṣ/	س /s/
Epigraphic South Arabian	s ³	z	ṣ	s ¹
Geez / Ethiopic	s	z	ṣ	s

Certain correspondences between Semitic and the other branches of Afrasian indicate that, at the very least, the sibilants *s and *sʷ are to be reconstructed for Proto-Afrasian, and these are the two sibilants reconstructed by Diakonoff (1988:34 and 1992:6), though he writes *š instead of *sʷ. Orël—Stolbova (1995:xvi), on the other hand, reconstruct only *s for Proto-Afrasian, while Ehret (1995:120—124 and 251—253) reconstructs the most complete set: *s, *z, *s', and *š. The following correspondences are based primarily upon Ehret's work, though I disagree with him concerning the Semitic reflexes, and I write *sʷ for his *š — these are all very, very tentative:

Proto-Afrasian	*s	*z	*s'	*sy
Proto-Semitic	*s	*z	*s'	*sy
Ancient Egyptian	s	z —	?	š □ s
Proto-Berber	*s	*z	*z	*s
Proto-East Cushitic	*s	*z	?	*s
Proto-Southern Cushitic	*s	*z	*c'	*š
Proto-Chadic	*s	?	*s'	*s

7.8. FRICATIVE LATERALS/LATERALIZED AFFRICATES

The Modern South Arabian languages contain the fricative laterals *ś* and *ẓ*, that is, /ɬ/ and /ʒ/, respectively (cf. Johnstone 1975:7, §2.1.3; Steiner 1977:20). The voiceless fricative lateral *ś* corresponds to sibilants in the other Semitic languages (excluding Hebrew, for the moment): Mehri, Jibbāli (formerly called Šheri), Ḥarsūsi, Soqotri *ś*, Epigraphic South Arabian *s*² (*ś*) = Akkadian *š*, Ugaritic *š*, Aramaic *s*, Arabic *š*, Geez (Classical Ethiopic) *š*. In Hebrew, however, a special character, adapted from šin (ש) and transliterated as *ś* (שׁ), appears in words whose cognates in the South Arabian languages contain fricative laterals (cf. Moscati 1964:33—34, §8.29; Watson—Al-Azraqi 2011). The evidence of Hebrew, coupled with that of the South Arabian languages, makes it seem likely that Proto-Semitic contained the voiceless lateralized affricate **tʃ* (cf. Martinet 1975[1953]:253). Cantineau (1952:84—87), Kogan (2011a:71—80), and Steiner (1977:155—156), however, would rather posit a voiceless fricative lateral **ɬ* for Proto-Semitic. R. Stempel (1999:60) notes that either **ɬ* or **tʃ* can be reconstructed. I prefer lateralized affricates to fricative laterals because the former provide a better basis for comparison with cognates in other Afrasian languages.

The original pronunciation of the Arabic sound transliterated as *ḍ* (ض) can be determined by the testimony of the native grammarians (cf. Cantineau 1952:84; Steiner 1977:57—67) and from the evidence of loanwords in other languages (cf. Steiner 1977:68—91). In all probability, this sound was originally a voiced emphatic fricative lateral (cf. Cantineau 1952:84; Steiner 1977:64—65). This sound can be derived from either (A) an earlier glottalized lateralized affricate **tʃ'* (cf. Cantineau 1952:84—86, who writes **tʃ'*₂; D. Cohen 1968:1304—1305, who writes **tʃ'*; Martinet 1975[1953]:253, who also writes **tʃ'*; R. Stempel 1999:60) or (B) an earlier glottalized fricative lateral **ɬ'* (cf. Steiner 1977:155—156; Kogan 2011a: 71—80). Either reconstruction can also account for the developments found in the other Semitic daughter languages. In Akkadian, Ugaritic, and Hebrew, Proto-Semitic **tʃ'* has the same reflex as **c'*, namely, *š*. As for the Modern South Arabian languages, it is represented by a lateralized dental emphatic in Soqotri, while in Mehri, Ḥarsūsi, and Jibbāli, it is represented by a lateralized interdental fricative emphatic (transcribed *ḍ*). In Geez, its reflex is generally transcribed as *ḍ*, though the

traditional pronunciation is identical to that of *š* (cf. Lambdin 1978:4). The Aramaic developments are problematic: in the most ancient texts, Proto-Semitic **tʃ'* is represented by *q*, while, in later texts, it is represented by *ʕ*. For discussion of this problem and proposed solutions, cf. Cantineau (1952:86) and Steiner (1977:38—41).

Semitic correspondences (cf. Moscati 1964:43—44; Lipiński 1997:129—132; R. Stempel 1999:56—60; Kogan 2011a:55):

Proto-Semitic	<i>*t</i> or <i>*tʃ</i>	<i>*t'</i> or <i>*tʃ'</i>
Akkadian	š	ṣ
Ugaritic	š	ṣ
Hebrew	ש /š/	צ /ṣ/
Aramaic	ܫ /s/	ܥ /ʕ/
Arabic	ش /š/	ض /ḍ/
Epigraphic South Arabian	s ²	ḍ
Geez / Ethiopic	š	ḍ

According to D. Cohen (1968:1304—1305), voiceless and glottalized lateralized affricates should also be reconstructed for Proto-Afrasian. Diakonoff (1992:6 and 15—21) tentatively reconstructs the fricative lateral **t*, which he writes **š*, and the voiceless and glottalized lateralized affricates **tʃ* and **tʃ'*, which he writes **ĉ* and **ĉ'*, respectively. Orël—Stolbova (1995:xvi) reconstruct the same set as Diakonoff. Ehret (1995:390—395) reconstructs the voiceless fricative lateral **t*, the voiced lateralized affricate **dʒ*, which he writes **dl*, and the glottalized lateralized affricate **tʃ'*, which he writes **tl*. Takács (2011a:32—33) reconstructs **š*, **ĉ*, and **ĉ'* but notes that the evidence for the first two is at present scanty.

Orël—Stolbova (1995:xix) give the following correspondences (their transcription has been changed to conform with the transcription used in this book):

Proto-Afrasian	<i>*t</i>	<i>*tʃ</i>	<i>*tʃ'</i>
Proto-Semitic	<i>*t</i>	<i>*tʃ</i>	<i>*tʃ'</i>
Ancient Egyptian	š 𓂏	š 𓂏	ḍ 𓂐
Proto-Berber	<i>*s</i>	<i>*c</i>	<i>*ç</i>
Proto-East Cushitic	<i>*s</i>	<i>*s</i> <i>*š</i>	<i>*c'</i>
Proto-Southern Cushitic	<i>*t</i>	<i>*tʃ</i> (?)	<i>*tʃ'</i>
Proto-Chadic	<i>*t</i>	<i>*tʃ</i>	<i>*tʃ'</i>

Note: Ehret (1980:37) reconstructs **t* and **tʃ'*, which he writes **t* and **tl*, for Proto-Southern Cushitic.

Ehret (1995:394) gives the following correspondences (as in the preceding table, Ehret's transcription has been changed):

Proto-Afrasian	*ɬ	*dɬ	*tɬʼ
Proto-Semitic	*ɬ	*dɬ	*tɬʼ
Ancient Egyptian	š 𓂏	d 𓂏	t 𓂏
Proto-Cushitic	*ɬ	*dɬ	*tɬʼ
Proto-Chadic	*ɬ	*dɬ	*tɬʼ
Proto-Omoti	*l	*d	*dʼ

7.9. GUTTURALS

Proto-Semitic had only a single guttural series, namely, the velars **k*, **g*, and **kʼ* (sometimes transcribed **q*, sometimes **k*). In Hebrew and Aramaic, /k/ and /g/ have the non-phonemic allophones /χ/ and /ɣ/, respectively (cf. Moscati 1964:26—27, §8.10; O’Leary 1923:52). Proto-Semitic **g* has become ġ [dʒ] (sometimes transcribed *j*) in Classical Arabic (cf. Moscati 1964:38, §8.42; Lipiński 1997:138) — this is a context-free development and is considered the standard pronunciation, though *g* is retained unchanged in some Arabic dialects (cf. Martinet 1975 [1959]: 243—245; Moscati 1964:38, §8.42). Secondary palatalization of the velars is a common innovation in modern Arabic dialects, in modern South Arabian languages, and in Ethiopian Semitic (cf. Lipiński 1997:138—139). In the Semitic languages of Ethiopia, a series of labiovelars has developed alongside the plain velars (cf. Moscati 1964:38, §8.43; Lipiński 1997:139). These labiovelars are a secondary development and do not go back to Proto-Semitic. There are several other notable secondary developments for this series (cf. Lipiński 1997:137—140, Moscati 1964:37—38, and O’Leary 1923:49—53 for details).

Semitic correspondences (cf. Moscati 1964:44; Gray 1934:10; Lipiński 1997: 137—140; R. Stempel 1999:44; Kogan 2011a:55):

Proto-Semitic	*k	*g	*kʼ
Akkadian	k	g	ḵ
Ugaritic	k	g	ḵ
Hebrew	כ /k/	ג /g/	ך /ḵ/
Aramaic	כ /k/	ג /g/	ך /ḵ/
Arabic	ك /k/	ج /ǧ/	ق /q/
Epigraphic South Arabian	k	g	ḵ
Geez / Ethiopic	k	g	ḵ

A series of velar stops should also be reconstructed for Proto-Afrasian (cf. M. Cohen 1947:111—128; Diakonoff 1992:6 and 22—25; Ehret 1995:174—178; Orël—Stolbova 1995:xvi). Both secondary palatalization of the velars as well as a

tendency toward fricative pronunciation are widespread developments in the Afrasian daughter languages.

Afrasian correspondences (cf. Ehret 1995:174—178; Orël—Stolbova 1995: xvii—xix; Takács 2011a:98):

Proto-Afrasian	*k	*g	*kʷ
Proto-Semitic	*k	*g	*kʷ
Ancient Egyptian	k 𓆎	g 𓆏	q 𓆐
Proto-Berber	*ɣ *-kk-	*g	*k
Proto-East Cushitic	*k	*g	*kʷ
Proto-Southern Cushitic	*k	*g	*kʷ
Proto-Chadic	*k	*g	*kʷ

In some cases, sibilants in the Semitic languages correspond to affricates in Egyptian and to gutturals in the Cushitic languages (cf. Vergote 1971:44), a good example being:

Semitic: Arabic *ṣubāʿ*, *ʾiṣbaʿ* ‘finger, toe’; Sabaean *ʾṣbʿ* ‘finger’; Ugaritic (pl.) *ʾṣbʿt* ‘fingers’; Hebrew *ʾeṣbaʿ* [עֶשְׂבָעַ] ‘finger, toe’; Imperial Aramaic (sg. abs.) *ṣbʿ* ‘finger’, (pl. abs.) *ʾṣbʿn* ‘fingers’; Aramaic *ṣiḇʿā* ‘finger, toe’; Geez / Ethiopic *ʾaṣbāʿ(ə)t* [አጽባዕት] ‘finger, toe’; Tigrinya *ʾaṣabəʿ* ‘finger, toe’;

= Egyptian *ḏbʿ* ‘finger’; Coptic *tēēbe* [ⲧⲏⲏⲃⲉ] ‘finger, digit’;

= Berber: Tamazight *aḏaḏ* ‘finger’; Siwa *ḏaḏ* ‘finger’; Ghadames *ḏaḏ*, *ṭaḏ* ‘finger’; Mزاب *ḏaḏ* ‘finger’; Tuareg *aḏaḏ* ‘finger’; Kabyle *aḏaḏ* ‘finger’;

= Cushitic: Proto-East Cushitic **kʷub-* ‘finger’ > Sidamo (pl.) *kʷubbe* ‘fingers’; Hadiyya *kʷubaʿa* ‘ring, finger-ring’; Yaaku *qop-e* ‘finger’.

Examples such as this can be accounted for by reconstructing a series of palatalized velars for Proto-North Erythraean, which Ehret (1995:489—490) sets up as the ancestor of Proto-Chadic, Proto-Semitic, Pre-Egyptian, and Proto-Berber. The palatalized velars arose through the palatalization of plain velars before **i* and **u*: **ki/*ku*, **gi/*gu*, **kʷi/*kʷu* > **kʷ*, **gʷ*, **kʷʷ*. In Proto-Semitic, this series developed into dental affricates: **kʷ*, **gʷ*, **kʷʷ* > **cʷ*, **ɟʷ*, **cʷʷ* > **c*, **ɟ*, **cʷʷ*. These newly-formed dental affricates then merged completely with the previously-existing dental affricates, and the subsequent development of these two series was identical. In Egyptian, on the other hand, the palatalized velars merged with the palatalized alveolars: **kʷ*, **gʷ*, **kʷʷ* > **tʷ*, **dʷ*, **tʷʷ* > *t*, *d*, *dʷ* (cf. Loprieno 1997:435). The Chadic developments are uncertain. However, Newman (1977:9 and 11) reconstructs a series of palatalized velars for Proto-Chadic, which he writes **kʷ* and **gʷ* (Newman does not reconstruct a glottalized member). If these sounds are not due to secondary developments within Chadic itself, it may be that the original palatalized velars of Proto-North Erythraean were preserved in Proto-Chadic.

Afrasian correspondences:

Proto-Afrasian	*ki/*ku	*gi/*gu	*k'i/*k'u
Proto-Semitic	*c	*ɟ	*c'
Ancient Egyptian	<u>t</u> ≡	<u>d</u> ≡	<u>d</u> ≡
Proto-Berber	*t (?)	*d (?)	*t' (?)
Proto-East Cushitic	*k	*g	*k'
Proto-Southern Cushitic	*k	*g	*k'
Proto-Chadic	*kʸ (?)	*gʸ (?)	*k'ʸ (?)

In addition to the correspondences that make it seem likely that Proto-Afrasian had a series of plain velars, there are still other correspondences that point to the existence of a series of labiovelars in Proto-Afrasian (cf. D. Cohen 1968:1303; M. Cohen 1947:129—130; Diakonoff 1988:34 and 1992:6, 22—29; Ehret 1995:174—178): *k^w, *g^w, and *k'^w. Although the labiovelars were lost in the Semitic branch, having merged with the plain velars, their former presence can be ascertained by the fact that, in primary nominal stems, they, along with the bilabials, caused a following earlier *ə to be raised, backed, and rounded to *u (cf. Diakonoff 1970:456 and 464, 1975:135 and 141): *k^wə, *g^wə, *k'^wə > *ku, *gu, *k'u. The labiovelars were preserved in Proto-Southern Cushitic (cf. Ehret 1980:23—36) and Proto-Chadic (cf. Newman 1977:11).

Afrasian correspondences:

Proto-Afrasian	*k ^w	*g ^w	*k' ^w
Proto-Semitic	*k	*g	*k'
Ancient Egyptian	k ≡	g ≡	q ≡
Proto-Berber	*k	*g	*k'
Proto-East Cushitic	*k	*g	*k'
Proto-Southern Cushitic	*k ^w	*g ^w	*k' ^w
Proto-Chadic	*k ^w	*g ^w	*k' ^w

Proto-Afrasian may also have had a series of postvelars (*q, *g, *q').

7.10. GLIDES AND LIQUIDS

There can be no question that Proto-Semitic had *w, *y, *l, and *r. The liquids are well preserved in the Semitic daughter languages, but the glides are subject to various modifications: In later Akkadian, the glides were lost initially (cf. Moscati 1964:45—46, §8.63; O'Leary 1923:66—67), while in Ugaritic, Hebrew, and Aramaic, initial *w mostly became y (cf. Gray 1934:19, §27; Moscati 1964:46,

§8.64; O’Leary 1923:65—67) — such a development also occurs sporadically in ancient South Arabian dialects.

Semitic correspondences (cf. Kogan 2011a:55):

Proto-Semitic	*w	*y	*l	*r
Akkadian	Ø	y Ø	l	r
Ugaritic	w y	y	l	r
Hebrew	װ /w/ ם /y/	ם /y/	ל /l/	ר /r/
Aramaic	װ /w/ ם /y/	ם /y/	ל /l/	ר /r/
Arabic	و /w/ ي /y/	ي /y/	ل /l/	ر /r/
Epigraphic South Arabian	w y	y	l	r
Geez / Ethiopic	w	y	l	r

The glides *w and *y and the liquids *l and *r are also to be reconstructed for Proto-Afrasian (cf. Diakonoff 1992:6 and 32—35; Ehret 1995:390—395 and 452; Orël—Stolbova 1995:xx).

The Ancient Egyptian developments require special comment. Egyptian did not have separate signs for /l/. There can be no doubt, however, that /l/ existed as an independent phonemic entity since it occurs as such in the later Coptic. In Egyptian, /l/ was written with the signs <n>, <r>, <ʒ>, and <i> (<*li-, *lu- [cf. Diakonoff 1974:595]) (cf. Loprieno 1995:33, note c; Peust 1999:127—132; Vergote 1973.Ib: 26). *r became <ʒ> in Egyptian when it occurred at the end of an accented syllable before a following consonant or before pause. Similar developments can be observed for *t*, *d*, and *n*. In some instances, *y* represents either an earlier glottal stop or an earlier *w*.

Newman (1977) does not reconstruct *l for Proto-Chadic, but the evidence presented by Jungraithmayr—Shimuzu (1981) and Jungraithmayr—Ibrizimow (1994) make it clear that *l must have existed. Both Ehret (1995:393—394) and Orël—Stolbova (1995:xx) reconstruct *l for Proto-Chadic.

Afrasian correspondences (cf. Ehret 1995:390—395 and 452; Orël—Stolbova 1995:xx; Diakonoff 1965:27—28):

Proto-Afrasian	*w	*y	*l	*r
Proto-Semitic	*w	*y	*l	*r
Ancient Egyptian	w 𓂏	i 𓂏 y 𓂏	n 𓂏 r 𓂏 ʒ 𓂏 i 𓂏	r 𓂏 ʒ 𓂏
Proto-Berber	*w	*y	*l	*r
Proto-East Cushitic	*w	*y	*l	*r
Proto-Southern Cushitic	*w	*y	*l	*r
Proto-Chadic	*w	*y	*l	*r

7.11. GLOTTAL STOP AND GLOTTAL, VELAR, AND PHARYNGEAL FRICATIVES

Proto-Semitic is usually assumed to have had a glottal stop, a glottal fricative, voiceless and voiced pharyngeal fricatives, and voiceless and voiced velar fricatives: *ʔ, *h, *ħ, *ʕ, *x, *ɣ (traditionally written *, *h, *ħ, *, *h, *ġ, respectively). In Akkadian, *ʔ, *h, *ħ, *ʕ, and *ɣ (but not *x [traditional *ħ]) merged into ʔ /ʔ/ initially. The former presence of *ħ and *ʕ and sometimes of *ɣ and *h as well can be determined by the fact that they changed a contiguous *a* to *e* (cf. Moscati 1964:38—39, §8.45, and 41—42, §8.54). These same sounds were completely lost medially between a preceding vowel and a following non-syllabic in Akkadian. This change caused the vowel to be lengthened (the following examples are from Couvreur 1937:288—289):

1. Akkadian **raʔšu* > *rāšu* (later *rēšu*) ‘head’; Hebrew *rōʔš* [רֹאשׁ] ‘head’; Aramaic *rēšā* ‘head’; Phoenician *rʔš* ‘head’; Arabic *raʔs* ‘head’; Epigraphic South Arabian *rʔs* ‘head’; Šheri / Jibbāli *rēš/réš* ‘head’; Soqotri *riy* ‘head’; Ugaritic *riš* ‘head’; Geez / Ethiopic *rəʔas* ‘head’ [ርእስ]; Tigrinya *rəʔsi* ‘head’; Tigre *rāʔas* ‘head’; Amharic *ras* ‘head’. Cf. Militarëv 2011:75, no. 38.
2. Akkadian **raḥmu* > **reḥmu* > **reʔmu* > *rēmu* ‘grace, mercy’; Hebrew *raḥūm* [רחום] ‘compassionate’; Arabic *raḥima* ‘to have mercy, compassion’, *raḥma* ‘pity, compassion’; Šheri / Jibbāli *raḥām* ‘to be kind’; Mehri *rəḥām* ‘to be kind to someone’; Ḥarsūsi *reḥam* ‘to pity’; Ugaritic *rḥm* ‘to be kind’; Tigre *rāḥama* ‘to have pity on’ (Arabic loan).
3. Akkadian **baʕlu* > **beʕlu* > **beʔlu* > *bēlu* ‘owner, lord’; Hebrew *baʕal* [בעל] ‘lord, owner’; Ugaritic *bʕl* ‘owner of the house’; Arabic *baʕl* ‘husband, master, owner’; Epigraphic South Arabian *bʕl* ‘master, owner’; Ḥarsūsi *bāl* ‘master, lord’; Mehri *bāl* ‘owner, possessor’; Šheri / Jibbāli *bāʕal* ‘person owning’; Soqotri *baʕl* ‘master, lord’; Geez / Ethiopic *baʕāl* [በዓል] ‘owner, master’; Tigre *bāʕal* ‘master’; Tigrinya *bāʕal*, *baʕal* ‘master’; Amharic *bal* ‘master’.

A similar phenomenon occurs in Classical Arabic, where, according to the native grammarians, as well as in the traditional reading of the Qurʾān, ʔ is weakened and even lost with compensatory vowel lengthening when the loss takes place between a preceding short vowel and a following consonant (cf. Cantineau 1960:79—80). Likewise in modern Arabic dialects, where original ʔ is often replaced by *w*, *y*, or by compensatory vowel lengthening (cf. Kaye—Rosenhouse 1997:277).

In Hebrew and Aramaic, *ʕ and *ɣ have merged into ʕ /ʕ/, and *ħ and *x have merged into ḥ /ħ/ (cf. Lipiński 1997:145—146; Moscati 1964:40, §8.49; R. Stempel 1999:62—63; Rendsburg 1997:74).

In the Semitic languages of Ethiopia, *ʕ and *ɣ have merged into ʕ /ʕ/, and the same change can be observed in Soqotri and several modern Arabic dialects (cf. Lipiński 1997:147—148). In Tigre and Tigrinya, *h* and *ħ* have merged into *h*, while all of the earlier laryngeal and pharyngeal fricatives tend to be lost in South

Ethiopic. On the other hand, *ʔ*, *h*, and *ħ* are preserved in Harari, Argobba, and several dialects of Gurage under certain conditions (cf. Lipiński 1997:148).

Semitic correspondences (cf. Moscati 1964:44—45; Lipiński 1997:141—150; R. Stempel 1999:60—63; Gray 1934:10 and 19; Buccellati 1997b:18):

Proto-Semitic	*ʔ	*h	*ħ	*ʕ	*x	*ɣ
Akkadian	ʔ Ø	ʔ Ø	ʔ Ø	ʔ Ø	ħ	ʔ Ø
Ugaritic	ʔ i ʔ	h	ħ	ʕ	ħ	ğ
Hebrew	ʔ /ʔ/	ħ /h/	ħ /ħ/	ʕ /ʕ/	ħ /ħ/	ʕ /ʕ/
Aramaic	ʔ /ʔ/	ħ /h/	ħ /ħ/	ʕ /ʕ/	ħ /ħ/	ʕ /ʕ/
Arabic	ʔ /ʔ/	h /h/	ħ /ħ/	ʕ /ʕ/	ħ /ħ/	ğ /ğ/
Epigraphic South Arabian	ʔ	h	ħ	ʕ	ħ	ğ
Geez / Ethiopic	ʔ	h	ħ	ʕ	ħ	ʕ

Opinions differ as to how many of these sounds are to be reconstructed for Proto-Afrasian. Indeed, the correspondences adduced to support the reconstruction of voiceless and voiced velar fricatives in Proto-Afrasian are controversial, and in some cases, it can be shown that secondary developments have led to the appearance of these sounds in the daughter languages. Moreover, some examples of voiceless and voiced velar fricatives are considered by some specialists to be reflexes of earlier postvelars. Finally, there is some confusion among the reflexes found in the daughter languages. Nonetheless, it seems that *ʔ, *h, *ħ, *ʕ, *x, *ɣ need to be reconstructed for Proto-Afrasian. Labialized varieties of these sounds may also have existed (cf. Diakonoff 1975:142). These sounds were generally preserved in the earlier stages of the Afrasian daughter languages, the main exceptions being Berber, where they seem to have been mostly lost, and Chadic, where they were partially lost. In the course of its history, Egyptian also reduced and/or modified these sounds, similar to what is found in several modern Semitic languages (cf. Vergote 1973.Ib:28; Loprieno 1995:41—46; Greenberg 1969). For discussion, correspondences, and examples, cf. Diakonoff 1992:25—29 (for the velar fricatives) and 29—32 (for *ʔ, *h, *ħ, *ʕ); Ehret 1995:174—178 (for the velar fricatives) and 338—340 (for *ʔ, *h, *ħ, *ʕ); Orël—Stolbova 1995:xx (Orël—Stolbova reconstruct *ʔ, *h, *ħ, *ʕ, *x, *ɣ, *q, and *q' for Proto-Afrasian).

Afrasian correspondences (cf. Takács 2011a:98):

Proto-Afrasian	*ʔ	*h	*ħ	*ʕ	*x	*ɣ
Proto-Semitic	*ʔ	*h	*ħ	*ʕ	*x	*ɣ
Ancient Egyptian	ʔ i ʔ	h ħ	ħ ʕ	ʕ ʕ	ħ ʕ ħ ʕ	ʕ ʕ
Proto-Berber	Ø	*h	*ħ	*h	*ɣ	*h
Proto-East Cushitic	*ʔ	*h	*ħ	*ʕ	*ħ	*ʕ
Proto-Southern Cushitic	*ʔ	*h	*ħ	*ʕ	*x	
Proto-Chadic		*h	*ħ			

Note: The Berber reflexes are based upon Takács 2011a.

7.12. VOWELS

Six vowels are traditionally reconstructed for Proto-Semitic (cf. Bergsträsser 1928:5 and 1983:5; Kogan 2005 and 2011a:119—124; Lipiński 1997:152—165; Moscati 1964:46, §8.66; O’Leary 1923:91—119; Brockelmann 1908—1913.I:44, 141—151, and 1916:54, 67—70; R. Stempel 1999:31—4):

i	u	ī	ū
a		ā	

Proto-Semitic is also assumed to have had sequences of **a* plus **y* and **a* plus **w* (cf. Moscati 1964:54, §8.97). The oldest Egyptian (cf. Callender 1975:8—9; Gardiner 1957:428—433; Loprieno 1995:35 and 1997:440; Vergote 1973.Ib:39) and Common Berber (cf. Prasse 1975:223) probably had vowel systems identical to that traditionally posited for Proto-Semitic, though modern Berber languages are quite diverse in their vowel systems (cf. Kossmann 2012:28—33). Ancient Egyptian may have had a schwa-like vowel (ə) as well. As noted by Ehret (1995:55 — details are given on pp. 60—66), Semitic, Berber, Egyptian, and Chadic have substantially reduced the vowel system inherited from Proto-Afrasian.

The problems of vocalic patterning — within the larger context of root structure patterning in Proto-Semitic — have been thoroughly investigated by Diakonoff (1970:453—480, 1975:133—151, and 1992:65—97). According to Diakonoff, in non-derivative nominal stems, the vocalic patterning differs from that posited for Proto-Semitic as a whole:

1. There were no original long vowels in non-derivative nominal stems in Proto-Semitic.
2. The vowel **u* seems to be in allophonic alternation with the vowel **i* in non-derivative nominal stems in Proto-Semitic, being found mainly before or after the bilabials **p*, **b*, and **m*, after the gutturals **k*, **g*, and **k'* (when from earlier **k^w*, **g^w*, and **k'^w*), and occasionally also after the glottal stop **ʔ* (perhaps from earlier **ʔ^w*?). This point leads Diakonoff to suggest that **i* and **u* are to be derived from an earlier common vocalic entity, which he writes **ə*. Diakonoff also notes that unstressed **a* could appear as either **a* or **i* in the Semitic daughter languages.
3. If a non-derivative nominal stem has the shape **C₁VC₂C₃*, then either *C₂* or *C₃* is **ʔ*, **w*, **y*, **m*, **n*, **l*, **r*. If it is **C₂* that is one of these phonemes, then the vowel is **a*. This leads Diakonoff to posit syllabic resonants similar to those reconstructed for Proto-Indo-European and Proto-Kartvelian. This view is particularly controversial and is not widely accepted — it is rejected by Ehret (1995:16), for example.

Diakonoff then continues by discussing the ramifications of his theories, including the patterning in verbal stems. See also Kogan 2005.

According to Sasse (1979:5), Proto-East Cushitic had the following ten vowels:

i	u	ī	ū
e	o	ē	ō
a		ā	

Ehret (1980:38) reconstructs fourteen vowels for Proto-Southern Cushitic. Ehret notes, however, that this system may have developed from an earlier six vowel system similar to that traditionally reconstructed for Proto-Semitic.

i	ī	u	ī	ī	ū
e	Λ	o	ē	ā	ō
a			ā		

Newman (1977:11) assumes that Proto-Chadic had, at most, four phonemic vowels:

i	u
ə	
a	

On the basis of a comparison of the vowel systems reconstructed for the various Afrasian daughter languages, it would appear that a vowel system identical to that traditionally posited for Proto-Semitic is to be posited for Proto-Afrasian as well, at least for the period of development existing immediately prior to the emergence of the individual Afrasian daughter languages. Such a reconstruction has indeed been proposed by a number of scholars. However, when the vocalic patterning is subjected to careful analysis, it becomes clear that a reconstruction modeled after that of Proto-Semitic does not represent the original state.

In a series of articles published in *Вопросы Языкознания* (*Voprosy Jazykoznanija*) in 1988 and 1990, respectively, Vladimir Orël and Olga Stolbova analyzed vowel correspondences in non-derivative nominal stems in West Chadic, Semitic, and Proto-Coptic. They also noted that the original vocalism of verbs is represented by West Chadic and Arabic imperfectives. Their analysis led them to reconstruct six vowels for Proto-Afrasian: **a*, **e*, **i*, **o*, **u*, and **ü*. Orël—Stolbova base their reconstruction upon the following correspondences:

Proto-Afrasian	<i>*a</i>	<i>*e</i>	<i>*i</i>	<i>*o</i>	<i>*u</i>	<i>*ü</i>
Proto-Semitic	<i>*a</i>	<i>*i</i>	<i>*i</i>	<i>*u</i>	<i>*u *a</i>	<i>*i</i>
Proto-West Chadic	<i>*a</i>	<i>*ya</i>	<i>*i</i>	<i>*wa</i>	<i>*u</i>	<i>*u</i>
Proto-Coptic	<i>*a *o</i>	<i>*e</i>	<i>*e *i</i>	<i>*e</i>	<i>*u *o</i>	<i>*i</i>

7.13. ROOT STRUCTURE PATTERNING IN AFRASIAN

There has been much discussion, some of it rather heated, concerning root structure patterning within Afrasian. Until fairly recently, there was strong resistance to look objectively at the data from all of the branches of the Afrasian language family, far too much emphasis being placed on the importance of the Semitic branch alone, which was often uncritically taken to represent the original state of affairs.

In the Semitic branch, the vast majority of roots are triconsonantal. It is certain, however, that at one time there were more biconsonantal roots and that the triconsonantal system has been greatly expanded in Semitic at the expense of roots with other than three consonants (cf. Moscati 1964:72—75; Ullendorf 1958:69—72; Militarev 2005). In particular, we may note Diakonoff's (1984:1—2) comments on Afrasian root structure patterning:

The latest argument which has recently been advanced in favour of retaining the term 'Hamitic' was, as far as I know, the supposed fact that the Hamitic roots are mainly biconsonantal while those of Semitic are triconsonantal. Our work on the Comparative Historical Vocabulary of Afrasian (CHVA) has shown without a shadow of doubt that this is wrong. The Common Afrasian roots were in principle biconsonantal; most of them have been extended to a triconsonantal status either by reduplicating the second consonant of the root or by adding a real or fictitious 'weak' consonant (forming either *mediae infirmae* or *tertiaae infirmae* roots); the choice between the formation of a *secundae geminatae*, a *mediae infirmae* or a *tertiaae infirmae* secondary stem is virtually non-predictable (i.e. these types of the root are allomorphic at the Proto-Afrasian level). An additional method of forming secondary roots is the one well known from Proto-Indo-European, viz., the adding of a suffixed (very rarely prefixed) consonant 'complement' to the root. In about 90% of the cases (at least in that part of the vocabulary which we have worked through) the so-called 'three-consonantal roots' can with a great certainty be derived from well attested biconsonantal roots plus a complement which is used to modify the main semantics of the biconsonantal roots. Note that the 'biconsonantal cum complement' roots are well attested not only in Semitic but also in Cushitic, Berber and Egyptian, and though they are somewhat more rare in Chadic and some of the Cushitic languages, the reason for this phenomenon is: (1) the loss of external inflection which later also caused losses in the final stem consonants and (2) the loss of a number of Proto-Semitic phonemes in Late Stage languages.

In an article published in 1989, Christopher Ehret closes the case. Through careful analysis, fully supported by well-chosen examples from Arabic, Ehret demonstrates that the third consonantal elements of Semitic triconsonantal roots were originally suffixes, which, in the majority of cases examined by him, had served as verb extensions. In particular, he identifies and categorizes thirty-seven such extensions. In subsequent works (1995:15—54, 2003a, 2003b, and 2008a), Ehret expands his investigation to encompass other branches of Afrasian. He concludes (1995:15):

The laying out of the comparative Afroasiatic data, undertaken in Chapter 5, shows that just two fundamental stem shapes can be reconstructed for proto-Afroasiatic, CVC and C(V), the latter having the possible alternative shape VC in verb roots. To the stem could be added any of a number of nominalizing suffixes of the form -(V)C- or any of a great variety of verb extensions of the shape -(V)C-. The evidence makes it probable that the underlying form of such suffixes was usually -C-, with the surfacing of a preceding vowel depending on, and its particular realization in different Afroasiatic subgroups predictable from, the syllable structure rules of the particular groups. (The particular outcomes of such processes will not be further argued here, but will be left to future studies.) Afroasiatic roots containing such suffixes are therefore given in Chapter 5 in the form $*C_1VC_2C_s$ -, where C_s represents the suffix. Two exceptions would have been the nominal suffixes $*w$ and $*y$, which probably did have fixed vowel accompaniments and -VC shapes...

Thus, the Proto-Afrasian root may be assumed to have had two forms, either $*CV$ - or $*CVC$ -. As in Pre-Proto-Indo-European, $*CVC$ - could be extended by means of a suffix to form an inflectional stem: $*CVC-(V)C$ -. Originally, these suffixes appear to have been utilized primarily as verb extensions. Depending upon when they became separated from the rest of the Afrasian speech community, each branch exploited to a different degree the patterning that was just beginning to develop in the Afrasian parent language, with Semitic carrying it to the farthest extreme.

It thus emerges that the rules governing the structural patterning of roots and stems in the earliest stage of Proto-Afrasian (cf. Diakonoff 1988:42—56) are remarkably similar to what is posited for the earliest stage of Proto-Indo-European:

1. There were no initial vowels in the earliest form of Proto-Afrasian. Therefore, every root began with a consonant. (It may be noted that Ehret [1995] assumes that roots could begin with vowels in Proto-Afrasian.)
2. Originally, there were no initial consonant clusters either. Consequently, every root began with one and only one consonant. There must also have been restrictions on permissible medial and final consonant clusters.
3. Two basic syllable types existed: (A) $*CV$ and (B) $*CVC$, where C = any consonant and V = any vowel. Permissible root forms coincided with these two syllable types.
4. A verb stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: $*CVC-(V)C$ -. Any consonant could serve as a suffix.
5. Primary (that is, non-derivational) noun stems displayed similar patterning, though, unlike verb stems, they were originally characterized by stable vocalism.

There were three fundamental stem types in Proto-Afrasian: (A) verb stems, (B) noun and adjective stems, and (C) pronoun and indeclinable stems. Pronoun and indeclinable stems could end in a vowel. Verb stems had to end in a consonant (it

may be noted that this is the stem patterning posited by Ehret [1980:45–47] for Proto-Southern Cushitic), while, at least according to Ehret (1995:15), noun and adjective stems were distinguished by an additional element, the so-called “terminal vowel”:

The Omotic, Cushitic, and Chadic evidence conjoin in requiring the existence in PAA of an additional element in word formation, a terminal vowel (TV) in nouns and modifiers, the original function and meaning of which remain obscure. TVs have been subjected to comparative-historical investigation in only two groups of Afroasiatic languages. In Omotic they have no reconstructible function beyond their necessary attachment to singular noun stems in semantically predictable fashion. With the exception of Kafa, in which two TVs, *-o* and *-e*, have been grammaticalized respectively as masculine and feminine markers, they carry no grammatical or recognizable semantic load (Hayward 1987). In proto-Southern Cushitic, pairs of TVs formed a variety of singular-plural markers. Particular paired sets tended to go with either masculine or feminine nouns, but an individual TV on a singular noun generally gave no indication of the grammatical gender of that noun (Ehret 1980:49–50).

From these indicators it seems reasonable to conclude that TVs are fossils of a nominal morphology productive in pre-proto-Afroasiatic and predating the rise of grammatical gender in the family. Having lost their original grammatical function, they have been reanalyzed as markers of the singular or sometimes, as in the case of Southern Cushitic, of the plural in nominals. In the Boreafasian subgroup (Semitic, Egyptian, and Berber: see Chapter 6 for this classification), the TVs have generally been dropped entirely, leaving most nouns and adjectives as consonant-final words.

The existence of TVs at early stages of Afroasiatic evolution obviates the need to reconstruct any syllabic consonants for PAA. The usual word structure of nouns and adjectives would have been $*C_1(VC_2)(C_3)V_{tv}$, in which the only possible structures are CVC and CV and never just C. The presence of syllabic C in Boreafasian languages can be understood as the natural outcome of vowel loss, whether word-internal or word-final, within that particular subgroup (as is also separately the case in a few modern Omotic languages, notably Bench and Maji, where the same kind of sound change has independently been at work).

The consonants carried the basic meaning of the stem in Proto-Semitic, while the vowels were used as internal grammatical morphemes: that is to say, grammatical categorization was partially achieved by means of fixed vocalic patterning, at least in verb stems (for more information, see Chapter 18, §18.2; see also Rubio 2004).

It is thus now certain beyond any reasonable doubt that the third consonantal element of the Proto-Semitic root, be it in initial, medial, or final position, was simply not a part of the root, in the overwhelming majority of cases, at the Proto-Afrasian level and that the underlying basic Proto-Afrasian root structure patterning was biconsonantal (C_1-C_2) (cf. Hecker 2007; Zaborski 1971). The mechanisms used to create new triconsonantal roots in Semitic are discussed by Militarev (2005).

7.14. PHONOLOGICAL SYSTEMS OF THE INDIVIDUAL BRANCHES

In this section, the phonological systems reconstructed for the proto-languages of the individual branches will be presented, beginning with Semitic.

SEMITIC: The reconstruction of the Proto-Semitic phonological system has been discussed in detail in the preceding sections of this chapter. It may be summarized thus (cf. Bergsträsser 1928:4; Bomhard 1988b; Brockelmann 1908—1913.I:41—44 and 1916:53—54; Cantineau 1952; Gray 1934:8; Huehnergard 2004:142 and 2023:141; Kogan 2011a:54; Moscati 1964:24; Rubin 2010:23; R. Stempel 1999:68):

	Labial	Palatalized	Dental	Velar	Glottal	Pharyngeal
Stops	p b	tʸ dʸ tʸʸ	t d tʼ	k g kʼ	ʔ	
Affricates			c ʕ cʼ			
Fricatives		sʸ	s z sʼ	x ɣ	h	ħ ʕ
Lateralized			ɬ or tɬ l ɬʼ or tɬʼ			
Nasals	m		n			
Glides	w	y				
Tap/Trill			r			

Notes:

1. The palatalized-alveolars are often reconstructed as interdental, which are written with an underscore: *t (= *tʸ), *d (= *dʸ), *t (= tʸʸ).
2. The emphatics are commonly written with an underdot: *t (= *tʸʸ), *t (= *tʼ), *k (= *kʼ), while *kʼ is sometimes written *q.
3. *sʸ is usually written *š.
4. The glottal stop, the glottal fricative, the voiceless and voiced velar fricatives, and the voiceless and voiced pharyngeal fricatives are usually written as follows: *ʔ (= *ʔ), *h (= *h), *ħ (= *x), *g (= *ɣ), *ħ (= *ħ), *ʕ (= *ʕ).
5. The voiceless fricative lateral is usually written *ś (= *ɬ), while its emphatic counterpart is usually written *ḏ (= *ɬʼ), sometimes also *ḏ. In Russian works, *ś = *ɬ, *ḏ = *ɬʼ, *ḥ = *tɬ, and *ḥ = *tɬʼ.

The Hebrew, Aramaic, and Arabic scripts and their standard transliterations are included in the tables of sound correspondences in the preceding sections and will

not be repeated here. The Ethiopian script was not included in those tables — it is as follows (cf. Lambdin 1978:8—9; Dillmann 1907:34—113; Daniels 1997b:39):

	Ca	Cū	Cī	Cā	Cē	C, Cə	Cō		Ca	Cū	Cī	Cā	Cē	C, Cə	Cō
h	ሀ	ሁ	ሂ	ሃ	ሄ	ህ	ሆ	ᶑ	ዐ	ዑ	ዒ	ዓ	ዔ	ዕ	ዖ
l	ለ	ሉ	ሊ	ላ	ሌ	ሎ	ሎ	z	ዘ	ዙ	ዚ	ዛ	ዞ	ዟ	ዠ
ḥ	ሐ	ሑ	ሒ	ሓ	ሔ	ሐ	ሐ	y	የ	ዩ	ዪ	ያ	ዮ	ይ	ዮ
m	መ	ሙ	ሚ	ማ	ሜ	ም	ሞ	d	ደ	ዱ	ዲ	ዳ	ዴ	ድ	ዶ
š	ሠ	ሡ	ሢ	ሣ	ሤ	ሥ	ሦ	g	ገ	ገ	ጊ	ጋ	ጌ	ግ	ገ
r	ረ	ሩ	ሪ	ራ	ራ	ር	ሮ	t	ጠ	ጡ	ጢ	ጣ	ጤ	ጥ	ጦ
s	ሰ	ሱ	ሲ	ሳ	ሴ	ሰ	ሶ	p	ጸ	ጹ	ጺ	ጻ	ጼ	ጽ	ጾ
k	ቀ	ቁ	ቂ	ቃ	ቄ	ቅ	ቆ	ṣ	ጸ	ጹ	ጺ	ጻ	ጼ	ጽ	ጾ
b	በ	ቡ	ቢ	ባ	ቤ	ብ	ቦ	ḍ	ፀ	ፁ	፲	፳	፴	፵	፶
t	ተ	ቱ	ቲ	ታ	ቲ	ት	ቶ	f	ፈ	ፋ	ፊ	ፋ	ፌ	ፍ	ፎ
ḥ	ሀ	ሁ	ሂ	ሃ	ሄ	ህ	ሆ	ḍ	ፈ	ፋ	ፊ	ፋ	ፌ	ፍ	ፎ
n	ነ	ኑ	ኒ	ና	ኔ	ን	ኖ	k ^w	ቁ		ቁ	ቁ	ቁ	ቁ	
ʔ	አ	ኡ	ኢ	ኣ	ኤ	አ	አ	ḥ ^w	ኧ		ኧ	ኧ	ኧ	ኧ	
k	ከ	ኩ	ኪ	ካ	ኬ	ክ	ኮ	k ^w	ከ		ከ	ከ	ከ	ከ	
w	ወ	ዉ	ዊ	ዋ	ዌ	ወ	ዐ	g ^w	ጐ		ጐ	ጐ	ጐ	ጐ	

EGYPTIAN: Here, I will just give the Egyptian hieroglyphs and their traditional transliteration, without further discussion (cf. J. Allen 2010:14; Gardiner 1957:27; Hannig 1995:XLV—XLVII; Mercer 1961a:4; Peust 1999:48; Loprieno 1995:15):

Hieroglyph	Transliteration	Hieroglyph	Transliteration
	ḥ		ḥ
	i		ḥ
	y		z
	ᶑ		s
	w		š
	b		q
	p		k
	f		g
	m		t
	n		t
	r		d
	h		d
	ḥ		

The Coptic alphabet is based upon Greek, with six additional letters borrowed from Demotic. It is as follows (cf. J. Allen 2013:12; Lambdin 1982:x; Loprieno 1995:25; Steindorff 1904:6—7; Till 1978:40):

ⲁ a	Ⲉ ē	ⲛ n	ⲧ t	ⲱ š
ⲃ b	Ⲑ th	Ⲭ ks	Ⲯ, ⲲⲮ u	Ⲕ f
Ⲅ g	ⲓ, Ⲉⲓ i	ⲟ o	Ⲥ ph	Ⲛ h
ⲅ d	ⲕ k	ⲡ p	ⲭ kh	ⲭ ġ
Ⲇ e	ⲗ l	ⲣ r	Ⲱ ps	Ⲕ č
ⲇ z	ⲙ m	ⲥ s	ⲱ ḏ	ⲧ ti

Semivowels and diphthongs (cf. Lambdin 1982:xii—xiii):

ⲁⲓ, ⲗⲈⲓ	=	ay
ⲗⲮ (rarely ⲗⲲⲮ)	=	aw
Ⲉⲓ (less commonly ⲈⲈⲓ)	=	ey
ⲈⲮ (rarely ⲈⲲⲮ)	=	ew
Ⲉⲓ	=	ey
ⲈⲮ	=	ew
ⲓⲈⲓ, ⲈⲓⲈⲓ	=	yi
ⲓⲲⲮ (rare)	=	iw
ⲟⲈⲓ, ⲟⲓ	=	oy
ⲟⲲⲮ	=	ow
ⲱⲓ	=	oy
ⲱⲲⲮ	=	ow
ⲲⲮⲓ (rare)	=	uy, perhaps also wi
ⲲⲮⲲⲮ (rare)	=	uw

Kammerzell (1998:38) reconstructs the consonant system of Pre-Old Egyptian (ca. 3000 BCE) as follows:

	cAh	CAH	CaH	caH	cah
Nasals	m	n			
Laterals		l			
Trills		r			
Glides	w		j		
Voiced Obstruents	b	d	g	g	[ɣ]
Emphatic Obstruents		tʔ	kʔ	qʔ	[χʔ]
Voiceless Obstruents	p	t [t] [ts]	k	q	[χ]
Sibilants	ʃ	ʃ			[h]

Note: c = [-coronal]; C = [+coronal]; a = [-anterior]; A = [+anterior]; h = [-high]; H = [+high].

BERBER: The Proto-Berber phonological system has not been reconstructed yet. The Ahaggar Tuareg consonant system may be taken as a representative example (cf. Kossmann 2012:23; Maddieson 1984:314):

	Labial	Dental	Palatal	Velar	Uvular	Pharyngeal
Voiceless Stop		t tt		k kk	q qq	
Voiced Fricative	f ff	s ss	(š) (šš)		(x) (xx)	
Voiced Stop	b bb	d dd	g ^y gg ^y			
Voiced Fricative		(z) zz	(ž) (žž)		ɣ	
Pharyngealized Voiceless Stop		t̤ t̤t̤				
Pharyngealized Voiced Stop		d̤ d̤d̤				
Pharyngealized Voiceless Fric.		z̤ z̤z̤				
Nasal	m mm	n nn	(ɲ)	(ŋ)		
Glide	w (ww)		y (yy)			h (hh)
Rhotic		r rr				
Liquid		l ll				

The following vowels are found in Ayer Tuareg (cf. Kossmann 2012:28):

i		u
	ə	
	ã	
e	a	o

Tashelhiyt / Shilha has a much simpler system (cf. Kossmann 2012:28):

i		u
	a	

Kossmann (2012:28) notes: “Berber languages differ considerably as to their vowel systems. Languages such as Tashelhiyt have only three phonemic vowels, while Tuareg and Ghadames Berber have a seven-vowel system.”

CUSHITIC: According to Ehret (1987, 1995, and 2008c), the Proto-Cushitic consonant system is to be reconstructed as follows (see Appleyard 2011:42, Table 5.1, for a different reconstruction):

b	d	dz	dl		g	g ^w	ʕ
p	t	ts			k	k ^w	ʔ
p'	t'	ts'	tl'	č'	k'	k ^w '	
f	s		ʈ	š	x	x ^w	ħ
	z						
m	n			ɲ	ɲ	ɲ ^w (?)	
w	l, r			y			h

Sasse (1979:5) reconstructs the Proto-East Cushitic phonological system as follows (for sound correspondences, see Ehret 2012:115—119):

Plain stops: voiceless:		t	k	ʔ		
voiced:	b	d	g			
Glottalized stops:		d'	d' _l	k'		
Fricative: voiceless:	f	s	š	(x ?)	h	ħ
voiced:		z				ʕ
Liquids and nasals:	m	n				
		l				
		r				
Semivowels:	w		y			
Vowels: short:	i	e	a	o	u	
long:	ii	ee	aa	oo	uu	

Note: Sasse writes *d'* and *d'_l* for *d'* and *d'_l*, respectively.

Ehret (2008b:129), on the other hand, reconstructs the consonant system of Proto-Eastern Cushitic as follows:

b	d		g	ʕ
ḃ	d'	ɸ	g'	
	t	c	k	ʔ
	t'	c'	k'	
f	s	ç	x	ħ
	z			
m	n	ɲ	ŋ	
	r			
w	l	y		h

As well as the following vowels: *a, *e, *i, *o, *u; *aa, *ee, *ii, *oo, *uu.

Ehret (1980:37) reconstructs the Proto-Southern Cushitic consonant system thus (see also Takács 2000):

b	d	ɖ	dz	l	(dʲ ?)	g	g ^w	ʕ
p	t	ɗ	(ts ?)	ɬ	tʲ	k	k ^w	ʔ
p'	t'	ɗ'	ts'	ɬ'	tʲ'	k'	k ^w '	
f	s			r	š	x	x ^w	ħ
m	n				nʲ	ŋ	ŋ ^w	
^m p	ⁿ t	ⁿ ɗ	ⁿ ts	ⁿ ɬ	ⁿ tʲ	ⁿ k	ⁿ k ^w	
w					y			h

Notes:

1. *ɖ*, *t*, *t'*, and *ⁿt* (Ehret writes *ɖ*, *t*, *t'*, and *ⁿt*) are retroflex.
2. *^mp*, *ⁿt*, *ⁿɗ*, *ⁿts*, *ⁿɬ*, *ⁿtʲ*, *ⁿk*, and *ⁿk^w* are prenasalized.
3. Labialization could not occur before back vowels in Proto-Southern Cushitic; it is only found before central and front vowels.

Ehret (1980:38) reconstructs the following vowels for Proto-Southern Cushitic:

i	ɨ	u	ī	ī̄	ū
e	ʌ	o	ē	ā̄	ō
a			ā		

The Beja / Beɖawye (= North Cushitic) phonological system is as follows (cf. R. Hudson 1976:99; see also Almkvist 1881:37—45; Maddieson 1984:216; Ruhlen 1975:167) (for details on Beja / Beɖawye historical phonology, cf. Blažek 2007b):

	Labial	Dental	Palatal	Retro-flex	Velar	Labio-velar	Glottal
Stops	b	t d		ɖ ɗ	k g	k ^w g ^w	ʔ
Affricates			ʃ				
Fricatives	f						h
Sibilants		s	š				
Nasals	m	n					
Trill		r					
Lateral		l					
Glides	w		y				

Vowels:

i		u
e		o
a		

Appleyard (2006:13) sets up the following table of consonant correspondences for Agaw (Central Cushitic) (Note: Fallon 2009 reconstructs ejectives for Proto-Agaw):

Proto-Agaw	Bilin	Xamtanga	Kemant	Awngi
*f	f	f	f	f
*b	b	b	b	b
*m	m	m	m	m
*t	t- -r-	t- -r-	t- -y-	t- -r-/t-
*d	d	d	d	d
*n	n	n	n	n
*s	s	s	s	s
*z	d	z	z	s
*c	š	s'	š	c
*ʒ	j	z	j	z/dz
*č	š	č'	š	č
*k	k	k/q/k'	k	k
*g	g	g	g	g
*ŋ	n- -ŋ-	ŋ	n- -ŋ-	ŋ
*x	-x-	Ø	Ø	-y-
*k ^w	k ^w	k ^w	k ^w	k ^w /k
*g ^w	g ^w	g ^w	g ^w	g ^w /g
*ŋ ^w	ŋ ^w	ŋ ^w	ŋ ^w	ŋ ^w /ŋ
*x ^w	-x ^w -	-w-	-w-	-y ^w -
*q	k'	x- -q-	x-	y- -q-
*ɣ	-x-	Ø	-y-	-y-
*q ^w	k' ^w	x ^w - -q ^w -	x ^w	y ^w -
*ɣ ^w	-x ^w -	-w-	-y ^w -	-y ^w -
*l	l	l	l	l
*r	-r-	-r-/l-	-r-	-r-
*w	w	w	w	w
*y	y	y	y	y
*ʔ	ʔ	Ø	Ø	Ø

OMOTIC: Amha (2012:434) reconstructs the Proto-Omotiic consonant system as follows (see also Bender 1988, 2000, and 2003:310):

	Bilabial	Alveolar	Palatal	Velar	Glottal
Stops: voiceless	p	t		k	
voiced	b	d-		-g-	
glottalized		t'-, d'		k'	
Fricatives: voiceless		s	š		h-
Affricates: voiceless		-ts-	-č-		
glottalized		ts'	č'		
Nasals	m	-n-			
Liquids		-l-, -r-			
Glides	w		y-		

Vowels: i e a o u

Notes:

1. The vowels **e* and **u* do not occur word-initially.
2. According to Bender (2003:310), **aa* and **uu* are the only long vowels that can be reconstructed for Proto-Omoti.

CHADIC: According to Newman (1977:9), the consonantal inventory of Proto-Chadic can be reconstructed as follows:

p	t	c	k	kʸ	kʷ
b	d	j	g	gʸ	gʷ
ɓ	d̥	ʔ			
f	s	(sh)	χ	χʸ	χʷ
	z				
	ʃ				
m	n				
	hl				
	r				
w	y				

Notes:

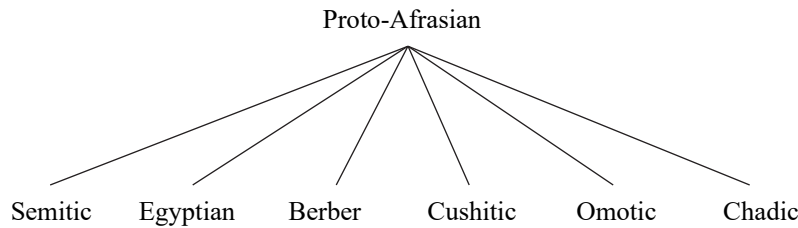
1. /c/ = /tʃ/; /j/ = /dʒ/; /ʔ/ = /dʒʰ/; /sh/ = /ʃ/; /hl/ = /ʎ/.
2. The exact phonetic value of /ʃ/ is unclear.
3. Newman does not reconstruct **l* for Proto-Chadic, but Jungraithmayr—Ibriszimow do. Jungraithmayr—Ibriszimow also reconstruct a velar ejective **k̥* and a voiced fricative lateral **l̥*. For more information, see the table of sound correspondences in Jungraithmayr—Ibriszimow 1994.I:XX—XXIX.

As noted above, Newman (1977:11) reconstructs four vowels for Proto-Chadic:

i	u
ə	
a	

7.15. SUBGROUPING

The traditional subclassification of the Afrasian language family includes the following six branches: Semitic, Egyptian (now extinct), Berber, Cushitic, Omotic, and Chadic (cf. Rubin 2010:3; Katzner 1995:27—29; Hamed—Darlu 2003:80—82; Huehnergard 1992:155; Peust 2012). This may be illustrated by the following chart:



An alternative subclassification is suggested by Militarev (2009:96):

1. North Afrasian (NAA) (first branching dated to the mid 9th mill. BCE):
 - 1.1. Semitic
 - 1.2. African North Afrasian (ANAA):
 - 1.2.1. Egyptian
 - 1.2.2. Chado-Berber:
 - 1.2.2.1. Berber-Canarian
 - 1.2.2.2. Chadic
2. South Afrasian (SAA):
 - 2.1. Cushitic
 - 2.2. Omotic

In his comparative Afrasian dictionary, Ehret (1995:489—490), has proposed a more radical subclassification:

- I. Omotic:
 - A. North Omotic
 - B. South Omotic
- II. Erythraean:
 - A. Cushitic:
 1. Beja / Beɣawye
 2. Agaw
 3. East-South Cushitic:
 - a. Eastern Cushitic
 - b. Southern Cushitic
 - B. North Erythraean:
 1. Chadic
 2. Boreafrasian:
 - a. Egyptian
 - b. Berber
 - c. Semitic

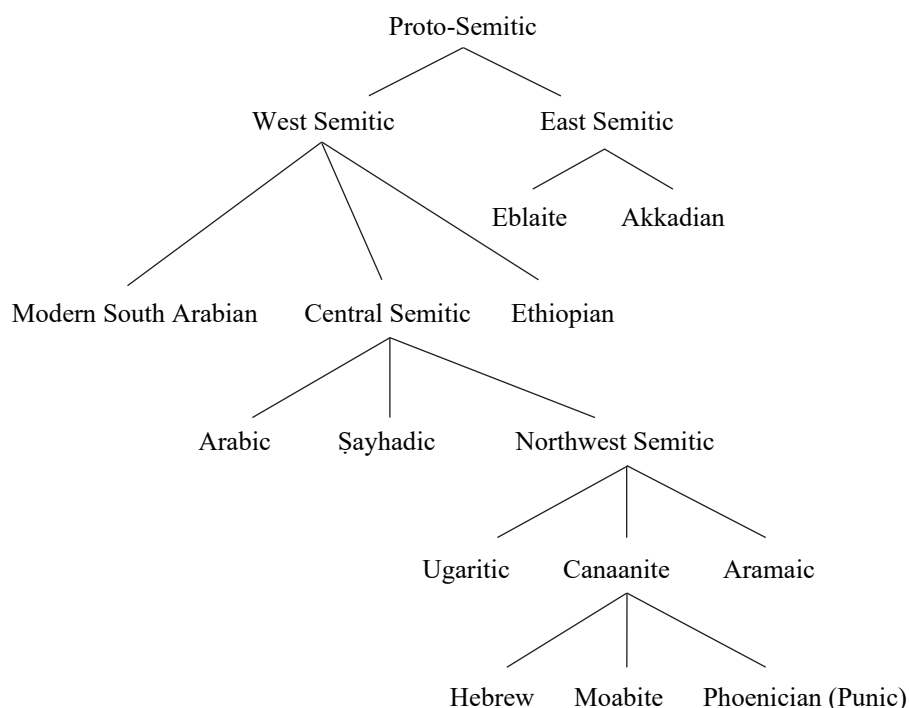
Fleming (2002b:39) adds Ongota to the above chart as a separate branch under Erythraean.

Huehnergard (2004:140), on the other hand, takes a more cautious view:

A number of morphological features indicate that Berber, Egyptian, and Semitic may constitute a *North Afro-Asiatic* subgroup. A connection between Berber and Chadic has also been suggested. Various other, more comprehensive subgroupings of the Afro-Asiatic branches have been proposed, but none has gained a consensus.

Now, let us look at the individual branches.

SEMITIC: Rubin (2008 and 2010:3—21) presents the current understanding of the subgrouping of the Semitic branch, on the basis of the facts available to date. First, he recognizes a primary division between East and West Semitic. As he notes, this “division has remained relatively uncontroversial for more than a century”. East Semitic includes two sub-branches — Eblaite and Akkadian —, while West Semitic is divided into Central Semitic, Ethiopian, and Modern South Arabian. Rubin’s views are illustrated in the following chart (see also Faber 1997; Ruhlen 1987:323; Pereltsvaig 2012:96; Lipiński 1997:47—85; Kogan 2015; Groen 2015:5):



EGYPTIAN: The Egyptian branch is represented by a single language throughout its long history of some five thousand years — roughly 3400 BCE to the sixteenth century CE. Though Egyptian is now extinct as a spoken language, the Bohairic dialect of Coptic is still used as the liturgical language of the Coptic Orthodox Church in Egypt. The following developmental stages are typically distinguished,

together with their approximate dates (cf. Allen 2013:2—4; Loprieno 1995:5—8; Loprieno—Müller 2012:102—104; Peust 1999:30):

- Old Egyptian 3000 BCE to 2000 BCE
- Middle Egyptian 2000 BCE to 1300 BCE
- Late Egyptian 1300 BCE to 700 BCE
- Demotic 700 BCE to 500 CE
- Coptic 400 CE to 1400 CE

Note: Coptic was still spoken in isolated pockets until the sixteenth century CE (cf. Pereltsvaig 2012:296).

BERBER: As noted by Kossmann (2012:18—20), the subgrouping of the Berber languages is extremely difficult, and no proposal made to date can be considered even close to definitive. Ruhlen (1987:320) gives the following subclassification:

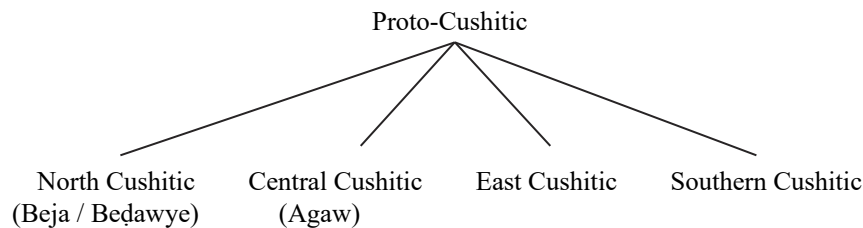
- A. †Guanche: †Guanche
- B. †East Numidian: †East Numidian (= Old Libyan)
- C. Berber proper:
 - 1. Eastern:
 - Siwa
 - Awjila-Sokna: Awjila, Sokna, Ghadames
 - 2. Tuareg:
 - a. Northern: Tamahaq
 - b. Southern: Tamazheq, Tamasheq
 - 3. Western: Zenaga
 - 4. Northern:
 - a. Atlas: Shilha, Tamazight
 - b. Kabyle: Kabyle
 - c. Zenati:
 - Shawiya, Tidikelt, Tuat, Riff, Ghmara, Tlemcen, Sheliff Basin
 - i. Mzab-Wargla: Guara, Mzab, Wargla, Ghardaia, Tugurt
 - ii. East Zenati: Tmagurt, Sened, Jerba, Tamezret, Taujjut, Zwara, Nefusi

Kossmann (2012:18) gets around the issue of subgrouping by giving a geographical distribution of the best known Berber languages and variants:

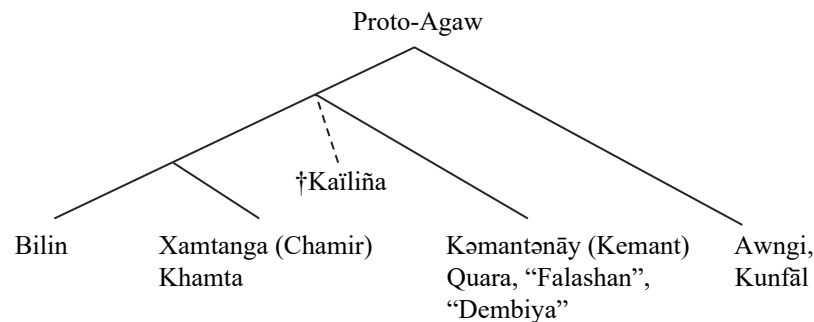
- MAURITANIA: Southwest: Zenaga;
- MOROCCO: Southwest: Tashelhiyt (also known as Chleuh, Shilha);
- Central and Southeast: Central Moroccan Berber (also called Middle Atlas Berber, Tamazight);
- North: Riffian (also Tarifiyt);

Northeast: Eastern Riffian (Beni Iznasen);
 Northern Sahara: Figuig;
 ALGERIA: Northwest: Beni Snous, Chenoua;
 Northwest: Kabyle, Chaouia;
 Northern Sahara: Ouargla, Mzab, Gourara, Touat (now extinct);
 TUNISIA: Djerba;
 LIBYA: Northwest: Djebel Nefusa;
 Libyan Sahara: Ghadames, Awdjilah, Elfoqaha (now extinct), Sokna (now extinct);
 EGYPT: Western Egyptian Sahara: Siwa
 TUAREG: Algeria, Libya: Ahaggar;
 Niger: Ayer, Iwellemmeden;
 Mali: Adagh des Hoghas;
 Burkina Faso: Oudalan.

CUSHITIC: Cushitic has four branches:



North Cushitic consists of a single language: Beja / Beɣawye. The subgrouping of Central Cushitic (Agaw) is as follows (cf. Appleyard 2006:4):

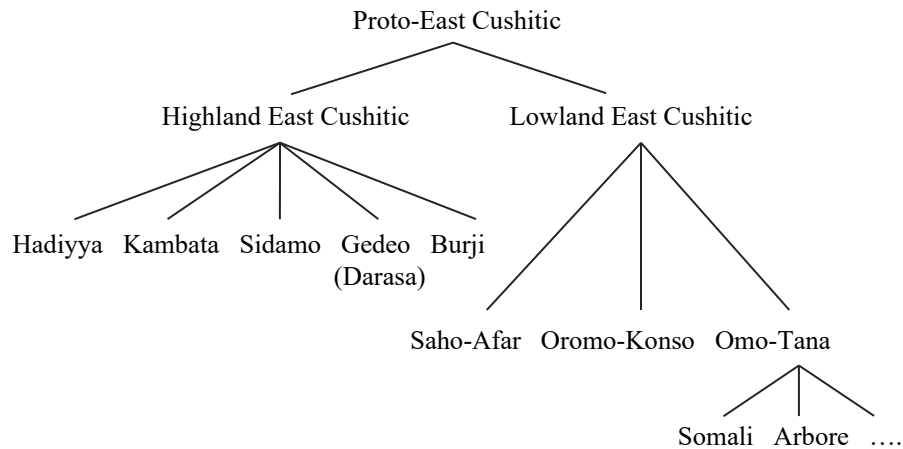


For East Cushitic, Sasse (1979:3—4) identifies the following modern languages, language groups, or dialect clusters:

1. Saho-Afar (dialect cluster).

2. Omo-Tana (language group, consisting of a western subgroup (Dasenech, Elmolo), an eastern subgroup (Somali, Rendille, Boni), and a northern subgroup).
3. Macro-Oromo or Oromoid (language group, consisting of Galla [Oromo] dialects, including Waata, and the Konso-Gidole group).
4. Sidamo group (language group, consisting of Sidamo, Darasa [Gedeo], Alaba, Kambata, Hadiyya / Libido, and some others).
5. Burji (language; formerly classified with the Sidamo group).
6. Dullay (dialect cluster, consisting of Gawwada, Gollango, Dobase, Harso, Tsamay, and some others; formerly called “Werizoid”).
7. Yaaku (Mogogodo; language).

Sasse’s Burji-Sidamo group corresponds to Hudson’s Highland East Cushitic, while the remainder are included in Hudson’s Lowland East Cushitic, as shown below (cf. Hudson 1989:2):



For a slightly different subclassification, cf. Mous 2012:346; see also Ehret 2012: 124.

Ehret (1980:132) gives the following subclassification for Southern Cushitic:

Southern Cushitic:

(a) Rift branch:

(a.1) West Rift subgroup:

(i) *Iraqw, Gorowa*

(ii) Alagwa-Burunge:

Burunge

Alagwa

(a.2) East Rift subgroup:

(i) *Kw'adza*

- (ii) *Asa*
 (b) Mbuguan branch:
 Ma'a
 (c) Dahaloan branch:
 Dahalo

OMOTIC: Various attempts at subclassification have been attempted (for details, cf. Amha 2012:425–434). Bender devotes a whole book to the study of Omotic subgrouping, based upon an analysis of morphology. He starts out (2000:2) by giving the following chart. Later (2000:221–235), he summarizes his findings and applies them to the problem of subgrouping.

1. Aroid: Ari (= Bako), Hamar-Bana-Kara, Dimé
2. Non-Aroid:
 - 2.1. Mao: Hozo-Sezo, Bambeshi-Diddesa, Ganza
 - 2.2. Dizoid: Dizi (= Maji), Sheko, Nayi
 - 2.3. TN (= ta / ne):
 - 2.3.1. Kefoid: Bworo (= Shinasha), Anfillo, Kefa-Mocha
 - 2.3.2. Yem (= Janjero)
 - 2.3.3. Gimira: Benc'-Shé
 - 2.3.4. Macro-Ometo:
 - 2.3.4.1. C'ara
 - 2.3.4.2. Ometo
 - Southeast: Koré, Zaysé, Gidicho, Gatsamé, Ganjulé
 - Northwest: Welaitta Cluster, Malo, Oyda, Basketo, Malé

CHADIC: The Chadic branch of Afrasian contains the largest number of daughter languages. Pereltsvaig (2012:206) places the number around 195 languages, while Frajzyngier—Shay (2012b:236) place the number between 140 and 160 languages (the exact number is still a matter of debate). Frajzyngier—Shay also note that the Chadic languages are the most typologically diverse Afrasian languages. Their subclassification is as follows (2012b:240):

West

- | A | B |
|------------------|--------------------------|
| 1. Hausa | 1. Bade, Ngizim |
| 2. Bole | 2. Miya, Pa'a |
| Tangale | 3. Guruntum, Saya (Za:r) |
| Bole | 4. Don (Zodí) |
| Pero | |
| 3. Angas | |
| Sura (Mwaghavul) | |
| Mupun | |
| 4. Ron, Fyer | |

Biu-Mandara

A

1. Ga'anda, Hwana (Hona), Jara, Tera
 2. Bura, Cibak, Margi
 3. Bana, Higi, Kapsiki
 4. Glavda, Guduf, Lamang, Hdi
 5. Ouldene, Zulgo
 6. Sukun (Sukur)
 7. Daba, Hina (Mina)
 8. Bachama, Tsuvan
- East

B

1. Buduma, Kotoko, Logone
2. Musgu
3. Gidar

A

1. Somrai, Tumak
2. Lele, Nancere, Tobanga
3. Kera, Kwang

B

1. Bidiya, Dangla, Migama, Mubi
2. Mukulu
3. Barain, Saba, Sokoro

Masa

Masa

Mesme

Musey

Zime-Lame

Zumaya

A more comprehensive subclassification is given by Jungraithmayr—Ibriszimow 1994. See also Newman 1977:4—7.

For alternative subgrouping schemata and alternative language names, cf. Ruhlen 1987:320—323, Blench 2000, and Orël—Stolbova 1995:xi—xiii. As can be clearly seen from the above discussion, there remain many uncertainties regarding the subgrouping of the Afrasian daughter languages, with the Chadic branch being particularly challenging.

...

References: Arbeitman (ed.) 1988a; Bergsträsser 1928 and 1983; Bomhard 2014b; Brockelmann 1908, 1908—1913, 1910, and 1916; Bynon (ed.) 1984; Bynon—Bynon (eds.) 1975; D. Cohen 1968; D. Cohen (ed.) 1988; M. Cohen 1947, 1952, and 1953; Comrie (ed.) 1987 and 1990; Diakonoff 1965, 1974, 1988, and 1992; Diakonoff—Militarëv—Porxomovsky—Stolbova 1987; Ehret 1980 and 1995; Frajzyngier—Shay (eds.) 2012; Gray 1934; Gzella (ed.) 2012; Hetzron (ed.) 1997; Hodge (ed.) 1971; Huehnergard 2004; Jungraithmayr—Mueller (eds.) 1987; Kaye

(ed.) 1997 and 2007; Kogan 2011a; Lecarme—Lowenstamm—Shlonsky (eds.) 2002; Leslau 1988; Lipiński 1997 and 2001; Moscati (ed.) 1964; O’Leary 1923; Orël—Stolbova 1988, 1990, and 1995; Militarëv 2000, 2002, 2005, 2010, 2011, 2012, and 2014; Petráček 1985, 1976, 1988b, and 1989; Porxomovsky (ed.) 1987; Rössler 1981; Takács 1999 and 2011a; Takács (ed.) 2008; Weninger (ed.) 2011; Woodard (ed.) 2004; W. Wright 1890.

CHAPTER EIGHT

A SKETCH OF PROTO-URALIC PHONOLOGY

8.1. INTRODUCTION

Even though the Uralic language family is part of a larger grouping called “Uralic-Yukaghir” (cf. Ruhlen 1987:64—65; de Smit 2017; Piispanen 2013 and 2017) (Abondolo 1998a:8—9 and Fortescue 1998:44—47 are more cautious), the main part of this chapter will be devoted to Uralic. Yukaghir will be dealt with separately in an Appendix.

Vowel harmony and consonant harmony are two notable phonological characteristics of the Uralic languages, though not all languages of the family exhibit these features. In those Uralic languages exhibiting vowel harmony, the system is generally based upon a front ~ back contrast, most often with the vowels *i* and *e* being neutral in regards to this contrast and thus able to combine freely with either front or back vowels, though absolute consistency is unusual. The vowel harmony systems found in the Uralic languages thus differ in this respect from those found in the Altaic languages, especially Turkic and Mongolian, where more consistent systems are the rule. Cf. Abondolo 1998a:13—18; Collinder 1965:65—67; Comrie 1988:454—457; Marcantonio 2002:82.

As an active phonological feature, consonant harmony (German *Stufenwechsel*) is not as widespread as vowel harmony, being found exclusively in Balto-Finnic and Lapp (Saami) (though there are traces in the Erza dialect of Mordvin [cf. Zaic 1998:190] as well as Tavgi [Nganasan], Forest Yurak [Forest Nenets], and Southern Selkup Samoyed [cf. Collinder 1965:67—73]). Consonant harmony is based upon a contrast, in different forms of the same word, between (1) medial voiceless geminated stops at the beginning of an open syllable versus medial single voiceless stops at the beginning of a closed syllable on the one hand and between (2) medial single voiceless stops at the beginning of an open syllable versus medial voiced stops, fricatives, or zero at the beginning of a closed syllable on the other hand. Diachronically, the system of consonant harmony may be viewed as a weakening of the phonetic value of a consonant before closed syllables. This resulted in a correlation of so-called “strong-grade” variants with open syllables and so-called “weak-grade” variants with closed syllables. Even though consonant harmony began as a purely phonetic process, however, it has since become morphologized in those languages where it developed, and a certain amount of leveling has also taken place. In Estonian, in particular, so many diachronic changes have taken place that there is no longer a readily discernible correlation between strong-grade and open syllables nor between weak-grade and closed syllables. Cf. Abondolo 1998a:11—12; Comrie 1988:457—459; Marcantonio 2002:83—84.

As noted by Vajda (2003:117), the “constituent branches [of Uralic] have undergone extensive areal contact mutually as well as with non-Uralic languages”.

8.2. THE PROTO-URALIC CONSONANT SYSTEM

There is broad agreement among Uralic scholars concerning Proto-Uralic consonantism. Though most consonants could appear both initially and medially, a small number were found only medially. Word initially, Proto-Uralic had the following sounds (cf. Collinder 1965:75—83): **p*-, **t*-, **k*-, **č*-, **tʲ*- (traditional **č*-), **s*-, **sʲ*- (traditional **š*-), **δ*^y- (traditional **δ*'-), **y*-, **w*-, **l*-, **lʲ*- (traditional **l*'-), **r*-, **nʲ*- (traditional **n*'-), **n*-, and **m*-. Medially between vowels, the following sounds were found (cf. Collinder 1965:83—92): **p*-, **t*-, **k*-, **č*-, **tʲ*-, **s*-, **sʲ*-, **š*-, **x*- (traditional **γ*-), **δ*-, **δ*^y-, **y*-, **w*-, **l*-, **lʲ*-, **r*-, **ŋ*-, **ŋk*-, **ŋt*-, **n*-, **nt*-, **nʲ*-, **m*-, **mt*-, and **mp*-. Note: In my opinion, traditional **δ* and **δ*' are to be interpreted as the voiceless and voiceless palatalized lateralized affricates **tʃ* and **tʃʲ*, respectively — to maintain continuity with the traditional reconstruction, they are written **δ* and **δ*^y, respectively, in this book. I also believe that the phoneme traditionally written **γ* was most likely the voiceless velar fricative **x* instead (as reconstructed by Sammallahti and Abondolo below). Palatalization is indicated as *Cʲ* throughout this book.

The Proto-Uralic consonant system may be reconstructed as follows (cf. Abondolo 1998a:12; Austerlitz 1968:1375—1377; Bakró-Nagy 1992:16; Janhunen 1982:23—24 and 1992:208; Décsy 1990:25—28; Rédei 1986—1988:ix; Fortescue 1998:127) (for sound correspondences, cf. Collinder 1965:75—103) (for examples, cf. Collinder 1960:45—193) (for Proto-Finno-Ugrian, cf. Kálmán 1988:401) (for Proto-Samoyed, cf. Janhunen 1977b:9), though it should be noted that the number of fricatives and affricates to be reconstructed for Proto-Uralic as well as their precise phonetic qualities are still a source of controversy (cf. Janhunen 1982:24):

p	t	č	tʲ	k
	δ (= tʃ)		δʲ (= tʃʲ)	x
	s	š	sʲ	
m	n		nʲ	ŋ
	r	l	(lʲ)	
w			y	

A slightly different system is reconstructed by Sammallahti (1988:480—483):

p			m			w
t	s	c	n	d	r	l
	sʲ		nʲ	dʲ		y
k			ŋ			

Marcantonio (2002:105) lists the following traditionally reconstructed Proto-Uralic consonants (her transcription is maintained):

1. The (voiceless) plosives: **p, *t, *k*;
2. The glides: **w* and **j*;
3. The (voiceless) sibilants: generally three: **s, *ś, *š*; or two: **s* and **ś*;
4. The ordinary as well as the palatalized liquids: **r, *l/*ĺ* and nasals **m, *n/*ń*;
5. The affricates: generally one: **č*, or two: **č* and the palatal(ized) **ć*.

Next, the phonological system proposed by Abondolo (1998a:12) is as follows:

Glides:	w		y	x
Nasals:	m	n	nʸ	ŋ
Stops:	p	t		k
Affricates:			č	cʸ
Fricatives:		s	sʸ	
Lateral:		l		
Trill:		r		

Abondolo also reconstructs **δ* and **δʸ*, whose phonetic status is uncertain. According to Abondolo (1998a:12), **lʸ* and **ś* were later developments and did not exist in Proto-Uralic. See also Marcantonio 2002:106 and Kortlandt 2008b.

Zhivlov (2023:118, table 3.1 — his notation has been retained) reconstructs the consonant inventory of Proto-Uralic as follows (see also Aikio 2022:5, table 1.2):

p	t			k
		č	ć	
	s	š		
	δ		δ'	x
m	n		ń	ŋ
	l			
	ĺ			
w			j	

Zhivlov (2023:119) notes that the precise phonetic values of **δ*, *δ'*, and **x* are particularly difficult to reconstruct — Aikio (2022:7) also notes that the phonetic quality of **δ* and *δ'* “remains unresolved”. Finally, Aikio states that the phonetic status of both **ś* and **x* in the Proto-Uralic consonant inventory is questionable.

8.3. VOWELS

There are still many uncertainties regarding the reconstruction of the Proto-Uralic vowels. Décsy (1990:22), for example, has proposed the following system:

i	u
e	o
ä	a

At the Proto-Uralic level, the system of vowel harmony was based exclusively upon a front ~ back contrast. This affected the distributional patterning of vowels in such a way that only front vowels could combine with front vowels and only back vowels could combine with back vowels in a given word. The basic rule is that the vowels of non-initial syllables adjust to the vowel of the initial syllable. According to Décsy (1990:36), the following combinations were permitted:

Front	Back
i ~ ä	u ~ a
e ~ ä	o ~ a
ä ~ ä	a ~ a

A key point in this scheme is the assumption by Décsy (1990:39—43) that only **ä* and **a* could appear in non-initial syllables. The traditional view among Uralic scholars, however, is that **i/*i* (or **e*) could also occur in non-initial syllables. Indeed, the evidence from the Uralic daughter languages strongly supports the reconstruction of the opposition **i/*i* (or **e*) versus **a/*ä* in non-initial syllables. Moreover, if this distinction is not reconstructed, it is impossible to explain many secondary consonant developments in the Samoyed languages.

Janhunen (1982:24 and 1992:208) reconstructs eight vowels for Proto-Uralic:

	Unmarked Front	Marked Front	Marked Back	Unmarked Back
High	i	ü	ĩ	u
Middle	e			o
Low	ä			a

Sammallahti (1988:481), on the other hand, reconstructs the following vowels for Proto-Uralic, all of which could appear in stressed syllables (in general, Sammallahti's views are supported by Abondolo 1998a:13—18, especially p. 16, though Abondolo devotes considerable space to a discussion of alternative proposals, including the suggestion that Proto-Uralic may have had phonemic long vowels):

u	i	ü	ĩ
o			e
å (a)			ä

According to Sammallahti, only the following vowels could appear in non-initial syllables:

i	i
ä (a)	ä

Sammallahti reconstructs the following system of vowel harmony:

Front vowels			Back Vowels		
i	~	ä, i	i	~	ä, i
ü	~	ä, i	u	~	ä, i
e	~	ä, i	o	~	ä, i
ä	~	ä, i	ä	~	ä, i

Though front rounded and back (or central) unrounded vowels are typical characteristics of most Uralic languages, they are innovations within Uralic proper and, consequently, are not to be reconstructed for Proto-Nostratic. There have been several attempts to show that phonemic long vowels also existed in Proto-Uralic. However, the prevailing view appears to be that phonemic long vowels were secondary developments in the Uralic daughter languages (cf. Lehtinen 1967) and not part of the phonological system of the Uralic parent language.

Finally, Zhivlov (2023:118, table 3.2) reconstructs the following vowels for Proto-Uralic (see also Aikio 2022:5, table 1.1):

i	ü	u
e	ɛ	o
ä	a	

According to Aikio (2022:10), “... due to the phonotactic limitations of vowel distribution, the stem-final vowels in the second syllable were mostly (or perhaps completely) limited to **a*, **ä* and **i*.”

8.4. ACCENTUATION

There were probably three degrees of stress contrast in Proto-Uralic (cf. Décsy 1990:48—49): (A) strongest, (B) weak, and (C) weakest. These are relative terms — the actual intensity differences between these three degrees was not great. The rule was that the strongest degree always fell on the first syllable of a word, and the weakest always on the last. The weak degree fell on odd non-initial syllables (except for the final syllable), while the weakest degree fell on even non-final syllables and the final syllables. According to Zhivlov (2023:120), “Proto-Uralic had no phonemic stress: the main stress automatically fell on the first syllable, while secondary stress fell on non-first odd syllables, except the final syllable.”

8.5. ROOT STRUCTURE PATTERNING

The Proto-Uralic root structure patterning was fairly straightforward (cf. Bakró-Nagy 1992, especially pp. 133—158; Janhunen 1982:25—27):

1. There were no initial consonant clusters in Proto-Uralic (cf. Décsy 1990:26). Medial clusters were permitted, however (cf. Décsy 1990:27).
2. Three syllable types were permitted: $*V$, $*CV$, $*CVC$ (cf. Décsy 1990:34—35). Initially, $*V$ comes from earlier $*HV$, upon loss of the preceding laryngeal.
3. All Proto-Uralic words ended in a vowel (cf. Décsy 1990:26 and 54).
4. Derivational suffixes had the form $*-CV$ (cf. Décsy 1990:58). Note: Proto-Uralic did not have prefixes or infixes (cf. Décsy 1990:58).

Proto-Uralic did not differentiate between nominal and verbal stems (cf. Décsy 1990:56). Only pronouns existed as an independent stem type. Moreover, adjectives probably did not exist as a separate grammatical category (cf. Abondolo 1998a:18).

Bakró-Nagy (1992:8 and 14) reconstructs the general structure of Proto-Uralic root morphemes as follows:

$$\#C(V) \left\{ \left\{ \begin{array}{c} CCC \\ CC \\ C \end{array} \right\} V \right\} (+CV)\#$$

Aikio (2022:10), categorizes Proto-Uralic morphemes into three types, according to their phonological structure: (1) content word stems, (2) function word stems, and (3) suffixes. Content words were always polysyllabic: $*(C)V(C)CV-$, while most function words were monosyllabic: $*(C)V-$. Furthermore, Aikio (2022:10) notes that several marginal content word stem shapes can be reconstructed. Specifically, he mentions $*(C)V(C)CVw-$ and $*(C)V(C)CVC(i)-$.

8.6. THE POSITION OF YUKAGHIR

Work on Yukaghir is still in its infancy, though the publication in 2006 of *A Historical Dictionary of Yukaghir* by Irina Nikolaeva has done much to advance the field. Indeed, I have relied heavily on this dictionary for the Yukaghir forms I have cited throughout this book, though I find the reconstructions problematic and have only included them when I felt that they helped clarify how particular Yukaghir forms fit with the material cited from other Nostratic daughter languages. The paper “The Uralic-Yukaghir Lexical Correspondences: Genetic Inheritance, Language Contact or Chance Resemblance?” (published in *Finnisch-Ugrische Forschungen* 62 [2014]) by Ante Aikio is also important. In this paper, Aikio evaluates previous attempts by various scholars to establish a genetic relationship between Uralic and Yukaghir. Aikio does not discount the possibility that such a relationship may

ultimately be established at some future date, but he claims that it cannot be supported on the basis of the evidence presented to date. Finally, Macario (2012:25) ends his study of the genetic affiliation of Yukaghir by noting:

Opinions on the genetic affiliation of Yukaghir diverge massively. Classification attempts range from language isolate theories to very long-range hypothesis such as Ural-Altaic-Yukaghir, Eskimo-Aleut-Yukaghir, and Nostratic etc. It is self-evident that it is hard to find a congruency within these theories. There is a fair amount of linguistic data and an even bigger amount of analysis and comparative research based on sometimes old data available. The most accepted and plausible classification attempt seems to be that there is a lot in common between Yukaghir and Samoyed (a branch of Uralic). But the linguistic data only will not suffice to determine anything. There had been language contact in this area; hence at least aspects of people's migration and cultural exchange should be taken into account as well. We do not know enough about the *Urheimat* of these peoples. Additionally, long-rangers seem to have shown major correspondences between Uralic and Altaic in particular. It is harder to prove such theories than to disprove them showing counter-evidence, so I believe.

On the basis of Nikolaeva's past work one could do more extensive etymological and morphosyntactic research. Over 170 Proto-Yukaghir affixes could be compared to Proto-Uralic (i.e. on the basis of Marcantonio 2002 and others). The major disagreement between Jochelson and Collinder on the vowel harmony could be restudied. One could also start to analyse available folklore or other cultural data such as Jochelson's descriptions on the tribes dating back to the early 20th century or the very few audio recordings available. The Nenets people seem to have some similar ways of living.

Due to the nature of the problem — a dying language, an immense amount of analysis being done and the tininess of researchers interested in this particular question (which is one among really a lot of questions) — it might be — unfortunately — impossible to determine the precise kinship of Kolyma and Tundra Yukaghir in the future.

Clearly, there is more work to be done here.

...

The tables of correspondences on the following pages are based primarily upon Collinder 1965:75—103. For comprehensive discussions of the developments in the individual Uralic daughter languages, see Abondolo (ed.) 1998; Aikio 2022:4—10; Bakró-Nagy—Laakso—Skribnik (eds.) 2022; Collinder 1960:45—193; Cavoto 1998; Sammallahti 1988:478—554; and (for Samoyed) Hajdú 1968:57—64. Due to the uncertainties surrounding the reconstruction of vowels in Proto-Uralic, only consonants are presented in the following tables (see Zhivlov 2010, 2014, and 2023 for information on the reconstruction of the vowels).

8.7. CORRESPONDENCES

In the following tables, the conventions established by Collinder (1965:75) are observed: Regional (dialectal) variants are noted in parentheses (), infrequent variants are noted in square brackets [], and regular alternations are indicated by ~.

A. INITIAL CONSONANTS — BEFORE BACK VOWELS:

Proto-Uralic	*p-	*t-	*č-	*ty-	*k-	*šy-	*s-	*sy-
Finnish	p	t	h	s (ć č c)	k	t	s	s
Lapp / Saami	p (b)	t (d)	c	ć [š]	k (g)	t (d)	s	ć
Mordvin	p	t	č (š)	ś ć	k	l'	s	ś
Cheremis / Mari	p	t	č (c ć)	ć (c)	k	l'	š (s)	š [s š]
Votyak / Udmurt	p [b]	t [d]	č š ž	ć ž	k [g]	l'	s	ś
Zyrian / Komi	p [b]	t [d]	č ž (ć)	ć ž	k [g]	l'	s	ś
Vogul / Mansi	p	t	š (s)	ś (ć) s (š)	q (h k)	l'	t	s
Ostyak / Xanty	p	t	č (š s)	t' (ś) s	k (h)	j	ɸ (j Ø)	s
Hungarian	f [b]	t [d]	š	ć š s	h		Ø	s
Yurak / Nenets	p	t	t	ś	h (k)	j	t	s (h)
Tavgi / Nganasan	f	t	t	s	k	j	t	s
Yenisei / Enets	f (p)	t	t		k	j	t	s
Selkup Samoyed	p	t	t (č c)	š (s h)	q [k]	t' (ć)	t	s (h)
Kamassian	p b h	t	t		k	l n	t	s

Proto-Uralic	*y-	*w-	*l-	*ly-	*r-	*ny-	*n	*m-
Finnish	j	v	l	l	r	n	n	m
Lapp / Saami	j	v	l	l	r	ń	n	m
Mordvin	j	v	l	l	r	n	n	m
Cheremis / Mari	j (d')	β	l	l r	r [l]	n	n	m
Votyak / Udmurt	j (d')	v	l	l'	ž (ž) ž (ž)	ń	n	m
Zyrian / Komi	j	v	l [v]	l'	r	ń	n	m
Vogul / Mansi	j l'	β	l	l'	r	ń	n	m
Ostyak / Xanty	j	u	l ɸ t	l' (ɸ t') j	r	ń	n	m
Hungarian	j d'	v	l	l?	r	ń	n	m
Yurak / Nenets	j (d')	β	l (ɸ r)	j	l (ɸ? r)	ń	n	m
Tavgi / Nganasan	j	b	l	l j?	l	ń	n	m
Yenisei / Enets	j	b	l	j	l	ń	n	m
Selkup Samoyed	t' k (ć)	kɸ (k)	l	t' ć	l	ń	n	m
Kamassian	t' d'	b β	l	t' ć	l	n ń	n	m [b]

B. INITIAL CONSONANTS — BEFORE FRONT VOWELS:

Proto-Uralic	*p-	*t-	*č-	*ty-	*k-	*šy-	*s-	*sy-
Finnish	p	ti ~ si	h	s (ć č c)	k	t	s	s
Lapp / Saami	p (b)	t (d)	c	ć [š]	k (g)	t (d)	s	ć
Mordvin	p'	t'	č (š)	ś ć	k'	l'	s (ś)	ś
Cheremis / Mari	p	t	č (c ć)	ć (c)	k	l'	š (ś)	š [s ś]
Votyak / Udmurt	p [b]	t [d]	č š ž	ć ž	k [g]	l'	s	ś
Zyrian / Komi	p [b]	t [d]	č ž (ć)	ć ž	k [g]	l'	s	ś
Vogul / Mansi	p	t	š (s)	ś (ć) s (š)	k	l'	t	s
Ostyak / Xanty	p	t	č (š s)	t' (ś) s	k	j	þ (j Ø)	s
Hungarian	f [b]	t [d]	š	ć š s	k (g)		Ø	s
Yurak / Nenets	p'	t' [ć]	t' [ć]	ś	ś	j	t'	s (h)
Tavgi / Nganasan	f	t	t	s	s	j	t	s
Yenisei / Enets	f (p)	t	t		s	j	t	s
Selkup Samoyed	p	t	t (č c)	š (s h)	š (s)	t' (ć)	t	s (h)
Kamassian	p b h	š t	t		š	l n	t	s

Proto-Uralic	*y-	*w-	*l-	*ly-	*r-	*ny-	*n-	*m-
Finnish	Ø	Ø v	l	l	r	n	n	m
Lapp / Saami	j	v Ø	l	l	r	ń	n	m
Mordvin	Ø (j)	Ø ~ v	l'	l'	ř	ń	ń	ř
Cheremis / Mari	*ji > i	β ~ Ø	l [l']	l r	r [l]	n [j]	n [ń]	m
Votyak / Udmurt	*ji > i	v	l l'	l'	ž (ž) ž (ž)	ń	n ń	m
Zyrian / Komi	j	v	l'	l'	r	ń	n ń	m
Vogul / Mansi	j Ø	β ~ Ø	l	l'	r	ń	n	m
Ostyak / Xanty	j Ø	u ~ Ø	l þ t	l' (þ' t') j	r	ń	n	m
Hungarian	*ji > i	v ~ Ø	l	l?	r	ń	n [ń]	m
Yurak / Nenets	j (d')	β ~ Ø	l' (þ' ř)	j	l' (þ' ? ř)	ń	n	ř
Tavgi / Nganasan	j	b	l	l j?	l	ń	n ń	m
Yenisei / Enets	j	b	l	j	l	ń	n ń	m
Selkup	Ø?	ku ~ Ø	l	t' ć	l	ń	n	m
Kamassian	t' d'	b β	l	t' ć	l	n ń	n ń	m [b]

Notes:

1. Proto-Uralic *w-: the developments shown in the above table are for *w- before rounded vowels.
2. Proto-Uralic *l- and *n-: the developments shown in the above table are for *l- and *n- before *ä*, *e*, and *i*.

C. MEDIAL CONSONANTS AND CONSONANT CLUSTERS —
BETWEEN BACK VOWELS:

Proto-Uralic	*-p-	*-t-	*-š-	*-tʲ-	*-k-	*-šy-	*-s-	*-sy-
Finnish	p ~ v	t ~ d	h	ts s	Ø v j	t ~ d	s	s
Lapp / Saami	pp ~ p	tt ~ δ	ss ~ s	ćć ~ ć	kk (hk) ~ γ k	δδ ~ δ	ss ~ s	ćć ~ ć
Mordvin	v	d	ž	ć	v	d	z	ž [ś]
Cheremis / Mari	Ø	-t -δ-	ž (z?)	ć (c ʒ)	Ø j	δ Ø	ž (z)	ž š
Votyak / Udmurt	Ø	Ø	ž	ć ž	Ø [k]	l'	z	ś ž
Zyrian / Komi	Ø	Ø	ž	ć ž	Ø [k]	l'	z	ś ž
Vogul / Mansi	p	t	t	ć	γ(h)[Øw]	l'	t	s z
Ostyak / Xanty	p	t (d)	l (p t)	ś (ž t')	γ(h)[Øw]	j	l (p t)	s (z)
Hungarian	v	z	Ø?	s d' š?	v Ø	j d'	s	s
Yurak / Nenets	b	-ʔ (-t) δ	δ d ~ -ʔ	ć ś	h	j	-ʔ (-t) δ	s
Tavgi / Nganasan	f ~ b	t ~ d	t ~ d	s ~ j	k ~ g	j Ø	t ~ d	s
Yenisei / Enets	b	d (r)	d (r)	s	h		d (r)	s
Selkup Samoyed	p (b)	t (d)	t (d)	s	k (g; kk ~ g/k)	d' t' ć ž	t (d)	s
Kamassian	b	d ~ -ʔt	d ~ -ʔt	s?	g	j Ø?	d ~ -ʔt	s

Notes: Medial *-č-: Finnish *t, h*; Lapp / Saami *cc (hc) ~ c, hcc ~ cc (hc)*, *ss ~ s, s's ~ s*; Cheremis / Mari *š, ž*; Votyak / Udmurt and Zyrian / Komi *ć, ž, ś, ž*.
Otherwise = *č-. Cf. Collinder 1965:84.

Proto-Uralic	*-y-	*-w-	*-l-	*-ly-	*-r-	*-ny-	*-n-	*-m-
Finnish	j [Ø]	v [Ø]	l	l	r	n	n	m [v]
Lapp / Saami	d'd' ~ j	vv ~ v	ll ~ l	l	rr ~ r	ńń ~ ń	nn ~ n	mm ~ m
Mordvin	j	v	l	l	r	ń	n	m [v]
Cheremis / Mari	j	Ø	l	l r	r	ń [m]	n	m [Ø]
Votyak / Udmurt	j jd	Ø	l	l'	r	ń	n	m
Zyrian / Komi	j jd	Ø	l [v]	l'	r	ń	n	m
Vogul / Mansi	j	β Ø	l [r]	l'	r	ń	n	m
Ostyak / Xanty	j	u (γ -h)	l p t	l' (p' t') j	r	ń	n	m
Hungarian	j [v]	v ~ Ø	l [r]	l?	r	ń	n	m v Ø
Yurak / Nenets	j	Ø	l (p r)	j	r (p)	j	n	β b (m)
Tavgi / Nganasan	j	Ø	l	l j?	r	j Ø?	n	m
Yenisei / Enets	j	Ø	δ (r)	j	δ r	ń	n	ʔ b w?
Selkup Samoyed	t' ć	Ø	l	t' ć	r	ń	n	m
Kamassian	j	Ø	l	t' ć	r	j	n	m

Proto-Uralic	*-x-	*-δ-	*-ŋ-	*-ŋk-	*-ŋt-	*-nt-	*-mt-	*-mp-
Finnish	k ~ Ø	t ~ d	v Ø [m]	ŋk ~ ŋŋ	t	nt ~ nn	nt ~ mn	mp ~ mm
Lapp / Saami	kk ~ γ	δδ ~ δ	ŋŋ ~ ŋ	ŋk ~ ŋg	ʉt	nt ~ nd	mt	mp ~ mb
Mordvin	v j Ø	d	(v j) Ø	ŋg	nd?	nd	nd	mb
Cheremis / Mari	Ø	Ø	n ŋ [m]	ŋg (γ)	ŋ + δ	nd δ	mδ	mb (m)
Votyak / Udmurt	j Ø	l Ø	ŋ n n m	g	d	d	d	b
Zyrian / Komi	j Ø	l Ø	n n m	g	d	d	d	b
Vogul / Mansi	γ j Ø	l [Ø?]	ŋk (ŋh)	ŋk (ŋh)	βt	nt	nt	mp
Ostyak / Xanty	γ ʉ Ø	l (p t)	ŋk (ŋh)	ŋk (ŋh)	ŋæt ŋt nt	nt	mæt nt	m
Hungarian	v Ø	l	g v j Ø	g		d	d	b
Yurak / Nenets	β Ø	r d	ŋ Ø	ŋk	mt	n	mt	mp (mb)
Tavgi / Nganasan	Ø	r d?	ŋ [n]	ŋk ~ ŋ	mt ~ md?	nt ~ nd	mt ~ md?	ŋf ~ mb
Yenisei / Enets	Ø	r (ð)	ŋ [n]	gg	dd	dd	dd	b
Selkup Samoyed	Ø w	r t	ŋ (γ Ø -k)	ŋk	md	nd	md	mb
Kamassian	Ø	r	ŋ Ø	ŋk ŋg	mn	n	mm	m

D. MEDIAL CONSONANTS AND CONSONANT CLUSTERS —
BETWEEN FRONT VOWELS:

Proto-Uralic	*-p-	*-t-	*-š-	*-ty-	*-k-	*-šy-	*-s-	*-sy-
Finnish	p ~ v	s	h	ts s	Ø v j	t ~ d	s	s
Lapp / Saami	pp ~ p	tt ~ δ	šš ~ š	ćć ~ ć	kk (hk) ~ γ k	δδ ~ δ	šš ~ š	ćć ~ ć
Mordvin	v'	d'	š	ć	j	d'	ž	ž [š]
Cheremis / Mari	j Ø	-t -δ-	š (z?)	ć (c ʒ)	Ø j	δ Ø	ž (ž)	ž š
Votyak / Udmurt	Ø	Ø	ž	ć ž	Ø [k]	l'	z	š ž
Zyrian / Komi	Ø	Ø	ž	ć ž	Ø [k]	l'	z	š ž
Vogul / Mansi	p	t	t	ć	γ(h)[Ø w]	l'	t	s z
Ostyak / Xanty	p	t (d)	l (p t)	ś (ž t')	γ(h)[Ø w]	j	l (p t)	s (z)
Hungarian	v	z	Ø?	s d' š?	v Ø	j d'	s	s
Yurak / Nenets	b'	d' (t' ć)	d'?	ć ś	ś	j	d' (t' ć)	s
Tavgi / Nganasan	f ~ b	t ~ d	t ~ d	s ~ j	s?	j Ø	t ~ d	s
Yenisei / Enets	b	d (r)	d (r)	s	s?		d (r)	s
Selkup Samoyed	p (b)	t (d)	t (d)	s	š (s)?	d't'ć ž	t (d)	s
Kamassian	b	d ~ -ʔt	d ~ -ʔt	s?	š?	j Ø?	d ~ -ʔt	s

Notes: Medial *-č-: Finnish *t*, *h*; Lapp / Saami *cc* (*hc*) ~ *c*, *hcc* ~ *cc* (*hc*), *ss* ~ *s*, *s's* ~ *s*; Cheremis / Mari *š*, *ž*; Votyak / Udmurt and Zyrian / Komi *ć*, *ž*, *š*, *ž*. Otherwise = *-č-. Cf. Collinder 1965:84.

Proto-Uralic	*-y-	*-w-	*-l-	*-[y-]	*-r-	*-nʸ-	*-n-	*-m-
Finnish	j [Ø]	v [Ø]	l	l	r	n	n	m [v]
Lapp / Saami	d'd' ~ j	vv ~ v	ll ~ l	l	rr ~ r	ńń ~ ń	nn ~ n	mm ~ m
Mordvin	j	v'	l'	l	ř	ń	ń	m v'
Cheremis / Mari	j	Ø (j)	l [(l')]	l r	r [l]	ń [m]	ń j	m [Ø]
Votyak / Udmurt	j jd	Ø	l (w)	l'	r	ń	n	m
Zyrian / Komi	j jd	Ø	l [v]	l'	r	ń	n	m
Vogul / Mansi	j	β Ø	l [r]	l'	r	ń	n	m
Ostyak / Xanty	j	ʏ (γ -h)	l ɸ t	l' (ɸ' t') j	r	ń	n	m
Hungarian	j [v]	v ~ Ø	l [r]	l?	r	ń	n ń	m v Ø
Yurak / Nenets	j	Ø	l' (ɸ' ř)	j	ř (ɸ')	j	ń	ɸ' b' (m)
Tavgi / Nganasan	j	Ø	l	l j?	r	j Ø?	n	m
Yenisei / Enets	j	Ø	ð (r)	j	ð r	ń	ń	? b w?
Selkup Samoyed	t' é	Ø	l	t' é	r	ń	n	m
Kamassian	j	Ø	l	t' é	r	j	n	m

Proto-Uralic	*-x-	*-δ-	*-ŋ-	*-ŋk-	*-ŋt-	*-nt-	*-mt-	*-mp-
Finnish	k ~ Ø	t ~ d	v Ø [m]	ŋk ~ ŋŋ	t	nt ~ nn	nt ~ nn	mp ~ mm
Lapp / Saami	kk ~ γ	δδ ~ δ	ŋŋ ~ ŋ	ŋk ~ ŋg	ʏt	nt ~ nd	mt	mp ~ mb
Mordvin	v j Ø	d'	(v' j) Ø	ŋg	nd?	nd	nd	mb
Cheremis / Mari	Ø	Ø	n ŋ [m]	ŋg (γ)	ŋ + δ	nd δ	mδ	mb
Votyak / Udmurt	j Ø	l Ø	ŋ n ń m	g	d	d	d	b
Zyrian / Komi	j Ø	l Ø	n ń m	g	d	d	d	B
Vogul / Mansi	γ j Ø	l [Ø?]	ŋk (ŋh)	ŋk (ŋh)	βt	nt	nt	mp
Ostyak / Xanty	γ ʏ Ø	l (ɸ t)	ŋk (ŋh)	ŋk (ŋh)	ŋæt ŋt nt	nt	mæt nt	m
Hungarian	v Ø	l	g v j Ø	g		d	d	b
Yurak / Nenets	β Ø	d'	j [ń] Ø	ŋk	mt	n	mt	mp (mb)
Tavgi / Nganasan	Ø	r d?	ŋ [n]	ŋk ~ ŋ	mt ~ md?	nt ~ nd	mt ~ md?	ŋf ~ mb
Yenisei / Enets	Ø	r (ð)	ŋ [n]	gg	dd	dd	dd	b
Selkup Samoyed	Ø w	r t	ŋ (γ Ø -k)	ŋk	md	nd	md	mb
Kamassian	Ø	r	j Ø [n]	ŋk ŋg	mn	n	mm	m

For comparison, the sound correspondences proposed by Aikio (2022:6, Table 1.3) are given on the following page (for details, cf. especially Zhivlov 2023:123—152).

Word-initial Consonants

PU	Saami	Finnic	Mordvin	Mari	Permic	Hung.	Mansi	Khanty	Samoyed
* <i>p</i>	* <i>p</i>	* <i>p</i>	* <i>p</i>	* <i>p</i>	* <i>p</i>	<i>f</i>	* <i>p</i>	* <i>p</i>	* <i>p</i>
* <i>t</i>	* <i>t</i>	* <i>t</i>	* <i>t</i> , * <i>t'</i>	* <i>t</i>	* <i>t</i>	<i>t</i>	* <i>t</i>	* <i>t</i>	* <i>t</i>
* <i>k</i>	* <i>k</i>	* <i>k</i>	* <i>k</i>	* <i>k</i>	* <i>k</i>	<i>k</i> , <i>h</i>	* <i>k</i>	* <i>k</i>	* <i>k</i>
* <i>č</i>	* <i>c</i>	* <i>t</i>	* <i>č</i>	* <i>č</i>	* <i>č</i>	?	* <i>š</i>	* <i>č</i>	* <i>č</i>
* <i>s</i>	* <i>s</i>	* <i>s</i>	* <i>s</i>	* <i>s</i>	* <i>s</i>	Ø	* <i>t</i>	* <i>L</i>	* <i>t</i>
* <i>sʲ</i>	* <i>ć</i>	* <i>s</i>	* <i>ś</i>	* <i>š</i>	* <i>ś</i>	<i>s</i> < <i>sz</i> >	* <i>s</i> , * <i>š</i>	* <i>s</i>	* <i>s</i>
* <i>š</i>	* <i>s</i>	* <i>h</i>	* <i>č</i>	* <i>š</i>	* <i>š</i>	Ø	* <i>t</i>	* <i>L</i>	?
* <i>m</i>	* <i>m</i>	* <i>m</i>	* <i>m</i>	* <i>m</i>	* <i>m</i>	<i>m</i>	* <i>m</i>	* <i>m</i>	* <i>m</i>
* <i>n</i>	* <i>n</i>	* <i>n</i>	* <i>n</i> , * <i>ń</i>	* <i>n</i>	* <i>n</i>	<i>n</i>	* <i>n</i>	* <i>n</i>	* <i>n</i>
* <i>nʲ</i>	* <i>ń</i>	* <i>n</i>	* <i>n</i> , * <i>ń</i>	* <i>n</i>	* <i>ń</i>	<i>nʲ</i> < <i>ny</i> >	* <i>ń</i>	* <i>ń</i>	* <i>ń</i>
* <i>dʲ</i>	* <i>ǵ</i>	* <i>t</i>	* <i>l</i> , * <i>l'</i>	* <i>l</i>	* <i>l'</i>	?	* <i>l'</i>	* <i>j</i>	* <i>j</i>
* <i>l</i>	* <i>l</i>	* <i>l</i>	* <i>l</i> , * <i>l'</i>	* <i>l</i>	* <i>l</i>	<i>l</i>	* <i>l</i>	* <i>l</i>	* <i>j</i> , * <i>l</i>
* <i>w</i>	* <i>v</i> , Ø	* <i>v</i> , Ø	* <i>v</i> , Ø	* <i>w</i> , Ø	* <i>v</i>	<i>v</i>	* <i>w</i>	* <i>w</i>	* <i>w</i>
* <i>j</i>	* <i>j</i> , Ø	* <i>j</i> , Ø	* <i>j</i> , Ø	* <i>j</i> , Ø	* <i>j</i>	<i>j</i> , Ø	* <i>j</i>	* <i>j</i>	* <i>j</i>

Intervocalic Consonants

*- <i>p</i> -	* <i>p</i>	* <i>p</i>	* <i>v</i>	* <i>w</i> , Ø	Ø	?	* <i>p</i>	* <i>p</i>	* <i>p</i>
*- <i>t</i> -	* <i>t</i>	* <i>t</i>	* <i>d</i> , * <i>d'</i>	* <i>d</i>	Ø	<i>z</i>	* <i>t</i>	* <i>t</i>	* <i>t</i>
*- <i>k</i> -	* <i>k</i>	* <i>k</i>	* <i>v</i> , * <i>j</i>	Ø	Ø	<i>v</i> , Ø	* <i>ɣ</i> , * <i>w</i>	* <i>ɣ</i>	* <i>k</i> , Ø
*- <i>č</i> -	* <i>c</i>	* <i>t</i>	* <i>č</i>	* <i>č</i>	* <i>š</i> , * <i>ž</i>	?	* <i>š</i>	* <i>č</i>	* <i>č</i>
*- <i>s</i> -	* <i>s</i>	* <i>s</i>	* <i>z</i>	* <i>z</i>	* <i>z</i>	<i>s</i> < <i>sz</i> >?	* <i>t</i>	* <i>l</i>	* <i>t</i>
*- <i>sʲ</i> -	* <i>ć</i>	* <i>s</i>	* <i>ž</i>	* <i>ž</i>	* <i>ž</i>	<i>s</i> < <i>sz</i> >	* <i>s</i> , * <i>š</i>	* <i>s</i>	* <i>s</i>
*- <i>š</i> -	* <i>s</i>	* <i>h</i>	* <i>ž</i>	* <i>ž</i>	* <i>ž</i>	?	* <i>t</i> ?	* <i>l</i> ?	?
*- <i>m</i> -	* <i>m</i>	* <i>m</i>	* <i>m</i>	* <i>m</i>	* <i>m</i>	<i>m</i> , <i>v</i>	* <i>m</i>	* <i>m</i>	* <i>m</i>
*- <i>n</i> -	* <i>n</i>	* <i>n</i>	* <i>n</i> , * <i>ń</i>	* <i>n</i> , Ø	* <i>n</i>	<i>n</i>	* <i>n</i>	* <i>n</i>	* <i>n</i>
*- <i>nʲ</i> -	* <i>ń</i>	* <i>n</i>	* <i>ń</i>	* <i>ń</i> ?	* <i>ń</i>	<i>nʲ</i> < <i>ny</i> >	* <i>ń</i>	* <i>ń</i>	* <i>ń</i>
*- <i>ŋ</i> -	* <i>ŋ</i>	* <i>v</i> , Ø	* <i>ŋ</i>	* <i>ŋ</i> , Ø	* <i>ŋ</i> , Ø	<i>g</i> , Ø	* <i>w</i> , * <i>ŋk</i>	* <i>ŋ</i> , * <i>ŋk</i>	* <i>ŋ</i>
*- <i>d</i> -	* <i>δ</i>	* <i>t</i>	* <i>d</i> , * <i>d'</i>	* <i>d</i> , Ø	Ø	<i>l</i>	* <i>l</i>	* <i>l</i>	* <i>r</i>
*- <i>dʲ</i> -	* <i>δ</i>	* <i>t</i>	* <i>d</i> , * <i>d'</i>	* <i>d</i> , Ø	* <i>l'</i>	<i>j</i> < <i>gy</i> >	* <i>l'</i>	* <i>j</i>	* <i>j</i>
*- <i>l</i> -	* <i>l</i>	* <i>l</i>	* <i>l</i> , * <i>l'</i>	* <i>l</i>	* <i>l</i>	<i>l</i>	* <i>l</i>	* <i>l</i>	* <i>l</i> , * <i>j</i> , Ø
*- <i>r</i> -	* <i>r</i>	* <i>r</i>	* <i>r</i> , * <i>r'</i>	* <i>r</i>	* <i>r</i>	<i>r</i>	* <i>r</i>	* <i>r</i>	* <i>r</i>
*- <i>w</i> -	* <i>v</i>	* <i>v</i> , Ø	* <i>v</i>	Ø	Ø	<i>v</i> , Ø	* <i>w</i>	* <i>w</i> , * <i>ɣ</i>	Ø
*- <i>j</i> -	* <i>j</i>	* <i>j</i> , * <i>i</i>	* <i>j</i>	* <i>j</i> , Ø	* <i>j</i>	<i>j</i> , Ø	* <i>j</i>	* <i>j</i>	* <i>j</i> , Ø
*- <i>x</i> -	* <i>k</i>	Ø	* <i>j</i>	Ø	Ø	<i>v</i> , Ø	* <i>ɣ</i> , * <i>w</i> , * <i>j</i>	* <i>ɣ</i> , * <i>w</i> , * <i>j</i>	Ø

APPENDIX:
PROTO-YUKAGHIR PHONOLOGY

According to Nikolaeva (2006:65—66), the Proto-Yukaghir consonant system is to be reconstructed as follows (Nikolaeva's transcription has been retained) (see also Zhivlov 2022:44, Table 1):

	Labial	Dental	Palatal	Velar and Uvular
Stops	p	t		k/q
Affricates		č	č'	
Sibilants		s	(ś)	
Fricatives		δ	(δ')	γ
Nasals	m	n	ń	ŋ
Laterals		l	l'	
Trills		r		
Approximants	w		j	

Nikolaeva (2006:66) notes that there were no voiced obstruents in Proto-Yukaghir. They developed in the modern languages either from fricatives or from consonant clusters. They are also found in borrowings.

Nikolaeva (2006:57) reconstructs the following vowels for Proto-Yukaghir:

Front vowels	i	e	ö	(ü)
Back vowels	y	a	o	u

Notes:

1. The front vowels exhibited vowel harmony.
2. Nikolaeva (2006:65—66) also posits long vowels for Proto-Yukaghir.

Zhivlov (2022:47, Table 3) proposes a slightly different reconstruction of the Proto-Yukaghir consonant inventory (Zhivlov's transcription has been retained):

	Labial	Dental	Palatal	Velar
Voiceless Stops	p	t		k
Voiced Stops	b	d		g
Voiceless Affricates		c	č	
Voiced Affricates		ʒ	ž	
Nasals	m	n	ń	ŋ
Laterals		l	l'	
Trills		r		
Approximants	w		j	

For Pre-Proto-Yukaghir, on the other hand, Zhivlov (2022:57, Table 7) reconstructs the following consonants (Zhivlov's transcription has been retained):

	Labial	Dental	Palatal	Velar
Stops	p	t		k
Affricates		c	č	
Nasals	m	n	ń	ŋ
Laterals		l	l'	
Trills		r		
Approximants	w		j	

Zhivlov notes:

This is by no means a definitive picture. Further work on internal reconstruction, as well as careful philological study of Old Yukaghir data, may result in additional modifications to the reconstruction of pre-Proto-Yukaghir.

According to Nikolaeva (2006:74—78), Proto-Yukaghir had two types of non-derived monosyllabic nominal stems, both of which contained a long vowel: (1) $*(C)V:C$ and (2) $*(C)V:$, while $*(C)V(C)$ was forbidden.

Three types of bisyllabic stems are to be reconstructed for Proto-Yukaghir: (1) $*(C)V:Cə$, (2) $*(C)VCV$, and (3) $*(C)VCCə$. Other types of bisyllabic stems could be formed by adding an additional consonant or consonantal cluster, thus: (1) $*(C)V:Cə+C(C)-$, (2) $*(C)VCV+C(C)-$, and (3) $*(C)VCCə+C(C)-$.

Finally, trisyllabic stems could be formed by adding $*-Cə$, $*-CV:$, or $*-Ci/uC$ to bisyllabic stems.

Nikolaeva (2006:71—74) reconstructs a series of potential medial consonant clusters for Proto-Yukaghir of the type “resonant + voiceless obstruent”. She notes that not all of them were “present in practice”. They are (Nikolaeva's transcription has been retained):

*mt	*nt	*ńt	*ŋt	*lt	*l't
*mp	*np	*ńp	*ŋp	*lp	*l'p
*mk/q	*nk/q	*ńk/q	*ŋk/q	*lk/q	*l'k/q
*mč	*nč	*ńč	*ŋč	*lč	*l'č
*mč'	*nč'	*ńč'	*ŋč'	*lč'	*l'č'

CHAPTER NINE

A SKETCH OF PROTO-DRAVIDIAN PHONOLOGY

9.1. INTRODUCTION

Even though the Dravidian languages are most likely related to Elamite (cf. McAlpin 1974a, 1974b, and 1981; Ruhlen 1987:140 and 330), which together form a larger grouping called Elamo-Dravidian, this chapter will concentrate primarily on Dravidian. Elamite phonology is discussed briefly in §9.6 below.

Several scholars have attempted to relate Dravidian with other language families. Edwin Norris (in 1853), Georg Hüsing (in 1910), Alfredo Trombetti (in 1913), Ferdinand Bork (in 1925), and Igor M. Diakonoff (in 1967), respectively, made early attempts to show that Dravidian might be related to Elamite. The most serious, and the most convincing, attempt along these lines has been the work of David McAlpin (in 1974 and 1981). On the other hand, Rasmus Rask, Robert Caldwell, Otto Schrader, Thomas Burrow, Stephen Tyler, and Elli Johanna Pudas Marlow explored the possibility of a relationship between Dravidian and Uralic. Attempts to relate Dravidian to Nilo-Saharan and to Japanese have not proved fruitful.

Dravidian phonology has been studied in detail by Andronov (2003), Zvelebil (1970), Krishnamurti (2003), and Subrahmanyam (1983), among others, and is fairly well understood. Tamil is the most conservative modern Dravidian language.

9.2. CONSONANTS

Word initially, there were only voiceless stops in Proto-Dravidian. This is still the situation found in Tamil. On the basis of the reflexes found in South Dravidian languages and Telugu, a series of alveolars distinct from dentals and retroflexes has been reconstructed for Proto-Dravidian. A notable feature of Proto-Dravidian consonantism is the absence of sibilants. Medially, Proto-Dravidian had a contrast between geminated (including clusters of nasal plus consonant) and non-geminated consonants. Initially and medially in combination with other stops, **p*, **t*, **k*, and **c* were voiceless; between vowels and before nasals, they were voiced. The geminates were voiceless.

The reconstruction shown below is close to that set up by Zvelebil (1970:77) and Krishnamurti (2003:91 and 120) for Proto-Dravidian; however, I have followed Burrow—Emeneau (1984:xii—xiii), Steever (1998a:14), and McAlpin (1981:24) in the representation of the alveolar as **ɭ* instead of **ɻ*. The reason for my decision to represent the Proto-Dravidian phoneme as **ɭ* instead of **ɻ* is based upon the observation that this phoneme corresponds to /r/ in the closely-related Elamite

(though there is some room for interpretation here) as well as in the other Nostratic languages.

Proto-Dravidian had the following consonants (cf. Krishnamurti 2003:91 and 120; Andronov 2003:300; McAlpin 1974a:93 and 1981:25; Steever 1998a:13—18 and 2020:12—17; Subrahmanyam 1983:40; Zvelebil 1970:77 and 1990:1—13):

p-	t-			c-	k-
-p-	-t-	-ṛ-	-ṭ-	-c-	-k-
-pp-	-tt-	-ṛṛ-	-ṭṭ-	-cc-	-kk-
-mp-	-nt-	-ṇṛ-	-ṇṭ-	-ñc-	-ṇk-
-p(u)	-t(u)	-ṛ(u)	-ṭ(u)	-c(u)	-k(u)
m	n	ṇ	ñ		
-mm-	-nn-	-ṇṇ-	-ññ-		
v-	-r	-l	-ṛ	y	
-v-	-r-	-l-	-ṛ-	-y-	
			-ḷ		
			-ḷ-		
-vv-	-ll-	-ḷḷ-	-yy-		
(-v)					

Several scholars (Krishnamurti, Meile, Burrow) have also reconstructed Proto-Dravidian **H* (cf. Zvelebil 1990:11—12; Krishnamurti 2003:154—157).

Among the most important consonantal developments are the loss of **c-*, a typical South Dravidian development that seems to be still in progress; the change of **c-* to *k-* before *u* in North Dravidian; the palatalization of **k-* to *c-* before front vowels in Tamil, Malayalam, and Telugu; and the replacement of **k-* by *x* before *a*, *o*, and *u* in North Dravidian. The voiced retroflex continuant **ṛ* (Krishnamurti writes **ṛ*) has been preserved only in the old stages of the cultivated languages and partly in modern Tamil and Malayalam — elsewhere, it merged with *l*, *ḍ*, and other sounds. Some languages, notably Kannada, have developed a secondary *h-*, not inherited from Proto-Dravidian. Cf. Zvelebil 1970:76—167 for details.

As shown by Kumaraswami Raja, clusters involving a homorganic nasal plus stop, **NC*, and a homorganic nasal plus geminate, **NCC*, are to be reconstructed for Proto-Dravidian. None of the daughter languages maintains **NCC* as such. In Tamil, for example, **NC* is preserved, while **NCC* has become **CC*, resulting in numerous *NC* ~ *CC* alternations.

There is sometimes a phonological alternation in the Dravidian daughter languages between medial *-c-* and *-y-*. Comparison with other Nostratic languages indicates that we are dealing with original **-dʷ-*, **-tʷh-*, **-tʷ-*, or **-sʷ-* in such cases. This can be illustrated by the following examples involving **-sʷ-*:

1. Proto-Nostratic root **pʰasʷ-* (~ **pʰasʷ-*):
 (vb.) **pʰasʷ-* ‘to split, to cleave, to break, to shatter’;
 (n.) **pʰasʷ-a* ‘split, break; part, share, portion’

- A. Proto-Dravidian **pā(y)-*/**pac-* ‘to divide, to separate, to distribute’: Tamil *payal* ‘half, share’; Kannaḍa *pañcu, pasu* (*pacc-*) ‘to divide, to separate, to part, to distribute, to share; to be divided, etc.’, *pacci, paccu* ‘part, portion’, *pasuge* ‘dividing, separation, division’; Tuḷu *pasalu* ‘the share of the fisherman’; Telugu *pancu* ‘to distribute, to divide’; Kolami *pay-*, *paiy-* ‘to divide’; Naikṛi *payk-* ‘to distribute’; Parji *payp-* (*payt-*) ‘to share’; Gadba (Salur) *pay-* ‘to divide into shares’, *payp-* (*payup-*) ‘to distribute’; Pengo *paspā* ‘to divide, to distribute’; Kui *pahpa* (*paht-*) ‘to share, to apportion’, *pahari* ‘part, share, portion’. Tuḷu *pāpaṭē* ‘parting of the hair on a female’s forehead’; Telugu *pāyu* ‘to separate (intr.), to leave, to quit, to be disentangled’, *pācu* ‘to remove’, *pāpu* ‘to separate (tr.), to divide, to part, to remove, to efface’, *pāya* ‘branch, division, clove or division of garlic’, *pāpaṭa* ‘the parting of the hair’; Kolami *pa-p-* (*pa-pt-*) ‘to comb’; Naikṛi *pāp-* ‘to comb’; Gondi *pāyā* ‘parting of the hair’; Konḍa *pāy-* ‘to leave, to be gone’. Burrow—Emeneau 1984:363, no. 4089.
- B. Afrasian: Proto-Semitic **pas^y-ax-* ‘to tear, to render asunder, to sever’ > Hebrew *pāśaḥ* [פָּשַׁח] ‘to tear to pieces’; Syriac *pāśaḥ* ‘to tear, to rend asunder, to cut off’; Arabic *fasaḥa* ‘to dislocate, to disjoint, to sever, to sunder, to tear’. Klein 1987:534. Proto-Semitic **pas^y-at-* ‘to tear off, to strip off’ > Hebrew *pāśaṭ* [פָּשַׁט] ‘to strip off’; Syriac *pāśaṭ* ‘to stretch out, to extend, to reach out’; Akkadian *paśāṭu* ‘to expunge, to obliterate’. Klein 1987:534.
- C. Proto-Kartvelian **pešk-* (‘to burst, to break’ >) ‘to explode (noisily)’: Georgian *piš-* in (reduplicated) *piš-piš-i* ‘popping noise made when broth or porridge is brought to a boil’; Mingrelian *pašk-*, *pešk-* ‘to explode (noisily)’; Svan *pišg-/pšg-* ‘to explode (noisily)’. Klimov 1964:188—189 **peš-* and 1998:201 **peš-* : **pš-* ‘to dehisce (noisily, with a crack)’; Fähnrich—Sardshweladse 1995:356—357 **peš-/piš-*; Fähnrich 2007:435 **peš-/piš-*. For the semantics, cf. Gurage *fārātā* ‘to burst, to burst and make the sound of bursting, to explode’ from the same root found in Hebrew *pāraš* ‘to break through, to break, to burst’, Arabic *faraša* ‘to cut, to split, to tear, to injure’, Akkadian *parāšu* ‘to break through’, etc.
- D. Proto-Uralic **pas^y3-* ‘to break, to shatter; to tear, to split’: Votyak / Udmurt *paś* ‘hole, opening’; Zyrian / Komi *paś* in *paś mun-* ‘to shatter into fragments, to fall and scatter, to fall and shatter’, *paś vart-* ‘to beat into small bits, to crush to pieces’; Selkup Samoyed *paase*, *pas* ‘fissure, tear, break’; Kamassian *buzoj* ‘a crack, crack in the floor, tear’, *puzoj* ‘cleft, tear’. Collinder 1955:47 and 1977:65; Rédei 1986—1988:357—358 **paś3*; Décsy 1990:105 **paśja* ‘hole, opening’.

Sumerian *peš₅* ‘to break, to smash, to shatter’.

2. Proto-Nostratic root **mus^y-* (~ **mos^y-*):
 (vb.) **mus^y-* ‘to immerse, dip, or plunge in water, to bathe’;
 (n.) **mus^y-a* ‘immersion, dip, plunge, bath’

Extended form (Indo-European and Uralic):

(vb.) **mus^y-V-k'*- 'to immerse, dip, or plunge in water, to bathe';

(n.) **mus^y-k'-a* 'immersion, dip, plunge, bath'

- A. Proto-Dravidian **muy-/muc-* > **mī(y)-/muc-* 'to wash, to bathe': Toda *mī-y-* 'to bathe'; Kannaḍa *mī, mīyu* 'to take a bath, to bathe; to cause to bathe, to wash, to pour over (the body)'; Tuḷu *mīpini* 'to take a bath, to wash oneself'; Parji *mī-* 'to bathe'; Gadba (Ollari) (*nīr*) *muy-*, (Salur) *mī-*, *mīy-* 'to bathe'; Maṇḍa *mī-* 'to bathe'; Gondī *mīy-*, *mī-* 'to wash someone else's body, especially infants', *micnā* 'to bathe another'; Kui *mīva* 'to lave, to bathe or anoint oneself, to be anointed or spattered', *musa* (*musi-*) 'to wash the head'; Kuṛux *mūjnā* 'to wash the face of'; Malto *múnje* 'to wash another's face', *múnjre* 'to wash one's face'. Burrow—Emeneau 1984:435, no. 4878.
- B. Proto-Indo-European **mosk'-* (secondary *e*-grade form: **mesk'-*) 'to immerse in water, to dip or plunge in water': Sanskrit *májjati* 'to sink, to dive, to plunge, to perish'; Latin *mergō* 'to dip, to plunge in liquid, to immerse'; Lithuanian *mazgóti* 'to wash, to wash up, to scrub'; Latvian *mazgāt* 'to wash'. Rix 1998a:398 **mesg-* 'to dip, to plunge into liquid, to immerse, to sink'; Pokorny 1959:745—746 **mezg-* 'to dip, to plunge'; Walde 1927—1932.II:300—301 **mezg-*; Mann 1984—1987:761 **mesgō* (**mezg-*) 'to immerse, to soak, to steep; to plunge', 800 **mosgos* (**mosg-*) 'steeping, infusion, mash'; Mallory—Adams 1997:160 **mesg-* 'to dip under water, to dive'; Watkins 1985:42 **mezg-* and 2000:56 **mezg-* 'to dip, to plunge'; Mayrhofer 1956—1980.II:549; Walde—Hofmann 1965—1972.II:76—77 Latin *mergō* < **mezgō*; Ernout—Meillet 1979:399 **mezg-*.
- C. Proto-Uralic **mus^yke-* (**mos^yke-*) 'to wash': Estonian *mõske-* 'to wash'; Mordvin *muške-* 'to wash'; Cheremis / Mari *muška-* 'to wash'; Yurak Samoyed / Nenets *maasa-* 'to wash'; Yenisei Samoyed / Enets *masua-* 'to wash'; Selkup Samoyed *musa-* 'to wash'. Collinder 1955:35, 1965:31, and 1977:54; Joki 1973:286—287; Rédei 1986—1988:289 **muške-* (**moške-*); Décsy 1990:103 **mosjka* 'to wash'; Sammallahti 1988:538 **moški-* 'to wash'.

9.3. VOWELS

Proto-Dravidian had five short vowels and five long vowels plus the sequences **ay* and **av* (< **aw*) (cf. McAlpin 1981:23—24; Subrahmanyam 1983:36; Zvelebil 1970:35 and 1990:6; Krishnamurti 2003:91; Burrow—Emeneau 1984:xii—xiii; Steever 1998a:13—14; Andronov 2003:26—27):

e	o	a	i	u
ē	ō	ā	ī	ū

A notable characteristic of South Dravidian is the neutralization of **i* and **e* to **e* and of **u* and **o* to **o* before a derivative **a* in Proto-South Dravidian. This patterning is preserved in Telugu and Kannaḍa, while **e* and **o* were later assimilated back into **i* and **u* respectively in Tamil and Malayalam. The full range of developments in the individual South Dravidian languages is rather complicated (cf. Zvelebil 1970:35—75 and Krishnamurti 2003:98—119 for details).

9.4. ACCENTUATION

Primary stress always falls on the first, that is, the root syllable and is not phonemically distinctive in Dravidian. On the other hand, intonation plays an important role. For details, cf. Zvelebil 1970:40—41, Steever 1998a:18, and Krishnamurti 2003:59—60.

9.5. ROOT STRUCTURE PATTERNING

Morphologically, the Dravidian languages are agglutinating (cf. Zvelebil 1977:3; Steever 1998a:18). Derivational morphology is exclusively suffixal (cf. Steever 1998a:18; Zvelebil 1990:16—17). The basic root type was monosyllabic, though there is some indication that an extremely small number of bisyllabic roots may have to be reconstructed at the Proto-Dravidian level as well. This is, however, by no means certain (Krishnamurti 2003:179 denies it emphatically), and it is best at present to regard Proto-Dravidian roots as exclusively monosyllabic. Inflectional categorization was achieved by means of suffixes added directly to the lexical roots or to the lexical roots extended by means of derivational suffixes. Any vowel, long or short, could appear in a root, but only **a*, **i*, and **u* could appear in a suffix.

The following root types may be assumed to have existed in Proto-Dravidian (cf. Subrahmanyam 1983:13—35; Zvelebil 1990:11—15; Krishnamurti 2003:90—93; Andronov 2003:101—102):

- A. **V-* and **CV-*
- B. **Ṽ-* and **CṼ-*
- C. **VC-* and **CVC-*
- D. **ṼC-* and **CṼC-*
- E. **VCC-* and **CVCC-*
- F. **ṼCC-* and **CṼCC-*

**V-* and **CV-* almost always occurred with a derivational suffix; **Ṽ-* and **CṼ-* could occur both with and without a derivational suffix; **VCC-* and **CVCC-* could occur both with and without a derivational suffix in bisyllabic nominal stems, while in verbal stems, they always occurred without a suffix — they alternated with **VC-* and **CVC-* before a derivational suffix in verbal stems and trisyllabic nominal stems; **ṼCC-* and **CṼCC-* could occur both with and without a derivational suffix

in bisyllabic nominal stems, but in verbal stems, they always occurred without a suffix.

Roots ending in a vowel were followed by derivational suffixes beginning with a consonant, while roots ending in a consonant could be followed by derivational suffixes beginning with either a consonant or a vowel, though those beginning with a vowel were by far the most common type. Derivational suffixes beginning with a vowel could consist of (A) the simple vowel itself (*-*V*-), (B) the vowel plus a single consonant (*-*VC*-), (C) the vowel plus a geminate stop (*-*VCC*-), (D) the vowel plus the sequence of nasal and its corresponding homorganic stop (*-*VNC*-), or (E) the vowel plus the sequence of a nasal and its corresponding homorganic geminate stop (*-*VNCC*-). In primary nominal stems, the derivational suffix *-*VCC*- could be further extended by adding another suffix of the type *-*VC*-. The derivational suffixes probably originally modified the meaning in some way, though, as noted by Caldwell (1913:209), it is no longer possible, in most cases, to discern their original meaning.

There were three fundamental form-classes in Proto-Dravidian (cf. Zvelebil 1977:6): (A) nominal, adjectival, and pronominal stems, (B) verbal stems, and (C) indeclinables.

9.6. ELAMITE PHONOLOGY

The Elamite phonological system was fairly simple (cf. Grilhot-Susini 1987:10—11; Khačikjan 1998:6—9; Paper 1955:36; Reiner 1969:71—75; Stolper 2004:70—73; Tavernier 2020:169—170):

Consonants:

p	t	k		
b	d	g		
	s	š		
	z			
	v/f (?)		h	
m	n			
l	r			
Vowels:	i	e	a	u
				(o ?)

Note: Vowel length was not phonemic.

...

The Dravidian sound correspondences on the following pages are from Burrow—Emeneau 1964:xii—xiii; Krishnamurti 2003:90—178; Zvelebil 1970; Andronov 2003:65—101; Subrahmanyam 1983.

9.7. CORRESPONDENCES

VOWELS

Proto-Dravidian	*a	*e	*i	*o	*u	*ā	*ē	*	*ō	*ū
Tamil	a	e	i	o	u	ā	ē	ī	ō	ū
Malayalam	a	e	i	o	u, ə	ā	ē	ī	ō	ū
Kota	a	e	i	o	u	ā	ē	ī	ō	ū
Toda	o, a	ö, e	ī, i	wa, wī, o, ī	wī, wa, u	ō, ā	ō, ē	ī	wā, wī, ī	ū
Kannāḍa	a	e	i	o	u	ā	ē	ī	ō	ū
Koḍagu	a	e, ē	i	o	u	ā	ē, ē	ī	ō	ū
Tuḷu	a	e	i	o	u	ā	ē	ī	ō	ū
Telugu	a	e	i	o	u	ā	ē	ī	ō	ū
Kolami	a	e	i	o	u	ā	ē	ī	ō	ū
Naikṛi	a	e	i	o	u	ā	ē	ī	ō	ū
Naiki (of Chanda)	a	e	i	o	u	ā	ē	ī	ō	ū
Paṛji	e, a	e, a	i	o	u	ē, ā	ē, ā	ī	ō	ū
Gadba (Ollari)	a	e	i	o	u	ā	ē	ī	ō	ū
Gadba (Salur)	a	e	i	o	u	ā	ē	ī	ō	ū
Gondi	a	e, a	i	o, u	u	ā	ē	ī	ō	ū
Konḍa	a	e	i	o	u	ā	ē	ī	ō	ū
Pengo	a	e	i	o	u	ā	ē	ī	ō	ū
Maṇḍa	a	e	i	o	u	ā	ē	ī	ō	ū
Kui	a	e	i	o	u	ā	ē	ī	ō	ū
Kuwi	a	e	i	o	u	ā	ē	ī	ō	ū
Kuṛux	a	e	i	o	u	ā	ē	ī	ō	ū
Malto	a	e	i	o	u	ā	ē	ī	ō	ū
Brahui	a	a, i	i	ō, u, a	u	ā	ē	ī	ō	ū

CONSONANTS

Proto-Dravidian	*k-	*-k-	*kk	*ñk	*c-	*-c-	*cc	*ñc
Tamil	k, c	k	kk	ñk	c	c, y	cc	ñc
Malayalam	k, c	k	kk	ññ	c	c, y	cc	ññ
Kota	k	g	k	g, ŋg	c	c	c	ñj
Toda	k	x	k	g, x	t	s	c (= ts)	z (= dz)
Kannāḍa	k	g	kk, k	g, ŋg	s, c	s	cc, s	j, ñj
Koḍagu	k	g	kk, k	ŋg	c	j	cc	ñj
Tuḷu	k	g	kk, k	ŋg	c, s, ś, t, h	j	cc	ñj
Telugu	k, c	g	kk, k	ŋg	c	c, s	cc, c	ñj
Kolami	k	g	k	ŋg	s	s	cc, c	ñj
Naiki (of Chanda)	k	g	k	ŋg, ŋ	s	s	cc	ñj
Parji	k	g, v, y	k	ŋg, ŋ	c	y	cc	ñ, ñj
Gadba (Ollari)	k	g	k	ŋg, ŋ	s, c	y	cc	ñ, ñj
Gondi	k	y	k	ng	s, h, Ø	s	s	ñj
Konḍa	k	g	k	ŋ	s	z	s	ñj
Pengo	k	g	k	ŋ(g)	h	z	c	ñj
Maṇḍa	k	g	k	ŋ(g)	h	h	c	ñj
Kui	k	g	k	ng	s	s, h	s	ñj
Kuwi	k	y	k	ng	h	h	cc, c	ñj
Kuṛux	x, k	x	k, (k) kh	ŋx, ŋg	c	s	cc, c	ñj
Malto	q, k	ḡ	q, k	nq, ṅḡ	c	s	c	ñj
Brahui	x, k	x	kk	ng	c	s	s	

Proto-Dravidian	*-t-	*tt	*nt	*t-	*-t-	*tt	*nt
Tamil	t̪	tt̪	nt̪	t	t	tt	nt
Malayalam	t̪	tt̪	nt̪	t	t	tt	nn
Kota	r̪	t̪	d̪, nd̪	t	d	t	d, nd
Toda	r̪	t̪	d̪	t	Ø	t	d, Ø
Kannāḍa	d̪	tt̪, t̪	d̪, nd̪	t	d	tt, t	d, nd
Koḍagu	d̪	tt̪, t̪	nd̪	t	d	tt, t	nd
Tuḷu	d̪	tt̪, t̪	nd̪	t	d	tt, t	nd
Telugu	d̪	tt̪, t̪	nd̪	t	d	tt, t	nd
Kolami	d̪	tt̪, t̪	nd̪	t	d	t	nd
Naiki (of Chanda)	r̪	tt̪, t̪	nd̪	t	d	tt, t	nd
Parji	d̪	tt̪, t̪	nd̪	t	d	tt, t	nd, d
Gadba (Ollari)	r̪	tt̪, t̪	nd̪	t	d	t	nd, d
Gondi	ɽ, r̪, r̪, rr	tt̪, t̪	nd̪	t	d	tt	nd
Konḍa	ɽ	tt̪, t̪	nd̪	t	d	t	nd
Pengo	z	t̪	nd̪	t	d	t	nd
Maṇḍa	y	t̪	nd̪	t	d	t	nd
Kui	j̪, g̪	t̪	nd̪, d̪	t	d	t	nd
Kuwi	y̪, r̪	tt̪, t̪	nd̪	t	d	tt, t	nd
Kuṛux	r̪	tt̪, t̪	nd̪	t	d	tt, t	nd
Malto	r̪	t̪	nd̪	t	th	t	nd
Brahui	r̪, rr̪, r̪	t̪	nd̪	t	d	t, tt	

Proto-Dravidian	*p-	*pp	*mp	*-ṛ-	*ṛṛ	*ṇṛ	*m
Tamil	p	pp	mp	ṛ	ṛṛ	ṇṛ	m
Malayalam	p	pp	mp	ṛ	ṛṛ	ṇṇ	m
Kota	p	p	b, mp	ṛ	ṭ	ḍ, ṇḍ	m
Toda	p	p	b	ṛ	ṭ	ḍ	m
Kannāḍa	p > h	pp, p	v, mb	ṛ	tt, t	ṛ, nd	m
Koḍagu	p	pp, p	mb	r	tt, t	nd	m
Tuḷu	p	pp, p	mb	d, j, r	tt	ṇj, j	m
Telugu	p	pp, p	m, mm, mb	ṛ	ṭṭ, ṭ	ṇḍ	m
Kolami	p	p	m, mb	d, r	tt, t	nd	m
Naiki (of Chanda)	p	p	m, mb	d, r	tt, t	nd	m
Parji	p	pp, p	m, mb, b	d, r	tt, t	nd	m
Gadba (Ollari)	p	p	m, mb	y	ṭṭ, ṭ	ṇḍ	m
Gondi	p	p	m	ṛ, ṛ, r, rr	tt, t	nd	m
Konḍa	p	p	mb, m	ṛ	r	ṇṛ	m
Pengo	p	p	m	z	c, s	ṇj	m
Maṇḍa	p	p	m, mb	y	c	ṇj	m
Kui	p	pp, p	mb	j, g, (r)	s	ṇj	m
Kuwi	p	pp, p	m, mb	y, r	c	ṇj	m
Kurux	p	pp, p	mb	r, rr, s	tt, t	nd	m
Malto	p	p	mb	r, s	t	nd	m
Brahui	p	p	mb	r, rr, Ø		s	m, b-

Proto-Dravidian	*n	* <u>n</u> (?)	*ṇ	*y	*r	*l	*ll
Tamil	n	<u>n</u>	ṇ	y	r	l	ll
Malayalam	n	<u>n</u>	ṇ	y	r	l	ll
Kota	n	n	ṇ	y	r	l	l
Toda	n	n	ṇ	y	r, š, ʃ, Ø	<u>s</u> , ɭ, l	<u>s</u> , l
Kannāḍa	n	n	ṇ	y	r	l	ll
Koḍagu	n	n	ṇ	y	r	l	ll
Tuḷu	n	n	ṇ, n	y	r	l, r	ll
Telugu	n	n	n	y	r	l	ll
Kolami	n	n	n	y	r	l	ll, l
Naiki (of Chanda)	n	n	n	y	r	l	l, ll
Parji	n	n	n	y	r	l	ll, l
Gadba (Ollari)	n	n	ṇ, n	y	r	l	ll
Gondi	n	n	n	y	r	l	ll, l
Koṇḍa	n	n	ṇ	y	r	l	l
Pengo	n	n	n, ṇ	y	r	l	l
Maṇḍa	n	n	n	y	r	l	l
Kui	n	n	n, ṇ	j	r	ɖ, l	ɖ, l
Kuwi	n	n	n	y	r	l	ll, l
Kuṛux	n	n	n	y	r	l	ll, l
Malto	n	n	n	y	r	l	l
Brahui	n, d-	n	n		r, rr, Ø	l, <u>lh</u>	ll

Note: According to Zvelebil (1970:129—130 and 1990:11), only *n should be reconstructed for Proto-Dravidian, not *n. Zvelebil interprets the [n] ~ [n] alternation found in Tamil and Malayalam as “entirely allophonic in distribution”.

Proto-Dravidian	*v-	*-v-	*ṛ	*ḷ	*ḷḷ
Tamil	v	v	ṛ	ḷ	ḷḷ
Malayalam	v	v	ṛ	ḷ	ḷḷ
Kota	v	v	ḷ, r, g, y	ḷ	ḷ
Toda	p	f	ḍ, r, ṣ, ṣ, w, Ø	ḷ, ḷ	ḷ, ḷ
Kannāḍa	b	v	ṛ (> ḷ, r)	ḷ	ḷḷ
Koḍagu	b	v	ḷ, Ø	ḷ	ḷḷ
Tuḷu	b	v, b	r, ḷ	ḷ, ḷ	ḷḷ
Telugu	v	v	ṛ (> ḍ, r)	ḷ	ḷḷ
Kolami	v	v	r	ḷ	ḷḷ
Naiki (of Chanda)	v	v	Ø, y	ḷ, y	ḷḷ
Parji	v	v	ṛ	ḷ	ḷḷ
Gadba (Ollari)	v	v	ṛ, ḍ	ḷ	ḷḷ
Gondi	v, w	v, w	ṛ, r	ṛ	ḷḷ, ḷ
Koṇḍa	v	v	ṛ	ṛ, ḷ	ḷ
Pengo	v	v	ṛ	ṛ	ṛ
Maṇḍa	v	v	ṛ	ṛ	ḷ
Kui	v	v	ṛ	ḍ, ḷ	ḍ, ḷ
Kuwi	b	v	ṛ	ṛ	ḷ
Kuṛux	b	b, v	Ø, r, y, ḷ	ḷ	ḷḷ
Malto	b	w	Ø, r, y, ḷ	ḷ	ḷ
Brahui	b	f, v	r, rr, r, ḷ/ḷh, Ø	ḷ, ḷh	ḷḷ

APPENDIX:
SELECTED PHONOLOGICAL SYSTEMS

OLD TAMIL

The phonemic inventory of Old Tamil was extremely conservative. It contained seventeen consonants and ten vowels (cf. Thomas Lehmann 1998:76—78; Steever 2004a:2018; Krishnamurti 2003:62):

Consonants:

	Labial	Dental	Alveolar	Retroflex	Palatal	Velar
Stop	p	t	ɽ	ʈ	c	k
Nasal	m	n	ɳ	ɳ̠	ɲ	[ŋ]
Lateral		l		ɭ		
Glide	v				y	
Tap			r			
Approx.				ɻ		

Notes:

1. /ɳ̠/ occurs only before /k/.
2. Only the following consonants can occur initially: p, t, c, k; m, n, ɳ̠; v, y.
3. Only the following consonants can occur finally: m, n, ɳ̠, ɳ̠; l, ɭ; v, y; r, ɻ.
4. There is also a fricative /h/ in Old Tamil. It is transcribed as *ḥ* and is only found between a short vowel and a stop — for instance, *akḥtu* ‘it, that’.

Vowels:

	Front		Central		Back	
	Short	Long	Short	Long	Short	Long
High	i	ī			u	ū
Mid	e	ē			o	ō
Low			a	ā		
Diphthongs: ai, au						

MODERN TAMIL

The consonant system of Modern Tamil consists of native elements (p, t, ʈ, c, k, r, m, n, ɳ̠, ɳ̠, l, ɭ, ɽ, ɻ, v, y) and borrowed elements (b, d, ɖ, j, g, f, s, ʃ, h). The borrowed elements are found in loanwords, mostly from Indo-Aryan (including Sanskrit), Persian, Arabic, and English sources. The borrowed elements are shown in parentheses in the following table (cf. Annamalai—Steever 1998:101—104;

Asher 1981:209—241; Krishnamurti 2003:62—63; Ruhlen 1975:274; Schiffman 1999:9—12; Steever 1990:183).

Consonants:

	Labial	Dental	Alveolar	Retroflex	Palatal	Velar	Glottal
Stop: vls.	p	t		ʈ	c	k	
vd.	(b)	(d)		(ɖ)	(j)	(g)	
Fricative	(f)						
Sibilant		(s)		(ʂ)			
Tap		r					
Flap			[ɾ]				
Nasal	m	n	[ɳ]	ɳ̐	ɲ	[ŋ]	
Lateral		l		ɭ			
Approx.				ɻ			
Glide	v				y		(h)

Notes:

1. The borrowed elements are pronounced as their closest native elements in normal speech. Thus, for example, /faiyal/ ‘file’ is pronounced /paiyal/, with /p/ substituted for /f/.
2. /n/ has three variants: /n/ occurs initially and before /t/; /ɳ̐/ occurs only before /k/; and [ɳ̐] occurs in clusters and finally.
3. The following sounds occur in Sanskrit loanwords: /s/, /ʂ/, /j/, /h/.
4. Stops are voiced after homorganic nasals and between vowels.
5. /ɻ/ can also be transcribed /z/.
6. Except for /ɾ/ and /ɻ/, all consonants can occur doubled.

Vowels:

	Front		Central		Back	
	Short	Long	Short	Long	Short	Long
High	i	ī			u	ū
Mid	e	ē	(ʌ)		o	ō
Low		(æ)	a	ā		
Diphthongs: ai, au						

Krishnamurti (2003:61—77) lists the phonemic inventories of the various Modern Dravidian languages — Old and Modern Tamil are discussed on pp. 62—63, while Malayalam is discussed on p. 63, Kannaḍa on pp. 66—67, and Telugu on pp. 68—69.

MODERN STANDARD KANNAḌA

Modern Standard Kannaḍa has a larger phonemic inventory than Modern Tamil. There are eleven vowels and thirty-four consonants (cf. Steever 1998b:130—131; Krishnamurti 2003:66—67). The consonant inventory consists of four series of stops and affricates based upon voicing and aspiration contrasts: (1) plain (unaspirated) voiceless (p, t, t̪, c, k); (2) voiceless aspirated (ph, th, t̪h, ch, kh); (3) plain voiced (b, d, d̪, j, g); and (4) voiced aspirated (bh, dh, d̪h, jh, gh). There are also: a series of fricatives (voiceless: f, s, ʃ, h; voiced: z); three nasals (m, n, ŋ); two laterals (l, ɭ); two glides (v, y); and a tap (r). The following sounds can only occur in loanwords: /æ/, /f/, /z/. Likewise, both the voiceless aspirates (ph, th, t̪h, ch, kh) and the voiced aspirates (bh, dh, d̪h, jh, gh) only occur in loanwords, mainly in those borrowed from Sanskrit. In rapid speech and in some dialects of Kannaḍa, these sounds are pronounced as their plain (unaspirated) counterparts. The borrowed elements are shown in parentheses in the following table.

Consonants:

	Labial	Dental	Retroflex	Palatal	Velar
Stop: vls.	p	t	t̪	c	k
vls. asp.	(ph)	(th)	(t̪h)	(ch)	(kh)
vd.	b	d	d̪	j	g
vd. asp.	(bh)	(dh)	(d̪h)	(jh)	(gh)
Fricative: vls.	(f)	s	ʃ	ś	h
vd.		(z)			
Nasal	m	n	ŋ		
Lateral		l	ɭ		
Glide	v			y	
Tap		r			

Vowels:

	Front		Central		Back	
	Short	Long	Short	Long	Short	Long
High	i	ī			u	ū
Mid	e	ē			o	ō
Low		(æ)	a	ā		

Notes:

1. Proto-Dravidian */ɽ/ > /l/ between vowels but /l/ or /r/ before consonants in Kannaḍa (cf. Andronov 2003:55). */ɽ/ only occurred in medial and final positions in Proto-Dravidian.

2. Initial /p-/ of Classical Kannaḍa has become /h-/ in Modern Standard Kannaḍa, though there are many exceptions in which /p/ has been retained (cf. Andronov 2003:54).

MODERN STANDARD TELUGU

The phonemic inventory of Modern Standard Telugu is similar to that of Modern Standard Kannaḍa (cf. Krishnamurti 1998:206—207 and 2003:68—69). Like other Dravidian languages, Telugu has a substantial number of loanwords from Indo-Aryan and other languages, including Persian, Arabic, and English, and this has resulted in the addition of several non-native elements to the phonemic inventory — the aspirated consonants and the sibilants /ʃ/ and /s/, for example, were introduced at an early date through Sanskrit and Prakrit loanwords.

Consonants:

	Labial	Dental-Alveolar	Retroflex	Palatal	Velar
Stop: vls.	p	t	ɖ	c	k
vls. asp.	ph	(th)	ʈh	ch	kh
vd.	b	d	ɖ	j	g
vd. asp.	bh	dh	ɖh	jh	gh
Fricative	f	s	ʂ	ʃ	h
Nasal	m	n	ɳ		
Lateral		l	ɭ		
Semivowel	w			y	
Flap		r			

Vowels:

	Front		Central		Back	
	Short	Long	Short	Long	Short	Long
High	i	ī			u	ū
Mid	e	ē			o	ō
Low		æ	a	ā		

Notes:

1. In Standard Telugu, /th/ tends to merge with /dh/ except after /s/.
2. In non-standard Telugu, the aspirated consonants are replaced by their plain (unaspirated) counterparts, /ʃ/ and /s/ are replaced by /s/, and /f/ is replaced by /p/.

CHAPTER TEN

A SKETCH OF PROTO-ALTAIC PHONOLOGY

10.1. INTRODUCTION

As noted by Merritt Ruhlen (1987:128):

The study of the Altaic family has had a long and stormy history, and even today there is considerable disagreement among specialists over exactly which languages belong to the family.

The similarities among what has come to be known as the “Altaic” languages (specifically, Chuvash-Turkic, Mongolian, and Manchu-Tungus) were recognized nearly three hundred years ago by the Swedish military officer Johann von Strahlenberg, who published a work on the subject in 1730 (though Strahlenberg actually rejected the idea of a genetic relationship among these languages). The famous Danish scholar, and one of the founders of Indo-European comparative grammar, Rasmus Rask, also conducted research into these languages as well as Eskimo, several Uralic languages, and what have sometimes been called the “Paleosiberian” languages. In the middle of the last century, important work was done by the Finnish linguist Matthew Alexander Castrén. It was another Finnish scholar, Gustav John Ramstedt (cf. Poppe [1965:83—85] for a sketch of Ramstedt’s life), who really put Altaic comparative linguistics on a firm footing. Ramstedt published many important studies, culminating in the posthumous publication (1952—1957) of his two-volume (in English translation) *Introduction to Altaic Linguistics*. A few of the many scholars who have made significant contributions to Altaic linguistics are: Pentti Aalto, Johannes Benzing, Anna Dybo, Joseph Grunzel, Erich Haenisch, Shiro Hattori, Wladyslaw Kotwicz, Samuel E. Martin, Karl H. Menges, Roy Andrew Miller, Antoine Mostaert, Oleg Mudrak, Gyula (Julius) Németh, Jerry Norman, Martti Räsänen, Martine Robbeets, András Róna-Tas, Andrew Rudnev, Aurélien Sauvageot, Boris A. Serebrennikov, Denis Sinor, Sergej A. Starostin, John C. Street, Vilhelm Thomsen, Vera Ivanovna Tsintsius (Cincius), Ármin Vámbéry, Boris Yakovlevich Vladimirtsov, Alexander Vovin, and others too numerous to count, including several Russian, Korean, and Japanese scholars. One of the most prominent Altaic scholars of the twentieth century was the Russian-born Nicholas Poppe, who published numerous books and articles, including (in English translation) *Khalkha-Mongolian Grammar* (1951), *Introduction to Mongolian Comparative Studies* (1955; reprinted 1987), (in English translation) *Comparative Grammar of the Altaic Languages* (1960; only Part I appeared), *Introduction to Altaic Linguistics* (1965), and *Grammar of Written Mongolian* (third printing 1974). A noteworthy work (1991) is the monograph by the late Russian linguist Sergej

Starostin entitled (in English translation) *The Altaic Problem and the Origin of the Japanese Language*. Finally, we may note in passing that Illič-Svityč (1963, 1964b) also made a couple of important contributions to Altaic linguistics.

Traditionally, Altaic has included the core groups (Chuvash-)Turkic, Mongolian, and (Manchu-)Tungus, to which some have tried to add Korean, Japanese-Ryukyuan (Japonic), and Ainu. Looking at just the core group, one is hard-pressed to find features common to all three. There are, to be sure, common features between (Chuvash-)Turkic and Mongolian on the one hand and between Mongolian and (Manchu-)Tungus on the other, but there appear to be relatively few features common to (Chuvash-)Turkic and (Manchu-)Tungus alone. All three are, in fact, similar in structure, but this has been considered by some to be strictly a typological characteristic. The common features found among the members of the core group have been explained as due to diffusion, and, for a good portion of the common lexical material, this seems to be a valid explanation (cf. Poppe 1965:157—163). There are, however, features common (pronouns, to cite a single example) to the members of the core group as a whole that cannot be explained as due to diffusion, and which do indeed point to some sort of genetic relationship. The problem is in trying to define the nature of that relationship. Two explanations are possible: (1) The shared features are due to common descent from Proto-Nostratic and do not imply a closer relationship between the three. Following this scenario, (Chuvash-)Turkic, Mongolian, and (Manchu-)Tungus represent three independent branches of Nostratic — this is Dolgopolsky's view. (2) The shared features are due to descent from a common Altaic parent language intermediate between Proto-Nostratic and each of the core group members. The trouble with the first explanation is that it merely shifts the question back to the Nostratic level without resolving a thing, whereas the second explanation keeps the focus exactly where it belongs. The second alternative thus remains a viable working hypothesis.

Strong opposition to the Altaic Theory has been expressed by several reputable scholars, perhaps the most vocal being Gerhard Doerfer and Gerard Clauson. At the Workshop on Linguistic Change and Reconstruction Methodology held at Stanford University from 28 July through 1 August 1987, the consensus of the Altaic panel was that “[i]n short, we found Proto-Altaic, at best, a premature hypothesis and a pragmatically poor foundation on which to build a sustained research program” (cf. Unger 1990:479).

The whole question of Altaic unity was again reexamined by Roy Andrew Miller (1991). Miller addresses and convincingly demolishes objections that have been raised by those opposed to setting up an Altaic language family, and he concludes his paper by listing a number of important tasks that must be undertaken by Altaicists to redirect “Altaic historical-linguistic studies back into the mainstream of comparative linguistics”. Another who defended the Altaic Theory against its critics was the Hungarian linguist Lajos Ligeti. In a 1969 article entitled “A Lexicostatistical Appraisal of the Altaic Theory”, Ligeti reevaluated the evidence for and against the Altaic Theory, concentrating particularly on the views of Clauson. Ligeti concluded that the evidence does indeed point to a genetic

relationship among (Chuvash-)Turkic, Mongolian, and (Manchu-)Tungus. Poppe (1965:125—156) also discusses the history of the Altaic Theory and confronts the issues raised by the critics. Sergej Starostin (1991) attempts to clarify many of the issues surrounding the problems associated with setting up an Altaic language family, including the relationship of Korean and Japanese to the other Altaic language groups (but see the rather critical reviews of Starostin's work by Comrie 1993, Krippes 1994, and Vovin 2001:107—114). One of the more recent works in support of the Altaic Theory is the massive *An Etymological Dictionary of the Altaic Languages* (2003) by Sergej Starostin, Anna Dybo, and Oleg Mudrak (see below). Greenberg (2005g) also considers Altaic to be a valid genetic grouping.

The question of genetic relationship (or lack thereof) can only be definitively resolved when each branch has been fully reconstructed in all aspects (phonology, morphology, and vocabulary) and when the issue of diffusion has been reasonably clarified — indeed, good progress has been made and continues to be made in both of these areas (cf. Robbeets 2005 and subsequent works). At that time, a meaningful comparison can be made between the putative daughter languages.

I would tentatively include the following groups within the Altaic language family: (Chuvash-)Turkic, Mongolian, (Manchu-)Tungus, and possibly Korean, while Japanese-Ryukyuan (Japonic) appears to be made up of an Altaic element that has been superimposed on an Austronesian substratum (cf. Robbeets 2017). The shared features between (Chuvash-)Turkic, Mongolian, and (Manchu-)Tungus may be looked upon as due to common descent from an Altaic parent language. Language change over time has gradually led to increasing differentiation between each of the three core group members, while diffusion, especially lexical diffusion, has tended to complicate the picture and has made it difficult to differentiate between that which is borrowed and that which is inherited.

Probably the most notable characteristic of the Altaic languages is the assimilatory phenomenon known as “vowel harmony”. In the Turkic languages, for example, the first vowel segment occurring in a word influences the following vowel segments so that all vowels in the word have certain features in common. In Kirghiz, all of the vowels occurring in a given word must have the same feature for front ~ back and for rounded ~ unrounded, while height distinctions do not figure into the system of vowel harmony at all, so that high and non-high vowels can be freely combined in a word. It was the development of the system of vowel harmony that was responsible for the appearance of front rounded and back unrounded vowels in Altaic. These vowels are, thus, a later development and are not to be reconstructed for Proto-Nostratic.

10.2. OLDER VIEWS ON THE RECONSTRUCTION OF THE PROTO-ALTAIC PHONOLOGICAL SYSTEM

In my 1994 co-authored book (Bomhard—Kerns 1994), I mostly followed the reconstruction of the Proto-Altaic phonological system proposed by Nicholas Poppe (1960), while I based the Proto-Altaic reconstructed forms upon those proposed by

John Street (1974). According to Poppe, Proto-Altaic is assumed to have had a voicing contrast in stops and affricates, but, as he notes (1960:9—10), there is a possibility that the contrast could have been between voiceless aspirated and voiceless unaspirated stops and affricates instead. An entirely different approach is taken by Illič-Svityč (1971—1984.I:147—156), who reconstructs the three-way contrast of (1) voiceless aspirated, (2) plain voiceless, and (3) plain voiced for Proto-Altaic, and this is also the system followed by Sergej Starostin (1991). According to Poppe's reconstruction, neither the liquids nor the velar nasal were used word initially, while the voiceless stops and voiceless palato-alveolar affricate were strongly aspirated. Poppe also assumed that Proto-Altaic had a rich system of long and short vowels.

According to Poppe (1960), the Proto-Altaic phonological system is to be reconstructed as follows (see also Ramstedt 1952—1957; Robbeets 2005):

	p	t	č	k				
	b	d	ž	g				
		s						
m	n	n ^y	-ŋ-					
	-r- (= -r ¹ -)	-r ^y - (= -r ² -)						
	-l- (= -l ¹ -)	-l ^y - (= -l ² -)						
		y						
a	o	u	i	e	è	ö	ù	ĩ
ā	ō	ū	ī	ē	ē̄	ȫ	ū̄	ĩ̄

According to Sergej Starostin (1991:5—24), on the other hand, the Proto-Altaic phonological system is to be reconstructed as follows:

Stops and affricates:	p ^h	t ^h	č ^h	k ^h					
	p	t	č	k					
	b	d	č̣	g					
Sibilants:		s	š (?)						
		z (?)							
Nasals and liquids:	m	n	n ^y	ŋ					
		-l- (= -l ¹ -)	-l ^y - (= -l ² -)						
		-r- (= -r ¹ -)	-r ^y - (= -r ² -)						
Glides:	-w-		-y-						
Vowels:	i	e	ä	ü	ö	ɨ (ə) (?)	u	o	a
Diphthongs:			ia	io		iu (ue?)	ua		

Note: Though not shown in the charts on pages 21–24 of his 1991 book, Starostin also reconstructs long vowels for Proto-Altaic.

The Proto-Altaic phonological system proposed by Starostin (and, earlier, by Illič-Svityč) is an improvement over the traditional reconstruction. Starostin's reconstruction is not, however, the final word on the subject — the vowels, in particular, need considerably more work. This shortcoming has been partially addressed by Starostin, Dybo, and Mudrak in their *An Etymological Dictionary of the Altaic Languages*.

Griffen (1994:42–43) reconstructs a Proto-Altaic obstruent system close to that of the Russians. He posits three degrees along the fortis-lenis scale: aspirata, tenuis, and media:

Aspirata:	p ^h	t ^h	č ^h	k ^h
Tenuis:	p	t	č	k
Media:	b	d	ž	g

10.3. NEW THOUGHTS ON THE RECONSTRUCTION OF THE PROTO-ALTAIC PHONOLOGICAL SYSTEM

An important milestone in Altaic studies was reached in 2003 with the publication by Sergej A. Starostin, Anna Dybo, and Oleg A. Mudrak of *An Etymological Dictionary of Altaic Languages*. Though this dictionary must be used with caution (note the critical reviews by Georg 2004, Vovin 2005, and Norman 2009 [Starostin wrote a rebuttal to Georg's review in 2005 in *Diachronica*]), it contains much that is of value and is, in many respects, an improvement over previous efforts.

Starostin—Dybo—Mudrak (2003:24) reconstruct the Proto-Altaic phonological system as follows (where their transcriptions differ from those used in this book, their transcriptions are shown in parentheses immediately after those used here) (see also Dybo 1996:44 and 2007:13; Tenishev—Dybo 2001–2006.III:9):

Stops and affricates:	p ^h - (= p ^ç -)	t ^h (= t ^ç)	č ^h (= č ^ç)	k ^h (= k ^ç)
	p	t	č	k
	b	d	ž	g
Sibilants:		s	š	
		z-		
Nasals and liquids:	m	n	n ^y (= n̄)	ŋ
		-l-	l ^y (= l̄)	
		-r-	-r ^y - (= -r̄-)	
Glides:			-y- (= -j-)	

Vowels:	i	e	u	o	a
	ī	ē	ū	ō	ā
Diphthongs:	ia	io	iu		

Starostin—Dybo—Mudrak note that **z* and **y* are in complementary distribution: **z* occurs only in initial position, while **y* is never found at the beginning of a word. Note: The reconstruction of **lʸ* and **rʸ* is highly controversial (cf. Poppe 1960:74—92; Robbeets 2005:78—79; Róna-Tas 1998:71—72; Stachowski 2012: 244—247).

According to Starostin—Dybo—Mudrak (2003:90), the traditional system of vowel correspondences proposed by Ramstedt and Poppe is outdated and in need of revision. Interestingly, they assume that the Proto-Altaic vowel system was completely devoid of vowel harmony, which they further assume evolved in all the subgroups at a later date as the result of complex interactions between the vowels of the first and the second syllables in polysyllabic roots and derivatives.

Starostin—Dybo—Mudrak (2003:90) assume that Proto-Altaic had five vowels (**i*, **e*, **u*, **o*, **a*) and three diphthongs (**iu*, **io*, **ia*) — the diphthongs were restricted to the first syllable of the word. The interaction of eight vocalic units (**i*, **e*, **u*, **o*, **a*, **iu*, **io*, **ia*) of the first syllable and five vocalic phonemes (**i*, **e*, **u*, **o*, **a*) of the second syllable led to an extremely diverse system of correspondences, of which the traditional correspondences proposed by Ramstedt and Poppe are only a small subset.

The diphthongs with **-i-* are basically reconstructed by Starostin—Dybo—Mudrak where Turkic and (Manchu-)Tungus have specific reflexes (**-ia-* in Turkic, **-ia-* and **-ü-* [-*iu-*] in (Manchu-)Tungus); in several cases, however, diphthongs have been lost in those subgroups as well and can be reconstructed only through circumstantial evidence.

The phonetic nature of the Proto-Altaic diphthongs is still not completely certain. Starostin—Dybo—Mudrak prefer to treat them as diphthongs because they are preserved as such in a number of cases in Proto-Turkic, Proto-(Manchu-)Tungus, and Korean, but an interpretation of the diphthongs as front vowels could also be possible. In that case, **ia* is to be reinterpreted as **ä*, **io* as **ö*, and **iu* as **ü*. They note that further research is needed before a definitive solution to this problem can be reached.

The (Manchu-)Tungus system of vowels appears to be the most conservative and was used by Starostin—Dybo—Mudrak as the basis of their reconstruction. Turkic, Mongolian, and Korean usually modify the first vowel under the influence of the second one. Thus, fronted first vowels usually signal that the second vowel was a front one. However, the second vowel could also be fronted or shifted to back under the influence of the first vowel, leading to numerous variations in the reflexes. Japanese seems to have exclusively assimilated the first vowel to the second one (a process very similar to what later happened in Mongolian), so that the quality of Japanese vowels in the first syllable is normally a good indicator of the

original quality of the second vowel, which itself may have been assimilated or have disappeared altogether.

Vowels of the non-initial syllable are generally very unstable in all modern Altaic languages. They tend to become assimilated to initial vowels, are frequently contracted in various combinations with following suffixes, and are often lost completely. They are best preserved in the (Manchu-)Tungus languages and are completely lost in the majority of Turkic and Korean roots. The situation, therefore, is very close, for example, to what is found in Germanic, within Indo-European, or in the Nakh languages in the Eastern Caucasus, where the quality of non-initial vowels can only be recovered on the basis of umlaut processes in the first syllable. Thus, Starostin—Dybo—Mudrak have chosen to reconstruct non-initial vowels on indirect evidence, namely, by the way the non-initial vowels have influenced preceding vowels. They note that rules for the development of non-initial vowels in the individual Altaic subbranches have yet to be worked out and will depend substantially on the future analysis of verbal and nominal morphophonemics and accent systems.

10.4. ROOT STRUCTURE PATTERNING IN PROTO-ALTAIC

Like Uralic-Yukaghir and Elamo-Dravidian, the Altaic languages are agglutinating in structure. Pronominal stems and particles were monosyllabic $*(C)V$, while nominal and verbal stems were typically disyllabic $*(C)VCV$ or $*(C)VCCV$. Polysyllabic stems could be derived from the disyllabic stems by the addition of suffixes. The addition of suffixes caused no changes in the vowel of the stem, but the vowels of the suffixes were subject to vowel harmony, which means that their vowels were adjusted to the vowel of the stem. The undifferentiated stems were real forms in themselves and could be used without additional suffixes. The suffixes, both derivational and inflectional, were added mechanically to the stem.

According to Starostin—Dybo—Mudrak (2003:22–24), the most common root structure pattern in Proto-Altaic was $*CVCV$, occasionally with a medial consonant cluster — $*CVCCV$. The final vowel, however, was very unstable: it is best preserved in (Manchu-)Tungus languages (though it is not always easily reconstructable due to morphological processes), and it is frequently dropped in Korean, Mongolian, and Turkic (in the latter family, in fact, in the majority of cases). Japanese usually preserves the final vowel, although its quality is normally lost; however, in cases where the final (medial) root consonant is lost, Japanese reflects original disyllables as monosyllables.

Japanese also has quite a number of monosyllabic verbal roots of the type $*CVC-$. These roots were originally disyllabic as well. However, reconstructing them as $*CVCa-$ is certainly incorrect. The Old Japanese verbal conjugation shows explicitly that the verbal stems can be subdivided into three main types: $*CVCa-$ (those having the gerund in $-e < *a-i$), $*CVC\partial-$ (those having the gerund in $-i < *a-i$), and $*CVC-$ (those having the gerund in $-ji < *i$). Here, there is a possibility that the latter type reflects original verbal roots $*CVCi$ (occasionally perhaps also

**CVCu*, though there are reasons to suppose that some of the latter actually merged with the type **CVCə-*). The gerund form in *-*i* may actually reflect the original final root vowel that had earlier disappeared before other verbal suffixes of the type *-*V(CV)-*.

A small number of trisyllabic roots such as **alak^hu* ‘to walk’, **kabari* ‘oar’, **k^hobani* ‘armpit’, etc. can also be reconstructed for Proto-Altaic. It cannot be excluded that, in many or most of these cases, the final syllable was originally a suffix, but the deriving stem was not used separately, and the derivation had already become obscure in the proto-language.

The monosyllabic structure *(*C*)*V* was typical for pronominal and auxiliary morphemes, but a small number of verbal (and, quite exceptionally, nominal) monosyllabic roots can also be reconstructed.

A special case involves a number of verbal roots that appear as monosyllables of the type **CV* in some languages but have the structure **CVl(V)* or, less frequently, **CVr(V)* in others. Starostin—Dybo—Mudrak reconstruct disyllables here, but note that the exceptional loss of **r* and **l* remains unexplained. A possible solution would be to reconstruct those roots as **CVC*, with occasional loss of the root-final resonant. However, the number of examples is not large, and the roots in question are frequently used as auxiliary verbs, which by itself could explain the exceptional phonetic development. It is also possible that *-*r-* and *-*l-* were originally suffixed and that the roots belonged instead to the rare type **CV*. Starostin—Dybo—Mudrak note that the problem requires further investigation.

There were four fundamental stem types in Proto-Altaic:

1. Verbal stems
2. Nominal and adjectival stems
3. Pronouns
4. Particles

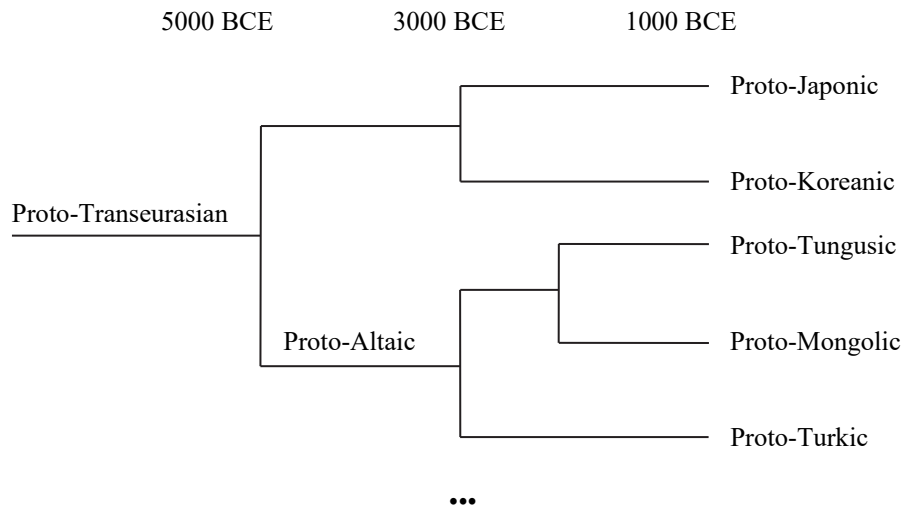
There was a strict distinction between nominal and verbal stems.

10.5. THE POSITION OF JAPANESE-RYUKYUAN (JAPONIC) AND KOREAN

Some recent work has attempted to demonstrate that Japanese-Ryukyuan (Japonic) and Korean are genetically related to each other (cf. Martin 1966, 1975, and 1991; Vovin 2001; Whitman 1985 and 2012; Francis-Ratté 2016), though Vovin has since (2010) taken a more negative view. Attempts to relate Japonic (usually Japanese alone) and Korean to other language families have generally not received wide acceptance, although the most viable comparison has been and continues to be with the Altaic languages (cf. Robbeets 2005 and subsequent work; Unger 2014). However, much work needs to be done here before this hypothesis can be accepted as proven beyond a reasonable doubt. Accordingly, Japonic and Korean data are not

included in this book except when the work of others is being referenced (as in the preceding discussion). See also Cavoto 1998:19—20.

It may be noted here that Martine Robbeets and Lars Johanson have recently coined the term “Transeurasian” to refer to a large grouping of languages that includes both the traditional Altaic languages (Chuvash-Turkic, Mongolian, and Manchu-Tungus) as well as Japonic and Korean. According to Robbeets (2015:31, 506, and 2017:214), the Transeurasian family tree may be represented as follows:



The first table of correspondences on the following pages is based upon the work of Starostin—Dybo—Mudrak (2003) (see also Griffen 1994; Dybo 2007:13—14). Older views must now be considered outdated. Only the consonants are given. The vowel correspondences are extremely complicated — for details on the vowels, cf. Starostin—Dybo—Mudrak (2003:90—134). The next set of tables is based upon the work of Robbeets (2016:206—207) — both consonants and vowels are given.

Starostin—Dybo—Mudrak consider Japanese-Ryukyuan (Japonic) and Korean to be members of the Altaic language family. Consequently, these languages are included in the table on the following page (though note the above comments on the position of these languages).

For information on the Turkic languages, cf. Tenishev—Dybo 2001—2006, Johanson—Csató (eds.) 1998, von Gabain—Pritsak—Poppe—Benzing—Menges—Temir—Togan—Taeschner—Spies—Caferoğlu—Battal-Taymas 1982, Dybo 2007; for Mongolic, cf. Janhunen (ed.) 2003, Svantesson—Tsendina—Karlsson—Franzén 2005, Poppe 1955, Poppe—Dosch—Doerfer—Aalto—Schröder—Pritsak—Heissig (eds.) 1964; and for (Manchu-)Tungus, cf. Fuchs—Lopatin—Menges—Sinor 1968, Malchukov—Whaley (eds.) 2012. See also de Rachewiltz—Rybatzki 2010. A new book on the (Manchu-)Tungus languages, under the editorship of Alexander Vovin, is currently being prepared (Vovin [ed.] to appear). For an excellent survey of the current status of Altaic studies, cf. Blažek—Schwarz—Srba 2019.

10.6. CORRESPONDENCES

Proto-Altaic	Proto-Tungus	Proto-Mongolian	Proto-Turkic	Proto-Korean	Proto-Japanese
p ^h -	p-	h-/y-	Ø-/y-	p-	p-
-p ^h -	-p-	-h-/b-, -b	-p-	-p-	-p-
p-	p-	b-/h-	b-	p-	p-
-p-	-b-	-b-	-b-	-p-	-p-
b-	b-	b-	b-	p-	p-/b[a, ə, Vy]
-b-	-b-	-h-/-[R]b-/b[Vg], -b	-b-	-b-, -p	-p-/[iV, y]w
m	m	m	b-, -m-	m	m
t ^h -	t-	t-/č(i)-	t- [dV+] ^y r ^y r]	t-	t-
-t ^h -	-t-	-t-/č(i)-, -d	-t-	-t-	-t-
t-	d-/ž(i)-	d-/č(i)-	d-	t-	t-/d[i ə]
-t-	-t-	-d-/č(i)-	-t-	-t-/r-	-t-
d-	d-	d-/ž(i)-	y-	t-	d-/t[V + C ^h]
-d-	-d-	-d-/ž(i)-	-d-	-t-/r-	-t-/iV y]y
n	n	n	y-, n	n	n
k ^h -	x-	k-	k-	k-	k-
-k ^h -	-k-/x-	-k-/g[Vh]-, -g	-k-	-k-/h-	-k-
k-	k-	k-	g-	k-	k-
-k-	-k-	-g-, -g	-k-/g[Vr]-	-Ø-/h-, -k	-k-
g-	g-	g-	g-	k-	k-
-g-	-g-	-h-/g[Vh]-, -g	-g-	-Ø-/h-, -k	-k-/iV]Ø
ŋ-	ŋ-	Ø-/y-/g[u]-/n[a o e]	Ø-/y-	n-	Ø-/n-/m[i]-)
-ŋ-	-ŋ-	-ŋ-/n-/m-/h-	-ŋ-	-ŋ-/Ø-	-n-/m-
č ^h -	č-	č-	č-	č-	t-
-č ^h -	-č-	-č-	-č-	-č-	-t-
č-	ž-	d-/č(i)-	d-	č-	t-
-č-	-s-	-č-	-č-	-č-	-s-
ž-	ž-	ž-	y-	č-	d-
-ž-	-ž-	-ž-	-y-	-č-	-y-
n ^y	n ^y	ž-, -y-/n-	y-, -n ^y -	n-, -n ^y -	m-, -n-/m-
-y-	-y-	-y-/h-	-y-	-y-/Ø-	-y-/Ø-
-r-	-r-	-r-	-r-	-r-	-r-/t-
-r ^y -	-r-	-r-	-r ^y -	-r-	-r-/t[i u]-
l	l	l-/n-, -l-	y-, -l-	n-, -r-	n-, -r-
l ^y	l	d-/ž(i)-, -l-	y-, -l ^y -	n-, -r-	n-, -s-
s	s	s	s	s-/h-, -s-	s
z-	s-	s-	y-	s-	s-
š	š	s-/č[A]-, -s-	s-/č[A]-, -s-	s	s

For comparison, Robbeets (2016:206—207) gives the following correspondences:

I. Consonants:

Proto-Transeurasian	Proto-Tungus	Proto-Mongolian	Proto-Turkic	Proto-Korean	Proto-Japanese
p-	p-	p-	b-	p-	p-
-p-	-p-	-ɣ-	-p-	-p-	-p-
b-	b-	b-	b-	p-	p-/w-
-b-	-b-	-b-/ɣ-	-b-	-p-	-p-/w-
-mT-	-PC-	-PC-	-P(C)-	-pC-	-np-
-Rp-	-RP-	-RP-	-RP-	-Rp-	-np-
t-	t-	t-	t-	t-	t-
-t-	-t-	-t-	-t-	-t-	-t-
d-	d- (ji-)	d- (ji-)	y-	t- (ci-)	t-/y-
-d-	-d- (-ji-)	-d- (-ji-)	-d-	-l-	-t-/y-
-nK-	-TC-	-TC-	-TC-	-c-	-nt-
-Rt-	-RT-	-RT-	-RT-	-Rc-	-nt-
k-	k-	k-	k-	k-	k-
-k-	-k-	-k-	-k-	-k- (-h-)	-k-
g-	g-	g-	k-	k-	k-
-g-	-g-	-g-	-g-	-k- (-h-)	-k-
-ŋT-	-KC-	-KC-	-KC-	-kC-	-nk-
-Rk-	-RK-	-RK-	-RK-	-Rk-	-nk-
č-	č-	č-	č-	c-	t-
-č-	-č-	-č-	-č-	-c-	-t-
-lč	-l(č)	-l(č)	-l(č) ~ -š	-l(i)	-si
x-	x-	k-	k-	k-, h-	k-
-x-	-x-	-g- ~ -k-	-g- ~ -k-	-k-	-k-
s-	s-	s-	s-	s-	s-
-s-	-s-	-s-	-s-	-s-	-s-
m-	m-	m-	b-	m-	m-
-m-	-m-	-m-	-m-	-m-	-m-
n-	n-	n-	y-	n-	n-
-n-	-n-	-n-	-n-	-n-	-n-
-r-	-r-	-r-	-r-	-l-	-r-
-r ₂ -	-r-	-r-	-r ₂ -	-l-	-r-
-l-	-l-	-l-	-l-	-l-	-r-

Note: According to Robbeets, “Transeurasian” comprises the following branches: (Manchu-)Tungus, Mongolian, (Chuvash-)Turkic, Korean, and Japonic. She restricts “Altaic” to (Manchu-)Tungus, Mongolian, and (Chuvash-)Turkic.

II. Vowels:

Proto-Transeurasian	Proto-Tungus	Proto-Mongolian	Proto-Turkic	Middle Korean < Proto-Korean	Old Japanese < Proto-Japanese
-a-	-a-	-a-	-a-	-a- < -a-	-a- < -a-
CaCa	CaCa	CaCa	CaC	C _Λ C _Λ	CaCa
-ə-	-e-	-e-	-e-	-e- < -e-	-a- < -a-
-ə-	-e-	-e-	-e-	-e- < -e-	-o- < -ə-
-ɔ-	-o-	-o-	-o-	-wo- < -o-	-o- < ? o-
-ɔ-	-o-	-o-	-o-	-wo- < -o-	-u- < -o-
-o-	-ö-	-ö-	-ö-	-u- < -i-	-o- < -i-
-u-	-u- (gü)	-ü-	-ü-	-wu- < -u-	-u- < -u-
-ü-	-u-	-u-	-u-/-i-	-o- < -Λ-	-u- < -u-
PoRo-	PuRu-	PuRu-	PuR-	P _Λ R _Λ - < PiRi-	PaRu- < PauRu-
-i-	-i-	-i-	-i-/-i-	-i- < -i-	-i- < -i-
a-	a-	a-	a-	a- < a-	a- < a-
ə-	e-	e-	e-	e- < e-	o- < ə-
ɔ-	o-	o-	o-	wo- < o-	o- < ? o-
o-	ö-	ö-	ö-	Ø < ? i-	o- < i-
u-	u-	ü-	ü-	wu- < u-	u- < u-
ü-	u-	u-	u-	Ø < ? Λ-	u- < u-
i-	i-	i-	i-	i- < i-	i- < i-

APPENDIX:
THE CONSONANT INVENTORIES OF
THE ALTAIC DAUGHTER LANGUAGES

Each section will begin with the consonant inventory reconstructed for the proto-language of the branch under discussion. Then, the developments that took place in each will be sketched.

(CHUVASH-)TURKIC

The Turkic languages constitute the most geographically widespread Altaic branch. There are some thirty Turkic languages, as well as numerous dialects, some of which are quite different from the standard/national forms of the languages in question. Chuvash is the most divergent Turkic language. Indeed, it appears likely that Proto-Turkic initially split into two branches: (1) Chuvash and (2) all of the others, hence, the designation (Chuvash-)Turkic.

Starostin—Dybo—Mudrak (2003:136) reconstruct the Proto-Turkic consonant system as follows (see also Johanson 1998b:95; Robbeets 2005:75):

p	t	č	k
b	d	y (= j)	g
	s		
-m-	-n-	-nʸ- (= -ń-)	-ŋ-
	-r-, -l-	-rʸ-, -lʸ- (= -ř-, -ĺ-)	

Notes:

1. *p, *t, *k are assumed to have been fortis and *b, *d, *g to have been lenes (cf. Róna-Tas 1998:71; Johanson 1998b:95; Robbeets 2005:75).
2. Robbeets (2005:75) does not reconstruct *lʸ for Proto-Turkic. She does, however, reconstruct all of the other sounds listed in the above table, including *rʸ, which she accepts as a possible Proto-Turkic phoneme and which she writes *r₂ (cf. Robbeets 2005:78).
3. Tenishev-Dybo (2001—2006.III:17) reconstruct a more complicated consonant system for Proto-Turkic.
4. As noted by Robbeets (2005:76), Proto-Turkic *k and *g had front and back allophones, depending upon the quality of adjacent vowels. These allophones later became phonemic. Cf. Menges (1968b:81—107) for a discussion of the development of these (and other) sounds in the Turkic daughter languages.

First, the initial voiced labial and velar stops reconstructed by Starostin—Dybo—Mudrak for Proto-Altaic were retained in Proto-Turkic (*b-, *g- > *b-, *g-), while the voiced dental stop *d- and the voiced palato-alveolar affricate *ʒ- became *y- (*d-, *ʒ- > *y-). Robbeets assumes that initial *g- became *k- in Proto-Turkic (see also Johanson 1998b:95—96), which seems highly probable.

All of the medial voiced stops were retained (*-b-, *-d-, *-g- > *-b-, *-d-, *-g-). The medial voiced palato-alveolar affricate *-ž- also became *-y- (*-ž- > *-y-).

Next, according to Starostin—Dybo—Mudrak, the initial plain (unaspirated) voiceless stops reconstructed for Proto-Altaic became voiced stops in Proto-Turkic (*p-, *t-, *k- > *b-, *d-, *g-), while the plain (unaspirated) palato-alveolar affricate *č- became *d- (*č- > *d-). Robbeets, on the other hand, assumes that the initial plain (unaspirated) stops and palato-alveolar affricate were retained, except for *p-, which was voiced (*p- > *b-).

According to Starostin—Dybo—Mudrak, the medial plain (unaspirated) stops and palato-alveolar affricate were retained (*-t-, *-k-, *-č- > *-t-, *-k-, *-č-), except for *p-, which was voiced (*p- > *b-), while Robbeets assumes that all of the medial plain (unaspirated) stops and palato-alveolar stops were retained as such (*-p-, *-t-, *-k-, *-č- > *-p-, *-t-, *-k-, *-č-). Starostin—Dybo—Mudrak further assume that medial *-k- became *-g- when followed by a vowel and *r (*-k[Vr]- > *-g[Vr]-).

Finally, according to Starostin—Dybo—Mudrak, initial aspirated voiceless stops reconstructed for Proto-Altaic merged with the plain (unaspirated) voiceless stops in Proto-Turkic (*t^h-, *k^h-, *č^h- > *t-, *k-, *č-), except for *p^h-, which was lost (*p^h- > *h- > *Ø-). Medial aspirated voiceless stops, including *p^h-, underwent the same development (*-p^h-, *-t^h-, *-k^h-, *-č^h- > *-p-, *-t-, *-k-, *-č-).

Proto-Altaic *š > *č^h (> *č) before back vowels but *s elsewhere, while initial *n^y- > *ž- (> *y-); *l^y- > *d- (> *y-); *n-, *l- > *d- (> *y-); *m- > *b-; *ŋ- > *Ø-; and *d-, *z- > *ž- (> *y-).

The reconstruction of Proto-Altaic *-l^y- (= *-l²-) and *-r^y- (= *-r²-) (cf. Poppe 1960:74—92) rests critically on the evidence from (Chuvash-)Turkic, and that evidence is open to different interpretations. Róna-Tas and Robbeets, for example, reject the reconstruction of Proto-Altaic *-l^y- and *-r^y-, while Russian scholars generally support the reconstruction of these sounds.

Starostin—Dybo—Mudrak's reconstruction is very close to the consonant system of early Old Turkic (cf. Erdal 1998:139—140 and 2004:62—85 — Erdal does not include sounds found only in loanwords) (see also Robbeets 2015:38):

	Labials	Alveolars	Palatals	Velars
Unvoiced orals	p	t	č	k
Voiced orals	v	d	y	g
Sibilants		s, z	š	
Nasals	m	n	n ^y	ŋ
Liquids		r, l		

Note: According to Erdal, the voiced oral stops had fricative variants β (or v), δ, γ, but were realized as stops (b, d, g) after r, l, n, and (partially) z.

Menges (1968b:81), however, reconstructs a more complicated system for Common Turkic and Ancient Turkic (see also Tenishev—Dybo 2001—2006.III:17):

	Occlusives	Fricatives	Sibilants	Affricates	Nasals	Liquids
Deep Velar	q	(h), γ				ɫ
Velar					ŋ	
Pre-palatal	k, g	(x)				
Palato-alveolar		š		č, ž	ň	
Dental	t, d	(ð)	s, z		n	l
Labial	p, b	(f), v ?				
Lingual					m	r
Semivowels:	j (asyllabic i) w (asyllabic u)					

Note: The consonant inventory reconstructed by Menges represents a later stage of development. Menges (1968b:81) mentions that all of the above phonemes are found in modern Turkic and that a few more have been added.

The consonant inventory of Modern Turkish contains a series of voiceless and voiced stops and affricates (p, t, k, q; b, d, g, ğ; tš, dž), a series of fricatives (f, s, š; v, z, ž; h), two nasals (m, n), three liquids (l, ɫ, r), and one glide (y). Consonant length is phonemically distinctive. Initial stops are aspirated. In the standard orthography, the following special symbols are used: ç = [tš]; ş = [š]; j = [ž] (this sound has a rather limited distribution); c = [dž]; ğ, or “yumuşak-g”, is used to indicate lengthening of a preceding vowel — it does not have phonemic status. For details, cf. Comrie 1997a; Csató—Johanson 1998:203—205; Kornfilt 1997:483—495 and 2009:522—527.

For the development of the consonants in the Turkic daughter languages, cf. the table of sound correspondences and accompanying notes (for consonants) in Starostin—Dybo—Mudrak 2003:137—146 (see also Dybo 2007:16—22; Johanson 1998b:95—106; Róna-Tas 1998:71—72; Tenishev—Dybo 2001—2006.III:13—16). For details on the phonological systems of the various modern Turkic languages, cf. Johanson—Csató (eds.) 1998.

MONGOLIC

Proto-Mongolic has a relatively shallow time depth. As the ancestor of all modern Mongolian languages, it represents the language that existed at the time of the geographical dispersal of the Mongols in the thirteenth century CE. Related Mongolic languages/dialects that existed alongside Proto-Mongolic as currently reconstructed were replaced around that time.

The Proto-Mongolic consonant system is nearly identical with Middle Mongolian (cf. Starostin-Dybo-Mudrak 2003:149; Janhunen 2003a:6; Robbeets 2005:72—73; Poppe 1960:9) — it may be reconstructed as follows:

	t	č	k
b	d	ž	g
	s		h/ɣ
m	n		ŋ
w	-r-	y (= j)	
	-l-		

Note: Poppe (1955:96—98 and 1960:10—12) reconstructs *p for Proto-Mongolic as does Robbeets (2005:72), while Janhunen (2003a:6) does not.

The Proto-Mongolic consonant inventory included labial, dental, and velar points of articulation (voiceless: *t, *k; voiced: *b, *d, *g) — the voiceless labial member was missing. There were also corresponding labial, dental, and velar nasals (*m, *n, *ŋ) as well as voiceless and voiced palato-alveolar affricates (*č, *ž). There was a sibilant (*s) and a glottal fricative (*h) (Janhunen 2003a reconstructs a voiceless velar fricative *x here). Starostin—Dybo—Mudrak complete the system with *w, *r, *l, and *y. However, Janhunen does not reconstruct *w for Proto-Mongolic. According to Janhunen (2003a:10), *r and *l did not occur in word-initial position.

Starostin—Dybo—Mudrak (2003:80—81) propose the following series of changes from Proto-Altaic to Proto-Mongolic:

1. Initial *š- > *č^h- before back vowels, but *š > *s in other positions.
2. Initial *p^h- (> *f) > *h-.
3. Initial *č- > *t-.
4. Initial *n^y- > *ž- and *l^y- > *d-, while initial *ŋ- > *Ø-, *n-, or *g-, depending upon the following vowel.
5. Medial *-r^y- > *-r-; *-l^y- > *-l-; and *-n^y- > *-n- or *-y- (distribution unclear).
6. Initial *z- > *s-.
7. Dentals are palatalized before *i: *t^h[i]- > *č^h[i]-; *t[i]- > *č[i]-; and *d[i]- > *ž[i]-. Note: This must have taken place after the merger of the vowels *i and *ī (*ī, *i > *i) (cf. Janhunen 2003a:7).
8. Medial *-b- > *-w- (except in clusters and before *k and *g); *-g- > *-h- (except in clusters and before *g); and *-ŋ- > *-h- (except in clusters).
9. Medial plain (unaspirated) stops are voiced: *-p- > *-b-; *-t- > *-d-; and *-k- > *-g-. Note: Medial *-č- remains unchanged: *-č- > *-č-.
10. Medial voiceless aspirated stops and palato-alveolar affricate merge with their plain (unaspirated) counterparts: *-p^h- > *-p-; *-t^h- > *-t-; *-k^h- > *-k-; and *-č^h- > *-č-.
11. Initial dental and velar voiceless aspirated stops and palato-alveolar affricate merge with their plain (unaspirated) counterparts: *t^h- > *t-; *k^h- > *k-; and *č^h- > *č-.

Neither Starostin-Dybo-Mudrak nor Janhunen reconstruct the postvelars *q and *ɣ (also written *γ) as separate phonemes for Proto-Mongolic — they were exclusively

nonphonemic positional variants (allophones) of the velars *k and *g, thus: *q and *ɣ could only appear before *a, *o, *u, while *k and *g appeared before *e, *ö, *ü, *i (cf. Robbeets 2005:73; see also Poppe 1960:9, 16—20, 23—25, 53—62).

Poppe (1955:95 and 1960:9) reconstructs a more complex consonant system for Common Mongolic:

		Labial	Dental & Alveolar	Palatal	Velar	
					Velar	Postvelar
Stops	Voiceless	p	t		k	q
	Voiced	b	d		g	ɣ (g)
Affricates	Voiceless		č			
	Voiced		ž			
Fricatives	Voiceless		s, š			
	Voiced	w (β)		y		
Nasals		m	n		ŋ	
Laterals			l			
Vibrants			r			

According to Poppe (1955:15), Common Mongolic still had initial *p- (or *p̥-), and the sequences *-aɣa-, *-aɣu-, etc. were still preserved. Moreover, the vowels *ĩ and *i were differentiated only after *q, *ɣ and *k, *g. Elsewhere, *ĩ had already merged with *i (*ĩ > *i) and had palatalized immediately preceding dental stops (*ti > *či; *di > *ži). Poppe (1955:96) considers the ancient voiceless stops and palato-alveolar affricate to be aspirated consonants in Common Mongolic and the ancient voiced stops and palato-alveolar affricate to be unaspirated consonants — they were realized as voiceless in some positions and voiced in other positions.

Modern Mongolic languages have reintroduced /š/ through loanwords. Several languages have also added /p/, /f/, and /w/, though their status tends to be rather marginal. New sequences of dentals before /i/ have been introduced (/ti/, /di/), which were not subject to the earlier process of palatalization (no. 7 above). Initial *h- has been mostly lost in the Modern Mongolic languages, though traces are still found in Dagur. Medial *h- has been completely lost.

Let us now look at the consonant system of Written (Literary) Mongolian. It is important to include Written Mongolian here for comparison. The reason being that, due to the relatively shallow time-depth commonly assumed for Proto-Mongolic, the Written Mongolian consonant inventory is very close, though not quite identical, to that reconstructed for Proto-Mongolic, even allowing for idiosyncrasies of the Written Mongolian writing system. Unfortunately, relatively little is known about the linguistic situation prior to Proto-Mongolic, though it may be assumed that several (perhaps mutually intelligible) Pre-Proto-Mongolic dialects existed. If only we had in-depth knowledge about these Pre-Proto-Mongolic dialects, the reconstruction of Proto-Mongolic as a whole would undoubtedly be both different and pushed much further back in time. The Written Mongolian consonant inventory was as follows (cf. Hambis 1945:XII; see also Grønbech-Krueger 1993:9—10;

Janhunen 2003b:35; Poppe 1974:17; Robbeets 2015:38; Rybatzki 2003a:64 [Middle Mongolian]):

	Occlusives		Affricates		Fricatives		Nasals	Liquids	Vibrants
	Voiceless	Voiced	Voiceless	Voiced	Voiceless	Voiced			
Bilabial	p	b					m		
Labiodental						w			
Dental	t	d			s	(z)	n	l	r
Palatal			č	č̣	ʃ				
Guttural	k	g					ŋ		
	q	ɣ							
Semivowel:	y								

The Brāhmi Bugut and Khüis Tolgoi inscriptions discovered in 2014 are over six hundred years older than the previously earliest known inscriptions in a Mongolic language. Though somewhat similar to Middle Mongolian, the language of these inscriptions also contains several archaic features. For details, cf. Vovin 2019.

For information on the phonological systems of the various modern Mongolic languages, cf. Janhunen 2012:21—55 and Janhunen (ed.) 2003; see also Nugteren 2011; Poppe 1955; Svantesson—Tsendina—Karlsson—Franzén 2005.

(MANCHU-)TUNGUS

The (Manchu-)Tungus (Tungusic) branch contains two subgroups: (1) Manchu, Sibe (also called Sibe, Xibe, Xibo), and Jurchen (extinct — formerly spoken in China) and (2) all other Tungusic languages (Evenki, Even, Solon, Negidal, Nanai [also called Gold, Goldi], Ulch, Oroch, and Udihe).

Starostin—Dybo—Mudrak (2003:156) reconstruct the Proto-(Manchu-)Tungus consonant system as follows (see also Tsintsius 1949; Robbeets 2005:68):

p	t	č	k
b	d	č̥	g
	s	š	x
	l, -r-	-y- (= -j-)	
m	n	n ^y (= n̄)	ŋ

Notes:

1. *-r- and *-y- only occur medially.
2. The distinction between velar and uvular consonants found in modern (Manchu-)Tungus languages represents a later development. They arose as positional variants (allophones) adjacent to front or back vowels (cf. Gorelova 2002:86 [for Literary Manchu]).
3. Proto-(Manchu-)Tungus had an extensive system of medial consonant clusters (cf. Robbeets 2005:70 for details).
4. *x is lost in the majority of the (Manchu-)Tungus daughter languages.

The Proto-(Manchu-)Tungus consonant inventory included labial, dental, and velar points of articulation (voiceless: *p, *t, *k; voiced: *b, *d, *g). There were also corresponding labial, dental, and velar nasals (*m, *n, *ŋ) as well as voiceless and voiced palato-alveolar affricates (*č, *ž) and a palatalized nasal (*nʸ). There were two sibilants (*s, *š) and a voiceless velar fricative (*x). Starostin—Dybo—Mudrak complete the system with *l, *-r-, and *-y-.

According to Starostin—Dybo—Mudrak (2003:78—79), the (Manchu-)Tungus consonant system is the most conservative. They note that the following changes took place and in the order listed:

1. Voicing of initial *t- and *č- (*t-, *č- > *d-, *ž-).
2. Spirantization of *kʰ (*kʰ > *x).
3. Merger of initial voiceless aspirates with their plain (unaspirated) voiceless counterparts (*pʰ-, *tʰ-, *čʰ- > *p-, *t-, *č-).
4. Voicing of medial *-p- (*-p- > *-b-) and development of medial *-č- to *-s-.
5. Merger of medial voiceless aspirates with their plain (unaspirated) voiceless counterparts (*-pʰ-, *-tʰ-, *-čʰ- > *-p-, *-t-, *-č-).

Finally, initial *z- became *s-, and the palatalized consonants were depalatalized (*lʸ, *rʸ > *l, *r), except for *nʸ, which was retained.

Regarding the reconstruction of Proto-Tungusic intervocalic *-x-, Starostin-Dybo-Mudrak (2003: 160) note:

Intervocalic *-x- is an innovation in PTM reconstruction, first proposed in Дыбо 1990. It is based on the distinction between -k- and -x in Ulcha, Oroch and Nanai. Northern languages, as well as Oroch, Udehe and Manchu have completely merged the reflexes of *-k- and *-x-. Such a reconstruction seems probable for two reasons: 1) the languages that preserve the distinction between *-k- and *-x- are exactly the same languages that preserve initial *x-; 2) the distinction between *-k- and *-x- seems to reflect the Altaic distinction *-k- : *-kʰ- (see above), thus exactly paralleling the distinction *k- : *x- in word-initial position.

This is an extremely important point, inasmuch as it is, in part, the basis for the reconstruction by Starostin—Dybo—Mudrak of a three-way contrast in the series of

stops and affricates in Proto-Altaic: (1) voiceless aspirated (*p^h, *t^h, *č^h, *k^h); (2) plain (unaspirated) voiceless (*p, *t, *č, *k); and (3) voiced (*b, *d, *ž, *g).

Menges (1968a:36) reconstructs a slightly more complex consonant system for Proto-(Manchu-)Tungus, showing the velar ~ uvular variants mentioned above:

p	t	tʷ (= tʃ)	q/k
b	d	dʷ (= dʒ)	ḡ/ɣ//g
	s		
w ?	ɭ/l	y (= j)	w ?
m	n	nʷ (= nj)	ŋ

Gorelova (2002:85) lists the following consonants for Literary Manchu (see also Austin 1962; Maddieson 1984:283, no. 069; Ramsey 1987:219; Sinor 1968:259—260):

Place of articulation		Labial				
Mode of articulation		Bilabial	Labio-dental	Front	Dorsal	Back
Obstruents	Voiceless	p		t		k
	Voiced	b		d		g
Fricatives	Voiceless		f	s, š		h
	Voiced	v			j*	
Affricates	Voiceless				č (c)	
	Voiced				čž (cz)	
Nasals		m		n		ŋ
Laterals				l		
Flapped				r		

*[j] corresponds to [y] in other systems where [j] is used instead to indicate [ž].

Note: Following the views of Russian scholars, Gorelova (2002:86) notes that /k/, /g/, /h/ have velar allophones [k], [g], [x] before the vowels *e*, *i*, *u* but uvular allophones [q], [ɢ], [χ] before the vowels *a*, *o*, *ū* (the symbol /ū/ is used to indicate two sounds: [ʊ] after uvulars and [o] in borrowings).

For a summary of Tungusic sound correspondences, see Appendix A in Robbeets—Oskolskaya 2022:285—287.

CHAPTER ELEVEN

ESKIMO-ALEUT, CHUKCHI-KAMCHATKAN, AND GILYAK

11.1. ESKIMO

While some progress has been made in reconstructing Proto-Eskimo-Aleut, the reconstruction of Proto-Eskimo is considerably more advanced at the present time, and, therefore, it is Proto-Eskimo alone that is used throughout this book, though Aleut forms are occasionally cited in the part dealing with comparative vocabulary.

According to Fortescue—Jacobson—Kaplan (1994:xi), the Proto-Eskimo phonological system is to be reconstructed as follows (note: the authors also list several non-Proto-Eskimo phonemes in their chart — these are not included below) (see also Fortescue 1998:125; Mudrak 1986):

p	t	c (= č)	k	q
v	ð	y	ɣ	ʀ
	l			
	ɬ			
m	n		ŋ	
		i	u	
		ə		
		a		

11.2. CHUKCHI-KAMCHATKAN

The Chukchi phonological system is relatively simple — not only is there a very small inventory of obstruents, there is also no voicing contrast in stops. The following chart is from Maddieson 1984:416, no. 908 (see also George Campbell 1991.I:328; Comrie [ed.] 1981:243; M. Dunn 1999:43; and Ruhlen 1975:182):

Voiceless stops:	p	t	k	q	ʔ
Voiceless affricates:		[c] č			
Voiced fricatives:		ʝ	ɣ		
Voiceless sibilant:		s			
Voiceless fricative lateral:		ɬ			
Nasals:		m	n	ŋ	
Glides:		w			y

Note: The voiceless dental affricate *c* (= [tʃ]) is used only by women.

Vowels:

High:	i	e	u	
				ə
Low:	e	a	o	

The Chukchi vowels form a system of vowel harmony in which the second correspondent (*e, a, o*) is labeled “dominant”, and the first (*i, e, u*) “recessive”. Native Chukchi words must contain either all “dominant” or all “recessive” vowels; the two correspondents cannot co-exist in the same word. The schwa (ə) is neutral in regards to the “dominant” ~ “recessive” contrast. Cf. M. Dunn 1999:48.

The system of vowel harmony found in Chukchi operates according to different principles than the system found, for example, in Altaic. In Altaic, the direction of vowel harmony is determined by the vowel of the root. In Chukchi, on the other hand, a particular morpheme is either “dominant” or “recessive”; it is the vowel of the “dominant” morpheme (this need not be the root) that influences the remaining vowels.

There are several differences between the Koryak and Chukchi phonological systems worth mentioning. In the Chavchuven dialect of Koryak, *r* and *y* have merged into *y*. In general, Koryak has a larger phonemic inventory than Chukchi, although some of the phonemes have a low frequency of occurrence. Whereas Chukchi has only *w*, Koryak distinguishes both *v* and *w* (though the opposition is neutralized to *w* in syllable-final position). Koryak also distinguishes between non-palatalized *t, l, n* and palatalized *tʲ, lʲ, nʲ*, though palatalization plays primarily an affective role, being used in the formation of diminutives. There are other differences as well: for example, *l* is a voiced frictionless continuant in Koryak, while the Koryak pharyngeal *ʕ* corresponds to Chukchi *ʔ*.

The Kamchadal / Itelmen consonant system is considerably more complicated than those of Koryak and Chukchi. The Kamchadal / Itelmen consonant system contains both plain and ejective stops, voiced and voiceless fricatives, and three lateral phonemes. The following chart is based upon Ruhlen (1975:215):

Voiceless stops and affricates:	p	t	č	k	q	
Ejectives:	pʼ	tʼ	čʼ	kʼ	qʼ	ʔ
Voiceless fricatives:	f	s		x	χ	
Voiced fricatives:	v	z		ɣ		
Nasals:	m	n	ɲ	ŋ		
Laterals:		l	ɭ	ʎ		
Voiced trill:		r				
Glides:	w		y			

Vowels:	i	u
	e	o
	a	ɒ

Fortescue (1998:125 and 2005:6) reconstructs the phonological system of Proto-Chukchi-Kamchatkan as follows (for correspondences, cf. Mudrak 2000:11—16):

p	t	c	k	q	i	u
v	ð		ɣ	ʀ	e	ə
m	n		ŋ		æ	a
	l					
	r					
w		j				

Note: Even though Fortescue's reconstruction is used throughout this book, comparison with other Nostratic languages indicates that the sound reconstructed by Fortescue as [ð] was most likely a voiceless palato-alveolar affricate [č] instead.

Fortescue also mentions that there may have been a full palatal series in Proto-Chukchi-Kamchatkan as well (*/tʲ/, */nʲ/, and */lʲ/). Moreover, Fortescue claims (2005:7—8) that the ejectives found in Kamchadal / Itelmen are secondarily derived, having arisen mostly as a result of syncope.

Proto-Chukchi-Kamchatkan / Proto-Nostratic phonological correspondences (consonants only):

Chukchi-Kamchatkan	Nostratic
p	b p ^h p'
t	d t ^h t'
c	ʒ c ^h c' s z
k	g k ^h k'; g ^w k ^{wh} k' ^w
q	q ^h q' q' ^w
v	x ^w
ð	dʲ tʲ ^h t'ʲ sʲ; ʒ č č' š
ɣ	g g ^w
ʀ	rʲ
m	m
n	n nʲ
ŋ	ŋ
l	l
r	r
w	w
j	y lʲ

The vowel harmonic relationship described above for Chukchi must also be reconstructed for Proto-Chukchi-Kamchatkan, where the “dominant” vowels **a*, **o*, **e* contrasted with the “recessive” vowels **æ*, **u*, **i* (cf. Fortescue 2005:11). Proto-Chukchi-Kamchatkan words had to contain either all “dominant” or all “recessive” vowels; the two correspondents could not co-exist in the same word (Fortescue 2005:438). The schwa (ə) was neutral in regards to the “dominant” ~ “recessive” contrast. For details, cf. Fortescue 2005:11—12.

11.3. GILYAK (NIVKH)

A notable feature of Gilyak (also known as Nivkh) is that it tolerates extremely complex consonant clusters. Furthermore, initial consonants undergo various alternations, which are conditioned both by the final segment of the preceding word and by syntactical considerations. In contrast, the vowel system is fairly simple. The following chart represents the phonological system of the Amur dialect and is based primarily on Comrie (ed.) 1981:267 and Ruhlen 1975:199 (see also George Campbell 1991.II:1014; Gruzdeva 1998:10; Maddieson 1984:416, no. 909):

Voiceless stops:	p	t		k ^y	k	q
Voiceless asp. stops:	p ^h	t ^h			k ^h	q ^h
Voiced stops:		b	d	g ^y	g	g
Palato-alveolar affricate:			č			
Voiceless fricatives:	f	s			x	χ
Voiced fricatives:	v	z			ɣ	ʁ
Nasals:		m	n		n ^y	ŋ
Voiced trill:			r			
Fricative vibrant:		r				
Lateral:		l				
Glides:		w			y	
Vowels:	i	e	a	i	o	u
	[ī]		[ā]		[ō]	[ū]

For information concerning the relationship of Gilyak / Nivkh to other Nostratic daughter languages, cf. Fortescue 1998 and 2011, Greenberg 2000, and Kortlandt 2004.

As noted by Fortescue (2016:1), the time depth for reconstructed Proto-Gilyak / Nivkh is rather shallow. Fortescue (2016:5) reconstructs the following consonant inventory for Proto-Gilyak / Nivkh:

p	t	č	k	q
b	d	d ^y	g	g
v	r	z	ɣ	ʁ

m	n	nʲ	ŋ
	l		
w		j	h

According to Fortescue (2016:5—6), the following consonant alternations between stops and fricatives are also to be reconstructed for Proto-Gilyak / Nivkh:

p ^h	~	f	p	~	v
t ^h	~	ř	t	~	r
č	~	s	dʲ	~	z
k ^h	~	x	k	~	ɣ
q ^h	~	χ	q	~	ʀ

Notes:

1. Fortescue indicates the aspirated stops with an apostrophe: /pʰ/ = /p^h/, etc.
2. Fortescue also uses an apostrophe to indicate palatalization in /nʲ/ (= /nʲ/) and /dʲ/ (= /dʲ/).
3. Fortescue writes /c/ for the palato-alveolar affricate /č/.

Proto-Gilyak / Nivkh was characterized by a vowel harmonic relationship between high harmonic */i/, */ə/, and */u/, on the one hand, and low harmonic */e/, */a/, and */o/, on the other hand (cf. Fortescue 2016:5).

CHAPTER TWELVE

A SKETCH OF PROTO-NOSTRATIC PHONOLOGY

12.1. THE PROTO-NOSTRATIC PHONOLOGICAL SYSTEM

Proto-Nostratic had a rich system of stops and affricates. Each stop and affricate series was characterized by the three-way contrast: (1) voiceless (aspirated), (2) voiced, and (3) glottalized. The aspiration of series (1) was phonemically non-distinctive. This three-way contrast is preserved in Kartvelian (cf. Fallon 2002:55).

The Proto-Nostratic phonological system may be reconstructed as follows (cf. Bomhard—Kerns 1994:122; Illič-Svityč 1971—1984.I:147—171; Dolgopolsky 1998:101 [correspondences, pp. 102—105] and 2008, §2):

Stops and Affricates:

p ^h	t ^h	c ^h	č ^h	t ^y ^h	tʃ ^h	k ^h	k ^{wh}	q ^h	q ^{wh}		
b	d	ʒ	ž	d ^y	dʒ (?)	g	g ^w	ɠ	ɠ ^w		
p'	t'	c'	č'	t' ^y	tʃ'	k'	k' ^w	q'	q' ^w	ʔ	ʔ ^w

Fricatives:

s	š	s ^y	x	x ^w	h	ħ	ħ ^w
z	ž (?)	z ^y (?)	ɣ			ʕ	

Glides:

w	y
---	---

Nasals and Liquids:

m	n	n ^y	ŋ
	l	l ^y	
	r	r ^y	

(It may be noted that the above reconstruction is extremely close to what Ehret [1980:37] posits for Proto-Southern Cushitic, but without the retroflex and prenasalized sounds.)

Vowels:

i (~ e)	u (~ o)
e	o
(ə ~)	a

Also the sequences: iy (~ ey) uy (~ oy) ey oy (əy ~) ay
 iw (~ ew) uw (~ ow) ew ow (əw ~) aw

As can be seen, the phonological system reconstructed above for Proto-Nostratic resembles that of Proto-Afrasian more closely than it does the phonological systems of any of the other branches. (For details about Proto-Afrasian phonology, cf. Chapter 7 of this book and Diakonoff—Militarëv—Porxomovsky—Stolbova 1987; Ehret 1995:480—482; Orël—Stolbova 1995:xvi; D. Cohen 1968:1300—1306; Diakonoff 1988:34—40; Takács 2011a.) This is as it should be, inasmuch as Afrasian was the oldest branch, the first to become separated from the rest of the Nostratic speech community. Likewise, Proto-Afrasian, together with Proto-Dravidian, are of paramount importance for the reconstruction of Proto-Nostratic morphology (see Chapters 16, 17, and 18 of this book for details).

12.2. REMARKS ON THE VOWELS

The following vowels may be reconstructed for Proto-Nostratic: **a*, **e*, **i*, **o*, and **u*. At least some of these vowels must have been subject to considerable subphonemic variation in the Nostratic parent language. The high front and back vowels **i* and **u*, in particular, may be assumed to have had lowered variants (indicated in the Proto-Nostratic reconstructions as **e* and **o* respectively), while the central low vowel **a* may be assumed to have had higher variants (indicated in the Proto-Nostratic reconstructions as **ə*). To complicate matters, **e* and **o* must also have existed as independent vocalic elements. It was the reanalysis, phonemicization, and exploitation of this subphonemic variation that gave rise, at least in part, to the ablaut and vowel harmony patterning found in the majority of the Nostratic daughter languages. It may be noted here that, according to Greenberg (1990a), traces of an earlier system of vowel harmony can be discerned in Proto-Indo-European.

It is unclear whether phonemic long vowels existed in Proto-Nostratic as well, though the evidence seems to indicate that they did not, except, probably, in nursery words.

Finally, it may be noted that, while any vowel (**a*, **e*, **i*, **o*, **u*) could appear in initial syllables, only **a*, **i*, **u* could appear in non-initial syllables. This is identical to the patterning found in Dravidian.

The Proto-Nostratic vowels were, for the most part, preserved in initial syllables in Uralic, Dravidian, and Altaic. They appear to have been originally preserved in Proto-Afrasian as well. Within Afrasian, Cushitic and Omotic are particularly conservative in their vocalism, while the vowel systems found in Semitic, Egyptian, and Berber exhibit a wholesale reduction of the inherited system (cf. Ehret 1995:55—67), similar to what is found in Sanskrit within Indo-European.

The system of vowel gradation found in Semitic, Egyptian, and Berber initially arose through morphological processes that will be discussed in the chapter on

Proto-Nostratic derivational morphology (Chapter 18, §18.2, no. 4). It appeared quite early in verbal stems and derivative nominal stems, though primary root nouns continued to maintain stable vocalism right up to the emergence of the individual daughter languages. Once established, the system of vowel gradation was greatly expanded, especially in Semitic.

The inherited vowel system underwent a thorough restructuring in both Proto-Indo-European and Proto-Kartvelian as a result of a complicated series of changes initiated by the phonemicization of a strong stress accent in the early prehistory of these branches. These developments diminish the importance of Kartvelian and Indo-European for ascertaining the Proto-Nostratic vowel system.

12.3. ROOT STRUCTURE PATTERNING IN PROTO-NOSTRATIC

Comparison of the various Nostratic daughter languages makes it possible to determine the rules governing the structural patterning of roots and stems in Proto-Nostratic. Most likely, the earliest patterning was as follows (later changes are discussed in the chapter on Proto-Nostratic morphology [Chapter 17]):

1. There were no initial vowels in Proto-Nostratic. Therefore, every root began with a consonant.
2. There were no initial consonant clusters either. Consequently, every root began with one and only one consonant. Medial clusters were permitted, however.
3. Two basic root types existed: (A) **CV* and (B) **CVC*, where *C* = any non-syllabic, and *V* = any vowel. Permissible root forms coincided exactly with these two syllable types.
4. A stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: **CVC+C-*. Any consonant could serve as a suffix. Note: In nominal stems, this derivational suffix was added directly to the root: **CVC+C-*. In verbal stems, it was added after the formative vowel: **CVC+V_{FV}+C-*. (FV = formative vowel.)
5. A stem could thus assume any one of the following shapes: (A) **CV-*, (B) **CVC-*, (C) **CVC+C-*, or (D) (reduplicated) **CVC-CVC-*. As in Proto-Altaic, the undifferentiated stems were real forms in themselves and could be used without additional suffixes or grammatical endings. However, when so used, a vowel had to be added to the stem: (A) **CV-* > **CV* (no change), (B) **CVC-* > **CVC+V*, (C) **CVC+C-* > **CVC+C+V*, or (D) (reduplicated) **CVC-CVC-* > **CVC-CVC+V*. Following Afrasian terminology, this vowel may be called a “terminal vowel” (TV). Not only did terminal vowels exist in Proto-Afrasian (cf. Ehret 1995:15; Bender 2000:214—215 and 2007:737—739; Hayward 1987; Mous 2012:364), they are also found in Dravidian, where they are called “enunciative vowels” (cf. Steever 1998a:15; Krishnamurti 2003:90—91; Zvelebil 1990:8—9), and in Elamite (cf. Khačikjan 1998:11; Grilhot-Susini 1987:12), where they are called “thematic vowels”. In Proto-Dravidian, the

enunciative vowel was only required in stems ending in obstruents, which could not occur in final position.

The derivational suffixes were derivational rather than grammatical in that they affected the meaning of a word rather than its relation to other words in a sentence.

While there were noun-deriving and verb-forming suffixes, the presence of a suffix was not necessary to the use of a noun or verb in grammatical constructions. Unextended roots could be used as either nouns or verbs.

Active verbs could be used as nouns denoting either (1) the action of the verb or (2) the agent or instrument of the action, while stative verbs could be used as nouns to indicate state. Noun stems could also be used as verbs. Thus, the distinction between nouns and verbs was not always clear. There was also a solid core of primary (underived) nouns. Reduplication was a widespread phenomenon. Undoubtedly, compounds also existed.

The original root structure patterning was maintained longer in Afrasian, Dravidian, and Altaic than in the other branches, while the patterning found in Proto-Indo-European and Proto-Kartvelian has been modified by developments specific to each of these branches. The root structure constraints found in Proto-Indo-European were an innovation. In Proto-Uralic, the rule requiring that all words end in a vowel was an innovation and arose from the incorporation of the so-called “terminal vowel” into the stem.

On the basis of the evidence of Proto-Indo-European, Proto-Kartvelian, Proto-Afrasian, Proto-Dravidian, and Proto-Altaic, it may be assumed that there were three fundamental stem types: (A) verbal stems, (B) nominal (and adjectival) stems, and (C) pronominal and indeclinable stems. Some stems were exclusively nominal. In the majority of cases, however, both verbal stems and nominal stems could be built from the same root. In Proto-Nostratic, only pronominal and indeclinable stems could end in a vowel. Verbal and nominal stems, on the other hand, had to end in a consonant, though, as noted above, when the undifferentiated stems were used as real words in themselves, a “terminal vowel” had to be added to the stem. As explained in Chapter 17, the terminal vowels were morphologically significant. Adjectives did not exist as an independent grammatical category in Proto-Nostratic.

Illič-Svityč (1971—1984) considers Proto-Nostratic to have been an agglutinating language. However, according to Dolgopolsky (1994:2838 and 2005), Proto-Nostratic probably had an analytical grammatical structure.

Those daughter languages that are highly inflected, namely, Proto-Indo-European, Proto-Kartvelian, and Proto-Afrasian, may be assumed to have gone through earlier periods of development as agglutinating languages. Such a development is suggested for Proto-Indo-European by Bomhard (1988c:475—488) and Rasmussen (1987:107—122); note also Adrados (1989b). See Chapters 19 and 20 of this book for details on Proto-Indo-European morphology.

12.4. ILLIČ-SVITYČ'S AND DOLGOPOLSKY'S RECONSTRUCTIONS

While their reconstructions are fairly close to what is proposed in this book (see above, §12.1), Illič-Svityč and Dolgopolsky arrive at their reconstructions through different sets of sound correspondences. Even though Dolgopolsky mostly adheres to the sound correspondences originally established by Illič-Svityč, he makes some modifications based upon his own research. Illič-Svityč did not prepare a table of Nostratic sound correspondences himself, but the work was done for him by his friend Vladimir Dybo and included at the beginning of volume 1 (pp. 147—171) of Illič-Svityč's posthumous Nostratic dictionary (1971—1984). The following table is taken from page 147 and includes only the stops (see also Illič-Svityč 2008):

Nostratic Init./Med.	Afras.	Kartv.	Indo- European	Uralic	Dravid.	Altaic
p ^ʰ -	p	p, p̣	p	p-	p-	p ^ʰ -
-p ^ʰ -	p	p	p	-pp- ~ -p-	-pp- ~ -p-	-p- ~ -b-
p-	p ₁	p ₁ (p ~ b)	p ~ b	p-	p ₁ - (p- ~ v-)	p-
-p-	p ₁	p ₁ (p ~ b)	p ~ b	-p-	-pp- ~ -v-	-b-
b-	b	b	bh	p-	p-	b-
-b-	b	b	bh	w-	-?- ~ -v-	-b-
ṭ-	ṭ (t)	ṭ	t	t-	t-	t ^ʰ -
-ṭ-	ṭ (t)	ṭ	t	-tt- ~ -t-	-t(t)-	-t-
t-	t	t	d	t-	t-	t-
-t-	t	t	d	-t-	-t(t)-	-d-
d-	d	d	dh	t-	t-	d-
-d-	d	d	dh	-ð-	-t(t)-	-d-
ḳ-	q (k)	ḳ	ḱ, k, k ^u	k-	k-	k ^ʰ -
-ḳ-	q	ḳ	ḱ, k, k ^u	-kk- ~ -k-	-k(k)-	-k- ~ -g-
k-	k	k	ḡ, g, g ^u	k-	k-	k-
-k-	k	k	ḡ, g, g ^u	-k-	-k(k)-	-g-
g-	g	g	ḡh, gh, g ^u h	k	k-	g-
-g-	g	g	ḡh, gh, g ^u h	-γ-	-:Ø-	-g-

Dolgopolsky (1998:102—105 and 2008:9—16) proposes the following Nostratic sound correspondences (as above, only the stops are given):

PN	Sem	Eg	Berb	Kart	PIE	Ural	Turk	Mong	Tung	Drav
*b-	*b	b	*b	*b	*b ^h	*p	*b	*b	*b	*p
*-b-	*b	b	*b, *β	*b	*b ^h	*w, ⊥ /*p	*b	*b	*b	*v
*p-	*p	f	*f	*p	*p, *b	*p	*b, *p ^ˀ	*φ, ? *b	*p	*p
*-p-	*p	f	*f	*p, ? *b	*p, *b	*p, ? *w	*Ø	*φ > *γ	*b	
*p̥-	*p	p	*f	*p, *p̥	*p	*p	*h > *Ø	*φ	*p	*p
*-p̥-	*p	p	*f	*p, *p̥	*p	*p	*pp	*p, *b	*b	*pp
*d-	*d	d	*d	*d	*d ^h	*t	*j	*d, i/*ǰ	*d	*t
*-d-	*d	d	*d	*d	*d ^h	*δ	*δ	*d	*d	t/ʈ
*t-	*t	t	*t	*t	*d	*t	*tˀ	*d, i/*ǰ	*d	*t
*-t-	*t	t	*t	*t	*d	*t	*t	*d	*d	*t̥
*t̥-	*t, *t̥	d	*d̥	*t̥	*t	*t	*tˀ	*t, i/*č	*t	*t
*-t̥-	*t, *t̥	d, t	*d̥, *t̥	*t̥	*t	*tt	*tˀ	*t	*t	*tt/t
*g-	*g	g, ɜ	*g	*g	*g ^h , *ġ ^h , *g ^{wh}	*k	*kˀ	*g, *g	*g	*k
*-g-	*g	g, ɜ	*g	*g	*g ^h , *ġ ^h , *g ^{wh}	*γ	*g	*g, *g, *γ, *γ	*g	*k
*k-	*k	k, c	*k, *g?	*k	*g, *ġ, *g ^w	*k	*kˀ	*k, *q	*k	*k
*-k-	*k	k, c		*k	*g, *ġ, *g ^w	*k	*g, *k	*g, *g, *γ, *γ	*g	*k
*k̥-	*k̥, *k	q	*γ, *k	*k̥	*k̥, k̥, *k ^w	*k	*kˀ, *kˀ	*k, *q	*x	*k
*-k̥-	*k̥	‘ ?		*γ	*x, *x ^w , [*x̥?]	*Ø	*Ø	*Ø	*Ø, ? *g	*Ø

It should be noted that Semitic, Egyptian, and Berber are given separate treatment in the above table of sound correspondences, while the other branches of Afrasian (Cushitic, Omotic, Chadic) are ignored. Likewise, Turkic, Mongolian, and Tungus are listed separately.

On the basis of these sound correspondences, Dolgopolsky (1998:101 and 2008:8) reconstructs the following consonant system for Proto-Nostratic:

Stops and Affricates			Fricatives		Central	Lateral		
Vd.	Vls.	Emph.	Vd.	Vls.	Approximants	Nasals	Sonants	Vibrants
b	p	p̣			w	m		
d	t	ṭ				n	l	
ʒ	c	c̣	z	s				
ʒ̣	č	č̣	ž	š		ɳ (= ɳ)	ḷ	r
ʒ̣̣	ć	ć̣	ẓ̌	ṣ̌	y	ɳ̣	ḷ̣	ř
ʒ̣̣̣	ĉ	ĉ̣	ẓ̣̌	ṣ̣̌				
g	k	ḳ				ŋ		
q	q	q̣	ʕ	χ				
			ħ	ħ (= ɸ)				
	ʔ			h				

Symbols: ʒ = dʒ; c = tʃ; ʒ̣ = dʒ̣; č̣ = tʃ̣; lateral obstruents ʒ̣̣, ĉ̣, ĉ̣̣, ẓ̣̌, ṣ̣̌ = lateralized ʒ, c, ĉ, z, s; palatalized consonants ʒ̣̣̣, ć̣̣̣, ẓ̣̣̣̌, ṣ̣̣̣̌, ɳ̣̣̣, ṛ̣̣̌ = palatalized ʒ, c, ĉ, z, s, n, l, r; ḷ and ɳ̣ (= ɳ) = cacuminal or retroflex l and n; uvular stops: g (voiced), q (voiceless), q̣ (“emphatic”); uvular fricatives: χ = Spanish j, ʕ = Arabic ġ /g/; epiglottal (pharyngeal) consonants: voiceless ħ (= ɸ = Arabic ḥ), voiced ʕ (= Arabic ʕ).

The system of vowels posited by Dolgopolsky (2008:20—24) is identical to that reconstructed for Proto-Nostratic by Illič-Svityč (1971—1984.I:152—153):

i		u	ü
	e		o
	a	ä	

12.5. REMARKS ON THE NOSTRATIC SOUND CORRESPONDENCES

The tables on the following pages summarize the sound correspondences existing among those branches of Nostratic dealt with in this book. These correspondences are based upon the analysis of the lexical material that forms the core of this book (Part 3, Comparative Vocabulary). The Chukchi-Kamchatkan correspondences can be found in Chapter 11.

These sound correspondences are based on three fundamental assumptions:

1. The traditional reconstruction of the Proto-Indo-European consonant system is flawed and is to be reinterpreted along the lines proposed, on the one hand, by Thomas V. Gamkrelidze and Vjačeslav V. Ivanov and, on the other hand, by Paul J. Hopper, as follows (the reconstruction of the Proto-Indo-European stop system posited by Lehmann [1952:99] is given for comparison) (see Chapter 3, §3.4, for details):

Lehmann				Gamkrelidze—Ivanov		
b	b ^h	p	=	p'	bh/b	ph/p
d	d ^h	t	=	t'	dh/d	th/t
g	g ^h	k	=	k'	gh/g	kh/k
g ^w	g ^{wh}	k ^w	=	k' ^u	g ^u h/g ^u	k ^u h/k ^u

2. The frequency distribution of Proto-Nostratic stops (and affricates) in the reconstruction proposed by Illič-Svityč and Dolgopolsky is in contradiction to typological predictions, and is, therefore, highly suspect (see Chapter 1, §1.5, and the Appendices at the end of Volume 4 for details; a synopsis is given below).
3. Taking into consideration (1) the radical reinterpretation of the Proto-Indo-European consonant system proposed by Gamkrelidze, Ivanov, and Hopper, as well as (2) the problems in the frequency distribution of stops (and affricates) in the reconstruction of the Proto-Nostratic phonological system proposed by Illič-Svityč and Dolgopolsky, a different set of sound correspondences is warranted.

Each of these assumptions must be evaluated independently. The reasons that each of these assumptions must be evaluated independently are as follows: Even if assumption 1 proves to be untenable, it does not invalidate assumption 2. Likewise, even if assumption 2 proves to be untenable, it does not invalidate assumption 1. Assumption 3, on the other hand, is dependent upon assumption 2 but not assumption 1. That is to say, assumption 3 is not dependent upon any particular reconstruction of the Proto-Indo-European consonant system, though, it goes without saying, if assumption 1 is valid, it reinforces the likelihood that the revised set of Nostratic sound correspondences proposed in this book is correct. Inasmuch as assumption 3 is dependent on assumption 2, however, if assumption 2 is invalid, then assumption 3 is unnecessary. Moreover, even if assumption 2 is valid and a different set of Nostratic sound correspondences is warranted, it does not necessarily follow that the alternative correspondences proposed in this book are the only possible scenario, though other scenarios are considerably less likely.

Let us now review the basis for assumption 2: The mistake that Illič-Svityč and Dolgopolsky made was in trying to equate the glottalized stops of Proto-Kartvelian and Proto-Afrasian with the traditional plain voiceless stops of Proto-Indo-European. Their reconstruction would make the glottalized stops the least marked members in the Proto-Nostratic labial series and the most marked in the velar series.

Such a reconstruction is thus in contradiction to typological evidence, according to which glottalized stops uniformly have the opposite frequency distribution (most marked in the labial series and least marked in the velar series). This means that the Proto-Nostratic glottalics have the same frequency distribution as the Proto-Indo-European plain voiceless stops. Clearly, this cannot be correct (Alexis Manaster Ramer [1997] makes the same observation). The main consequence of the mistaken comparison of the glottalized stops of Proto-Kartvelian and Proto-Afrasian with the traditional plain voiceless stops of Proto-Indo-European is that Illič-Svityč and Dolgopolsky are led to posit forms for Proto-Nostratic on the basis of theoretical considerations but for which there is absolutely no evidence in any of the Nostratic daughter languages.

The question then arises: Do these criticisms completely invalidate the cognate sets involving glottalized stops (and affricates) proposed by Illič-Svityč and Dolgopolsky? Well, no, not exactly — it is not quite that simple. In many cases, the etymologies are correct, but the Proto-Nostratic reconstructions are wrong — here, a simple rewriting of the reconstructions is all that is required. Other examples adduced by Illič-Svityč and Dolgopolsky admit alternative explanations, while still others are questionable from a semantic point of view and should be abandoned. Once the questionable examples are removed, there is an extremely small number left over (no more than a handful) that appear to support their position. However, compared to the massive counter-evidence supplied in this book (see Part 3, Comparative Vocabulary), even these remaining examples become suspect (they may be borrowings or simply false etymologies). Finally, there are even some examples where the comparison of glottalized stops in Proto-Kartvelian and Proto-Afrasian with plain voiceless stops in Proto-Indo-European is correct. This occurs in the cases where two glottalics originally appeared in a Proto-Nostratic root: **C'VC'*-. Such roots are preserved without change in Proto-Kartvelian and Proto-Afrasian, while in Proto-Indo-European, they have been subject to a rule of regressive deglottalization: **C'VC'* -> **CVC'* -.

We may close this section by noting that Campbell—Poser (2008:243—264) have recently prepared a highly critical and devastating assessment of the work on Nostratic by the Moscow School in general and by Illič-Svityč in particular. They conclude:

To summarize the results of our investigation of IS's Uralic and Indo-European data and his methods, we see serious problems with the methods utilized and with the data in a large number of the sets presented (see Campbell 1998, 1999 for details). With Uralic supposedly being the strong suit of Nostratic, we can only assume that the forms presented from the other putative Nostratic language families, where we have less expertise, probably exhibit a similar range of problems. Therefore, we do not accept the Nostratic hypothesis.

Similar views are expressed by Ringe (1995a) and Ringe—Eska (2013:265—279) regarding the work of Illič-Svityč (and Dolgopolsky).

12.6. CORRESPONDENCES

Proto-Nostratic	Proto-IE	Proto-Kartvelian	Proto-Afrasian	Proto-Uralic	Proto-Dravidian	Proto-Altaic	Proto-Eskimo
b-	b ^h -	b-	b-	p-	p-	b-	p-
-b-	-b ^h -	-b-	-b-	-w-	-pp-/v-	-b-	-v-
p ^h -	p ^h -	p-	p-, f-	p-	p-	p ^h -	p-
-p ^h -	-p ^h -	-p-	-p-, -f-	-p-	-pp-/v-	-p ^h -	-p(p)-
p'-	(p'-)	p'-	p'-			p-	
-p'-	-(p'-)	-p'-	-p'-			-p-	

d-	d ^h -	d-	d-	t-	t-	d-	t-
-d-	-d ^h -	-d-	-d-	-t-	-t(t)-	-d-	-ð-
t ^h -	t ^h -	t-	t-	t-	t-	t ^h -	t-
-t ^h -	-t ^h -	-t-	-t-	-t(t)-	-tt-	-t ^h -	-t(t)-
t'-	t'-	t'-	t'-	t-	t-	t-	t-
-t'-	-t'-	-t'-	-t'-	-t-	-t(t)-	-t-	-t-

dy-	d ^h -	žg-	dy-	ty-	c-	ž-	c-
-dy-	-d ^h -	-žg-	-dy-	-ty-	-c(c)/-y-	-ž-/d-	-c-
t ^y ^h -	t ^h -	čk-	ty-	ty-	c-	č ^h -	c-
-t ^y ^h -	-t ^h -	-čk-	-ty-	-ty-	-c(c)/-y-	-č ^h -	-c(c)-
t'y-	t'-	č'k'-	t'y-	ty-	c-	č-	c-
-t'y-	-t'-	-č'k'-	-t'y-	-tyty-	-c(c)/-y-	-č-	-c-
sy-	s-	šk-	sy-	sy-	c-	s-	
-sy-	-s-	-šk-	-sy-	-sy-	-c(c)/-y-	-s-	

ʒ-	d ^h -	ʒ-	ʒ-	č-	c-	ž-	c-
-ʒ-	-d ^h -	-ʒ-	-ʒ-	-č-	-c(c)-	-ž-/d-	-c-
c ^h -	t ^h -	c-	c-	č-	c-	č ^h -	c-
-c ^h -	-t ^h -	-c-	-c-	-č-	-c(c)-	-č ^h -	-c(c)-
c'-	t'-	c'-	c'-	č-	c-	č-	c-
-c'-	-t'-	-c'-	-c'-	-č-	-c(c)-	-č-	-c-
s-	s-	s-	s-	s-	c-	s-	
-s-	-s-	-s-	-s-	-s-	-c(c)-	-s-	
z-	s-	z-	z-	s-		z-	
-z-	-s-	-z-	-z-	-s-			

Proto-Nostratic	Proto-IE	Proto-Kartvelian	Proto-Afrasian	Proto-Uralic	Proto-Dravidian	Proto-Altaic	Proto-Eskimo
ǰ-	d ^h -	ǰ-	ʒ-	č-	c-	ǰ-	c-
-ǰ-	-d ^h -	-ǰ-	-ʒ-	-č-	-c(c)-	-ǰ-/d-	-c-
č ^h -	t ^h -	č-	c-	č-	c-	č ^h -	c-
-č ^h -	-t ^h -	-č-	-c-	-č-	-c(c)-	-č ^h -	-c(c)-
č'-	t'-	č'-	c'-	č-	c-	č-	c-
-č'-	-t'-	-č'-	-c'-	-č-	-c(c)-	-č-	-c-
š-	s-	š-	s-	s-	c-	s-	
-š-	-s-	-š-	-s-	-s-	-c(c)-	-s-	

g-	g ^h -	g-	g-	k-	k-	g-	k- q-
-g-	-g ^h -	-g-	-g-	-x-	-k-	-g-	-ɣ-
k ^h -	k ^h -	k-	k-	k-	k-	k ^h -	k- q-
-k ^h -	-k ^h -	-k-	-k-	-k(k)-	-k(k)-	-k ^h -	-k(k)- -q(q)-
k'-	k'-	k'-	k'-	k-	k-	k-	k- q-
-k'-	-k'-	-k'-	-k'-	-k-	-k(k)-	-k-	-k- -q-

g ^w -	g ^{wh} -	gw/u-	g ^w -	k-	k-	g-	k- q-
-g ^w -	-g ^{wh} -	-gw/u-	-g ^w -	-x-	-k-	-g-	-ɣ-
k ^{wh} -	k ^{wh} -	kw/u-	k ^w -	k-	k-	k ^h -	k- q-
-k ^{wh} -	-k ^{wh} -	-kw/u-	-k ^w -	-k(k)-	-k(k)-	-k ^h -	-k(k)- -q(q)-
k' ^w -	k' ^w -	k' ^w /u-	k' ^w -	k-	k-	k-	k- q-
-k' ^w -	-k' ^w -	-k' ^w /u-	-k' ^w -	-k-	-k(k)-	-k-	-k- -q-

g-	g ^h -	g-	g- (?)	k-	k-	g-	k- q-
-g-	-g ^h -	-g-	-g- (?)	-x-	-k-	-g-	-ɣ-
q ^h -	k ^h -	q-	q- (?)	k-	k-	k ^h -	k- q-
-q ^h -	-k ^h -	-q-	-q- (?)	-k(k)-	-k(k)-	-k ^h -	-k(k)- -q(q)-
q'-	k'-	q'-	q'- (?)	k-	k-	k-	k- q-
-q'-	-k'-	-q'-	-q'- (?)	-k-	-k(k)-	-k-	-k- -q-
g ^w -	g ^{wh} -	gw/u-	g ^w - (?)	k-	k-	g-	k- q-
-g ^w -	-g ^{wh} -	-gw/u-	-g ^w - (?)	-x-	-k-	-g-	-ɣ-
q' ^w -	k' ^w -	q' ^w /u-	q' ^w - (?)	k-	k-	k-	k- q-
-q' ^w -	-k' ^w -	-q' ^w /u-	-q' ^w - (?)	-k-	-k(k)-	-k-	-k- -q-

Proto-Nostratic	Proto-IE	Proto-Kartvelian	Proto-Afrasian	Proto-Uralic	Proto-Dravidian	Proto-Altaic	Proto-Eskimo
<u>t</u> ^h -	k ^h -	x-	<u>t</u> ^h -	sʏ-	c-	š-	ɬ-
- <u>t</u> ^h -	-k ^h -	-x-	- <u>t</u> ^h -	-δ- (?)	-k-		-ɬ-
<u>t</u> ^ʔ -	kʔ-	kʔ-	<u>t</u> ^ʔ -	δʏ-	t-		
- <u>t</u> ^ʔ -	-kʔ-	-kʔ-	- <u>t</u> ^ʔ -	-δʏ-	-t(t)-		

ʃ-	ʃ ^h -	Ø-	ʃ-	Ø-	Ø-	Ø-	Ø-
-ʃ-	-ʃ ^h -	-Ø-	-ʃ-	-Ø-	-Ø-	-Ø-	-Ø-
ħ-	ħ ^h -	x-	ħ-	Ø-	Ø-	Ø-	Ø-
-ħ-	-ħ ^h -	-x-	-ħ-	-Ø-	-Ø-	-Ø-	-Ø-
ʔ-	ʔ-	Ø-	ʔ-	Ø-	Ø-	Ø-	Ø-
-ʔ-	-ʔ-	-Ø-	-ʔ-	-Ø-	-Ø-	-Ø-	-Ø-
ʔ ^w -	ʔ ^w -	w-	ʔ ^w -	w-	v-/Ø-		v-
-ʔ ^w -	-ʔ ^w -	-w-	-ʔ ^w -	-w-	-v-		-v-
h-	h-	Ø-	h-	Ø-	Ø-	Ø-	Ø-
-h-	-h-	-Ø-	-h-	-Ø-	-Ø-	-Ø-	-Ø-
x-	ħ ^h -	x-	x-	Ø-	Ø-	Ø-	Ø-
-x-	-ħ ^h -	-x-	-x-	-x-	-Ø-	-Ø-	-Ø-
x ^w -	-ħ ^h ^w -	xw/u-	x ^w -	w-	v-/Ø-		v-
-x ^w -	-ħ ^h ^w -	-xw/u-	-x ^w -	-x-	-v-		-v-
ɣ-	ʃ ^h -	ɣ-	ɣ-	Ø-	Ø-	Ø-	Ø-
-ɣ-	-ʃ ^h -	-ɣ-	-ɣ-	-Ø-	-Ø-	-Ø-	-Ø-

y-	y-	y-/Ø-	y-	y-	y-/Ø-		y-
-y-	-y-		-y-	-y-	-y-	-y-	-y-
w-	w-	w-	w-	w-	v-/Ø-		v-
-w-	-w-	-w-	-w-	-w-	-v-		-v-

m-	m-	m-	m-	m-	m-	m-	m-
-m-	-m-	-m-	-m-	-m-	-m-	-m-	-m-
n-	n-	n-	n-	n-	n-	n-	n-
-n-	-n-	-n-	-n-	-n-	-n-/ɲ-	-n-	-n-
nʏ-	n-	n-	n-	nʏ-	ɲ-	nʏ-	
-nʏ-	-n-	-n-	-n-	-nʏ-	-ɲ-	-nʏ-	
-ŋ-	-n-	-n-	-ŋ-	-ŋ-	-ɲ-	-ŋ-	-ŋ-

Proto-Nostratic	Proto-IE	Proto-Kartvelian	Proto-Afrasian	Proto-Uralic	Proto-Dravidian	Proto-Altaic	Proto-Eskimo
l-	l-	l-	l-	l-	l-	l-	
-l-	-l-	-l-	-l-	-l-	-l-	-l-	-l-
-ly-	-l-	-l-	-l-	-ly-	ɭ-	-ly-	-l- -y-
r-	-r-	-r-	-r-	r-			
-r-	-r-	-r-	-r-	-r-	-r-/-ɽ-	-r-	-R-
-rʸ-	-r-	-r-	-r-	-rʸ-	-ɽʸ-	-rʸ-	

Note: In Eskimo, *-lʷ- > -l- after -i- but -y- after -u-.

i	i e	i	i	i	i	i	i
ə	e a ə	e i	i u	e	e	e	ə
u	u o	u	u	u	u	u	u
e	e	e	e	e	e	e	i
a	a o ə	a	a	a ä	a	a	a
o	o	o	o	o	o	o	u
iy	īy ey ī	iy i	iy	iy i	iy ī		iy
əy	ey ay	ey i	iy uy	ey	ey ē		əy
uy	īy ī ī	uy i	uy	uy	uy ū		uy
ey	ey īy ē	ey i	ey	ey e	ey ē		iy
ay	ay oy	ay i	ay	ay äy	ay ā		ay
oy	oy īy ī	oy i	oy	oy	oy ō		uy
iw	ū ũw ũ	iw u	iw	iw	iv ī		iv
əw	ew aw ūw ũ	ew u	iw uw	ew	ev ē		əv
uw	ū ō ũw ow ũ	uw u	uw	uw u	uv ū		uv
ew	ew ũw ū	ew u	ew	ew	ev ē		iv
aw	ow ũw ū	aw u	aw	aw äw	av ā		av
ow	ō ow ūw ũ	ow u	ow	ow o	ov ō		uv

Note: The Proto-Altaic vowels are in accordance with Starostin—Dybo—Mudrak's reconstruction. The developments of the sequences **iy*, **əy*, **uy*, **ey*, **ay*, **oy*, **iw*, **əw*, **uw*, **ew*, **aw*, **ow* in Proto-Altaic are unclear.

APPENDIX:
A SKETCH OF PROTO-EURASIATIC PHONOLOGY

A comparison of the Eurasiatic daughter languages shows that the Proto-Eurasiatic consonant system was close to that reconstructed by Starostin—Dybo—Mudrak (2003:24) for Proto-Altaic, but with some notable exceptions: (1) The plain (unaspirated) voiceless stops and affricates reconstructed for Proto-Altaic by Starostin—Dybo—Mudrak were glottalized stops and affricates (ejectives) in Proto-Eurasiatic. (2) A series of postvelar stops (*q^h, *g, *q') must be reconstructed to account for the reflexes found in Proto-Chukchi-Kamchatkan (but not Proto-Eskimo). (3) A series of labiovelars (*k^{wh}, *g^w, *k'^w) must be reconstructed to account for the reflexes found in Proto-Indo-European. (4) A series of laryngeals must be reconstructed. (5) A series of palatalized alveolars (*t^y^h, *d^y, *t'^y) must be reconstructed to account for the reflexes found in Proto-Uralic (in the other Eurasiatic daughter languages, they have the same reflexes as the palato-alveolar affricates). Finally, (6) a series of lateralized affricates (*t^l^h, *t^l') must be reconstructed to account for the reflexes found in Proto-Uralic and Proto-Eskimo. Thus, the Proto-Eurasiatic phonological system may be reconstructed as follows:

Stops and Affricates:

p ^h	t ^h	č ^h	t ^y ^h	t ^l ^h	k ^h	k ^{wh}	q ^h		
b	d	ž	d ^y		g	g ^w	g		
p'	t'	č'	t' ^y	t ^l '	k'	k' ^w	q'	ʔ	ʔ ^w

Fricatives:

s	s ^y	x	x ^w	h	ħ
z		ɣ			ʕ

Glides:

w	y
---	---

Nasals and Liquids:

m	n	n ^y	ŋ
l		l ^y	
r		r ^y	

I would tentatively set up a vowel system for Proto-Eurasiatic identical to that reconstructed in this book for Proto-Nostratic, leaving open the possibility that front rounded and back unrounded allophones may have started to develop, at least in some branches of Eurasiatic.

Vowels: i (~ e) u (~ o)
 e o
 (ə ~) a

Also the sequences: iy (~ ey) uy (~ oy) ey oy (əy ~) ay
 iw (~ ew) uw (~ ow) ew ow (əw ~) aw

CHAPTER THIRTEEN

THE NOSTRATIC HOMELAND AND THE DISPERSAL OF THE NOSTRATIC LANGUAGES

13.1. OVERVIEW

Here, we run into potentially serious problems, for we must turn to other disciplines such as archeology. Archeological data provide the raw material from which archeologists construct theories about the past. The problem is that the raw material is hardly ever complete, but rather it is limited by what has happened to survive, usually products of manual skill and craftsmanship. This means that the theories derived from the controlled analysis of the raw material involve a good deal of interpretation on the part of the observer — one's view of the past will be directly conditioned to a greater or lesser degree by the theoretical framework within which one operates as well as by one's prejudices in addition to the type of evidence employed. (To complicate matters, many of these same problems occur in the field of Linguistics [cf. Labov 1994:10—11].) Moreover, when dealing with pre-literate cultures, there is seldom a clear-cut correlation between linguistic groups and culture, and cultural spread does not always mean language spread, even when migration of people takes place — individuals or small groups of individuals moving peacefully to a new territory may simply be assimilated into the dominant population group. One could cite the example of the many ancient Greek trading colonies established on the shores of the Mediterranean and Black Seas, most of which were eventually absorbed into the surrounding communities. On the other hand, language spread can occur with a relatively small migration of people when the language belongs to conquerors or to those bearing a more technologically advanced culture — both these factors were involved, for example, in the spread of Latin to the Iberian Peninsula, Gaul, and Dacia, where modern-day Romance languages are found, nearly all of the indigenous languages existing at the time of the Roman conquest having been replaced (Basque is an exception). Another example would be the spread of Turkic languages across Central Asia, mostly replacing the Iranian languages that were spoken there at the time of the appearance of the Turkic tribes (Tajik [also called Tadzhik] is an exception). Tocharian was completely replaced and is now extinct. It goes without saying that written records, when combined with the surviving relics of material culture, give a much broader view of earlier communities and reduce the need for speculation/interpretation. Even when no written records exist, however, the analysis of the lexicon of a reconstructed proto-language can give important clues about the habitat, social organization, and material culture of the speakers of that language — this endeavor is referred to as “linguistic paleontology” or “paleolinguistics”.

The question of where the probable homeland of the Nostratic proto-language is to be located is directly related to the locations of the homelands of each of the daughter languages. Since there is a fair amount of controversy surrounding this subject, it is necessary to survey current theories and to select the scenarios that seem most likely in view of linguistic, archeological, and anthropological evidence, while mindful of the problems expressed in the preceding paragraph. Let us look at each of the daughter languages in turn.

13.2. INDO-EUROPEAN

Until fairly recently, there were two main competing theories regarding the Indo-European homeland (cf. Mallory—Adams 2006:442—463; Darden 2001): (1) according to the first theory, championed by the late Marija Gimbutas and a large number of supporters, the Indo-European homeland was located to the north of and between the Black and Caspian Seas and has been broadly identified with the “Kurgan Culture”; (2) another view, made popular by Colin Renfrew, would place the Indo-European homeland in Anatolia — similar views were put forth by Gamkrelidze—Ivanov in the second volume of their massive 1984 work (in English translation) *Indo-European and the Indo-Europeans: A Reconstruction and Historical Typological Analysis of a Protolanguage and a Proto-Culture* (an English translation of this work was published in 1995), by Krantz (1988), Dolgopolsky (1988a), and Drews (1997). Renfrew tries to link the spread of Indo-European languages in Europe with the spread of agriculture. According to Gimbutas, the period of Indo-European unity is to be placed at around 4,500 BCE, while Renfrew would place the date significantly earlier at around 7,000 BCE.

The following objections may be raised against the theory of an Anatolian homeland for Proto-Indo-European and against the view that Indo-Europeans were somehow responsible for the spread of agriculture in Europe:

1. There are no unambiguous references to Indo-Europeans in written records from the ancient Near East until just before 2,000 BCE, and the first references are to Hittites. Moreover, the Hittites were most definitely invaders (cf. Gamkrelidze 1970; Mellaart 1981; Puhvel 1994; Gerd Steiner 1990) who imposed themselves on populations speaking non-Indo-European languages — it is generally agreed that Hittite replaced Hattic, which was the indigenous language of central Anatolia (cf. Diakonoff 1990:63). Another language widely-spoken in Anatolia at the time that the Hittite texts were composed was Hurrian, which, along with the later and closely-related Urartian, may have been an early Northeast Caucasian language (cf. Diakonoff—Starostin 1986), though this is by no means proven. Thus, it is clear that there were speakers of non-Indo-European languages in Anatolia before the arrival of Indo-Europeans — Diakonoff (1990:62—63) places the Hurro-Urartian language in eastern Anatolia at least as far back as the third millennium BCE. Attempts to equate other groups (Gutians, for example) referred to in cuneiform texts with Indo-

- Europeans are based upon such insufficient evidence as to be meaningless (Diakonoff [1990:63] claims that the Gutians [Qutians] were Caucasian).
2. An Anatolian homeland for Indo-European makes it difficult to account for the evidence of contact between Indo-European and Uralic (cf. Joki 1973; Anthony 2007:93—97; Häkkinen 2012b; Haarmann 1994 and 1998; Koivulehto 2002).
 3. Anthony (1991:198—201, 2007, and 2013) argues that the linguistic evidence confirms the existence of four-wheeled vehicles among the Indo-Europeans. Archeological evidence indicates that four-wheeled vehicles appeared in Europe no earlier than 3,300—3,100 BCE. The correlation of the linguistic and archeological evidence brought forth by Anthony rules out a date for Indo-European unity as early as that proposed by Renfrew and suggests that “the PIE language community remained relatively intact until at least 3,300 BC” (see also Melchert 2001:233). Moreover, the association of the Indo-Europeans with the domestication of horses and with the development of four-wheeled vehicles definitely points to a North Pontic/Steppe homeland as opposed to an Anatolian homeland. I will have more to say about this below.
 4. The study of Indo-European social institutions, lexicon, and mythology indicates that the Indo-Europeans were primarily mobile pastoralists and not sedentary agriculturalists, that Indo-European social structure was patriarchal, and that warriors and heroes were highly esteemed (cf. Hock—Joseph 1996:526—528; Mallory 1997:112; Sergent 1995:171—392). As early as 9,000 BCE, incipient agriculture and sedentary settlements began to appear in southeastern Anatolia. By 6,000 BCE, agriculture had spread westward to the Aegean Sea. Clearly, the Anatolian economic and cultural traditions do not match those of the Indo-Europeans. On the other hand, the economic and cultural traditions evidenced by the archeological data from the North Pontic/Steppe zone are more in line with the Indo-European situation (cf. Anthony 2007 and 2013).
 5. Had the Indo-European homeland been located in Anatolia, one would expect to find abundant, clearly recognizable, and ancient Indo-European loanwords in the oldest recorded languages of the ancient Near East (Hattic, Hurrian, Sumerian, Semitic, etc.) — there are few if any such loanwords. Likewise, there are very few loanwords from any of these languages in Indo-European. Given its great antiquity and cultural influence, one would particularly expect that Sumerian loanwords would have made their way into late Proto-Indo-European and show up in the non-Anatolian Indo-European daughter languages, just as they do in Hittite. However, hardly any such loanwords can be identified. Cf. Whittle 1996.
 6. While the first farmers arrived in Europe around 7,500 years ago, genetic research conducted by the Australian Centre for Ancient DNA at the University of Adelaide and reported on-line in April 2013 indicates that a new population moved into Europe around 5,000 to 4,500 years ago, causing the disappearance of the earlier populations. This research shows that the current population of Europe is not descended from the earlier Anatolian agriculturalists, providing further proof that Anatolia could not have been the Indo-European homeland.

The literature supporting a North Pontic/Steppe homeland for Indo-European is extensive and begins as far back as 1926 with the publication of V. Gordon Childe's book *The Aryans: A Study of Indo-European Origins*. Rather than presenting all of the arguments and evidence, I will summarize my own views. For detailed information on the theory of a North Pontic/Steppe homeland, cf. James P. Mallory, *In Search of the Indo-Europeans: Language, Archaeology and Myth* (1989); Thomas Markey and John A. C. Greppin (eds.), *When Worlds Collide: Indo-European and Pre-Indo-Europeans. The Bellagio Papers* (1990); the volume honoring Marija Gimbutas co-edited by Susan Skomal and Edgar C. Polomé entitled *Proto-Indo-European: The Archaeology of a Linguistic Problem. Studies in Honor of Marija Gimbutas* (1987); Benjamin W. Fortson IV, *Indo-European Language and Culture: An Introduction* (2004 [2nd edition 2010]), Chapter 2: Proto-Indo-European Culture and Archaeology; and David W. Anthony, *The Horse, The Wheel, and Language* (2007). Many important articles on the subject have appeared in issues of the *Journal of Indo-European Studies*, including numerous articles by Marija Gimbutas herself. A notable recent article in this journal is by Axel Kristinsson (2012). See also Bernard Sergent's remarkable book (in English translation) *The Indo-Europeans: History, Language, Myths* (1995) and the co-edited volume by James P. Mallory and Douglas Q. Adams entitled *Encyclopedia of Indo-European Culture* (1997) as well as their later work *The Oxford Introduction to Proto-Indo-European and the Proto-Indo-European World* (2006).

In an important paper entitled "The Epicenter of Indo-European Linguistic Spread", Nichols (1997a) has argued that the earliest Indo-European speech community ("Pre-Indo-European") was located in Central Asia (see also Kozintsev 2019 and 2020; Rouard 2022). Nichols proposes that Pre-Indo-European spread westward across the steppes, eventually arriving on the northeastern shores of the Black Sea (Nichols 1997a:135). I support this scenario. I would place the Pre-Indo-Europeans in Central Asia at about 7,000 BCE, and I would date the initial arrival of the Pre-Indo-Europeans in the vicinity of the Black Sea at about 5,000 BCE — this is somewhat earlier than the date Nichols assigns. Though it is not known what language or languages were spoken in the area before the arrival of Indo-European-speaking people, it is known that the Pre-Indo-Europeans were not the first inhabitants of the area. According to Koško (1991:252), archeological evidence points to cultural influence spreading from the Caucasian-Pontic zone to the area of the Vistula-Oder in the earliest Neolithic (around 7,000 BCE). The direction of influence was subsequently reversed, and there appears to have been a movement of people from west to east into the Pontic area. I would equate this reversal with the arrival of the Pre-Indo-Europeans. I will venture a guess that, when the Pre-Indo-Europeans arrived on the shores of the Black Sea, they encountered and occupied territory formerly inhabited by people speaking primordial North Caucasian languages (cf. Kortlandt 1990 and 2010f). This disrupted the pre-existing cultural link between the Caucasian-Pontic zone and the Vistula-Oder area and resulted in a displacement of Caucasian languages southward toward the Caucasus Mountains. That there was contact between Indo-Europeans and Caucasians is supported by a number of shared vocabulary items between Indo-European and Northwest

Caucasian. Among these are the following (this is but a small sampling — the Northwest Caucasian examples cited below are from the Circassian branch [cf. Kuipers 1975]; a more extensive list, incorporating examples from the remaining branches of Northwest Caucasian, can be found in Chapter 21 of this book). (Note: The Proto-Indo-European reconstructions are in accordance with the Glottalic Model of Proto-Indo-European consonantism proposed by Gamkrelidze—Ivanov [1972 and 1973] and Hopper [1973] — see Chapter 3, §3.4, for details):

1. Proto-Circassian **q'atha* 'to tell, to report; to announce, to make known' ~ Proto-Indo-European **k'weth-/k'wot-* 'to say, to speak, to call' (cf. Pokorny 1959:480—481 **g^uet-* 'to talk': Armenian *kočem* 'to call, to name'; Gothic *qipan* 'to say'; Old Icelandic *kveða* 'to say'; Old English *cweþan* 'to say, to speak'; Old Saxon *quēdan* 'to speak'; Old High German *quedan* 'to speak').
2. Proto-Circassian **wasa* 'price' ~ Proto-Indo-European **wes-no-m* 'price' (cf. Pokorny 1959:1173 **ues-* 'to buy, to sell', **ues-no-* 'price': Sanskrit *vasná-m* 'price, value'; Latin *vēnum* 'sale'; Greek ὄνος [**wós-no-s*] 'price').
3. Proto-Circassian **warq:ə* 'nobleman' ~ Proto-Indo-European (adj.) **wordh-o-s* 'grown, full-grown, tall, upright', (adj.) **wrdh-o-s* 'raised, upright, tall', (stem) **werdh-/wordh-/wrdh-* 'to raise, to elevate; to grow, to increase' (cf. Pokorny 1959:1167 **uerdh-*, **uredh-* 'to grow': Sanskrit *vārdha-h* 'increasing, growing, thriving', *vṛddhá-h* 'grown, become larger or longer or stronger, increased, augmented, great, large; experienced, wise, learned; eminent in, distinguished by', *vṛddhi-h* 'growth, increase, augmentation, rise, advancement').
4. Proto-Circassian **wala* 'cloud' ~ Proto-Indo-European **wel-/wol-/wǵ-* 'to moisten, to wet, to flow': (extended forms) **wel-kh-/wol-kh-/wǵ-kh-*, **wel-gh-/wol-gh-/wǵ-gh-*, **wel-k-/wol-k-/wǵ-k-* 'to wet, to moisten' (cf. Pokorny 1959:1145—1146 **uelk-*, **uelg-* 'wet, moist': Old English *weolcen*, *wolcen* 'cloud'; German *Wolke* 'cloud').
5. Proto-Circassian **naba* 'belly' (note here Temirgoy *nəbəžə* 'navel'; Abaza *bənz'a* 'navel'; Kabardian *bənža* 'navel'; Ubykh *nəbəž'* 'navel') ~ Proto-Indo-European (**nebh-/nobh-* 'navel' (cf. Pokorny 1959:314—315 [**enebh-*], **embh-*, **ombh-*, **nōbh-*, [**nēbh-* ?], **mbh-* 'navel': Sanskrit *nābhi-h* 'navel'; Old High German *naba* 'nave, hub (of a wheel)'; Old Prussian *nabis* 'navel').
6. Proto-Circassian **ban(a)* 'to fight' ~ Proto-Indo-European **bhen-* 'to slay, to wound' (cf. Pokorny 1959:126 **bhen-* 'to slay, to wound': Gothic *banja* 'strike, blow, wound'; Old High German *bano* 'death, destruction').
7. Proto-Circassian **malə* 'sheep' ~ Proto-Indo-European **mel-* 'wool, woolen garment' (cf. Pokorny 1959:721 **mel-* 'wool, woolen garment': Greek μαλλός 'a lock of wool, wool').
8. Proto-Circassian **hawa* 'but' ~ Proto-Indo-European **hew-* [**haw-*] 'that, other' (cf. Pokorny 1959:73—75 **au-*, **u-* pronoun stem: 'that, other': Gothic *auk* 'but, also'; Latin *au-tem* 'but, on the other hand').
9. Proto-Circassian **p:əyə* 'enemy' ~ Proto-Indo-European **phē(y/i)-* 'to hurt, to harm, to attack' (cf. Pokorny 1959:792—793 **pē(i)-* 'to hurt': Gothic *fijands* 'enemy'; Old Icelandic *fjáandi* 'enemy, foe'; Old English *fēonds* 'enemy').

10. Proto-Circassian **k'anə* 'knucklebone (used in bone game)' ~ Proto-Indo-European **k'enu-* 'knee, joint, angle' (cf. Pokorny 1959:380—381 **ĝenu-*, **ĝneu-* 'knee': Sanskrit *jānu* 'knee'; Latin *genū* 'knee, knot, joint'; Greek γόνυ 'knee, joint'; Gothic *kniu* 'knee'; Old English *cnēow* 'knee').
11. Proto-Circassian **k'asa* 'to go out (as fire, light); to escape, to run away, to desert, to elope' ~ Proto-Indo-European **k'wes-* 'to extinguish' (cf. Pokorny 1959:479—480 **gʷes-*, **zɡʷes-* 'to extinguish': Lithuanian *gestù*, *gèsti* 'to go out, to die out, to become dim'; Old Church Slavic *u-gasiti* 'to put out').
12. Proto-Circassian **sama* 'heap' ~ Proto-Indo-European **sem-/som-* 'together, together with; one' (originally 'to gather together') (cf. Pokorny 1959:902—905 **sem-* 'one; together': Sanskrit *sa* [*< *sṃ-*] 'with, together with, along with', *sám* 'with, together with, along with, together, altogether', *sámana-h* 'meeting, assembly, amorous union, embrace', *sa-trá* 'together, together with', *samūbhá-h* 'heap, collection').
13. Proto-Circassian **gəya* 'smooth (of ice)' ~ Proto-Indo-European **gʰey-* 'snow, ice, winter' (cf. Pokorny 1959:425—426 **ĝhei-*, **ĝhi-* 'winter, snow': Sanskrit *himá-h* 'snow, frost, hoar-frost, winter', *hemantá-h* 'winter, the cold season'; Greek χιών 'snow; snow-water, ice-cold water', χειμα 'winter-weather, cold, frost', χειμών 'winter; wintry weather, a winter storm').

The Armenian linguist Gevork B. Djahukyan has devoted a book (1967) entitled (in English translation) *Interrelations of the Indo-European, Hurrian-Urartian, and Caucasian Languages* to exploring lexical parallels between Indo-European and Caucasian languages. Though dated, this book can still be used with profit, especially for its bibliography.

Thus, it was the area to the north of and between the Black and Caspian Seas that was most likely the final homeland of a unified Indo-European parent language (cf. Mallory 1997, especially pp. 112—113). By 3,500 BCE, Indo-European had begun to split up into different dialect groups, and Indo-European-speaking people had started to spread westward into Central Europe and southward into the Balkans (cf. Anthony 1991; Nichols 1997a:134—135). Gimbutas (1973b) suggests similar dating and identifies the spread of Bronze Age metallurgical technology with the Indo-Europeanization of Europe. For more information, cf. Anthony 2007. The Indo-European homeland is shown in Map 1, and the dispersal of the Indo-European languages is shown in Map 2 at the end of this chapter. In closing, we may note Kortlandt's (2020) latest views on the Indo-European homeland question:

Thanks to the meticulous analysis of the combined linguistic and archaeological data by James Mallory (1989) and David Anthony (2007) it has been established that the beginnings of Indo-European can be identified with the Khvalynsk culture on the Volga around 5000 BC. It now appears that the Indo-Uralic ancestors of the Indo-Europeans arrived in Europe from Siberia following the Ural and Samara rivers and that they encountered an offshoot of an East Caucasian culture when they reached the Volga (cf. Anthony 2019 and Kortlandt 2019). When the southern part of these people moved further toward the Dnepr, their language developed into Proto-Indo-European under heavy

Caucasian influence. The northern part of the people moved further north to the confluence of the Volga and the Kama, which became the homeland of Finno-Ugric speakers. At a later stage, probably around 3000 BC at the thermal maximum, the ancestors of Ugric speakers returned to Siberia, perhaps following the Chusovaya and Iset' rivers.

13.3. AFRASIAN

So much controversy surrounds the subject of the homeland of Afrasian that none of the proposals advanced to date can be considered definitive (cf. Hamed—Darlu 2003). Diakonoff (1988:23—25) presents a summary of several of the proposals — his own view is that Afrasian was located in the “South-Eastern Sahara (say, between Tibesti and Darfur)”. Vycichl (1987), Militarëv (2000, 2002, and 2009), and Kozintsev (2021), on the other hand, favor an Asian homeland (the Levant). According to Militarëv, the original Afrasian homeland was in the Middle East and the Arabian peninsula (cf. Diakonoff 1988:24). Diakonoff (1988:32, fn. 14) further clarifies Militarëv's views (note also the map given by Shnirelman [1997:159]):

A more precise identification was proposed by Militarev and sustained from the archaeological and historical side by V. Shnirelman. In their opinion, the Proto-Afrasian speakers were the Natufians of the well-known early Neolithic culture of the Palestinian-Syrian area.

In my opinion, Militarëv's proposals have great merit. Henry (1992:182—184) notes that “Natufian assemblages are remarkably well-dated because of multiple lines of evidence tied to radiocarbon dates, stratigraphic successions, and artifact seriation”. Henry dates the earliest Natufian finds to 10,900 BCE and the latest to 7,800 BCE (he actually says [1992:184] “as early as about 12,900 years ago to as late as about 9,800 years ago”). The earlier date agrees extremely well with the date assigned to the Afrasian parent language (approximately 10,000 BCE [that is, 12,000 years ago] according to Diakonoff [1988:33, fn. 15]). The following scenario may be proposed: Afrasian is sufficiently different from other Nostratic languages to suggest that it was the first branch to split off from the rest of the Nostratic speech community — some have even suggested that Proto-Afrasian might be a sister language to Proto-Nostratic rather than a daughter language (see below). Proto-Afrasian may be dated at roughly 10,000 BCE (cf. Militarëv 2009:95 — in a 2002 paper, Fleming places it at 11,200 BP, though he notes that earlier dates are also possible), and the Afrasian homeland may be placed in the Middle East in an area bordering the eastern shores of the Mediterranean Sea, stretching from modern-day Syria through Lebanon and south into Israel (that is, the Levant) — if Militarëv and Shnirelman are correct, the Natufian cultural complex may be identified with the Afrasian parent language. By 8,000 BCE, Afrasian had begun to split up into various dialect groups and had spread southward into the Arabian peninsula and southwestward across the Sinai peninsula into northern Africa. A northern and eastern spread followed the fertile crescent, initially as far as northern

and eastern Syria — it was this dialect group that eventually developed into Proto-Semitic, which Diakonoff (1988:25) dates to the 6th—5th millennia BCE. Further spread took Afrasian languages southward down through the Arabian Peninsula, across the Bab el-Mandeb Strait, and into the Horn of Africa, westward across northern Africa, and then southward across the Sahara Desert into what is today the area bordering northern and northeastern Nigeria around Lake Chad. See also Renfrew (1992:472) and Cavalli-Sforza et al. (1994:171—174) on the spread of Afrasian languages. Map 3 shows the distribution of the Afrasian languages at about 500 BCE (this is adapted from D. Cohen [ed.] 1988:viii).

Archeological remains in the Levant (Syria-Lebanon-Israel coast and slightly inland) go back to Paleolithic times. The Levant is made up of a combination of mountains, plains, valleys, and coastal lowlands cramped into a rather small geographical area. There is plentiful evidence from Mesolithic hunter-gatherer societies. The earliest Neolithic settlements (such as Jericho, which is still inhabited) date to at least 9,000 BCE. Several noteworthy, partially sequential, partially overlapping Neolithic cultural complexes have been identified, namely, the Mushabian, the Geometric Kebaran, and the Natufian (for details, cf. Henry 1992). The dating for these is as follows: Mushabian: between 14,170 B.P. and 11,700 B.P. (Henry 1992:125); Geometric Kebaran: between 14,330 B.P. and 12,610 B.P. (Henry 1992:155); Natufian: between 12,500 and 10,500 B.P. (Henry 1992:182 — earlier dates are given in Cavalli-Sforza et al. 1994:214). It is the Natufians who are associated with the development of agriculture. Neolithic remains from the Levant are dated well into the 5th millennium BCE. Apparently, the topography of the Levant did not favor the establishment of large, unified states, since the archeological record points to numerous, autonomous or semi-autonomous city-states instead — by the 3rd millennium BCE, there were many such city-states. The Levant stood at the cross-roads between the mighty empires in Egypt and Mesopotamia — it was an area made rich by trade, an area coveted by competing neighbors, an area with a rich and varied literature, an area that gave birth to great religions, and an area with a long and colorful history. The archeological data from the Levant are extremely rich and have been fairly intensively studied and dated, though it will still take several generations to sift through it all.

The topography of Mesopotamia is varied: the east is bounded by the Zagros mountains and the Iranian Plateau, the center is dominated by the plains surrounding the Tigris and Euphrates Rivers, the south is dominated by alluvial plains, and the west is semi-arid/desert. Several major shifts in climatic conditions have taken place over the past 15,000 years. Permanent settlements associated with agriculture and stock herding date as far back as 8,000 BCE. At this period, settlements were relatively small. By 6,000 BCE, agriculture was well-established, and larger villages appeared. Slightly later, major cultural centers (such as Eridu) emerge, trade flourishes, and wealth and population increase. Pictographic writing begins to appear at around 3,500 BCE, and this slowly develops into the cuneiform syllabary. The earliest recorded language was Sumerian — the Sumerians were located in central and southern Mesopotamia. Semitic people were located to the north and west. The earliest recorded Semitic language was Akkadian. Further

north, in modern-day Turkey (Türkiye), Caucasian languages were spoken. There were also several languages of unknown affiliation (such as Kassite). References: Balkan 1954; Diakonoff 1988; Henry 1992; Nissen 1988; Nissen—Heine 2009.

Over the past two decades or so, several scholars (such as Greenberg, Ruhlen, Militarev, and Starostin) have suggested that Afrasian should be viewed as a sister (“coordinate”) language to Nostratic rather than as a Nostratic daughter language, while others, including Illič-Svityč and Dolgopolsky, see it as a full-fledged branch of Nostratic. However, this is not necessarily an “either/or” issue. Another explanation is possible, namely, the recognition that not all branches of Nostratic are on an equal footing. Afrasian can be seen as the first branch to have become separated from the main speech community, followed soon thereafter by Elamo-Dravidian, then by Kartvelian, and, finally, by Greenberg’s Eurasiatic, which was the last branch to become differentiated into separate languages and language families.

By adopting this scenario, Dolgopolsky’s conclusion (2008:33) that “... the traditional Nostraticist view considering H[amito-]S[emitic] as a branch of N[ostratic] is still valid” can be maintained, while the objections raised by Ruhlen, Greenberg, Militarev, and Starostin can also be accommodated. Thus, Afrasian is to be seen as a branch of Nostratic rather than as a sister language. It should be noted that, just before his untimely death (on 30 September 2005 at age 52), Starostin had changed his mind and had sought to reintegrate Afrasian into Nostratic.

The question of the position of Afrasian is related to the problem of the location of the Afrasian homeland in both time and space. As noted above, various possibilities have been suggested, including Africa and the Levant, while the dating has been difficult to ascertain (cf. Kitchen—Ehret—Assefa—Mulligan 2009).

Taking into account the latest research, especially in Russia, the Czech scholar Václav Blažek has recently addressed this problem (Blažek to appear). According to Blažek, the original Afrasian homeland is to be sought in the Levant. Blažek notes that the following arguments speak in favor of a location of the Afrasian parent language in the Levant:

1. Distant relationship of Afrasian with Kartvelian, Elamo-Dravidian, Indo-European, and other language families within the framework of the Nostratic Hypothesis;
2. Lexical parallels connecting Afrasian with Near Eastern languages which cannot be explained from Semitic alone;
3. Sumerian-Afrasian lexical parallels indicating an Afrasian substratum in Sumerian;
4. Elamite-Afrasian lexical and grammatical cognates explainable as a common heritage (through Nostratic or some intermediary stage);
5. North Caucasian-Afrasian parallels in cultural vocabulary explainable through contact at a very remote (pre-Semitic) period.

Blažek maintains that the most likely scenario for the disintegration of Proto-Afrasian and the migrations of speakers of the various daughter languages can be

accounted for by two distinct migrations from the Levant: the first branches to become separated were Cushitic and Omotic, at around 12,000 BP. They spread southward into the Arabian Peninsula. The second series of migrations separated Egyptian, Berber, and Chadic from Semitic, which remained in the Levant, at around 11,000—10,000 BP. Egyptian, Berber, and Chadic migrated first to the Nile Delta and Valley, where Egyptian remained, while Berber and Chadic continued westward and southwestward. Blažek's views concerning the migrations of each of the individual branches of Afrasian may be summarized as follows:

1. Semitic: The Semitic ecological vocabulary indicates that the Semitic homeland is to be located in the northern Levant. The homeland of the Akkadians was in northern and central Mesopotamia. Beginning with the reign of Sargon, Akkadian began to replace Sumerian in Southern Mesopotamia. It also spread into Elam, Syria, and Anatolia. In the 2nd millennium BCE, the Babylonian dialect was used as a diplomatic language in the Near East, including Egypt. The massive migration of the Canaanite tribes into Lower Egypt around 1700 BCE has been connected with the invasion of the Hyksos. A part of this multi-ethnic conglomeration could have been Hebrews, whose return to the Levant is described in the book of Exodus in the Bible. This narrative is supported by the linguistic analysis of the Egyptian toponyms from the Bible. The oldest Phoenician inscriptions are known from Byblos and later also from Tyre, Sidon, and other Levantine ports. During the 1st millennium BCE, Phoenicians founded numerous colonies in southern Anatolia, Cyprus, Malta, Sicily, Sardinia, the coast of Libya, Tunisia, Algeria, and on to Morocco and the Iberian Peninsula. Although the strongest of them, Carthage, was destroyed by the Romans in 146 BCE, the Phoenician/Punic language survived in North Africa until the 5th century CE. Traces of Punic influence have been identified in modern Berber languages. In the late 2nd millennium BCE, Aramaeans lived in northern Syria and northwestern Mesopotamia. During the first half of the 1st millennium BCE, their inscriptions appeared throughout the Fertile Crescent. From the end of 9th to mid-7th centuries BCE, Aramaeans were brought into North Mesopotamia as captives of the Assyrians. At the time of the fall of Assyria (612 BCE), Aramaic was already a dominant language in northern Mesopotamia, and from the time of the Babylonian captivity (586—539 BCE), Aramaic began to replace Hebrew in Palestine. Aramaic became the dominant Near Eastern language during the Achaemenid Empire (539—331 BCE), where it served as a language of administration from Egypt and northern Arabia to Central Asia and the borders of India, where the Aramaic script served as the basis for local Indian scripts. The dominant role of Aramaic in the Near East continued until the expansion of Arabic in the 7th century CE. Even though it has been mostly replaced by Arabic, small pockets of Aramaic speakers have remained in the Near East until the present day (for details, cf. Rubin 2008:72—73, §10.1; Otto Jastrow 1997). A half millennium before the rise of Islam, Arabs expanded from northern Arabia into the southern Levant and Mesopotamia. Two Arabic speaking states, Palmyra and the Nabatean

kingdom, controlled the commercial routes between the Mediterranean Sea, the Red Sea, and the Persian Gulf. With the spread of Islam, the rapid expansion of Arabic began. By the 8th century CE, Arabic was used from Morocco and the Iberian Peninsula in the west to Central Asia in the east. Although Arabic has lost ground in some areas (the Iberian Peninsula, Sicily, and Iran), elsewhere, it has expanded. In Africa, it spread to the southern border of the Sahara and along the East African coast. One of the pre-Islamic languages of Yemen crossed the Red Sea into Eritrea and northern Ethiopia in the early 1st millennium BCE and became the basis of the Ethiopic branch of Semitic. Separation of the northern and southern Ethio-Semitic subbranches has been dated to 890 BCE. See also Bellwood 2004; Blench 2012; Rubin 2008.

2. Egyptian: Egyptian was spoken in the Nile Valley from Lower Nubia to the Delta, probably also in the oases of the Western Desert and, due to Egyptian expansion during the New Kingdom, also in the Sinai Peninsula and Palestine. The unification of Upper and Lower Egypt in 3226 BCE probably stimulated a process of integration of local dialects. Only a few traces remained of the original dialectal diversity. In the course of time, new dialects developed such as the Sahidic, Akhmimic, and Bohairic dialects of Coptic.
3. Berber: Not only do the modern Berber languages spoken across North Africa from Morocco, Senegal, and Mauritania in the west to Egypt (Oasis Siwa) in the east belong to the Berber branch of Afrasian, so do the language(s) of the Libyco-Berber inscriptions attested from the Canary Islands to Libya and dated from the 7/6th century BCE to the 4th century CE, as well as fragments of languages of the original inhabitants of the Canary Islands recorded by Spanish and Italian chroniclers in the 14–16th centuries CE. No doubt, the Proto-Berbers spread westward along the Mediterranean coast from the Nile Valley. For more information, see especially Blench 2014.
4. Cushitic: A Cushitic-like substratum has been identified in Modern South Arabian, and it has been proposed that early Cushitic speakers originally occupied the entire Arabian Peninsula. Thus, they can be seen as southern neighbors of the Semites, who gradually assimilated those Cushites who did not cross the Bab el-Mandeb Strait into what is now Eritrea, Djibouti, and Ethiopia. This hypothesis is supported by the rock art of Central Arabia. The spread of Cushites in Africa is connected with the Rift Valley. In the coastal areas of Eritrea and Djibouti, where the Rift enters the African mainland, three archaic representatives of the North, Central, and Eastern branches of Cushitic are found: (1) Beja / Beḍawye, (2) Bilin, and (3) Saho-Afar, respectively. The disintegration of Cushitic probably began in this general area. Ancestors of Agaw spread throughout Eritrea and northern Ethiopia, while Beja / Beḍawye spread into the Sudan between the Nile and the Red Sea. Other East and South Cushitic languages moved further south along the Rift Valley through Ethiopia and Kenya, and even into Central Tanzania. Further migrations from the Rift Valley spread Cushites throughout the Horn of Africa and south into Kenya.
5. Omotic: Both the external and internal classifications of Omotic remain controversial; indeed, Thiel (2006) considers Omotic to be a language isolate.

The separation of Omotic as a distinct branch of Afrasian from what was formerly called “West Cushitic” was originally based on a lexico-statistical analysis. But a later grammatical analysis demonstrated that most of the grammatical formants that Omotic inherited from Afrasian are shared with Cushitic. Then, it was shown that there were numerous lexical isoglosses connecting Omotic with other Afrasian branches that were not shared with Cushitic, providing further evidence that Omotic and Cushitic are sister branches, and that Omotic is not West Cushitic. That Cushitic and Omotic should be considered distinct branches of Afrasian now seems certain. The separation of Cushitic and Omotic has been dated to the early 8th millennium BCE.

6. Chadic: The disintegration of Proto-Chadic has been dated to around 5000 BCE. The easternmost Chadic language is Kajakse from the archaic Mubi group, spoken in the Waddai highlands in Southeastern Chad. This area is accessible from the Nile Valley in two ways only: along the Wadi Howar north of Darfur and along the Bahr al-Ghazal and its north tributary Bahr al-‘Arab south of Darfur. The northern route could lead along the Batha River, which flows into Lake Fitri at the present time but which formed a part of a much larger Lake Chad in the past (around 4000 BCE). The southern route could continue along the Bahr Azoum/Salamat in the basin of the Chari River, the biggest tributary of Lake Chad. See also Dimmendaal 2016.

Another scenario, proposed by Martin Bernal, associates the final disintegration of the Afrasian parent language with the Khartoum Mesolithic and locates the latest Afrasian homeland in modern-day Sudan. Bernal (1980:4) notes that “archeological evidence from the Maghreb, the Sudan, and east Africa [makes it seem] permissible to postulate that at least three branches of Afrasian existed by the eighth millennium [BCE]”. Thus, he (1980:13) dates the breakup of Proto-Afrasian to no later than about 8,000 BCE, after which there was a rapid expansion outward in all directions. Fleming has also proposed an African homeland.

Bernal (1980:17) further notes that “[t]he earliest evidence of the Khartoum Mesolithic comes from the East African Rift Valley in Kenya and Ethiopia”. The precursor of the Khartoum Mesolithic seems to have been the Kenya Capsian culture, which began as far back as 20,000 years ago. This implies that the earliest homeland of Pre-Proto-Afrasian is to be sought in Ethiopia, and Bernal (1980:46—59) proposes just such a scenario.

The implications of Bernal’s views are enormous. Though his views are highly speculative, they are by no means implausible. Should they turn out to be true, it would give substantial weight to the arguments that Afrasian is to be viewed as a sister language to Proto-Nostratic rather than a descendant.

13.4. KARTVELIAN

At the present time, the Kartvelian (also called “South Caucasian”) languages are located in the Republic of Georgia (საქართველო), except for Laz, which is

spoken in Lazistan, Turkey (Türkiye). Georgian has the most speakers, while Svan is the most conservative. As is to be expected by its more archaic nature, Svan was the first language to split from the rest of the Kartvelian speech community (Georgian, Mingrelian, and Laz). According to Gamkrelidze—Mačavariani (1982:23—24), Klimov, using glottochronology, has dated this split at 2,000 BCE. The next split was between Georgian and Laz-Mingrelian (together called “Zan”), which has been dated at 800 BCE. This chronology would mean positing a rather shallow time depth for Proto-Kartvelian, in the vicinity of 4,000—3,000 BCE. However, in view of the apparent contacts between Proto-Kartvelian and Proto-Indo-European (cf. Gamkrelidze 1966, 1967, and 1970:141), Proto-Kartvelian must have been roughly contemporaneous with Proto-Indo-European, which would imply a slightly earlier date. Therefore, I would cautiously suggest a date of around 5,000 BCE for Proto-Kartvelian. It is certain, at the very least, that Kartvelians were in their current location by that date.

Gamkrelidze—Ivanov (1984.II:880—881, fn. 2; 1995.I:777, fn. 19) discuss the questions of the Kartvelian homeland and the dating of the proto-language in detail:

Proto-Kartvelian (South Caucasian) dates to the fourth to the third millennia B.C. Glottochronological evidence puts the beginning of its differentiation in the very early second millennium B.C. (and possibly much earlier), at which time Svan separated out and Proto-Kartvelian divided into two separate areas, Svan and Georgian-Zan, the latter subsequently splitting into Georgian and Zan (or Colchidian)...

Proto-Kartvelian prior to its breakup must be placed, on the evidence of archaic lexical and toponymic data, in the mountainous regions of the western and central part of the Little Caucasus (the Transcaucasian foothills). The first wave of Kartvelian migrations to the west and northwest, in the direction of the Colchidian plains, must have begun with one of the western dialects in the third millennium B.C. and led to the formation of Svan, which spread to the western Transcaucasus and was superimposed on local languages, probably of the Northwest Caucasian type, which thus became substratal to Svan. Svan was gradually displaced to the north, to the Great Caucasus range, by the next wave of migrations, which occurred approximately nine centuries later (on glottochronological evidence) and removed the westernmost remaining dialect as far as the Black Sea coast. This western dialect gave rise to the later Colchidian — or Zan, or Mingrelian-Laz — language, one of the languages of ancient Colchis.

The dialects which remained in the ancient Kartvelian homeland underlie Georgian. In historical times, speakers of Georgian spread to the west, to part of the Colchidian territory, splitting the Colchidian language into two dialects and setting up the development of Mingrelian and Laz (Chan) into independent languages. They also spread to the north and northeast, displacing languages of the Northeast Caucasian type.

These Kartvelian migrations triggered the breakup of Proto-Kartvelian and the expansion of its dialects beyond the original territory.

Nichols (1997a:138) speculates that Pre-Kartvelian originated in Central Asia, near Pre-Indo-European, and that it spread westward along a southern route below the Caspian Sea, eventually reaching its present location, where it stayed.

13.5. URALIC-YUKAGHIR

There is general agreement about the homeland of Uralic — Décsy (1990:9), for example, places the Uralic proto-language “in the Forest-Zone-Steppe-Border (mainly north of it) between the Volga Bend in Eastern Russia and the Ob River in Western Siberia” (for more information on the Uralic homeland, cf. Collinder 1965:28—30; Fortescue 1998:180—183; Hajdú 1972:17—23 and 1975:30—40; Häkkinen 2012a; Janhunen 2009; Napolskikh 1995; and Saarikivi 2022).

The date at which the unified Uralic parent language is thought to have been spoken is 4,000—5,000 BCE (cf. Suihkonen 2002:165; Janhunen 2009:68), while bringing in Yukaghir pushes that date back another millennium or so and moves the homeland slightly to the east. Nichols (1997a:140—141) also sees Pre-Uralic as having spread westward and northward from Central Asia, slightly just ahead of the westward movement of Pre-Indo-European. Pre-Uralic took a more northerly route, while Pre-Indo-European took a more southerly route directly across the steppes.

A number of scholars have claimed that Indo-European and Uralic are more closely related to each other than either of them is to any other language or language family, while others have claimed that Uralic and Altaic are particularly close, even going so far as to set up a Ural-Altaic language family. The Ural-Altaic hypothesis is generally no longer supported by specialists in the field. The Indo-Uralic hypothesis, however, may indeed have some validity. I would very, very tentatively set up an Indo-Uralic subbranch within Eurasiatic (note, in particular, Kortlandt 2010e), suggest that Indo-Uralic be located in Central Asia not far from the Aral Sea, and place the date of Indo-Uralic at around 7,000 BCE. This is definitely an area that requires additional research. We will close by citing Collinder’s (1965:29—30) tantalizing remarks on the possibility of a relationship between Proto-Indo-European and Proto-Uralic and the question of homelands:

As we shall see later, Uralic and Indo-European seem to have several words in common. If these words were borrowed from Common Indo-European, the speakers of Common Uralic must have been the neighbors of the speakers of Common Indo-European. If we account for them by assuming that Uralic and Indo-European are interrelated, we arrive at the conclusion that the Uralians and the Indo-Europeans once had a common *Urheimat*. Both alternatives imply that the Indo-Europeans lived to the north of the Black Sea, and the Uralians lived to the north of them.

There is evidence of both continuous contact after they had become independent language families — they were indeed neighbors — and earlier genetic relationship between Proto-Indo-European and Proto-Uralic. Cf. Anthony 2007:93—97.

According to Grünthal et al. (2022:24—25):

We have argued that Proto-Uralic originated east of the Urals and out of contact with Proto-Indo-European. Its traceable prehistory begins with a mostly westward spread bringing daughter speech communities to the middle Volga. That spread took place rapidly and for the most part without substratal effects. It occurred in the time frame of the 4.2 ka event, the Seima-Turbino transcultural phenomenon, and the Indo-Iranian contact episode, and taken together these three events explain the Uralic spread and situate it in space and time. Early Uralic ... spread with ST trade along the rivers that were the main avenues of communication and transport, and this brought it into position for Indo-Iranian contacts. That contact episode with independently well-dated Indo-Iranian gives a reliable absolute date for the Uralic divergence and dispersal: not long before 4,000 years ago. It took place over some expanse of space and some length of time, as loans come separately into the early Uralic daughters (the ancestors of the modern branches) and reflect time frames from Pre-Proto-Indo-Iranian to early Iranian.

That early spread turned Proto-Uralic as reconstructed by the comparative method into Common Uralic, the set of still mutually intelligible but separate and separately evolving varieties that emerged from the initial diversification of Proto-Uralic. Proto-Uralic has a number of eastern typological features suggesting an eastern origin. It also has some rare features that have remained stable in the family, indicating that, while early Uralic must have expanded via language shift, the shifting population had minimal impact on Proto-Uralic grammar and vocabulary. It was Common Uralic that was involved in Seima-Turbino trade and Indo-Iranian contacts. The non-pastoral, non-agricultural, sparsely distributed Common Uralic populations suffered less from the 4.2 ka event and accompanying plague, and were able to recover from it faster than the denser stockbreeding Indo-European populations. As a result, early Uralic replaced IE-speaking populations along the Volga and near the Urals, acquiring no Indo-European substratum and no evidence of IE lexical contact prior to the Indo-Iranian episode.

The early history of the Samoyedic branch is mysterious. If Pre-Samoyedic spread with Seima-Turbino, it spread eastward and not into the area of strong Indo-Iranian contact. Samoyedic retains a low absolute number of Proto-Uralic etyma, but until more Proto-Uralic reconstruction and statistical analysis are done it is not known whether the number of etyma is significantly low.

Northward spreads, a standing pattern in northern Eurasia, gave the Uralic language family its large northern extent. An important contributor to these spreads was language shift. Major northward spreads of Uralic branches proceeded from the upper Yenisei, the middle Volga, and (later, involving Saamic and then Finnic) from the northeast Baltic region. As a result of these spreads, apart from what are now national languages, Uralic languages became known to linguistics and ethnography primarily as languages of hunter-gatherers and northern people.

13.6. ELAMO-DRAVIDIAN

Proto-Dravidian may be dated at approximately 5,000 BCE — Zvelebil (1970:18), for instance, notes that by 4,000 BCE, Dravidian had already started to break up

into different dialect groups, Brahui being the first group to split off from the main speech community (note: the dates proposed by Pejros—Shnirelman [1988] are far too shallow [for example, they place Proto-Elamo-Dravidian at the 5th—4th millennia BCE], considering that Elamite is already attested as a separate language in written records [so-called “Proto-Elamite” — assumed to be Elamite but as yet undeciphered] as early as the Jemdet Nasr period, that is, around 3,000 BCE [cf. Reiner 1969:56], though it is not until considerably later, after the adoption of cuneiform by the Elamites, that abundant records begin to appear [the earliest document in cuneiform is the so-called “Treaty of Nārām-Sin”, which is dated at just before 2,200 BCE]). At the present time, the overwhelming majority of Dravidian languages are located in the southern half of the Indian subcontinent and in the northern part of Śri Lanka, though a few outliers are found to the northwest and northeast of the main body of Dravidian languages — Brahui, for instance, is spoken in the Qalat, Hairpur, and Hyderabad districts of Pakistan (plus a smaller number of speakers in Iran and southern Afghanistan), while Kurux is spoken in the districts of Bihar, Orissa, and Madhya Pradesh, and Malto near the borders of Bihar and West Bengal (cf. Zvelebil 1970:15—18; Ruhlen 1987:136—137). We may note in passing that the inscriptions of the Indus Valley (Harappan) Civilization may have been written in an early Dravidian language (cf. Fairservis 1992:14—23 and Parpola 1994; but see also Zide—Zvelebil [eds.] 1976 for a critical assessment of earlier Soviet attempts to decipher the Indus Valley script).

David McAlpin (1981) has presented convincing evidence for a genetic relationship between Elamite and Dravidian, and many prominent scholars now accept this view (though there are still some notable holdouts!). I would suggest a date of 8,000 BCE for Proto-Elamo-Dravidian, though a bit later (say, 7,000 BCE) is also possible. Elamite, which is now extinct (but see McAlpin 2022), was located primarily in south-western Iran, in the vicinity of the Zagros mountains as well as the adjacent plains of Khuzistan and to the south along the coast of the Persian Gulf. There is good reason to believe that Elamite once occupied nearly all of the Iranian plateau.

Pejros—Shnirelman (1988) accept the Elamo-Dravidian hypothesis. They argue for a “western origin” of the Dravidian languages “somewhere in the Middle East”. After the disintegration of Proto-Elamo-Dravidian, “the Dravidian languages could begin to spread eastwards to South Asia”. Though, as noted above, their dating is questionable, the scenario they propose for the spread of Dravidian languages into India is plausible. Thus, the Elamo-Dravidian homeland may be placed roughly in western and central modern-day Iran at about 8,000 BCE. Elamo-Dravidian gradually spread eastward covering all of the Iranian plateau and extending into modern-day Pakistan and northwestern India. There was then an east-west split, with Proto-Elamite developing in the western area and Proto-Dravidian developing in the eastern area. Thus, the Dravidian homeland may be placed in Pakistan and northwestern India and dated at about 5,000 BCE, from which Dravidian languages spread southward into India proper (note the map in Andronov 2003:23). The invasion of Indo-Aryans (occurring in several phases during the period of about 1,700—1,400 BCE [cf. Burrow 1973:30—34]) drove the

Dravidians further south and severed the geographical links between Brahui, Kuṛux, and Malto and the main body of Dravidian languages. Similar views are expressed by Cavalli-Sforza et al. 1994:221—222; see also Tony Joseph 2017. But, cf. Krishnamurti (2003:2—5) for a critical assessment of these views.

Pejros—Shnirelman (1988) correlate the movement of the Dravidian languages into India with archeological evidence of the Neolithic and Chalcolithic. After surveying faunal and floral terminology in Central-Southern Dravidian languages, they discuss agricultural and stock-raising terminology. This combined evidence confirms a high level of agriculture in West-Central India by about 2,000 BCE. They associate this area and culture with the homeland of Central-Southern Dravidian. This is the region from which Central-Southern Dravidian languages spread eastward and southward. They also note that the archeological evidence as well as linguistic reconstructions indicate that arable farming was widespread in the western South Asian regions already by the late third millennium BCE and that both the “Harappans and the Chalcolithic inhabitants of Central India and Maharashtra kept goats, sheep, humped cattle, buffaloes, pigs, and dogs”.

Neolithic settlements in Iran (Tepe Ganj Dareh, for example) have been dated to before 7,000 BCE. The dwellings from this period were constructed of sun-dried mud bricks, and the inhabitants herded goats and produced lightly-fired pottery. In the 5th and 4th millennia BCE, the settlements had grown to large towns — Susa had already been established (Susa was the capital of Elam). At that time, the western part of Iran was under the influence of the Ubaid and Uruk cultures of Mesopotamia. Though it is probably safe to say that an early form of Elamite was the language of western and southern Iran (and most likely well to the east) by this time, Caucasian languages were spoken in the northwestern part of Iran on into modern-day Turkey (Türkiye) (as evidenced by the later Hurrian and Urartian). By the 3rd millennium BCE, there were several Bronze Age cultures in Iran. In the west and south, the Elamite kingdom had been established — it lasted until it was destroyed by the Assyrians in 640 BCE. As noted above, the earliest “Proto-Elamite” inscriptions date to this period. To the north of Elam, in what is currently central and western Iran, the Giyan culture was flourishing — it lasted nearly a thousand years. Another noteworthy cultural center (at sites such as Sharh-i Sokhte and Tepe Yahya) existed in southeastern Iran, not far from the Indus Valley (Harappan) Civilization. In the middle of the 2nd millennium BCE, Persian tribes began invading from the northeast, and, by 1,200 BCE, they had conquered nearly all of Iran.

The India-Pakistan cultural area is enormous and has always been heterogeneous — even now, there is still tremendous variety. In the 3rd millennium BCE, Baluchistan and northwestern India were part of the vast Mesopotamian-Iranian-Indus Valley cultural complex. Copper-working agriculturalists were living in well-built villages. Trade routes were thriving. By 2,500 BCE, the Indus Valley (Harappan) Civilization was well-established — it extended over most of Baluchistan, north well into Punjab, and south as far as the Gulf of Cambay. Indo-Aryan tribes began invading from the northwest at about 1,700 BCE. Given the geography, claims that the Indus Valley inscriptions were written in an early form

of Dravidian are not impossible, though another possibility is that the language of the Indus Valley Civilization may have constituted an independent branch of this language family, related to but distinct from both Elamite and Dravidian (cf. Southworth 2006). References: Dani—Masson (eds.) 1992. For information about the Indus Valley (Harappan) Civilization, cf. McIntosh 2002 and Possehl 2002.

13.7. ALTAIC

At the present time, Altaic languages cover an enormous territory, beginning with Turkey (Türkiye) in the west; stretching eastward across the Russian Federation and the republics of Central Asia in the middle and across nearly all of northern Siberia; encompassing all of Mongolia, parts of northern, northwestern (Xīnjiāng Wéiwú'ěr Zìzhìqū [新疆维吾尔自治区]) and northeastern China (Dōngběi [東北]) (the area formerly called “Manchuria” [Mǎnzhōu (滿洲)], but now mostly divided into Jílín [吉林], Hēilóngjiāng [黑龙江], and Liáoníng [辽宁] provinces along with part of the Inner Mongolia Autonomous Region [Nèi Měnggǔ Zìzhìqū (内蒙古自治区)]); possibly even reaching down into the Korean peninsula; and ending far to the east in Japan. The spread of Turkic and Mongolian languages across vast stretches of Eurasia has occurred within the past two millennia — the first westward forays of Altaic tribes began with the Huns, going as far back as Roman times (Nichols [1997a] gives a good overview of the spread of Turkic and Mongolian languages; see also Menges 1968b:16—53 and Golden 1992). (Manchu-)Tungus languages were once more widely spoken but have lost considerable ground fairly recently.

In the middle of the first millennium BCE, Turkic tribes were concentrated in the vicinity of modern-day Mongolia and just to the north (cf. Golden 1998:16—17), while Mongolian tribes were direct neighbors to the east, south, and southeast. Tungus tribes were to the north and northeast. Indo-European languages covered most of Central Asia (Iranian) and parts of Xīnjiāng (新疆) (Tocharian). To the extreme northeast were Chukchi-Kamchatkan peoples. Prior to their expansion to the west, Altaic-speaking people had lived for millennia in the area delimited above in small pastoral nomadic tribes, apparently freely intermingling with one another.

Menges (1968b:56—57) specifies the original geographical distribution of the Altaic languages as follows (see also Golden 1998:16 and Vovin 2013):

Not discussing here the position of Korean, and not including it in the Altaic group of languages proper, this group originally comprised four large families:

I. Hunnic, originally in the southwest and south of the Altaic area, although we know so little about it that we include it in Altaic mainly because it apparently survives in Volga-Bulgarian and present-day Tǎvaš [Chuvash];

II. Turkic, originally in the northwest and west;

III. Mongolian, in the center and southeast; and

IV. Tungus, in the north and northeast.

Of all of these, Turkic represents the most recent evolutionary type, while Mongolian, though more archaic than Turkic, nevertheless shows a more recent type of development than does Tungus, which is the most archaic type of

Altajic, and thus serves as an excellent “time-table” for relative evolutionary age in Altajic.

For the times prior to the separation and differentiation from the primordial nucleus groups of Altajic, which were later to become the four Altajic divisions mentioned above, a habitat must be assumed which probably comprised all of the Central Asiatic steppes, so that the term “Altajic” languages is actually justified, since it designates that group of languages spoken around the Altaj Mountains, in a wider sense of the term, in this case on the steppes extending to the south around the Altaj...

Recently, Robbeets (2017a:212) has placed the Altaic homeland in northeastern China and linked it with the Xīnglóngwā (興隆洼文化) culture (6200—5400 BCE). However, this is rejected by Kortlandt (2020).

13.8. OTHERS

13.8.1. CHUKCHI-KAMCHATKAN

The Chukchi-Kamchatkan family includes the following languages: Chukchi, Koryak, Kerek, Alyutor, and Kamchadal (also called Itelmen or Itelmic). Koryak, Kerek, and Alyutor are extremely close as a group, and these, in turn, are close to Chukchi. Kamchadal, which is now on the verge of extinction, stands apart from the others. The Chukchi-Kamchatkan languages are found in the extreme northeast corner of Siberia in the Chukotka and Kamchatka peninsulas. Though written languages were developed for Chukchi, Koryak, and Kamchadal in the 1930's, only Chukchi is still being used in publications and education.

13.8.2. GILYAK

Gilyak (also called Nivkh) is usually considered to be a single language, but the two main dialects, namely, the Amur dialect, on the one hand, and the Sakhalin (or Eastern) dialect, on the other, are not mutually intelligible. Of the two, the Sakhalin dialect is the more archaic. The Gilyaks are found on the lower reaches of the Amur River and on Sakhalin Island. Though a written language was developed for the Amur dialect in the 1930's, next to nothing has appeared in it.

Recently, Fortescue (2011) has presented compelling evidence for a close relationship between Gilyak / Nivkh and Chukchi-Kamchatkan.

13.8.3. ESKIMO-ALEUT

As the name implies, Eskimo-Aleut has two branches: Eskimo and Aleut. The Aleut dialects are mutually intelligible. However, this is not the case with the Eskimo dialects. Two main Eskimo dialect groups are distinguished, namely, Yupik and Inuit (also called Inupiaq). Yupik speakers are concentrated in southwestern Alaska, beginning at Norton Sound and extending southward along the western and

southern coasts and inland. An extremely small enclave of Yupik speakers is found in northeastern Siberia as well — the result of a fairly recent migration. Inuit speakers are found north of Norton Sound all the way to the northern coast of Alaska and extending eastward across all of the northernmost parts of Canada and on into Greenland. Aleut is spoken on the Aleutian Islands and the Commander Islands. For more information, cf. Fortescue 1998:178—180.

13.9. NOSTRATIC

Now that we have surveyed the homelands and/or present locations of the Nostratic daughter languages, we are in a position to try to determine the probable homeland of Nostratic itself. Before beginning, however, let us quote what Aharon Dolgopolsky, John C. Kerns, and Henrik Birnbaum have to say about Nostratic in general, about its structure, about its dating, and about its homeland — this will set the stage for what follows.

First, Dolgopolsky (1994:2838):

The [Nostratic] parent language had, most probably, an analytical grammatical structure with a strict word order (sentence-final predicate; object preceding the verb; nonpronominal attribute preceding the head; a special position for unstressed pronouns) and with grammatical meaning expressed by word order and auxiliary words (e.g., postpositions: **nu* for genitive, **ma* for marked accusative, and others). In the descendant languages this analytic grammar evolved towards a synthetic one. The phonological system (reconstructed by V. Illič-Svityč (1971—84) and A. Dolgopolsky (1989) in the framework of a Nostratic historical phonology) included a rich consonantism (with threefold opposition of voiced/voiceless/glottalized [ejective] stops and affricates, with three series of sibilants and affricates, with lateral obstruents, laryngeal, pharyngeal, and uvular consonants), and a vowel system of 7 vowels. The ancient Nostratic parent language seems to have existed in the Pre-neolithic period (up to ca. 15,000 or 12,000 BC) somewhere in southwest Asia. But most descendant proto-languages (e.g., Proto-Indo-European) existed during the neolithic period (with agriculture and husbandry, resulting in a demographic explosion, which can explain their spread throughout Eurasia and the northern half of Africa).

In his 1998 book *The Nostratic Macrofamily and Linguistic Palaeontology*, Dolgopolsky applies the techniques of linguistic palaeontology to try to establish a possible date when Proto-Nostratic was spoken (somewhere between 15,000 to 12,000 BCE), to locate its place of origin or “homeland” (in southwest Asia, that is to say, in the Near East in the vicinity of the Fertile Crescent), and to get a rough idea about the social organization and material culture of the speakers of the parent language (late Upper Palaeolithic ~ early Mesolithic). In this book, the focus of Dolgopolsky’s attention is exclusively on putative etyma pertaining to habitat, social organization, and material culture — Dolgopolsky is not concerned here with

presenting all of the evidence he has gathered in support of the Nostratic macrofamily. The full evidence is presented in his massive *Nostratic Dictionary* (a draft of which became available on-line in 2008).

John C. Kerns (Bomhard—Kerns 1994:153—156) is considerably more specific than the others, not only about the location of the homeland of Nostratic but also about the Pre-Neolithic environment existing at the time. Therefore, we will quote him at length:

I believe that Nostratic languages did not exist except as a part of Dene-Caucasian until the waning of the Würm glaciation, some 15,000 years ago. At this time the glacial ice began a rapid retreat all along the Northern fringe of Eurasia. In Europe, the effect was particularly dramatic, where the ice had been piled to impressive heights with moisture received from the Atlantic. Huge lakes developed from the melt water, particularly in the lowlands of Southern Russia, and new rivers were eroded into being, to both feed and drain the lakes, and to drain the Northern slopes of Eurasia as they came into view. As the new lands emerged, sub-Arctic winds whipped up the dust of rocks, which had been ground by the movements of glacial ice, and carried it Southward into the newly emerging forests. Most of the dust was deposited in the valleys near rivers, forming the basis of the fertile loess soils that later proved so attractive to early Neolithic farmers with their techniques of slash and burn and their casual herding of domesticated animals. These people included the Chinese in Asia, and also the Indo-Europeans in the Balkans and later in Central Europe with the Linear Pottery expansion around 5000 BCE, and in the lands radiating Northward and Eastward from there.

By 10,000 BCE, the Northern half of Eurasia and North America had been transformed. Formerly glacial and sub-Arctic lands were now temperate forests; only the Circumpolar fringe was still Arctic or sub-Arctic. The great herds of large Arctic mammals had been replaced by more solitary game, and fish abounded in the lakes and streams. People of (ultimately) Aurignacian ancestry adapted their equipment and techniques to take advantage of the new opportunities. The small-blade stone working of the Aurignacians and their successors was refined and elaborated to provide a varied array of new tools and weapons by setting these “microliths” in handles of wood or antler. Greater use was made of bows and arrows (with microlith tips), and dogs were used in the hunt and for food. Fishing industries were established in the rivers and lakes, and particularly in the Baltic, involving nets, boats and bait lines.

As always in hunter-gatherer societies, mobility was at a premium. Canoes were used for water travel and snow shoes and sleds were developed for overland travel in winter. The conditions were favorable for the rapid spread of tribes and their new linguistic family over immense distances. This expansion, which is called Mesolithic, is indicated archaeologically by microliths found all along Northern Eurasia and Southward through the Caucasus into the Near East, where it later developed smoothly into the Neolithic with its domestication of cereals and of animals suitable for food and fibers.

The Mesolithic culture is aptly named, for it provided a gradual though rapid transition between the Upper Paleolithic and the agricultural Neolithic.

There was, in fact, a steady advance in man's ability to control and exploit his environment. This point is brought out by Grahame Clark (1980).

The more I study the matter, the more I am convinced that the spread of the Nostratic speaking peoples was occasioned by the spread of the Mesolithic culture, for it occupied the right positions in time and space, and its characteristic features are compatible with the residual vocabulary of the Nostratic families — it was the last of the pre-agricultural eras in Eurasia.

Was the culture unilingual? I believe it was, in origin, though by the time the culture had spread into the more extreme areas — North Africa and Eastern Eurasia and North America — it had broken up into a catenation of mutually unintelligible, though closely related, languages, some of which eventually became ancestral to new linguistic families, including those comprising the Northern Nostratic sub-phylum we observe today. One reason for assuming a unitary origin is that certain features of vocabulary and morphology are shared between Eskimo-Aleut and Indo-European that occur only vestigially in the intervening families. This includes the heteroclitic declension. It also includes a few items of shared vocabulary such as Eskimo (Yupik) *alla* 'other' and *ingne* 'fire' (with a velar nasal in the first syllable). The paucity of such correspondences is analogous to the vestigial retention of radioactive atoms after the lapse of several half-lives.

Here, *ingne* is particularly interesting. It reminds us of Latin *ignis* 'fire'. The vowel in the first syllable is controversial since the corresponding vowels in the Lithuanian and Sanskrit words are respectively *u-* and *a-*, which cannot be reconciled with the Latin form or with each other by the accepted rules of phonological correspondence. This suggests that the ancestral word in Nostratic had the velar nasal in the first syllable, preserved in Yupik but perhaps lost sometime during the prehistory of Indo-European. Bomhard informs me that some Indo-Europeanists (cf. Ernout—Meillet 1979:308) have suggested that the Latin form may come from an earlier **ngnis*, with a syllabic nasal in the first syllable.

I believe that the Mesolithic culture, with its Nostratic language, had its beginning in or near the Fertile Crescent just south of the Caucasus, with a slightly later northern extension into Southern Russia in intimate association with woods and fresh water in lakes and rivers. From these positions, it had ready access to the lower Danube and the Balkans (Indo-European), to the Caucasus (Kartvelian), south of the Caucasus into Mesopotamia, Palestine, Egypt, and the rest of North Africa (Sumerian and Afroasiatic), eastward into Central Siberia (Elamo-Dravidian), and northward and thence eastward along the Circumpolar fringe (Uralic-Yukaghir, Altaic, Chukchi-Kamchatkan, Gilyak, and Eskimo-Aleut). In the process of its expansion, it undoubtedly effected a linguistic conversion of many tribes of Dene-Caucasian or other origin; this accounts for the fact that non-Nostratic languages in Eurasia in historic times have been found mostly as relics in mountainous regions. Exceptions are Chinese and the now moribund or extinct Ket, which, together with Hattic and Hurrian, probably represent post-Nostratic reemergences of Dene-Caucasian speakers from their relict areas.

The Nostratic dispersion probably began at least 15,000 years ago, giving ample time for a plethora of eccentric linguistic developments unrecorded in history. By historic times — i.e., as late as the nineteenth century in many

instances — the primordial features have been much diluted and transformed. Only by viewing the entire macrofamily holistically can we gain some idea of the features of the original Nostratic language; the importance of Indo-European in this is crucial in that it serves as an intermediate link, linguistically as well as geographically, between Kartvelian, Sumerian, and Afroasiatic on the one hand, and the Circumpolar group (Uralic-Yukaghir to Eskimo-Aleut) on the other. Besides, Indo-European seems to be fairly conservative in its syntactic system, its nominal declension, its pronouns, and its vocabulary in general.

At last we return to the issue I raised at the beginning of this section: Why does Indo-European resemble Afroasiatic in phonology and vocabulary, but the Circumpolar group in syntax and morphology? If the foregoing scenario is correct, or nearly so, it suggests that the Nostratic dispersal began almost as soon as its unity was formed; this is the inevitable result of the peripatetic activities of hunter-gatherers in an expansive situation. If we assume that the speakers of pre-Indo-European remained in the neighborhood of the Caucasus to a fairly late period (say 7500 BCE), with Afroasiatic already extending through Palestine into Egypt and eventually into the rest of North Africa, but with its Semitic branch still situated in Northern Mesopotamia high on the upper slopes of the Fertile Crescent, we would have an explanation for the similarity of vocabulary. That this proximity existed to a late period is suggested by shared words for field, bull, cow, sheep, and goat, animals which were then being domesticated in the Fertile Crescent. In addition, shared words for star and seven suggest a common veneration for that number and perhaps a shared ideology. This is speculative, of course, but if it is true it suggests an association that was social as well as geographical.

Meanwhile, the Circumpolar families were developing in a situation that was geographically and environmentally separate. Here, the Mesolithic way of life has been maintained continuously to recent times; any impulses toward agriculture have been late, and except for the Finno-Ugrians, they all have been received from non-Indo-European sources. The linguistic developments have been equally idiosyncratic. In all of these families the SOV word order and associated morphological principles of early Indo-European have been retained except where subjected to alien influences in more recent times, and they have been maintained with special purity in Altaic and Elamo-Dravidian, which may well have been of Siberian origin. In vocabulary, they show little in common with Indo-European or Afroasiatic except at a strictly pre-agricultural level.

In Uralic-Yukaghir, the linguistic idiosyncrasy is particularly marked. While the syntax and a considerable part of the morphology are basically conservative, the latter has been extended to an astonishing degree in several languages. But the most striking peculiarity of this family is the remarkable simplification that has developed in its consonantal system (reminiscent of Tocharian in Indo-European), and in the paucity of the Nostratic vocabulary that it has retained. It suggests a long isolation along the North Siberian fringe in the neighborhood of tribes not yet converted to Nostratic speech, for these features are less prominent in the other families of this group.

By the same token, it also suggests that the similarities shared by Uralic with Indo-European, or Eskimo-Aleut are very likely to have been features of the original Nostratic since borrowing among these groups is excluded by their

mutual isolation until much more recent times. Although the similarities are few as discernible at this late date, they are sufficiently striking that they are unlikely to have been due to independent developments.

Finally, the following quote is what the well-known Slavicist Henrik Birnbaum has to say about the Nostratic Hypothesis in general and about the Nostratic homeland in particular (Birnbaum 1992:25):

If, in conclusion, I were to indicate my own position with regard to the still highly controversial issue of Nostratic, I would have to say that I have no difficulty in accepting the notion of a Nostratic macrofamily of languages comprising at least the six language families envisioned by Illič-Svityč and Dolgopolskij. However, my understanding of such a macrofamily — and similar considerations would presumably apply to other large-scale language groups elsewhere in the world — would not, and could not, be based exclusively on evidence of genetic relationship as defined above. Linguistic macrofamilies (such as the one we term Nostratic) must, I submit, be viewed as the tangible result of both genetic relationships resulting from divergence and structural adjustments reflecting convergent trends in linguistic evolution. Consequently, and in line with some of the views propounded by Baudouin de Courtenay, Polivanov, and Trubeckoj, I would consider it fairly realistic to hypothesize a once actually spoken Nostratic ancestral language. Presumably, this language was characterized by a degree of inner cohesion comparable to what, *mutatis mutandis*, we can assume to have been the case with, say, Common Baltic or, possibly, Anatolian in their chronological and substantive development from Proto-Indo-European. And perhaps, if the heartland of Proto-Nostratic, as just qualified, is indeed to be identified with an area encompassing Transcaucasia, eastern (and southern) Anatolia, as well as the upper reaches of the Tigris and Euphrates, it would not be too far-fetched to assume secondary Indo-European protohomes in territories closer to the Black Sea, namely in the Pontic Steppe region, in northern and western Anatolia, and in parts of the Balkan Peninsula. This would further provide at least a point of departure for a reasonable explanation for the early settlement of the Greeks in mainland Greece and the archipelagos of the Aegean; for the formation of a secondary — if not tertiary — Indo-European core area focused in the Baltic region; and possibly even for the yet largely opaque earliest moves of Celtic tribes throughout Western, Central, and Southeastern Europe.

In my opinion, John C. Kerns has hit the nail on the head (Bomhard—Kerns 1994:155): “I believe that the Mesolithic culture, with its Nostratic language, had its beginning in or near the Fertile Crescent just south of the Caucasus”. Let us now reexamine the evidence from the Nostratic daughter languages and see how it leads to this conclusion.

The Indo-European homeland was most likely to the north of and between the Black and Caspian Seas. However, Nichols has convincingly argued that Pre-Proto-Indo-European originated in Central Asia and later spread westward to the North Pontic/Steppe zone that was the geographical location where Proto-Indo-European proper developed, where it began to split up into different dialect groups, and from

which its descendants spread into Europe, the Iranian plateau, and northern India. Likewise, again as argued by Nichols, Pre-Proto-Uralic may be presumed to have originated in Central Asia and to have spread westward, following a more northerly route than Pre-Proto-Indo-European. Thus, it is likely that the Eurasiatic parent language was located in Central Asia and that it is to be dated roughly at about 9,000 BCE. This would mean that the eastern Eurasiatic languages (Altaic, Chukchi-Kamchatkan, Gilyak, and Eskimo-Aleut) must have spread eastward from Central Asia (more specifically, the area traditionally called “Western Turkestan”) to their prehistoric homelands. Nichols has also speculated that Pre-Proto-Kartvelian may have originally been located in Central Asia, from which it spread westward along a southern route below the Caspian Sea to the Caucasus Mountains. The Elamo-Dravidian homeland may be placed roughly in western and central modern-day Iran and dated at about 8,000 BCE. Finally, following Militarëv and Shnirelman, the Afrasian homeland may be placed in the Middle East in the Levant and dated at about 10,000 BCE. Working backwards geographically and chronologically, we arrive at the only possible homeland for Proto-Nostratic, namely, “the Fertile Crescent just south of the Caucasus”. For a candid assessment of these proposals, cf. Makkay 2004.

Thus, the following scenario emerges: The unified Nostratic parent language may be dated to between 15,000 to 12,000 BCE, that is, at the end of the last Ice Age — it was located in the Fertile Crescent just south of the Caucasus (see Map 4). Beginning around 12,000 BCE, Nostratic began to expand, and, by 10,000 BCE, several distinct dialect groups had appeared. The first to split off was Afrasian. One dialect group spread from the Fertile Crescent to the northeast, eventually reaching Central Asia sometime before 9,000 BCE — this was Eurasiatic. Another dialect group spread eastward into western and central Iran, where it developed into Elamo-Dravidian at about 8,000 BCE. If Nichols is correct in seeing Pre-Proto-Kartvelian as having migrated from Central Asia westward below the Caspian Sea to the Caucasus, this would seem to imply that Pre-Proto-Kartvelian had first migrated northeastward from the Fertile Crescent along with or as part of Pre-Proto-Eurasiatic, that it stopped somewhere along the way, and that it then returned to the Middle East. The early dispersal of the Nostratic languages is shown in Map 5.

Analysis of the linguistic evidence has enabled us to determine the most likely homeland of the Nostratic parent language, to establish a time-frame during which Proto-Nostratic might have been spoken, to date the disintegration of Proto-Nostratic, and to trace the early dispersal of the daughter languages. To round out the picture, let us now correlate the linguistic data with archeological data. During the last Ice Age (the so-called “Würm glaciation”), which reached its zenith about 18,000 to 20,000 years ago, the whole of northern Eurasia was covered by huge sheets of ice, while treeless steppe tundra stretched all the way from the westernmost fringes of Europe eastward to well beyond the Ural Mountains. It was not until about 15,000 years ago that the ice sheets began to retreat in earnest. When the ice sheets began melting, sea levels rose dramatically, and major climatic changes took place — temperatures rose, rainfall became more abundant, all sorts of animals (gazelles, deer, cattle, wild sheep, wild goats, wild asses, wolves, jackals,

and many smaller species) became plentiful, and vegetation flourished. Areas that had formerly been inhospitable to human habitation now became inviting. Human population increased and spread outward in all directions, exploiting the opportunities created by the receding ice sheets. New technologies came into being — toward the end of the last Ice Age, hunter-gatherers had inhabited the Middle East, living either in caves or temporary campsites. As the Ice Age began coming to an end, more permanent settlements started to appear, and there was a gradual transition from an economy based on hunting and gathering to one based on cultivation and stock breeding. This was the setting in which Nostratic arose. Nostratic was indeed at the right place and at the right time. The disintegration of the Nostratic parent language coincided with the dramatic changes in environment described above, and Nostratic-speaking people took full advantage of the new opportunities.

Roaf (1990:18) has an interesting map showing the spread of agriculture in the ancient Middle East and beyond (see Map 6; see also Cavalli-Sforza et al. 1994:257 and Guilaine [ed.] 1989:118). It is striking how closely this map matches the early dispersal of Nostratic languages as shown in our Map 4, though the time-frames are different — the language spread seems to have preceded the spread of agriculture by about three millennia, at least in Central Asia. It is tempting to speculate that the spread of agriculture may have been facilitated by the cultural contacts that seem to have been maintained among the speakers of the early Nostratic daughter languages (for more discussion, see the following section on Eurasiatic). There is, however, one very important exception, namely, the spread of agriculture into and throughout Europe, which could not have been in any way connected with the early dispersal of the Nostratic daughter languages, since Nostratic languages do not appear in Europe until a much later date. In what follows, I would like to offer a proposal to account for this.

Nostratic-speaking people were not the only population group in the Middle East at the time that the dramatic changes described above were taking place. To the north of the Fertile Crescent, in Anatolia and the Caucasus, there were non-Nostratic-speaking people (as evidenced by the later Hattic, Hurrian-Urartian, and, perhaps, Gutian [so Diakonoff 1990:63] in Anatolia), and these people were also active participants in the “Neolithic Revolution” and the resulting development and spread of agriculture and stock breeding. I suggest that these were the people responsible for the spread of agriculture into Europe, not early Nostratic-speaking people and definitely not Indo-Europeans as suggested by Renfrew. I further suggest that it was the migration of these ancient non-Nostratic-speaking agriculturalists into the Balkans that gave rise to the civilization of “Old Europe” (on Old Europe, see Paliga 1989; Gimbutas 1994). Thus, we can plot two distinct migrations into Europe: the earliest, which crossed from Anatolia into the Balkans and then spread northward into Europe, began about 10,000 years ago. I am proposing that this migration was by non-Nostratic-speaking agriculturalists. The second, which came from the Russian steppes and spread westward into Europe, began about 6,000 years ago. This migration was by Indo-European-speaking

horsemen. As a result of this migration, Indo-European languages gradually replaced all of the earlier languages of Europe except for Basque. Cf. Curry 2019.

13.10. EURASIATIC

In the preceding section, I stated that the Nostratic dialect group which developed into Proto-Eurasiatic spread from the Fertile Crescent to the northeast, eventually reaching Central Asia sometime before 9,000 BCE (cf. Kozintsev 2019 and 2020 for thoughts on the Eurasiatic homeland). At the time of their arrival in Central Asia, the climate of the area was too dry to support primitive agriculture — it was not until the eighth millennium BCE that climatic conditions significantly improved. Therefore, we would expect to find no traces of agriculture in this region before this date, and indeed there are none. Nonetheless, there is evidence for early trade and cross-cultural contacts between northeastern Iran, Central Asia, and the Fertile Crescent dating as far back as Mesolithic times (cf. Sarianidi 1992:112—113). Moreover, in northeastern Iran, on the southeastern shores of the Caspian Sea, there is evidence that wild goats and sheep were hunted as early as the twelfth and eleventh millennia BCE, and these were among the first animals to be domesticated. The earliest known Neolithic remains in northeastern Iran go back to about the seventh millennium BCE. By the sixth millennium BCE, Neolithic culture had spread northward into Central Asia — the Neolithic settlement patterns and technology (pottery, agriculture, stock breeding, etc.) appearing in this area were clearly imported from the Middle East (cf. Cavalli-Sforza et al. 1994:198). On the basis of this information, we may surmise that the earliest Nostratic-speaking people to appear in Central Asia were Mesolithic hunter-gatherers, not agriculturalists, though agriculture and stock breeding eventually followed. Even after the introduction of agriculture, there is evidence of different cultural traditions co-existing in the region, as noted by Sarianidi (1992:126):

The culture of Neolithic agricultures and of cattle-breeders of Iran, Afghanistan and Soviet Central Asia shows that a transition to the forms of economy, usually termed the ‘Neolithic Revolution’, took place here almost simultaneously with similar developments in western Asia. A new way of life is clearly represented here by comfortable houses with accurate trimming of interiors, bright ceramics and wide use of ornaments. This qualitative leap in social development prepared the necessary base for the creation of ancient civilizations. At the same time inequalities in the course of historical development become clear: the ancient tribes of Iran and southern Turkmenistan passed to the new forms of economy, while in other areas of Soviet Central Asia and northern Afghanistan the transition was delayed. Tribes of hunters, fishers and food-gatherers, maintaining many archaic features in their culture, were contemporary with sedentary communities in oases. The lines of cultural links that emerged during the Palaeolithic epoch not only keep their importance but also become stronger — a fact which played an important role in the diffusion of cultivating cereals and of cattle-breeding.

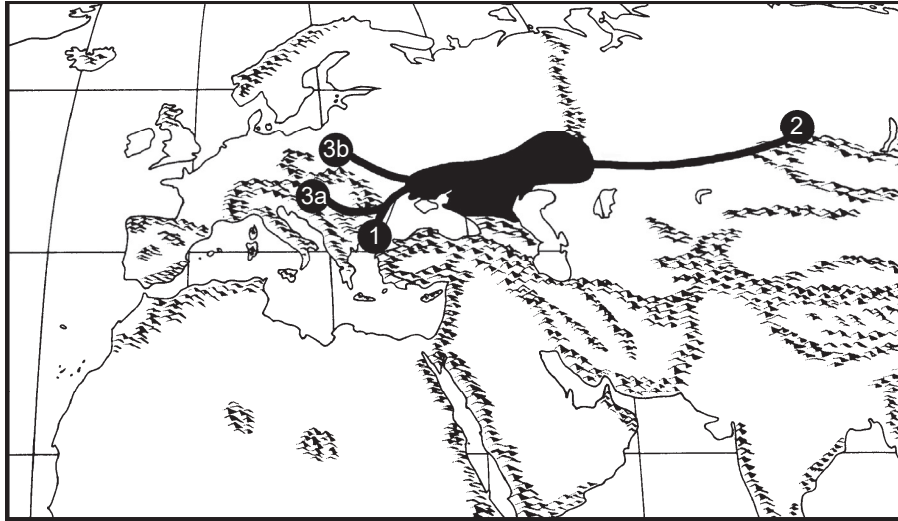
Map 1: The Indo-European Homeland



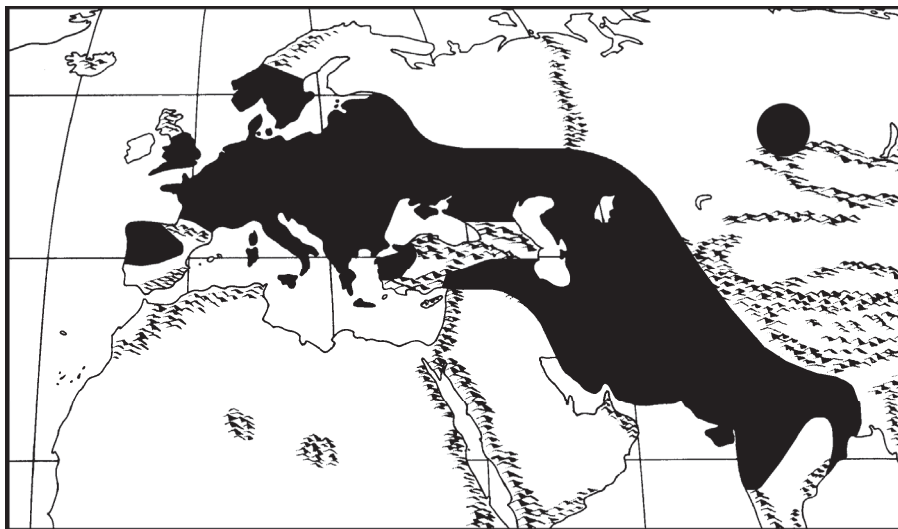
The shaded area shows the homeland of Indo-European-speaking people at about 5,000—4,500 BCE (cf. Anthony 2007:84, figure 5.1 [for the period between about 3,500—3,000 BCE]; Mallory—Adams 1997:299 [Homeland IX — the “Kurgan solution,” which places the Indo-European homeland in the Pontic-Caspian steppelands around 4,500—2,500 BCE]; Villar 1991b:15). Anthony (2007:458), basing his views on the cumulative archeological evidence, including the most recent discoveries, concludes:

Linguistic and archaeological discoveries now converge on the probability that Proto-Indo-European was spoken in the Pontic-Caspian steppes between 4500 and 2500 BCE, and alternative possibilities are increasingly difficult to square with the new evidence.

Maps 2a and 2b: The Dispersal of the Indo-European Languages

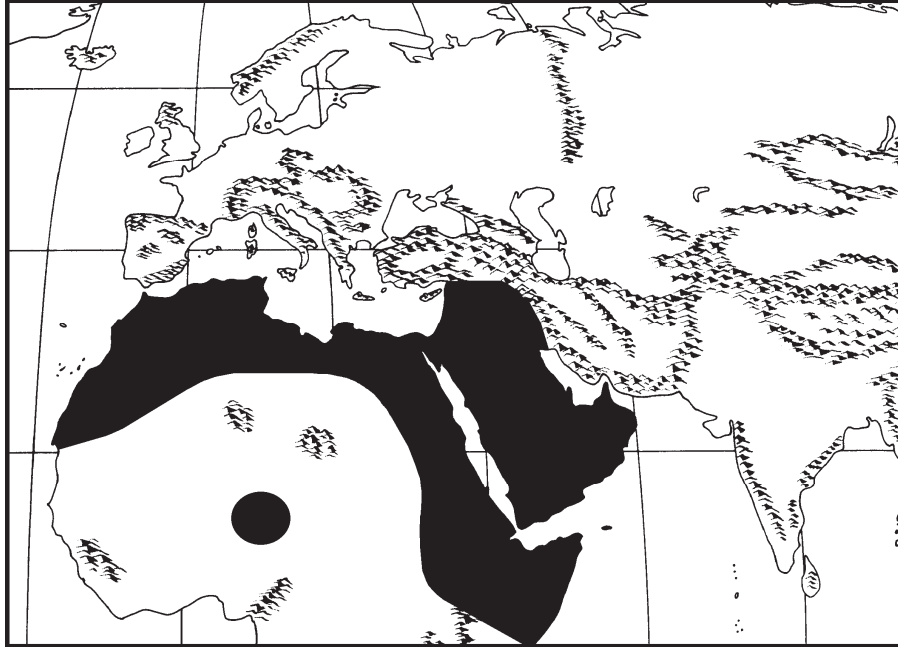


Map 2a: According to Anthony (2013:7), the first three migrations out of the Indo-European homeland are as shown above: (1) Anatolian; (2) Tocharian; (3a) Celtic; (3b) Germanic.



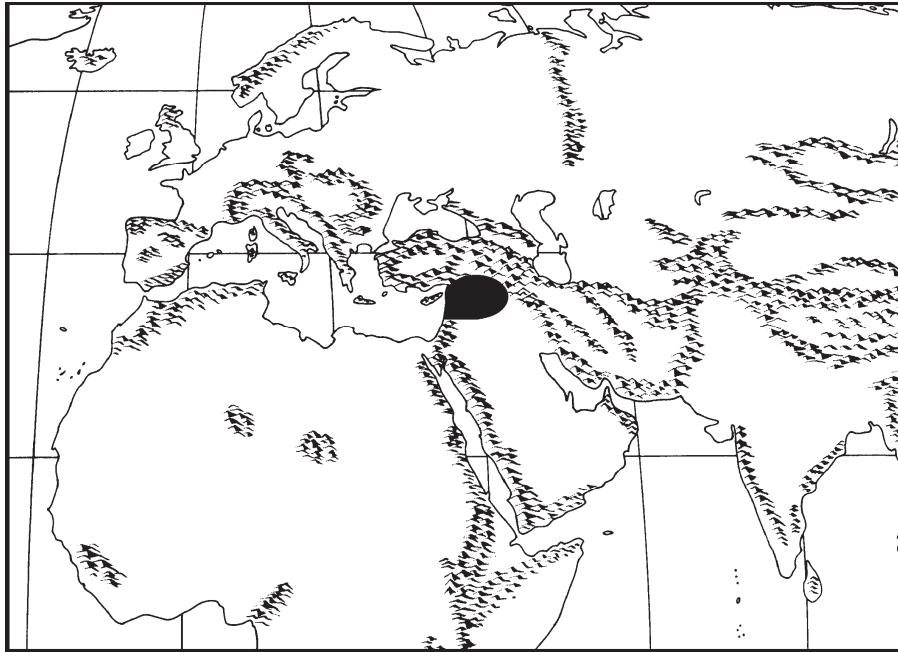
Map 2b: This map shows the approximate area to which Indo-European languages had spread by the first century BCE (cf. Mallory 1998:179; Villar 1991b:17).

Map 3: The Distribution of the Afrasian Languages at about 500 BCE



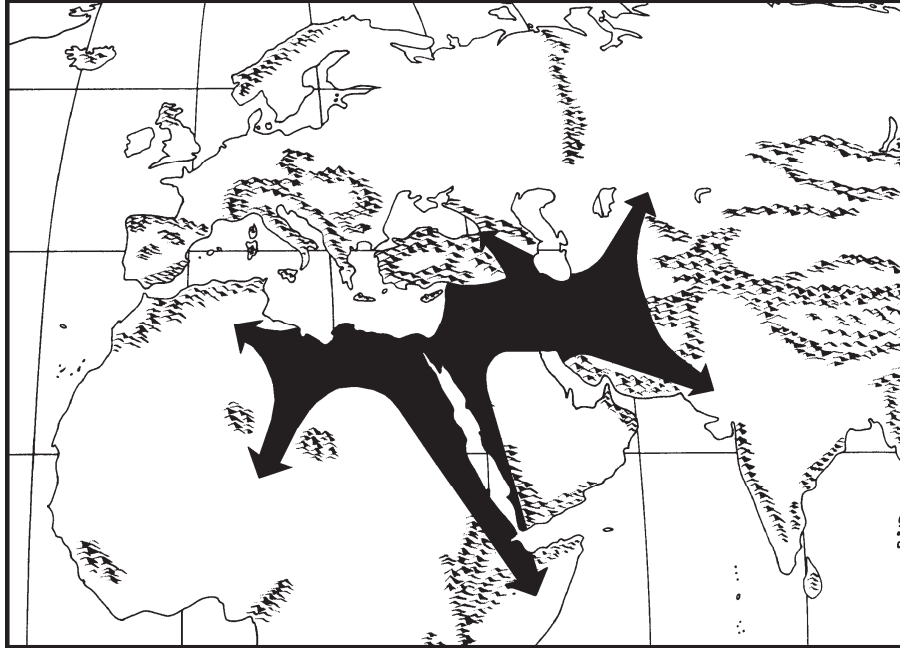
This map shows the approximate distribution of the Afrasian languages at about 500 BCE — it is adapted from the map facing page 1 in D. Cohen (ed.) 1998.

Map 4: The Nostratic Homeland



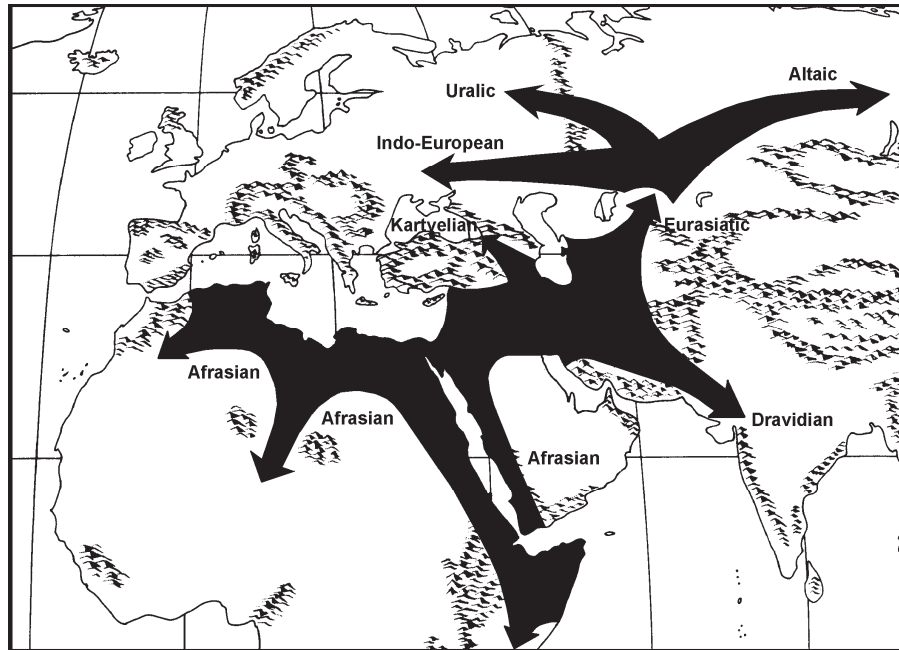
This map shows the approximate location of the Nostratic homeland at about 15,000 BCE.

Map 5a: The Early Dispersal of the Nostratic Languages



This map shows the approximate areas to which Nostratic languages had spread by about 8,000 BCE.

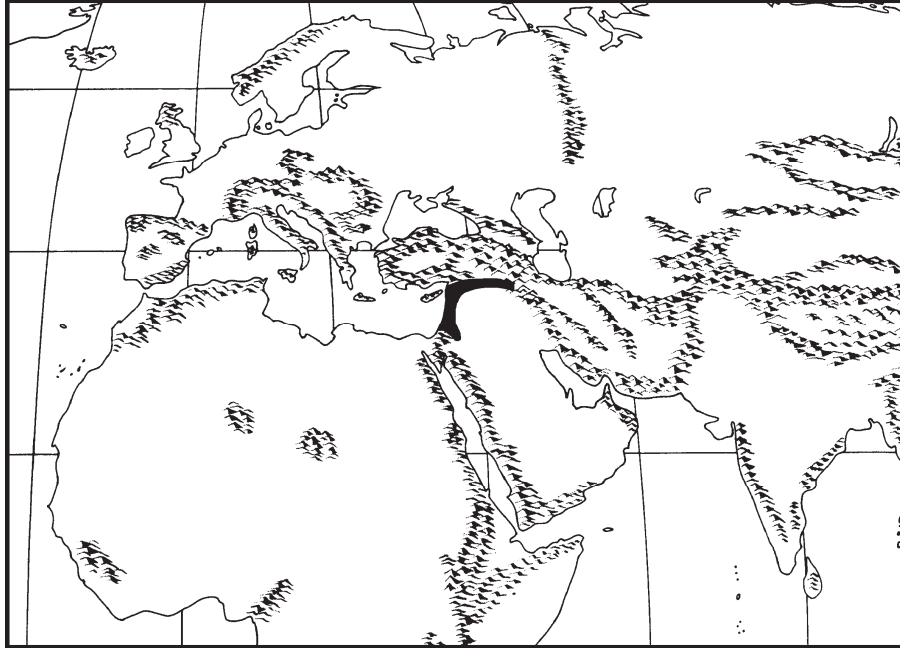
Map 5b: The Dispersal of the Nostratic Languages at about 5,000 BCE



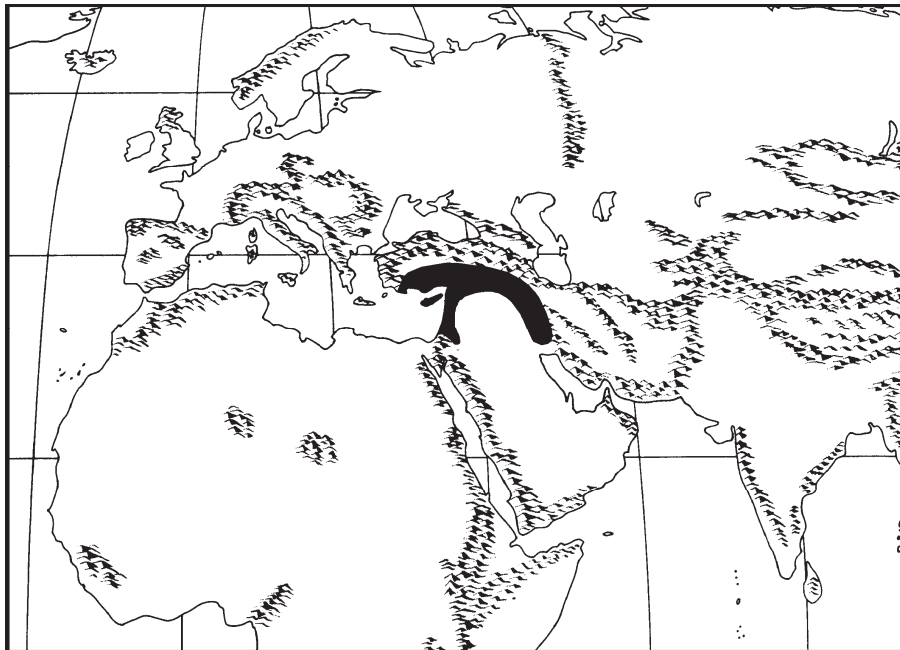
Note: Recent research conducted at the Harvard Medical School in the United States and the University of Tübingen in Germany has identified a genetic component in modern Europeans that is derived from Ancient North Eurasians. According to the new model, the Ancient North Eurasians entered Europe from the East and mingled with an exiting population composed of early farmers and still earlier hunter gatherers. Thus, nearly all modern Europeans have DNA from these three ancestral groups: (1) hunter gatherers, (2) early farmers, and (3) Ancient North Eurasians. Moreover, “[t]he research team also discovered that ancient Near Eastern farmers and their European descendants can trace much of their ancestry to a previously unknown, even older lineage called the Basal Eurasians.” This genetic model complements the linguistic dispersal scenario diagrammed in the above map for the Nostratic languages, especially as it relates to the entry of the Indo-Europeans into Europe. The full article was published in *Nature* (no. 513, pp. 409—413 [18 September 2014]).

See the maps on the following pages for the spread of agriculture.

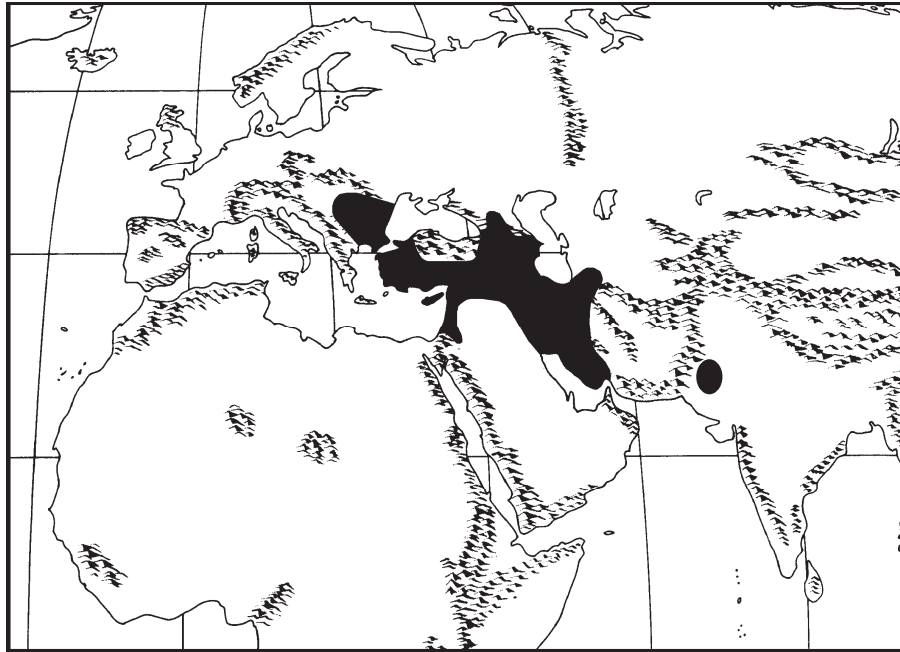
Map 6a: The Spread of Agriculture to 8,000 BCE



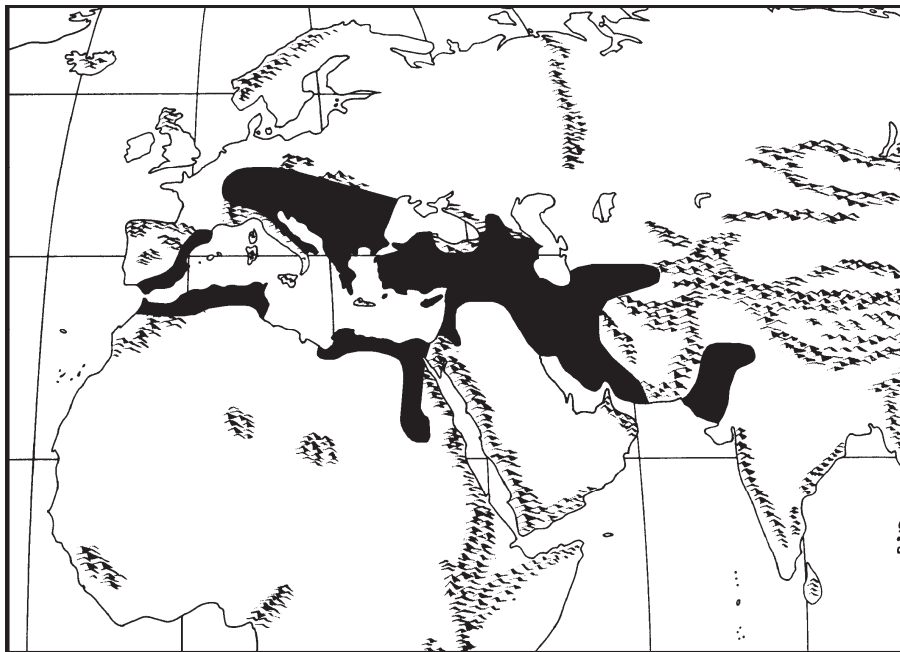
Map 6b: The Spread of Agriculture to 7,000 BCE



Map 6c: The Spread of Agriculture to 6,000 BCE



Map 6d: The Spread of Agriculture to 5,000 BCE



CHAPTER FOURTEEN

THE ORIGIN OF ETRUSCAN

14.1. INTRODUCTION

In spite of several heroic efforts, Etruscan has never been convincingly shown to be related to any known language or language family, except the poorly-attested Lemnian (spoken on the island of Lemnos) and Raetic (spoken in northeastern Italy in present-day Tyrol) (cf. Rix 1998b; Sverdrup 2002). This applies as well to recent attempts by Russian scholars to establish a connection between Etruscan and Northeast Caucasian (cf. Orël—Starostin 1990). And yet, there are some important clues as to the origin of Etruscan, and these need to be looked at in a new perspective. But, first, a few introductory comments need to be made.

Etruscan was spoken in central Italy, with the largest concentration of speakers being in the region now known as Tuscany. Several scholars have tried to show that the Etruscans came to Italy from Anatolia (cf. Beekes 2003a; John Hooper 2007; van der Meer 2004), as originally claimed by the Greek historian Herodotus. However, recent (2021) DNA evidence makes this view suspect. The first written documents date from the 7th century BCE, while the latest date from the first century CE, which is probably not far beyond the time that Etruscan became extinct. Etruscan was usually written from right to left in an alphabet based mostly on Western Greek models (cf. Rix 2004:945). Though approximately 13,000 Etruscan inscriptions have been found, the overwhelming majority of them are extremely brief and consist mainly of formulaic inscriptions written on tombs and sarcophagi.

14.2. ETRUSCAN PHONOLOGY

The phonological system was simple: There were only four vowels, namely, *a*, *e*, *i*, *u*, and the consonant system distinguished a relatively small number of phonemes and lacked a voicing contrast in stops (*φ*, *θ*, *χ* were voiceless aspirates; *z* was a voiceless dental affricate).

Stops and affricates:	p	t	c (= k)
	φ (= p ^h)	θ (= t ^h)	χ (= k ^h)
		z (= ts)	
Fricatives:	f	s	ś (= š ?)
	v		h
Nasals and liquids:	m	n	l
			r

Around 500 BCE, Etruscan developed a strong stress accent on the first syllable of words. The result was that the vowels of non-initial, that is, non-stressed, syllables were gradually weakened and eventually lost. This led to an increase in the number of consonant clusters: cf., for example, *turuce* ‘gave’ > *turce*.

14.3. NOTES ON ETRUSCAN MORPHOLOGY

Unfortunately, the Etruscan inscriptions present an incomplete picture of Etruscan morphology. Nouns were divided into several declensions and distinguished the following cases (cf. Bonfante—Bonfante 2002:83; Cristofani 1991:54—62; Rix 2004:951—953):

Case	Endings
Nominative	-Ø
Accusative	-Ø, -n
Genitive	-(V)s, -(a)l
Dative	-ś(i), -ale, -ane, -i
Locative	-θi, -ti

Sample declension: *clan* ‘son’ (cf. Bonfante—Bonfante 2002:83):

	Singular	Plural
Nominative or accusative:	<i>clan</i>	<i>clenar</i>
Genitive:	<i>clans</i>	
Dative:	<i>clensī</i>	<i>clenaraśi</i> <i>cliniiaras</i>
Locative:	<i>*clenθi</i>	

There was also an archaic genitive ending *-n* (*-an*, *-un*), while a genitive ending *-(a)l* was frequently found on nouns ending in a velar or dental. Plural was usually indicated by adding the suffixes *-ar*, *-er*, *-ur*: cf. (singular) *clan* ‘son’, (plural) *clenar* ‘sons’. Gender is clearly indicated in personal names: masculine names end in a consonant or *-e*, feminine in *-a* or *-i*:

Masculine	Feminine
<i>aule</i>	<i>aula, aulia</i>
<i>vel</i>	<i>vela, velia</i>
<i>seθre</i>	<i>seθra</i>
<i>arnθ</i>	<i>arnθi</i>
<i>larθ</i>	<i>larθi</i>

A special form was used to indicate the patronymic. The general scheme was as follows:

Nominative	Genitive	Patronymic
<i>larθ</i>	<i>larθal</i>	<i>larθalisa</i>
<i>arnθ</i>	<i>arnθal</i>	<i>arnθalisa</i>
<i>laris</i>	<i>larisal</i>	<i>larisalisa</i>

We can venture a guess that the original meaning of *-al* was ‘belonging to’, so that *larθal* would have originally meant ‘belonging to Larth’. The patronymic can be seen as a hypercharacterized (“double genitive”) form in which the genitive ending *-isa* was added to the ending *-al*. The ending *-la* could be added again to the patronymic to indicate the grandfather: cf. *larθalisla* in the phrase *arnθ velimna aules clan larθalisla*, where Larth is the father of Aule and, therefore, the grandfather of Arnth. Interestingly, in this example, *aules* contains the genitive ending *-s*. Thus, we can render this loosely as ‘Arnth Velimna, son of Aule, belonging to Larth’ or, in better English, ‘Arnth Velimna, son of Aule, whose father was Larth’.

The cardinal numbers ‘one’ through ‘nine’ were most likely as follows (cf. Bonfante—Bonfante 2002:94—98; Cristofani 1991:76—79; Jatsemirsky 2007:1; Rix 2004:961; Glen Gordon 2008):

- 1 = *tu(n), θu(n)*
- 2 = *zal (esal)*
- 3 = *ci, ki*
- 4 = *hut, huθ*
- 5 = *maχ*
- 6 = *śa, sa*
- 7 = *semφ*
- 8 = *cezp*
- 9 = *nurφ*

Bonfante—Bonfante (2002:96) give ‘four’ as *śa* and ‘six’ as *huθ*. However, this interpretation is questionable. As noted by Blažek (1999b:211 and 235) and Briquel (1994:329), support for considering *huθ* to be ‘four’ comes from its identification in the Pre-Greek name Ὑττηνία for the city Tetrapolis (Τετράπολις, composed of τέτρα- ‘four’ and πόλις ‘city’) in Attica. *semφ* ‘seven’ is usually considered to be a loan from Indo-European. The tens (other than *zaθrum* ‘twenty’) are formed from the simple numbers by adding the element *-alχ-*: *cealχ-* ‘thirty’; **huθalχ-* ‘forty’; *muvalχ-* ‘fifty’; *śealχ-* ‘sixty’ (Lemnian *śialχv-*); *semφalχ-* ‘seventy’; *cezpālχ-* ‘eighty’; **nurφalχ-* ‘ninety’. According to Jatsemirsky, the number ‘ten’ may have been *halχ*, not *śar/zar*, which he interprets as ‘twelve’ instead.

Adjectives formed a distinct morphological category in Etruscan. Three types of adjectives were distinguished: (1) adjectives of quality, (2) adjectives of possession or reference, and (3) adjectives expressing a collective idea. In general, adjectives were indeclinable.

The following personal pronouns are known (cf. Rix 2004:955):

First person:	<i>mi</i> 'I', (acc. sg.) <i>mini</i> 'me'
Second person:	* <i>u</i> 'you', (acc. sg.) <i>un</i> , (dat. sg.) <i>une</i> ; (acc. pl.) <i>unu</i>
Third person:	
Personal:	<i>an</i> (<i>ana</i> , <i>ane</i> , <i>anc</i> , <i>ancn</i> , <i>ananc</i>) 'he, she; this, that'
Inanimate:	<i>in</i> (<i>inc</i> , <i>ininc</i>) 'it'

The following demonstrative, relative, and indefinite pronouns existed:

Demonstrative:	<i>ca</i> , <i>ta</i> (<i>ita</i>), <i>cen</i> , <i>cn</i> , <i>eca</i> (<i>ica</i>), <i>ek</i> , <i>tn</i> ; <i>itun</i> (emphatic) 'this'
Relative:	<i>ipa</i> , <i>an</i> 'who, which; where'
Indefinite:	<i>ipe</i> , <i>ipa</i> 'whoever'

Verb morphology is even less completely understood. The past passive ending, for both first and second persons, was *-χe*, while the third person past active ending was *-ce*, as in *turce* 'gave'. The second person imperative endings were *-t*, *-θ*, *-θi*. There was an active past participle ending in *-θas*, while present participles were formed with an ending *-an*.

The following conjunctions and adverbs may be noted:

-c 'and' (this is most likely an Indo-European loan)
-m (*-um* after consonants) 'and'
sve 'likewise'
ic, *iχ*, *iχnac* 'how, as'
etnam 'also; again'
ratum 'according to ritual' (Latin loan)
θuni 'at first'
(e)nac 'then, after; how, as, because, since'
matam 'before, earlier'
epl, *pul* 'until'
θui 'now; here'
une 'and then' (?)
hinθin 'from below'
ipa 'where'
θar 'there, thither'
eθ, *et* 'thus, in this way'

14.4. CLUES ABOUT THE ORIGIN OF ETRUSCAN

Although only a relatively small portion of the Etruscan vocabulary is known (cf. Briquel 1994:328—329), even that small sample contains unmistakable Nostratic elements, including the personal pronouns *mi* ‘I’, and *mini* ‘me’, the demonstrative pronouns *eca*, *ca* ‘this’ and *ita*, *ta* ‘this’, and several lexical items such as, for example:

Etruscan	Nostratic
<i>maθ</i> ‘honey, honeyed wine’	<p>A. Proto-Indo-European <i>*med^hu</i> ‘honey, mead’ (cf. Sanskrit <i>mádhu</i> ‘sweet drink, anything sweet, honey’);</p> <p>B. Proto-Finno-Ugrian <i>*mete</i> ‘honey’ (cf. Finnish <i>mesi</i> ‘nectar, honey’);</p> <p>C. Proto-Dravidian <i>*maṭṭu</i> ‘honey, nectar, toddy’ (cf. Tamil <i>maṭṭu</i> ‘honey, toddy, fermented liquor, sweet juice, etc.’).</p>
<i>apa</i> ‘father’	<p>A. Indo-European (cf. Gothic <i>aba</i> ‘man, husband’);</p> <p>B. Proto-Afrasian <i>*ʔab-</i> father, forefather, ancestor’ (cf. Akkadian <i>abu</i> ‘father’; Tawlemmet <i>abba</i> ‘father’; Sidamo <i>aabb-o</i> ‘father’);</p> <p>C. Proto-Dravidian <i>*appa-</i> ‘father’ (cf. Tamil <i>appan</i>, <i>appu</i> ‘father’);</p> <p>D. Proto-Altaic <i>*aba</i> ‘father’ (cf. Written Mongolian <i>abu</i> ‘father’).</p>
<i>hanθin</i> ‘in front of, before’	<p>A. Indo-European (cf. Hittite <i>hanti</i> ‘facing, frontally, opposite, against’, <i>hanza</i> ‘in front’; Sanskrit <i>ánti</i> ‘in front of, before, near’; Latin <i>ante</i> ‘before’; Greek <i>ávta</i> ‘over against, face to face’, <i>ávri</i> ‘over against, opposite’);</p> <p>B. Afrasian (cf. Egyptian <i>hnt</i> ‘face, front part; in front of’).</p>
<i>pi</i> (also <i>pul</i>) ‘at, in, through’	<p>A. Indo-European (cf. Gothic <i>bi</i> ‘about, over; concerning, according to’; Old English <i>bī</i>, <i>bi</i>, <i>be</i> ‘[of place] near, in, on, upon, with, along, at, to; [of time] in, about, by, before, while, during; for, because of, in consideration of, by, by means of, through, in conformity with’; Sanskrit [with prefix] <i>a-bhí</i> ‘to, towards’);</p> <p>B. Afrasian (cf. Proto-Semitic <i>*ba</i> ~ <i>*bi</i> ‘in, with, within, among’);</p> <p>C. Sumerian <i>bi</i> ‘with, together with, in addition to’.</p>

- θar* ‘there, thither’ A. Proto-Indo-European **thē-r*, **thō-r* ‘there’ (cf. Sanskrit *tār-hi* ‘there’; Gothic *þar* ‘there’; Old High German *thar* ‘then, there’; Old English *þāra*, *þær* ‘there’);
 B. Altaic (cf. Lamut / Even *tar* ‘yonder, the one yonder’).
- m* (*-um*) ‘and’ A. Afrasian (cf. Semitic: Ugaritic *ʿm* (= *ʿamma* ?) ‘with, to’ (also *ʿmn*); Hebrew *ʿim(m-)* [עִם/אִמֶּנּוּ] ‘with, together with’; Syriac *ʿam* ‘with’; Aramaic *ʿim(m-)* ‘with’; Arabic *maʿa* ‘with, together with, accompanied by, in the company of’, *maʿan* ‘together, at the same time, simultaneously’; East Cushitic: Hadiyya *-m* ‘too, also’; Chadic: Hausa *ma* ‘also, too, even’);
 B. Proto-Dravidian coordinating formant **-um*;
 C. Indo-European (cf. Gothic *miþ* ‘with, among’; Old English *mid*, *miþ* ‘together with, with, among’; Middle High German *mite*, *mit* ‘with, by, together’; Old Icelandic *með* ‘with, along with, together with’; Greek μετά [‘with gen.] in the midst of, among; [with dat.] among, in the company of; [with acc.] into the middle of, coming among’);
 D. Chukchi comitative suffix *-ma*;
 E. Sumerian *-m-* conjunctive prefix and *-m-da-* third person singular comitative prefix inanimate.
- te-* ‘to put, to place’ A. Afrasian (cf. Proto-Semitic **day-* [**wa-day-*, **na-day-*] ‘to cast, to throw, to put, to place’ > Hebrew *yāḏāh* [יָדָה] ‘to throw, to cast’; Akkadian *nadū* [Old Akkadian *nadāʾum*] ‘to cast [down], to lay[down], to throw; [stative] to lie, to be situated’; Geez / Ethiopic *wadaya* [ወደየ] ‘to put, to put in, to add, to put on [adornments], to put under, to place, to set, to throw, to cast’);
 B. Proto-European (**dheyC-* >) **dhē-* ‘to set, to lay, to put, to place’ (cf. Sanskrit [reduplicated] *dā-dhā-ti* ‘to put, to place, to set, to lay [in or on]; to appoint, to establish, to constitute’; Greek [reduplicated] τί-θη-μι ‘to set, to put, to place’).

There is also a pronoun *θi*, whose meaning is unknown, but which resembles the Nostratic 2nd singular personal pronoun. That *θi* may, in fact, have been a form of the 2nd singular personal pronoun finds support in the verbal 2nd person imperative endings *-ti*, *-θ*, *-θi* (though it must be noted here that the 2nd person personal pronoun is attested in the Zagreb mummy wrappings as **u* ‘you’). There is a widespread plural marker **-r* in the Nostratic daughter languages — it shows up, for example, in the Proto-Dravidian plural marker **(V)r* used with nouns of the

personal class and pronouns. In Manchu, there is a plural in *-ri*, which is used with certain kinship terms. Moreover, Benzing reconstructs a Proto-Tungus **-ri* as the plural marker of reflexive pronouns. Within Kartvelian, Svan has a plural ending *-är*. In Upper Bal, this is changed to *-äl*, but in Lower Bal, *-är* has mostly been generalized. The Chukchi first and second person plural personal pronouns *mu-ri* ‘we’ and *tu-ri* ‘you’, respectively, contain the plural marker *-ri*. Finally, a plural marker *-r* is also found in Omotic, within Afrasian: cf. the typical Zayse plural suffix *-ir* in, for example, *šóoš-ir* ‘snakes’ (singular *šóoš* ‘snake’). These forms may be compared with the Etruscan plural suffixes *-ar*, *-er*, *-ur*.

But, there is more. The declensional system is reminiscent of Indo-European, and verb morphology, though poorly known, also exhibits Indo-European characteristics. According to Georgiev (1981:232–233), there were five noun stem types in Etruscan: (A) stems ending in *-a*, with genitive singular in *-as* or *-aś*; (B) stems ending in *-i*, with genitive singular in *-is*, *-ias*, or (rarely) *-aias*; (C) stems ending in *-ai*, with genitive singular in *-ias* or *-aias*; (D) stems ending in *-u*, with genitive singular in *-us*; and (E) consonant stems, with genitive singular in *-as* or (later) *-s*. These correspond to similar stem types in Indo-European. Moreover, the genitive singular in *-s* is typically Indo-European. Etruscan also had an archaic genitive in *-n* (*-an*, *-un*), which corresponds to the Indo-European genitive plural in **-om* (also with long vowel: **-ōm*, contracted from **-o-om*). In demonstrative stems, the accusative ends in *-n*, and this also has a correspondence with the Indo-European accusative singular ending **-om* (note: the change of final *-m* to *-n* occurs in several Indo-European daughter languages). The locative in *-ti*, *-θ(i)* has parallels in Anatolian (Hittite ablative singular *-az*, *-aza* [*z* = /ts/], instrumental singular *-it*; Luwian ablative-instrumental singular *-ati*; Palaic ablative-instrumental singular *-at*; Lycian ablative-instrumental singular *-edi*, *-adi*) and in other Nostratic languages, such as the Uralic ablative ending **-ta*. The active past participle ending in *-θas* is reminiscent of the Proto-Indo-European suffix **-t^{ho}-s* found, for example, in Sanskrit in (past participle passive) *śru-tá-h* ‘heard’ and in Greek in κλυτός ‘heard of, famous, renowned, glorious’ (cf. Burrow 1973:370–371; Szemerényi 1996: 323–324), while the present participle ending in *-an* also has parallels in Indo-European.

There are also several remarkable lexical parallels with Indo-European, a few examples being:

Etruscan	Indo-European
<i>-c</i> ‘and’	Sanskrit <i>-ca</i> ‘and’; Latin <i>-que</i> ‘and’
<i>semϕ</i> ‘seven’	Latin <i>septem</i> ‘seven’; Sanskrit <i>saptá</i> ‘seven’
<i>tin</i> ‘day, Jupiter’	Sanskrit <i>dina-m</i> ‘day’; Old Church Slavic <i>день</i> ‘day’

<i>tiu, tiv-, tiur</i> 'moon, month'	Same stem as in Sanskrit <i>dīvasa-h</i> 'heaven, day', <i>divyā-h</i> 'divine, heavenly, celestial'; Latin <i>diēs</i> 'day'
<i>neri</i> 'water'	Sanskrit <i>nārāṇ</i> 'water', <i>Narmadā</i> the name of a river
<i>θam-</i> 'to build, to found' and <i>tmia</i> 'place, sacred building'	Same stem as in Latin <i>domus</i> 'house, home; dwelling abode'; Sanskrit <i>dāma-h</i> 'house, home'; Greek <i>δέμω</i> 'to build, to construct'
<i>an</i> (<i>ana, ane, anc, ananc</i>) 'he, she'	Sanskrit demonstrative stem <i>ana-</i> 'this'; Hittite demonstrative <i>anniš</i> 'that, yonder'; Lithuanian demonstrative <i>anàs</i> 'that one (over yonder)'
<i>car-, cer-</i> 'to make, to build'	Sanskrit <i>kāratī</i> 'to do, to make, to perform, to accomplish, to cause, to effect, to prepare, to undertake, to work at, to build' (cf. Pokorny 1959:641—642 * <i>k^uer-</i> 'to make, to form')

While some of these may be borrowings (*-c* 'and' and *semφ* 'seven', for example), others (*an* 'this', for instance) are native Etruscan words. The following is also a borrowing: *neftís, nefš, nefis* 'grandson' (< Latin *nepos* 'grandson').

14.5. CONCLUSIONS

These and other similarities are discussed in detail in articles by Adrados (1989a and 2005a) and Woudhuizen (1991). Adrados draws the conclusion that Etruscan is an archaic Indo-European language and that it is particularly close to the languages of the Anatolian branch. Woudhuizen reaches a similar conclusion, as did Georgiev (1979) before them. In my opinion, Adrados and Woudhuizen have indeed shown that Etruscan is related in some way to Indo-European, but not as a daughter language. The question then arises, if Etruscan is not an Indo-European daughter language, then what is the nature of its relationship to Indo-European and, further, to Nostratic?

Until fairly recently, Etruscan was considered to be a language isolate, with no known relatives. However, this view is no longer tenable. As noted at the beginning of this chapter, Etruscan is now known to be related to Raetic and Lemnian (cf. Rix 2004:944). Together, these three form the Tyrrhenian language family. Hence, when looking for possible relatives of Etruscan, we need to think in terms of Tyrrhenian as a whole rather than working with a single branch of this language family. Unfortunately, Proto-Tyrrhenian has not yet been reconstructed. Rix (2004:944) calls the parent language Proto-Tyrsenic and dates it to the last quarter of the second millennium BCE. He further notes that the location of its homeland is disputed.

The striking similarities between Tyrrhenian (only Etruscan has been compared to date, not reconstructed Proto-Tyrrhenian) and Indo-European presented in this chapter and by several other scholars are real, as are the similarities between Tyrrhenian and other Nostratic languages. These similarities point to genetic relationship. Thus, the following hypothesis may tentatively be proposed: The Tyrrhenian language family is a separate branch of Eurasiatic, closest to Indo-European. Eurasiatic, in turn, is a branch of the Nostratic macrofamily. Future research must be directed toward testing the validity of the conclusions reached in this section, especially in light of the growing body of literature on Nostratic.

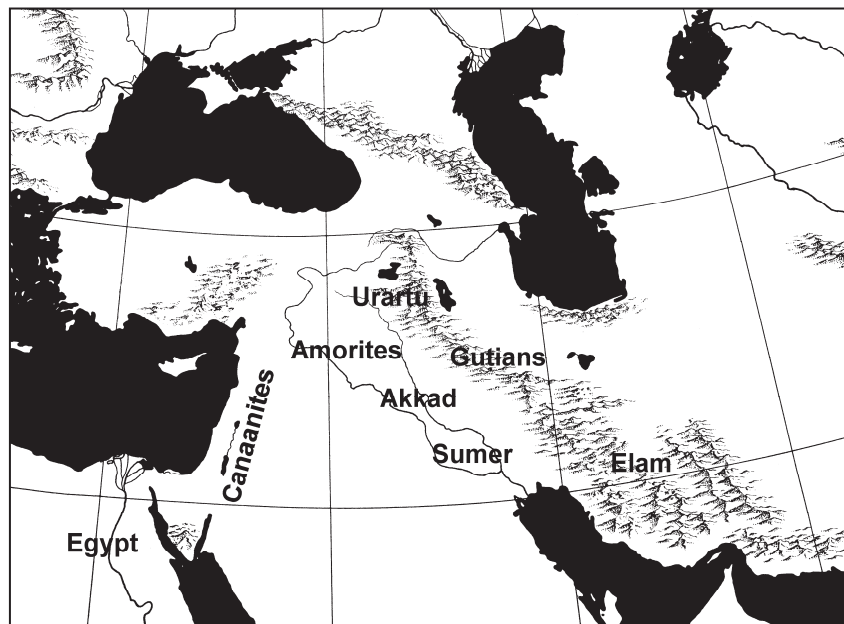
References: Barker—Rasmussen 1998; Beekes 2003a; Briquel 1994; D'Aversa 1994; Larissa Bonfante 1990; Bonfante—Bonfante 1983 and 2002; Cristofani 1991; Facchetti 2005; Georgiev 1979 and 1981:229—254 (these works must be used with caution); Glen Gordon 2008; Jatsemirsky 2007; Perrotin 1999; Pfiffig 1969; Rix 1998b and 2004; Stoddart 2009; Sverdrup 2002.

CHAPTER FIFTEEN

SUMERIAN AND NOSTRATIC

15.1. INTRODUCTION

Sumerian, which is now extinct, was spoken in southern Mesopotamia (modern-day Iraq), extending from Babylon in its northernmost limits to the tip of the Persian Gulf in the south (see map below). From the time of the earliest texts, several dialects can be distinguished, the most important of which was Emesal (*eme-sal*), most probably “women’s speech”, which Boisson (1992:434—435) argues was more conservative than the main dialect, Emegir (*eme-ĝir₁₇*). The earliest Sumerian inscriptions date from around 3,100 BCE, though the oldest intelligible texts date from about 2,600 BCE, and the language was probably still spoken as late as the 3rd century BCE. The Sumerian writing system was based exclusively on the cuneiform syllabary, which exhibits several marked stages of development over the course of Sumerian literary history. After about 1,900 BCE, Akkadian (a Semitic language) began to replace Sumerian in letters and administrative texts, though Sumerian continued to be used in cultic and literary texts.



Map 7: The Location of Sumerian

Sumerian shares a number of interesting lexical parallels with the Nostratic languages (these are listed in several papers by Boisson, in Bomhard—Kerns 1994: 195—714, and in Chapter 22, Part III: Comparative Vocabulary, of this book), including some core vocabulary items such as pronominal stems, though there are important differences here as well. Thus, Sumerian *may* in some way be related to the Nostratic languages. In a number of privately-circulated papers, Claude Boisson has explored lexical parallels between Sumerian and Dravidian, while Anumugam Sathasivam (1965), in an unpublished manuscript, has tried to show that Sumerian is related to Dravidian. Though I formerly very tentatively accepted a modified version of Sathasivam's (and Boisson's) theories, placing Sumerian as a sister to Proto-Elamo-Dravidian, I am not entirely satisfied with this arrangement. True enough, Sumerian has an agglutinating morphological structure, as do Elamite and Dravidian, and the nominal case endings, for example, are, in reality, bound postpositions in both Sumerian and Elamo-Dravidian. However, Sumerian is sufficiently different from both Elamite and Dravidian to make me question that there was a special relationship between them.

15.2. NOTES OF SUMERIAN MORPHOLOGY

Before beginning, we should give a brief sketch of Sumerian grammatical structure, noting first and foremost that, even after more than a century of intensive study, there is still not widespread agreement among experts in the field on many fundamental questions of Sumerian grammar. Nevertheless, the overall structure is clear. Three word classes were distinguished: (A) nouns, (B) verbs, and (C) adjectives. Even though grammatical gender in the strictest sense did not exist, nouns fell into two classes, namely, animate and inanimate, which were only distinguished in the 3rd person actor verbal and possessive pronoun affixes and in the relative pronoun. Ten cases (genitive, absolutive, ergative, dative, locative, comitative, terminative, ablative-instrumental, and equative [in nouns] plus subject case [in pronouns only]) and two numbers (singular and plural) were distinguished. The plural was indicated by means of the suffix *-ene*, which was used only with animate nouns, or by reduplication. In later texts, the plural could also be indicated by the form *hi-a*, which was used with inanimate nouns and which was originally an independent word meaning 'mixed, various, unspecified', or by *-me-eš*, which was properly the enclitic copula with plural suffix. Sumerian differentiated between ergative and absolutive in nouns. In pronouns, however, the patterning was that of a nominative-accusative system (so Thomsen 1987:51, §42; Hayes 1997a:28—30; and Michalowski 1992:96; Diakonoff, however, disputes this [personal communication]). Sumerian verbs were formed by adding various prefixes and/or affixes directly to the verbal root, which was itself invariable. Verbal constructions fell into one of two categories, namely, finite forms or non-finite forms. Finite verbal stems distinguished three conjugational types: (A) the intransitive conjugation, (B) the transitive *hamtu* conjugation, and (C) the transitive *maru* conjugation. Intransitive forms were noted by means of pronominal suffixes, while transitive forms were

noted by means of either prefixes, suffixes, or both. Syntactically, the basic word order was SOV.

15.3. SUMERIAN PHONOLOGY

The Sumerian cuneiform syllabary distinguished the following sounds:

p	t	k		
b	d	g		
	s	š		h
	z			
m	n	ḡ (= [ŋ])		
	l			
	r			
*w		*y		
a	e	i	u	(o ?)

There may have been corresponding long vowels as well. There were no initial consonant clusters, while final consonants, especially *t*, *d*, *k*, *g*, *m*, *n*, and *r*, were often omitted in the writing (cf. Thomsen 1987:43), and this often makes it difficult to ascertain the form of the word. Internally, there was a tendency for consonants to assimilate. The traditional transliteration shows a voicing contrast in stops. There is a very strong probability, however, that the actual contrast was between voiceless aspirated versus voiceless unaspirated or simply between tense versus lax (cf. Boisson 1988b:215—19; Hayes 1997a:12; Thomsen 1987:43): thus, traditional *p*, *t*, *k* = *p^h*, *t^h*, *k^h* respectively, while traditional *b*, *d*, *g* = *p*, *t*, *k* respectively. Traditional *z* may have been an affricate (cf. Boisson 1989b:221—26). Though the semivowels /*y*/ and /*w*/ were not directly represented in the writing system, there is indirect orthographic evidence of their existence. The vowels have also drawn the attention of several scholars. It is possible that Sumerian may have had more vowels than what are directly represented in the writing system — in particular, a strong case has been made for an *o*-quality vowel. Other proposals, however, are much more controversial and have not won wide support. Lastly, Boisson (1989b:212—214) considers Bauer's proposed *d^r* (cf. Hayes 1997a:12—13; Thomsen 1987:44) to be highly questionable. For a discussion of the problems involved in interpreting Sumerian phonetics and phonology, cf. Diakonoff 1992:125—129; Edzard 2003: 13—21; Hayes 1997a:7—15; Jagersma 2010:31—67.

The Sumerian root was generally monosyllabic: *V*, *CV*, *VC*, and, most often, *CVC*. There was no distinction between verbal roots and nominal roots — thus, for example, *dūg* could mean either 'good' or 'to be good'.

In the Sumerian texts, certain non-standard forms of speech can be discerned. It is not entirely clear what this means — perhaps different dialects, perhaps not; perhaps so-called "refined speech", perhaps not. These forms, which have been

encountered mostly in religious texts, were labeled “Emesal” (*eme-sal*) by the scribes, while the standard forms were labeled “Emegir” (*eme-ġir₁₇*) (*eme* means ‘speech, language’).

15.4. CLUES ABOUT THE ORIGIN OF SUMERIAN

To illustrate the problems involved in trying to determine the origin of Sumerian, let us begin by looking at the differences between the case endings reconstructed for Proto-Elamo-Dravidian by McAlpin (1981:111) with those found in Sumerian (cf. Thomsen 1987:88—89):

A. Proto-Elamo-Dravidian:

Nominative	*-Ø
Accusative	*-(V)n
Adessive/ Purposive (Dative)	*-əkkə (?)
Genitives:	
1. Possessive	*-a
2. Adnominal	*-in
3. Oblique/Locative	*-tə

B. Sumerian:

Case	Postpositions / “case endings”		
	Animate	Inanimate	Prefix Chain
Genitive	-ak	-ak	
Absolutive	-Ø	-Ø	
Ergative	-e	-e	
Dative (“to, for” — animate only)	-ra		-na-, etc.
Locative (“when”)		-a	-ni-
Comitative (“with”)	-da	-da	-da-
Terminative (“to”)	-šè	-šè	-ši-
Ablative (“from”)-Instrumental		-ta	-ta- and -ra-
Locative-Terminative		-e	-ni-
Equative (“like, as”)	-gin ₇	-gin ₇	

The prefix chain cases require special explanation (I will quote from Thomsen 1987:215 and 219 [for the dative, §431 below]):

§ 423. Some cases, the so-called dimensional cases, can be incorporated in the prefix chain of finite verbal forms. These cases are: dative, comitative, terminative, ablative, and locative. In principle the case elements have the same shape as the corresponding postpositions and only minor changes in writing and pronunciation occur.

The rank of the case elements in the prefix chain is between the conjugation prefixes and the pronominal element serving as subject/object mark...

§ 424. Terminology

The case elements of the prefix chain are most often called ‘infixes’ or ‘dimensional infixes’ by the sumerologists. However, since they do not act as infixes in the stem but merely as members of the chain of grammatical elements preceding a verbal root, ‘case elements’ or ‘case prefixes’ are used here as the most appropriate terms.

§ 431. The dative is the only case prefix which has different prefixes for every person...

1.sg.	ma- < /mu-a-/	1.pl.	-me-
2.sg.	-ra-	2.pl.	?
3.sg.an.	-na- < /-n-a-/	3.pl.	-ne-

There are parallels, to be sure, but as many with *other* Nostratic languages as with Elamo-Dravidian. The Sumerian ablative-instrumental case ending (inanimate) *-ta*, (prefix chain) *-ta-* agrees with the Proto-Uralic ablative ending **-ta* as well as with the Proto-Elamo-Dravidian oblique/locative ending **-tə*. The Sumerian locative case ending (prefix chain) *-ni-* is similar to the Proto-Uralic locative case ending **-na*, though the vowels are problematic, and to the Proto-Dravidian locative case ending **-in* (**-il* ?). The Sumerian genitive case ending *-ak* is similar in form to the Proto-Dravidian dative case ending *-(k)ku* and the Proto-Elamo-Dravidian adessive/locative (dative) **-əkkə*, but the difference in function is a problem. Moreover, the *-na-* and *-ni-* prefix chain case endings may be somehow related to the oblique-*n* formations described by John C. Kerns (cf. Bomhard—Kerns 1994: 173—179, §3.5.3.1).

An extremely interesting parallel involves the Sumerian comitative element *da* (also *-dè*). As noted by Thomsen (1987:99): “The basic meaning of the comitative is ‘with’, ‘together with’, expressing accompaniment as well as mutual action.” A particle **da* (*~ *də*), with the basic meaning ‘along with, together with, in addition to’, shows up all over Nostratic (cf. Bomhard—Kerns 1994:275—276, no. 89). It appears in Kartvelian as a conjunction: Georgian *da* ‘and’, Mingrelian *do* ‘and’, Laz *do* ‘and’ < Proto-Kartvelian **da* ‘and’, and probably as the adverbial case ending *-ad/d* found, for example, in Old Georgian (in Modern Georgian, the ending is *-ad[a]*). In Afrasian, it is found in Chadic: Hausa *dà* ‘with; and; by, by means of; regarding, with respect to, in relation to; at, in, during; than’; Kulere *tu*; Bade *də*; Tera *ndə*; Gidar *di*; Mokulu *ti*; Kanakuru *də* < Proto-Chadic **də* ‘with, and’.

According to Diakonoff (1988:61), a comitative/dative in **-dV*, **-Vd* is to be reconstructed for Proto-Afrasian — it is attested in some Cushitic languages. In Burji, for example, it appears in the locative suffix *-ddi*, as in *miná-ddi* ‘in the house’. In Berber, it appears as a preposition. Elamite has *da* (*tak*) ‘also, too, as well, likewise; so, therefore, consequently, accordingly, hence; thereby, thereupon’. Particularly interesting is Altaic, where this particle functions as a locative suffix on the one hand, **-da*, and as an independent particle on the other, **da* ‘together with, and, also’: Common Mongolian dative-locative suffix **-da* > Mongolian *-da*; Dagur *-da*; Khalkha *-db*; Buriat *-da*; Kalmyk *-db* (cf. Poppe 1955:195—199). In Manchu, the dative-locative particle is *-de*. In Turkic, it also appears as a locative suffix: Common Turkic **-da/*-dä* (cf. Menges 1968b:110). It may be preserved in Indo-European in the suffixed particle appearing, for example, in Sanskrit as *-ha* and *-dhi*: *sa-há* ‘with’ (Vedic *sa-dha*), *i-há* ‘here’ (Prakrit *i-dha*), *kú-ha* ‘where?’, *á-dhi* ‘above, over, from, in’; in Avestan in *iḍa* ‘here’, *kudā* ‘where?’; and in Greek in the locative particle *-θι* in, for example, *oīko-θι* ‘at home’, *πό-θι* ‘where?’.

Now let us look briefly at verb morphology. McAlpin (1981:122—123) notes that the Proto-Elamo-Dravidian verbal conjugation “does not survive in Dravidian as a paradigm”. Therefore, we will give the verbal endings as they appear in Middle Elamite, using, once again, the verb *hutta-* ‘to make’ for illustration (cf. Reiner 1969:76; Grillett-Susini 1987:33):

Person	Singular	Plural
1	<i>hutta-h</i>	<i>hutta-hu</i> (< <i>-h+h</i>)
2	<i>hutta-t</i>	<i>hutta-ht</i> (< <i>-h+t</i>)
3	<i>hutta-š</i>	<i>hutta-hš</i> (< <i>-h+š</i>)

McAlpin derives the Elamite 1st sg. ending *-h* from Proto-Elamo-Dravidian **-H*, the 2nd sg. ending *-t* from **-ti*, and the 3rd sg. ending *-š* from **-(V)š*. The Proto-Elamo-Dravidian 2nd sg. ending **-ti* survives in South Dravidian negative imperatives.

The Sumerian finite verb employs various pronominal elements. These are described by Thomsen (1987:147, §287) as follows:

The pronominal elements of the finite verbal form refer to the persons involved in the verbal action. There are two main series with different marks: the prefixes and the suffixes. A verbal form can have at most one prefix immediately before the verbal root and one suffix after the verbal root (or, if present, after /ed/), both referring to subject and/or object. The prefixes are identical with the pronominal elements which under some conditions occur together with case prefixes...

Thomsen (1987:148—149, §290) lists the following pronominal prefixes (see also Hayes 1997a:19 and 22—24):

1.sg.	-?-
2.sg.	-e-
3.sg. animate	-n-
inanimate	-b-
1.pl.	-me-
2.pl.	-e ene-
3.pl.	-ene-

The plural pronominal prefixes “are used as dative elements only..., and it is thus more probable that they are case elements rather than pronominal elements” (cf. Thomsen 1987:148).

The Sumerian pronominal prefixes are strongly reminiscent of the possessive suffixes/personal endings found in various Nostratic daughter languages — note, for example, the Proto-Uralic personal endings, which have been reconstructed as follows (cf. Hajdú 1972:40 and 43—45; Sinor 1988:725; Aikio 2022:18):

Person	Singular	Plural
1	*-me	*-me (+ Plural)
2	*-te	*-te (+ Plural)
3	*-se	*-se (+ Plural)

Even more interesting are the possessive suffixes reconstructed for Proto-Tungus (cf. Sinor 1988:725):

Person	Singular	Plural
1	*-m	*-m (+ Plural) (excl.)
2	*-t	*-t
3	*-n	*-t

Similar forms are found in Indo-European, Kartvelian, and Afrasian. The first person possessive suffixes/personal endings in *-m found in various Nostratic daughter languages are similar in both form and function to the Sumerian first person pronominal prefixes, 1st singular *ma-* (< /mu-a-/) and 1st plural *-me-*, while the Proto-Tungus third person singular possessive suffix in *-n (related forms are found in other Nostratic daughter languages) is similar to the Sumerian third person pronominal prefixes, 3rd singular *-n-*, *-na-* (< /-n-a-/) and 3rd plural *-ne-*, *-ene-*.

There are also two series of pronominal suffixes (cf. Thomsen 1987:152), the first of which (column A below) marks both the subject of intransitive verbs and the direct object of transitive verbs. It is also found after the enclitic copula. The second series (column B below), on the other hand, “serves as the subject marks of the two-

part. *marû* conjugation”. In actual fact, only the 3rd persons singular and plural are different (cf. Thomsen 1987:152).

	A		B	
Person	Sg.	Pl.	Sg.	Pl.
1	-en	-enden	-en	-enden
2	-en	-enzen	-en	-enzen
3	-Ø	-eš	-e	-ene

There is simply nothing here that resembles what is found in Elamo-Dravidian nor, for that matter, at least for the first and second persons singular and plural, in other Nostratic languages. The third person pronominal suffixes, however, do have parallels in various Nostratic daughter languages. For a discussion of the etymology of the pronominal stems, see below.

The Sumerian personal pronoun stems are as follows (the Emesal forms are shown in parentheses; /ḡ/ = /ŋ/) (cf. Thomsen 1987:68; Boisson 1992:437):

	1.sg.	2.sg.	3.sg.	3.pl.
Subject	ḡá.e (me.e) ḡá-a-ra	za.e (ze) za-a-ra	e.ne e.ne-ra	e.ne.ne e.ne.ne-ra
Dative	ḡá-a-ar (ma-a-ra)	za-a-ar		
Terminative	ḡá(-a/e)-šè	za(-a/e)-šè	e.ne-šè	e.ne.ne-šè
Comitative	ḡá(-a/e)-da	za(-a/e)-da	e.ne-da	e.ne.ne-da
Equative	ḡá(-a/e)-gin ₇	za(-a/e)-gin ₇	e.ne-gin ₇	e.ne.ne-gin ₇

The possessive suffixes are (cf. Thomsen 1987:71):

	Singular	Plural
1	-ḡu ₁₀ ‘my’	-me ‘our’
2	-zu ‘your’	-zu.ne.ne, -zu.e.ne.ne, -zu.ne ‘your’
3 animate	-a.ni ‘his, her’	-a.ne.ne ‘their’
inanimate	-bi ‘its’	-bi also ‘their’, presumably collective

Right away, we notice that the Emesal 1st singular forms (subject) *me.e*, (dative) *ma-a-ra* parallel the common Nostratic 1st person personal pronoun stem **mi* (~ **me*) ‘I, me’ (cf. Illič-Svityč 1971—1984.II:63—66, no. 299 **mi*; Bomhard—Kerns 1994:661—662, no. 540), while the 1st plural possessive suffix *-me* parallels the

common Nostratic inclusive 1st plural personal pronoun stem **ma-* (\sim **mā-*) ‘we, us’ (cf. Bomhard—Kerns 1994:661—662, no. 540; Illič-Svityč 1971—1984.II: 52—56, no. 289 **mä*). The 2nd person personal pronoun *ze-*, *za-*, *-zu* may also correspond to the Proto-Nostratic 2nd person personal pronoun stem **thi-* (\sim **the-*) ‘you’ (cf. Bomhard—Kerns 1994:285—287, no. 102; Dolgopolsky 1984:87—89 **t[ü]*), assuming affricatization of the dental before front vowel (similar to what has happened in Mongolian): **thi-* (\sim **the-*) > **tʰi-* (\sim **tʰe-*) > (**tʰi-* / **tʰe-*) > *ze-* / *tʰe-* /, etc. (Sumerian <z> = /tʰ/ [cf. Boisson 1989:221—226 and 1992:436]). Finally, the 3rd person forms *e.ne* and *a.ne* are related to the demonstrative pronoun *ne.en*, *ne(-e)*, which has a parallel in the Proto-Nostratic demonstrative stem **na-* (\sim **nā-*), **ni-* (\sim **ne-*), **nu-* (\sim **no-*) (cf. Bomhard—Kerns 1994:688—689, no. 570). To account for the beginning vowels in *e.ne* and *a.ne*, Shevoroshkin (cited in Boisson 1992:443) has suggested that these appear “to be a compound of the demonstrative / personal pronoun of the 3rd person ***ʔi* / ***ʔä* [...] plus the demonstrative base ***n(ä)*”. I agree with Shevoroshkin’s suggestion. Though widespread in the Nostratic daughter languages, these stems are lacking in Dravidian (though see Dolgopolsky 1984 for a slightly different interpretation of the Dravidian material). Zvelebil (1977:40) reconstructs the following personal pronoun stems for Proto-Dravidian (see also Krishnamurti 2003:244—253):

	Singular	Plural
1	<i>*yān</i> : <i>*yan-</i> ‘I’	(incl.) <i>*yām</i> : <i>*yam-</i> ‘we’ (excl.) <i>*nām</i> : <i>*nam-</i> ‘we’
2	<i>*nīn</i> : <i>*nin-</i> ‘you’	<i>*nīm</i> : <i>*nim-</i> ‘you’
3	<i>*tān</i> : <i>*tan-</i> ‘he, she, it’	<i>*tām</i> : <i>*tam-</i> ‘they’

McAlpin (1981:112) begins his discussion of pronouns by making some very important observations regarding the relationship of the Elamite and Dravidian pronouns:

530.0 The personal pronouns have long been an enigma in the relationship of Elamite to Dravidian. On the one hand, the second person pronouns provided the morphological detail first recognized as being cognate... On the other hand, one of them, the first person plural is still somewhat ambiguous as to its form in PED. For the others, it has been a long quest, fitting together the morphological pieces. The major breakthrough came with the realization that the Proto-Dravidian pronouns were not ultimately archaic, but rather a major innovation in late Pre-Dravidian. The nature of the innovation was the replacement of the nominative by oblique stems. Thus, Proto-Dravidian pronouns have little to say directly about the morphology of nominative bases in PED. However, the same forms, in a different usage, were preserved as personal possessive prefixes in kinship terminology. This was maintained as a system for a few kin terms in Old Tamil and sporadically in many other Dravidian languages. Thus, Dravidian does attest the PED system, but not directly in the paradigm.

McAlpin (1981:112—117) reconstructs the following personal pronoun stems for Proto-Elamo-Dravidian:

	Singular	Plural
1	* <i>i</i>	* <i>nəNKə</i>
2	* <i>ni</i>	* <i>nim</i>
3 resumptive	* <i>ta(n)</i>	
reflexive	* <i>i</i>	

The 1st person singular is to be derived from Proto-Nostratic **ɔiya* 1st person personal pronoun stem (postnominal possessive/preverbal agentive) found also in Afrasian (cf. Bomhard—Kerns 1994:597—598, no. 470; Dolgopolsky 1984:72, 83, 85—86, 96, and 99—100), while the 3rd person stem **ta(n)* is to be derived from the widespread Nostratic demonstrative stem **ʰa-* (~ **ʰə-*) ‘this’ (cf. Bomhard—Kerns 1994:287—289, no. 103), and the Proto-Dravidian 1st plural (exclusive) stem **nām* : **nam-* ‘we’ is to be derived from the Proto-Nostratic 1st person personal pronoun stem **na-* (~ **nə-*) (cf. Bomhard—Kerns 1994:683—684, no. 564; Dolgopolsky 1984:90—91) — this stem may have a parallel in the Sumerian 1st person pronoun *ĝá-* /*ġa-*/, but this is uncertain.

Also worth noting are the Sumerian interrogative particles *me-na-àm* ‘when?’, *me-a* ‘where?’, and *me-šè* ‘to where?’, which parallel the Nostratic interrogative stem **mi-* (~ **me-*), found in Indo-European (marginally only — relic forms are found in Celtic, Tocharian, and Hittite), Kartvelian, Afrasian, Uralic, and Altaic (for details, cf. Bomhard—Kerns 1994:645—647, no. 524).

15.5. CONCLUSIONS

The evidence surveyed in this chapter indicates that Sumerian does not bear a special relationship to Elamo-Dravidian. Moreover, Sumerian does not bear a special relationship to any other Nostratic daughter language either. Rather, the evidence seems to indicate that Sumerian is not a Nostratic daughter language at all but that it is distantly related to Nostratic. However, there are also many problems that must still be solved regarding the exact nature of that relationship — we have only scratched the surface in this brief summary.

...

References: Boisson 1987a, 1987b, 1988a, 1988b, 1988d, 1989a, 1989b, 1992, 2002a, and 2002b; Clauson 1973b; Crawford 1991; Edzard 2003; Fähnrich 1981; Falkenstein 1959; Fane 1990; Hayes 1997a and 1997b; Jagersma 2010; Michalowski 1980, 1992, and 2004; Rubio 1999, 2007a, and 2007b; Sathasivam 1965; Thomsen 1987; Zakar 1971; Zólyomi 2010.

PART TWO

COMPARATIVE MORPHOLOGY

CHAPTER SIXTEEN

NOSTRATIC MORPHOLOGY I: THE EVIDENCE

16.1. INTRODUCTION

One of the criticisms often leveled at the Nostratic Hypothesis is the relative dearth of morphological evidence presented by its proponents. Recently, this deficiency has begun to be filled. The late Joseph H. Greenberg has amassed a tremendous amount of morphological evidence in volume 1 of his book *Indo-European and Its Closest Relatives*. On the basis of the morphological evidence alone, I believe that Greenberg has successfully demonstrated that Eurasiatic is a valid linguistic taxon of and by itself. Though not without problems (cf. Georg—Vovin 2003), the morphological evidence that Greenberg has gathered for determining which languages may be related to Indo-European is the most complete to date and the most persuasive — it goes far beyond what Illič-Svityč was able to come up with, and it also surpasses what was presented in the chapter on morphology by John C. Kerns in our joint monograph *The Nostratic Macrofamily*.

I have tried to demonstrate in this and other works that Greenberg's Eurasiatic is a branch of Nostratic. If, as I have claimed, that is in fact the case, then there should be clear morphological parallels between Eurasiatic and the other branches of Nostratic, and indeed there are. This will be demonstrated here.

In this chapter, I shall present the morphological evidence for Nostratic, incorporating (and amending, as necessary) what Greenberg gathered for Eurasiatic with data from the non-Eurasiatic branches of Nostratic, making use especially of the works of Illič-Svityč and Dolgopolsky (Fortescue 1998 and 2016, Kortlandt 2010, and Nafiqoff 2003 have also been helpful). I shall also include evidence not found in Greenberg's book nor in the works of Illič-Svityč and Dolgopolsky, while, at the same time, excluding dubious or poorly supported proposals made in these works. However, I shall not attempt a systematic reconstruction of Nostratic morphology here, but, rather, I shall merely present the evidence — a systematic reconstruction of Nostratic morphology will be attempted in the following chapter. Explanations are provided where appropriate, and references are given to relevant literature.

16.2. GENERAL COMMENT

In volume 1 of his book *Indo-European and Its Closest Relatives*, Greenberg did not reconstruct the vowels for the Eurasiatic pronoun stems he identified. However, this shortcoming can be easily remedied since the evidence from the daughter languages (both Eurasiatic and non-Eurasiatic) is fairly straightforward here. Thus: §1. First-

Person M = first person independent pronoun (active) **mi*. §2. First-Person K = first person independent pronoun stem (stative) **k^ha*. §3. First-Person N = first person independent pronoun stem **na*. §4. Second-Person T = second person independent pronoun stem **t^hi*. §5. Second-Person S = second person independent pronoun stem **si*. For §6, Second-Person N, on the other hand, the evidence in Eurasiatic makes it difficult to reconstruct the vowel — indeed, as Greenberg notes, the very existence of a second person pronoun **N* in Proto-Eurasiatic is questionable. Bringing in other Nostratic languages, however, allows us to reconstruct **ni*.

I. PRONOMINAL, ANAPHORIC, AND DEICTIC STEMS

- 16.3. First person singular **mi* (~ **me*), first person plural (inclusive) **ma* (~ **mə*) (Greenberg: §1. First Person M; Illič-Svityč 1971—1984.II:52—56, no. 289, **mä* 1st person pl. inclusive personal pronoun, II:63—66, no. 299, **mi* 1st person sg. personal pronoun; Dolgopolsky 1984:85 **mi* ‘I, me, my’ and 2008, no. 1354, **mi* ‘I’, no. 1354a, **mi* *ʔa* ‘we’; Nafiqoff 2003:40—41, 46 **mä* [1st pl. inclusive], **mi* [1st sg.], and 58—62; Fortescue 1998:96—123)

There actually appear to be two separate stems involved here: (A) **mi* (~ **me*) first singular personal pronoun ‘I, me’ and (B) **ma* (~ **mə*) first plural personal pronoun (inclusive) ‘we, us’.

In Afrasian and Dravidian, first person singular **mi* and first person plural (inclusive) **ma* have been mostly lost. For an excellent overview of the personal pronouns in Afrasian, cf. Diakonoff 1988:70—79; for Elamo-Dravidian, cf. McAlpin 1981:112—117; and for Dravidian, cf. Krishnamurti 2003:244—253, Steever 1998a:21—23, and Zvelebil 1977:40—52.

- A. Afrasian: This stem appears only in Chadic as an independent pronoun: cf. Hausa (pl.) *maa* ‘we’, (indirect object pl.) *manà* ‘us, to us, for us’, (pl.) *muu* ‘we, us, our’, (past tense subj. pl.) *mun* ‘we’, (continuous tense subj. pl.) *munàa* ‘we’, (indirect object sg.) *mini* ‘me, to me, for me’; Kotoko *mi* ‘we, us’; Mandara *ma* ‘we, us’; Musgu (sg.) *mu* ‘I, me’, (pl.) *mi* ‘we, us’; Bole *mu* ‘we, us’. It also serves as the basis of the first singular verbal suffix in part of Highland East Cushitic: cf. the perfect endings in Hadiyya: *-ummo*, Kambata: *-oommi*, and Sidamo: *-ummo*. In Burji and Gedeo / Darasa, on the other hand, the perfect suffixes are *-anni* and *-enne* respectively, which are based upon the first person stem **na* discussed below.
- B. Dravidian: First plural suffix **-m* in: (A) first person plural exclusive **yā-m-* (obl. **yā-m-*), (B) first person plural inclusive **ñā-m-* (obl. **ñā-m(m)-*) > (A) Tamil *yām* ‘we’; Kota *a-m* ‘we’; Kannaḍa *ām* ‘we’; Telugu *ēmu* ‘we’; Kolami *a-m* ‘we’; Naikṛi *ām* ‘we’; Parji *ām* ‘we’; Gadba (Ollari) *ām* ‘we’; Maṇḍa *ām* ‘we’; Kurux *ēm* ‘we’; Malto *ém* ‘we’; etc. (cf. Burrow—Emeneau 1984:467—468, no. 5154); (B) Tamil *nām* ‘we’ (inclusive); Malayalam *nām* ‘we’

(inclusive); Kuṛux *nām* ‘we’ (inclusive); Malto *nám* ‘we’ (inclusive); etc. (cf. Burrow—Emeneau 1984:322, no. 3647). It also occurs as the first plural suffix in finite verbs: **-ŷm* > Tamil *-mu*, *-mi* first plural exclusive suffix, *-amu* first plural inclusive suffix; Kui *-amu*, *-ami* first plural exclusive suffix; Kuwi *-amu*, *-omi* first plural exclusive suffix; Kuṛux *-m* first plural exclusive suffix; Malto *-im*, *-em*, *-om* first plural exclusive suffix; Parji *-am*, *-um*, *-om*, *-m* first plural exclusive suffix; Kolami *-um*, *-am*, *-m* first plural exclusive suffix, *-am* first plural inclusive suffix; etc. Cf. Krishnamurti 2003:246—248 and 308—312. Finally, it is found in the alternative forms of the first plural exclusive pronoun in: Gondi (dialectal) (nom. pl.) *mamm-āṭ*, *mā-ṭ*, *mām-aṭ*, *mamm-oṭ*, *mamo-o*, *mar-at*, *mamm-a*, *mā-m* ‘we’, (obl. pl.) *mā* ‘us’; Telugu (nom. pl.) *mēmu* ‘we’, (obl. pl.) *mamm-*, *mā* ‘us’; Konda (nom. pl.) *māp* ‘we’, (obl. pl.) *mā* ‘us’; Kui (nom. pl.) *māmu* ‘we’, (obl. pl.) *mā* ‘us’; Kuwi (nom. pl.) *māmu* ‘we’, (obl. pl.) *mā* ‘us’; Pengo (obl. pl.) *mang-*, *mā* ‘us’. Cf. Krishnamurti 2003:247.

- C. Kartvelian: Proto-Kartvelian **me-*, **men-* first person personal pronoun stem > Georgian *me-*, *men-*, *mena-* ‘I’; Mingrelian *ma-* ‘I’; Zan *ma*, *man* ‘I’; Svan *mi-* ‘I’. It occurs in Georgian *m-* first person singular verb prefix (objective conjugation) and is also found in Svan as the first person personal formant (objective) *m-* (cf. Tuite 1997:23). Cf. Klimov 1964:132 **me(n)* and 1998:119 **men* ‘I’; Schmidt 1962:123 **me* ‘I’; Fähnrich—Sardshweladse 1995:223—224 **m-* first person verb prefix (objective conjugation), and 233—234 **me-* ‘I’; Fähnrich 1994:240, 260, and 2007:273 **m-* first person verb prefix (objective conjugation), and 284 **me-* ‘I’.
- D. Indo-European: Proto-Indo-European **me-* used to form the oblique cases of the first person personal pronoun stem: Sanskrit (acc. sg.) *mām*, *mā*, (gen. sg.) *māma*, *me*, (abl. sg.) *māt*, (dat. sg.) *māhya(m)*, (loc. sg.) *māyi*, (inst. sg.) *māyā*; Greek (acc. sg.) ἐμέ (με), (gen. sg.) ἐμεῖο (μεν), (dat. sg.) ἐμοί (μοι); Old Latin (acc.-abl. sg.) *mēd*, (gen. sg.) *meī*, *mīs*, (dat. sg.) *mihī*; Gothic (acc. sg.) *mik*, (gen. sg.) *meina*, (dat. sg.) *mis*; etc. Proto-Indo-European (A) **-mi* first person singular non-thematic primary ending, (B) **-m* first person singular non-thematic secondary ending: Sanskrit (1st sg. primary) *-mi*, (1st sg. secondary) *-m*; Hittite (1st sg. primary) *-mi*, (1st sg. secondary) *-n* (< **-m*); Greek (1st sg. primary) *-μι*, (1st sg. secondary) *-ν* (< **-m*); Old Latin (1st sg. primary and secondary) *-m*; etc. Proto-Indo-European **-me-* combined with the plural markers **-s-* and **-n-* to indicate the first person plural in verbs (cf. Meillet 1964:229—230): (primary) **-mesi*, **-meni*, (secondary) **-mes*, **-men*: Sanskrit (1st pl. primary) *-mas(i)*, (1st pl. secondary) *-ma*; Hittite (only after *-u-*) (1st pl. primary) *-meni*, (1st pl. secondary) *-men*; Greek (1st pl. primary and secondary) *-μεν/-μες*; Old Latin (1st pl. primary and secondary) *-mus*; etc. According to Greenberg (2000:77—78), in Proto-Indo-European, this **-m* was added to the nominative singular of the first person independent pronoun: **ǵe-ǵʰō-m*, **ǵe-k’ō-m* ‘I’; Sanskrit *ahám* ‘I’; Greek ἐγώ(ν) ‘I’; etc. For details, cf. Beekes 1995:207—209, 232—235; Brugmann 1904:407—413, 588—596; Fortson 2010:141—142; Gamkrelidze—Ivanov 1995.I:254—260; Meillet 1964:227—235 and 332—338; Szemerényi 1996:211—218, 233—235, 327—33.

- E. Uralic-Yukaghir: Proto-Uralic **mi-nä* first person independent personal pronoun stem 'I' — (A) first person singular: Finnish *minä/mini-* 'I'; Lapp / Saami *mon/mú-* 'I'; Mordvin *mon* 'I'; Cheremis / Mari *mññ, mōj(ō)* 'I'; Votyak / Udmurt *mon* 'I'; Zyrian / Komi *me* (acc. *menō*) 'I'; Ostyak / Xanty *mä, mən-* 'I'; Yurak Samoyed / Nenets *mañ* 'I'; Tavgi Samoyed / Nganasan *mannan* 'I'; Yenisei Samoyed / Enets *mod'i* 'I'; Selkup Samoyed *man, mat* 'I'; Kamassian *man* 'I'; (B) first person plural: Finnish *me* 'we'; Lapp / Saami *mi* 'we'; Mordvin *min* 'we'; Cheremis / Mari *mä, me* 'we'; Votyak / Udmurt *mi* 'we'; Zyrian / Komi *mi* 'we'; Vogul / Mansi *man* 'we'; Ostyak / Xanty *mōñ* 'we'; Hungarian *mi* 'we'; Yurak Samoyed / Nenets *maña?* 'we'; Tavgi Samoyed / Nganasan *meen* 'we'; Yenisei Samoyed / Enets *mod'i?* 'we'; Selkup Samoyed *mee, mii* 'we'; Kamassian *mi?* 'we'. Proto-Uralic first person personal/possessive suffix **-mi*: Finnish *pala-m* 'I burn'; Lapp / Saami *buola-m* 'I burn'; Mordvin *vana-n* 'I see'; Cheremis / Mari *wide-m* 'I lead'; Vogul / Mansi *totegu-m* 'I bring'; Ostyak / Xanty *tetə-m* 'I eat'; Hungarian *esze-m* 'I eat'; Yurak Samoyed / Nenets *mada-m* 'I cut'; Tavgi Samoyed / Nganasan *mata'a-m* 'I cut'; Kamassian *nereel'ε-m* 'I become afraid'. Cf. Collinder 1960:308—310, 1965:134—135, 141 Common Uralic **minä ~ *myna* 'I', and 1977:53, 54; Abondolo 1998a:24—25; Rédei 1986—1988:294 **mš* 'I' and 294—295 **mš* 'we'; Décsy 1990:103 **me* 'I' and **me* 'we'; Aikio 2022:13 (sg.) **mi(-)nä* (?) 'I', (pl.) **me* (?) 'we'; Zhivlov 2023:155—158. The first person independent pronouns in Yukaghir (Northern / Tundra) are: (sg.) *met* 'I', (pl.) *mit* 'we' (cf. Nikolaeva 2006:267 and 269—270). In Yukaghir, a suffix *-m* is found as a first person singular subject of the verb in its interrogative form.
- F. Altaic: Proto-Altaic **bī* first person singular independent pronoun (if from **mī*) 'I' > (A) Proto-Tungus **bi* 'I' > Manchu *bi* 'I'; Evenki *bi* 'I'; Lamut / Even *bi* 'I'; Negidal *bi* 'I'; Ulch *bi* 'I'; Oroch *bi* 'I'; Nanay / Gold *mi* (dialectal *bi*) 'I'; Oroch *bi* 'I'; Udihe *bi* 'I'; Solon *bi* 'I'; (B) Proto-Mongolian **bi* 'I' > Written Mongolian *bi* 'I' (gen. *minu*); Dagur *bī* 'I' (gen. *minī*); Monguor *bu* 'I' (gen. *muni*); Ordos *bi* 'I' (gen. *mini*); Khalkha *bi* 'I' (gen. *mini*); Buriat *bi* 'I' (gen. *menī*); Kalmyk *bi* 'I' (gen. *minē*); Moghol *bi* 'I' (gen. *mini*); (C) Proto-Turkic **bē-* 'I' > Old Turkic *ben ~ men* 'I'; Karakhanide Turkic *men* 'I'; Turkish *ben* 'I'; Gagauz *ben* 'I'; Azerbaijani *mān* 'I'; Turkmenian *men* 'I'; Tatar *min* 'I'; Bashkir *min* 'I'; Karaim *men* 'I'; Kazakh *min* 'I'; Kirghiz *men* 'I'; Noghay *men* 'I'; Uzbek *men* 'I'; Uighur *mān* 'I'; Yakut *min* 'I'; Chuvash *e-bā* 'I'. Cf. Starostin—Dybo—Mudrak 2003:341—342 **bī* 'I'. Starostin—Dybo—Mudrak (2003:342) note: "An alternation **bi* / **mi-ne-* (sing.); **ba* / **mīu-n-* (plur.) should be reconstructed". In Turkic, **-m* occurs as the first person singular personal marker of the subject in the verb and as possessive in the noun (cf. Dolgopolsky 1984:77). Similar suffixes are found in the Tungus languages — first person possessive suffixes: (sg.) **-m*, (pl.) **-m* plus plural marker (exclusive), with variation between *m-*, *b-*, and *w-* in the individual daughter languages (cf. Sinor 1988:726).
- G. Chukchi-Kamchatkan: Proto-Chukchi-Kamchatkan **mur(i)* 'we' > Chukchi *mu-ri* 'we', *mury-in* 'our'; Kerek (pl.) *mājəkkū* 'we', (dual) *məəj* 'we two';

- Koryak (dual) *muji* ‘we two’, (pl.) *muju* ‘we’, *mucy-in* ‘our’; Alyutor (pl.) *muruwwi* ‘we’, (dual) *muriy-* ‘we two’; Kamchadal / Itelmen *muzaʔn* ‘we’, *mizvin* ‘our’. Cf. Fortescue 2005:179. Proto-Chukchi-Kamchatkan suffix **-m* in the first person singular independent personal pronoun **kə-m* ‘I’ > Chukchi *yəm* ‘I’ (in predication: *-iyəm* ~ *-eyəm*); Kerek *umju* ‘I’; Koryak *yəmmo* ‘I’; Alyutor *yəmmə* ‘I’; Kamchadal / Itelmen *kəm(m)a* ‘I’; *kəm(m)an* ‘my’. Cf. Fortescue 2005:146—147; Bogoras 1922:719.
- H. Gilyak / Nivkh: Proto-Gilyak / Nivkh **mirn* or **mern* ‘we’ (inclusive): Amur first person plural *mer* ‘we’ (inclusive) (West Sakhalin Amur *meř* ‘we’ [inclusive]); North Sakhalin *mir* ‘we’ (inclusive); East Sakhalin *mi(ř)n* ‘we’ (inclusive); South Sakhalin *miřn* ‘we’ (inclusive). Cf. Gruzdeva 1998:25—26; Fortescue 2016: 105. Proto-Gilyak / Nivkh **mengin* (dual) ‘we two’: Amur *megi* (dual) ‘we two’ (West Sakhalin Amur *mergu*, *megi* [dual] ‘we two’); North Sakhalin *memak* (dual) ‘we two’; East Sakhalin *mej* (dual) ‘we two’; South Sakhalin *mej* (dual) ‘we two’. Cf. Gruzdeva 1998:25—26; Fortescue 2016:103. Note: Fortescue considers **mengin* ‘we two’ to be a derivative of **men* / **menj* ‘of two people’ and comitative **-kin*.
- I. Eskimo-Aleut: Eskimo: perhaps preserved in Sirenik *məŋa* ‘I’. In Aleut, **-m(V)* is found in the affixed first person plural forms: (Central) *-mas*, (Eastern and Western) *-man*.
- J. Etruscan: Etruscan *mi* ‘I’, *mini* ‘me’ (cf. Bonfante—Bonfante 2002:91); Raetic *mi* ‘I’ (cf. Sverdrup 2002:108).

Sumerian: (Emesal) *ma(-e)*, *me-a*, *me-e* ‘I’. According to earlier theories, the first person plural pronominal suffix was *-me-*. But Thomsen (1987:148) points out that *-me-* is used as a dative element only, in the meaning ‘for us’. She considers *-me-* to be a case element rather than a pronominal element. However, both its form and meaning indicate that *-me-* should be included here. The first first person singular possessive suffix was *-mu* ‘my’.

16.4. First person **k^ha* (~ **k^hə*) (Greenberg: §2. First-Person K; Dolgopolsky 1984:69—71)

- A. Afrasian: Diakonoff (1988:72—73) lists independent personal pronouns of the direct case in a table. For Proto-Semitic, he reconstructs first person singular **ʔan-āku*, **ʔan-ā*, and **ʔan-ī*, that is, a stem **ʔan-* followed by three suffixal elements, the first of which, **-āku*, appears to contain a double suffix, that is, the **-ā* found in the second form further extended by **-ku* (cf. Moscati 1964:103—104, where the Proto-Semitic form is reconstructed as **ʔanā[ku]*). According to Barth (1913:4), **ʔanāku*, *-ki* is composed of **ʔana* plus the demonstrative stem **ku*, **kī*. Dolgopolsky (1984:70), on the other hand, does not analyze **-āku* as a compound suffix. In the same article, it may be noted, Dolgopolsky reconstructs a Proto-Nostratic **HVkE*, which he describes as either a “non-pronominal word liable to replace the independent pronoun” or as

a “nomen regens following an appositional nomen”. **-ku* is also a widespread marker of the first person singular in the stative (cf. the table in Diakonoff 1988:92—93). This **-ku* also appears in the Egyptian first person singular pronoun *in-k* and the Tashelhiyt (Berber) first person singular pronoun *nki* in the table given by Diakonoff. Forms in other Berber languages include: Tuareg *nək*, *nəkkunan* ‘I, me’; Ghadames (Ghadamsi) *nəc*, *nəccan* ‘me’; Mzab *nəcc*, *nəcci*, *nəccin* ‘me’; Tamazight *nəkk* ‘me’; Kabyle *nəkk*, *nəkki*, *nəkkini* ‘I, me’. It is this **-ku* that I would compare with the forms under discussion here. Note also Ongota *ka/-k* ‘I, me’ (cf. Fleming 2002b:50).

- B. Elamo-Dravidian: David McAlpin (1981:119—120, §542.1) reconstructs a first person singular appellative personal ending **-kə* for Proto-Elamo-Dravidian, and this undoubtedly belongs with the forms under consideration here. Note the first person personal possessive pronominal enclitic in Brahui: *-ka*. Note also the locutive *-k* in Elamite in, for example, *u...sunki-k* ‘I am king’ or *huttah halen-k* ‘I made it at great pains’ (*hutta-h*, predicate; *halen-k*, included form, locutive).

For Proto-Dravidian, Zvelebil (1990:35—36) reconstructs a first person singular non-past personal ending **-N-ku*, found, for example, in Old Tamil (archaic non-past) *-Ø-ku* and in Gondi (future) *-k-ā*, while the first person plural exclusive non-past personal ending was **-N-kum*, found, for example, in Old Tamil (archaic non-past) first person plural exclusive *-Ø-kum* and in Gondi (future) first person plural exclusive *-k-em*, first person plural inclusive *-k-āṭ*. Cf. also Krishnamurti 2003:290 and 301—304.

- C. Indo-European: I have difficulty in accepting Greenberg’s basis for writing the Hittite (and Luwian) laryngeal as *x*. I prefer the traditional transcription *h*, which, of course, says nothing about the phonetics. Greenberg should have given a little explanation here and mentioned that some scholars (Sturtevant and Lehmann, for example) have interpreted **₂* as a voiceless velar fricative /x/ — indeed, this appears to be the current consensus (cf. Chapter 4, §4.2.1).

I agree with Greenberg’s statement that “The perfect is originally stative and cannot take an object”, but not with his comparison of the Hittite-Luwian endings and earlier Indo-European first person perfect ending **-Ha* with the *k*-forms from the other Eurasian languages. Rather, I would prefer comparison with the heretofore unexplained first person perfect endings in **-k-* found, for example, in Tocharian A (preterite active) *tākā-* ‘I was’, Latin *fēcī* ‘I made’, Greek *ἔθηκα* ‘I placed’, etc. Elsewhere (Bomhard 1996a:94), I have compared the Proto-Indo-European first person perfect ending **-Ha* with the Elamite first person ending *-h* (note that David McAlpin 1981:122, §552.0, derives the Elamite first person forms in *-h* from Proto-Elamo-Dravidian **H* — see below). Let’s look at this in a little more detail:

The perfect reconstructed by the Neogrammarians for Proto-Indo-European was distinguished from the present and aorist by a unique set of personal endings in the indicative, namely, first person singular **-Aa* (traditional **-₂e*; cf. Sanskrit *véd-a* ‘I know’, Greek *οἶδ-α*, Gothic *wait*), second person singular **-tʰAa* (traditional **-t₂e*; cf. Greek *οἶσ-θα*, Sanskrit *vét-tha* ‘you know’, and

Gothic *waist*), third person singular **-e* (cf. Sanskrit *véd-a* ‘he/she knows’, Greek *οἶδ-ε*, and Gothic *wait*). Except for Armenian and Balto-Slavic, the perfect remained in all branches. It was least changed in Indo-Iranian, Celtic, and Germanic. In Greek, however, it was mixed up with a *κ*-formation and, in Italic, with a whole series of non-perfect tense forms. According to Greenberg, the perfect was originally stative, and Karl Horst Schmidt, Norbert Oettinger, Winfred P. Lehmann, Thomas Gamkrelidze and Vjačeslav Ivanov, Andrew Sihler, and others have made similar claims. Sihler (1995:564—590) gives an excellent overview of the stative in Indo-European.

Now, Greek has a unique formation, the so-called “first perfect”, which would be better named the “*κ*-perfect”. As noted by Sihler (1995:576): “Its inception must belong to prehistoric G[reek], for it is already established, within limits, in Hom[er] and in the earliest records of other dialects.” Moreover, Sihler notes (1995:576): “In Hom[er] the formation is found in some 20 roots, all ending in long vowel (from the G[reek] standpoint), and in all of them the *κ*-stem is virtually limited to the SINGULAR stems which actually contain a long vowel... Later the formation, by now more accurately a *κα*-perfect, spreads to other stems ending in a long vowel, then to stems ending in any vowel (including denominatives), and finally to stems ending in consonants, and to all persons and numbers.” This is very important, for Sihler here traces the expansion of this stem type within the history of Greek itself. Thus, we are dealing with developments specific to Greek. Buck (1933:289—290) agrees with Sihler here.

In Latin, we find first singular perfect forms *fēcī* ‘I did’ and *iēcī* ‘I threw’ (N.B. *faciō* and *iaciō* are “secondary elaborations based on these” [Sihler 1995:562]). As in Greek, the *-c-* [k] is found in all persons (cf. third singular *fecit*), and, as in Greek, the *-c-* [k] has given rise to secondary formations.

The *-k-* forms are also found in Tocharian, as in first singular preterite active *tākā-* (< **(s)tā-k-ā-* < **(s)teA-* [**(s)taA-*] ‘to stand’ [cf. Adams 1999: 345—356]) ‘I was’, and, as in Greek and Latin, the *-k-* is found in all persons and has given rise to secondary formations. Van Windekens (1976.I:495—496) goes so far as to posit Proto-Indo-European **dhēq-*, **dhə₁q-*, as does Rix (1998a:120—121 and 2001:139—140 **d^heh₁k-*).

On the basis of the evidence from Greek, Latin, and Tocharian, we may assume that a “suffix” **-k-* is to be reconstructed for late-stage Proto-Indo-European — what I have referred to as “Disintegrating Indo-European”. This “suffix” originally had a very limited distribution — it seems to have appeared only in the perfect (< stative) singular of verbs that ended in a long vowel, when the long vowel originated from earlier short vowel plus laryngeal. All of the other formations found in Greek, Italic, and Tocharian are secondary elaborations. But, we can go back even farther — it is my contention that the *-k-* originally characterized the first person exclusively, from which it spread to other persons. Of course, this suggestion is not new. Sturtevant (1942:87—88) suggested that **-k-* developed in the first person singular when a root-final laryngeal was followed by the ending **-xe* (that is, **-H₂e* [Kuryłowicz would

write $*-\mathfrak{z}_2e]$). Though a laryngeal explanation along these lines has not been generally accepted, the suggestion that the $-k-$ was originally confined to the first person singular is still worthy of consideration, especially in view of the extensive evidence from other Nostratic languages.

- D. Uralic: Proto-Uralic alternative first person marker (subjective conjugation) $*-k$. Greenberg (2000:67—68) presents evidence from Hungarian and Selkup for this ending. See also Collinder 1960:309: “Selkup has $-k$ (η). Hungarian has, in all the form groups except in the ik -verbs and in the t -preterite of the verbs without $-ik$, the ending $-k$.” (Note: the ending $-k$ occurs here as well.)
- E. Chukchi-Kamchatkan: Greenberg (2000:68) notes that Bogoras “reconstructs a set of suffixes for the intransitive verb with $-k-$ as first-person singular and zero as third-person singular”. Specifically, Bogoras (1922:736) writes: “The pronominal suffixes do not show a close relation to the personal pronoun, and, furthermore, are somewhat differentiated in different modes of the verb. A comparison of the various forms suggests the following as the essential elements of the suffixed pronominal verbal forms:

INTRANSITIVE

I	$-k$	we	$-mk$
thou ...	?	ye	$-tk$
he	—	they	$-t$

“It may be that the m and t of the first and second persons plural are related to myr_i and tur_i , ...”

- F. Eskimo-Aleut: Greenberg (2000:68—69) discusses the contrast between an ergative $-m$ and an absolutive $-k$ as first person singular in Eskimo. He notes specifically that the first person singular possessive suffix $-ma$ is attached to nouns that are the subject of transitive verbs, while $-ka$ ($> -\eta a$) is attached to nouns that are the object of transitive verbs or the subject of intransitive verbs.
- G. Etruscan: First person singular passive preterite ending $-\chi e$, as in: *mi araθiale zixuχe* ‘I was written for Araθ’, *mi titasi cver menaχe* ‘I was offered as a gift to Tita’ or ‘I was offered as a gift by Tita’ (cf. Bonfante—Bonfante 2002:101). This ending is also found in Raetic: *tina-χe* ‘I have given, I gave’ (cf. Sverdrup 2002:98).

- 16.5. First person $*ha$ ($\sim *h\partial$) (not in Greenberg 2000; Dolgopolsky 1984:85—86 derives the forms discussed below — along with several others — from Proto-Nostratic $*HoyV$ ‘by me’ [agent])

- A. Elamite: Middle Elamite first person singular I conjugation (transitive, past tense) subject ending $-h$ (pl. $-hu$ [$< *h-hu$]). This conjugation was formed by adding the personal subject endings to the verb stem. The object was not reflected in the verbal form. Cf. Khačikjan 1998:34; Grilhot-Susini 1987:33;

Reiner 1969:76. McAlpin (1981:122, §552.0) notes that this ending does not seem to have any cognates in Dravidian.

- B. Kartvelian: This form may be preserved in the second person prefix (subjective) **x-*, the third person prefix (objective) **x-*, and the first person prefix (subjective) **xw-* (< **x-w-*). Cf. Fähnrich—Sardshweladse 1995:543, 544, 547—548; Fähnrich 1994:241 and 2007:680. If these forms are indeed related to those under discussion in this section, the spread of what was originally a first person affix to other persons must have been a development specific to Kartvelian since nothing comparable is found elsewhere (except perhaps in the case of the second sg. perfect ending in Indo-European, where the ending of the first singular appears to have been added to **-tʰ*: **-tʰ+Aa*).
- C. Indo-European: Proto-Indo-European first singular perfect (< stative) ending **-h₂e* [**-h₂ha*] (Cf. Lehmann 2002:171 **-χ-e*; Fortson 2010:103 **-h₂e*; Beekes 1995:238 **-h₂e*; Meillet 1964:231 **-a*; Gamkrelidze—Ivanov 1995.I:256—260 **-Ha*; Brugmann 1904:590 **-a*; Szemerényi 1996:243—244 **-a*; Burrow 1973:317 **-Ha*; Dolgopolsky 1984:58 **-He*): Sanskrit *véd-a* ‘I know’; Greek *οἶδ-α*. In Indo-European, this ending has mostly replaced first person **kʰa*, which is preserved only in secondary formations in several daughter languages (see above for details).

- 16.6. First person singular **na* (~ **nə*) (Greenberg: §3. First-Person N; Dolgopolsky 1984:90 reconstructs Proto-Nostratic **nV* ‘we’ [exclusive])

On the basis of Dravidian (and possibly Altaic), the original form of this stem may have been **ŋa* (~ **ŋə*), but this is not certain. Sumerian (Emegir) *ĝá.e* (= /ŋa-/) ‘I’ supports such a reconstruction as well.

- A. Afrasian: There is evidence for a first person singular **nV* in Afrasian: Chadic independent pronoun: Hausa *ni* ‘I, me’; Ngizim *na(a)* ‘I’; Mubi *ni* ‘I’; Semitic first person verb suffix: Akkadian *-ni*, Ugaritic *-n*, Hebrew *-nī*, Syriac *-n*, Arabic *-nī*, Geez *-nī*, etc. (cf. Moscati 1964:106, §13.14). Ongota *naa-ku/na* ‘for me, to me’, *s-ine* ‘my’ (cf. Fleming 2002b:50).

Ehret (1995:362 and 363) reconstructs the following first person pronouns for Proto-Afrasian: **ʔan-/ʔin-* or **an-/in-* ‘I’; **ʔann-/ʔinn-* or **ann-/inn-* ‘we’ (= **ʔan-/ʔin-* or **an-/in-* + old Afrasian pl. in **-n*). Militarev (2011:77), however, analyzes this stem as a compound **ʔa-na(-k/tV)-*, that is, **ʔa+na-*: Semitic: Arabic *ʔanā* ‘I’, Sabaeen *ʔn* ‘I’, Hebrew *ʔānī*, *ʔānōxī* ‘I’, Syriac *ʔenā* ‘I’, Eblaite *ʔanna* ‘I’, Old Babylonian *anāku* ‘I’, Ugaritic *ʔn*, *ʔnk* ‘I’, Geez / Ethiopic *ʔana* ‘I’, Tigrinya *ʔanā* ‘I’, Tigre *ʔana* ‘I’, Amharic *əne* ‘I’ (cf. Moscati 1964:102, §13.1; Lipiński 1997:298—299); Egyptian *ink* ‘I’, Coptic *anok* [*ANOK*] ‘I’; Berber: Tuareg *nək* ‘I, me’, Kabyle *nəkk* ‘me’, Tamazight *nəkk* ‘me’; East Cushitic: Burji *āni* ‘I’, Gedeo / Darasa *ani* ‘I’, Hadiyya *ani* ‘I’, Kambata *ani* ‘I’, Sidamo *ane*, *ani* ‘I’, Saho-Afar *an-u* ‘I’, Bayso *an-i*, *an-a*, *an-ni* ‘I’, Rendille *an(i)* ‘I’, Galla / Oromo *an(i)* ‘I’, Dullay *an-o* ‘I’; Southern

- Cushitic: Iraqw *an, ani* ‘I’, Burunge *an, ana* ‘I’, Alagwa *an, ana* ‘I’, Ma’a *áni* ‘I’, Dahalo *ʔányi* ‘I’. Cf. Hudson 1989:83; Sasse 1982:26; Ehret 1980:283. Beja / Beḍawye *ʔane* ‘I’ (cf. Appleyard 2007a:457; Reinisch 1895:20).
- B. Dravidian: First person singular stem **ñā-n-* and the first singular suffix **-n* in: first person singular **yā-n-* (obl. **yā-n-*), alternative first person singular **ñā-n-* (obl. **ñā-n-*, also **ñā-*) > Tamil *yāñ, ñāñ* ‘I’; Malayalam *ñān* ‘I’; Kota *a-n* ‘I’; Toda *o-n* ‘I’; Kannaḍa *ān, nān* ‘I’; Koḍagu *na-ni, na-* ‘I’; Tuḷu *yānu, yēnu* ‘I’; Telugu *ēnu, nēnu* ‘I’; Kolami *a-n* ‘I’; Naikṛi *ān* ‘I’; Parji *ān* ‘I’; Gadba *ān* ‘I’; Gondi *anā*, (emph.) *annā, nannā, nanā, nana* ‘I’; Konḍa *nān(u)* ‘I’; Pengo *ān/āneṇ* ‘I’; Maṇḍa *ān* ‘I’; Kuḷi *ānu, nānu* ‘I’; Kuwi *nānū* ‘I’; Kuṛux *ēn* ‘I’; Malto *én* ‘I’; Brahui *ī* ‘I’ (cf. Burrow—Emeneau 1984:468, no. 5160). It also occurs as the first singular suffix in finite verbs **-ñn* > Old Tamil *-ēñ, -an*; Old Malayalam *-ēn, -an*; Kota *-ē(n)*; Iruḷa *-e/-en*; Toda *-en, -in, -n*; Kannaḍa *-eM*; Telugu *-nu, -ni*; Kolami *-un, -n, -an*; Kuḷi *-enu*; Kuwi *-ni*; Konḍa *-a*; Gadba *-an, -on, -en, -n*; Pengo *-aṇ*; Naikṛi *-un, -n, -an*; Parji *-on, -en, -an, -in, -n*; Kuṛux *-n*; Malto *-in, -en, -on*. Cf. Krishnamurti 2003:244—245 and 308—312.
- C. Indo-European: Note Tocharian B first singular (nom.) *ñās/ñis* ‘I, me’, Tocharian A *nās* (nom. m.)/*ñuk* (nom. f.) ‘I, me’. Initial *ñ-* may be derived from earlier **nī(ā-)* (ultimately < **n-i-* ?). Indo-Europeanists have been at a loss about how to account for the Tocharian forms (cf. Adams 1999:265—266), and most of the explanations offered to date have been makeshift at best. Assuming that Tocharian has preserved an original **n(-i)-*, which has been lost elsewhere within Indo-European, may be a simpler explanation. This is quite speculative, however.
- D. Altaic: In Mongolian, besides **min-*, there is an alternative stem **na-ma-*, which serves as a base for the oblique cases of the first person personal pronoun: Middle Mongolian *namay, nadur* ~ *nada*; Dagur *namda, nada*; Monguor *ndā*; Moghol *nanda*; Ordos *namādu, nada*; Khalkha *nad-, namay(g)*; Buriat *namda, namā(yi)*; Kalmyk *nan-, namā(g)*. Cf. Poppe 1955:209—212. Poppe notes that the origin of this stem is not clear, but he mentions the fact that **na-* is identical with Korean *na* ‘I’. Starostin—Dybo—Mudrak 2003:1024 reconstruct Proto-Altaic **ŋa* first person pronoun. They note: “The root serves as oblique stem in Mong[olian], which may have been its original function...”
- E. Gilyak / Nivkh: Proto-Gilyak / Nivkh independent first person singular personal pronoun **nʷi* ‘I’: Amur *nʷi* ‘I’; North Sakhalin *nʷi* ‘I’; East Sakhalin *nʷi* ‘I’; South Sakhalin *nʷi* ‘I’. Cf. Gruzdeva 1998:25; Fortescue 2016:114—115.
- Sumerian: In Emegir, the first singular (subject) is *ḡá.e* (= /ḡa-/) ‘I’. This may belong here if we assume that the original form contained an initial velar nasal, which was retained in Sumerian, having been replaced by a dental nasal in Nostratic (except perhaps in Dravidian [cf. Krishnamurti 2003:245—249]).

- 16.7. First person plural exclusive **na* (~ **nə*) (Greenberg: §3. First-Person N; Dolgopolsky 1984:90 **nV* ‘we’ [exclusive] and 2008, no. 1526, **nV* ‘we’ [exclusive])

- A. Afrasian: Proto-Afrasian **na-* ~ **ni-* ~ **nu-* first person plural personal pronoun stem: ‘we’ > Proto-Semitic independent 1st pl. personal pronoun **naħnū* ‘we’ > Hebrew (ʔā)naħnū ‘we’; Aramaic ʔānaħnā(n) ‘we’; Old Babylonian nīnu ‘we’; Arabic naħnu ‘we’; Šheri / Jibbāli nħān ‘we’; Harsūsi neħā ‘we’; Mehri neħā n- ‘we’; Geez / Ethiopic nəħna ‘we’; Tigrinya nəħna ‘we’. Cf. Moscati 1964:105, §13.10; Lipiński 1997:298—306. Old Egyptian *n* ‘we’ (also *inn*); Coptic *anon* [ANON], *an-* [AN-], *ann-* [ANN-] ‘we’. Cf. Hannig 1995:77 and 387; Faulkner 1962:23 and 124; Erman—Grapow 1921:14, 76 and 1926—1963.1:97, 2:194—195; Gardiner 1957:53, 554, and 572; Vycichl 1983:13; Černý 1976:9. Berber: Tamazight (independent) nəkni ‘we’, (indirect, after prepositions) nək; Tuareg (independent) nəkkanid. Common East Cushitic **na/*ni/*nu* ‘we’ > Burji náanu ‘we’, nín-ka ‘our’, nín-si ‘us’; Gedeo / Darasa (nom. pl.) noʔo ‘we’, (acc. pl.) noʔo(o) ‘us’, (dat. pl.) noʔoʔá, noʔá ‘to us’, (poss.) (m.) noʔo-ka, (f.) noʔo-tt’a ‘our’; Hadiyya (nom. pl.) neese ‘we’, (acc. pl.) ne(e)s ‘us’, (dat. pl.) niin ‘to us’, (poss.) ni- ‘our’; Kambata (nom. pl.) naʔooti ‘we’, (acc. pl.) ne(e)s, -nne ‘us’, (dat. pl.) nesá ‘to us’, (poss.) -nne ‘our’; Sidamo (nom.-acc. pl.) ninke ‘we’, (dat. pl.) ninke-ra ‘to us’, (poss.) -nke ‘our’; Saho nanu ‘we’; Galla / Oromo (Welledda) first plural present suffixes (affirmative) -na, (negative) -nu, independent (subject) nuy, (base) nu. Sasse (1982:151) reconstructs Common East Cushitic **na/*ni/*nu* ‘we’, which “is sometimes provided with a suffix -ni/-nu in the subject case”. Cf. Hudson 1989:161 and 165. Proto-Southern Cushitic **nana*, **nani* ‘we’ > Ma’a níne ‘we’; Dahalo nányí/nyányi ‘we’. Cf. Ehret 1980:184. Omotic: Dizi first plural suffixes (with auxiliary) -n, (without auxiliary) -ńno, (subject) inu, (object) in, (possessive affix) ín-. Bender (2000:196) reconstructs a Proto-Omotic first person plural independent personal pronoun **nu* ‘we’ > Zayse (inclusive/exclusive) nu/ni ‘we’; Harro na ‘we’; Chara noone ‘we’; Bench / Gimira (inclusive/exclusive) nu/ni ‘we’; Bworo nu, ni ‘we’. Proto-Semitic **-nā* 1st pl. personal pronoun suffix, **na-/*ni-* 1st pl. personal pronoun prefix > Hebrew -nū, ni-; Aramaic -n(ā), ne-; Ugaritic -n, n-; Akkadian -āni, -ānu; ni-; Arabic -nā, na-; Geez / Ethiopic -na, nə-; Tigre -na. Cf. Moscati 1964:106, §13.14; R. Stempel 1999:80; Lipiński 1997:306—311. The following first person plural suffixed personal pronouns are found in other Afrasian daughter languages: Egyptian -n; Coptic -n [-N]. Berber: Tuareg -na, -nə. Cushitic: Beja / Beɣawye -n. For Southern Cushitic, Ehret (1980:65) lists the following first person plural conjugational affixes: Burunge -an; Iraqw -an; Dahalo -Vnu.
- B. Dravidian: Proto-Dravidian first person plural (inclusive) **ñā-m-* (obl. **ñā-m(m)-*) > Tamil nām (obl. nam(m)-) ‘we’; Malayalam nām (obl. nam(m)-) ‘we’; Kannaḍa nāvu (obl. nam-) ‘we’; Tuḷu nama ‘we’; Kolami ne-nd ‘we’; Naikri nēnd, nēm ‘we’; Kuṛux nām ‘we’; Malto nám ‘we’; Brahui nan ‘we’ (cf. Burrow—Emeneau 1984:322, no. 3647; Krishnamurti 2003:247—248).

- C. Kartvelian: Svan *näj* ‘we’ (Tuite 1997:18 writes *næj*).
- D. Indo-European: Proto-Indo-European (personal pronoun of the first person dual and plural) **ne-/no-/*n-s-* ‘we, us’ > Sanskrit (acc.-dat.-gen. dual) *nau* ‘us’, (acc.-dat.-gen. pl.) *nas*; Latin *nōs* ‘we’; Greek (nom. du.) *vó* ‘we two’; Gothic (acc.-dat. pl.) *uns*, *unsis* ‘us’, (gen. pl.) *unsara*; Old Church Slavic (acc. pl.) *nasъ*, *ny*, (acc. du.) *na*, (dat. pl.) *namъ*, *ny*, (gen.-loc. pl.) *nasъ*, (instr. pl.) *nami*. Cf. Pokorny 1959:758; Beekes 1995:207—209; Szemerényi 1996:211—220; Brugmann 1904:407—413; Burrow 1973:263—269; Sihler 1995:372—373; Fortson 2010:141—142; Meillet 1964:335—336.
- E. Gilyak / Nivkh: Gilyak / Nivkh: Amur *nʷəŋ* ‘we’ (exclusive); North Sakhalin *nʷin* ‘we’ (exclusive); East Sakhalin *nʷin* ‘we’ (exclusive); South Sakhalin *nʷin* ‘we’ (exclusive). Cf. Fortescue 2016:114—115 and 169.

16.8. First person (postnominal possessive/preverbal agentive) **ʔiya* (not in Greenberg 2000; Dolgopolsky 1984:85—87 **HoyV* [a] ‘by me’, [b] agent marker of the 1st sg. of verbs, [c] postnominal possessive pronoun [‘my’])

- A. Afrasian: Proto-Afrasian **ʔiya* first person suffixed personal pronoun stem: Proto-Semitic **(i)ya* first person singular suffixed personal pronoun > Old Babylonian *-ī, -ya*; Ugaritic *-y*; Hebrew *-ī*; Aramaic *-ī*; Classical Arabic *-ī, -ya*; Mehri *-i, -yā*; Geez / Ethiopic *-ya*; Tigre *-ye*; Tigrinya *-äy* (cf. Moscati 1964:106, §13.14; O’Leary 1921:149—150; Lipiński 1997:306—307 and 308; Gray 1934:63—64; W. Wright 1890:95—98). Egyptian *-i* 1st singular suffix: ‘I, me, my’ (cf. Erman—Grapow 1926—1963.1:25; Gardiner 1957:39 and 550; Faulkner 1962:7; Hannig 1995:21). Berber: Tuareg *-i, -iyi* ‘me, to me’; Kabyle *-i, -iyi, -yi* ‘me, to me’, *-i* ‘me’ as in: *fəll-i* ‘for me’, *yid-i* ‘with me’, *əʔr-i* ‘towards me’, *gar-i d-rəbbi* ‘between me and God’, *wəhd-i* ‘me alone’, *zdat-i* ‘in front of me’; Tamazight (1st sg. direct object pronoun, placed either before or after verbs according to the syntactic conditions) *i, yi*. Proto-East Cushitic **ya/*yi* ‘me, my’ > Saho *yi* ‘me’; Afar (poss.) *yi* ‘my’; Burji (1st sg. abs. [obj.]) *ee* ‘me’, *ii-ya* ‘my’; Arbore *ye-* ‘me’; Dasenech *ye-* ‘me’; Elmolo *ye-* ‘me’; Kambata *e(e)s* ‘me’; Hadiyya *e(e)s* ‘me’; Sidamo *-e* ‘me’; Dullay *ye* ‘me’; Yaaku *i(i)* ‘me’ (cf. Sasse 1982:67 and 104; Hudson 1989:97; Heine 1978:53). Proto-Southern Cushitic **ʔe/*ʔi* ‘my’ > Iraqw *e* ‘my’; Burunge *ayi* ‘my’; Alagwa *i* ‘my’; K’wadza *-ʔe* ‘my’; Dahalo *ʔi* ‘my’ (cf. Ehret 1980:289). Cf. Ehret 1995:478, no. 1011, **i* or **yi* ‘me, my’ (bound 1st sg. pronoun); Diakonoff 1988:76—77.
- B. Elamo-Dravidian: McAlpin (1981:112—114, §531.0) reconstructs a Proto-Elamo-Dravidian **i* ‘I’. In Elamite, this became *u* ‘I’. McAlpin assumes that the following developments took place in Dravidian: **i-ən* > **iən* [**yən*] > (with vowel lengthening in accordance with Zvelebil’s Law) **yān* ‘I’ > Tamil *yān* ‘I’; Kota *a-n* ‘I’; Toda *o-n* ‘I’; Kannada *ān* ‘I’; Tuḷu *yānu, yēnu* ‘I’; Telugu *ēnu* ‘I’; Kolami *a-n* ‘I’; Naikṛi *ān* ‘I’; Parji *ān* ‘I’; Gadba *ān* ‘I’; Gondī *anā*, (emph.) *annā* ‘I’; Pengo *ān/āneŋ* ‘I’; Maṇḍa *ān* ‘I’; Kui *ānu* ‘I’; Kuṛux *ēn* ‘I’;

Malto *én* ‘I’; Brahui *ī* ‘I’ (cf. Burrow—Emeneau 1984:468, no. 5160). Cf. also Caldwell 1913:359—373; Zvelebil 1990:24—26 (1st sg. nom.) **yān* ‘I’, (obl.) **yan-*, (1st pl. excl. nom.) **yām* ‘we’, (obl.) **yam-*; Steever 1998a:21 (1st sg. nom.) **yān*, (obl.) **yan-/*(y)en-*; Krishnamurti 2003:245 **yān/*yan-* ‘I’; Bloch 1954:30—31.

- 16.9. Second person **thi* (~ **the*), (oblique form) **tha* (~ **thə*) (Greenberg: §4. Second-Person T; Illič-Svityč 1971—1984.I:6 **ti* and I:7 **tā*; Dolgopolsky 1984:87—88 **t[ü]* and 2008, no. 2312, **t[ü]* (> **ti*) ‘thou’; Starostin—Dybo—Mudrak 2003:1424 Proto-Altaic **tʰi* ‘thou’; Nafiqoff 2003:62—65 **ti* ‘thou’; Cf. Fortescue 1998:96—123)

- A. Afrasian: In Semitic, this stem occurs first as the second component in the second person independent pronoun: cf. Arabic (second person sg. m.) *ʔanta* (= *ʔan-+ta*) ‘you’, (f.) *ʔanti* (= *ʔan-+ti*); (m.) Akkadian *attā* ‘you’, (f.) *attī*; Ugaritic (m./f.) *āt* ‘you’; Hebrew (m.) *ʔattā* ‘you’, (f.) *ʔattī*; Geez / Ethiopic (m.) *ʔanta* ‘you’, (f.) *ʔantī* (cf. Moscati 1964:102: “The first and second persons singular and plural belong to the same system [*ʔan-* plus suffixes] ...”; note also Diakonoff 1988:70: “[t]he independent personal pronouns in the direct [absolute] case may be introduced by a special demonstrative element: Sem[itic] *ʔan-*, Eg[yp]tian *in-* and *nt-*, Berb[er] *n-*, *nt-*, Cush[itic] *an*, *a-*.”). Next, it appears as a second person personal affix, prefixed in the imperfect (“atelic”) and suffixed in the perfect (“telic”) (for comparison of Proto-Semitic with Berber and Cushitic, cf. Diakonoff 1988:80):

	Imperfect	Perfect
Masculine	<i>*ta-</i>	<i>*-t-a</i>
Feminine	<i>*ta-...-ī</i>	<i>*-t-ī</i>

Suffixed forms (cf. Lipiński 1997:360—361): Akkadian (m.) *-āt(a/i)*, (f.) *-ātī*; Ugaritic (m./f.) *-t*; Hebrew (m.) *-tā*, (f.) *-t*; Aramaic (m.) *-t*, (f.) *-tī*; Arabic (m.) *-ta*, (f.) *-ti*. Prefixed forms (cf. Lipiński 1997:370—371): Old Akkadian (m.) *ta-*, (f.) *ta-...-ī*; Ugaritic (m.) *t-*, (f.) *t-...-n*; Hebrew (m.) *ti-/ta-*, (f.) *ti-/ta-...-ī*; Arabic (m.) *ta-*, (f.) *ta-...-ī*; Mehri (m.) *tə-*, (f.) *tə-...-i*; Geez / Ethiopic (m.) *tə-*, (f.) *tə-...-i*; Amharic (m.) *tə-*, (f.) *tə-...-i*. In later Egyptian, it forms part of the second person independent personal pronoun: (m. sg.) *nt-k* ‘you’, (f. sg.) *nt-t*; (m. pl.) *nt-tn*, (f. pl.) *nt-sn*. In Berber, this stem also appears as a second person personal affix (cf. Tashelhiyt second person personal affix (m./f.): *t-...-t*), and likewise in Beja / Beḍawye (Cushitic) (second person personal prefix, “old” conjugation: [m.] *te-... -a*, [f.] *te-...-i*). Also note the Highland East Cushitic second person singular subject pronouns: Burji *a-ši*; Gedeo / Darasa *a-ti*; Hadiyya *a-ti*; Kambata *a-ti*; Sidamo *a-ti*; and the conjunctive suffixes (sg.): Burji *-ši*; Gedeo / Darasa *-tee*; Hadiyya *-ta*; Kambata *-ti(keʔi)*; Sidamo *-te*. Cf.

Sasse 1982:29 (Proto-East Cushitic **ʔat-i/u*); Hudson 1989:172, 405, and 423. In Southern Cushitic, note the Dahalo second singular independent pronoun: (m.) *ʔát:à*, (f.) *ʔàt:à* (cf. Ehret 1980:282). Ehret (1980:65) lists the following second person singular and plural conjugational affixes for Southern Cushitic:

	Burunge	Iraqw	Dahalo	Proto-Southern Cushitic
2nd sg.	<i>-id</i>	<i>*-it</i>	<i>-Vto</i>	<i>*-ito</i>
2nd pl.	<i>-idey</i>	<i>*-ta</i>	<i>-Vte</i>	<i>*-ite</i>

- B. Elamo-Dravidian: In Proto-Elamo-Dravidian, this stem appears as the second singular appellative ending **-ti* > Proto-Elamite **-tə*; Proto-Dravidian **-ti* (cf. McAlpin 1981:120, §542.3). Cf., for example, the conjugation of *hutta-* ‘to do, to make’ in Middle Elamite:

Person	Singular	Plural
1	<i>hutta-h</i>	<i>hutta-hu</i> (< <i>-h+h</i>)
2	<i>hutta-t</i>	<i>hutta-ht</i> (< <i>-h+t</i>)
3	<i>hutta-š</i>	<i>hutta-hš</i> (< <i>-h+š</i>)

Note also the allocative *-t* in Elamite in, for example, *katu-k-t* ‘you, living’. For Dravidian, McAlpin cites the Brahui second person singular ending *-s* as a possible reflex of Proto-Dravidian **-ti* but is careful to note that this is uncertain.

- C. Indo-European: Proto-Indo-European second person singular personal pronoun stem **th₂i*: cf. Hittite (acc.-dat. sg.) *tu-uk*, *tu-ga*; Palaic (acc.-dat. sg.) *tu-ú*; Hieroglyphic Luwian (poss.) *tuwa-*; Sanskrit (nom. sg.) *tvám* ‘you’; Avestan (nom. sg.) *twām*, *tūm*; Greek (nom. sg.) *σύ* ‘you’ (Doric *τύ*); Old Latin (nom. sg.) *tū* ‘you’; Gothic (nom. sg.) *þu* ‘you’; Old Church Slavonic (nom. sg.) *ty* ‘you’ (cf. Szemerényi 1996:211—221 nom. sg. **tu/*tū*, acc. sg. **twe/*te* ~ **twē/*tē* ~ **twēm/*tēm*; Pokorny 1959:1097—1098 nom. sg. **tū*, acc. sg. **te*; Walde 1927—1932.I:745; Burrow 1973:263—269; Beekes 1995:209; Meier-Brügger 2003:225—227; Fortson 2010:142; Meillet 1964:333—335). The data from the Anatolian branch indicates that the original form must have been **th₂i*: cf. Hittite (nom. sg.) *zi-ik* ‘you’; Palaic (nom. sg.) *ti-i*; Hieroglyphic Luwian (nom. sg.) *ti*. As a verb ending, **-th-* is preserved only in Hittite and Tocharian in the second person singular: cf. Hittite (2nd sg. pret.) *-ta* in, for example, *e-eš-ta* ‘you were’; Tocharian A (2nd sg. athematic) *-(ä)t*, B *-(ä)t(o)*. This was later replaced by the ending **-s-*. In the second person plural, however, **-th-* is found in all of the older daughter languages: Proto-Indo-European (athematic) **-the*; (primary) **-the-s-i*, **-the-n-i*; (secondary) **-the-s*, **-the-n* — with ablaut variants: Hittite (primary) *-teni*, (secondary) *-ten*; Sanskrit (primary) *-tha*, *-thana*, (secondary) *-ta*, *-tana*; Avestan (primary) *-θa*, (secondary) *-ta*; Greek (primary/secondary)

- te*; Old Latin (primary/secondary) *-tis*; Gothic (primary/ secondary) *-þ*; Lithuanian (primary/secondary) *-te*; Old Church Slavic (primary/secondary) *-te* (cf. Beekes 1988:153 and 1995:232; Burrow 1973:309; Brugmann 1904:591—592; Szemerényi 1996:233—234; Fortson and 2010:91—92; Watkins 1998: 60).
- D. Uralic-Yukaghir: Proto-Uralic second person singular personal pronoun **ti-nä* ‘you’: (Abondolo 1998a:20) **tV* ‘you, thou’; (Rédei 1986—1988:539) **tš*; (Collinder 1965:144) **tinä* ~ **tyna*; (Décsy 1990:57) (sg.) **te*, (pl.) **te(kä)*; (Aikio 2022:13) (sg.) **ti(-)nä* (?), (pl.) **te* (?); Zhivlov 2023:155—158: (A) singular: Finnish *sinä/sinu-* ‘you’; Lapp / Saami *don* ~ *dú-* ‘you’; Mordvin *ton* ‘you’; Cheremis / Mari *tə́n* ‘you’; Votyak / Udmurt *ton* ‘you’; Zyrian / Komi *te* (acc. *tenō*) ‘you’; Hungarian *tē* ‘you’; Selkup Samoyed *taŋ, tat* ‘you’; Tavgi Samoyed / Nganasan *tannaŋ* ‘you’; Yenisei Samoyed / Enets *tod’i* ‘you’; Kamassian *tan* ‘you’; (B) plural: Finnish *te* ‘you’; Lapp / Saami *dí* ‘you’; Mordvin (Erza) *tiń, tiň* ‘you’; Cheremis / Mari *tā, te* ‘you’; Votyak / Udmurt *ti* ‘you’; Zyrian / Komi *ti* ‘you’; Hungarian *ti* ‘you’; Tavgi Samoyed / Nganasan *teen* ‘you’; Yenisei Samoyed / Enets *tod’i?* ‘you’; Selkup Samoyed *tee, tii* ‘you’; Kamassian *ši?* ‘you’. Proto-Uralic second person possessive/personal suffix **-t*: Finnish *pala-t* ‘you burn’; Mordvin *vana-t* ‘you see’; Cheremis / Mari *wide-t* ‘you lead’; Votyak / Udmurt *baštiško-d* ‘you take’ (cf. Collinder 1960:310). In Yukaghir (Northern / Tundra), the second person independent pronouns are: (sg.) *tet* ‘you, thou’ and (pl.) *tit* ‘you’ (cf. Greenberg 2000:71).
- E. Altaic: Proto-Altaic (nom. sg.) **thi* ‘thou, you’: Proto-Mongolian (nom. sg.) (**thi* > **vi*) *či* ‘you’, (nom. pl.) **ta* ‘you’ > Written Mongolian (nom. sg.) *či* ‘you’ (gen. *činu*), (nom. pl.) *ta*; Dagur (nom. sg.) *šī* ‘you’, (nom. pl.) *tā*; Monguor (nom. sg.) *či* ‘you’, (nom. pl.) *ta*; Ordos (nom. sg.) *či* ‘you’, (nom. pl.) *ta*; Khalkha (nom. sg.) *či* ‘you’, (nom. pl.) *ta*; Buriat (nom. sg.) *ši* ‘you’, (nom. pl.) *tā*; Moghol (nom. sg.) *či* ‘you’, (nom. pl.) *to*; Kalmyk (nom. sg.) *či* ‘you’, (nom. pl.) *ta*. Cf. Poppe 1955:35, 104, 112, 213, and 218; Starostin—Dybo—Mudrak 2003:1424 **t’i* ‘thou’. Starostin—Dybo—Mudrak note: “Mongolian has alone preserved the Nostratic 2nd p[erson personal pronoun] stem **t’i*; other Altaic languages have retained only the other stem **si* (**sja*), with the oblique stem **nV*.”
- F. Chukchi-Kamchatkan: Proto-Chukchi-Kamchatkan **tu-r(i)* ‘you’: Chukchi *turi* ‘you’, *tury-in* ‘your’; Kerek (pl.) *təjəkkū* ‘you’, (dual) *təj* ‘you’, *təjəj* ‘your’; Koryak (pl.) *tuju* ‘you’, (dual) *tuji* ‘you’, *tucy-in* ‘your’; Alyutor (pl.) *tuwuwī* ‘you’; Kamchadal / Itelmen *tuzaʔn* ‘you’, *tizvin* ‘your’. Cf. Fortescue 2005:291. Proto-Chukchi-Kamchatkan **-ə* in **kəə* ‘you’: Chukchi *yət* (Southern *yəto*) ‘you’; Kerek *həŋu* ‘you’; Koryak *yəcci* ‘you’; Alyutor *yətta, yəttə* (Palana *yətte*) ‘you’; Kamchadal / Itelmen *kəz(z)a* (Sedanka *kza*) ‘you’. Cf. Fortescue 2005:142—143; Greenberg 2000:72—73 and 79.
- G. Gilyak / Nivkh: Proto-Gilyak / Nivkh (**thi* > **vi*) **či* (sg.) ‘you’: Amur *čhi* ‘you’; North Sakhalin *čhi* ‘you’; East Sakhalin *čhi* ‘you’; South Sakhalin *či* ‘you’. Cf. Fortescue 2016:32 and 169; Gruzdeva 1998:26. Proto-Gilyak / Nivkh **čin(yun)* (pl.) ‘you’: North Sakhalin *čhiŋ* (pl.) ‘you’; Amur *čhəŋ* (pl.) ‘you’;

East Sakhalin *č^hin(γun)* (pl.) ‘you’; South Sakhalin *č^hin* (pl.) ‘you’. Cf. Fortescue 2016:33. Greenberg (2000:72 and 75) waivers between placing the Gilyak stem here or with Proto-Nostratic **si*.

- H. Etruscan: Perhaps *θi* — the meaning is unknown, but it may be the second person personal pronoun in view of the second singular imperative endings *-ti*, *-θ*, *-θi* (cf. Bonfante—Bonfante 2002:103). However, it should be noted that the accusative of the second person personal pronoun appears as *un* ‘you’ in the Zagreb mummy wrappings (cf. Bonfante—Bonfante 2002:91).

- 16.10. Second person **si* (~ **se*) (Greenberg: §5. Second-Person S; Dolgopolsky 2008, no. 2006a, **s[ü]* [*> **śi*] ‘thou’; Illič-Svityč 1971—1984.I:6 **Si*)

When I was doing research for my co-authored book *The Nostratic Macrofamily*, I considered the evidence for a second person pronoun stem **si* and rejected it. At that time, I thought that this stem may have been secondarily derived, at the Proto-Nostratic level, from **thi* as follows: **thi* > **t̥si* > **si*. I thought that the Kartvelian second person pronoun **si-* may ultimately have had the same origin (**si* < **t̥si* < **thi*). However, I reasoned that the original stem must not have been lost either, so that there was a split which resulted in two competing forms at the Proto-Nostratic level. Considering the evidence Greenberg presents, my former views should be abandoned, and two distinct second person pronoun stems should be recognized, namely, **thi* and **si*. This is certainly much more straightforward than the scenario I had previously envisioned.

- A. Kartvelian: Note the second person verb prefix *s-* found in Old Georgian (present) *s-c’er* ‘you write’ and the second singular personal pronoun in Mingrelian *si* ‘you’, Laz *si(n)* ‘you’, and Svan *si* ‘you’ (cf. Tuite 1997:18). Klimov (1998:164) reconstructs Proto-Kartvelian **sen* ‘you’ (sg.), while Fähnrich—Sardshweladse (1995:300) reconstruct **si-* ‘you’ (sg.) (variant form **si-n-* with secondary *-n-*), as does Fähnrich (2007:366). In Georgian, this stem has been replaced by that of the possessive pronoun: *šen-* ‘you’ (< **škwe[n]-*). The Kartvelian evidence strengthens the case for an independent second person pronoun stem **si* in Proto-Nostratic.
- B. Indo-European: In Indo-European, this stem is found only in the second person singular verbal endings (primary) **-s-i*, (secondary) **-s* > Sanskrit (primary) *-si*, (secondary) *-s*; Avestan (primary) *-si*, (secondary) *-s*; Hittite (primary) *-ši*, (secondary) *-š*; Greek (primary) *-σι*, (secondary) *-ς*; Old Latin (primary/secondary) *-s*; Gothic (primary/secondary) *-s*; Old Church Slavic (primary) *-si/**-ši*; Lithuanian (primary) *-si*. It appears that there were originally two competing endings of the second person singular in Proto-Indo-European: (A) **-th*, which is preserved only in Hittite and Tocharian, and (B) **-s(i)*, which is also found in Hittite as well as in the non-Anatolian daughter languages other than Tocharian. It is clear that the **-s(i)* ending ousted the **-th* ending in the singular in the non-Anatolian daughter languages, while the **-th* ending was

preserved intact in the plural. Cf. Beekes 1995:232—234; Brugmann 1904:590; Meillet 1964:227—228, 229, and 1965:316—318; Szemerényi 1996:233—236; Burrow 1973:306—314; Fortson 2010:92—93.

- C. Altaic: This stem is found in Tungus, and Turkic: Proto-Altaic **si* second person singular pronoun: ‘you’: Proto-Tungus **sī*, **sū* second person singular pronoun: ‘you’ > Manchu *si* ‘you’; Spoken Manchu (Sibo) *ši* ‘you’; Evenki *si* ‘you’; Lamut / Even *hī* ‘you’; Negidal *sī* ‘you’; Ulch *si* ‘you’; Oroch *si* ‘you’; Nanay / Gold *si* ‘you’; Oroch *si* ‘you’; Udihe *si* ‘you’; Solon *ši* ‘you’. Second person singular possessive suffixes: Lamut / Even (after vowels) *-s*, (after consonants) *-as*, (after *n*) *-si*; Evenki (after vowels) *-s*, (after consonants) *-is*. Proto-Turkic **se-* second person singular pronoun: ‘you’ > Old Turkic *sen* ‘you’; Turkish *sen* ‘you’; Azerbaijani *sən* ‘you’; Turkmenian *sen* ‘you’; Tatar *sin* ‘you’; Bashkir *hin* ‘you’; Karaim *sīn* ‘you’; Kazakh *sen* ‘you’; Kirghiz *sen* ‘you’; Noghay *sen* ‘you’; Uzbek *sən* ‘you’; Uighur *sen* ‘you’; Tuva *sen* ‘you’; Yakut *en* ‘you’; Chuvash *esē* ‘you’. Second person singular possessive suffixes/personal markers: Turkish *-sIn*; Kazakh *-sIn*; Kirghiz *-sIn*; Uzbek *-sān*. Cf. Johanson—Csató 1998; Starostin—Dybo—Mudrak 2003:1237—1238.

16.11. Second person **ni* (~ **ne*) and/or **na* (~ **nə*) (Greenberg: §6. Second-Person N)

While the evidence for this stem in Eurasiatic is not plentiful, it is found in other Nostratic languages. However, the evidence is somewhat controversial, especially in Afrasian, where it is found only in Omotic. Nonetheless, the evidence is compelling enough to make it seem likely that this stem should be reconstructed for Proto-Nostratic. The vowel is difficult to reconstruct — Afrasian and Dravidian point to original **ni* (~ **ne*), while Altaic points to **na* instead.

- A. Afrasian: Interestingly, this stem exists in Omotic (cf. Zayse second singular [subject] *né[j]* ‘you’, bound form *-n*; Bench / Gimira [subject] *nen*³ ‘you’, [oblique] *nī*⁴; Yemsa / Janjero *ne* ‘you’; etc.). Bender (2000:196) reconstructs a Proto-Omotic second person singular independent personal pronoun **ne* ‘you’. Bender (2000:197) implies, however, that there may have been a reversal of the Afrasian **n* (first person) ~ **t* (second person) pattern to **t* (first person) ~ **n* (second person) in Omotic. But note the patterning in Elamite (below).
- B. Elamo-Dravidian: The possessive pronouns of the second series, or the possessive pronouns proper in Achaemenid Elamite were: (1st person sg.) *-ta*, (2nd person sg.) *-ni*, (3rd person sg.) *-e* (cf. Khačikjan 1998:26—27). Middle Elamite second person singular personal pronoun (nom. sg.) *ni* ~ *nu* ‘you, thou’ (Old Elamite *nī*), (pl.) *num*, *numi* ‘you’. The Proto-Dravidian second person pronoun has been reconstructed as (sg.) **nīn-*, (pl.) **nīm-* > (A) singular: Tamil *nī* ‘you’; Malayalam *nī* ‘you’ (obl. *nin(n)-*); Kota *nī* ‘you’; Toda *nī* ‘you’; Kannaḍa *nīm*, *nīn(u)* ‘you’; Koḍagu *nī-nī/ni-* ‘you’; Telugu *nīvu* ‘you’; Kolami *nī-v* ‘you’; Naikri *nīv* ‘you’; Koṇḍa *nīn* ‘you’; Kuwi *nīnū* ‘you’; Kuṛux *nīn*

‘you’; Malto *nín* ‘you’; Brahui *nī* ‘you’; (B) plural: Tamil *nīm*, *nīr*, *nīyir*, *nīvir*, *nīnkaḷ* ‘you’; Malayalam *nīnṇaḷ* ‘you’; Kota *nī-m* ‘you’; Toda *nīm* ‘you’; Kannaḍa *nīm*, *nīvu*, *nīngaḷ* ‘you’; Koḍagu *nīnga* ‘you’; Kolami *nī-r* ‘you’; Naikṛī *nīr* ‘you’; Kuṛux *nīm* ‘you’; Malto *nīm* ‘you’; Brahui *num* ‘you’ (cf. Krishnamurti 2003:249—252; Burrow—Emeneau 1984:327, no. 3684, and 328, no. 3688). McAlpin (1981:114—115) reconstructs Proto-Elamo-Dravidian 2nd person sg. independent personal pronoun **ni* ‘you, thou’, possessive clitic **-ni*. For the 2nd person pl., he reconstructs Proto-Elamo-Dravidian **nim*.

- C. Uralic: Greenberg (2000:76—77) notes that there is some evidence for a second person personal pronoun *n-* in Uralic, especially in Ob-Ugric. However, as he rightly points out, this evidence is extremely controversial and has been variously explained by specialists. As noted by Marcantonio (2002:226): “...the Possessive endings of the 2nd Singular in Vogul and Ostyak differ, yet again, from those of Hungarian and other U[ralic] languages; in fact, Vogul and Ostyak have the ending *-(V)n* and not *-t* as reconstructed for P[roto]-U[ralic]. Compare Hun[garian] *ház-a-d* vs Finn[ish] *talo-si* ‘your house’ vs Vog[ul] *ula-n* ‘bow-your’ (Keresztes 1998: 411). Several connections have been proposed for *-(V)n* (compare for example Sinor 1988: 733; Hajdú 1966: 132-3). Among these connections, one may consider that of the formant *-n-* in P[roto]-Samoyed. As Janhunen puts it (1998: 471):

From the Proto-Uralic point of view, one of the most interesting features is that the second-person singular predicative ending seems to have been *-n* in proto-Samoyedic, as opposed to **-t* in most sub-branches of Finno-Ugric.

According to Collinder (1965:134), there may have been two endings in Proto-Uralic for the second person: **-t* and **-n*. See also Aikio 2022:18.

- D. Altaic: Starostin—Dybo—Mudrak (2003:959) reconstruct Proto-Altaic **na* ‘thou’ on the basis of: (A) Proto-Turkic **-ŋ* an ending of the second person > Old Turkic (Orkhon, Old Uighur) *-ŋ*; Karakhanide Turkic *-ŋ*; Turkish *-n*; Gagauz *-n*; Azerbaijani *-n*; Turkmenian *-ŋ*; Uzbek *-ŋ*; Uighur *-ŋ*; Karaim *-n*, *-y*; Tatar *-ŋ*; Bashkir *-ŋ*; Kirghiz *-ŋ*; Kazakh *-ŋ*; Noghay *-ŋ*; Oyrot (Mountain Altai) *-ŋ*; Tuva *-ŋ*; Chuvash *-n*; Yakut *-ŋ*; (B) Proto-Japanese **na* ‘thou’ > Old Japanese *na* ‘thou’; (C) Proto-Korean **na* ‘thou’ > Middle Korean *na* ‘thou’ > Modern Korean *ne* ‘thou’ (cf. Sohn 1999:207). They note: “Velarization in Turkic is not quite clear and probably secondary (perhaps a fusion with the attributive **-k’i*). The root is widely used only in the Kor[ean]-J[apanese] area, and its original function (to judge from the O[ld] J[apanese] opposition of *si* and *na*) was probably limited to the oblique stem of the suppletive 2nd p[erson] paradigm.”

- 16.12. Pronominal stem of unclear deictic function **-gi* (~ **-ge*) (Greenberg: §7. Pronoun Base GE)

- A. Kartvelian: This element occurs in Kartvelian: cf. Old Georgian demonstrative stems *ege* ‘that’ and *igi* ‘that yonder’ (cf. Fährnrich 1994:72), which are to be analyzed as *e+ge* and *i+gi* respectively. Cf. also Klimov 1998:24; Fährnrich—Sardshweladse 1995:73; Fährnrich 2007:92.
- B. Indo-European: Within Indo-European, the only evidence for $*\mathcal{P}e\text{-}g^h\check{o}\text{-}m$, with $-g^h\text{-}$, comes from Indo-Iranian (and perhaps Slavic). Elsewhere, the evidence from the daughter languages points to earlier $*\mathcal{P}e\text{-}k'\check{o}\text{-}m$ (Greek, Latin, Germanic) or even $*\mathcal{P}e\text{-}k^h\check{o}\text{-}m$ (Lithuanian and Armenian). What this implies is that there were multiple pronominal elements involved (at least in Indo-European), not just $*\text{-}g^h\text{-}$. Thus, the basic pronominal stem was $*\mathcal{P}e\text{-}$, to which various elements were added: $*\mathcal{P}e\text{-}g^h\check{o}\text{-}m$, $*\mathcal{P}e\text{-}k'\check{o}\text{-}m$, $*\mathcal{P}e\text{-}k^h\check{o}\text{-}m$. This stem appears to be a late formation within Indo-European, though it is found in Anatolian (cf. Hittite *ú-uk*, *ú-ga*, *ú-ug-ga* ‘I’, with analogical *u-*). It should be noted that the same $*\text{-}g^h\text{-}$ element may occur in the dative singular in Sanskrit *máhya(m)* ‘to me’ and Italic (Latin *mihi*; Umbrian *mehe*) < $*me\text{-}g^h\text{-}$ (cf. Burrow 1973:263—264; Poultney 1959:65, §48a, and 108, §107a; Palmer 1954:254; Kapović 2017c:82), though some Indo-Europeanists take these forms to be a reflex of Proto-Indo-European $*me\text{-}b^h\text{-}$ instead (cf., for example, Szemerényi 1996:214—215; Sihler 1995:377—378). Finally, $*g^he\text{-}$ may be preserved as an independent pronominal stem in Latin *hīc*, *haec*, *hōc* ‘this, this one here’ (cf. Ernout—Meillet 1979:293; Sihler 1995:393 $*ghi\text{-}$, $*gho\text{-}/\text{*}gheH_2\text{-}$; Buck 1933:225; Palmer 1954:255—256) and may also appear in the following particles: Sanskrit *hi* ‘for, because, on account of’, *ha* particle used to emphasize a preceding word, *gha* particle used to lay stress on a word: ‘at least, surely, verily, indeed, especially’; Avestan *zī*; Greek $-\chi\iota$. Cf. Pokorny 1959:417—418.
- C. Chukchi-Kamchatkan: This pronominal element appears as $-\gamma\text{-}$ in Chukchi in the first person singular independent personal pronoun $\gamma\partial\text{-}m$ ‘I’ (in predication: $-\text{iy}\partial m \sim -\text{ey}\partial m$) and the second person singular independent personal pronoun $\gamma\partial\text{-}t$ ‘you’ (in predication: $-\text{iy}\partial t \sim -\text{ey}\partial t$) (cf. also Fortescue 2005:142—143 and 146—147). While Greenberg attaches a great deal of importance to the parallel between Indo-European and Chukchi (with suggestions of remnants in Uralic as well), it appears to me that we are dealing here with independent developments and not an inherited feature. To be sure, the same principles were at work in each branch, and I agree totally with Greenberg’s (2000:81) analysis of the Indo-European form into three parts: $*\mathcal{P}e\text{-}g^h\check{o}\text{-}m$ (Greenberg writes $*e\text{-}\acute{g}he \sim \acute{g}ha\text{-}m$). I base the conclusion that we are dealing here with independent developments in each branch on the fact that three different forms must be reconstructed for Proto-Indo-European, not just one: (1) $*\mathcal{P}e\text{-}g^h\check{o}\text{-}m$, (2) $*\mathcal{P}e\text{-}k'\check{o}\text{-}m$, and (3) $*\mathcal{P}e\text{-}k^h\check{o}\text{-}m$ (in traditional transcription: $*e\text{-}\acute{g}h\check{o}\text{-}m$, $*e\text{-}\acute{g}\check{o}\text{-}m$, and $*e\text{-}\acute{k}\check{o}\text{-}m$) and that, unlike Indo-European, this pronominal element occurs in both the first and second person forms in Chukchi.

- 16.13. Deictic particle (A) $*\mathcal{P}a\text{-}$ ($\sim * \mathcal{P}\partial\text{-}$) (distant), (B) $*\mathcal{P}i\text{-}$ ($\sim * \mathcal{P}e\text{-}$) (proximate), and (C) $*\mathcal{P}u\text{-}$ ($\sim * \mathcal{P}o\text{-}$) (intermediate) (Greenberg: §8. Third-Person I ~ E and §9.

Demonstrative A ~ E; Illič-Svityč 1971—1984.I:257—258, no. 121, **ʔa* demonstrative pronoun indicating distant object: ‘that’, I:270—272, no. 134, **ʔi/(?)ʔe* demonstrative pronoun indicating nearby object: ‘this’; Nafiqoff 2003:42, 46—47, and 49—50 **ʔi/(?)ʔe*; Dolgopolsky 2008, no. 751, **ha* deictic pronominal particle [‘ille’, distal deixis], no. 753, **h[e]* ‘this’, no. 754, **[h]i* ‘iste’ [or ‘hic’], no. 755, **[h]u* ‘iste’)

Greenberg (2000:81) notes that the Common Eurasiatic third person singular pronoun **i-* ~ **e-* originates from a near demonstrative. He also notes (2000:87) that **a-* is a far demonstrative that alternates with **e-*. Greenberg does not posit an intermediate demonstrative. The Dravidian and Southern Cushitic material supports Greenberg’s findings on the proximate and distant demonstrative stems and adds evidence for an intermediate demonstrative. In Kartvelian, the distal distribution has been reversed: here, **i-* is the distant stem, and **a-* is the proximate stem.

- A. Afrasian: For Proto-Southern Cushitic, Ehret (1980:50) reconstructs the following suffixes: (A) **-i* nearness marker, (B) **-a* farness marker, (C) **-o* marker of reference (indefinite distance): (A) Iraqw *-i* in *wi/ri/ti* ‘this’ (m./f.); Burunge *-i* in *ki/ti* ‘this’ (m./f.), *-i-* in *tiʔi* ‘here’; Alagwa *-i* in *wi/ti* ‘this’ (m./f.); Ma’a *i-* in *ilaʔi* ‘this direction’, *iʔi* ‘here’; (B) Iraqw *-a* in *qa* ‘that’, *da* ‘that aforementioned’; Burunge *-a* in *kaʔa/taʔa* ‘that’ (m./f.), *taʔi* ‘there’; Ma’a *-a* in *twaʔi* ‘there’; (C) Iraqw *-o* in *wo/ro/to* ‘this being talked about’ (m./f./n.); Alagwa *-o* in *qo* ‘that’; K’wadza *-o* in *-uko* masculine gender marker, *-eto*, *-ito* feminine gender marker.
- B. Dravidian: Proto-Dravidian (A) **ā* distant demonstrative stem (cf. Burrow—Emeneau 1984:1—3, no. 1; Krishnamurti 2003:253—258 and 390 **aH* ‘that’), (B) **ī* proximate demonstrative stem (cf. Burrow—Emeneau 1984:38—40, no. 410; Krishnamurti 2003:253—258 and 390 **iH* ‘this’), and (C) **ũ* intermediate demonstrative stem (cf. Krishnamurti 2003:253—258 and 391 **uH* ‘yonder, not too distant’; Burrow—Emeneau 1984:54—55, no. 557). Krishnamurti derives these stems from deictic bases and notes that they carry gender and number and are inflected for case. Finally, he notes that time (‘now, then, when’) and place (‘here, there, where’) adverbs are also derived from these deictic bases. Similar usage is found in other Nostratic languages. Examples (this is but a small sampling): (A) Tamil *a* demonstrative base expressing the remoter person or thing; prefixed to nouns to express remoteness; Malayalam *a*, *ā* ‘that, yonder’; Kota *a-* distant from the speaker in space or time; Toda *a-* distant from speaker in space or time; Kannada *a-* remote demonstrative base; Kui *a-* ‘that over there’; Kuwi (adj.) *ā* ‘that most remote’; Kuṛux *a-* ‘that most remote’; (B) Tamil *i* demonstrative base expressing the nearer or proximate person or thing; prefixed to nouns to express nearness; Malayalam *i*, *ī* ‘this’; Kota *i-* demonstrative base expressing nearness to the speaker; Maṇḍa *ī* ‘this’; Toda *i-* demonstrative base expressing nearness to the speaker; Kannada *i-* proximate demonstrative base; (C) Tamil *u* demonstrative base expressing a person, place, or thing occupying an intermediate position, neither far nor near,

and meaning yonder or occupying a position near the person or persons spoken to; demonstrative particle before nouns expressing intermediate position or position near the person or persons spoken to; Kannada *u-* base indicating intermediate place, quantity, or time; Kuwi *ū* (adj.) ‘that’ (intermediate).

- C. Kartvelian: Proto-Kartvelian **i-* deictic stem (distant) (cf. Klimov 1964:99 and 1998:80), **a-* demonstrative stem (proximate) (cf. Klimov 1964:41 and 1998:2), **e-* pronominal element (cf. Klimov 1964:77 and 1998:45). Extended forms: **e-g-* pronominal stem (cf. Georgian *e-g* ‘this; it, he, she’; Svan [*e-ž-*]); **e-š-* pronominal stem (cf. Georgian *ese* ‘so’; Mingrelian *eši* ‘so’; Laz *eše* ‘so, there’; Svan *eš* ‘so’); **i-š-* deictic element (cf. Georgian *is-* ‘that, he’; Mingrelian [*iš-*] in adverbs such as *iš-o*, *viš-o* ‘there’; Laz [(*h*)*iš-*] in (*h*)*iš-o* ‘this way, over there’); **a-ma-* ‘that, this’ (cf. Georgian *ama-* ~ *am-* ‘that, this’; Mingrelian *amu-* ‘that, this’; Laz (*h*)*amu-* ‘that, this’; Svan *am(a)-* ‘that, this’); **a-š-* deictic stem (cf. Georgian *ase* ‘so’; Mingrelian [*aš-*] in *ašo* ‘here’ and *aš(i)* ‘so’; Laz [(*h*)*aš-*] in (*h*)*ašo* ‘so’; Svan *aš* ‘so’). There appears to have been a reversal of the Nostratic pattern **ʔa-* (distant) ~ **ʔi-* (proximate) to **a-* (proximate) ~ **i-* (distant) in Kartvelian.
- D. Indo-European: demonstrative stem: **ʔe-/ʔo-*, **ʔey-/ʔoy-/ʔi-* (cf. Latin *is*, *ea*, *id* ‘he, she, it; this or that person or thing’, *idem* ‘the same’; Gothic *is* ‘he’, *it-a* ‘it’; Sanskrit [m.] *ay-ám*, [f.] *iy-ám*, [n.] *id-ám* ‘this’, *átra* ‘there’, *á-taḥ* ‘from there’, *idā́*, *idā́nīm* ‘now’, *ihá* ‘here’, *itthám* ‘thus’; Old Irish *é* ‘he, they’, *ed* ‘it’; Hittite [dat. sg.] *e-di*, *i-di*, *e-da-ni* ‘to or for him, her, it’; etc.); also (adverbial particle) **ʔē-/ʔō-* ‘near, by, together with’ (cf. Sanskrit *ā* ‘hither, near to, towards’; Old High German prefix *ā-*; Old Church Slavic prefix *ja-*; Greek prefixes *ἐ-* and *ὀ-*) (cf. Brugmann 1904:401, no. 6, and 401—402, no. 10; Szemerényi 1996:206—207; Pokorny 1959:280—281 and 281—286; Burrow 1973:276—278; Beekes 1995:203 and 205; Fortson 2010:134; Watkins 1985:26 and 2000:35—36; Gamkrelidze—Ivanov 1995.I:253). Proto-Indo-European deictic particle **-i* meaning ‘here and now’ added to verbs to form so-called “primary endings” (cf. Kerns—Schwartz 1972:4; Lundquist—Yates 2018:2140); athematic singular primary endings: first person **-m-i*, second person **-s-i*, third person **-th-i* (cf. Sanskrit *-mi*, *-si*, *-ti*; Hittite *-mi*, *-ši*, *-zi* [*< *-ti*]; Greek *-μι*, *-σι*, *-τι*; Lithuanian *-mi*, *-si*, *-ti*; etc.).
- E. Uralic-Yukaghir: Proto-Uralic **e-* demonstrative particle > Finnish *e-* in *että* ‘that’; Estonian *et* ‘that’, *egä*, *iga* ‘every’; Mordvin *e-* in *esě* (iness.) ‘there’, *estä* (elat.) ‘from there’, *ešt’a* ‘so’, *ešt’amo* ‘such’, *ete* ‘this’, *ese* ‘that, that one’, *embe* ‘if, when, after’; Zyrian / Komi *e-* in *esy* ‘this, that’; Hungarian *ez* ‘this’, *itt* ‘here’, *innen* ‘from here’, *ide* ‘hither’, *így* ‘so’, *ilyen* ‘such’; Yenisei Samoyed / Enets *eke*, *eko* ‘this, this here’, *eo?* ‘hither’ (cf. Collinder 1955:9 and 1977:31; Rédei 1986—1988:67—68; Décsy 1990:98 **e* ‘this’). Yukaghir *a-* distant demonstrative (cf. [Northern / Tundra] *a-n* ‘that’, contrasting with *ten* ‘this’) (cf. Greenberg 2000:89; Nikolaeva 2006:104 and 428).
- F. Altaic: Proto-Altaic **i-* deictic stem > (A) Proto-Tungus **i* third person deictic stem > Manchu *i* ‘he, she’, *ineku* ‘the same; this’; Spoken Manchu (Sibo) *ī* ‘he, she’; Jurchen *in* ‘he, she’; Solon *ini* ‘his’; (B) Proto-Mongolian **i-nu-* third

person possessive pronoun > Written Mongolian *inu* ‘his’ (originally the genitive of **i* ‘he’, which no longer exists); Khalkha *ń* ‘his’; Buriat *ń* ‘his’; Kalmyk *ń* ‘his’; Moghol *ini* ~ *ni* ~ *ne* ~ *i* ‘his’; Dagur *ĩn* ‘he; this, that’; (C) Proto-Turkic **i-na-* ‘that’ > Turkmenian *ĩna-ru* ‘that’; Tuva *ĩnda* ‘there’, *ĩndĩr* ‘such’ (cf. Róna-Tas 1998:74). Cf. Starostin—Dybo—Mudrak 2003:577.

Proto-Altaic **e-* ‘this’ (deictic stem) > (A) Proto-Tungus **e* ‘this’ > Evenki *er*, *eri* ‘this’; Lamut / Even *er* ‘this’; Negidal *ey* ‘this’; Manchu *ere* ‘this’; Spoken Manchu (Sibo) *erə* ‘this’; Jurchen *e(r)se* ‘this’; Ulch *ey* ‘this’; Orok *eri* ‘this’; Nanay / Gold *ei* ‘this’; Oroch *ei* ‘this’; Udihe *eyi* ‘this’; Solon *er* ‘this’; (B) Proto-Mongolian **e-ne* ‘this’ (pl. **e-de* ‘these’) > Written Mongolian *ene* ‘this’ (pl. *ede*); Khalkha *ene* ‘this’; Buriat *ene* ‘this’; Kalmyk *enə* ‘this’; Ordos *ene* ‘this’ (pl. *ede*); Moghol *enā* ‘this’; Dagur *ene* ‘this’; Monguor *ne* ‘this’ (cf. Poppe 1955:47, 52, 55, 164, 214—215, 225, and 226). Cf. Starostin—Dybo—Mudrak 2003:447.

Proto-Altaic **a-* ‘that’ (deictic stem) > Proto-Turkic **an-* ‘that (oblique cases); here’ > Old Turkic (Orkhon, Old Uighur) (locative) *an-ta* ‘that’, (dative) *aŋ-ar*; Karakhanide Turkic (locative) *an-da* ‘that’, (dative) *aŋ-a*; Turkmenian *ana* ‘here’; Karaim (locative) *an-da* ‘that’, (dative) *an-ar*; Tatar (locative) *an-da* ‘that’, (dative) *aŋ-a*; Bashkir (locative) *an-ta*, *an-da* ‘that’, (dative) *aŋ-a*; Kirghiz (locative) *an-ta* ‘that’, (dative) *a-(γ)a*; Oyrot (Mountain Altai) (locative) *an-da* ‘that’, (dative) *o-(γ)o*; Tuva (locative) *in-da* ‘that’, (dative) *a(ŋ)-a*; Chuvash (locative) *on-da* ‘that’, (dative) *ɔ^wn-a*; Yakut *ana-rā* ‘here’. Cf. Starostin—Dybo—Mudrak 2003:447. Starostin—Dybo—Mudrak include the Turkic (and Japanese) forms under Proto-Altaic **e*. However, the difference in both form and meaning indicate that two separate stems are involved here. Róna-Tas (1998:74) notes: “Proto-Turkic may nevertheless have had a pronoun for the third person, possibly **a(n)-*, since the oblique stem of *ol* is *an-*; cf. Chuvash *un-*. The fact that Chuvash has a 3p. sg. *-ě* < **-i* in certain conjugations shows that Proto-Turkic had a third-person singular pronoun **i-* or **in-*. It developed into a suffix [in Chuvash], but disappeared in other Turkic languages. Note that Proto-Mongolian had 3p. sg. **in-* and 3p. pl. **an-*.”

Proto-Altaic **o-* ‘this, that’ (deictic particle) > (A) Proto-Tungus **u-* ‘this, that’ > Manchu *u-ba* ‘here, this place; this’; Spoken Manchu (Sibo) *evā* ‘this’; Udihe *u-ti* ‘that’; (B) Proto-Mongolian **on-* ‘other, different’ > Written Mongolian *ončuyui* ‘peculiar, unusual; specific; separate; special, particular, different; remote, isolated (of place or area); strange’, *ondu* ‘other, another; different(ly); apart, separately’; Khalkha *ondō* ‘other, different’; Buriat *ondō* ‘other, different’; Ordos *ondōn* ‘other, different’; Dagur *enčū* ‘other’; (C) Proto-Turkic **o(l)-* ‘that’ > Old Turkic (Old Uighur) *o-l* ‘that’; Karakhanide Turkic *o-l* ‘that’; Turkish *o* ‘that’; Gagauz *o* ‘that’; Azerbaijani *o* ‘that’; Turkmenian *ol* ‘that’; Uzbek *u* ‘that’; Uighur *u* ‘that’; Karaim *o* ‘that’; Tatar *u-l* ‘that’; Bashkir *o-šo*, *u* ‘that’; Kirghiz *o-šo* ‘that’; Kazakh *o-l* ‘that’; Noghay *o-l* ‘that’; Oyrot (Mountain Altai) *o-l* ‘that’; Tuva *ol* ‘that’; Chuvash *ɔ^w-l* ‘that’; Yakut *ol* ‘that’ (cf. Róna-Tas 1998:74). Starostin—Dybo—Mudrak 2003:1040.

- G. Gilyak / Nivkh: Proto-Gilyak / Nivkh **a-* distant demonstrative: ‘that yonder, that over there’: Amur *a-d* ‘that over there’, *a-in* ‘there’; East Sakhalin *ahu-d* / *ehu-d* ‘that distant from the speaker but visible’; South Sakhalin *a-x* / *ahus* ‘over there’. Cf. Gruzdeva 1998:26; Greenberg 2000:91; Fortescue 2016:7. Proto-Gilyak / Nivkh **i-* in **ivŋ* ‘he’ or ‘she’: Amur *if* ‘he, she’; North Sakhalin *i* ‘he, she’; East Sakhalin *jaŋ* ‘he, she’; South Sakhalin *jaŋ* ‘he, she’. Cf. Fortescue 2016:81 and 169 (table of affixes). Proto-Gilyak / Nivkh (deictic) **e-* in **ey-* distant demonstrative: ‘that over there’: Amur *aēhə-d* distant demonstrative: ‘that over there’; East Sakhalin *ey-* intermediate demonstrative: ‘that over there’, *aiŋ-* distant demonstrative: ‘that over there’, *aix-nt* distant demonstrative: ‘that far away’; South Sakhalin *(a)eyn* distant demonstrative: ‘that (far away)’. Cf. Fortescue 2016:55 and 175 (table of affixes).
- H. Etruscan: *i-* in *i-ca* ‘this’, *i-n*, *i-nc* ‘it’ (inanimate), *i-ta* ‘this’ (cf. Bonfante—Bonfante 2002:91, 92, and 93).

Sumerian: Adverbial particle *e* ‘hither, here’.

- 16.14. Deictic particle (A) **k^ha-* (~ **k^hə-*) (proximate), (B) **k^hu-* (~ **k^ho-*) (distant), and (C) **k^hi-* (~ **k^he-*) (intermediate) (Greenberg: §10. Demonstrative KU; Dolgopolsky 2008, no. 982, **K[ü]* demonstrative pronoun [animate ?])

The evidence from all of the Nostratic daughter languages seems to point to the existence of at least two, possibly three, stems here: (A) **k^ha-* (~ **k^hə-*) (proximate), (B) **k^hu-* (~ **k^ho-*) (distant), and (?) (C) **k^hi-* (~ **k^he-*) (intermediate). Greenberg (2000:91), however, considers **ku* to have been a near demonstrative. Indeed, there appears to have been some confusion between these stems in the various daughter languages, which makes it difficult to determine which degree of distance is to be assigned to which stem.

- A. Afrasian: Proto-Afrasian **ka-* ~ **ki-* ~ **ku-* demonstrative pronoun stem: Semitic: Aramaic *-χ* (< **-k*) in *dēχ* ‘that’; Arabic *-k* in *ḍāka*, *ḍālīka* ‘that’; Mehri *-k* in *ḍāk* ‘that’; Geez / Ethiopic *-(k)ku* an element expressing distance as in *zəkkū* ‘that’; Gurage *ka* ‘that’, (Chaha) *kəṃ* in *kəṃəkəṃ* ‘such and such’, *-x* (< **-k*) in *zax* ‘that’; Amharic *-h* (< **-k*) in *zih* ‘this’. Cf. Leslau 1979:331, 343 and 1987:271, 635; Barth 1913:80—83; Brockelmann 1908.I:318 and I:323—324. Highland East Cushitic: Burji (m. sg.) *kú* ‘this’, (m./f. sg./pl.) *káaci* ‘that, those’, (m./f. pl.) *cí* ‘these’; Gedeo / Darasa (m. sg./pl.) *kunni* ‘this, these’, (m. sg./pl.) *ikki* ‘that, those’; Hadiyya (m. sg./pl., f. pl.) *ku(k)* ‘this, these’, (m. sg./pl., f. pl.) *o(k)* ‘that, those’; Kambata (m. sg./pl., f. pl.) *ku* ‘this, these’; Sidamo (m. sg.) *kuni* ‘this’, (m. sg., m./f. pl.) *kuuʔu* ‘that, those’, (m. pl.) *kuni*, *kuri* ‘these’. Cf. Sasse 1982:111; Hudson 1976:255—256 and 1989:150—151, 153. Galla / Oromo (Wellegga) near demonstratives: (subject) *kun(i)*, (base) *kana* ‘this’. Proto-Southern Cushitic (m.) **ɖuukaa* ‘this’, (m. bound) **kaa* ‘this’

- > Iraqw *ka* ‘this’ (neuter ?); Burunge (m.) *ki* ‘this’, (m.) *kaʔa* ‘that’; K’wadza *-(u)ko* masculine gender marker; Asa *-(u)k*, *-ok* masculine gender marker; Ma’a *ka* ‘this’; Dahalo *ʔuukwa* ‘this’. Cf. Ehret 1980:296. Omotic: Aari unaffixed 3rd person pronominal stems (m. sg.) *kí*, (f. sg.) *kó*, (m./f. pl.) *ké* and the deictic determiner *kooné* ~ *kooná* ‘this, that; these, those’. This stem may also occur in the Ongota third person singular pronoun stem (m.) *ki* ‘he’, (f.) *ko* ‘she’ and third person plural pronoun (focal) *kiʔi-ta* ‘they’ and the subject and object clitic *kiʔi* ‘they’ (cf. Fleming 2002b:49, 55, and 59). Ehret (1995:194, no. 309) reconstructs Proto-Afrasian **kaa* ‘this’ (demonstrative).
- B. Kartvelian: Proto-Kartvelian pronoun stem **-k-*: Georgian *[-k-]*; Mingrelian *[-k-]*; Laz *[-k-]*. In the modern Kartvelian languages, this stem is found only in historical derivatives (cf. Klimov 1998:211).
- C. Indo-European: Proto-Indo-European near demonstrative **kʰe-/kʰo-*, **kʰ(e)i-*, **kʰ(i)yo-* ‘this’, adverbial particle **kʰe-* ‘here’ > Hittite (nom. sg.) *ka-a-aš*, (nom.-acc. sg. neuter) *ki-i* ‘this, that’; Palaic *ka-* ‘this (one)’, *ki-i-at* ‘here’; Greek **κε-* in *κεῖνος* ‘that’; Latin *ce-* in *ce-do* ‘give here!’, *-c(e)* in *hi-c*, *sī-c*, *illī-c*, *illū-c*, *tun-c*, *nun-c*, *ec-ce*, *ci-* in *cis*, *citer*, *citrō*, *citrā*; Old Irish *cé* in *bith cé* ‘this world’; Gothic *hēr* ‘here, hither’, *hi-* pronominal stem preserved in the adverbial phrases *himma daga* ‘on this day, today’, *fram himma* ‘from henceforth’, *und hina dag* ‘to this day’, *und hita*, *und hita nu* ‘till now, hitherto’ and in *hiri* ‘come here!’, *hidrē* ‘hither’; Old Icelandic *hann* ‘he’; Old English *hē* ‘he’, *hīe* ‘they’, *hider* ‘hither’, *hēr* ‘here’; Lithuanian *šis* ‘this’; Old Church Slavic *sb* ‘this’. (cf. Pokorny 1959:609—610; Walde 1927—1932.I: 452—454; Mann 1984—1987:606, 617, 619, 620, 621, 622; Watkins 1985:32 and 2000:43; Brugmann 1904:401, nos. 4 and 5; Lehmann 1986:182 and 182—183; Beekes 1995:202 **ki-* ‘here’; Puhvel 1984— .4:3—12; Meillet 1964:326; Fortson 2010:144; Kloekhorst 2008b:425—427).
- D. Altaic: Proto-Altaic **kʰo-* (~ *k-*) ‘this’ > (A) Proto-Mongolian **kü* deictic particle > Written Mongolian *ene kü* ‘exactly this’, *tere kü* ‘exactly that’; Khalkha *χū*; Ordos *kū*; Dagur *ke*, *kē*; (B) Proto-Turkic **kō* ‘this’ > Salar *ku* ‘this’; Sary-Uighur *gu*, *go* ‘this’; Chuvash *ko*, *кo* ‘this’. Starostin—Dybo—Mudrak 2003:709 **ko* (~ **k-*) ‘this’. Greenberg (2000:92—93) describes “a widespread Altaic suffix *-ki*, with a demonstrative and revitalizing function, which may belong here”. As evidence, he cites the Turkic suffix *-ki* used to form possessive pronouns. It also occurs after the locative of a noun. Both uses are also found in Mongolian (cf. *ende-ki* ‘being here, belonging to this place’). In Tungus, **-ki* is suffixed to possessives to substantivize them. The locative construction found in Turkic and Mongolian appears to be absent from Tungus, however. Greenberg also notes that “occasional forms in *ku* occur in all branches of Altaic”.
- E. Etruscan: Note the demonstratives (archaic) *ika* ‘this’, (later) *eca*, *ca*.

Sumerian: *ki* ‘there, where’.

- 16.15. Deictic particle (A) **tha-* (\sim **thə-*) (proximate), (B) **thu-* (\sim **tho-*) (distant), and (C) **thi-* (\sim **the-*) (intermediate) (Greenberg: §11. Demonstrative T; Nafiqoff 2003:51 **ta*; Dolgopolsky 2008, no. 2310, **tä* demonstrative pronoun of non-active [animate] objects [without distance opposition (proximate \leftrightarrow intermediate \leftrightarrow distal)])

It seems that three separate stems are to be reconstructed here, indicating three degrees of distance: (A) **tha-* (\sim **thə-*) (proximate), (B) **thu-* (\sim **tho-*) (distant), and (C) **thi-* (\sim **the-*) (intermediate). As in (A) **kha-* (\sim **kə-*) (proximate), (B) **khu-* (\sim **kho-*) (distant), and (C) **khi-* (\sim **khe-*) (intermediate), discussed above, there appears to have been some confusion between these stems in the various daughter languages, which makes it difficult to determine which degree of distance is to be assigned to which stem.

- A. Afrasian: Proto-Afrasian **ta-* (\sim **tu-* \sim **ti-*) demonstrative stem > Proto-Semitic **tā-/tī-* demonstrative stem > Arabic (m.) *tī*, (f.) *tā* ‘this’; Tigre (m.) *tū*, (f.) *tā* ‘this’. Egyptian (f. sg. dem. and def. article) *b* ‘this, the’, (f. sg. dem. adj.) *tn* ‘this’; Coptic *t-* [ṯ-], *te-* [ṯe-] feminine singular definite article. Berber: Tuareg *ta* feminine singular demonstrative stem: ‘this one’ (pl. *tī*). Proto-East Cushitic **ta*, (subj.) **tu/*ti* feminine demonstrative pronoun stem > Burji (dem. f.) *ta*, (subj.) *ci* ‘this’; Somali (dem. f.) *ta*, (subj.) *tu*; Rendille *ti* feminine gender marker and connector; Oromo / Galla *ta-*, (subj.) *tu-*; Sidamo *-ta*, (subj.) *-ti* feminine article; Kambata (f. acc. sg. dem. det.) *ta* ‘this’; Hadiyya (f. acc. sg. dem. det.) *ta* ‘this’. Proto-Southern Cushitic (f. bound dem. stem) **ta* ‘this, that’ > Burunge *ti* ‘this’, *taʔa* (f.) ‘that’; Iraqw *ti* ‘this’; Kʼwadza *-(i)to*, *-(e)to* feminine gender marker; Asa *-(i)t(o)*, *-(e)t(o)* feminine gender marker; Maʼa *-eta* suffix on feminine nouns; Dahalo *tá-* in *táʔini* (f.) ‘they’.
- B. Dravidian: Proto-Dravidian **tān-* reflexive pronoun singular, **tām-* reflexive pronoun plural > Tamil *tān* ‘oneself’ (obl. *tan-*; before vowels *tann-*), *tām* (obl. *tam-*; before vowels *tamm-*) ‘they, themselves; you’; Malayalam *tān* ‘self, oneself’, *tām* (obl. *tam-*, *tamm-*) ‘they, themselves; you’; Kota *ta-n* ‘oneself’, *ta-m* (obl. *tam-*) ‘themselves’; Toda *to-n* ‘oneself’, *tam* (obl. *tam-*) ‘themselves’; Kannada *tān* ‘he, she, it’ (in the reflexive or reciprocal sense), *tām* (obl. *tam-*), *tāvu* (obl. *tav-*) ‘they, themselves; you’; Kodagu *ta-ni* ‘oneself’, *taṅga* (obl. *taṅga-*) ‘themselves’; Telugu *tānu* ‘oneself; he or himself; she or herself’, *tāmu* (obl. *tam-*, *tamm-*), *tamaru*, *tāru* ‘they, themselves; you’; Naikri *tām* ‘they, themselves’; Parji *tān* ‘self, oneself’, *tām* (obl. *tam-*) ‘they, themselves’; Gadba (Ollari) *tān* (obl. *tan-*) ‘self, oneself’, *tām* (obl. *tam-*) ‘they, themselves’; Pengo *tān* ‘he, himself’; Kurux *tān* reflexive pronoun of the third person: ‘himself’, *tām-* (obl. *tam-*) ‘they, themselves’; Malto *tān*, *tāni* ‘himself, herself, itself’, *tām*, *tāmi* (obl. *tam-*) ‘they, themselves’; Brahui *tēn* ‘self, myself, thyself, himself, ourselves, etc.’ Cf. Krishnamurti 2003:252–253; Burrow—Emeneau 1984:275, no. 3162, and 278, no. 3196.
- C. Indo-European: Proto-Indo-European **tho-* ‘that’, also **thyo-* (< **thi-o-*) > Sanskrit *tād* ‘this, that’; Greek *tó* ‘this, that’; Gothic *þata* ‘that’; Old Icelandic

bat ‘that, it’; Old English *þæt* ‘that’; Lithuanian *tàs* ‘this, that’; Tocharian A *tām* ‘this’, B *te* ‘this one, it’; Hieroglyphic Luwian *tas* ‘this’; Hittite *ta* sentence connective. This stem is joined in a suppletive alternation with **so-* ‘this’. It is also used as a third person verb ending (primary) **-thi*, (secondary) **-t^h* > Hittite (primary) *-zi* (< **-ti*), (secondary) *-t*; Sanskrit (primary) *-ti*, (secondary) *-t*; Avestan (primary) *-ti*, (secondary) *-t*; Greek (primary) *-τι*; Gothic (primary) *-þ*; Latin (primary/secondary) *-t*; Lithuanian (primary) *-ti*; Russian Church Slavic (primary) *-tb*. Cf. Pokorny 1959:1086—1087; Burrow 1973:269—272 and 306—311; Brugmann 1904:399—401 and 590—591; Beekes 1995:202 and 232; Szemerényi 1996:204—206 and 233—235; Meillet 1964:228 and 326; Fortson 2010:144.

- D. Uralic-Yukaghir: Proto-Uralic (demonstrative pronoun stem) **ta/*tä* ‘this’ > Finnish *tämä/tä-* ‘this’; (?) Estonian *tema, temä* ‘he, she, it’; Lapp / Saami *dat* ~ *da-* ‘this’, *deikē* (< **dekki*) ‘hither’; Mordvin (Erza) *te*, (Moksha) *te* ‘this’, (Erza) *tesē*, (Moksha) *t’asa* ‘here’, (Erza) *tite, teke*, (Moksha) *tite, t’aka* ‘(just) this’; Cheremis / Mari (West) *ti*, (East) *tə, tō* ‘this’; (?) Votyak / Udmurt *ta* ‘this’; (?) Zyrian / Komi *ta* ‘this’; Vogul / Mansi *te, ti, tə* ‘this’, *tet, tit, tət* ‘here’; Ostyak / Xanty *temi, tə-* ‘this’; Yurak Samoyed / Nenets *təm?* ‘this’, (pl.) *teew?* ‘these’; Selkup Samoyed *tam, tau, tap* ‘this’, *teda?* ‘now’, *tii, teŋa, teka* ‘hither’; Kamassian *teeji* ‘hither’. Cf. Rédei 1986—1988:505 **ta*; Collinder 1955:62 and 1977:79; Décsy 1990:108 **ta/*tä* ‘that, this’; Aikio 2022:13 **tä-*. Yukaghir (Southern / Kolyma) *tiŋ* ‘this’, *ti:* ‘here’, *ti:-ta:* ‘here and there’. Proto-Uralic (demonstrative pronoun stem) **to-* ‘that’ > Finnish *tuo* ‘that, yonder’; Lapp / Saami *duot-* ~ *duo-* ‘that (one) over there, that ... over there, that’; Mordvin *tona, to-* ‘that’; Cheremis / Mari (East) *tu* ‘that’; Vogul / Mansi *ton, to-* ‘that’; Votyak / Udmurt *tu* ‘that’; Zyrian / Komi *ty* ‘that’; Ostyak / Xanty *tōmi, tomi, tōm, tō-* ‘that’; Hungarian *tova* ‘away’, *túl* ‘beyond, on the further side; exceedingly, too’; Yurak Samoyed / Nenets *taaky* ‘that, yonder’, *taaj* ‘there’; Yenisei Samoyed / Enets *tohonoo* ‘that (one) there’; Selkup Samoyed *to* ‘this’. Cf. Collinder 1955:64, 1965:146, and 1977:81; Rédei 1986—1988:526—528 **to*; Décsy 1990:109 **to* ‘those’; Joki 1973:330—331; Raun 1988b:562; Aikio 2022:13 **to-/*tu-* (?). Ob-Ugric and Samoyed third person singular possessive suffix **-t*. Cf. also Abondolo 1998a:25. Yukaghir (Southern / Kolyma) *taŋ* ‘that’, *tada* ‘there’, *ta:t* ‘so, then’, *tude-* ‘he, she, it’ (cf. Nikolaeva 2006:423—424 and 438).
- E. Altaic: Proto-Altaic **tha* (**the*) ‘that’ > (A) Proto-Tungus **ta-* ‘that’ > Manchu *tere* ‘that’; Solon *tari* ‘that’; Evenki *tar, tari* ‘that’; Lamut / Even *tar* ‘that’; Negidal *tay* ‘that’; Orok *tari* ‘that’; Nanay / Gold *taya* ‘that’; Udihe *tei, teyi* ‘that’; Oroch *tī, tei* ‘that’; Solon *tayā, tari* ‘that’; (B) Proto-Mongolian (sg.) **te, *te-r-e* ‘that’ > Written Mongolian (sg.) *tere* ‘that’, (pl.) *tede* ‘those’; Dagur (sg.) *tere* ‘that’, (pl.) *tede* ‘those’; Moghol *tě* ‘that’; Ordos (sg.) *tere* ‘that’, (pl.) *tede* ‘those’; Khalkha (sg.) *terə* ‘that’, (pl.) *tēddə* ‘those’; Monguor (sg.) *te* ‘that’; Moghol (sg.) *te* ‘that’; Buriat (sg.) *tere* ‘that’, (pl.) *tede* ‘those’ (cf. Poppe 1955:225, 226, 227, and 228); (C) Proto-Turkic **ti(kü)-* ‘that’ > Gagauz *te bu* ‘this here’, *te o* ‘that there’; Tatar *tēgē* ‘that’; Kirghiz *tigi* ‘that’; Kazakh

- (dialectal) *tigi* ‘that’; Yakut *i-ti* ‘that’ (pl. *itiler* ‘those’). Starostin—Dybo—Mudrak 2003:1389 **t’a* (**t’e*) ‘that’.
- F. (?) Gilyak / Nivkh: Proto-Gilyak / Nivkh **ta-* ‘where’: Amur *řa-r* / *řa-n* ‘where’; East Sakhalin *taŋx* ‘where’; South Sakhalin *řak-* / *tak-* ‘where’. Cf. Fortescue 2016:144. (?) Proto-Gilyak / Nivkh **tant* ‘which’: Amur *řad* ‘which (of them)’; East Sakhalin *thad* ‘which’; (?) South Sakhalin *tan* / *tand* ‘that’. Cf. Fortescue 2016:146. (?) Proto-Gilyak / Nivkh **taŋz* or **taŋr* ‘how much’: Amur *řaŋs* ‘how much’, *řaŋslu* / *řaŋzlu* ‘some’ (West Sakhalin Amur *řaŋzlu* / *thāŋzlu* ‘some’); North Sakhalin *řaŋspaklu* ‘some’; East Sakhalin *thāŋs* ‘how much’, *thāŋzlu* / *thāgzlu* / *thāŋřak* ‘some’. Cf. Fortescue 2016:146. (?) Proto-Gilyak / Nivkh **tunt* ‘what’: North Sakhalin *ru-t* / *řu-d* ‘what’; East Sakhalin *ru-(n)t* ‘what’; South Sakhalin *ru-nt* / *lu-nt* ‘what’. Cf. Fortescue 2016:152. Assuming semantic development as in Old High German (demonstrative pronoun) *dēr*, *diu*, *daz* ‘that’ (also used as a definite article and relative pronoun) (New High German *der*, *die*, *das* [definite article] ‘the’, [demonstrative pronoun] ‘that’, [relative pronoun] ‘who’).
- G. Etruscan: Note the demonstratives *ita*, *ta* ‘this’ and the adverb *θar* ‘there, thither’.

16.16. Deictic particle **ša-* (~ **šə-*) ‘this one here, that one there’ (Greenberg: §12. Demon-strative S; Nafiqoff 2003:53 **sV*)

- A. Afrasian: Chadic: Ngizim near demonstrative pronoun *sáu* ‘this one’, *sáu ... său* ‘this one ... that one’; Hausa *sà* ‘his, him’.
- B. Kartvelian: Proto-Kartvelian **-š-* pronoun stem > Georgian [-s-]; Mingrelian [-š-]; Laz [-š-]; Svan [-š-]. Cf. Klimov 1964:173 and 1998:178; Fähnrich—Sardshweladse 1995:310—311; Fähnrich 2007:378.
- C. Indo-European: Proto-Indo-European **so-*, (f.) **seA* [**saA*] (> **sā*), also **syo-* (< **si-o-*), demonstrative pronoun stem: ‘this, that’ > Sanskrit *sá-h*, (f. sg.) *sā* (also *sī*), *syá-h* demonstrative pronoun; Avestan *ha-* demonstrative pronoun stem; Greek *ὁ*, (f. sg.) *ἡ* demonstrative pronoun and definite article; Old Latin (m. sg.) *sum* ‘him’, (f. sg.) *sam* ‘her’, (m. pl.) *sōs*, (f. pl.) *sās* ‘them’; Gothic *sa*, (f.) *sō* ‘this, that; he, she’; Old Icelandic *sá*, *sú* ‘that’; Old English *se* ‘that one, he’, (f.) *sēo* ‘she’; Old High German *si*, *sī* ‘she’; Tocharian A (m.) *sa-*, (f.) *sā-*, B (m.) *se(-)*, (f.) *sā(-)* demonstrative pronoun; Hittite *ša* connective particle, *-še* third person singular enclitic pronoun. Cf. Pokorny 1959:978—979; Walde 1927—1932.II:509; Mann 1984—1987:1137 **sī-* (**sīm*) ‘he, she, it’, 1142—1143 **sīā* (**sīə*) ‘she, it’, 1143—1144 **sīos*, **sīā* ‘he; she; this, it’, 1250 **sos*, (f.) **sā* ‘this; he, she’; Watkins 1985:62 and 2000:81; Gamkrelidze—Ivanov 1984.I:384 and 1995.I:336. (?) Proto-Indo-European **-s-* in (m.) **ṛey-s-os*, (f.) **ṛey-s-eA* [-aA] (> *-ā*), **ṛey-s-yos* compound demonstrative pronoun: ‘this’ > Sanskrit *eśá-h* (f. *eśā*) ‘this’; Avestan *aēša-* (f. *aēšā*) ‘this’; Oscan *eiseis* ‘he’; Umbrian *erec*, *erek*, *ere*, *eřek*, *erse* ‘he, it’. Note: the **-s-* element could be from the Proto-Nostratic third person anaphoric stem **si-* (~ **se-*) instead (see

below). Cf. Pokorny 1959:281—283; Walde 1927—1932.I:96—98; Mann 1984—1987:235 **eisjos* (**eiso-*, **eito-*) a compound pronoun; Mayrhofer 1956—1980.I:129. This stem is joined in a suppletive alternation with **t^{ho}o-* ‘that’ (cf. Watkins 1998:66).

- D. Uralic: Proto-Finno-Ugrian **s[ä]* ‘he, she, it’ > Finnish *hän* (< **sän*) ‘he, she’; Lapp / Saami *son* ‘he, she’; Mordvin *son* ‘he, she’; Votyak / Udmurt *so* ‘that, yonder; he, she, it’; Zyrian / Komi *sy* ‘he, she, it’, *sija* ‘he, she, it; that, yonder’; Vogul / Mansi *täu* ‘he, she’; Ostyak / Xanty (Vasyugan) *jõh* ‘he, she’; Hungarian *ő* ‘he, she, it’. Cf. Collinder 1955:80—81 and 1977:97; Rédei 1986—1988:453—454; Décsy 1990:107; Hajdú 1972:40 Proto-Uralic **se*; Abondolo 1998a:25; Aikio 2022:13 **sV-* (?) (**sä-* [?]).

Sumerian: *še* deictic element, exact meaning unknown. *še* is translated by the Akkadian demonstrative pronoun *animmamû*. Cf. Thomsen 1987:81.

- 16.17. Anaphoric pronoun stem **si-* (~ **se-*) (Dolgopolsky 2008, no. 2006, **sE* ‘he/she’; Greenberg: §12. Demonstrative S)

This is an old anaphoric pronoun distinct from Proto-Nostratic **ša-* (~ **šə-*) ‘this one here’.

- A. Afrasian: Proto-Afrasian **si-* third person pronoun stem, **-s(i)* third person suffix > Egyptian *-s*, *-sy* third person singular suffix; dependent pronouns: *sw* ‘he, him, it’, *sy* ‘she, her, it’, *sn* ‘they, them’, *st* old form of the dependent pronoun third singular feminine, which has been specialized for certain particular uses, mainly in place of the third plural ‘they, them’ or of the neuter ‘it’. Cf. Gardiner 1957:45, §43, 46, §44, and 98, §124; Hannig 1995:647, 674, 712, and 777; Faulkner 1962:205, 211, 215, 230, and 252. Berber: Tamazight third person indirect pronouns: (singular after preposition and possessive with kinship) *s*, *as*, (possessive sg.) *-nnəs* or *ns*; (m. pl.) *sən*, *-sən*, *asən*, (f. pl.) *sənt*, *-sənt*, *asənt*, (possessive m. pl.) *-nsən*, (possessive f. pl.) *-nsənt*. Cf. Penchoen 1973:26—27. Chadic: Ngizim demonstratives (previous reference): (deictic predictor) *sónà* ‘here/there (it) is, here/there they are (pointing out or offering)’, (pronoun) *sónú* ‘this one, that one; this, that (thing or event being pointed out or in question)’; Hausa *šii* ‘he’, (direct object) *ši* ‘him’. Proto-East Cushitic **ʔu-s-uu* ‘he’ > Burji *is-i* third singular masculine personal pronoun abs. (= obj.) ‘him’; Gedeo / Darasa *isi* third singular masculine nominative pronoun ‘he’; Kambata *isi* third singular masculine nominative pronoun ‘he’; Sidamo *isi* third singular masculine nominative pronoun ‘he’. Proto-East Cushitic **ʔi-š-ii* ‘she’ > Burji *iš-ée* third singular feminine personal pronoun abs. (= obj.) ‘her’; Gedeo / Darasa *ise* third singular feminine nominative pronoun ‘she’; Hadiyya *isi* third singular feminine nominative pronoun ‘she’; Kambata *ise* third singular feminine nominative pronoun ‘she’; Sidamo *ise* third singular feminine nominative pronoun ‘she’. Cf. Sasse 1982:106 and 107;

- Hudson 1989:77 and 132. Highland East Cushitic: Kambata *-si* third singular possessive pronoun (m.): ‘his’, *-se* third singular possessive pronoun (f.): ‘her’; Sidamo *-si* third singular possessive pronoun (m.): ‘his’, *-se* third singular possessive pronoun (f.): ‘her’. Cf. Hudson 1989:80. Proto-Southern Cushitic **ʔi-si-* ‘she’ > Iraqw, Burunge, Alagwa *-s* in *-os* ‘his, her, its’. Proto-Southern Cushitic **-si* (bound) ‘her’ > Dahalo *ʔiði* ‘she’, *-ði* ‘her’. Proto-Southern Cushitic **ʔu-su-* ‘he’ > Iraqw, Burunge, Alagwa *-s* in *-os* ‘his, her, its’. Proto-Southern Cushitic **-su* (bound) ‘his’ > Ma’a *-ʔu* in *ku-ʔu* ‘his, her, its’; Dahalo *ʔúðu* ‘he’, *-ðu* ‘his’. Cf. Ehret 1980:290 and 295. Omotic: Zayse bound third person singular subject pronouns: (m.) *-s*, (f.) *-is*, third person singular independent pronouns: (subject m.) *ʔé-s-í*, (subject f.) *ʔí-s-í*, (direct object complement m.) *ʔé-s-a*, (direct object complement f.) *ʔí-s-a*, (postpositional complement m.) *ʔé-s-u (-ro)*, (postpositional complement f.) *ʔí-s-u(-ro)*, (copular complement m.) *ʔé-s-te*, (copular complement f.) *ʔí-s-te*; Gamo *sekki* ‘that, those’, third person singular subject markers (affirmative): (m.) *-es*, (f.) *-us*. Ehret (1995:156, no. 210) reconstructs Proto-Afrasian **su*, **usu* ‘they’.
- B. Elamite: Third singular personal suffix *-š* (< **-si* ?).
- C. Kartvelian: Proto-Kartvelian **-s* verb suffix used to mark the third person singular (subjective conjugation) > Georgian *-s*; Mingrelian *-s*; Laz *-s*; Svan *-s*. Cf. Fähnrich 1994:241 and 2007:357—358; Klimov 1964:160; Fähnrich—Sardshweladse 1995:292.
- D. Indo-European: Proto-Indo-European **-s* third person singular verb ending > Hittite *hi*-conjugation third singular preterit ending *-š* (cf. Sturtevant 1951:144, §270a; J. Friedrich 1960:76—79); Sanskrit third singular root aorist optative ending *-s* in, for example, *bhū-yā-s* (cf. Burrow 1973:352); Tocharian A third singular verb ending *-s* (< **-se*) in, for example, *pālkās* ‘shines’ (cf. Adams 1988:56, §4.212). According to Watkins (1962), it was this suffix that gave rise to the sigmatic aorist in Indo-European. Proto-Indo-European **-s-* in (m.) **ʔey-s-os*, (f.) **ʔey-s-eA* [**ʔey-s-aA*] (> **eysā*), **ʔey-s-yos* a compound demonstrative pronoun: ‘this’ > Sanskrit *eṣá-h* (f. *eṣā*) ‘this’; Avestan *aēša-* (f. *aēšā*) ‘this’; Oscan *eiseis* ‘he’; Umbrian *erec*, *erek*, *ere*, *eřek*, *erse* ‘he, it’. Note: the **-s-* element could be from the Proto-Indo-European demonstrative stem **so-* ‘this, that’ (< Proto-Nostratic **ša-* [**šə-*] ‘this, that’) instead. Cf. Mann 1984—1987:235 **eisjos* (**eiso-*, **eito-*) a compound pronoun; Pokorny 1959: 281—283; Walde 1927—1932.I:96—98; Mayrhofer 1956—1980.I: 129.
- E. Uralic: Proto-Uralic **-se* third singular possessive suffix/third person verb suffix (determinative conjugation). Cf. Abondolo 1998a:29; Hajdú 1972:40 and 43—44; Raun 1988b:564; Aikio 2022:16 **-sA*; Zhivlov 2023:156 **-sA*.
- F. Altaic: Proto-Turkic *-(s)i(n)* ~ *-(s)ĩ(n)* third person possessive suffix > Turkish *-(s)I(n)*; Azerbaijani *-(s)I*; Turkmenian *-(s)I*; Tatar *-(s)E*; Kazakh *-(s)I*; Kirghiz *-(s)I*; Uighur *-(s)I*. Cf. Johanson—Csató 1998; Starostin—Dybo—Mudrak 2003:1320—1321 **sI’* (~ **š-*) ‘this, that’ (3rd person pronoun).

- 16.18. Deictic particle **na* (~ **nə*), **ni* (~ **ne*) (not in Greenberg 2000; Nafiqoff 2003:50—51 **NA*; Illič-Svityč 1971—1984.II:93—94, no. 332, **NA* demonstrative pronoun)
- A. Afrasian: Proto-Semitic demonstrative stem/deictic particle **na/*-n* (cf. Akkadian *annū* ‘this’; Sabaeen *-n* definite article; Hebrew *-n* deictic element). Egyptian (dem. neuter and pl.) *nʾ* ‘this, these’, (dem. pronoun) *nw* ‘this, these’; Coptic *n-* [**ŋ**-], *nen-* [**ŋŋn-**] plural of definite article, *nai* [**ŋai**] ‘these’, *nē* [**ŋh**] ‘those’. Berber: Kabyle *-nni* ‘this, that; these, those’, *-inna/-yinna* ‘that, those’ (a person or thing at a distance but usually within sight). According to Sasse (1984:123, fn. 3), there is evidence for the reconstruction of a demonstrative stem **n-* in East Cushitic: Afar **n-a*, Saho **n-i/u*. Sasse further notes that this stem is attested in combination with *k/t* demonstratives in Galla / Oromo and Saho-Afar. Proto-Agaw **n-* in **ʔə-n-* ‘this’ > Bilin *ʔəna* ‘this’, *ʔən* ‘the’; Xamtanga (suffix) (m.) *-in* ‘that’ (cf. Appleyard 2006:136).
- B. Kartvelian: Found in verb endings in Kartvelian. Proto-Kartvelian third person singular present iterative (subjective conjugation) **-n* > Old Georgian *-n*; Mingrelian *-n*; Laz *-n* (cf. Klimov 1964:144—145; Fähnrich—Sardshweladse 1995:258; Fähnrich 1994:85, 240, and 2007:310—311). Proto-Kartvelian third person plural present (subjective conjugation) **-en* > Georgian *-en*, *-n*; Mingrelian *-an*, *-a*, *-n*; Laz *-an*, *-n* (cf. Klimov 1964:79; Fähnrich 1994:85, 240, and 2007:148—149; Fähnrich—Sardshweladse 1995:123).
- C. Indo-European: Proto-Indo-European demonstrative stem **ne-*, **no-*; **ʔe-no-*, **ʔo-no-* > Sanskrit (instr.) *anéna*, *anáyā* ‘this, these’; Avestan *ana-* ‘this’; Greek *ἐν* ‘the last day of the month’; Latin (conj.) *enim* ‘indeed, truly, certainly’; Lithuanian *añs*, *anàs* ‘that, that one’; Old Church Slavic *онъ* ‘that, he’; Hittite *an-ni-iš* ‘that, yonder’; Armenian *na* ‘that; he, she, it; him, her’ (cf. Brugmann 1904:401; Burrow 1973:277; Mayrhofer 1956—1980.I:32; Pokorny 1959:319—321; Walde 1927—1932.II:336—339; Puhvel 1984— .1/2:51—55; Kloekhorst 2008b:173—174). This stem may occur in the third plural verb ending **-n* as well. This was later extended by **-th* to form a new third plural ending **-nth*. Later still, this was further extended by a deictic **-i* to form the so-called “primary” third plural ending **-nthi* (see below for details).
- D. Uralic: Proto-Uralic **nā* (~ **ne* ~ ? **ni*) ‘this; this one’ > Finnish *nämä/nä-* (pl. of *tämä/tä-*) ‘these’, *ne/ni-* (pl. of *se*) ‘these, those’, *näim* ‘so, like this’, *niin* ‘so, thus’; Lapp / Saami *navt*, *na* ‘like this, in the same way as this’; Mordvin *ne* (pl. of *te* ‘this’ and *se* ‘that’) ‘these, those’; Zyrian / Komi *na*, *najō* ‘she’; Selkup Samoyed *na* ‘that’, *nyy* ‘thither’ (cf. Collinder 1955:38 and 1977:57; Rédei 1986—1988:300—301; Décsy 1990:103).
- E. Altaic: Proto-Tungus third person possessive suffix **-n* (cf. Sinor 1988:725) > Evenki *-n* (*-in* after consonants); Lamut / Even *-n* (*-an* after consonants); Udihe *-ni*; etc. Cf. Fuchs—Lopatin—Menges—Sinor 1968.

Sumerian: *na*, *ne* ‘this’; *ane*, *ene* ‘he, she’, *-ani* (*-ni* after vowels) ‘his, her’.

16.19. Deictic particle **ʋʰa-* (\sim **ʋʰə-*) ‘that over there, that yonder (not very far)’ (not in Greenberg 2000)

- A. Afrasian: Proto-Semitic **ʋa-* ‘that over there, that yonder’ > Arabic *tamma* ‘there, yonder’, *tumma* ‘then, thereupon; furthermore, moreover; and again, and once more’, *tammata* ‘there, there is’; Hebrew *šām* ‘there, thither’; Imperial Aramaic *tmh* ‘there’; Biblical Aramaic *tammā* ‘there’; Phoenician *šm* ‘there’; Ugaritic *tm* ‘there’. Cf. Klein 1987:664.
- B. Altaic: Proto-Altaic **čʰa-* ‘that over there, that yonder (not very far)’ > (A) Proto-Tungus **čā-* ‘that, further (not very far)’ > Manchu *ča-* ‘over there (not very far)’: *čala* ‘over there, on the other side; previously, before’, *čargi* ‘there, over there, that side, beyond; formerly’, *časi* ‘in that direction, thither, there’; Evenki *čā-* ‘that, further (not very far)’; Lamut / Even *čā-* ‘that, further (not very far)’; Negidal *čā-* ‘that, further (not very far)’; Ulch *ča-* ‘that, further (not very far)’; Oroch *čō-* ‘that, further (not very far)’; Nanay / Gold *ča-* ‘that, further (not very far)’; Oroch *čā-* ‘that, further (not very far)’; Udihe *ča-* ‘that, further (not very far)’; Solon *sā-* ‘that, further (not very far)’; (B) Proto-Mongolian **ča-* ‘that, beyond’ > Mongolian *ča-* in: *čadu*, *čayadu* ‘situated on the other or opposite side; beyond’, *čayaduki* ‘lying opposite, situated on the other side; situated beyond’, *čayan-a*, *čīyan-a* ‘farther, beyond, behind, yonder’, *čayayur* ‘along or on the other side; farther, beyond’, *čayanaḡan* ‘a little further or beyond’; Khalkha *cāna* ‘that, beyond’; Buriat *sā-* ‘that, beyond’; Kalmyk *cā-* ‘that, beyond’; Ordos *čāna* ‘that, beyond’; Dagur *čā-š* ‘that, beyond’, *čāši* ‘thither’; Monguor *čagšə*, *tagšə* ‘that, beyond’. Cf. Starostin—Dybo—Mudrak 2003:406 **č’a* ‘that, beyond (not very far)’; Poppe 1960:26 and 139; Street 1974:10 **čagā* ‘there, further away’.
- C. Eskimo: Proto-Eskimo demonstrative stem **cam-* ‘down below, down-slope (not visible)’: Alutiiq Alaskan Yupik *camna*; Central Alaskan Yupik *camna*; Naukan Siberian Yupik *samna*; Central Siberian Yupik *saamna*; Sirenik *samna*; Seward Peninsula Inuit *samna*; North Alaskan Inuit *samna*; Western Canadian Inuit *hamna*; Eastern Canadian Inuit *sanna*; Greenlandic Inuit *sanna*. Note: all of the preceding forms are cited in the absolutive singular. Cf. Fortescue—Jacobson—Kaplan 1994:458.

II. DUAL AND PLURAL MARKERS

16.20. Dual **kʰi(-nV)* (Greenberg: §14. Dual KI[N]; Dolgopolsky 2008, no. 1902, **qV* particle of collectivity [(in descendant languages) → a marker of plurality]; Fortescue 1998:96—123)

Greenberg (2000:101—106) reconstructs a Eurasiatic dual marker **KI(N)*. The evidence he adduces for this formant is spotty. Nonetheless, I believe that he may ultimately be right. It looks like we are dealing here with an archaic word for the number ‘two’, which shows up in Egyptian as ‘other, another’ and which is

preserved in relic forms here and there in other Nostratic daughter languages as a dual formant.

- A. Afrasian: Note Egyptian (m.) *ky*, *ki*, *kii*, (f.) *kt* (*kiti*) ‘other, another’; Coptic *ke* [ⲕⲉ] ‘another (one), (the) other (one); other, different’. Cf. Hannig 1995:878—879; Gardiner 1957:78, §98, and 597; Vycichl 1984:70; Černý 1976:51.
- B. Indo-European: Mann (1984—1987:618) posits a Proto-Indo-European **kin-*, but he does not assign a meaning. He bases this reconstruction on the following forms from the daughter languages: Armenian *mia-sin* ‘together’; Old Church Slavic *sq-sbnъ* ‘mutual’, *pri-sbnъ* ‘akin’. The underlying sense seems to have been togetherness or complementarity, which may be derived from an original meaning ‘pair, set of two’ or the like. Though speculative, there is nothing unreasonable in this proposal.

At the very end of the discussion of Dual **KI(N)*, Greenberg (2000:106) briefly mentions the Armenian plural ending *-k^h* (= *-kʰ*), which, as he notes, has always been enigmatic. I would remove Armenian from this section and put it in §18. Plural KU. The Armenian ending *-k^h* has no known parallels in other Indo-European languages and is usually considered to be a development specific to Armenian, without clear explanation (cf., for example, Godel 1975:102, §5.22, and Rüdiger Schmitt 1981:111—112). To be sure, a suffix **-k^h(o)-* is well represented in other Indo-European daughter languages — it is found, for instance, in Latin *senex* ‘old man’, Greek *μειραξ* ‘young man, lad’, and Sanskrit *sanaká-h* ‘old’ —, but it usually does not change the meaning except in a few cases where it seems to add a diminutive sense (as in Sanskrit *putraká-h* ‘little son’). Nothing would lead one to think that this ending could have been the source of the Armenian plural ending *-k^h*. At the same time, I find it hard to believe that a Proto-Eurasiatic plural marker **-k^h(V)* could have been preserved in Armenian and have left absolutely no traces in the other Indo-European daughter languages — and yet, there it is!

- C. Uralic: Greenberg (2000:102—103) mentions possible related forms in Uralic: Proto-Uralic dual **-ka* ~ **-kã* + **-n* or **-nʷ* (cf. Collinder 1960:302—303; Décsy 1990:73). This is identical in form to the plural ending of the personal/possessive inflection. However, we would expect Proto-Uralic **-ki* ~ **-ke* + **-n* or **-nʷ*, with **-i* ~ **-e* vocalism, if the Uralic forms had indeed been related to the others discussed by Greenberg instead of the vowels reconstructed by Collinder (and others). Therefore, if the traditional reconstruction is correct, the inclusion of the Uralic material here is suspect. In fairness, Greenberg (2000:102) does propose that “*k* was originally a dual and was in fact followed by a vowel *i* that was often lost”, and Greenberg’s case is strengthened by the Selkup Samoyed dual marker (used with both nouns and verbs) *-qi*, *-qí* (Collinder 1960:302 writes *-qy*). See also Aikio 2022:16 and 18—19. Yukaghir (Northern / Tundra) *ki* ‘two’, *kijuod’e* ‘twins’ (cf. Nikolaeva 2006:209).
- D. Greenberg (2000:103) derives the *-gi* extension found in the Amur first person dual personal pronoun *me-gi* ‘we two’ from **-ki(n)* by assuming derivation from **men-gi(n)* (or **meŋ-gi(n)*), with **-g-* through voicing of **-k-*. With loss

of **-n-*, we arrive at the attested form: **men-ki(n)* > (with voicing of *k* to *g*) **men-gi(n)* > (with loss of *-n-*) *me-gi* ‘we two’.

Sumerian: Of interest here are the forms *ki-me-en* *min* ‘two’, *ki-2-en-ta* ‘twice’, and *ki-2-še^(se)* ‘twice’, where the common element *ki-* resembles both in form and meaning the dual form **ki(n)* that Greenberg posits for Eurasiatic.

- 16.21. Plural **-t^ha* (Greenberg: §15. Plural T; Dolgopolsky 2008, no. 2240, **tV* a postnominal marker [pronoun ?] of plurality [‘together’]; Fortescue 1998: 96—123; Janhunen 2014b:320—321, §5.1)

A. Afrasian: A plural marker *-ta* is found in Cushitic. In Kambata, for instance, the most common plural suffix is *-ata*, as in *duunn-ata* ‘hills’, (sg. *duuna*). This suffix occurs elsewhere in Highland East Cushitic: cf. the Sidamo plural suffix *-oota* in *ballicca* ‘blind one’, (pl.) *balloota*. Also note Galla / Oromo: *nama* ‘man’, (pl.) *namoota*. A plural marker *-t* (~ *-d*) also occurs in Omotic (cf. Bender 2000:212—213). Ehret (1995:17) notes that “[a] distinct Afroasiatic suffix in **t*, a nominal plural marker, may be reflected in the Egyptian cases where **t* indicates a collectivity”. Later, Ehret (1995:27) lists a number of nominal suffixes that are most certainly ancient in Afrasian, including “plurals in *t*, probably reconstructible as **-at-*, seen in Semitic, Egyptian (as the collective **t*), Cushitic, and Omotic.” Note also the remarks concerning *t*-plurals in Semitic by Lipiński (1997:241—242): “Some nouns, both masculine and feminine, without the *-t* mark of the feminine in the singular, take the ‘feminine’ ending in the plural. This phenomenon assumes larger proportions in Assyro-Babylonian and especially in North Ethiopic where the ‘feminine’ plural ending *-āt* is widely used for masculine nouns. Also the external plural in *-očč* / *-ač*, used for both genders in South Ethiopic (§31.17) and in some Tigre nouns, originates from an ancient **-āti*, which was the ending of the plural oblique case: the vowel *i* caused the palatalization of *t* and was absorbed in the palatal. In Assyro-Babylonian, some of the nouns in question are really feminine also in the singular, as e.g. *abullu(m)*, ‘city gate’, plur. *abullātu(m)*, or *eleppu(m)*, ‘ship’, plur. *eleppētu(m)*. Other nouns however, as e.g. *qaqqadu(m)*, ‘head’, plur. *qaqqadātu(m)*, or *ikkaru*, ‘peasant’, plur. *ikkarātu(m)*, are masculine in both numbers. A third group consists of nouns which are masculine in the singular, but are treated as feminine in the plural, e.g. *epinnu(m)*, ‘plough’, plur. *eppinētu(m)*, or *eqlu(m)*, ‘field’, plur. *eqlētu(m)*. The situation is similar to Ugaritic with nouns like *ksû*, ‘chair’, or *mṭb*, ‘dwelling’, which have the plurals *ksât* and *mṭbt*. We know at least that *ksû* is also feminine in the singular. In North Ethiopic the ending *-āt* is used instead of the masculine plural morpheme *-ān* without influencing the gender of the nouns (e.g. Ge‘ez *māy*, ‘water’, plur. *māyāt*; Tigrinya *sāb*, ‘person’, plur. *sābat*), while the morpheme *-ān* (§31.12) is employed for adjectives and participles (e.g. Ge‘ez *ḥadis*, ‘new’, plur. *ḥadisān*), and for a smaller number of substantives. In

Tigrinya, the plural is *-tat* after vowels (e.g. *gāza* ‘house’, plur. *gāzatat*), even when the final vowel has only an auxiliary function (§27.16), as in *labbī*, ‘heart’, plur. *labbətat* (§31.20). Besides the plural ending *-očč* (§31.17), Amharic continues using the Old Ethiopic ending *-āt*, mainly with masculine nouns or with nouns unspecified as to gender, e.g. *hawaryat*, ‘apostles’, *łasanat*, ‘languages’, *gādamat* ‘converts’. The wide use of the ending *-āt* can best be explained by the original function of the morpheme *-t-* forming collective nouns (§30.1). However, a side influence of the Cushitic adstratum on Ethiopic should not be excluded, since *-t-* is the most common Cushitic marker of the plural, also in Highland East Cushitic.” Plural suffixes in **-Vt-* are also found in Southern Cushitic (cf. Ehret 1980:54—55): Proto-Southern Cushitic **-ata* > Iraqw *-ta* in *qarta*, plural of *qari* ‘age-mate’, *-t* adjective plural, K’wadza *-ata*, Asa *-at-* in complexes of the form *-atVk*, Dahalo *-Vtta*; Proto-Southern Cushitic **-etu* > K’wadza *-etu*, Dahalo *-ettu*; Proto-Southern Cushitic **-ota* > Asa *-ot-* in complexes *-otVk*, Dahalo *-Vtta*; Proto-Southern Cushitic **-uta* > Asa *-ut*, Dahalo *-Vtta*. Finally, Bender (2000:214) remarks: “Plural *t* is not so common: Egyptian and Semitic have it, but it is lacking in Berber and Chadic. Cushitic and Omotic both are strong in plurals involving *n* and also *t*.” For example, in Kullo, which is part of Northwest Omoto branch of Omotic, plurals are usually formed by adding the suffix *-(a)tu* to the head of the noun phrase, as in: *asatu* ‘people’ (sg. *asa* ‘person’), *kanatu* ‘dogs’ (sg. *kana* ‘dog’), *naatu* ‘boys’ (sg. *naa* ‘boy’), *kutatu* ‘chicken(s)’ (sg. *kutu* ‘chicken’).

- B. Kartvelian: Note that a plural marker *-t(a)* is also found in Kartvelian in the so-called “*n*-plural”; cf. the Old Georgian *n*-plural case forms for *perq-i* ‘foot’ (cf. Fähnrich 1994:56):

Nominative	<i>perq-n-i</i>
Ergative	<i>perq-t(a)</i>
Genitive	<i>perq-t(a)</i>
Adessive	<i>perq-t(a)</i>
Dative	<i>perq-t(a)</i>
Instrumental	<i>perq-t(a)</i>
Adverbial	<i>perq-t(a)</i>
Vocative	<i>perq-n-o</i>

Thus, there are really only three distinct case forms in the *n*-plural, namely, nominative, vocative, and oblique (that is, all the other cases). There is also a plural marker *-eb-*, which was probably originally collective. The plural ending *-t(a)* is also found in pronoun stems in the oblique cases. Finally, note that a plural marker *-t* is also found in verbs — cf., for instance, the Old Georgian present forms of the verb *c’er-* ‘to write’ (cf. Fähnrich 1994:85):

	Singular	Plural
1st person	<i>v-c 'er</i>	<i>v-c 'er-t</i>
2nd person	<i>s-c 'er</i>	<i>s-c 'er-t</i>
3rd person	<i>c 'er-s</i>	<i>c 'er-en</i>

As a plural suffix of the first and second persons in the verb (subjective conjugation), **-t* is found in Mingrelian and Laz as well (cf. Fähnrich 1994:240 and 2007:185—186; Fähnrich—Sardshweladse 1995:153—154).

- C. Uralic: According to Collinder (1960:297), the nominative plural ending was **-t* in Proto-Uralic: cf. Finnish *kala* ‘fish’, (pl.) *kalat*; Lapp / Saami (pl.) *guolet*, *guolek* (*-k < *-t*) ‘fish’; Mordvin (Erza) (pl.) *kalt* ‘fish’; Vogul / Mansi (pl.) *hult* ‘fish’; Ostyak / Xanty (pl.) *kult* ‘fish’; Yurak Samoyed / Nenets (pl.) *haale?* ‘fish’. See also Abondolo 1998a:21; Décsy 1990:72—75; Aikio 2022:15. Regarding plural endings in Uralic, Marcantonio (2002:229) notes: “Most U[ralic] languages, like Finnish, Vogul, Ostyak, Samoyed, have an ending *-t*, as in Finn[ish] *talo-t* ‘houses’. This morpheme *-t* is also used in the verbal conjugation in several languages, for example in Vogul...” See also Sinor 1952:211.
- D. Altaic: Common Mongolian had a plural suffix **-t* (cf. Sinor 1952:211—212). This suffix is preserved in Ordos, Khalkha, Buriat, and Moghol. In Mongolian, it appears as *-d*, in Dagur as *-r*, and in Kalmyk as *-D* (see the table in Poppe 1955:183). Though Poppe (1955:178—184) reconstructs a Common Mongolian plural suffix **-d*, Greenberg (2000:107) cites an earlier work by Poppe in which he derives **-d* from an earlier **-t*. Tungus: Manchu *-ta* and *-te* form the plural of certain kinship terms. Turkic has a few forms with a relic plural *-t* (cf. Menges 1968b:111; Sinor 1952:212—213). For Proto-Altaic, Starostin—Dybo—Mudrak (2003:221) reconstruct a plural suffix **-tʰ* on the basis of: Proto-Tungus **-ta(n)/*-te(n)* (basically in Manchu; in other Tungus languages, it is used as the 3rd plural pronominal suffix); Mongolian *-d*; Proto-Turkic **-t*; Proto-Japanese **-ta-ti*; Proto-Korean **-ti-r*. They note: “This is the most common and probably original P[roto-]A[ltaic] plural suffix.”
- E. Gilyak / Nivkh: Gilyak / Nivkh: Suffix **-t* is used to indicate the plural in all three persons in the participle indicating action simultaneous with that of the main verb (cf. Greenberg 2000:107).
- F. Chukchi-Kamchatkan: Greenberg (2000:120; see also 107—108, §15) notes that the plural of nouns in declension I in Chukchi “is *-t* after vowels and *-ti ~ -te* after consonants”. Declension I distinguishes singular from plural only in the absolutive. In declension II, singular and plural are distinguished in all cases. In the absolutive, the plural is *-n-ti ~ -n-te*, formed with the *-n* plural formant discussed below plus the plural endings *-ti ~ -te* under discussion here.
- G. Eskimo: A plural marker **-t* is also found in Eskimo (cf. Greenberg 2000:108; Fortescue—Jacobson—Kaplan 1994:441).

16.22. Plural **-ri* (Greenberg: §17. Plural RI; Dolgopolsky 2008, no. 1953a, **r[i]* a particle of plurality/collectivity)

- A. Afrasian: A plural marker *-r* is found in Omotic: cf. the Zayse plural suffix *-ir* in, for example, *šóoš* ‘snake’, (pl.) *šóoš-ir*. Cf. also Bender 2000:214.
- B. Dravidian: Note here the Proto-Dravidian plural marker **(V)r*, used with nouns of the personal class and pronouns (cf. Tamil *avan* [sg.] ‘that man’, [pl.] *avar* ‘those people’) (cf. Krishnamurti 2003:206—207; Zvelebil 1977:15—16). Particularly interesting is the close agreement here with Manchu, where, as Greenberg remarks (2000:113), the plural *-ri* is confined to certain kinship terms. Finally, Krishnamurti (2003:308) reconstructs a Proto-Dravidian third plural (human) verb suffix **-ār* > Old Tamil *-ar*, *-ār(kal)*; Old Malayalam *-ār*; Iruḷa *-ar(u)*, *-ār*; Kota *-ār*; Kannaḍa *-ar(u)*, *-ār*, *-or*; Tuḷu *-ēri*; Koraga *-ēri*; Telugu *-ru*, *-ri*; Konda *-ar*; Kui *-eru*; Kuwi *-eri*; Pengo *-ar*; Maṇḍa *-ir*; Kolami *-ar*, *-er*; Naikṛi *-ar*, *-er*, *-r*; Parji *-ar*, *-or*, *-er*, *-ir*, *-r*; Gadba *-ar*, *-er*, *-or*, *-r*; Kurux *-ar*, *-r*; Malto *-er*, *-ar*, *-or*; Brahui *-ir*, *-ēr*. This has a close parallel in Indo-European (see below).
- C. Kartvelian: Proto-Kartvelian plural suffix **-ar* > Georgian *-ar*; Svan *-ar* (Upper Svan *-ār*). In Upper Bal, this is changed to *-āl*, but in Lower Bal, *-ār* has mostly been generalized. Cf. Fähnrich—Sardshweladse 1995:35; Fähnrich 2007:38.
- D. Indo-European: Verbal third person endings in *-r* are found in Indo-Iranian, Hittite, Italic, Venetic, Celtic, Phrygian, and Tocharian (cf. Szemerényi 1996:242—243: “It follows that the *r*-forms were originally limited to the primary endings and, there, to the 3rd persons. The early forms were for Latin *-tor/-ntor*, for Hittite *-tori/-ntori*, for Old Irish [giving conjunct endings *-ethar/-etar*] *-trol/-ntro*.”). According to Lehmann (2002:171), **-r* was originally used to mark the third plural in the stative in early Proto-Indo-European. This contrasted with third plural **-n* in the active. This **-n* was later extended by **-th*, which itself was further extended by the deictic particle **-i*, meaning ‘here and now’, to form the later Proto-Indo-European third plural primary ending **-nthi*.
- E. Uralic: In her discussion of plural markers in Uralic, Marcantonio (2002:231) notes: “Finally, one should mention the ending *-r*, although its distribution is very restricted. It is present in the function of a collective suffix in Samoyed Yurak and in Cheremis.” Sinor (1952:217) also notes that Cheremis / Mari had a denominal collective suffix in *-r* and cites the following example: *lülper* ‘alder grove’ (*lülpə* ‘alder’). For Yurak Samoyed / Nenets, Sinor cites *kārβ-rie* ‘larch grove’ (*kārβ* ‘larch’) as an example.
- F. Altaic: As noted by Greenberg (2000:113), a nominal plural marker *-ri* occurs in Manchu in conjunction with certain kinship terms. Benzing reconstructs a Common Tungus **-ri* as the plural of reflexive pronouns. Sinor (1952:216) cites the following examples: Manchu *mafa-ri* ‘grandmothers’ (sg. *mafa* ‘grandmother’); Nanay / Gold *məpəri* plural of the reflexive pronoun (for all persons) (acc. sg. *məpi*); Evenki: words ending in *-n* may form their plural by replacing the *-n* with *-r*, as in: *oror* ‘deer’ (sg. *oron* ‘deer’), *murir* ‘horses’ (sg.

murin ‘horse’). This form is also found in Turkic. The Pre-Proto-Turkic first and second personal plural personal pronouns may be reconstructed as **mi-ri* and **si-ri*, respectively. These yielded Proto-Turkic **mi-rʸ* (> **bi-rʸ*) and **si-rʸ* (the following forms are all nominative plural): Turkish *biz* ‘we’, *siz* ‘you’; Tatar *běz* ‘we’, *sěz* ‘you’; Kazakh *biz* ‘we’, *siz* ‘you’; Noghay *biz* ‘we’, *siz* ‘you’; Kirghiz *biz* ‘we’, *siz* ‘you’ (polite, to one addressee); Uzbek *biz* ‘we’, *siz* ‘you’; Uighur *biz* ‘we’, *siz* ‘you’ (now used as the polite form only); Chuvash *epir* ‘we’, *esir* ‘you’. Cf. Johanson—Csató 1998. It may be noted here that the Common Turkic plural suffix **-lar* is most likely composed of the plural/collective suffix **-la* (discussed below) plus the plural suffix **-r(i)* (cf. Sinor 1952:226). Starostin—Dybo—Mudrak (2003:222) note: “Above we have already dealt with the suffix **-rV* which may have had an original dual meaning. Outside Turkic the reflexes of **-r-* cannot be distinguished from those of **-r-*, and it seems interesting to note the peculiar plural in **-r* in T[ungus-]Manchu, which occurs in nouns whose singular ends in **-n...*”

- G. Chukchi-Kamchatkan: Plural ending *-ri* in *mu-ri* ‘we’, *tu-ri* ‘you’, and the third person plural independent pronoun in the nominative case *ət-ri* ‘they’ (cf. Greenberg 2000:112—113).
- H. Gilyak / Nivkh: Gilyak / Nivkh: A plural formant *-r* is found in (Amur) *me-r* ‘we’ (inclusive) (cf. Gruzdeva 1998:26).
- I. Etruscan: Note the nominal plural endings *-ar*, *-er*, and *-ur* (cf. [sg.] *clan* ‘son’, [pl.] *clenar* ‘sons’). Cf. Bonfante—Bonfante 2002:83.

16.23. Plural **-kʰu* (Greenberg: §18. Plural KU; Dolgopolsky 2008, no. 837, **kU* particle of plurality)

- A. Afrasian: For Proto-Southern Cushitic, Ehret (1980:58—59) reconstructs the following nominal plural suffixes: (A) Proto-Southern Cushitic **-aaki* > Iraqw, Alagwa *-akw* adjective plural suffix (underlying **-ako*), K’wadza *-aki* (also *-ako*), Asa *-ak* (also *-aka*), Dahalo *-aaki* (also *-aake*); (B) Proto-Southern Cushitic **-eeke* > Asa *-ek*, Dahalo *-eeke* (also *-eeke*); (C) Proto-Southern Cushitic **-ooki* > Asa *-ok*, Dahalo *-ooki*; (D) Proto-Southern Cushitic **-uuka* > K’wadza *-uka* (also *-uko*), Asa *-uk* (also *-uko*, *-uk*), Dahalo *-uuka* (also *-uuke*). Ongota has a pronominal plural suffix *-ku* (cf. Fleming 2002b:40). A nominal plural suffix **-aki* is widespread in Chadic (cf. Newman 1990:16—21).
- B. Dravidian: The most common plural marker in Proto-Dravidian has been reconstructed by Zvelebil (1977:12—15) as **(n)kVl(u)*, while Krishnamurti (2003:206—207) reconstructs three forms, the last of which is a combination of the first two: **-nk(k)*, **-Vl*, and **-nk(k)Vl*. According to Jules Bloch, the plural ending **(n)kVl(u)* developed from the coalescence of the two plural markers **-k(V)* and **-Vl(u)* — this agrees with Krishnamurti’s analysis. Specifically, Zvelebil (1977:14—15) remarks: “...from the existence of only the reflexes of **k* in North Dravidian (Brahui) and Gondi-Konda Kui-Kuvi, we may infer that the *velar stop* is preferably to be regarded as the earliest Dravidian suffix of

substantive plurals of the non-personal class.” The Dravidian plural suffix **-k(V)* may be compared with the forms under discussion here.

- C. Indo-European: On Armenian, see above (Greenberg’s §14. Dual KI[N]).
- D. Uralic: Marcantonio (2002:234—235) notes: “Unlike most U[ralic] languages, Hungarian has a different Plural ending, used both for nouns (in ‘non-oblique’ Cases), and for verbs: the ending *-k*. A Plural *-k* is also found in Lapp, although this is generally considered as deriving from **-t...*” Further, she notes: “The origin of *-k* is disputed. Some researchers believe that it derives from a derivational suffix **-kkV*, compare Finn[ish] *puna-kka* ‘rubicund’ from *puna* ‘red’ (Abondolo 1988b: 439). This explanation looks a bit far fetched. Abondolo himself (ibid.) also considers the possibility that the verbal element *-k* is the same as the possessive element *-k* in *uru-n-k*. This is indeed the interpretation which is chosen here, but this interpretation still does not tell us where the component *-k* comes from. Aalto (1969/78: 326) considers the possibility of connecting **-k* with the Samoyed co-affixal element **-k(Ø)*-discussed above (Section 8.4.1), as well as with the Tungus, Turkic and Mongolian collective ending *-g*. Menges (1968/95: 129) on the other hand remarks that in a number of Turkic languages the 1st Poss. Plu. *-ym ~ -yz* (normally used in connection with a verbal noun) is replaced by *-yq ~ -ik* (the two forms coexist in some languages), whose origin is considered unclear, but whose meaning and sound-shape could be connected with Hung. *-k*. A Plural *-k* also exists in Dravidian.” Collinder (1965:106) notes: “[t]he ending *-ikko* often forms collective nouns, as in [Finnish] *koivikko* (seldom *koivukko*) ‘birch grove’.”
- E. Gilyak / Nivkh: Proto-Gilyak / Nivkh **-kun* plural ending: Amur *-ku / -γu / -xu* plural ending; East Sakhalin *-kun / -xun* plural ending; South Sakhalin *-kun / -xun* plural ending. Cf. Fortescue 2016:168. As noted by Gruzdeva (1998:16), “one or another phonetic variant of the suffix is chosen according to the rules of morpho-phonological alternation”. Gilyak / Nivkh also forms plurals by means of reduplication.
- F. Eskimo: Greenberg (2000:115—116) devotes most of the discussion to the Eskimo plural forms containing *-ku*.

16.24. Plural **-sʷa* (Greenberg: §19. Plural S; Janhunen 2014b:321—322, §5.2)

In view of the evidence from Southern Cushitic, this may originally have been an adverbial particle meaning ‘very, very much’; it became a plural marker in both Southern Cushitic and Eurasiatic.

- A. Afrasian: Ehret (1980:329, D.1.) reconstructs Proto-Southern Cushitic **ša* or **šaa* ‘very, very much’ (> K’wadza *seʔem* ‘every, each’, plurals in *-Vs-*, *-Vds-*; Asa *šaʔi* ‘many’, plurals in *-Vš-*; Ma’a *ša* ‘very, very much’).
- B. Indo-European: In the traditional reconstruction of the noun stems, an **-s* is added to the case endings in the plural: nominative-accusative (consonant

stems, masculine and feminine) *-es; accusative (masculine and feminine) *-ns/*-ŋs; ablative *-bhyos/*-bhōs, *-mos; dative *-bhyos/*-bhōs, *-mos; locative *-su; and instrumental *-bhis, *-mis; *-ōis (cf. Szemerényi 1996:160; Burrow 1973:235—240). An *-s is also found in several plural forms in the personal pronouns (cf. Szemerényi 1996:216—218). An *-s is sometimes used to indicate the plural in the first and second person personal endings in verbs: first person plural: (primary) *-mesi, (secondary) *-mes; second person plural: (primary) *-theŋi, (secondary) *-thes (cf. Burrow 1973:308; Szemerényi 1996:235). An alternative form in which *-n appears as the plural marker in these persons is attested as well (in Hittite, for example). In the second person plural, the ending could also appear in an unextended form, *-the.

- C. Altaic: In Mongolian, the ending -s is one of the means used to indicate plurality (cf. Poppe 1955:177—178): cf. Mongolian *ayulas* ‘mountains’ (sg. *ayula*), *eres* ‘men’ (sg. *ere*), *noqas* ‘dogs’ (sg. *noqai*), *erdenis* ‘jewels’ (sg. *erdeni*), *üges* ‘words’ (sg. *üge*), *tengris* ‘gods’ (sg. *tengri* ‘heaven, god’), *aqas* ‘older brothers’ (sg. *aqā*), *moγas* ‘snakes’ (sg. *moγai*), etc.; Moghol (*s ~ z* variation) *tākā-z* ‘bucks’, *taḡta-z* ‘boards’, *šānā-z* ‘combs’, etc.; Ordos *emes* ‘women’, etc.; Khalkha *ūlvs* ‘mountains’, *erās* ‘men’, etc.; Kalmyk *zalūs* ‘young men’, *tšon^os* ‘wolves’, *noχ^os* ‘dogs’, etc. In Manchu, there is no common nominal plural marker, several distinct suffixes being found: -sa, -so, -se, -si; -ta, -te; -ri: cf. *hahasi* ‘men’ (sg. *haha*), *amata* ‘fathers’ (sg. *ama*), *mafari* ‘grandfathers’ (sg. *mafa*) (cf. Sinor 1968:264). Sinor (1952:218) considers the Manchu plural suffixes -sa, -so, se, -si to be loans from Mongolian. Greenberg (2000:117) also notes that, in Old Turkish, -s is used to indicate the plural in names of ranks and nationalities (but see Sinor 1952:219—220, who argues against the existence of an -s plural in Turkic). According to Poppe (1955:175), the plural markers *-n, *-s, and *-t (Poppe writes *-d, but see above) were inherited from Common Altaic. Starostin—Dybo—Mudrak (2003:222) reconstruct a Proto-Altaic plural suffix *-s- on the basis of: Proto-Tungus *-sa-l; Proto-Mongolian *-s. They note: “This suffix is restricted to the T[ungus]-M[anchu]-Mong[olian] Area, and may in fact reflect the P[roto]-A[ltaiic] collective *-sa.”
- D. Eskimo-Aleut: As noted by Greenberg (2000:117), -s is “the basic indicator of plurality throughout the inflectional system...” in the central dialects of Aleut.

16.25. Plural/collective *-la (Greenberg: §20. Collective L; Nafiqoff 2003:95—97 */a/; Illič-Svityč 1971—1984.II:16, no. 248, *-la suffix of collective nouns; Dolgopolsky 2008, no. 1249, */A analytical ([in descendant languages] → synthetic) marker of collectivity)

- A. Afrasian: For Proto-Southern Cushitic, Ehret (1980:58) reconstructs the following nominal collective suffixes: (A) *-ala > Asa -ala in *lawala* ‘truth’, K’wadza -ala noun plural suffix; (B) *-ela > Iraqw -eli noun plural marker, Asa

-*ela* noun plural/collective marker, Dahalo -*la* in *nala* ‘honey’ (contraction of **naṭlela* or **naṭlala*).

- B. Dravidian: The Dravidian (non-human) plural marker *-*Vl(u)* mentioned above and discussed in detail by Krishnamurti (2003:206—207 and 215—217) should probably be included here. See also Zvelebil 1977:14—15.
- C. Uralic: According to Greenberg (2000:117), a suffix -*l(a)* with collective meaning is found in Estonian and Cheremis / Mari. In Selkup, this suffix functions as a plural. See also Collinder 1960:260, §778. Marcantonio (2002:230) notes: “An ending of more restricted, although not of less complex distribution within U[ralic] is -*l*, which in fact is not always reconstructed for P[roto]-U[ralic]. It is present in Ostyak, in Cheremis and in Samoyed. In Samoyed Selkup it is present in the form -*la*, simply to mark Plurality, as in *loga* ‘fox’ vs *loga-la* ‘fox-Plu.’. However, here it can also express Plurality in connection with Possession, as in *loga-la-m* alongside with *loga-ni-m*, which both mean ‘fox-Plu.-my, my foxes’... In Eastern Ostyak -*l* is a marker of Plurality only in connection with Possession (-*t* otherwise), as in *weli-t* ‘reindeer-Plu., reindeers’ vs *weli-l-äm* ‘reindeer-Plu.-my, my reindeers’... This formant is also the marker of Plurality of the Definite Object within the Definite Conjugation.”
- D. Altaic: Greenberg (2000:118) mentions that, in Turkic, a collective suffix -*ala* ~ -*la* is used with numerals. According to Róna-Tas (1998:73), the Common Turkic plural suffix in nouns was *-*LAr*. This is most likely a compound suffix composed of the plural/collective suffix *-*la* under discussion here plus the plural suffix *-*r(i)* discussed above. Examples: Middle Kipchak *yunlar* ‘feathers’, *oqlar* ‘arrows’, *işler* ‘things’, *ölüler* ‘dead people’, etc.; Turkish *sular* ‘masses of water’, *evler* ‘houses’, etc.; Azerbaijani *atlar* ‘horses’, *evler* ‘houses’, etc.; Turkmenian *kitaplar* ‘books’, *atlar* ‘horses’, etc.; Tatar: the plural suffix is -*LAr*; Kazakh: the plural marker is -*LAr*; Noghay *suwlar* ‘masses of water’, *üyler* ‘houses’, etc.; Uzbek: the plural ending is -*lār*; Yakut *tabalar* ‘reindeer’, etc. For Tungus, Sinor (1952:214) cites the following examples of plural -*l*: Evenki *ḡul* ‘houses’ (sg. *ḡu*); Lamut / Even *delal* ‘heads’ (sg. *del*); Nanay / Gold: “[t]he -*l* appears not as a nominal plural suffix but only in the 3rd pers. plural of some verbal forms. In these cases it is used to differentiate the plural form from the singular. For example: In the subjunctive (the term is inexact): *bumcə* ‘he would give’, *bumcəl* ‘they would give’.” Sinor (1952:214) also mentions that a plural -*l* appears in Middle Mongolian, as in: *kimul* ‘nails’ (cf. Classical Mongolian sg. *kimusun* ‘nail’), *dabayal* ‘mountain passes’ (sg. *dabaya* ‘mountain pass’). Starostin—Dybo—Mudrak (2003:222) reconstruct a Proto-Altaic plural suffix *-*l*- on the basis of: Proto-Tungus *-*l*; Proto-Turkic *-*lar*; Proto-Mongolian *-*nar*; Proto-Japanese *-*ra*. They note: “In Turkic, Mongolian, and Japanese this suffix seems to have been originally restricted to forming plurals of animate nouns, and in Japanese it basically reflects associativity (‘brothers and those together with them, associated with them’). Ramstedt (EAS 2) suggests it was originally a separate noun **larV* which accounts for the specific reflex *n*- in Mongolian (otherwise typical for *-*l*-

in word-initial position, see above). Turkic and Japanese already treat it as suffix (word-initial **l-* is absent in Turkic, just as word-initial **r-* is absent in Japanese). Loss of **-rV* in T[ungus-]Manchu and Japanese, however, is difficult to account for — perhaps one should think of an early assimilative process in a suffixed morpheme (something like **-larV* > **-lrV-* > **-llV*).” My own views differ somewhat from those of Starostin—Dybo—Mudrak. I take Mongolian **-nar* to be a reflex of the Proto-Nostratic plural suffix **-nV*, and I take Proto-Turkic **-la-r* to be a compound suffix (see above).

- E. Chukchi-Kamchatkan: Proto-Chukchi-Kamchatkan affix **-la-* ‘several (do)’ > plural marker in verbs in Kerek, Alyutor, and Koryak (cf. Fortescue 2005:413).

- 16.26. Plural **-nV* (Greenberg: §21. Personal N; Illič-Svityč 1971—1984.II:94—96, no. 333, **-nA* suffix of plural of animate nouns; Nafiqoff 2003:93—95 **NA*; Dolgopolsky 2008, no. 1522, **n[ä]* pronoun of collectivity and plurality)

My comments will only address the pluralizing function of Greenberg’s Personal N.

- A. Afrasian: In Geez, the masculine external plural is *-ān*, which is related to the Akkadian plural marker (nom.) *-ānu* (cf. Lipiński 1997:239—240). A plural suffix *-n* occurs elsewhere in Afrasian: In Egyptian, the personal endings added to the stative (old perfective, or pseudoparticiple) conjugation add *-n* in the plural (cf. Loprieno 1995:65). Furthermore, Loprieno (1995:64) notes that the plural forms of the suffix pronouns, “common to both masculine and feminine, show the addition of an element *n* (in the dual *nj*) to the singular: (1) first person plural = *n* (**-ina* > **-in*), dual = *nj* (**-inij*); (2) second person plural = *tn* (from **-kina*; the front vowel led to palatalization of the velar stop: **-tin*), dual = *tnj* (**-tinij*); (3) third person plural = *sn* (**-sina* > **-sin*), dual = *snj* (**-sinij*).” In Burji, for example, there are a few plurals formed with a suffix *-nna/-nno*: *gót-a* ‘hyena’, (pl.) *got-ínna*; *saa-yí* ‘cow’, (pl.) *saa-yanna*, *sa-ynaa*; *rud-áa* ‘sibling’, (pl.) *rud-áannoo* (data from Sasse 1982). Note also the plural suffix *-n* in Berber: Tamazight *ass* ‘day’, (pl.) *ussa-n*; *asif* ‘river’, (pl.) *i-saff-ən*. In Tamazight, *i-* is prefixed, and *-n* is suffixed to masculine nouns to form so-called “sound plurals”, while the prefix *ti-* and the suffix *-n* serve the same function for feminine nouns (in rare cases, one finds *ta-...-in* instead). Nouns ending in vowels add one of the following suffixes: *-tn*, *-wn*, or *-yn*. Thus, the common marker for “sound plurals” in Tamazight is *-n*. (There are also so-called “broken plurals”, which do not add *-n*.) In Semitic, there is a so-called “intrusive *n*” found in the plural of the personal pronouns. Though Gelb (1969:50—53) explains this as “a consonantal glide introduced in order to avoid two contiguous vowels”, it is curious that it is only found in the plural and that no such “consonantal glide” appears to be needed elsewhere. This leads me to suspect that we may be dealing here with a relic of the plural *n* under discussion here. A plural suffix *-n* occurs in Omotic, though, as Bender

(2000:212) points out, “There is no pervasive Omotic plural suffix. Both *n* and *t* (~ *d*) are found in pls.”. According to Newman (1990:21—26), plurals in *-n* are extremely common in Chadic (see also Bender 2000:213). For Proto-Southern Cushitic, Ehret (1980:56) reconstructs the following plural suffixes: (A) Proto-Southern Cushitic **-ena* > Iraqw *-en* adjective plural, *-(V)na* plural suffix; Burunge *-en* adjective plural; K’wadza *-Vn-* plural marker in complexes, *-VnVk-*, *-en(D)-* in complex *-endayo*; Asa *-Vn(D)-* plural marker in complexes, *-VndVk-*; Ma’a *-ena* plural suffix; Dahalo *-eena* plural suffix; (B) Proto-Southern Cushitic **-eno* > Burunge *-eno* plural suffix; K’wadza *-Vn-* plural marker in complexes, *-VnVk-*, *-en(D)-* in complex *-endayo*; Asa *-Vn(D)-* plural marker in complexes, *-VndVk-*; Ma’a *-no* suffix attached to nouns indicating a great number or quantity. Note also the Hamar (Omotic) particular plural suffix *-na*. Finally, Bender (2000:214) notes: “Most Afrasian families have plurals involving *n*, with Egyptian and Semitic being the weakest.”

- B. Kartvelian: A plural suffix *-n* is found in Kartvelian as well: Georgian plural suffix in nouns *-n* (cf. *k’ac-n-i* ‘men’, *mta-n-i* ‘mountains’, *zywa-n-i* ‘seas’, etc.); Laz plural suffix *-n* (cf. *ha-n-i* ‘these’, etc.). Fähnrich (1994:55—67) lists numerous examples from Old Georgian. Cf. Fähnrich 1994:252—253 and 2007:311; Fähnrich—Sardshweladse 1995:258.
- C. Indo-European: There is also evidence for a plural marker **-n* in Indo-European in verbs. In Hittite, the first person plural personal endings are (present) *-weni* (occasionally also *-wani*; but *-meni* after stems ending in *-u-*), (preterite) *-wen* (*-men* after stems ending in *-u-*); the second person plural personal endings are (present) *-teni* (occasionally also *-tani*), (preterite) *-ten*. In Greek, there is a first plural ending (primary and secondary) *-μεν* (there is also an alternative ending *-μες*). In Sanskrit, in addition to the second plural personal endings (primary) *-tha* and (secondary) *-ta*, there are extended forms *-thana* and *-tana* respectively. In Sanskrit, the first plural endings are (primary) *-mas*, *-masi* and (secondary and perfect) *-ma*, that is to say, they do not contain the plural marker *-n* found in Hittite and Greek. It is thus now clear how the different plural personal endings found in the daughter languages came to be. The earliest forms were (first person plural) **-me* and (second person plural) **-the*. These could be extended (optionally) by an ancient plural marker **-n*, yielding **-men* and **-then* respectively. At a later date, when the so-called “primary” endings were formed, these endings could be further extended by the primary marker **-i*, giving **-meni* and **-theni* respectively. Conversely, the plural marker **-s* could be used instead, at least with the first person plural, yielding **-mes*, and, later, with the addition of the primary marker, **-mesi*. The dual **n*-marker identified by Witczak (2001) in residual forms in several Indo-European daughter languages may ultimately belong here as well.
- D. Uralic: Common Uralic plural suffix **-n*, which is “limited mainly to the personal endings” (cf. Décsy 1990:74—75; Sinor 1952:205—207). Collinder (1960:303, §960), however, identifies this as a dual for personal pronouns and possessive suffixes. Marcantonio (2002:229—230) notes: “Another frequent morpheme of Plurality is *-(a)n*, which is found for example in Zyrian, Mordvin,

Samoyed, Estonian (as a prefix in Personal pronouns), and Vogul. In this last language it is also used in connection with verbs, to express Plurality of the Definite Object in the Definite Conjugation. It is mainly used to form Plurality of nouns when the Possessive ending is present as well, and it indicates Plurality of the Possession (and/or Possessor). Compare Vog[ul] *kol* ‘house’, *kol-um* ‘my house’ vs *kol-an-um* ‘house-Plu.-my, my houses’...” “The formant *-n* is generally believed also to have existed in P[roto]-Finnish. For example, in modern Finnish the form *talo-mi* has two grammatical meanings: (1) ‘my house’ < **talo-mi* (where **-mi* is the 1st Possessive); (2) ‘my houses’ < **talo-n-mi*, where *-n* indicates Plurality.”

- E. Altaic: Sinor (1952:207—208) observes: “So far as I can see, Grönbech was the first to demonstrate the existence of a Turkish plural suffix *-n*. It is absent from the modern dialects and it is quite clear that even in Old Turkish it was already obsolescent. It occurs mainly with two words *oğul* ‘boy, son’ and *är* ‘man’, the plurals of which are respectively *oğlan* and *ärän*.” On the Proto-Mongolian plural suffix **-nar*, see above under plural/collective **-la*.
- F. Chukchi-Kamchatkan: Greenberg (2000:120; see also 107—108, §15) notes that the plural of nouns in declension I in Chukchi “is *-t* after vowels and *-ti* ~ *-te* after consonants”. Declension I distinguishes singular from plural only in the absolutive. In declension II, singular and plural are distinguished in all cases. In the absolutive, the plural is *-n-ti* ~ *-n-te*, formed with the *-n* plural formant under discussion here plus the plural endings *-ti* ~ *-te*.
- G. Gilyak / Nivkh: Plural affix **-n* in: Proto-Gilyak / Nivkh plural ending **ku-n* and comitative/associative plural ending **ku-n-u*. Cf. Fortescue 2016:168; see also Gruzdeva 1998:16.

Sumerian: In Sumerian, the plural of animate nouns is indicated by the suffix *-ene*. This ending is also found in the second and third plural possessive suffixes: (2nd pl.) *-zu.ne.ne*, *-zu.ne*, and *-zu.e.ne.ne* ‘your’; (3rd pl.) *-a.ne.ne* ‘their’. This suffix appears to be close both in form and function to the material gathered here.

III. RELATIONAL MARKERS

- 16.27. Direct object **-ma* ~ **-na* (Greenberg: §24. Accusative M; Dolgopolsky 1984:92 **-ma* postpositional marker of a definite direct object [accusative], 1994:2838 accusative **ma*, and 2008, no. 1351, **mA* particle of marked accusative; Illič-Svityč 1971—1984.II:48—51, no. 285, **-mA* suffixal formant of the marked direct object; Michalove 2002a; Fortescue 1998:103)

There is evidence for both direct object markers **-m* and **-n*. **-m* is found in Indo-European, Uralic, Mongolian, Tungus, and the Aroid branch of Omotic within Afrasian. **-n* is found in Elamo-Dravidian, Etruscan, the Dizoid Branch of Omotic within Afrasian, Turkic, and possibly even in Indo-European in the accusative plural. The original forms of these formants may have been **-ma* and **-na*.

- A. Afrasian: There are traces of both of these endings in Omotic. In Aari, “[i]n direct object function the head of a definite NP receives an accusative suffix -m” (Hayward 1990b:443). Likewise in Dime, “[d]irect objects are indicated by the suffix -im attached to the stem of the object noun” (Fleming 1990:518). Bender (2000:211) reconstructs an accusative/absolutive formant **-m* for the Aroid branch of Omotic. For Dizoid, he reconstructs **(n)a*. Zaborski (1990:625) lists the following examples of accusative *-n*, *-na* in Omotic (see also Fleming 1976a:316): *-na* in Gofa Omoto pronouns and in Yemsa / Janjero; *-n* in Basketo pronouns, in Yemsa / Janjero, in Kefa, in Dizi (with nouns other than masculine singular), in Galila (for accusative pronoun *me*), and in Hamer. Fleming (1976a:316) also discusses accusative *-n* in Hamer, Galila, and Kefa and remarks that “South Omotic otherwise uses *-m* for direct objects on nouns and pronouns, while Dime has *-n* for the dative-benefactive.”
- B. Dravidian: The Proto-Dravidian accusative ending has been reconstructed as **(V)n* > Kota *-n*; Kannaḍa *-aM*, *-an*, *-ān*; Tuḷu *-nu/-nī*, *-anu*; Gondi *-n*; Koṇḍa (acc.-dat.) *-ŋ/-ŋi*; Pengo (acc.-dat.) *-aŋ*; Kolami *-n* ~ *-un*, *-n* (after any stem ending in a vowel, liquid, or semivowel), *-un* (elsewhere); Naikṛi *-ŋ/-ūŋ*; Naiki (of Chanda) *-n* ~ *-un*; Parji *-n* ~ *-in*; Gadba (Ollari) *-n* ~ *-in*; Malto *-n/-in* (cf. Zvelebil 1977:27—31; Krishnamurti 2003:228—230, 495, and 498). (There was also an accusative ending **-aŋ* in Proto-Dravidian.) Note the Elamite accusative ending *-n* found in the declension of personal pronouns: first singular (nominative) *u* ‘I’, (acc.) *un*; second singular (nom.) *nu* ‘you’, (acc.) *nun*; etc. McAlpin (1981:109, §522.1) sets up a Proto-Elamo-Dravidian accusative singular ending **-n*. This is not, however, quite as straightforward a comparison as I have made it out to be. In general, final **-m* is preserved in Dravidian (though, in at least one case, namely, the Proto-Dravidian nominative suffix of some nouns with stems ending in *-a*, final **-m* alternates with **-n* [cf. Zvelebil 1970:127]), and, therefore, we would expect the accusative ending to have been **(V)m* instead of **(V)n* (but note McAlpin 1981:92, §314.2: “The reflexes of PED **m* are clear only in the first syllable. After that Elamite and Dravidian attest both *n* and *m* finally; *n* more commonly in Elamite, *m* more commonly in Dravidian [symbolized as PDr. **N*]. This is really no different from the situation in Dravidian where the common formative PDr. **-aN* ... is attested in both *m* and *n* [but never in alveolar n] ...”). But, considering that an *-m* ~ *-n* variation occurs throughout Nostratic for this case, the Dravidian forms may still belong here if we assume that the variation went all the way back to Proto-Nostratic itself.
- C. Indo-European: The Proto-Indo-European accusative singular masculine/feminine ending is to be reconstructed as **-m* (after vocalic stems) ~ **-ŋ* (after consonantal stems), and the accusative plural masculine/feminine as **-ns* (after vocalic stems) ~ **-ŋs* (after consonantal stems): (A) accusative singular: Sanskrit *vṛkām* ‘wolf’; Greek *λύκον* ‘wolf’; Latin *lupum* ‘wolf’; Gothic *wulf* ‘wolf’; Lithuanian *vilką* ‘wolf’; Old Church Slavic *vlъkъ* ‘wolf’; (B) accusative plural: Sanskrit *vṛkān* ‘wolves’, *sūnūn* ‘sons’; Avestan *vəhrkq* ‘wolves’; Greek (Cretan) *λύκονς* (Attic *λύκους*) ‘wolves’, *υἷονς* ‘sons’; Latin *lupōs* ‘wolves’;

Gothic *wulfans* ‘wolves’, *sununs* ‘sons’; Old Prussian *deiwans* ‘gods’ (cf. Szemerényi 1996:160; Brugmann 1904:378—379 and 391—392; Burrow 1973:231—232 and 236—237; Sihler 1995:250). Clearly, the plural form is composed of **-n/*-ŋ* plus the plural marker **-s*. If not assimilated from **-ms*, the plural form may represent preservation of the *n*-accusative attested in Elamo-Dravidian, Etruscan, and the Dizoid branch of Omotic within Afrasian. Except for **-o*-stems, the nominative and accusative had the same form in neuter nouns.

- D. Uralic: Both Greenberg (2000:129) and Collinder (1960:284—286) reconstruct Proto-Uralic accusative singular **-m*, which was mainly used to mark the definite direct objects of finite verbs: cf. Finnish *kalan* ‘fish’; Lapp / Saami *guolem* ‘fish’; Cheremis / Mari *kolôm* ‘fish’; Vogul / Mansi *päŋkäm* ‘his head’; Yurak Samoyed / Nenets *ŋudam* ‘hand’; Tavgi Samoyed / Nganasan *kinda(m)* ‘smoke’; Kamassian *d’agam* ‘river’ (see also Abondolo 1998a:18—20; Décsy 1990:69; Raun 1988b:558; Sinor 1988:714—715; Aikio 2022:14). Marcantonio (2002:284) notes: “The Accusative *-m* is present in a few U[ralic] languages: Cheremis, some dialects of Lapp, some dialects of Vogul and Samoyed. Ostyak has *-Ø*. Perhaps reflexes of **-m* can be found in the Finnish Accusative *-n*, in Permian and Mordvin (Hajdú 1981: 136). If present, this ending applies only to known, referential, Direct Objects, so that it might be the reflex of an original Topical marker, rather than of a proper Accusative marker. This is still the case in Vogul and this function is still transparent in the behaviour of Acc. *-n* in Finnish (see Marcantonio 1988 and 1994).”
- E. Altaic: Greenberg (2000:129) discusses possible evidence from Mongolian and Tungus for an accusative **-m*. Specifically, he notes that, in Mongolian, the first and second person personal pronouns contain a suffixal element *-ma* in all cases except the genitive (Common Mongolian first person **na-ma-*, second person **či-ma-*). This *-ma* is not found in nouns. This element is mentioned in passing by Poppe (1955:211 and 213). Greenberg takes *-ma* to be a relic of the accusative *-m*. According to Greenberg (2000:129), the accusative marker in both nouns and pronouns in Tungus is *-wa ~ -we*, *-ba ~ -be*, or *-ma ~ -me*, depending on the phonological environment. Sinor (1988:715) reconstructs a Proto-Tungus accusative **-m*. He also notes (1988:714) that the accusative is *-nV* (mostly *-ni*) in the majority of the Turkic languages. Róna-Tas (1998:73) reconstructs the Proto-Turkic accusative as **-nVG* (in the pronominal declension **-nI*): cf. Middle Kipchak *-nI* (cf. *qulnī* ‘servant’, *aqčani* ‘money’, *teŋirni* ‘god’, *kišini* ‘man’); Chagatay *-nI*, *-n*; Azerbaijani *-(n)I* (cf. *atani* ‘father’, *évi* ‘house’, *oŋu* ‘arrow’); Turkmenian *-(n)I*; Tatar and Bashkir *-nĕ* (cf. Tatar *etinĕ* ‘father’); Kazakh *-NI*; Kirghiz *-NI*; Uzbek *-ni*; Uighur *-ni* (cf. *balini* ‘child’, *köl̄ni* ‘lake’, *qušni* ‘bird’, *yurtini* ‘his house’, *tüg̈milirimni* ‘my buttons’); Yakut *-(n)I* (cf. *eyeni* ‘peace’); Chuvash (dat.-acc.) *-nA*.
- F. Chukchi-Kamchatkan: The following Proto-Chukchi-Kamchatkan absolutive suffixes may belong here as well, assuming that they are derived from the *n*-variant of the Proto-Nostratic direct object relational marker: (class 1 sg.)

-(ə)n/-ŋæ/*-lŋən, (class 2 sg.) *-(ə)n, (class 2 pl.) *-(ə)nti (cf. Fortescue 2005:426).

- G. Etruscan: Note the accusative singular ending *-n* found in the following demonstrative stems: (archaic) *ikan* ‘this’, (later) *ecn*; *itan*, *itun*, *etan*, *tn* ‘this’ (cf. Bonfante—Bonfante 2002:92—94). Note also the accusative of the personal pronouns ‘I’, *mini*, and ‘you’, *un* (cf. Bonfante—Bonfante 2002:91).

- 16.28. Genitive **-nu* (Greenberg: §25. Genitive N; Fortescue 1998:103; Nafiqoff 2003:89—93; Dolgopolsky 1984:92 **nu* postpositional marker of genitive, 1994:2838 genitive **nu*, and 2008, no. 1525, **nu* (or **nū* ?) postposition and postverb ‘from’, postposition ‘of’; Janhunen 2014b:323—324, §5.3)

In Greenberg’s book, this whole section is extremely powerful and well presented. Many of the same conclusions were reached by John C. Kerns in his discussion of Nostratic morphology in our joint monograph (1994:141—190, Chapter 3: “Nostratic Morphology and Syntax”). Kerns notes: “*Oblique* cases with **-n-* stems. Though scantily attested in Dravidian and Uralic (there vestigially preserved as a stem for the personal possessive endings of nouns in oblique cases), it is better preserved in some of the other families. It is a major feature of the heteroclitic declension in Indo-European and Eskimo (J. C. Kerns 1985:109—111).”

Genitive **-nu* developed from a particle meaning ‘belonging to’. The clearest indication that this is the origin of these formations comes from Egyptian and Berber (see below).

- A. Afrasian: In Egyptian, positive and relative pronouns are formed by means of a base *n*, which builds the determinative series (m. sg.) *ny*, (f.) *nyt*, (m. pl.) *nyw*, (f. pl.) *nywt*, used as genitival marker in the sense ‘belonging to’ (cf. Loprieno 1995:70; Gardiner 1957:66, §86; Diakonoff 1988:82) — this appears in Coptic as the genitive particle *n-* [n̄-] (cf. Černý 1976:102). A genitive in *-n* is found sporadically in Omotic (cf. Bender 2000:212; Zaborski 1990:621): cf. Yemsa / Janjero *-n*, *-ni*; Hamar (gen. sg. ending on possessive pronouns) *-n*. Bender considers this to be an Afrasian retention. There is a rare genitive singular marker *-ni* in Sidamo (Highland East Cushitic) and an equally rare (archaic ?) *-n* in Dasenech (East Cushitic) as well (cf. Zaborski 1990:621). A genitive *n-* also occurs in Chadic (cf. Diakonoff 1988:82). This form is found as an independent particle in Berber (cf. Kabyle *n* ‘of’; Tamazight *n* ‘of’; Mzab *n* ‘of’). Ehret (1995:315, no. 609) reconstructs Proto-Afrasian **ni* ‘of’ (genitive).
- B. Elamo-Dravidian: In Elamite, possession could be expressed by adding the neutral classifier *-ni*, as in *siyan Išnikarap-ni* ‘Išnikarap’s temple’. In Neo-Elamite and Achaemenid Elamite, the marker *-ni* coupled with the relative/connective particle *-a* to form a new marker, *-na*. In Achaemenid Elamite, “the marker *-na* had almost completely replaced the others and functioned as a special genitival ending” (cf. Khačikjan 1998:15). McAlpin (1981:110)

reconstructs Proto-Elamo-Dravidian genitive singular (adnominal) **-in* (< **-i* + **-nu*), from which he derives Proto-Elamite **-inni* and Proto-Dravidian **-in*. In the following section, he also discusses the genitive *-na* found in Achaemenid Elamite. Krishnamurti (2003:221—224) reconstructs a Proto-Dravidian oblique marker **-an/*-in*, **-nV* > Old Tamil *-an* (used with demonstrative pronouns, quantifiers, and numerals), *-in* (after disyllabic and trisyllabic stems ending in *-a*, *-ā*, *-u*, *-ū*, *-ē*, and *-ai* in the instrumental, dative, and occasionally sociative cases), *-in* by itself was genitive; Malayalam had *-an* as an augment of demonstratives in early inscriptions — otherwise, *-in* had the same distribution as *-in* in Old Tamil, while stems ending in *-tt-* add *-in-* also in the dative and genitive; Iruḷa *-(a)n* occurs as an augment with animate nouns, including the personal pronouns before instrumental; Koḍagu *-in/-n* are used as augments after neuter demonstrative pronouns in the accusative, dative, and genitive cases; Kota *-n* after neuter demonstratives; Toda *-n* added in adnominal use of some noun stems; Kannaḍa *-ar* (a sandhi variant of *-an*) became generalized as the oblique marker of neuter demonstratives in the singular and plural and in numerals; Tulu *-n* augment after human nouns and after stems ending in *-e*; Telugu *-an-i* oblique augment in demonstrative neuter forms, singular and plural; Gondi *-n* augment after masculine nouns ending in a vowel; Pengo *-n* genitive plural of non-human nouns ending in *-ku*; Konḍa *-an-i* (< *-an+-i*) in neuter demonstrative forms; Kuwi *-n/-na* augment of nouns referring to humans; Maṇḍa *-n-* oblique-genitive; Naiki (of Chanda) *-n* in animate nouns in some of the cases; Parji *-n* oblique marker of some stems in ablative and genitive cases; Gadba *-n/-in/-un* genitive marker; Kuṛux *-in/-i* after non-masculine singular demonstrative stems before all cases. It is worth repeating that the ending *-in* by itself was genitive in Old Tamil and that it could be used syntactically as an adnominal. Indeed, *n*-endings occur in genitive forms in several Dravidian languages (cf. Zvelebil 1977:31; for examples, see above).

- C. Indo-European: Greenberg (2000:130 and 131—132) rightly notes that “oblique-*n*” shows up in the oblique cases of the heteroclitic *-r/-n* stems in Indo-European (for details about heteroclitic stems, cf. Benveniste 1935:100—120; Szemerényi 1996:173—174; Beekes 1995:187; Meillet 1964:266; Burrow 1973:127—130). A good illustration of the patterning can be found in Sanskrit (nom. sg.) *ásṛk* ‘blood’ (cf. Hittite nom.-acc. sg. *e-eš-ḥar* ‘blood’, Tocharian A *ysār* ‘blood’, Greek *ἔαρ* ‘blood’, Latin *assir* ‘blood’) versus (gen. sg.) *asnás* (cf. Hittite gen. sg. *e-eš-ḥa-na-aš*, *e-eš-na-aš*) (the nom. sg. in Sanskrit contains a secondary suffix). There is also important evidence elsewhere within Indo-European. For example, it appears in the genitive of the first person singular personal pronoun **me-ne* > Avestan *mana*; Old Church Slavic *mene*; Lithuanian *manęs* (cf. Szemerényi 1996:214). In Slavic, it is found in all of the oblique cases of the first person singular personal pronoun, not just the genitive (note the table in Szemerényi 1996:212). Finally, Greenberg (2000:132) convincingly claims that the large and important class of *n*-stems arose through the spread of the oblique-*n* to the nominative, at least in Greek, which always has *-v*. In Latin, this type is found, for example, in *homō* ‘human being, person,

man', (gen. sg.) *hominis* (for a detailed discussion of this stem, cf. Ernout—Meillet 1979:297—298).

- D. Uralic: The genitive ending in Proto-Uralic was **-n* > Finnish *kalan* (*kala* 'fish'); Lapp / Saami *guolen* (*guole* 'fish'); Cheremis / Mari *kolōn* (*kol* 'fish'); Selkup Samoyed (Ket) *logan* (*loga* 'fox'); Kamassian *d'agan* (*d'aga* 'river'); Tavgi Samoyed / Nganasan *kinday* (*-ŋ* < **-n*) (*kinta* 'smoke') (cf. Abondolo 1998a:19—20; Collinder 1960:282—284; Greenberg 2000:130 and 133; Raun 1988b:558—559; Sinor 1988:715; Aikio 2022:14). Marcantonio (2002:284) notes: "The Genitive *-n* within U[ralic] is present in Finnish, Cheremis, Lapp, Mordvin, and Samoyed Selkup."
- E. Altaic: Poppe (1955:187) reconstructs the Common Altaic genitive suffix as **-n* > Korean **-n*, Tungus **-ŋi* (< **-n* + the ending **-gi* < **-ki*); Ancient Turkic *-ŋ* (< **-n*). Poppe notes that, after stems ending in a vowel, **-n* was used, but, after stems ending in a consonant, a connective vowel was inserted before the *n*: **C-Vn*, which appears as **-i-ŋ*/**-i-ŋ* in Turkic, as either **-u-n* or **-i-n*/**-i-n* in Pre-Mongolian, and as **-aŋ* or **-in* in Korean. Several important changes occurred in Pre-Mongolian. In Pre-Mongolian, the ending **-i-n*/**-i-n* was generalized, and the inherited post-vocalic form, **-n*, was replaced by **-i-n*. Additional changes occurred in Common Mongolian. First, the final **-n* of the genitive ending was lost in stems ending in **n*: **n-Vn* > **n-V*. With the replacement of the post-vocalic genitive **-n* by **-i-n*, the hiatus between the final vowel of the stem and the genitive suffix was filled with the consonant *-j-*: **-V-n* > **-V-in* > **-V-j-in*. See Poppe (1955:189—194) for details concerning the developments in the individual Mongolian daughter languages. Examples of the genitive in Mongolian: *ger-ün* (*ger* 'house'), *eke-yin* (*eke* 'mother'), *köbegün-ü* (*köbegün* 'son'), *bars-un* (*bars* 'tiger'), *aqa-yin* (*aqa* 'older brother'), *qayan-u* (*qayan* 'king'). Note here also the genitive marker *-nu* found in the Mongolian obsolete pronouns *anu* and *inu*. Róna-Tas (1998:73) reconstructs a Proto-Turkic genitive **-n* > Ottoman Turkish *oqınñ* 'of his arrow' (later *oqın*); Turkish (sg.) *taşın* (*taş* 'stone'), (pl.) *taşların*; Azerbaijani *evin* (*év* 'house'), *oxun* (*ox* 'arrow'), *atanın* (*ata* 'father'); Turkmenian genitive singular suffix (after vowels) *-nIj*, (after consonants) *-Ij*; Tatar (and Bashkir) genitive singular suffix *-nĖj*; Kirghiz genitive singular suffix *-Nin*; Uighur *balanıj* (*bala* 'child'), *kölniñ* (*köl* 'lake'), *quşniñ* (*quş* 'bird'); *yurtiniñ* (*yurti* 'house'), *tügmilirimniñ* (*tügmilirim* 'my buttons'); Uzbek genitive singular suffix *-niñ*; Chuvash genitive singular suffix *-(n)ăn/-nĕn*. Róna-Tas (1998:73) also mentions that an oblique marker in **-n* has left traces in four cases in Proto-Turkic: genitive **-n*, accusative **-nVG* (**-nI* in pronouns), dative **-nKA*, and instrumental **-nVn*. Greenberg (2000:135) notes that "[i]n South Tungus there is a large class of nouns in which *-n* occurs in the oblique cases, but not in the nominative or accusative. In North Tungus the *-n* has apparently been extended through the whole paradigm..." According to Greenberg (2000:135), the only remnant of an *n*-genitive is found in pronouns in North Tungus — Greenberg cites an example from Negidal (*min*, *minŋi* 'my' versus nominative *bi* 'I'). However, note the Manchu genitive particle *-ni*, used after words ending

- in *-ŋ*. Cf. Sinor (1988:715) for an excellent sketch of *n*-genitive forms in Uralic and Altaic, and Greenberg (2000:133—135) for additional discussion of the Altaic data. Starostin—Dybo—Mudrak (2003:221) reconstruct a Proto-Altaic genitive suffix **-ŋV* on the basis of: Proto-Tungus **-ŋi* (< **-ŋ-ki*); Old Japanese *-no*; Korean *-ŋ*; Proto-Mongolian **-n*; Old Turkic *-ŋ* (< **-ŋ-ki*).
- F. Chukchi-Kamchatkan: Note the following Proto-Chukchi-Kamchatkan attributive suffixes: (class 1 sg.) **-nu*, (class 2 sg.) **-(ə)nu*, (class 2 pl.) **-(ə)δyənu* (cf. Fortescue 2005:426 and fn. 10). Also note the Proto-Chukchi-Kamchatkan possessive suffix **-inæ* ‘pertaining to’: Chukchi *-in(e)* ‘pertaining to’ (possessive adjective formant of human possessors), *-nin(e)* on personal pronouns and optionally on proper names (pl. *-yin(e)*); Kerek possessive suffix *-in(a)*; Koryak possessive suffix *-in(e)* ‘pertaining to’ (also *-nin(e)* on personal pronouns and optionally vowel-final proper names); Alyutor possessive suffix *-in(a)* ‘pertaining to’; Kamchadal / Itelmen possessive suffix *-n*, *-ʔin*, *-ʔan* ‘pertaining to’. Cf. Fortescue 2005:409.
- G. Etruscan: In Etruscan, in addition to the regular genitive endings in *-s*, there is an archaic genitive in *-n* (*-an*, *-un*): cf. *lautn* ‘family’, (genitive) *lautun* or *lautn*; *puia* ‘wife’, (genitive) *puian*.

Sumerian: In Sumerian, there is an asyntactical construction *nu*+NOUN used mainly to form terms for professions. As noted by Thomsen (1987:55), the “exact character of /nu/ is not evident”. However, we can offer a guess that *nu* may originally have been an independent particle meaning ‘belonging to’, which is preserved only in the above construction. That this guess is not far off the mark is indicated by Thomsen’s (1987:56) comment that: “[t]he constructions with *nu-* are normally asyntactic, only in one case: *nu.ḡis̄kiri₆*, it seems to be a genitive construction; cf. for instance *nu.ḡis̄kiri₆-ke₄* (ergative) in *NG* nr. 120b, 4 (see Edzard, 1963, p. 92f.).”

- 16.29. Locative **-ni* (Greenberg: §30. Locative N; Illič-Svityč 1971—1984.II: 78—81, no. 314, **-n* suffix of oblique form of nouns and pronouns; Janhunen 2014b:327—328, §5.7)

In his book on Eurasianic morphology, Greenberg treats the different cases based on this suffix separately. Indeed, despite their similarity in form, the locative **-n* and genitive **-n* developed from two separate formants:

The origin of the locative marker **-ni* may have been as follows: Evidence from Afrasian and Indo-European supports reconstructing an independent particle **ʔin-* (~ **ʔen-*), **(-)ni* meaning ‘in, within, into’ (from Afrasian, cf. Akkadian *ina* ‘in, on, from, by’; Egyptian *in* ‘in, to, for, because, by’; from Indo-European, cf. Greek *ἐν*, *ἐνί*, *ἐνί* ‘in, on, among, into, and, besides, moreover’, Latin *in* ‘in, on, among, into, on to, towards, against’, Gothic *in* ‘in’). Originally, **ʔin-* (~ **ʔen-*) meant ‘place, location’ (cf. Dolgopolsky 2008, no. 45, **ʔin̄[A]* ‘place’). When this particle was

used in conjunction with nominal stems, it indicated the place in, on, or at which something existed or occurred: NOUN+*ni*. From there, it developed into a full-fledged case form with locative, inessive, or adessive meanings. At a later date, **-n* became generalized as the oblique marker *par excellence*. Greenberg (2000:130) is thus correct in noting the wider use of *-n* as a marker of the oblique case.

To complicate matters, there may have been yet a third form involved, namely, a (lative-)dative **-na*. The evidence for this comes mainly from Samoyed (cf. Collinder 1960:293—294), from Vogul, where the lative-dative endings are *-(ə)n*, *-na* ~ *-nā* (cf. Marcantonio 2002:208), and several Afrasian languages. The forms in Nostratic thus appears to have been similar to what is found in Sumerian, which has a locative prefix *-ni-* and a dative prefix *-na-*. The original patterning has been reversed in Uralic (except for Samoyed and Vogul, as just indicated).

- A. Afrasian: In Highland East Cushitic, we find the following: In Gedeo / Darasa, the ablative-locative ('from, in, at') suffix is *-ni*, and the instrumental suffix is *-nni*, while in Hadiyya and Kambata the locative-instrumental suffix is *-n* (cf. Hudson 1976:253 and 2007:540). In Sidamo, on the other hand, there is a multipurpose postposition *-nni* with the meanings 'from, at, on, by, with' (cf. Hudson 1976:254). In Omotic, there is a widespread instrumental-locative-directional marker *-nV* (cf. Zaborski 1990:626—627) — Zaborski lists the following examples from various Omotic daughter languages: Koyra *-na*, *-una* (after consonants); Zayse *-n* and the postposition *-unna* ~ *-nna* 'with, by means of' used in an instrumental function: *kallónna* (*kalló* 'stick'), *súgénna* (*súge* 'rope'), *súusúnna* (*súus* 'blood'); Omoto *-n*; Welamo *-n*; Kullo *-n*; Chara *-in*, *-ina*; Shinasha *-n(i)*; Kefa *-nā*. Also note the following locative markers: Gofa *-n*; Basketo *-n*; Gemu *-n*; Zala *-n* (cf. Bender 2000:24). Zaborski (1990:627) further notes that some of the Omotic forms may be borrowed from Highland East Cushitic. Bender (2000:212) notes that a locative in *-n* is widespread in the Macro-Omotic branch of Omotic. Ehret (1980:185) reconstructs Proto-Southern Cushitic **nee* 'with, and; by [agent]' > Iraqw *ne* 'with, and; by'; Burunge *ne* 'with, and; by'; Alagwa *ne* 'with, and; by'; Ma'a *ní* 'by [agent]', *ne-* in *neri* 'until'. For Proto-Afrasian, Ehret (1995:315, no. 608) reconstructs **ne(e)* 'with'.
- B. Dravidian: As noted by Zvelebil (1977:32, §1.1.3.5.6): "**-in/*-il* may probably be reconstructed as the underlying shape of a number of related forms which are markers of a locative function": Old Tamil *-il/-in* as in *maruk-in* 'in the street', *irav-in* 'at night', *cilamp-il* 'in the mountain'; Old Telugu *-a(n)* as in *cēt-an* 'in hand', *iṇṭ-an* 'in the house'; Konḍa *-ṇ* locative marker in the plural oblique of stems in *-a*; Naiki (of Chanda) *-in* as in *kuḍḍ-in* 'on the wall', *-un* as in *ūr-un* 'in the village'; Gadba *-in* as in *māre-t-in* 'in a tree', *-un* as in *polub-t-un* 'into the village'; Kuṛux and Malto locative marker *-nū*. The first member of the pair reconstructed by Zvelebil, namely, **-in*, may be compared with the locative forms in *-n-* found elsewhere in Nostratic. Cf. also Krishnamurti 2003:238—243. Note also the Proto-Dravidian oblique markers **-an/*-in*,

- *-n*V* (cf. Krishnamurti 2003:221—224); oblique marker in non-human demonstrative pronouns in South Dravidian *-an (cf. Krishnamurti 2003:222—223).
- C. Kartvelian: Proto-Kartvelian *-n suffix of oblique form of nouns and pronouns. Cf., for example, the following forms of Svan *ala* ‘this’: (instr. sg.) *am-n-oš*, (adverbial) *am-n-är-d*, (erg.) *am-n-ēm-(D)*, (gen. sg.) *am-n-ēm-iš* (cf. Tuite 1997:15; Gudjedjiani—Palmitis 1986:46).
- D. Indo-European: Greenberg (2000:150) also considers various evidence in Indo-European for a locative ending in *-n. The most convincing evidence he cites is the Vedic pronominal locatives *asmín* ‘in that’, *tásmin* ‘in this’, and *kásmín* ‘in whom?’. In these examples, the pronoun stem has been enlarged by an element -*sm(a)*-, to which a locative ending -*in* has been added. Since the final -*n* is missing in the cognate forms in Iranian, Burrow (1973:271) considers this to be a secondary formation, unique to Sanskrit. However, as Greenberg rightly points out, the Vedic forms can be compared with Greek pronominal datives in -*ι(v)* such as Lesbian ἄμμιν, ἄμμι ‘to us’ (cf. Buck 1933:219 and 1955:98; Sihler 1995:380). Thus, we may be dealing here with relic forms. Benveniste (1935:87—99) explores in great detail locative forms in -*n* in Indo-European — he (1935:88) cites the following examples from Sanskrit: *jmán*, *kṣāmán* ‘in the earth’, *áhan* ‘on [this/that] day’, *udán* ‘in the water’, *patan* ‘in flight’, *āsán* ‘in the mouth’, *śīrśán* ‘in the head’, *hemán* ‘in winter’, *akṣán* ‘in the eye’.
- E. Uralic-Yukaghir: Collinder (1960:286—287) reconstructs a Proto-Uralic locative(-essive) *-na ~ *-nā, while Abondolo (1998a:20) reconstructs a Proto-Uralic locative marker *-nA, as does Aikio (2022:14). According to Collinder, the locative(-essive) is best preserved in Finnish (where it now functions mostly as an essive), Eastern Ostyak / Xanty, and Yurak Samoyed / Nenets: Finnish and Eastern Ostyak / Xanty -na ~ -nā, Yurak Samoyed / Nenets -na ~ -ne. Tavgi Samoyed / Nganasan has -nu (< *-na) and -ne, -ni, without regard to the quality of the vowel of the first syllable. Northern Ostyak / Xanty has -na or (in some dialects) -n. Cheremis / Mari has -nō, -nə (with or without vowel harmony; in the easternmost dialects -no, -nō, -ne). Lapp / Saami has -nne, -nnē after a monosyllabic stem, -n (Southern Lapp / Saami -nē) in other positions. The Permian languages and Hungarian have -n. Marcantonio (2002:284) notes: “The locative I -n(*V*) is found in the majority of the U[ralic] languages (but not in Vogul), in more or less productive functions.” Note also the Proto-Yukaghir locative/lative affix *-n(ə) (> Northern / Tundra -n(ə)) (cf. Nikolaeva 2006:82).
- F. Chukchi-Kamchatkan: Chukchi locative -ne (recessive) (cf. Comrie [ed.] 1981:246). Proto-Chukchi-Kamchatkan derivational affix *-nv(ə) ‘place of -ing’ (cf. Fortescue 2005:417—418).
- G. Gilyak / Nivkh: Gilyak / Nivkh: Amur has the locative markers -uine/-uin/-in/-un/-n (cf. Gruzdeva 1998:18 [table of case markers] and 19; Fortescue 2016:168 [table of affixes and fn. 169]). Nominal stems ending in a consonant form locatives by adding the -uin variant, while those ending in a vowel other than -i add the -in or -un variant; stems ending in -i add -n.

H. Eskimo: Proto-Eskimo locative (plural) **-ni*, (dual) **-yni* (cf. Fortescue—Jacobson—Kaplan 1994:442; Greenberg 2000:152).

Sumerian: Note the locative dimensional prefix *-ni-* (cf. Thomsen 1987:99 and 234—240; Hayes 1997a:22).

16.30. Dative **-na* (not in Greenberg 2000)

The evidence for this formant is spotty.

- A. Afrasian: In Egyptian, “[t]he meaning of the dative is rendered by means of the preposition *n* ... ‘to’, ‘for’” (cf. Gardiner 1957:48, §52; also Hannig 1995: 385—386); Coptic *n-* [n-], *na-* [na-] dative preposition. In Hadiyya (Highland East Cushitic), the dative is indicated with a suffixed *-n* (cf. Hudson 1976:252). Bender (2000:212) points out that, in Omotic, “[t]here are two other widespread datives: *r* in single languages... and *n*...” (cf. Dime *-in*).
- B. Dravidian: Krishnamurti (2003:230—233) reconstructs the Proto-Dravidian dative as **-nkk-*, but he points out that the “geminate consonant cluster **-kk-* is the core of the dative suffix”. We may be dealing here with a hyper-characterized suffix, combining a relic of **-n* dative plus **-kk-* (on which, see below).
- C. Indo-European: Perhaps preserved in the adverbial suffix found, for example, in Latin *superne* ‘to a higher level, above’; Gothic *ūtana* ‘from without’; etc.
- D. Uralic: In Samoyed, the lative-dative case is built upon **-n* (cf. Collinder 1960:293—294; Hajdú 1968:65). Examples: Yurak Samoyed / Nenets *ηudan* (*ηuda* ‘hand’); Selkup Samoyed *hajond* (*haj* ‘eye’); Kamassian *d’agane* (*d’aga* ‘river’). Künnap (1984:287) reconstructs a Proto-Samoyed lative (absolute declension) **-ntV*. He also notes that, at a minimum, the following local case endings existed in Proto-Samoyed: lative **-η*, locative **-n*, ablative **-tV*, and prospective **-mVnV*. According to Marcantonio (2002:285): “The existence of P[roto]-U[ralic] Lative/Dative I **-ŋ̊ ~ *-n*, or perhaps **-η* ..., is not widely accepted, because its reflexes are to be found only in the Vogul Lative *-n(V)* and in Mordvin, where it has a Dative/Allative function (Zaicz 1998: 192). Possible reflexes are to be found in adverbial forms such as Finn. *kohde-n* ‘towards’ and in Samoyed, for which compare the reconstructed Samoyed Dative **-ng* in Table 8.6. Aikio (2022:14) reconstructs lative **-η*. It is also present in Yukaghir; see again Table 8.6.” In Vogul, the lative-dative endings are *-(ə)n*, *-na ~ -nä* (cf. Marcantonio 2002: 208).
- E. Altaic: Starostin—Dybo—Mudrak (2003:221) reconstruct a Proto-Altaic dative/instrumental suffix **-nV* on the basis of: Old Japanese dative/locative *-ni*; Old Turkic instrumental *-(i)n/(i)n*.

Sumerian: The (3rd sg. animate) dative dimensional prefix is *-na-* (cf. Thomsen 1987:220; Hayes 1997a:22).

- 16.31. Directive **-k^ha* (Greenberg: §26. Dative KA; Illič-Svityč 1971—1984.I: 368—369, no. 245, **K_A* directive particle; Nafiqoff 2003:102 Proto-Altaic **-ka/*-kä* lative-dative formant; Dolgopolsky 2008, no. 983, **K_V* [= **k_V* ?] ‘towards’ directive particle)

This formant appears to be derived from an old particle **k^ha* meaning ‘direction to or towards; motion to or towards’.

- A. Afrasian: According to Bender (2000:212), there is some evidence in several Omotic languages for a dative(-locative) **-k_Vn*. In Northwest Omoto, we find the following suffixes indicating ‘motion to or toward’: Welaita *-(k)ko*; Gofa *-ko*; Gemu *-ko* (?) (cf. Bender 2000:24). Note also the Ongota locative suffix *-ka/-ke/-ki* (cf. Fleming 2002b:40).
- B. Elamo-Dravidian: The Proto-Dravidian dative is reconstructed as **-nkk-* by Krishnamurti (2003:230—233) but as **(k)ku* by Zvelebil (1977:31): cf. Tamil *-kku*; Malayalam *-kku*; Kota and Toda *-k*; Iruḷa *-(u)kku*, *-kke*; Kannaḍa *-(k)ke* (after stems ending in *-a* and after pronouns which take *-ar* as the augment), *-(g)ge* (elsewhere); Koḍagu *-gī* (after stems ending in a nasal), *-kī* (elsewhere); Baḍaga *-ga*; Tuḷu *-ku/-kī/-gi*; Telugu *-ki(n)* (after stems ending in *-i*), *-ku(n)* (elsewhere); Gondi *-k*; Kui *-gi*; Kuwi *-ki*; Northern Parji *-g/-gi*; Kuṛux *-gē*; Malto *-k/-ik*. Krishnamurti considers the *-n-* as originally part of this formant and that it was dropped in South Dravidian. As in Turkic (see below), **-nkk-* may be a compound suffix in which **-kk-* has been added to dative-*n* (on which, see above). For Proto-Elamo-Dravidian, McAlpin (1981:109—110) reconstructs an adessive ending **-əkkə*, which developed into the dative in Dravidian. In Elamite, **-əkkə* developed into the superessive ending *-ukku* (‘on, in, according to’) (cf. Paper 1955:81), on the one hand, and into the directive-allative ending *-ikki* (‘to, towards, into’) (cf. Paper 1955:77—78), on the other.
- C. Kartvelian: In Svan, there is a nominal postposition *-ka* with the meaning ‘out, through’, also found in the compound *-xānka* with the meaning ‘out of’. When used as a verb prefix, *ka* indicates outward direction. There may have been a semantic shift from ‘direction to or towards’ to ‘direction out from or away from’. If so, the Svan forms can be compared with those under discussion here.
- D. Uralic: Collinder (1960:296) notes that a lative **k* + a vowel is to be reconstructed for Proto-Uralic. Abondolo (1998a:18) reconstructs lative **k*. Cf. also Sinor 1988:719. According to Künnap (1984:287—291), in Proto-Samoyed, this form serves as the basis for the lative, locative, and ablative case endings: (A) absolutive declension: (locative) **-k_Vn_V*, (ablative) **-k_Vt_V*; (B) possessive declension: (lative) **-k_V*, (locative) **-k_Vn_V*, (ablative) **-k_Vt_V*. Clearly, the lative **-k_V* found in the possessive declension is the oldest form. The locative and ablative endings are compound forms, consisting of the base form **-k_V* + **-n_V* and **-k_V* + **-t_V*, respectively. Künnap also notes that, at a minimum, the following local case endings existed in Proto-Samoyed: lative **-ŋ*, locative **-n*, ablative **-t_V*, and prospective **-m_Vn_V*. Marcantonio (2002:286) notes: “The Lative II **-k(V)* is supposed to have developed in most

languages into spirants (- γ , - χ , - w) or into vowels, as in Hun. *fel-é* ‘towards’, *id-e* ‘toward here’, according to traditional, but not widely accepted, analysis (Raun 1988b: 560; Hajdú 1988a: 280). It is preserved as such in a few languages, such as Ingrian *ala-k* ‘[towards] under’. Traces of this ending can be found in Lapp (Korhonen 1988a: 280). There is in Mordvin a Prolative -*ka* (Raun 1988a: 101), which could be a reflex of Lative II *-*k(V)*.”

- E. Altaic: Greenberg (2000:137) reconstructs a Proto-Turkic dative-allative *-*ka*, while Róna-Tas (1998:73) reconstructs a dative *-*nKA*. As noted by Róna-Tas, *-*nKA* is a compound suffix in which *-*KA* has been added to oblique-*n*. Sinor (1988:719) notes that the Common Turkic dative is -*qa*, -*ka*, -*ya*, -*ge*. Turkic examples: Middle Kipchak -*GA* (cf. *yolya* ‘for the road’, *toyya* ‘for the feast’, *qarabusqa* ‘to the saddle-bow’); Chagatay -*ya*, -*ge* (but mostly -*qa*, -*ke* after voiceless consonants); Tatar -*GA* (cf. *atqa* ‘to the horse’, *etige* ‘to the father’, *urmanya* ‘to the forest’); Kazakh -*GA*; Noghay -*GA* (cf. *balaya* ‘to the child’, *terekke* ‘to the tree’, *qoyanya* ‘to the hare’, [pl.] *atlarya* ‘to the horses’); Kirghiz -*GA*; Uighur -*GA* (cf. *töpige* ‘to the peak’, *tayiya* ‘to the uncle’, *közge* ‘to the eye’, *qizya* ‘to the girl’, *sayya* ‘to the river gorge’, *seyge* ‘to the vegetable’, *χunenge* ‘to Hunan’, *šendunya* ‘to Shandong’, *terepke* ‘to the side’, *tetqiqatqa* ‘to [the] research’); Uzbek -*Gā*; Yakut -*GA* (cf. *eyeye* ‘to peace’, *uokka* ‘to the fire’, *oχko* ‘to the arrow’). Greenberg (2000:137—138), notes that “[i]n Tungusic, -*k*- occurs as a case marker only with coaffixes, e.g. Evenki -*k-la* (lative)...”, while Sinor (1988:719) notes the same usage and also compares the Tungus directive suffix -*ki*, -*xi* found at the end of postpositions and adverbs. Starostin—Dybo—Mudrak (2003:221) reconstruct a Proto-Altaic dative/directive suffix *-*k^V* on the basis of: Proto-Tungus directive *-*kī* and Old Turkic dative -*qa/-ke*.
- F. Chukchi-Kamchatkan: The Proto-Nostratic directive marker *-*k^ha* may have been the source of the following Proto-Chukchi-Kamchatkan locative suffixes: (class 1 sg.) *-*(ə)k*, (class 2 sg.) *-*(a)næk*, (class 2 pl.) *-*(ə)ðək* (cf. Fortescue 2005:426).
- G. Eskimo: Proto-Inuit postbase *-*q*- ‘go (to)’ (added to allative case of [adverbial] demonstrative bases) (cf. Fortescue—Jacobson—Kaplan 1994:421).

16.32. Locative-directive particle *-*la*

- A. Afrasian: Originally, this was an independent particle in Afrasian. It shows up as a directive prefix in Semitic and as a directive suffix in Cushitic. Diakonoff (1988:61) reconstructs an Afrasian directive *-*l* and notes:

-*l*: directive (in the Cushitic Bilin, Saho); the Semitic ‘dative’ and ‘directive’ preposition *lV-* (also > prefixed accusative marker in the later Aramaic dialects), and the Egyptian preposition *n* (< *-*l*-)

Ehret (1995:396) reconstructs Proto-Afrasian *-*la* ‘at, to’.

B. Uralic: Collinder (1960:291—292) notes:

In western FU and in Samoyed, the local cases are mostly formed by means of a coaffix (**l*, **s*, **ś*, **k*), i.e., the primordial case ending (**-na* ~ **-nā*, for instance) is added to a derivative, not immediately to the word stem.

Collinder then goes on to discuss the developments in the various Uralic daughter languages. Illič-Svityč has done a good job of summarizing the Uralic developments. The only disagreement I have with Illič-Svityč is the reconstruction of Proto-Uralic initial **l-/*. The evidence points to Proto-Uralic initial **l-/* instead. This means that the Proto-Nostratic form should be reconstructed as **-la*.

The paper by Aikio—Ylikoski (2016) is particularly relevant here (see also Aikio 2022:14) — the goal of their paper is to demonstrate that:

The element *-l-* has traditionally been equated with a derivational suffix indicating locality, but against the received view this paper argues that the endings emerged via agglutination of the Proto-Uralic postpositions **ül-nā* [on-LOCATIVE], **ül-tā* [on-ABLATIVE] and **üli-ŋ* [on-LATIVE], based on the relational noun root **ül(i)-* ‘location on/above’.

C. Altaic: Starostin—Dybo—Mudrak (2003:859) reconstruct Proto-Altaic **la-* ‘on this side, near’. They note: “Originally a monosyllabic deictic root with directive affixes.”

Illič-Svityč 1971—1984.II:25—26, no. 257, **lA* locative particle; Dolgopolsky 2008:1178—1180, no. 1250, **lA* locative particle. I have purposely excluded some of the evidence adduced by Dolgopolsky in support of this particle.

16.33. Locative **-ma* (variant **-mi*) and locative **-bi* (Greenberg: §27. Locative M, and §28. Locative BH)

These two forms will be discussed together. The locative function ascribed to these forms by Greenberg is clearly a later development. At the Proto-Nostratic level, we are dealing with independent particles.

I did not reconstruct a Proto-Nostratic ancestor for Proto-Indo-European **me-/mo-* ‘with, along with, together with’ in my 1994 joint monograph — perhaps I should have looked a little more diligently. Given all of the considerations discussed below, I would now reconstruct a Proto-Nostratic **ma* (~ **mā-*) — as in Egyptian, it was used to indicate position and had a similar range of meanings, that is, ‘in; from; with’. I propose that it was this stem that was the source of the locative forms Greenberg discusses. In Indo-European (and Etruscan), the instrumental-comitative sense prevailed, while elsewhere in Eurasiatic, the locative sense was emphasized.

In my joint monograph with John C. Kerns (1994:218—219, no. 23), I reconstruct Proto-Nostratic **bi* (~ **be*) ‘in addition to, with, together with’ on the basis of the Indo-European material discussed below plus Afrasian **bi* ‘in, with, within, among’ and Sumerian *bi* ‘with, together with, in addition to’. In Sumerian, this stem is also used as a conjunction: *-bi*, *bi-da*, *-bi-(da)* (literally, ‘with its...’) “...used in the sense ‘and’ with nouns and without the disjunctive force of *u*” (quote from Thomsen 1987:84).

- A. Afrasian: In Egyptian, we find *m* (preposition, with suffixes) ‘in; with, by means of; from, out of; as, namely’. Note Gardiner (1957:124—125, §162): “...*m*, before suffixes...*im*; indicates *position* generally, the main lines of development being ‘in’, ‘from’, and the instrumental ‘with’.” Note also the following forms from Semitic: Ugaritic *ʿm* (= *ʿamma* ?) ‘with, to’ (also *ʿmn*); Hebrew *ʿim(m-)* ‘with, together with’; Syriac *ʿam* ‘with’; Aramaic *ʿim(m-)* ‘with’; Arabic *maʿa* ‘with, together with, accompanied by, in the company of’, *maʿan* ‘together, at the same time, simultaneously’. A locative ending **-u(m)* can be reconstructed for Proto-Semitic as well. Also worth noting are Hadiyya (East Cushitic) *-m* ‘too, also’ and Hausa (Chadic) *ma* ‘also, too, even’. Ongota has an agentive/instrumental noun suffix *-mi/-me* (cf. Fleming 2002b:40). For Proto-Afrasian, Diakonoff (1988:61) reconstructs a locative-adverbialis **Vm*.

Proto-Nostratic **bi* ‘in addition to, with, together with’ is particularly well represented in Semitic: Proto-Semitic **ba* ~ **bi* ‘in, with, within, among’ > Hebrew *bə-* ‘in, at, on, with’; Arabic *bi* ‘in, within, among’; Ugaritic *b* ‘in, with, from’; Sabaeen *b* ‘from, of, in, on, at’; Šheri / Jibbāli *b-* ‘at, about, by, with, in’; Ḥarsūsi *b(e)-* ‘in, with, by’; Geez / Ethiopic *ba* ‘in, at, into, on, by, through, with (by means of), after (kind and means), by reason of, because of, out of, on account of, according to, concerning, against (contiguity)’; Gurage *bä* ‘with, in, at, by, out, out of, from’; Harari *-be* ‘with, from, by, of, in, on, at’. It is also found in Beja / Beḍawye (postposition) *-b* ‘by, in, of’.

- B. Elamo-Dravidian: Note the Elamite locative affix (postposition) *-ma* ‘in’ (cf. Paper 1955:79—81), variant *-me* (there is also a genitive affix *-ma*, variants *-mi* and *-me*). McAlpin (1981:68, table 2.1) lists the Elamite postposition *-ma* ‘in, on; according to’, used with things and time units and indicating location inherent in place names. Krishnamurti (2003:413—415) reconstructs a Proto-Dravidian coordinating formant **-um*. In Modern Tamil, *-um* has several meanings: (A) ‘also’, (B) ‘totality’, (C) ‘any/none’ (when added to interrogative words, depending on the positive or negative governing verb), (D) ‘and’ (when added to each of the coordinating phrases), and (E) ‘even, although’ (when added to a conditional phrase). Similar usage is found in Malayalam (cf., in the sense ‘also’: *avan roṭṭi tinnu; vellavum kuṭiccu* ‘he ate the bread; he drank the water *also*’; in the sense ‘and’: *rāghavan-um kumār-um vannu* ‘Raghavan *and* Kumar came’; in the sense ‘always’: *avar eppōḻ-um vāyiccu-konṭ-irukk-unnu* ‘they are *always* reading’). In Old Kannaḍa, *-um* means ‘and’ or ‘even, also’ (cf., in the sense ‘and’: *iḍ-ut-um...ār-ut-um...mung-ut-um* ‘hitting, shouting, and swallowing’, *tāy-um tande.y-um* ‘mother and

father'; in the sense 'even, also': *nudiyey-um* 'even after saying', *ad-um* 'that also'). In Elamite, the locative sense is dominant, while in Dravidian, the conjunctive-comitative sense prevailed.

- C. Indo-European: Two separate stems must be reconstructed for Proto-Indo-European, namely, (1) **me-/mo-* and (2) **b^{hi}-*, just as Greenberg indicates. Pinning down the exact meaning of each is not easy, however. In Germanic, the primary meaning of the derivatives of the first stem is 'with, among': cf. Gothic *miþ* 'with, among'; Old English *mid*, *miþ* 'together with, with, among'; Middle High German *mite*, *mit* 'with, by, together'; Old Icelandic *með* 'with, along with, together with'. Greek *μετά* means '(with gen.) in the midst of, among; (with dat.) among, in the company of; (with acc.) into the middle of, coming among'. The original meaning seems to have had to do with 'accompaniment, conjunction', that is, 'with, along with, together with', as in Old Icelandic. In other words, a stem is involved that is more instrumental or comitative in meaning than locative, at least in Indo-European. As Greenberg notes, the use of this stem as an inflectional ending is restricted to Germanic, Slavic, and Baltic. As Greenberg points out in §28, the stem **b^{hi}-* also exists as an independent stem in Germanic: cf. Gothic *bi* 'about, over; concerning, according to; at'; Old English *be*, *bi*, *bī* (preposition, with dat., indicating place and motion) 'by (nearness), along, in'; Old High German *bi-*, *bī* adverb indicating nearness, preposition meaning (with dat.) '(near) by, at, with', as adverb 'from now on [von jetzt an]'. The original meaning, based upon the Germanic evidence, seems to have had to do with 'proximity, nearness', either of place '(near) by, at' or time 'now, at the present time'. There is a compound in Sanskrit, namely, *abhi* (either < **e-/o-+b^{hi}-* or **m-+b^{hi}-*), whose primary meaning is 'moving or going towards, approaching' — as an independent adverb or preposition, it means (with acc.) 'to, towards, in the direction of, against, into'; as a prefix, it means 'to, towards, into, over, upon'. Another compound is found in Greek *ἀμφί* (**m-+b^{hi}-*), preposition used with the genitive, dative, and accusative with the basic meaning 'on both sides', as opposed to *περί*, whose basic meaning is 'all around' — (with gen., causal) 'about, for, for the sake of', (of place) 'about, around'; (with dat., of place) 'on both sides of, about'; (with acc., of place) 'about, around'; (as independent adverb) 'on both sides, about, around'. This compound is also found in the Latin inseparable prefix *amb-*, *ambi-*, meaning 'on both sides; around, round about'. Further relationship to words meaning 'both' is usually assumed, though uncertain. When we look at the use of **-b^{hi}-* as a case ending, we find a slightly different semantic range than what is indicated by the above evidence. I think it is significant that it is specifically this ending that shows up in the instrumental singular in Greek and Armenian. This seems to indicate that the original meaning was similar to **me-/mo-*, that is, 'with, along with, together with'. Indeed the choice between **-me-/mo-* as a case ending in Germanic, Baltic, and Slavic, on the one hand, and **-b^{hi}-* as a case ending in Italic, Indo-Iranian, Greek, and Armenian, on the other, seems to indicate that they were close, if not identical, in meaning. Considering this, it appears to me that the

Germanic meanings are secondary. Thus, we can reconstruct two separate stems for Proto-Indo-European, the first of which, **me-/mo-*, meant ‘with, along with, together with’, the second of which, **b^{hi}-*, meant (on the basis of its use in case endings) ‘in, with, within, among’. The evidence from Afrasian and Sumerian mentioned above reinforces the interpretation that the original meaning of Proto-Indo-European **b^{hi}-* was ‘in, with, within, among’.

- D. Altaic: In Tungus, *-mi* appears as a locative-instrumental adverbial suffix, as in Orok *gitu-mi* ‘on foot, by foot’ (cf. Greenberg 2000:141).
- E. Chukchi-Kamchatkan: Chukchi comitative suffix *-ma* (cf. Comrie [ed.] 1981: 245; Fortescue 2005:426 and fn. 9).
- F. Proto-Gilyak / Nivkh **-mi* ‘in; in a direction (with directional roots)’: Amur *-mi* ‘in’; East Sakhalin *-mi* ‘in’; South Sakhalin *-mi* ‘in’. Fortescue 2016:176.
- G. Eskimo-Aleut: Proto-Eskimo postbase **mi-* ‘and then, again’ > Central Alaskan Yupik *+mi* ‘also’; Seward Peninsula Inuit *+(p)mi* ‘even though’; North Alaskan Inuit *+(m)mi-* ‘also’; Western Canadian Inuit *+(m)mi* ‘again, too, and then’; Eastern Canadian Inuit *+(m)mi* ‘again, also’; Greenlandic Inuit *+(m)mi* ‘and then’. Proto-Aleut **ma-* ‘also, too’ (Eastern Aleut also ‘finally’: cf. Atkan *maaya-* ‘finally’). Cf. Fortescue—Jacobson—Kaplan 1994:412.

Note also the Proto-Eskimo locative singular ending **-mi* (cf. Greenberg 2000:143; Fortescue—Jacobson—Kaplan 1994:442). Fortescue—Jacobson—Kaplan (1994:446, note 10) point out that this ending is also found in Aleut (cf. *qila-m* ‘in the morning’).

- H. Etruscan: In Etruscan, we find the enclitic copula *-m* (*-um* after a consonant) ‘and’, which may also be compared (cf. Bonfante—Bonfante 2002:104). Perhaps the preposition *pi* (also *pen*, *pul*, *epl*) ‘at, in, through’ belongs here as well (if from **bi*).

Sumerian: In Sumerian, there is a conjunctive prefix *-m-* and a third person singular comitative prefix inanimate *-m-da-*. The *-da-* in *-m-da-* is the standard Sumerian comitative element. The *-m-* may be related to the forms we have been discussing here. Note also the locative-terminative prefixes *ba-*, *bi-* (on which, cf. Thomsen 1987:176—185).

16.34. Directive(-locative) **-ri* (Greenberg: §29. Locative RU)

The exact meaning of this formant is difficult to determine, though something like ‘direction to or towards; motion to or towards’ (as in Mongolian) is probably not too far off. In the Eurasiatic languages (including Etruscan), its primary function appears to have been to form adverbs from pronominal stems.

- A. Afrasian: Note the Egyptian preposition *r* (originally *ir*) ‘to; at; concerning; more than; from’. It could also be used as a conjunction meaning ‘so that, until, according as’. According to Gardiner (1957:125), the original meaning appears to have been ‘to, towards’.

- B. Indo-European: In Indo-European, there is a suffix **-r* that is added to pronominal stems to form adverbs; examples include: Proto-Indo-European **k^{wh}ē-r*, **k^{wh}ō-r* ‘when?, where?’ (cf. Sanskrit *kár-hi* ‘when?’; Latin *cūr* [*<* Old Latin *quōr*] ‘why?’; Gothic *har* ‘where?’; Old Icelandic *hvar* ‘where?’; Old English *hwær* ‘where?’; Lithuanian *kur* ‘where?’); Proto-Indo-European **t^hē-r*, **t^hō-r* ‘there’ (cf. Sanskrit *tár-hi* ‘there’; Gothic *þar* ‘there’; Old English *pāra*, *pær* ‘there’; Old High German *thar* ‘then, there’), etc. (cf. Brugmann 1904:456, §583; Burrow 1973:281; Krause 1968:206, §195; Beekes 1995:220).
- C. Uralic: Greenberg (2000:148) cites Zyrian / Komi *kor* ‘when?’, apparently constructed in the same way as the Indo-European forms cited above. Greenberg (2000:148) also suggests that the Hungarian sublativ ending *-ra* ~ *-re* may belong here (cf. Collinder 1957:377). Perhaps also Proto-Yukaghir applicative affix **-ri*: (*>* Northern / Tundra *-ri*:-) (cf. Nikolaeva 2006:83).
- D. Altaic: In Mongolian, there is a rare case suffix **-ru* with the meaning ‘direction to or towards; motion to or towards’ (cf. Poppe 1955:205). It is only found in Mongolian (in a few adverbs), Ordos, Khalkha, and Buriat (cf. Written Mongolian adverbs *inaru* ‘this side, prior to’, *činaru* ‘that direction, after’; Ordos *otoarū* ‘in the direction of the Otog banner’; Khalkha *moddbrū* ‘towards the woods’; Buriat *uharū* ‘towards the water’, *morilū* ‘towards the horse’). In Tungus, there is a suffix *-r(i)* that is added to pronominal stems to form adverbs; examples include: Lamut / Even *ar* ‘there, the one there’, *tar* ‘yonder, the one yonder’; Manchu *e-de-ri* ‘this time, this way, by here’, *te-de-ri* ‘from there, by there, from that’ (cf. Greenberg 2000:148—149). Turkic also has a suffix *-r(V)*. Its primary use appears to have been to form adverbs from pronominal stems (cf. Greenberg 2000:148). Starostin—Dybo—Mudrak (2003:221) reconstruct a Proto-Altaic directive suffix **-rV* on the basis of: Mongolian directive *-ru*; Old Turkic directive *-γa-ru/-ge-rü* (also **-ra*, **-rü*); Korean lative *-ro* (a merger of the comitative and directive cases).
- E. Chukchi-Kamchatkan: Greenberg (2000:149) cites the following Chukchi examples in which a suffix *-ri* is used to form adverbs: *ənkə-ri* ‘thither’ (cf. *ənkə* ‘there, then’), *miŋkə-ri* ‘whither?’ (cf. *miŋkə* ‘where?’).
- F. Gilyak / Nivkh: Greenberg (2000:149) notes that a suffix *-r* is used in the Amur dialect to form adverbs of place; he cites the following forms: *tu-r* ‘here’, *hu-r* ‘there’, *t^ha-r* ‘on water near the shore’, *k^he-r* ‘upstream’, *k^hi-r* ‘a higher place’. Cf. also Gruzdeva 1998:36.
- G. Etruscan: An adverbial *r*-suffix is found in *θar* ‘there, thither’ (motion towards) (cf. Bonfante —Bonfante 2002:105 and 220).

Sumerian: In addition to the common form *-ni*-, Sumerian also has a locative prefix *-ri*- (cf. Thomsen 1987:234). This may be compared with the forms being discussed here. It is also interesting to note that Sumerian has a distant demonstrative stem *ri* ‘that, yonder’ (cf. Thomsen 1987:80—81), which may be in some way related to the forms under discussion here.

16.35. Locative **-i* (Greenberg: §31. Locative I)

This formant may be a derivative of the proximate demonstrative stem **ʔi-* (\sim **ʔe-*).

- A. Afrasian: Ehret (1980:51) reconstructs the Proto-Southern Cushitic locational suffix **-i* (**-ʔi*) in: Burunge *tɪʔi* ‘here’, *taʔi* ‘there’; Ma’a *twaʔi* ‘there’, *ilaʔi* ‘this direction’, *iʔi* ‘here’, *araʔi* ‘there referred to’.
- B. Indo-European: The most common locative singular case marker in Proto-Indo-European was **-i*: Sanskrit *pitāri* (*pitar-* ‘father’), *ukṣāni* (*ukṣan-* ‘ox’), *udāni* (*udan-* ‘water’), *padī* (*pad-* ‘foot’), *mūrdhāni* (*mūrdhan-* ‘head’); Greek *πατέρι* (*πατερ-* ‘father’); Hittite *pa-ar-ni* ‘at home’ (nom. sg. *pí-ir*, gen. sg. *pár-na-aš*) (cf. Beekes 1995:173; Brugmann 1904:384—386; Gamkrelidze—Ivanov 1995.I:247—250; Meillet 1964:295; Szemerényi 1996:160; Burrow 1973:234; Sihler 1995:253; Lehmann 1993:145; Fortson 2010:116, §6.11), though the bare stem could be used instead. **-i* is also found in adverbs (cf. Greenberg 2000:153): cf. Greek *ἐκεῖ* ‘there, in that place’.
- C. Eskimo: The Proto-Eskimo deictic **-i* used with demonstratives (cf. Fortescue—Jacobson—Kaplan 1994:399) most likely belongs here. Greenberg (2000:153—154) discusses other evidence in Eskimo for an original locative **-i*.
- D. Etruscan: In Etruscan, the locative ending is *-θi*. I regard this as a hyper-characterized form in which the locative ending *-i* has been added to a locative *-θ* (< the comitative-locative ending **-da* [there is no voicing contrast in stops in Etruscan] or < the oblique marker **-tʰ*).

Sumerian: In Sumerian, there is a locative-terminative postposition *-e*, which is only used with inanimate beings. The locative-terminative is used to indicate the direction ‘near to’ or ‘near by’. As an adverb, *e* simply means ‘here’. I suspect that this may be related in some way to the locative *-i* under discussion here.

- 16.36. Comitative-locative particle **da* (Illich-Svityč 1971—1984.I:212—214, no. 59, **da* locative particle; Dolgopolsky 2008, no. 508, **d[E]H₁a* ‘with, together with’ and no. 579, **d[oy]a* [$>$ **da*] ‘place’; Hegedüs 1997:108—112; Nafiqoff 2003:41—42 **daH₁* and 101; Greenberg: §32. Locative TA)

A comitative-locative particle **da* (\sim **də*) with the basic meaning ‘along with, together with, in addition to; in, at’, shows up all over Nostratic (cf. Bomhard—Kerns 1994:275—276, no. 89). I would equate the forms Greenberg lists with the widespread Proto-Nostratic comitative-locative element **da* (\sim **də*) discussed there and would, therefore, derive them from Proto-Eurasiatic **da* instead of TA. Thus, I suggest that it would have been better to have written “§32. Locative DH.” This is a case where material from the non-Eurasiatic Nostratic languages can help explain developments in Eurasiatic. Greenberg sometimes confuses the Altaic reflexes of this particle with those of oblique **-tʰa* (see below), as does (to a lesser extent)

Sinor (1988:716—718), which is understandable given the phonology involved and the overlapping semantics between the two forms.

- A. Afrasian: Diakonoff (1988:61) reconstructs a Proto-Afrasian **-dV*, **-Vd* comitative-dative case on the basis of evidence from Cushitic (Agaw) and Berber-Libyan. A comitative-locative particle **da/*də* is widespread in Chadic: cf. Hausa *dà* ‘with; and; by, by means of; regarding, with respect to, in relation to; at, in, during; than’; Kulere *tu*; Bade *də*; Tera *ndə*; Gidar *dí*; Mokulu *tí*; Kanakuru *də* < Proto-Chadic **də* ‘with, and’. Cushitic: Burji locative suffix *-ddi* (< **-n-di* [cf. Hudson 2007:540]); Bilin comitative case *-di*.
- B. Elamo-Dravidian: The locative element **da/*də* may also be found in the Proto-Dravidian sociative (comitative) ending **-ōtu* (cf. Krishnamurti 2003: 237). Particularly noteworthy are the Tulu locative endings *-du ~ tu*, *-di ~ ti*, which may, perhaps, be compared with the Tamil locative postposition *-ittai* (Proto-Dravidian medial *-t-* < Proto-Nostratic **-d-*). Possibly also Royal Achaemenid Elamite, Neo-Elamite *da* (also *-da* in *-be-da*, *e-da*, *ku-da*, etc.) ‘also, too, as well, likewise; so, therefore, consequently, hence, accordingly; thereby, thereupon’ (cf. Paper 1955:107 *ku-ud-da* ‘and’). Note also: Middle Elamite, Neo-Elamite *tak* ‘also’ (< *da-* ‘also’ + *a-ak* ‘and’).
- C. Kartvelian: This particle appears in Kartvelian as a conjunction: Proto-Kartvelian **da* ‘and’ > Georgian *da* ‘and’; Mingrelian *do* ‘and’; Zan *do* ‘and’ (cf. Fähnrich—Sardshweladse 1995:97—98; Fähnrich 2007:120—121; Klimov 1964:68—69 and 1998:35—36). It is also probably found in the Proto-Kartvelian adverbial case ending **-ad/*-d* > Old Georgian *-ad/d* (in Modern Georgian, the ending is *-ad[a]*); Mingrelian *-o/-t/-ot*; Laz *-o/-t*; Svan *-ad/-d* (cf. Klimov 1964:43 and 1998:1; Fähnrich—Sardshweladse 1995:31; Fähnrich 1994:240, 254, and 2007:32—33).
- D. Indo-European: Greenberg (2000:155) compares the Indo-European suffix **-d^{he}* found in adverbs of place with the forms under discussion here. **-d^{he}* is preserved in the daughter languages in the suffixed particle appearing, for example, in Sanskrit as *-ha* and *-dhi*: *sa-há* ‘with’ (Vedic *sa-dha*), *i-há* ‘here’ (Prakrit *i-dha*), *kú-ha* ‘where?’, *á-dhi* ‘above, over, from, in’; in Avestan in *iḍa* ‘here’, *kudā* ‘where?’; and in Greek in the locative particle *-θι* in, for example, *οἴκο-θι* ‘at home’, *πό-θι* ‘where?’. Cf. Burrow 1973:281; Beekes 1995:220; Brugmann 1904:454—455 **-dhe* and **-dhi*; Fortson 2010:119.
- E. Altaic: Particularly interesting is Altaic, where this particle functions as a (dative-)locative suffix on the one hand, **-da*, and as an independent particle on the other, **da* ‘together with, and, also’: Common Mongolian dative-locative suffix **-da* > Mongolian *-da*; Dagur *-da*; Khalkha *-dv*; Buriat *-da*; Kalmyk *-dv* (cf. Poppe 1955:195—199). In Manchu, the dative-locative particle is *-de*. In Turkic, it also appears as a locative(-ablative) suffix: Common Turkic **-da/*-dä* (cf. Menges 1968b:110; Róna-Tas 1998:73 **-dA*). Starostin—Dybo—Mudrak (2003:221) reconstruct a Proto-Altaic dative/locative suffix **du/*da* on the basis of: Proto-Tungus dative **du*, locative **-dā-*; Old Japanese attributive/locative *-tu* (although this suffix can also be compared with Mongolian

adjectival *-tu*); Mongolian dative/locative *-da/-du-r*, attributive *-du*; Old Turkic locative/ablative *-ta/-da/-te/-de*.

- F. Chukchi-Kamchatkan: Note the Proto-Chukchi-Kamchatkan instrumental case marker **-tæ* and the suffix **-tæ* in the comitative 1 case marker **kæ- -tæ* ‘together with’ (both class 1). Cf. Fortescue 2005:426. Perhaps also Proto-Chukotian **to* ‘and’ > Koryak *to* ‘and’; Alyutor *tu* (Palana *to*) ‘and’. Cf. Fortescue 2005:288.
- G. Etruscan: As noted above, in Etruscan, the locative ending is *-θi*. I regard this as a hypercharacterized form in which the locative ending *-i* has been added to a locative ending *-θ* (< the comitative-locative ending **-da* [there is no voicing contrast in stops in Etruscan] or < the oblique marker **-th*). The Etruscan form is particularly reminiscent of the Greek locative particle *-θι* (< Proto-Indo-European **-d^{hi}i*).

Sumerian: Sumerian comitative element *da* (also *-dè*). As noted by Thomsen (1987:99): “The basic meaning of the comitative is ‘with’, ‘together with’, expressing accompaniment as well as mutual action.”

16.37. Oblique **-t^ha* (Greenberg: §33. Ablative TA; Janhunen 2014b:326—327, §5.6)

This formant served as the basis for a number of oblique cases in the various Nostratic daughter languages. Only Dravidian retains it as a general oblique marker.

- A. Afrasian: Ongota has the locative suffix *-tu/-to* (cf. Fleming 2002b:40).
- B. Elamo-Dravidian: McAlpin (1981:110—112, §522.4) reconstructs a Proto-Elamo-Dravidian oblique/locative ending **-tə*. McAlpin notes that this form is confused with the appelative and derivational ending **-tə* in Elamite, though it may be found in the locative-genitive particle *-da* (*-te*) (cf. Khačikjan 1998:53). In my opinion, we are dealing here with what were originally two separate particles, the first of which, *-da*, probably belongs with the comitative-locative particle **da* discussed above, the second of which, *-te*, belongs here. The two have become confused in Elamite. In Dravidian, the **-tə* reconstructed by McAlpin developed into the oblique augment **-tt-*: Old Tamil *mara-tt-* in (loc. sg.) *mara-tt-il* ‘in a tree’, (dat. sg.) *mara-ttu-kku* ‘to a tree’; Malayalam (gen. sg.) *mara-tt-in* ‘of a tree’; Iruḷa (acc. sg.) *mara-tt-e* ‘tree’; Kannaḍa (instr.-abl.) *mara-d-inda* ‘by the tree’; Pengo *mar* ‘tree’: (acc. sg.) *ma(r)-t-iṇ*, (loc. sg.) *ma(r)-t-o*, (gen. sg.) *ma(r)-t-i*, (instr.-loc.) *mar-(t)-aṇ*; Parji *mer* ‘tree’: (gen. sg.) *mer-t-o*, (loc. sg.) *mer-t-i*; etc. (cf. Krishnamurti 2003:218—221).
- C. Kartvelian: Worth noting is the Proto-Kartvelian instrumental suffix **-it* (cf. Georgian *-it/-jt/-t*, Mingrelian *-(i)t/-t*, Laz *-t*), which may ultimately come from the same formant under discussion here. Cf. Fähnrich 1994:240 and 2007:213; Fähnrich—Sardshweladse 1995:177—178.

- D. Indo-European: Greenberg (2000:157—158) tries to compare the Proto-Indo-European thematic ablative singular case ending $*-\bar{e}d/*-\bar{o}d$ (cf. Brugmann 1904:282—283; Buck 1933:176, 181, 196, and 199; Szemerényi 1996:160) (cf. Sanskrit $-\bar{a}t$ [- $\bar{a}d$]; Oscan $-ud$, $-\acute{u}d$; Old Latin $-\bar{e}/\bar{o}d$; etc.) with the forms under consideration here. However, this ending is best seen as a particle that has been incorporated into the thematic declension instead (cf. Lundquist—Yates 2018:2087), $*-\bar{o}/\bar{e}-t^h- < *-\bar{o}/e-+H_1(e)t^h-$. On the other hand, the archaic ablative singular case ending in $*-t^hos$ (cf. Sihler 1995:246—247) probably belongs here (cf. Sanskrit $-tas$; Latin $-tus$; Greek $-\tau\omicron\varsigma$). According to Sturtevant (1951.I:88, §134), the Hittite ablative singular ending $-az$ represents “the zero grade of the adverbial suffix $-tos$ ”.
- E. Uralic-Yukaghir: Collinder (1960:287—288) posits a Proto-Uralic separative suffix $*-ta \sim *-t\ddot{a}$, but later (1960:291), he refers to this case as “partitive”. Finally, he (1960:296—297) notes that there was probably a locative case in $*-tta \sim *-tt\ddot{a}$ in Proto-Finno-Ugric. Abondolo (1998a:18) reconstructs a Proto-Uralic separative $*-tA \sim *tI$. According to Marcantonio (2002:285), two separate case suffixes are to be reconstructed for Proto-Uralic: (A) locative $*-t$ and (B) ablative $*-t(V)$. She notes: “The ending $-t(V)$ is fully functional as a Locative in Vogul (but not in Ostyak); it is present in Hungarian and Samoyed Yurak in fossilised forms. The ending $-t(V)$ is also present in Balto-Finnic, Permian, Samoyed, Lapp. In Finnish, it has the function of Partitive.” Further: “The Ablative $-t(V)$ is absent in Ob-Ugric languages. In Hungarian, in addition to $-t$, there is an Ablative $-l$, which is also used to form complex endings, such as $-tV-l$ (see Table 8.5). This morpheme is found also in Vogul, where it is used to express Instrumental/Comitative functions. In its Ablative function it co-occurs with the Vogul Dative/Lative $*-nV$..., to form the complex ending $-nV-l$.” The following forms are found in the Uralic daughter languages (these are taken from Collinder 1960:287—288 and 1965:124): Finnish $-ta \sim -t\ddot{a}$ after monosyllabics and sometimes after trisyllabics (but $-a \sim -\ddot{a}$ after disyllabics that are not the result of contraction); Veps $-d$; Lapp / Saami $-ht\ddot{e}$ (or $-t\ddot{e}$) after monosyllabic stems ending in a vowel, otherwise $-t$; Mordvin $-do \sim -de$ (but $-to \sim -te$ after a voiceless consonant); Cheremis / Mari $-c$, $-\acute{c}$. Proto-Yukaghir ablative affix $*-t$ ($>$ Northern / Tundra $-t$) (cf. Nikolaeva 2006:83).
- F. Altaic: According to Greenberg (2003:150), “[i]n Altaic, the ablative-instrumental t is found only in Yakut, the non-Chuvash Turkic language that is genetically the most remote. Here we find an instrumental $-ti \sim -t\ddot{i}$ and an indefinite accusative $-ta$ ”. Stachowski—Menz (1998:421) list Yakut (A) partitive $-TA$, which they derive from an old locative suffix, and (B) ablative $-(t)tan$: (A) partitive: *eyete* (eye ‘peace’), *uotta* (uot ‘fire’), *oxto* (ox ‘arrow’); (B) ablative: *eyetten*, *uottan*, *oxton*. Menges (1968b:110) mentions the existence in Turkic of an old locative in $-t$, which survives only in petrified forms. Finally, Greenberg (2003:150) notes that “[i]n Northern and Southern Tungus (but not in Manchu), there is an instrumental $-ti$ ”. Sinor (1988:716—718) provides an excellent overview of the reflexes of $-t$, $-t\ddot{a}$ in the Uralic and Altaic languages and the interrelationship between the various forms.

- G. Gilyak / Nivkh: Perhaps Proto-Gilyak / Nivkh **-to-* in: (1) **-to-R* (or **-do-R*) allative-dative affix: Amur *-toχ/-doχ/-r(o)χ* allative-dative affix; East Sakhalin *-toχ/-rχ* allative-dative affix; South Sakhalin *-toχ/-doχ/-roχ/-rχ* allative-dative affix. (2) **-to-ro* (or **-do-ro*); **-ta-ka*, **-t-ra* terminative-limitative affix: Amur *-toγo/-tʰəkə/-tʰχa* terminative-limitative affix; East Sakhalin *-toγo/-tʰaka/-tʰχa* terminative-limitative affix; South Sakhalin *-toγo/-taγo* (*-doro/-roro* according to Austerlitz) terminative-limitative affix. Cf. Fortescue 2016:169 (table of affixes).

Sumerian: As noted by Thomsen (1987:88 and 103—108), the Sumerian ablative-instrumental case ending is (inanimate) *-ta*, (prefix chain) *-ta-*. Likewise, Hayes (1997a:16): ablative-instrumental *-ta* (/ *-t/* after vowels) ‘from, by’.

16.38. Possessive **-lV* (Greenberg: §40. Possessive L)

- A. Afrasian: (?) Coptic *la-* [λa-] plus noun, forming adjectives, ‘possessing, endowed with’. Cf. Vycichl 1983:93 (probably not derived from Egyptian *n*, *ny* ‘belonging to’); Černý 1976:69.
- B. Kartvelian: In Georgian, there is a suffix *-el-* which is used to form adjectives of nationality designating human beings; examples include: *kartveli* and *kartuli* ‘Georgian’, *megreli* and *megruli* ‘Mingrelian’, *ingliseli* ‘English’, *činelī* ‘Chinese’, etc. This same suffix is used to derive adjectives designating human beings from common nouns: cf. *kalakeli* ‘citizen, city-person’ (< *kalaki* ‘city’), *sopleli* ‘peasant, country-person’ (< *sopeli* ‘village’), etc. The fundamental meaning of the Proto-Kartvelian **-el-* suffix appears to have been ‘pertaining to’ or ‘belonging to’. Cf. Hewitt 1995:108; Vogt 1971:231—232; Fähnrich—Sardshweladse 1995:121—122; Fähnrich 2007:147; Klimov 1998:46.
- C. Indo-European: In Hittite, one of the primary functions of the suffix *-li-* is to form adjectives indicating nationality (cf. Kronasser 1966:211—214); examples include: *Ḫurrili-* ‘Hurrian’, *Ḫattili-* ‘Hattic’, *Palaumnili-* ‘Palaic’, *Luwili-* ‘Luwian’, *Nāšili-* and *Nešumnili-* ‘Hittite (?)’, etc. Lydian also has a possessive suffix *-li*, which has the underlying meaning ‘pertaining to’ or ‘belonging to’ (cf. Gusmani 1964:36—37; Greenberg 2000:174), as in (nom. c.) *manelis* ‘pertaining to Manes’ from the noun (nom.) *Manes*. The ending *-ili-* is also used to derive adjectives from adverbs in Hittite (cf. Luraghi 1997:20).
- D. Yukaghir: Proto-Yukaghir possessive affix **-lʷ* (cf. Nikolaeva 2006:81).
- E. Altaic: According to Greenberg (2000:173), “[i]n Turkic there is a common suffix *-li* that derives adjectives or nouns from nouns, with the resulting meaning ‘possessing the thing or quality expressed by the noun’.” Greenberg cites the following examples from Turkish: *ev* ‘house’, *ev-li* ‘possessing a house’; *el* ‘hand’, *el-li* ‘having a hand or handle’; *yaz-ı* ‘writing’, *yaz-ı-lı* ‘written, inscribed, registered’ (*yaz-* ‘to write’). Greenberg (2000:173) further notes: “In Old Turkish there is also a suffix *-lä* with essentially the same meaning, e.g. *körk-lä* ‘beautiful,’ *körk-* ‘form’ (Gabain 1950:65). Chuvash has

a similar adjectival suffix *-lǎ*, e.g. *čap-lǎ* ‘famous,’ *čap-* ‘fame’ (Krueger 1961: 130—31).”

- F. Etruscan: In Etruscan, personal names often have a genitive ending *-al*: cf. *aule velimna larθal clan* (= *aule velimna larθalisa*) ‘Aulus Velimna, son of Larth’ (*larθalisa* is a patronymic form in which the ending *-isa* replaces *clan*) (cf. Bonfante—Bonfante 2002:87—88). The general scheme was as follows:

Nominative	Genitive	Patronymic
<i>larθ</i>	<i>larθal</i>	<i>larθalisa</i>
<i>arnθ</i>	<i>arnθal</i>	<i>arnθalisa</i>
<i>laris</i>	<i>larisal</i>	<i>larisalisa</i>

We can venture a guess that the original meaning of *-al* was ‘belonging to’, so that *larθal* would have originally meant ‘belonging to Larth’. The patronymic can be seen as a hypercharacterized form in which the genitive ending *-isa* was added to the ending *-al*. The ending *-la* could be added again to the patronymic to indicate the grandfather: cf. *larθalisla* in the phrase *arnθ velimna aules clan larθalisla*, where Larth is the father of Aule and, therefore, the grandfather of Arnth. Interestingly, in this example, *aules* contains the genitive ending *-s*. Thus, we can render this loosely as ‘Arnth Velimna, son of Aule, belonging to Larth’, that is, ‘Arnth Velimna, son of Aule, whose father was Larth’.

IV. DERIVATIONAL SUFFIXES

In the following sections, the cover term “nominalizer” is used for any suffix that is used to create nouns and adjectives (in the daughter languages — adjectives did not exist as a separate grammatical category in Proto-Nostratic), whether from verbs or nouns. Some of these forms are also listed under non-finite verb forms.

- 16.39. Nominalizer **-r-* (Greenberg: §13. Substantivizer RE; see also Bomhard—Kerns 1994:169; Dolgopolsky 2008, no. 1953, **rV* [*< *ʔV[r]V ?*] theme-focalizing [topicalizing] particle)

- A. Afrasian: Ehret (1995:18) reconstructs two separate nominal **r* suffixes for Proto-Afrasian: (A) **r* instrument and complement deverbative suffix and (B) **r* adjective suffix. Ehret notes that the latter suffix is used to form modifiers, usually from verbs. These may belong with the forms under discussion here. Ehret (1980:57—58) lists a large number of Southern Cushitic noun and adjective suffixes in **-Vr-*: (A) noun suffixes: Proto-Southern Cushitic **-ara* (masculine) > Iraqw *-ara*, K’wadza *-ala*, Asa *-ara*, Ma’a *-ara*, Dahalo *-ara*; Proto-Southern Cushitic **-are* > K’wadza *-ale*, Ma’a *-are*, Dahalo *-are*; Proto-Southern Cushitic **-aro* > Iraqw *-aro*, K’wadza *-alo*, Asa *-ar-* in complex *-arok*, Ma’a *-alo*, Dahalo *-aro*; Proto-Southern Cushitic **-aru* >

Burunge *-aru*, Dahalo *-aru*; Proto-Southern Cushitic **-era* > Burunge *-era*, K'wadza *-ela*, Asa *-era*, Ma'a *-era*; Proto-Southern Cushitic **-ere* > Ma'a *-ere*, Dahalo *-ere*; Proto-Southern Cushitic **-ero*, **-eru* > Burunge *-eru* (verbal-noun suffix), K'wadza *-el-* in complex *-eluko*, Ma'a *-(e)ru*, Dahalo *-eero*; Proto-Southern Cushitic **-eri* (feminine) > Burunge *-eri* (noun and adjective suffix), Alagwa *-eri*, Ma'a *-eri*, Dahalo *-eeri*; Proto-Southern Cushitic **-iiri* > Alagwa *-iri*, K'wadza *-il-* in complexes *-ilika*, *-ilita*, Ma'a *-iri*, Dahalo *-iiri*; Proto-Southern Cushitic **-ore* > Ma'a *-ore*, Dahalo *-oore* (also *-ora*); Proto-Southern Cushitic **-ori* > Iraqw *-ori*, Ma'a *-ori*, Dahalo *-ori*; Proto-Southern Cushitic **-oro* > Iraqw, Burunge *-oro* (no longer productive), K'wadza *-ol-* in complex *-oluko*, Ma'a *-olo* (no longer productive), Dahalo *-ooro*; Proto-Southern Cushitic **-ura* > Iraqw, Alagwa *-uru*, K'wadza *-ul-* in complex *-uluko*, *-ulungayo* (cf. also *-ule*), Ma'a *-ure*, *-ura*, Dahalo *-ura*; (B) adjective suffixes: Proto-Southern Cushitic **-ari* > Iraqw, Alagwa *-ar*, Burunge *-ari*, K'wadza *-al(i)-*, Asa *-ara*, Ma'a *-ari*, Dahalo *-are*, *-aare*; Proto-Southern Cushitic **-iru* > Alagwa *-iru* (noun suffix), Iraqw *-ir*, Burunge *-iru* (noun suffix), Asa *-ir-* noun suffix in complex *-iruk*, Ma'a *-(V)ru*. In his analysis of third consonants in Semitic roots, Ehret (1989:128—131) identifies three uses of **r*: (A) **r* diffusive (as in Arabic *ʔafr* 'to attack, to drive away', *sabr* 'to probe or clean a wound', *namr* 'to ascend, to mount', etc.), (B) **r* noun suffix (as in Arabic *fağr* 'split, opening, hole', *bahr* 'abuse', *kasr* 'breach, fracture', *mağr* 'thirst', etc.), and (C) **r* modifier suffix (as in Arabic *baṭr* 'much', *baṭūr* 'much, many', *kaṣr* 'shortness', etc.).

- B. Elamite: Note the animate ending *-r* found in the Elamite third singular anaphoric (animate sg.) *i-r* 'this one here', (neuter) *i-n* 'this' (cf. Grilhot-Susini 1987:17). This may belong here. Also note the derivational suffix *-r(a)* used to form personal nouns indicating a member of a group (cf. Khačikjan 1998:12): cf. *liba-r* 'servant', *peti-r* 'enemy', *hinduya-ra* 'Indian' (< *Hinduš* 'India'), *kurtaš-ra* 'worker' (*kurtaš* is a loan from Old Persian).
- C. Indo-European: The origin of the heteroclitic declension in Indo-European has long defied explanation. In the heteroclitic stems, the nominative-accusative is characterized by *-r*, while the oblique cases are characterized by *-n*. A good example here is Sanskrit (nom. sg.) *ásrk* 'blood' versus (gen. sg.) *asnás* (an additional suffix has been added to the nominative singular), which has an exact parallel in Hittite (nom-acc. sg.) *e-eš-ḫar* 'blood' versus (gen. sg.) *e-eš-ḫa-na-aš*, *e-eš-na-aš* (cf. Tocharian A *ysār* 'blood', Greek *ἔαπ* 'blood', Latin *assir* 'blood'). This is an archaic type of neuter noun, which is abundantly represented in Hittite, but which is tending towards obsolescence in the older non-Anatolian daughter languages (cf. Burrow 1973:127). In looking at the other Nostratic daughter languages, we find an exact match for this patterning in Altaic. The Common Mongolian nominative singular of the demonstrative stem **te-* has an extended form **te-r-e*, while the oblique cases are built upon **te-n* (also **te-gün*) (cf. Poppe 1955:225—228). At long last, the origin of the heteroclitic stems in Indo-European is clear: the nominative singular was created by adding the nominalizing particle **-ri/*-re*, while the oblique cases

were built upon the Common Nostratic oblique marker **-n* (see above for details). A trace of this element as a separate particle may survive in the Cuneiform Luwian enclitic particle *-r* (on which, cf. Melchert 1993b:182 and Laroche 1959:83).

The suffix **-ro-* was also used to create verbal adjectives in Indo-European (cf. Brugmann 1904:329, §404; Burrow 1973:147—148; Sihler 1995:628; Lindsay 1894:328—331; Palmer 1980:258): cf. Sanskrit *rud-rá-h* ‘gleaming’, *nam-rá-h* ‘bowing’, *ug-rá-h* ‘powerful’, *chid-rá-h* ‘torn apart’, *a-vadh-rá-h* ‘not hurting’, *vak-rá-h* ‘cooked’; Latin *cā-ru-s* ‘dear’, *gnā-ru-s* ‘knowing’; Greek *πικ-ρό-ς* ‘sharp’, *λυγ-ρό-ς* ‘hurtful’, *νεκ-ρό-ς* ‘dead’, *λεπ-ρό-ς* ‘scabby’. It was also used to create concrete nouns (Burrow 1973:148 considers these forms to be mainly substantivized adjectives): cf. Sanskrit *áj-ra-h* ‘plain, flatland’; Greek *ἀγ-ρό-ς* ‘field’; Latin *ager* (*-er* < **-ros*) ‘field’; Gothic *akrs* ‘field’; Old English *æcer* ‘(cultivated) field’; Dutch *akker* ‘field’.

- D. Altaic: The main evidence Greenberg (2000:101) cites for reconstructing a Eurasianic nominalizing morpheme **-ri* ~ **-re* comes from Altaic. Specifically, it is found in Mongolian and Tungus: (A) Mongolian: Mongolian *te-re* ‘this’ (pl. *te-de*); Dagur *tē-re* ‘this’; Ordos *te-re* ‘this’; Khalkha *te-rə* ‘this’; Buriat *tē-re* ‘this’; Kalmyk *te-r* ‘this’; (B) Tungus: Manchu *e-re* ‘this’, *te-re* ‘that’; Solon *e-ri* ‘this’, *ta-ri* ‘that’. As noted above, the stem of the oblique cases in the Mongolian languages is **te-n* (also **te-gün*).

- 16.40. Nominalizer **-m-* (Greenberg: §39. Nominalizer M; Bomhard—Kerns 1994:169; Illič-Svityč 1971—1984.II:45—48, no. 284, **mA* formant with nominal function in relative constructions; Dolgopolsky 2008, no. 1352, **mA* marker of nominalized syntactic constructions, nominalizer that formed analytic equivalents of nomina actionis, nomina agentis, and other derived nouns)

- A. Afrasian: Ehret (1995:17) reconstructs two suffixes for Proto-Afrasian: (A) **-m* attributive noun suffix and (B) **-m* adjective-forming suffix. He notes that “[i]t is common in Semitic in the C₃ position and is well attested also for Egyptian, Cushitic, Chadic, and Omotic”. Ehret claims that “[t]he **mV-* instrument-agent prefix of Semitic, Egyptian, and Chadic is argued below (this chapter) to have an origin quite distinct from that of this suffixed **m* deverbative”. In his groundbreaking work on the origin of third consonants in Semitic roots, Ehret (1989:163—164) lists a large number of trilateral roots in Arabic in which *m* in C₃ position can be derived from just such a deverbative noun-forming suffix: cf. *šaḡam* ‘ruin, perdition, death’ (cf. *šaḡḡa* ‘to break, to split, to cleave, to fracture, to bash in’), *қаdam* ‘sword’ (cf. *қаdda* ‘to pierce, to perforate, to bore; to break into pieces, to crush, to bray, to bruise, to pulverize [something]; to tear down, to demolish [a wall]; to pull out, to tear out [a peg or stake]’), *lifām* ‘cloth covering the mouth and the nose’ (cf. *laffa* ‘to wrap up, to roll up, to fold up; to wind, to coil, to spool, to reel; to twist, to wrap, to fold; to envelop, to

cover, to swathe, to swaddle'), etc. According to Moscati (1964:82—83, §12.22), the suffix *-m* is infrequent in Semitic and occurs mainly in Arabic adjectives: cf. *fushum* 'wide', *šadkam* 'wide-mouthed'. Moscati also cites several examples with suffix *-m* from other Semitic languages: cf. Hebrew *šāḡām* 'moustache'; Geez / Ethiopic *kastam* 'bow'. Similar formations occur in Cushitic: cf. Galla / Oromo *liil-am-a* 'thread' (< 'something whirled'; cf. *liil* 'to whirl'); Sidamo *naadamme* 'pride' (*naad* 'to praise', *naad-am* 'to be proud'), *ilama* 'generation' (*il* 'to give birth, to beget', *il-ama* 'relative'), *baddimma* 'baldness' (*badd* 'to be or become bald'); Kambata (adj.) *kotima* 'small, little' (*kot-is* 'to decrease'), *abba(a)sima* 'straw broom' (*abba(a)s* 'to sweep'); Hadiyya *liit-imma* 'mill' (*liit* 'to grind'), *t'aban-s-imma* 'a slap' (*t'aban-s* 'to slap'), *baddimma* 'fear' (*badd* 'to be afraid', *badd-is* 'to frighten'); Gedeo / Darasa *sood-umma* 'dawn' (*sood* 'to dawn'); Burji *layimi*, *layma* 'bamboo' (*lay* 'to sprout'), *k'alamo* 'generation' (*k'al* 'to give birth', *k'ala* 'baby, child, young of animals', *k'al(a)-go* 'to be pregnant'). Ehret (1980:51—53) lists a great variety of Southern Cushitic nominal suffixes in **-Vm-*: (A) noun singular suffixes: Proto-Southern Cushitic **-ama* > Iraqw, Burunge, Alagwa *-ama*, K'wadza *-am-* in complex *-amato*; *-ama*, Asa *-ama-* in complex *-amaok*, Ma'a *-(a)me*, Dahalo *-ama*; Proto-Southern Cushitic **-ame* (feminine ?) > Iraqw, Burunge, Alagwa *-ame*, Ma'a *-(a)me*, Dahalo *-ame*; Proto-Southern Cushitic **-amo* (masculine) > Iraqw, Alagwa *-amo*, K'wadza *-amo*, Dahalo *-amo*; Proto-Southern Cushitic **-amu* (masculine) > Iraqw, Burunge, Alagwa *-amu*, K'wadza *-amu*, Ma'a *-amu*; Proto-Southern Cushitic **-em-* > Iraqw, Burunge *-emo* (also Iraqw *-ema*), Alagwa *-ema*, *-emu*, K'wadza *-eme*, *-emo*, Dahalo *-emi*; Proto-Southern Cushitic **-ima* > Iraqw, Alagwa *-ima*, Asa *-ima*, Ma'a *-ime*, *-ima*, Dahalo *-ima*; Proto-Southern Cushitic **-imi* > Iraqw *-imi*, Ma'a *-imi*; Proto-Southern Cushitic **-imo*, **-imu* (masculine) > Burunge, Alagwa *-imo*, K'wadza, Asa *-imo*, K'wadza *-im-* in complex *-imuko*, Ma'a *-(i)mo*, Dahalo *-iimu*; Proto-Southern Cushitic **-om-* > Asa *-omo*, Burunge *-om-* in complex *-omiya*, Dahalo *-ome*, *-oome*, *-oma*; Proto-Southern Cushitic **-umo* > Ma'a *-umo*, Iraqw, Alagwa *-umo*, Dahalo *-ume*, *-uume*, *-uma*; Proto-Southern Cushitic **-umu* (masculine ?) > K'wadza *-umu*, *-um-* in complex *-umuko*, Asa *-um-* in complex *-umuk*, Dahalo *-umu*; (B) noun plural suffix: Proto-Southern Cushitic **-ema* > Iraqw *-emi*, Iraqw, Burunge *-ema* (also Iraqw, Burunge *-emo*), Dahalo *-VVma* (also *-VVme*, *-eemu*), Asa *-ema* (also *-imo*).

Ehret (1995:52) also discusses the **mV-* instrument-agent prefix and notes that it is an innovation in Semitic, Egyptian, and Chadic and should not be reconstructed for the Afrasian parent language. The prefixes *ma-/mi-/mu-* are common nominalizers in Semitic and have a wide range of meanings (cf. Moscati 1964:80—81, §12.26; Lipiński 1997:216—219).

- B. Elamo-Dravidian: McAlpin (1981:107, §511) reconstructs a Proto-Elamo-Dravidian **-maj* (> Proto-Elamite **-may* [> *-me*], Proto-Dravidian **-may*), which "is used to derive abstract nouns from other nouns and occasionally from verbs". For Elamite *-me*, note (cf. Khačikjan 1998:12): *tuppi-me* 'text' (< *tuppi*

‘tablet’), *titki-me* ‘lie’ (< *tit-* ‘to lie’), *liba-me* ‘service’ (cf. *liba-r* ‘servant’), *takki-me* ‘life’, *sit-me* ‘destiny’. For Proto-Dravidian **-may*, the following examples may be cited (cf. Krishnamurti 2003:200, §5.8.2): Tamil *peru-mai* ‘abundance’ (*pēr/per-u* ‘big’); Telugu *pēr-mi* ‘greatness, superiority’; Kannada *per-me* ‘increase, greatness’, *hem-me* ‘pride, insolence’. Krishnamurti (2003:200) also reconstructs: (A) a Proto-Dravidian noun formative **-am*, added to an intransitive or transitive verb stem, plus (B) several compound nominalizers built upon **-am*: cf. (A) **cōt-am* ‘boat’ (< **cōt-* ‘to run’) > Tamil, Malayalam *ōt-am* ‘boat’; Kannada *ōḍ-a* ‘boat’ (also note: *sōl-am* ‘defeat’ [< *sōl-* ‘to be defeated’]); Tuḷu *ōl-a* ‘boat’; Telugu *ōḍ-a* ‘boat’; (B) *-am+t+am* → *-antam* in, for example, Tamil, Malayalam *opp-antam* ‘agreement, contract’, Telugu *opp-andamu* ‘agreement, contract’, Kannada *opp-anda* ‘agreement, contract’, Tuḷu *opp-anda* ‘agreement, contract, treaty’ (< *oppu-* ‘to agree’); also note Tamil *opp-am* ‘comparison, resemblance’ from the same verb. Cf. Burrow—Emeneau 1984:89, no. 924.

- C. Kartvelian: In Georgian, an *m*-prefix is used in various prefix + suffix combinations (confixes) to form active participles; these include the following: *m-...-ar* (also *m-...-al*), *m-...-el*, *ma-...-el*, *me-...-ar*, *mo-...-ar* (also *mo-...-al*), *mo-...-e* (for a complete list of Old Georgian active participles formed with *m*-prefixes, cf. Fähnrich 1994:76—77; for Modern Georgian, cf. Fähnrich 1993:66—67 and Vogt 1971:249—250). Some examples are: *m-sm-el-i* ‘drinker’ (*v-svam* ‘I drink’), *me-om-ar-i* ‘warrior’ (*v-om-ob* ‘I wage war’), *m-c'er-al-i* ‘author, writer’ (*v-c'er* ‘I write’), etc. Other *m*-prefix + suffix combinations figure in nominal derivation as well. This may be an example of where Georgian is using as a prefix what appears as a suffix elsewhere. This is not unusual. It seems that Kartvelian underwent several syntactic shifts in its prehistoric development (possibly SOV > SVO and then back to SOV, each change leaving a trace in the surface morphology of the daughter languages), no doubt due to prolonged contact with North Caucasian and (perhaps) one or more unknown other languages. Thus, I believe that these Georgian *m*-prefix + suffix forms are comparable to the forms under discussion here. Similar verbal substantives with *m(V)*-prefix are common in other Kartvelian languages: cf. Svan *me-sgwre* ‘sitting; servant’ (*li-sgwre* ‘to sit’), *me-sed* ‘one who remains’ (*li-sed* ‘to remain’), *me-yrāl* ‘singer’ (*li-yrāl* ‘to sing’), etc.
- D. Indo-European: *m*-suffixes play an important role in nominal derivation in Indo-European (cf. Burrow 1973:173—176; Brugmann 1904:346 and 347—348; Meillet 1964:265—266 and 274—275; Lindsay 1894:328; Palmer 1980:252), and a great variety of suffixes exist: **-mo-*, **-mer-*, **-men-*, **-meno-*, **-menth-*, **-emo-*, **-themo-*, etc. The suffix **-mo-* forms a large number of adjectives and nouns — a few examples include: Sanskrit *yug-má-h* ‘paired’, *bhī-má-h* ‘fearful’, *madhya-má-h* ‘being in the middle’, *aj-má-h* ‘career, march’, *ghar-má-h* ‘heat’, *tig-má-h* ‘sharp’; Greek θερμός ‘hot’, σιγμός ‘puncture’ (cf. also σίγμα, σιγμή), ἄρμός ‘the fastenings (of a door)’; Latin *for-mu-s* ‘hot’; etc.

- E. Uralic: According to Collinder (1960:266—269 and 1965:111—112), the suffix **-ma* ~ **-mä* is used: (A) in Fennic, to denote a single instance of verb activity or the result of the action: cf. Finnish *jäämä* ‘remainder, rest’ (*jää-* ‘to remain’), *luoma* ‘creation, work’ (*luo-* ‘to create’), *repeämä* ‘rent, tear, rupture, breach, cleft’ (*repeä-* ‘to rend, to tear [tr.]; to be torn [in two]’), *vieremä* ‘cave-in; slip, slide; falling ground, fallen ground, fallen rocks’ (*vieri-* ‘to roll; to fall in, to give way; to fall down, to slide, to glide, to slip’), *voima* ‘strength, power’ (*voi-* ‘to be able, to have power, to know how to’); (B) in Finnish, derivatives in *-ma* ~ *-mä* often function as passive participles (with the agent in the genitive): cf. Finnish *ensimmäinen suomalainen kielioppi ruostesalaisen kirjoittama* ‘the first Finnish grammar was written by a Swede’; (C) in Lapp / Saami, the counterpart of Finnish *-ma* ~ *-mä* forms action nouns: cf. Lapp / Saami *ælem* ‘life’, *japmem* ‘death’, *kållem-pái’hke* ‘ford’ (*källe-* ‘to wade, to ford a river’ + *pái’hke* ‘place’), *saddjem* ‘whetstone’ (*saddje-* ‘to hone’). Mordvin has two suffixes: (A) **-ma* (without vowel harmony) and (B) **-mō* ~ **-mə*. Suffix (A) forms concrete nouns (cf. Erza *veškuma* ‘pipe, whistle’ [*veška-* ‘to whistle’], *čapavtuma* ‘ferment, leaven, yeast’ [*čapavto-* ‘to ferment, to make sour’]), while suffix (B) is found mainly in abstracts (cf. *simeme tarka* ‘drinking place’ [*sime-* ‘to drink’]). Suffix (A) also forms action nouns which function as passive participles and gerunds, as in *nilima* ‘(the activity of) swallowing, swallowed (participle), one must swallow’, whereas suffix (B) forms the infinitive. In Cheremis / Mari, *-m* suffixes form (A) deverbative nouns (cf. *koem* ‘woven ribbon’ [*koe-* ‘to weave’]), (B) action nouns, and (C) past participles in *-mō*, *-mə* (cf. *šūwər šoktəmā* ‘bagpipe playing’, *jōratəmā* ‘loved, beloved’, *komō* ‘woven’, *kaymə* ‘gone’). In Vogul / Mansi, *-m* suffixes form (A) action nouns and (B) participles (cf. *uuləm* ‘sleep’, *minəm* ‘gone [or going]’, *wäärəm* ‘made’). In Ostyak / Xanty, *-m* suffixes form (A) action nouns and (chiefly past) participles (cf. *uləm* ‘sleep, dream’, *mānəm* ‘gone’). *-m* suffixes are rare in Hungarian — a few examples include: *álom* ‘sleep’ (*al-* ‘to sleep’), *öröm* ‘joy, pleasure’ (*örül-* ‘to rejoice, to be glad’). In Yurak Samoyed / Nenets, *-ma*, *-me* form (A) action nouns (cf. *kaema* ‘[the act of] going [away]’) and (B) participles that function in passive constructions in the same way as Finnish participles in *-ma* ~ *-mä* (cf. *toondamaw jaw* ‘the place I covered’ [*toonda-* ‘to cover’, *-w* = 1st sg. personal ending]). Collinder also (1960:260) reconstructs Proto-Uralic **m* and notes: “[t]his is a typical stem determinative. It may be historically identical with the deverbative noun-formant **m...*” See also Raun 1988b:566: “Richly represented is the suffix **-mV* which has several meanings...” Note also Aikio (2022:19) **-mA* (general nominalizer).
- F. Altaic: A suffix *-m* is used to form verbal nouns in Turkic (cf. Greenberg 2000:172). This includes passives in *-ma/-me*, as in Turkish *yaz-ma* ‘written’ and *der-me* ‘collected, gathered together’, and the common infinitives in *-mak/-mek*, as in Turkish *bur-mak* ‘to twist’ and *sil-mek* ‘to wipe, to scrub, to plane, to rub down, to polish’. Décsy (1998:62—66) also lists Old Turkish (A) *-m* denominal substantive builder identical with the possessive ending first person singular in addresses and titles, (B) *-ma/-mä* rare deverbal substantive builder

(more frequently adjective), (C) *-ma/-mä* rare deverbal adjective builder, (D) *-maq/-mäq* deverbal substantive builder for abstract concepts, (E) *-maz/-māz* deverbal substantive builder for negative nouns used mainly in predicative function, (F) *-myr/-mur* rare deverbal substantive builder, (G) *-myš/-miš/-maš/-mäš*(*/-muš/-miš*) deverbal substantive builder for nouns used mainly in predicative function, tense-indifferent, active or passive, (H) *-ym/-im/-am/-ām* deverbal substantive builder, (I) *-maz/-māz* deverbal adjective builder, used as predicate noun in connection with negation, and (J) *-myš/-miš/-maš/-mäš*(*/-muš/-miš*) deverbal adjective builder used mainly as a predicate noun. In Mongolian, *-m* serves as the basis for several converb suffixes (cf. Poppe 1955:280—281): (A) Written Mongolian *-maγča*, Modern Mongolian *-may/-meg*, which indicates an action simultaneous with the main verb (cf. Mongolian *qaγurmaγ* ‘fraud, deceit’ from *qaγur-* ‘to deceive’ and *egedemeg* ‘a kind of sour dough’ from *egede-* ‘to become sour’) and (B) Buriat *-mγā*, Mongolian *-mγai*, Ordos *-maā*, Khalkha *-maā^uē/-mā^uē*, Kalmyk *-mγā*, which indicates the idea of the ability to perform the action in question (cf. Mongolian *surumγai* ‘able to learn’ from *sur-* ‘to learn’). In Tungus, this suffix is found in the simultaneous verbal participle in *-mi* as well as verbal nouns in *-ma* in Oroch and the Manchu verbal suffix *-me* indicating that the action is simultaneous with the main verb (cf. Greenberg 2000:172).

16.41. Nominalizer **-y-* (Greenberg: §38. Nominalizer I; see also Bomhard—Kerns 1994:169)

This suffix was a common nominalizer. In Afrasian, it could also be added to nominals to form attributives (adjectives). It was particularly productive in Indo-European.

- A. Afrasian: Ehret (1995:16) reconstructs an attributive deverbative and attributive noun suffix **y* (**-ay-*, **-iy-*) for Proto-Afrasian. He notes: “[t]his suffix can operate as a noun-forming deverbative in Semitic, Egyptian, Chadic, and Cushitic instances, but is also often added to nominals to form attributives — names of things having the attribute(s) of, or associated by location or resemblance with, the item named by the stem to which **y* is suffixed.” In Semitic, the suffixes *-īy* and *-āy* produce adjectives with the meaning ‘belonging to’: cf., for example, Arabic *ʿarḏīy* ‘terrestrial’; Akkadian *maḥrū* (< **maḥrīyu*) ‘first’; Biblical Aramaic *Kašdāy* ‘Chaldean’; Hebrew *Yəhūdī* ‘Jewish’; etc. (cf. Moscati 1964:83, §12.23; Lipiński 1997:223—225). In West Semitic, the prefix *ya-* is confined to the names of animals and (infrequently) plants: cf. Arabic *yaḥmūr* ‘a kind of antelope’, *yabrūḥ* ‘mandrake’ (cf. Moscati 1964:80, §12.15; Lipiński 1997:216). It is also used to form adjectives: cf. Arabic *yaḥmūm* ‘black’. In Egyptian, the suffix *-y* is used to form adjectives from nouns or to form prepositions: cf. (A) adjectives: *Hr Nḥny* ‘Horus of Nin’, *rsy* ‘southern’, *mhyty* ‘northern’; (B) prepositions: *īry* ‘relating to, connected

with', *hry* 'above', *imy* '(who is) in' (cf. Gardiner 1957:61—63, §§79—80). Like other adjectives, those ending in *y* are often used as nouns: cf. *hmy* 'steersman' (*hm* 'to steer'), *rhly* 'washerman' (*rht* 'to wash'), *shly* 'peasant' (cf. Gardiner 1957:63, §81). Ehret (1980:61—62) lists a great variety of Southern Cushitic noun suffixes in **-Vy-*: (A) noun singular suffixes: Proto-Southern Cushitic **-aya* > Iraqw, Burunge *-aya*, K'wadza, Asa *-aya*, Ma'a *-aye*, Dahalo *-aaja*; Proto-Southern Cushitic **-aye* > Iraqw, Burunge *-aye*, Ma'a *-aye*; Proto-Southern Cushitic **-ayi* (masculine) > Iraqw, Burunge, Alagwa *-ayi*, K'wadza *-ayi*, Ma'a *-(V)yi*; Proto-Southern Cushitic **-ayo* (masculine) > Alagwa *-ayo* (also *-ayu*), K'wadza, Asa *-ayo*, Dahalo *-ajo*, *-adzdo*; Proto-Southern Cushitic **-iya* (feminine) > Burunge, Alagwa *-iya*, K'wadza *-iya*, Asa *-iya* (also *-iya* plural suffix), Ma'a *-(y)e*; Proto-Southern Cushitic **-iye* (feminine) > Iraqw *-iye*, K'wadza *-iye*, Ma'a *-(i)ye*; Proto-Southern Cushitic **-iyo* (feminine) > Burunge *-iyo*, K'wadza, Asa *-iyo*, Dahalo *-ijo* (rare); Proto-Southern Cushitic **-oy-* > K'wadza *-oyi*, Asa *-oye*, Dahalo *-ooja* (rare); (B) noun plural suffixes: Proto-Southern Cushitic **-aye* > K'wadza *-aye*, Ma'a *-aye* in *gomaye* 'cloth' (which occurs in quantity rather than number); Proto-Southern Cushitic **-ayi* > Iraqw, Burunge *-ay*, Ma'a *-ai* in *ataakai* 'riddle'; Proto-Southern Cushitic **-ayu* > Asa *-ay-* in complex *-ayuko*, Ma'a *-ayu* in names of things that occur in mass/quantity, as in *šwayayu* 'dry grass', Dahalo *-aju* (frequent). Ehret (1980:62) also lists the following adjective suffixes: Proto-Southern Cushitic **-ayi* > K'wadza *-ayi*, Ma'a *-(V)yi*; Proto-Southern Cushitic **-iye* > Burunge *-i*, Ma'a *-(i)ye*.

- B. Dravidian: Krishnamurti (2003:199) reconstructs a Proto-Dravidian suffix **-ay* which was added to monosyllabic verb roots to form verbal nouns: cf. **wil-ay* 'price' (**wil-* 'to sell') > Tamil *vil-ai* 'selling, sale, price, cost' (*vil-* 'to sell'); Malayalam *vil-a* 'sale, price, value'; Kannada *bil-i*, *bel-e* 'price'; Kota *vel* 'price, cost'; Telugu *vel-a* 'price'; Kodagu *bel-e* 'cost'; Tuḷu *bil-è*, *bel-è* 'price, value, worth' (cf. Burrow—Emeneau 1984:492, no. 5421); **kaṭṭ-ay* 'dam' (**kaṭṭ-* 'to tie, to bind') > Tamil *kaṭṭ-ai* 'dam' (*kaṭṭu* 'to tie, to fasten, to build'); Kannada *kaṭṭ-e* 'structure of earth or stones to sit upon, embankment, dam, causeway'; Tuḷu *kaṭṭ-a* 'dam, embankment'; Naikri *kaṭṭ-a* 'bund of field, dam, dike'; Gondi *kaṭṭ-a* 'bund, embankment' (cf. Burrow—Emeneau 1984:108, no. 1147).
- C. Kartvelian: Klimov (1998:80) reconstructs Proto-Kartvelian **-ia* nominal diminutive affix (> Georgian *-ia*, Mingrelian *-ia*), while Fähnrich—Sardshweladse (1995:177) reconstruct Proto-Kartvelian **-i* nominal suffix (> Georgian *-i*, *-j*; Mingrelian *-i*; Laz *-i*; Svan *-i*, *-j*) — examples include: Georgian *k'ac-i* 'man', *saxl-i* 'house', *zma-j* 'brother'; Mingrelian *k'oč-i* 'man', *osur-i* 'wife'; Laz *k'oč-i* 'man', *inč'ir-i* 'elder'; Svan *mag-x-i* 'all, every', *jex-i* 'some', *č'alā-j* 'river, stream', *dā-j* 'sister-in-law, husband's sister'.
- D. Indo-European: A deverbal suffix **-i-* has been reconstructed for Proto-Indo-European (cf. Brugmann 1904:348—349; Burrow 1973:176—187; Greenberg 2000:167—168), while the suffix **-yo-* was commonly used to produce adjectives from verbal stems (cf. Brugmann 1904:318; Burrow 1973:185;

Lindsay 1894:318—321; Palmer 1980:254—255). Burrow (1973:185) notes specifically: “The suffix [*-yo-], originating in this way, became widespread at an early period producing adjectives meaning ‘belonging to..., connected with’.” We can cite a few examples from Sanskrit to illustrate the general patterning: cf. *div-yá-h* ‘heavenly’ (cf. Greek *ḗϊος* ‘god-like, divine’), *sat-yá-h* ‘true’, *grām-yá-h* ‘of the village’, *rāj-yá-h* ‘royal, regal’ (cf. Latin *rēgius* ‘royal, regal’), *som-yá-h* ‘relating to soma’, *pitr-ya-h*, *pītri-ya-h* ‘paternal’ (cf. Greek *πάτριος* ‘of or belonging to one’s father’, Latin *patrius* ‘of or relating to a father, fatherly, paternal’), *nár-ya-h* ‘manly’, etc.

- E. Uralic: Collinder (1960:264, §792, and 1965:110) reconstructs a Proto-Uralic deverbative suffix **-ya* ~ **-yā*, which “seems to have formed *nomina actoris* (*agentis*) and participles in PU”: cf. Finnish *ostaja* ‘purchaser’ (*osta-* ‘to buy, to purchase’); Lapp / Saami *puol’le* ‘burning’ (Southern *buollējē*), present participle of *puolle-* ‘to burn (intr.)’; Mordvin *palaj-* ‘kissing’, present participle of *pala-* ‘to kiss’; Yurak Samoyed / Nenets *taalej* ‘thief’ (*taale-* ‘to steal’), *jæhoraj* ‘lost’ (*jæhora-* ‘to lose’); Selkup Samoyed *sit’aj-* ‘liar’ (cf. Yurak Samoyed / Nenets *sijje-* ‘to lie, to tell lies’). Note also Aikio (2022:19) **-jA* (agent noun). In addition, Collinder (1960:257) reconstructs a Proto-Uralic formant **y*, noting that “it is impossible to say what function it had from the beginning”, but that, “[i]n some of the F[inno-] U[grian] languages, it occurs in diminutives or words with a tinge of familiarity (designations of near relatives, and the like)...” Décsy (1990:60—61) attributes the following functions to the suffix **-ya* ~ **-yā*: (A) denominal noun, (B) deverbal noun, (C) denominal verb, and (D) deverbal verb. According to Raun (1988b:566), in Proto-Uralic, “[t]he suffix **-jV* seems to have been used preferably to designate the actor.”
- F. Altaic: The deverbal suffixes *-yaq/-yäk*, *-ayaq/-äyäk* are found in Old Turkish (cf. Décsy 1998:65). However, they are extremely rare. Greenberg (2000:168) also notes that “[a]s a formative for verbal nouns *i* is also found in all branches of Altaic, although it is no longer productive in Mongolian (Ramstedt 1952, II: 100—2).” Likewise, Poppe (1955:264): “The verbal noun in **i* occurred in Common Altaic, cf. Turk. *qaršī* ‘obstacle, against’ (from *qarış-* ‘to resist’), *qonšu* ~ *qonšī* ‘neighbour’ (from *qonış-* ‘to spend nights together’), Tungus *sulī* ‘sharp, sharpened’ (from *sul-* ‘to sharpen’ e.g., a pencil), *degī* ‘bird’ (from *deg-* ‘to fly’), Korean *nophi* ‘height’ (from *noph-* ‘to be high’), etc.” For Mongolian, Poppe (1955:264) mentions that “[t]he primary suffix **i* still occurs in a few forms of verbal nouns, e.g., Mo. *ajisui* ‘approaching’ (as a predicate ‘he approaches’), *odui* ‘going away’ (‘he goes away’), *bui* ‘existence, existing’ (‘is’), *bolui* ‘he is, he becomes’, etc. The verb *bol-* occurs also in the form *bolaj* ‘he is’. In Pre-classical Written Mongolian and in Middle Mongolian more forms ending in *-i* occurred as predicates, e.g., Mo[ngolian] *kemegdej* ‘it is said.’” “Other petrified forms in *-i* are Mo[ngolian] *γaruī* ‘exceeding’, *darui* (Kh[alkha] *dar^ui*) ‘immediately’ (from *daru-* ‘to press’), Mo[ngolian] *bayurai* ‘weak, backward, underdeveloped’ (from *bayura-* ‘to become weak, to be in a state of decay, to go down’), etc.”

- 16.42. Nominalizer **-th-* (not in Greenberg 2000; but Greenberg does posit the following: §43. Passive Participle T; see also Hegedűs 1992b:41—42 **t-* suffix forming deverbal or denominal nouns, mainly abstracts; Dolgopolsky 2008, no. 2311, **ti* syntactic particle; it is combined with words of verbal meaning to build analytical nomina actionis; Bomhard—Kerns 1994:170); also see below: participle **-tha*.

- A. Afrasian: Ehret (1995:16—17) notes that a “noun formative in **t* is well attested all across the Afroasiatic family.” “It appears to have been especially productive in Egyptian, ... forming noun instruments, attributives, and complements from verbs as well as deriving nouns from other nouns of related or associatable meanings. This latter function has also been observed in Cushitic derivations...” Ehret (1995:17) also reconstructs an adjective suffix **t*. According to Ehret, this suffix “is prominent in Cushitic and is more weakly attested in Egyptian, Semitic, and apparently Omotic.” In Semitic, the suffixes *-ūt*, *-īt* produce abstract stems: (A) *-ūt*: Akkadian *šarrūtu* ‘kingship’, Hebrew *malχūth* ‘kingship’, Syriac *dayyūthā* ‘purity’, Geez / Ethiopic *hūrūt* ‘goodness’; (B) *-īt*: Hebrew *rēšīt* ‘beginning’, Punic *swyt* ‘curtain’, Syriac *ʿarawwīthā* ‘fever’, Biblical Aramaic *ʾaḥārīt* ‘end’ (cf. Moscati 1964:83, §12.24). The suffix *-āt* occurs in Geez / Ethiopic as well: cf. *naʾasāt* ‘youth’, *ḳadsāt* ‘holiness’. In Semitic, the prefixes *ta-/ti-/tu-* mostly produce nouns derived from verbal stems: cf. Arabic *tardād* ‘repeating’, *tibyān* ‘explaining’; Akkadian *tallaktu* ‘going’; Geez / Ethiopic *tafšām* ‘completing’; Ugaritic *trmmt* ‘offering’; etc. (cf. Moscati 1964:81, §12.17; Lipiński 1997:219—220). An infix *-t-* is also found in Akkadian and Amorite, where it is used to create adjectives with intensive meaning: cf. *gitmālu(m)* ‘perfect’, *pitluḥu(m)* ‘awful’ (cf. Lipiński 1997:220). Egyptian also forms nouns by means of a *t*-suffix: cf. *m-sdm-t* ‘black eye-paint’ (*sdm* ‘to paint [the eyes]’). Ehret (1980:53—55) lists a great variety of Southern Cushitic nominal suffixes in **-Vt-*: (A) noun singular suffixes in **-Vt-*: Proto-Southern Cushitic **-ata* > Iraqw, Burunge, Alagwa *-ata* (also Iraqw *-ate*), Ma’a *-ate*, Dahalo *-atta*; Proto-Southern Cushitic **-ati* > Iraqw *-(a)ti*, K’wadza *-ati*, Asa *-aš(i)*, Ma’a *-ati*, Dahalo *-aṭi*; Proto-Southern Cushitic **-atu* (masculine) > Alagwa *-atu*, K’wadza, Asa *-atu*, Ma’a *-atu*, Dahalo *-aṭu*; Proto-Southern Cushitic **-eete* > K’wadza *-et-* in complexes *-etuko*, *-etito*, Asa *-ete*, Dahalo *-eete*; Proto-Southern Cushitic **-eta*, **-eto* > Iraqw, Burunge *-ita*, K’wadza *-ita*, *-ito*, Asa *-ita*, *-ida*, Ma’a *-ito*, Dahalo *-iṭa* (cf. also *-iṭe*); (B) suffixes in **-Vt-* for deriving nouns from other nouns: Proto-Southern Cushitic **-eta* > Burunge *-eta*, Asa *-eta* suffix on both nouns and adjectives, Ma’a *-eta*; Proto-Southern Cushitic **-eto* > Iraqw *-eto*, K’wadza *-eto*, Asa *-et*, Ma’a *-eto*, Dahalo *-etto*; Proto-Southern Cushitic **-ota* > Asa *-ota* in *ʾajota* ‘day’ (< **ʾaj-* ‘sun’), Ma’a *-ota* in *kadota* ‘perhaps’ (< **kaḳ-* ‘then’); (C) noun particularizing suffixes in **-Vt-*: Proto-Southern Cushitic **-itu* (masculine ?) > Iraqw *-itu*, *-it-* in *-itoʾo* feminine particularizing suffix, Burunge *-itu*, Asa *-Vt-* in complex *-Vtok*, *-Vtuk*, Ma’a *-(i)tu*, Dahalo *-ittu* singular of ethnic names (Ehret notes that the use of **-itu* to singularize ethnic

names probably goes back to Proto-Southern Cushitic since that usage also turns up in West Rift in *Iraqutu* ‘one Iraqw person’); Proto-Southern Cushitic *-otu > Burunge -otu, Dahalo -ottu; (D) adjective suffixes in *-Vt-: Proto-Southern Cushitic *-ate > Iraqw, Alagwa -at, Burunge -adi, K’wadza -at(i)-, Asa -aš(i), Ma’a -a, Dahalo -ate; Proto-Southern Cushitic *-ite (rare) > Iraqw -it, Burunge -d in *qadayd* ‘bitter’ (**qadayit*-), Dahalo -iite in *mbiite* ‘bad’; (E) plural suffixes in *-Vt-: Proto-Southern Cushitic *-ata > Iraqw -ta in *qarta*, plural of *qari* ‘age-mate’, -t adjective plural, K’wadza -ata, Asa -at- in complexes of the form -atVk, Dahalo -Vtta; Proto-Southern Cushitic *-etu > K’wadza -etu, Dahalo -ettu; Proto-Southern Cushitic *-ota > Asa -ot- in complexes -otVk, Dahalo -Vtta; Proto-Southern Cushitic *-uta > Asa -ut, Dahalo -Vtta.

- B. Elamo-Dravidian: Note the Elamite derivational suffix -t(e) (cf. Khačikjan 1998:12; Grilhot-Susini 1987:14): cf. *hal-te* ‘door’, *hala-t* ‘brick’, *Haltam-ti* ‘Elam’, *Nahhun-te* ‘Sun’. Krishnamurti (2003:199) reconstructs two Proto-Dravidian compound deverbal suffixes: (A) *-t-al/*-tt-al and (B) *-t-am, which are added to roots ending in *-t-: cf., for example, Tamil *ōttu* (< *ōt+t-; cf. *ōtu* ‘to run [intr.]’) ‘to cause to run (tr.)’, *ōt-t-am* (< *ōt+t-am) ‘running’; cf. also Kannada *kūt-am* (< *kūt+t-am; cf. *kūdu* ‘to join’) ‘union’, *pāt-am* (< *pāt+t-am; cf. *pādu* ‘to sing’) ‘song’. Krishnamurti (2003:200) also reconstructs two other Proto-Dravidian complex noun formatives: (A) *-am+tt-am (cf. Tamil *opp-antam* ‘agreement, contract, unanimity’; Malayalam *opp-antam* ‘agreement, contract’; Kannada *opp-anda* ‘agreeing, agreement, contract’; Telugu *opp-andamu* ‘contract, agreement’; Tulu *opp-anda* ‘agreement, contract, treaty’) and (B) *-t+al+ay (cf. Telugu *oppu-dala* ‘agreement’; Kannada *tavu-dale* ‘destruction’ [cf. *tavu* ‘to decrease’]). These are obviously extensions of the *-t- nominalizer under discussion here.
- C. Kartvelian: Klimov (1998:46) reconstructs Proto-Kartvelian *-et toponymic suffix. It is found mostly in the names of villages and regions: cf. Georgian -et-toponymic suffix as in: *Kvirik-et-*, *Tuš-et-*, *žoxox-et-* ‘hell’; Mingrelian and Laz -at- toponymic suffix as in: *Zan-at-*, *Max-at-*; etc. Cf. also Fähnrich—Sardshweladse 1995:121; Fähnrich 1994:240 and 2007:146—147.
- D. Indo-European: Nominal/adjectival-forming suffixes in *-th- are extremely productive in Indo-European. For details, cf. Brugmann 1904:315 (*-ent-, *-nt-, *-nt-), 317—318 (*-to-), 321 (*-tero-), 322 (*-is-to-, *-tmmo-), 325 (*-to-), 326 (-tmo-, *-tno-), 330—331 (*-(t)er-, *(t)or-, *(t)r-, *(t)g-), 332—333 (*-ter-, *-tor-, *-tr-, *-tg-), 334—335 (*-tro-, *-ter-, *-tor-, *-trā-), 335 (*-tro-), 344—345 (*-to-, *-tā-), 348—349 (*-ti-s), 349—350 (*-tu-s), 350 (*-tāti-, *-tāt-, *-tūti-, *-tūt-); Burrow 1973:164—173. According to Burrow (1973:164), “[i]ts original function as one of the primary neuter suffixes is seen most clearly when it serves as an extension of the neuter r- and n- stems, e.g. in Skt. *śákṛt*, *yákṛt* and in Gk. *χειμα*, gen. sg. *χειματος* ‘winter’ (but the corresponding -nt- stem in Hittite, *gimmant-* ‘winter’, is common gender). Similarly the primitive suffix t on which the suffix -t-ar has been built may be presumed to have been neuter. Apart from this there remain in the various

languages a few sporadic instances of a neuter suffix *t*: Skt. *pṛśat-* ‘drop’, *upatā-pat-* ‘fever’; Gk. μέλι (for *μέλιτ), Hitt. *milit* ‘honey’; Gk. γάλα, γάλακτος, Lat. *lac*, *lactis* ‘milk’; Lat. *caput* ‘head’.” Examples from Sanskrit include: (A) adjectives in *-*tho-s*: *darśatā-h* ‘visible’ (cf. Greek ὀδερκτος), *trṣṭā-h* ‘rough’, *śyetā-h* ‘white’; (B) action nouns in *-*thi-s*: *kṣīti-ṣ* ‘destruction’ (cf. Greek φθίσις), *ā-huti-h* ‘oblation’ (cf. Greek χύσις), *pluti-h* ‘floating’ (cf. Greek πλύσις), *tati-h* ‘stretching, row’ (cf. Greek τάσις); (C) agent nouns in *-*thi-s*: *jñātī-h* ‘relation’ (cf. Lithuanian *gentis*), *sāpti-h* ‘steed’, *srutī-h* ‘flowing’ (cf. Greek ρύσις), *rātī-h* ‘liberal’, *sthapāti-h* ‘governor; architect’; (D) neuters in *-*thu-*: *vāstu* ‘abode’ (cf. Greek [F]άστν ‘city’), *dātu* ‘division’, *vāstu* ‘thing’, *māstu* ‘sour cream’; (E) masculines in *-*thu-s*: *dhātu-h* ‘element’, *sōtu-h* ‘libation’; (F) agent nouns and adjectives in *-*thu-s*: *māntu-h* ‘councilor’, *tapyatū-h* ‘glowing’; (G) neuters in *-*thwo-s*: *devatvā-h* ‘divinity’; (H) *-*thāt-*: *devātāt-* ‘godliness’, *sarvātāt-* ‘completeness’ — the same suffix appears in Avestan (cf. *haurvatāt-* ‘wholeness’), Greek (cf. βαρύτης ‘heaviness’), and Latin (cf. *civitas* ‘citizenship’); etc. The specialized use of *-*tho-* as a participle ending will be discussed below.

- E. Uralic: According to Collinder (1960:271 and 1965:115), **t* was used to form infinitives and participles in Fennic, Lappish, Ob-Ugric, and Samoyed: cf. Finnish (lative) *juota* (dial. *juotak*) ‘to run’; Lapp / Saami (Lule) (infinitive) *mannat* ‘to go’; Ostyak / Xanty infinitive ending *-taǵə* (this may be identical with the ending *-ta[k]* ~ *-tä[k]* of the Finnish [lative case of the] infinitive); Yenisei Samoyed / Enets (Baiha) *jebide* ‘drunk’ (*jebi-* ‘to be drunk’). Décsy (1990:65) reconstructs Proto-Uralic *-*tya*/*-*tyä* used to form denominal nouns and deverbal verbs. For the Proto-Uralic suffix *-*ta*/*-*tä*, he (1990:64—65) attributes denominal verbal and deverbal verbal functions.
- F. Altaic: Décsy (1998:62—66) lists various Old Turkish denominal *t*-suffixes: (A) *-t* denominal substantive builder, (B) *-ta/-tä* very rare adjective builder, and (C) *-t(-yt/-ut/-üş)* deverbal substantive builder. Turkic denominal *t*-suffixes are also discussed by Menges (1968b:159 and 163): cf. Uighur *boşyu-t* ‘teaching’ (**boşyu-* in *boşyu-n-* ‘to learn’), *ur-un-t* ‘offense’ (*ur-un-* ‘to fight’); Chagatay *bin-üt* ‘riding animal’ (*bin-* ‘to mount’). Manchu has the nominalizing suffixes *-ta* and *-tai* (cf. Sinor 1968:261): cf. *ilate* ‘three by three’ (*ilan* ‘three’), *šanggatai* ‘finally, indeed, actually; fully at an end, thoroughly completed’ (*šangga-* ‘to come to an end, to terminate successfully, to finish’, *šanggan* ‘completion, accomplishment’).

16.43. Nominalizer *-*n-* (not in Greenberg 2000; but Greenberg does posit the following: §42. Passive Participle N; Illič-Svityč 1971—1984.I:16 *-*na*; see also Bomhard—Kerns 1994:170; Hegedüs 1992b:37—41 *-*na*: formative of verbal and relative constructions); see below: participle *-*na*.

- A. Afrasian: According to Ehret (1995:17—18), “[a]nother nasal, **n*, also functioned as an attributive suffix, but its scope more closely paralleled that of

the *y attributive (q.v.). Like *y, it appears frequently to have produced adjectives from verbs or nouns. It is known from all branches of the family. Its Semitic reflex appears to have been *-ān. In Semitic, the suffix *-ān is used to create (A) verbal nouns or abstracts (cf. Arabic *ṭayarān* ‘flight’; Hebrew [**pitṛān* >] *piṭrōn* ‘interpretation’; Syriac *puḫḫānā* ‘order’; Epigraphic South Arabian *ʔḥwn* ‘brotherhood’; Geez / Ethiopic *rəšān* ‘old age’); (B) adjectives (cf. Arabic *sakrān* ‘intoxicated’; Hebrew [**kadmān* >] *kaḏmōn* ‘eastern’; Syriac *ʔarʿān* ‘terrestrial’); and (C) diminutives (cf. Arabic *ʿaḫrabān* ‘little scorpion’; Hebrew [**ʔišān* >] *ʔišōn* ‘[little man >] pupil [of the eye]’; Akkadian *mīrānu* ‘little animal’) (cf. Moscati 1964:82, §12.21; Lipiński 1997:221–223). In Akkadian, prefix *n-* either (A) alternates with prefix *m-*, in which case it cannot be considered an independent category, or (B) is used to derive deverbal nouns (cf. *namungatu* ‘paralysis’, *nalbubu* ‘enraged’, etc.) — a possible non-Akkadian example may be found in Ugaritic *nblāt* ‘flames’ (cf. Moscati 1964:81–82, §12.19; Lipiński 1997:218–219). Ehret (1980:55–56) lists several Southern Cushitic nominal suffixes in *-*Vn-*: (A) noun singular suffixes in *-*Vn-*: Proto-Southern Cushitic *-*ana* > Burunge -*ana*, Iraqw -*an* adjective suffix, K’wadza -*an-* in complex -*aniko*, -*an-* adjective suffix, Asa -*ana*, Ma’a -(*a*)*na*, -(*a*)*ne*, Dahalo -*ana*, -*anna*; Proto-Southern Cushitic *-*ano* (feminine) > Iraqw -*ano*, Dahalo -(*a*)*no*; Proto-Southern Cushitic *-*eno* > Iraqw, Burunge -*eno* (also -*ino*), Alagwa -*inu*, Asa -*en(D)-* in complex -*endet* (also -*ena*), K’wadza -*ino*, Ma’a -(*e*)*no* (also -(*e*)*nu*), Dahalo -*eno* (cf. also -*eeni*); Proto-Southern Cushitic *-*ina* > Burunge -*ina*, Dahalo -*ina* (cf. also -*iini*); Proto-Southern Cushitic *-*oni* > Iraqw -*oni*, Dahalo -*oni*; Proto-Southern Cushitic *-*ona* > Burunge -*ona*, Alagwa -*onda* (also -*ono*), Dahalo -*ona* (also -*una*); (B) plural suffixes in *-*Vn-*: Proto-Southern Cushitic *-*ena* > Iraqw, Burunge -*en* adjective plural, Iraqw -(*V*)*na*, K’wadza -*Vn-* in complexes -*VnVk-*, -*en(D)-* in complex -*endayo*, Asa -*Vn(D)-* in complexes -*VndVk*, Ma’a -*ena*, Dahalo -*eena*; Proto-Southern Cushitic *-*eno* > Burunge -*eno*, K’wadza -*Vn-* in complexes -*VnVk-*, -*en(D)-* in complex -*endayo*, Asa -*Vn(D)-* in complexes -*VndVk*, Ma’a -*no* suffix attached to nouns indicating a great number or quantity.

- B. Elamo-Dravidian: Elamite had the following derivational suffixes: -*in*, -*un*, -*n*. “These suffixes were part of neutral nouns with a weakly expressed abstract meaning, often connected with building or locality...” (cf. Khačikjan 1998:12): cf. Elamite *muru-n* ‘land’, *siya-n* ‘temple’, *huhu-n* ‘wall’, *Šuša-n* ‘Susa’, *šati-n* ‘priest’. According to Krishnamurti (2003:307), “Old Tamil is said to have -*un/-n-* used as adjectival formatives, followed by personal suffixes in deriving predicative nouns in the third human plural, e.g. *ceppu-n-ar* ‘those who tell’, *varu-n-ar* ‘those who come’, *turakk-un-ar* ‘those who renounce’, *i-n-ar* ‘those who give’, etc.”
- C. Kartvelian: Proto-Kartvelian *-*na-* word-formation affixes of the past participle > Georgian *na-* (as in *na-p’arev-* ‘stolen’, *na-t’ex-* ‘broken, broken off’, *na-šob-* ‘born’); Mingrelian *no-*; Laz [*no-*]; Svan *na-*. Proto-Kartvelian *-*ne-* word-forming prefix > Georgian [*ne-*] (as in *ne-zv-* ‘female of small livestock’, *ne-k’erčxal-* ‘maple tree’, *ne-rg-* ‘sapling, seedling’, *ne-rc’q’v-* ‘saliva, spittle’, *ne-*

st'o- 'nostril'); Mingrelian [*na-*]; Laz [*na-*]; Svan [*ne-*, *nä-*]. Proto-Kartvelian **ni-* word-forming prefix > Georgian [*ni-*] (as in *nī-k'ap'* 'chin'); Mingrelian [*ni-*]; Laz [*ni-*]; Svan [*ni-*]. Cf. Klimov 1998:136, 140, and 142; Fähnrich—Sardshweladse 1995:259, 262, and 265; Fähnrich 1994:240 and 2007:312, 316, 320. Hegedüs (1992b:40) also mentions Georgian *-n-* element of adjective-forming suffixes, as in *c'ver-ian-i* 'bearded'. Note also Fähnrich (2007:36) and Fähnrich—Sardshweladse (1995:34) Proto-Kartvelian **-an* derivational affix > Georgian *-an* (in the combinations *-ev-an*, *-e-an*, *-i-an*, *-ov-an*, *-os-an*); Mingrelian *-on*; Laz *-on*.

- D. Indo-European: **-n-* suffixes figure prominently in nominal derivation in Indo-European. For details, cf. Brugmann 1904:315 (**-ent-*, **-nt-*, **-nt-*), 316 (**-meno-*, **-mno-*), 316—317 (**-n-*: **-eno-*, **-ono-*, **-no-*), 325 (**-no-*), 325—326 (**-ino-*, **-īno-*), 326 (**-tino-*, **-tno-*), 338 (**-ino-*, **-eino-*), 339—340 (**-en-*, **-on-*), 345 (**-no-*, **-nā-*), 347—348 (**-men-*), and 349 (**-ni-s*); Burrow 1973:127—158 (Burrow discusses **-r-* and **-n-* formations together). Examples include: (A) Proto-Indo-European **-en-th-/*-on-th-/*-n-th-/*-n-th-*: Sanskrit *sánt-*, *sát-* 'being', *bhárant-*, *bhárat-* 'bearing'; Greek (Doric) *ἔντ-εσ* 'being', *φέρων* (-οντος) 'bearing'; Latin *-sēns* in *prae-sēns* 'being before, presiding over', *ferēns* 'bearing'; Gothic *bairands* 'bearing'; (B) Proto-Indo-European **-me-no-*, **-m-no-*: Sanskrit middle passive participle *-māna-* in, for example, *bódha-māna-h* (cf. *bodhāti* 'is awake, observes, notices, understands', root: *budh-*); Greek middle passive participle *-μενο-* in, for example, *πυθόμενο-* (cf. *πύθομαι* 'to learn of, to hear of'); Latin *fē-mina* 'woman, female' (that is, 'she who suckles'); (C) Proto-Indo-European: **-e-no-/*-o-no-/*-no-*: Sanskrit *dā-na-m* 'the act of giving; donation, gift', *bhāra-ṇa-m* 'the act of bearing'; Latin *dō-nu-m* 'gift'; Gothic (inf.) *baira-n* 'to bear', *fulg-in-s* 'hidden'; Old Church Slavic *nes-enъ* 'borne'; (D) Proto-Indo-European **-no-*: Sanskrit *pūr-ṇa-h* 'filled, full', *sváp-na-h* 'sleep, dream', *rac-ana-m* 'an arranging, regulating'; Avestan *kaēnā* 'punishment'; Gothic *fulls* (< **ful-na-z*) 'filled, full'; Lithuanian *pil-na-s* 'filled', *vār-na-s* 'raven'; Greek *ποινή* 'requit, punishment, reward', *ἔδ-από-ν* 'food'; Latin *plē-nu-s* 'full', *som-nu-s* 'sleep'; Old Irish *lā-n* 'full'; (E) Proto-Indo-European **-i-no-*, **-ī-no-*: Sanskrit *dāks-īna-h* 'right, able, dexterous', *aj-īna-m* 'skin', *mal-iná-h* 'spotted'; Greek *φίγ-ινο-* 'beech-like', *ἄνθ-ινο-* 'consisting of flowers'; Lithuanian *áuks-ina-s* 'golden', *med-ini-s* 'wooden'; Latin *fibr-īnu-s* 'of or belonging to the beaver', *capr-īna* 'goat's flesh'; (F) Proto-Indo-European **-th-ṇno-*, **-th-no-*: Latin *diū-tinu-s* 'lasting a long time', *prīs-tinu-s* 'former, previous, earlier'; Sanskrit (adv.) *pra-tná-h* 'former, old', *nū-tna-h*, *nū-tana-h* 'present', *prātas-tāna-h* 'in the morning, early'; Lithuanian *bū-tina-s* 'being, remaining, actual'; (G) Proto-Indo-European **-ni-s*: Sanskrit *agnī-h* 'fire'; Latin *ignis* 'fire'; Lithuanian *ugnīs* 'fire'; Old Church Slavic *ognъ* 'fire'. The specialized use of **-no-* as a participle ending is discussed below.
- E. Uralic: Collinder (1960:262 and 1965:108) reconstructs a Proto-Uralic **n*, which "seems to have been a stem determinative in C[ommon] U[ralic]": cf. Votyak / Udmurt *viznan* (= *vizan*) 'fishhook'; Mordvin diminutive suffixes *-nie*,

-*ñe* in, for example, *kine* diminutive of *ki* ‘path, track’; Zyrian / Komi (diminutive) *lunan* (= *lun*) ‘day’; Hungarian *vadon* ‘wilderness’ (*vad* ‘wild’, [earlier] ‘forest’); Yurak Samoyed / Nenets *jehōōna* ‘sturgeon’; Tavgi Samoyed / Nganasan *bakunu* ‘back’; Yenisei Samoyed / Enets *behana* ‘back’; Kamassian *bagyn* ‘back’; etc. According to Décsy (1990:62–63), the suffix **-na/*-nā* formed denominal nouns, deverbal nouns, and deverbal verbs in Proto-Uralic, while the compound suffix **-nya/*-nyä* formed denominal nouns, and the compound suffix **-nta/*-ntä* formed denominal nouns, deverbal nouns, and deverbal verbs.

- F. Altaic: According to Décsy (1998:62), the suffix *-an/-än* is used as a “denominal substantive builder expressing familiarity and emotion/affection in relationship” in Old Turkish. He also (1998:65) lists the Old Turkish suffix *-yn/-in/-ün* used as a “deverbal substantive (also adjective) builder, rare.” A suffix **-n* is found in numerous verbal nouns throughout Altaic: cf. Written Mongolian *singen* ‘liquid, fluid’ (from *singe-* ‘to be absorbed’); Turkish *bütün* ‘whole, entire, complete’ (from *büt-* ‘to end, to be completed’), *akın* ‘current’ (from *ak-* ‘to flow’); etc. (cf. Poppe 1955:262). In Mongolian, the primary suffix **-n* occurs only as an ending of the *converbum modale*, as in: Mongolian *uᠰsin* ‘reading’; Middle Mongolian *üžen* ‘seeing’; Monguor *dāran dāran* ‘freezing’ (it is always reduplicated); Dagur *ul sonsoᠭ* ‘not listening’; Ordos *meden* ‘knowing, knowingly’; Buriat *ūᠭ* ‘drinking’, *χaraᠭ ugī* (< negative **ügei*) ‘not looking’; etc. (cf. Poppe 1955:263).

- 16.44. Nominalizer **-l-* (not in Greenberg 2000; but Greenberg does list the following: §45. Gerundive-Participle L; Illič-Svityč 1971–1984.II:20–21, no. 253, **-la* adjectival suffix; see also Hegedüs 1992b:35–37 **-la*: suffix of adjectives; Bomhard–Kerns 1994:169); see below: gerundive-participle **-la*.

- A. Afrasian: Ehret (1995:18) reconstructs two **l* suffixes for Proto-Afrasian: (A) **l* attributive and complement deverbative suffix and (B) adjective suffix. He notes that “[a] noun-deriving suffix turns up widely in Afroasiatic with a variety of effects. In pre-proto-Semitic (pPS) it can be proposed to have been a noun-patient and noun-complement formative (Ehret 1989: Table 13a). Examples of the suffix in Egyptian seem often to go with attributive nouns or noun complements, while a similar function may [have] existed in Chadic ... and in Cushitic. In Cushitic, **l* became especially prominent as a suffix in animal names, probably because such names not infrequently derive from roots descriptive of the animals’ attributes, i.e., their appearance or behavior. Like **y* and **n*, **l* became important as an adjective-forming suffix...”

In his study of the origin of third consonants in Semitic roots, Ehret (1989:134) notes: “The consonant **l* can also occur in C₃ position in verbs of two other kinds, durative and essive/inchoative. The durative cases can co-occur with nouns having the same three consonants and a complementive

meaning, thus appearing to be verb derivatives of original nouns. The essive/inchoative verbs in **l* can plausibly be explained as derivatives in parallel fashion from earlier adjectives, although coexistent adjectives are harder to find; thus the case that can be made for this proposition is weak if one relies on Semitic evidence alone. But in Cushitic both noun and adjective suffixes in **l* can be reconstructed, and the essive/inchoative examples of **l* as C₃ have provisionally been attributed here to pre-P[roto]-S[emitic] adjectives, widely converted to verbs in Semitic.” Arabic examples cited by Ehret include: *ʔaml* ‘to hope, to hope for’ ~ *ʔamal* ‘hope’; *maʃl* ‘to drip’ (presumed derivation from a no longer existent noun ‘drip, drop’); *tuʃul* ‘to decline toward setting’ ~ *taʃal* ‘time between afternoon and sunset, twilight’; *maʕl* ‘to hasten, to urge to haste’ ~ *maʕil* ‘quick, fast, swift’; *maʔl* ‘to prolong, to stretch, to lengthen, to delay, to defer’ (presumed derivation from a no longer existent adjective ‘long, lengthy’); *haml* ‘to be bathed in tears, to shed tears in profusion, to flow, to rain steadily and uniformly’ (presumed derivation from a no longer existent adjective ‘drenching, flowing steadily’ or from a noun ‘flow, outflow’); etc.

- B. Dravidian: Krishnamurti (2003:199) reconstructs a Proto-Dravidian deverbal suffix **-al*: cf. Proto-Dravidian **keʔ-al* ‘evil’ > Tamil *keʔal* ‘evil’ (cf. *keʔu* ‘to perish, to be destroyed, to decay, to rot, to become damaged, to degenerate; to destroy, to damage, to spoil, to defeat’); Proto-Dravidian **kūt-al* ‘joining (intr.)’, **kūtʔ-al* ‘uniting (tr.)’ > Tamil *kūʔal* ‘joining, sexual union’, *kūtʔal* ‘uniting’ (cf. *kūʔu* ‘to come together, to join, to meet’); Kannaḍa *kūḍal* ‘state of being joined with or endowed with, junction’; Telugu *kūḍali* ‘joining, meeting, junction’; Proto-Dravidian **enk-al* ‘left-over food’ > Tamil *eñcal* ‘defect, blemish, extinction’ (cf. *eñcu* ‘to remain, to be left behind, to survive, to lack, to be deficient, to be spoiled, to be marred, to transgress’); Malayalam *eccil*, *iccil* ‘remains and refuse of victuals’; Kannaḍa *eñjal* ‘left-over food’; Telugu *engili* ‘left-over food’; Koḍagu *ecci* (with loss of *-l*) ‘scraps of food that fall on the floor during a meal’; Tamil, Malayalam, Kota *añc-al* ‘fear’; etc.
- C. Kartvelian: In Kartvelian studies, the Arabic term “masdar” is used to indicate the verbal noun in preference to “infinitive” (cf. Hewitt 1995:423). There are a number of masdar forms involving *l* that belong here (see below, under gerundive-participle **-la*, for details; see also Hegedüs 1992b:35). Note also Fähnrich—Sardshweladse (1995:122) Proto-Kartvelian **-el* derivational affix > Georgian *-el* (as in *sax-el-i* ‘name’, *qʷ-el-i* ‘cheese’, *grʒ-el-i* ‘long’, *tx-el-i* ‘thin’); Mingrelian *-al*, *-a*, *-e*, *-u* (as in *ʔv-al-i* ‘cheese’); Laz *-al*, *-a*, *-e*, *-u* (as in *qʷ-al-i* ‘cheese’); Svan *-el*, *-e*, *-o* (as in *dətx-el* ‘thin’); etc.
- D. Indo-European: The suffix **-lo-* was used to create denominal and deverbal adjectives in Proto-Indo-European: cf. Sanskrit *bahu-lá-h* ‘thick, dense, wide, abundant’; Latin *simi-li-s* ‘like, resembling, similar’; Greek *μεγά-λο-ς* ‘big, great’, *χθαμα-λό-ς* ‘near the ground, on the ground, flat’, *ὅμα-λό-ς* ‘even, level; equal’, *πῖα-λο-ς* ‘fat, plump’. This suffix was also used to create nominal stems: cf. Latin *legulus* ‘a picker’ (*legō* ‘to collect, to gather together, to pick’), *nebula* ‘vapor, fog, mist’, *vinculum* ‘a band, cord, chain’ (*vinciō* ‘to bind, to tie round’); Greek *νεφέλη* ‘a cloud’ (*νέφος* ‘a cloud’). Finally, it was used to form

- diminutives: cf. Latin *mensula* ‘a little table’ (*mensa* ‘table’). For details, cf. Burrow 1973:148; Brugmann 1904:327—328, 333, 334, 335, and 338; Hegedüs 1992b:35; Lindsay 1894:331—334.
- E. Uralic: Collinder (1960:259 and 1965:106—107) reconstructs a Proto-Uralic suffix **l* used (A) to create substantives from substantives, (B) adjectives from substantives, and (C) adjectives from adjectives: cf. Finnish *käpälä* ‘paw’ (cf. Estonian *käpp* ‘paw’), *vetelä* ‘fluid, liquid, loose’ (*vesi/vete-* ‘water’); Lapp / Saami *njoammel* ‘hare’; Mordvin *numolo* ‘hare’; Votyak / Udmurt *lunal* ‘day’ (cf. Zyrian / Komi *lun* ‘day’), *jumal* ‘sweet, unleavened’; Zyrian / Komi *jumol* ‘sweet, sweetish’, *gördol* ‘reddish’ (*görd* ‘red’); Hungarian *hangyál* ‘ant’; Tavgi Samoyed / Nganasan *ŋamtalaa* ‘horned’ (*ŋamta* ‘horn’); Selkup Samoyed *mogal* ‘vertebra’ (*mog* ‘back, spine’); Kamassian *kaadel* ‘face’ (cf. Yurak Samoyed / Nenets *sææ?* ‘face’); etc. Décsy (1990:61—62) sets up a Proto-Uralic suffix **-la/*-lä*, which was used to form: (A) denominal nouns, (B) deverbal nouns, (C) denominal verbs, and (D) deverbal verbs. Hegedüs (1992b:37) cites the following examples from Yukaghir: *tadil* ‘giving’ (*tadik* ‘give!’), *wuel* ‘doing’ (*wiek* ‘do!’).
- F. Altaic: As noted by Hegedüs (1992b:35—36), “this morpheme is also attested in the Tungus branch as **-la* forming deverbal nouns and adjectives. It was retained in all Tungus languages either in the original form or in a slightly modified form, cf.: Evenki *olgorilän* ‘jealous’ (*olgori-* ‘to be jealous’), Evenki *ikēlen* ‘singer’ (*ikē-* ‘to sing’), Evenki *soktomola* ~ *soktomula* ‘drunken’ (*soktomu-* ‘to get drunk’), Solon (no longer productive) *urilē* ‘family; courtyard’ (*urīn-* ‘to stop [of nomads]’), Negidal *gojalan* ‘apt to butt’ (*goja-* ‘to butt’), Olca [Olch] *vāčila* ‘barking dog’ (*vači-* ‘to bark’), Orok *jājala* ‘singer’ (*jaja-* ‘to sing’), Nanaj *herkele* ‘strap’ (*herke-* ‘to fasten’), etc.” Greenberg (2000:189) briefly mentions that *-l* forms nouns and adjectives from verbs in Orkhon Turkish. Décsy (1998:62—64) also lists Old Turkish (A) *-l* denominal adjective builder, (B) *-la/-lä* rare adjective builder, mainly in words which stand in predicate, (C) *-al/-äl/-yl* deverbal substantive builder, (D) *-lay/-lög* denominal substantive builder, (E) *-lyγ/-lig* denominal substantive (nomina possessoris) builder, (F) *-lyq/-lik/-luk/-lük* denominal substantive (concrete and abstract) builder, and (G) *-lyγ/-lig* adjective builder, provided with something (nomina possessoris). Note here Azerbaijani *-li*, which is used to derive adjectives from nominal stems, as in *atli* ‘provided with a horse, horseman’ (*at* ‘horse’). In Azerbaijani, there is a multifunctional suffix *-lik*, which is used to form abstracts (cf. *yağsiliğ* ‘goodness’ [*yağši* ‘good’]), professions (cf. *müəllimlik* ‘profession of a teacher’ [*müəllim* ‘teacher’]), and nouns of location and instrument (cf. *kömürlük* ‘coal cellar’ [*kömür* ‘coal’], *gözlük* ‘glasses’ [*göz* ‘eye’]). There is also a homophonous suffix *-lik* in Azerbaijani, which is used to form adjectives meaning ‘good for..., concerning...’ (cf. *aylig* ‘for a month’ [*ay* ‘month’], *bizlik* ‘concerning us’ [*biz* ‘we’]). West Kipchak has the denominal suffix *-lXK*, *-lUK* (cf. *arqunluq* ‘slowness, gentleness’, *aruwliḡ* ‘purity’, *bazliq*, *baziliḡ*, *bazlux* ‘peace’, *oyurlux* ‘theft’). In Turkmenian, the multifunctional suffix *-lik* is used to create abstract nouns (cf. *doθilux*

‘friendship’ [*doθt* ‘friend’]), place nouns (cf. *dašliq* ‘stony place’ [*daš* ‘stone’]), and collective nouns of numerals (cf. *bæšlik* ‘unit of five’). There is also a homophonous suffix *-LIK*, which is used to form adjectives meaning ‘intended or suitable for’ (cf. *donluq mata* ‘material for clothing’). One of the most frequent adjective suffixes is *-li* (cf. *θowatli* ‘with document’ [*θowat* ‘document’]). Note the Tatar suffixes *-lĕ* (cf. *aqılĭq* ‘clever’, *köçlŏ* [= *köslŏ*] ‘strong’) and *-lĕk* (cf. *süzlĕk* [= *hüðlĕk*] ‘dictionary’, *yĕğĕtlĕk* ‘bravery’, *küplĕk* ‘multitude’). In Kazakh, the suffix *-LIK* is used to form nouns and adjectives from noun stems (cf. *qalalıq baq* ‘municipal park’), while *-LI* forms adjectives from nouns (cf. *muñdı* ‘sad’ [*muñ* ‘sadness’]). The suffix *-LAs* (which corresponds to *-DAš* in several other Turkic languages) is used to denote fellowship (cf. *žerles* ‘countryman’ [*žer* ‘land’]). Hegedüs (1992b:37) also briefly mentions the Turkic suffixes *-ly*, *-lyk* and notes that Menovshchikov compared them with Eskimo *-lyk*. She assumes that both the Turkic and Eskimo suffixes ultimately go back to a common Nostratic source.

- G. Eskimo: Hegedüs (1992b:37) compares Eskimo *-lyk*, suffix forming nomina possessoris with attributive-predicative and substantive features. She cites the following examples: (A) Greenlandic Eskimo: *tungalik* ‘having juice’ (*tungo* ‘juice’), *sakulik* ‘armed’ (*sako* ‘weapon’); (B) Alaskan Eskimo: *qayalik* ‘having a kayak’ (*qayaq* ‘kayak’), *awiyatalik* ‘place with a lot of shrubs’ (*awiyak* ‘shrubbery’), *moqtalik* ‘place rich in water’ (*moq* ‘water’).

- 16.45. Nominalizer **-kh-* (not in Greenberg 2000; Illič-Svityč 1971—1984.I:312—313, no. 189, **-kä* nominal diminutive suffix; Bomhard—Kerns 1994:169)

The Dravidian and Uralic examples cited here are phonologically ambiguous. They may belong under Nominalizer **-k’a* instead (see below).

- A. Dravidian: Krishnamurti (2003:200) reconstructs the following compound Proto-South Dravidian noun formatives: (A) **(i)kay-* (cf. Kannaḍa *bē-ge* ‘fire’ [*bēy* ‘to burn’], *paṇṇ-ige* ‘decoration’ [*paṇṇu* ‘to make’], *toḍ-ige* ‘ornament to wear’ [*tuḍu* ‘to wear’ < **toḍu*]) and (B) **(i)kk-ay* (cf. Kannaḍa *alas-ike* ‘weariness’ [*alas* ‘to be weary’], *ir-ke* ‘an abode’ [*ir-* ‘to be’], *agal-ke* ‘separation’ [*agal* ‘to be separated’]); Telugu *kōr-(i)ke* ‘a wish’ [*kōru* ‘to wish’], *pūn-(i)ke*, *pūn-(i)ki* ‘perseverance’ [*pūnu* ‘to undertake’], *man-iki* ‘living’ [*manu* ‘to live’]).
- B. Indo-European: Nominal/adjectival-forming suffixes in **-kh-* are also found in Indo-European. For details, cf. Brugmann 1904:326—327 (**-qo-*), 327 (**-is-qo-*), 338 (diminutive **-qo-*), 340 (**-qo-*); Lindsay 1894:336—338; Palmer 1980:256. Burrow (1973:197) notes: “[i]t is often simply an extension which adds nothing to the meaning, but also it has in some cases a diminutive sense...” Examples include: Greek (adv.) *πρόκα* ‘forthwith, straightway, suddenly’; Latin *reciprocus* ‘returning, going backwards and forward’, *senex* ‘old, aged; an old person’, *bellicus* ‘warlike’ (*bellum* ‘war’); Old Church Slavic

prokь ‘(adj.) remaining; (n.) remainder’; Sanskrit *udaká-m* ‘water’ (*udán-* ‘water’), *sanaká-h* ‘old’ (*sána-h* ‘old’); Gothic *mannisks* ‘human’ (*manna* ‘person, man’); Old High German *altisc* ‘old’ (*alt* ‘old’); etc. In a diminutive function, cf. Greek *μειράξ* ‘a young girl, a lass’; Sanskrit *maryaká-h* ‘a little man’ (*márya-h* ‘young man’).

- C. Uralic: Collinder (1960:257 and 1965:105—106) reconstructs a Common Uralic denominative suffix **k*. He notes that “[i]t is impossible to tell what function this formant had in C[ommon] U[ralic]. To some extent it may be identical with deverbative **k* ...” Examples include: Vote *pihlaga* ‘mountain ash’; Lapp / Saami *pætnaka-* ‘dog’ (*pæna* ‘dog’), *ætnak* (predicative) ‘much’ (attributive *ætna* ‘much’); Cheremis / Mari *južga* ‘cold and penetrating’ (*juž* ‘cold wind’); Yurak Samoyed / Nenets *pirće* ‘high’; etc. Collinder (1960:258—259 and 1965:106) also reconstructs **kk*, which “sometimes has a diminutive function”: cf. Lapp / Saami *suonahk* ‘lash-rope in a sledge’ ([formerly] ‘made of sinews’ [*suotna* ‘sinew’]); Mordvin *avaka* ‘the female’ (*ava* ‘mother, woman’); Cheremis / Mari *laksak* ‘pit’, *laksaka* ‘valley’, *laksikā* ‘small valley’ (*laksō* ‘pit’); Votyak / Udmurt, Zyrian / Komi *nylka* ‘girl, lass’ (*nyl* ‘girl, daughter’); Vogul / Mansi *morah* ‘cloudberry’; Ostyak / Xanty *māñək* = *māñə* ‘younger stepbrother’; Yurak Samoyed / Nenets *jæhaku*, diminutive of *jæha* ‘river’; Tavgi Samoyed / Nganasan *ñomuku*, diminutive of *ñomu* ‘hare’; Finnish *punakka* ‘red, red-faced’ (*puna* ‘red color’); etc. Décsy (1990:61) reconstructs a Proto-Uralic suffix **-ka/*-kă*, which was used to form: (A) denominal nouns, (B) deverbal nouns, and (C) denominal verbs. See also Raun 1988b:566: “[t]hus the refle[xes] of an alleged Proto-Uralic **-kkV* suffix designate not only a result or [an instrument] of an action, but also an actor, cf. H[ungarian] *maradék* ‘remainder’, F[innish] *menekki* ‘demand, sale’, E[stonian] *söök* ‘food’, S[amoyed] Y[urak] *šījek* ‘liar’.” Cf. Aikio (2022:19—20) for additional information.
- D. Altaic: Décsy (1998:62—64) lists Old Turkish (A) *-ki/-qy* denominal adjective builder, belonging to someone (occasionally makes substantives), (B) *-qal/-kă* rare denominal substantive and adverb builder, identical with dative ending, (C) *-qan/-kän* denominal substantive (title) builder, (D) *-ki* (occasionally also *-qy*) adjective builder, often after locative case ending, (E) *-q/-uq/-üq* deverbal substantive/adjective builder, and (F) *-q/-k/-uq/-ük* deverbal adjective builder. West Kipchak has the denominal suffix *-AK* (cf. *kesek* ‘price’, *qisraq* ‘mare’). There is also a deverbal suffix *-(V)K* (cf. *satux* ‘trading, selling’, *artuq*, *artux* ‘more’, *yazoq*, *yazuq*, *yazux* *yazuq*, *yezuq* ‘sin’, *arex*, *arix* ‘thin’, *tešik* ‘hole’). There is a suffix *-ki* in Azerbaijani, which is used to derive relational adjectives (cf. *ağşamki* ‘pertaining to the evening’ [*ağşam* ‘evening’]), adjectives from locatives (cf. *baydaki* ‘located in the garden’ [*bayda* ‘garden’]), and nouns from genitives (cf. *bizimki* ‘ours’ [*bizim* ‘our’]). Like possessive suffixes and demonstrative pronouns, *-ki* takes on the ‘pronominal *n*’ in oblique cases (cf. *bizimki-n-den* ‘from ours’). In Turkmenian, the suffix *-ki* is used to derive relational adjectives (cf. *ağşamki* ‘pertaining to the evening’ [*ağşam* ‘evening’]) and adjectives from genitives and locatives (cf. *Amaniňki*

‘belonging to Aman’). In Tatar and Bashkir, the suffix *-AK* is used to derive noun stems from noun stems (cf. Tatar *bašaq* ‘ear of corn’; Bashkir *kiθek* ‘piece’). Similarly, *-Kay* (cf. Tatar *balaqay* ‘dear little baby’, *esekey* ‘mummy’).

- E. Gilyak / Nivkh: Note the (Amur, East Sakhalin) nominalizing suffix *-k* indicating object/person (cf. *hyjm-* ‘to grow old’ > *hyjmk* ‘old man’) (cf. Gruzdeva 1998:22).

- 16.46. Nominalizer **-k’-* (not in Greenberg 2000; Illič-Svityč 1971—1984.I: 312—313, no. 189, **-kǎ* nominal diminutive suffix)

The Dravidian and Uralic examples cited above under Nominalizer **-k^ha* are phonologically ambiguous. They may belong here instead.

- A. Kartvelian: Proto-Kartvelian diminutive affix **-ik’-* > Georgian *-ik’-* diminutive affix (cf. Old Georgian *vac-ik’-* ‘small goat’); Mingrelian *-ik’-*; Laz *-ik’a-* (cf. *xož-ik’a-* ‘a steer, bull-calf’), complex diminutive affix *-ik’ina-* (cf. *xož-ik’ina-* ‘bull-calf’). Cf. Klimov 1998:80.
- B. Indo-European: Nominal/adjectival-forming suffixes in **-k’-* (traditional **-ĝ-* [**-ĝ-*, **-ĝ-*] and **-g-*) are also found in Indo-European: cf. the following examples from Sanskrit: *dhṛśáj-* ‘bold’, *sanáj-* ‘old’, *bhiśáj-* ‘physician’, *sraja-* ‘garland’, *tṛṣṇáj-* ‘thirsty’, *ásvapnáj-* ‘not sleeping’, *uśij-* ‘a kind of priest’, *vaṇij-* ‘merchant’, *bhurij-* ‘shears’, *sphij-* ‘hip’; *śṛñ-ga-* ‘horn’, *vámśa-ga-* ‘bull’, *pata-ga-*, *patañ-ga-* ‘bird’, etc. Cf. Burrow 1973:198 — Burrow does not cite corresponding non-Indo-Iranian examples, however, Schwyzler (1953.I:498) lists several Greek examples of nominal stems containing *-γ-* and *-γγ-* suffixes (cf. *πάταγος* ‘a clatter, a crash [of trees falling]; a chattering [of teeth]’, *άρπαγή* ‘seizure, rapine, robbery, rape; the thing seized, booty, prey’, etc.), and Lindsay (1894:355) lists a number of Latin examples. The diminutive function is absent in Indo-European.

V. VERBS: NON-FINITE FORMS

There is a good deal of overlap between the forms discussed here and those discussed above as nominalizers. The non-finite verb forms are to be considered a subset of the above forms.

- 16.47. Participle **-n-* (Greenberg: §42. Participle N; Dolgopolsky 2008, no. 1526a, **ñV* a marker [pronoun] that formed analytic equivalents of passive participles [(in descendant languages) → derived passive verbs])

- A. Elamite: As noted by McAlpin (1981:79—80): “Verbals in Middle Elamite consist of two participles, one in *-n* and one in *-k*... The participle in *-n* is

‘active,’ which seems to be nonpast and progressive.” Note also Grillot-Susini (1987:34): “The participle in *-n* represents a passive or an intransitive of unaccomplished-durative aspect (present-future tense, durative)...” Cf. also Khačikjan 1998:41—42; Reiner 1969:83. Examples include: *talū-n-* ‘writing’, *hali-n-* ‘toiling’, *туру-ну-н* ‘saying’. The infinitive marker **-Vn* reconstructed by Krishnamurti (2003:348) for Proto-Dravidian may belong here as well.

- B. Kartvelian: Proto-Kartvelian **na-* word-formation affix of the past participle > Georgian *na-* (cf. Old Georgian *na-p’arev-* ‘stolen’, *na-t’ex-* ‘broken, broken off’, *na-šob-* ‘born’, etc.); Mingrelian *no-*; Laz [*no-*]; Svan *na-* (cf. *na-k’id-* ‘taken’, *na-səm-* ‘heard’, etc.) (cf. Klimov 1998:136; Fähnrich 1994:240 and 2007:311—312; Fähnrich—Sardshweladse 1995:259). As noted by Klimov, “[t]he Svan affix is highly productive to this day...”
- C. Indo-European: The suffix **-no-* was one of the means Proto-Indo-European used to indicate past passive participles. Its use in this function has been abandoned in most of the daughter languages, though traces survive here and there (cf. Sihler 1995:628; Lindsay 1894:324). In Sanskrit, however, it remained fully productive (cf. *bhug-ná-h* ‘bent’, *gīr-ná-h* ‘swallowed’, *kīr-ná-h* ‘scattered’, *pūr-ná-h* ‘filled’, etc.). Cf. Burrow 1973:370; Buck 1933:322—324; Fortson 2010:109; Sihler 1995:628; Szemerényi 1996:323. According to Meillet (1964:277), however, strictly speaking, these stems were adjectives in Proto-Indo-European and not participles.
- D. Uralic: Greenberg (2000:178) mentions the Finno-Ugric suffix *-n* used to derive nouns and adjectives from verbs, while Raun (1988b:566) notes that “[t]he suffix **-nV* appears both in infinitives and participles. Thus ‘to go’ is Z[yrian] *munni*, V[otyak] *minni*, H[ungarian] *menni*, and the participle ‘going’ is V[ogul] *minne*, S[amoyed] Y[urak] *minda*.”
- E. Altaic: Poppe (1955:262) notes that the suffix **n* is found in numerous verbal nouns in Written Mongolian. He compares it with the Korean perfect participle *-n*, and the Turkic suffix *-n* found, for example, in Turkish *bütün* ‘whole, entire, complete’ (from *büt-* ‘to end, to be completed’). In Classical Mongolian, the suffix *-(u)n/-(ü)n* forms the gerund of absolute subordination (cf. Grønbech—Krueger 1993:23—24): cf. *abun* ‘grasping’ (*ab-* ‘to take, to grasp, to get hold of’), *iden* ‘eating’ (*id-* ‘to eat, to consume’). In Chuvash, the past (post-terminal) participles end in *-nĀ*, which, as noted by Greenberg (2000:178), belongs with the forms under discussion here (cf. also Clark 1998:446). Finally, Greenberg (2000:178) notes: “Another productive use is in the Tungus present tense in the first- and second-person singular of some languages where, however, it has an active meaning, for example, Evenki *wā-n-ni* < **wā-n-si* ‘thou killest’. A use closer to that of Indo-European, Korean and Ainu is Evenki *-na* ~ *-ne* ~ *-no*, which, when suffixed to a verb stem, indicates the result of an act, as in, for example, *dukū-na-w* ‘what I have written’ (‘thing-written-my’; Menges 1968b: 82).” The use of the suffix **-(V)n-* to form verbal nouns in Turkic is discussed by Menges (1968b:137): “The verbal noun in *-n*, *-Vn*, though rare, should be mentioned here. It occurs in A[ncient] T[urkic], and, as it seems, oftener in Ujγur [Uighur], but it is later found as a relic only;

cf. U[ighur] *ti-jin* ‘saying’, *ij-in* ‘following’, also *jaq-yn* ‘approaching’ in *jaq-yn käl-* ‘to come near’. It is the ancient nomen praesentis in *-n/-Vn*, living on in Mongol and Turkic in the function of a plain gerund, but in Tungus it is still found as the ancient ‘present-base’, not only in the Manžu [Manchu] nomen praesentis in *-m-bi* < **-n + bi* (cf. BANG, ‘Études ouralo-altaïques’), but also in the older group of forms of the heteroclitic aorist in the North Tungus languages...”

- F. Etruscan: The Etruscan present participles ending in *-an* (such as, for example, *turan* ‘giving’, *mulvan* ‘founding’, etc.) belong here as well. Cf. Bonfante—Bonfante 1983:85.

16.48. Participle **-th-* (Greenberg: §43. Passive Participle T; Dolgopolsky 2008, no. 2313, **tV* a marker of passive participial constructions)

- A. Dravidian: South Dravidian past/perfective participle marker **-tu/*-ttu* (cf. Krishnamurti 2003:330—331).
- B. Indo-European: Proto-Indo-European participle ending **-tho-* > Sanskrit *-ta-h* (cf. *śru-tá-h* ‘heard’, *ga-tá-h* ‘gone’, *pati-tá-h* ‘fallen’, *jñā-tá-h* ‘understood’, *diṣ-ṭá-h* ‘pointed out’, etc.); Greek *-το-ς* (cf. *κλυ-τό-ς* ‘heard of, famous, renowned’, *βα-τό-ς* ‘gone’, *τα-τό-ς* ‘stretched’, *γνω-τό-ς* ‘understood’, *δρα-τό-ς* ‘flayed’, etc.); Latin *-tu-s* (cf. *strātus* ‘spread out’, *(g)nā-tu-s* ‘born’, *(g)nō-tu-s* ‘known’, *sū-tu-s* ‘sewn’, *ten-tu-s* ‘stretched’, *dic-tu-s* ‘said’, etc.); Old Church Slavic *-tb* (cf. *ši-tb* ‘sewn’, etc.); Lithuanian *-ta-s* (cf. *siūtas* ‘sewn’, etc.) (cf. Fortson 2010:109; Szemerényi 1996:323; Beekes 1995:250—251; Brugmann 1904:317—318 **-to-*; Buck 1933:307—308; Burrow 1973:370—371; Watkins 1998:64; Sihler 1995:621—625; Lindsay 1894:335—336; Palmer 1980:256—257). Again, Meillet (1964:277) considers such stems to have been adjectives.
- C. Uralic: According to Collinder (1960:271 and 1965:115), **t* was used to form infinitives and participles in Fennic, Lappish, Ob-Ugric, and Samoyed: cf. Finnish (lative) *juota* (dial. *juotak*) ‘to run’; Lapp / Saami (Lule) (infinitive) *mannat* ‘to go’; Ostyak / Xanty infinitive ending *-taǵə* (this may be identical with the ending *-ta[k] ~ -tä[k]* of the Finnish [lative case of the] infinitive), present participle active, as in *jāntti* ‘playing’ (*jānt-* ‘to play’), (Northern) present participle passive, as in *and ošti* ‘unknown’; Yenisei Samoyed / Enets (Baiha) *jebide* ‘drunk’ (*jebi-* ‘to be drunk’). Cf. also Greenberg 2000:180.
- D. Etruscan: In Etruscan, we find active past participles ending in *-θas*, as in *avil svalθas LXXXII* ‘having lived eighty-two years’ (cf. Bonfante—Bonfante 2002:102—103).

- 16.49. Participle **-nt^h*- (Greenberg: §44. Participle NT; Bomhard—Kerns 1994: 170)

This ending is found in several Eurasiatic languages. It is an obvious combination of the two preceding suffixes: **-n-+*-t^h*-.

- A. Indo-European: The participle ending **-nt^h* is found in all of the older Indo-European daughter languages: cf. Sanskrit *bhārant-* ‘bearing’, *bhāvant-* ‘being’; Greek *φέρωντ-* ‘bearing’; Latin *ferent-* ‘bearing’, *amant-* ‘loving’; Gothic *frijōnds* ‘friend’ (< ‘loving’), *bairands* ‘carrying, bearing’; etc. (cf. Szemerényi 1996:317—319; Brugmann 1904:315 **-ent-*, **-nt-*, **-nt-*; Burrow 1973:367—368; Beekes 1995:249—250; Sihler 1995:613—616; Lindsay 1894:352; Palmer 1980:312—313; Fortson 2010:108; Meier-Brügger 2003: 185). In Hittite, there is a single participle ending: *-ant-*. As noted by Sturtevant (1951:78, §111), “[i]f the verb from which a participle is formed is intransitive, it is usually convenient to translate it by an active English participle (e.g. *a-ša-an-za* ‘being’: *e-eš-zi* ‘he is’, pl. *a-ša-an-zi*), while a participle from a transitive verb generally calls for a passive expression in English (e.g. *a-da-an-za* ‘eaten’: *e-iz-za-az-zi* ‘he eats’, pl. *a-da-an-zi* ‘they eat’). Although participles are formed from the stems with suffix or other modification which in I[ndo-] E[uropean] grammar are called tense stems, the Hittite participles do not denote time. If a verb has both active and middle conjugation, it is not possible to assign its participle to either voice.”

According to Greenberg (2000:183—184), the Proto-Indo-European third person plural ending **-nt^{hi}* of the present tense is to be derived from the participle **-nt^h*. This idea is not new — Oswald Szemerényi and Thomas Burrow proposed a similar theory. In my 1988 article on “The Prehistoric Development of the Athematic Verbal Endings in Proto-Indo-European” (1988c:475—488), I accepted the views of Szemerényi and Burrow. However, I have since proposed a different explanation (1996a:76). Basically, I see the incorporation of the third person ending **-t^h* into the conjugational system in Proto-Indo-European as an innovation (so also Watkins 1998:59: “The third persons in *-t-*, *-nt-* belong to a later chronological layer”), which, nevertheless, must have taken place at an early date since it is found in Anatolian as well as later stage daughter languages. I believe that the third plural was indicated by the ending **-n* at the time that **-t^h* was added and that, with the addition of the **-t^h*, a new third plural ending was created, namely, **-nt^h*. At a later date, this was further extended by a deictic **-i* meaning ‘here and now’ to form so-called “primary” endings. Thus, while the new third plural ending **-nt^h* was identical in form with the participles ending in **-nt^h*, I believe that, ultimately, they had a different origin (a similar conclusion is reached by Sihler 1995:615, note a). Note that there may be evidence from the Indo-European daughter languages for an unextended third plural ending *-n*: cf., for example, the so-called “secondary” third plural forms in Sanskrit *ābharan*, Avestan *barən*, and Greek *ἔφερον*. These are usually interpreted as being derived from **-nt^h* through loss

of the final **-t^h*. But, could they not be simply relics of an earlier unextended **-n* instead? Quite honestly, it is probably impossible to tell whether or not this suggestion has any validity given that regular phonological developments in each of these daughter languages can also account for loss of final **-t^h* rather nicely.

- B. Uralic: Proto-Uralic **-nt-* (cf. Collinder 1960:269—270 and 1965:113—114; Greenberg 2000:184; Aikio 2022:19). In Finnish, this is a deverbative suffix, while in Lapp / Saami, it forms absolute gerunds. Examples include: Finnish *ammunta* ‘shooting, fire’ (*ampu-* ‘to shoot’), *ammunta* ‘(the act of) lowing, mooing’ (*ammu-* ‘to moo, to low’), *myynti* ‘sale’ (*myy-* ‘to sell’); Lapp / Saami *kuotteht*, *kuottedä-* ‘(the reindeer’s) calving-time’ (*kuodde-* ‘to calve’), absolute gerund *lokadettin*, (Tornio) *lokadin* ‘while (he is, was) reading’ (*lohka-* ‘to read’; cf. Finnish *luenta* ‘the act of reading’, *luento* ‘lecture’); Zyrian / Komi *jitōd* ‘joining, fastening; tie, band, etc.’ (*jit-* ‘to tie or sew together’); Selkup Samoyed present participle in *-nde*, as in *ilinde* ‘living’; Taigi participle in *-nde*, as in *ilinde* ‘living’.
- C. Gilyak / Nivkh: Greenberg (2000:184) notes: “In Gilyak there is a verb suffix that in the standard dialect of the Amur region takes the form *-d’* and in Northeastern Sakhalin, *-nd*. Grube (1892:30) notes that in the collection of Gilyak data of Glehn and Schrenk it includes as variants *-nt*, *-nč*, and *-č*. The first is characteristic of the Tym dialect of Sakhalin, whereas the latter are found on the west coast of the same island.” Kortlandt (2004:288) as well identifies the Gilyak / Nivkh verbal suffix (Amur) *-d’/-t’*, (East Sakhalin) *-d’/-nd/-nt* (cf. Gruzdeva 1998:22) with the participial suffix **-nt-* found in Indo-European and Uralic. Finally, Fortescue (2016:169) reconstructs Proto-Gilyak / Nivkh **-nt* indicative/nominalizer.

16.50. Gerundive-participle **-l-* (Greenberg: §45. Gerundive-Participle L)

- A. Dravidian: Caldwell (1913:543) describes a group of verbal nouns ending in *-al* (or *-dal*) in Tamil. Unfortunately, he does not give an in-depth explanation of the uses of this ending. He does mention, however, that “[i]t is remarkable that *l* or *al* is used also in Mongolian as a formative of verbal nouns...” McAlpin (1981:52) also mentions this ending: “It is possible that the ending **-al* on the verb stem could be Proto-Dravidian in origin; see Andronov, 1979, p. 69.” And that is all he says! In his descriptive grammar of Tamil, R. E. Asher (1982:20, §1.1.2.2.1) gives a little more information:

The most usual marker of a noun clause is a nominalized verb form. In the formal variety of the language, these nominalized forms fall into two types: (I) nominalized forms marked for tense. The most common — one found for all verbs — is one consisting of verb stem + (*i*)*tal*, e.g. *varutal* ‘the coming’, *koṭuttal* ‘the giving’...

Clearly, the ending *-(t)al* described by Asher has been built by adding *-al* to *-(t)t-*.

Krishnamurti (2003:346) reconstructs a South Dravidian **-al* infinitive-nominal marker > Kota *-l, -lk*; Old Kannada *-al* (+ *ke*); Tuḷu *-alka/-akka*; Kuwi *-ali ~ -eli*. The infinitive-nominal marker **-al* should be included with the forms being discussed here.

- B. Kartvelian: In a long section on Georgian participles, Vogt (1971:246—254) devotes considerable attention to perfect passive participles (he uses the term [p. 247] “participes passés passifs”) in *-ul/-il-* (see also Fähnrich 1993:67—69, and, for Old Georgian, Fähnrich 1994:77): *c'er-il-i* ‘written’, *k'r-ul-i* ‘tied, bound’, etc. Note also the noun *c'er-ili* ‘letter’ (that is, ‘that which has been written’). Klimov (1998:81) reconstructs a Common Georgian-Zan **-il* affix used to form participles (see also Fähnrich—Sardshweladse 1995:178 and Fähnrich 2007:213—214). Tuite (1997:37) notes that, in Svan, “[t]he masdar (*li-*) is used in ... roughly the same contexts as in Georgian, and can take nominal as well as verbal stems...” Svan also has a past participle in *lə-* (*-e*) (cf. Tuite 1997:37). Finally, Svan has “two distinct future participles, denoting patients and themes (*le-*), and instruments and destinations (*la-* *-a*)” (cf. Tuite 1997:37).
- C. Indo-European: Godel (1975:128) points out that **-lo-* endings form participles or infinitives in Tocharian, Slavic, and Armenian: “Both the INFINITIVE and PARTICIPLE belong to the *o* declension (3.2): in *bereal* as well as *berel*, *-l* < **-lo-*. Evidence for primary adjectives in **-lo-* is found in several I[ndo-]E[uropean] languages: G[reek] *deilós* ‘cowardly’, *tuphlós* ‘blind’; Lat[in] *pendulus* ‘hanging’, etc. In O[ld] C[hurch] S[lavic] this morpheme supplies the active past participle, mostly used in compound tenses (*bilŭ jesmŭ* ‘I have struck’). Verbal adjectives in *-l* < **-lo-* also occur in Tokharian (Eastern dialect; instead of *-l*, Western Tokharian has *-lye*, *-lle* < **-lyo-*). Thus, we have a frame of reference for the Armenian participle in *-eal*. As, on the other hand, adjectives do not evolve into infinitives, the above evidence does not account for *berel*. Although there are only faint traces of P[roto-]I[ndo-]E[uropean] action nouns in **-lo-*, such a formation has to be postulated in order to explain the Armenian infinitive: it may have been productive in some limited dialectal area.” The Tocharian, Slavic, and Armenian developments are discussed at length by Greenberg (2000:186—188). In Old Church Slavic, the resultative participle was formed by adding the suffix *-l-* to the infinitive stem. The resultative participle indicated the result of a completed action. It was used in compound verbal categories (perfect, conditional), where it was accompanied by a finite form of the verb ‘to be’: cf. *jesmъ neslъ* ‘I have carried’, *bimъ/byxъ neslъ* ‘I would carry’.
- D. Uralic: According to Greenberg (2000:188—189), **-IV* is used to form participles in Samoyed. He notes: “In Kamassian the aorist, which is used to indicate both past and present tense, is formed by a participle in *-la, -le*, or *-l*, for example, *nere-le-m* ‘I fear’ (‘fear-*le*-I’). This participle occurs also in Selkup (e.g. *ity-lä* ‘taking’), where it is used as a verbal participle just like

Russian *berja* (Serebrennikov 1964: 89).” Greenberg also notes that *-l* is used to form infinities in Yukaghir: “The *l*-morpheme we have been discussing is prominent in Yukaghir. What is sometimes described as the infinitive is formed by an *-l* suffix, e.g. Kolyma *kelu-l* ‘arrival, to arrive’ (Krejnovich 1979b: 355). It may also qualify a noun, e.g. *lodo-l adilek* ‘a playing youth’. The verbal noun in *-l* also forms an optative, e.g. *ā-l-uol* ‘wish to do’ (Kolyma dialect, literally, ‘do-*l*-wish’). In addition, if it is intransitive it may be predicated, in what is called the definite conjugation, that is, when the verb is unfocused and the statement supplies definite information about the subject (if the verb is intransitive), i.e. is an answer to such questions as ‘who played?’ An appropriate answer is *met-ek lodo-l*, which might be paraphrased as ‘I-am-the-one-who-played’ (for *-ek*, see No. 23). The *-l* participle is also found in the extinct Omok dialect of Yukaghir (Tailleur 1959a: 94).”

- E. Altaic: Greenberg (2000:189) briefly mentions that *-l* forms nouns and adjectives from verbs in Orkhon Turkish: “In Orkhon Turkish *-l* forms nouns and adjectives from verbs, e.g. *ine-l* ‘trustworthy’ (a name) (cf. *ine-* ‘to trust’), *qisi-l* ‘mountain-cliff, canyon’ (cf. *qis* ‘make narrow’). The first of these is strikingly similar to Latin examples such as *crēdulus* cited earlier.” Greenberg further remarks: “In Mongolian, *-l* forms nouns of action ‘not taken in any particular way’ (Groenbech and Kruger 1955: 41), e.g. *ab-ul* ‘a taking’, *ay-ul* ‘fright’. After a consonant stem the suffix is *-ul* ~ *-ül*; after a vowel, *-l*.”

VI. VERBS: FINITE FORMS

- 16.51. Imperative **k^hV* (Greenberg: §47. Imperative KA; Dolgopolsky 1984:89 **KV* (**kV* or **gV*) ‘thee, thy’ and 2008, no. 839, **kV* ~ **gV* ‘thee, thy’). According to Dolgopolsky (1984:89), “[o]riginally, this pronoun functioned as a verbal object...and as a postnominal possessive...”

The vowel is difficult to pin down — the evidence from the daughter languages points to proto-forms **k^ha*, **k^hi*, and **k^hu*. This leads me to suspect that we may ultimately be dealing here with the deictic stems **k^ha* (~ **k^hə*), **k^hi* (~ **k^he*), and **k^hu* (~ **k^ho*) (see above) used adverbially. Used in conjunction with a verb, their original function was to reinforce the imperative: GO+**k^ha* = ‘go here (close by)!', GO+**k^hi* ‘go over there (not too far away)!', GO+**k^hu* ‘go yonder (far away)!. When so used, **k^ha*, **k^hi*, and **k^hu* were interpreted as imperative markers in Uralic, Altaic, and, in relic forms, in Indo-European. In Afrasian, however, **k^ha*, **k^hi*, and **k^hu* were interpreted as second person markers: GO+**k^ha* = ‘you go (here)!', GO+**k^hi* ‘you go (over there)!', GO+**k^hu* ‘you go (yonder)!’.

- A. Afrasian: A second person personal pronoun stem **kV-* is widespread in Afrasian (cf. Diakonoff 1988:74—75, table of Suffixed Object Pronouns, and 76—77, table of Suffixed Possessive Pronouns; Lipiński 1997:308, §36.19; Ehret 1995:194, 195, and 198: **ki* ‘you’ [f. sg. bound pron.]; **ku*, **ka* ‘you’ [m.

sg. bound pron.]; **kuuna* ‘you’ [pl. bound pron.] [= **ku* + old Afrasian pl. in **-n*]. In Semitic, this stem appears as the second person singular and plural personal pronoun suffix (table taken from Moscati 1964:106, §13.14; see also Lipiński 1997:308 and 362—363; Gray 1934:64 Proto-Semitic affixed personal pronouns: 2nd sg. m. **-k-ā*, 2nd sg. f. **-k-ī*; O’Leary 1923:153—155; R. Stempel 1999:80—81; Bergsträsser 1983:8; Gragg—Hoberman 2012:191, table 4.23; Barth 1913:43—48):

	Akkadian	Ugaritic	Hebrew	Syriac	Arabic	Geez
m. sg.	<i>-ka</i>	<i>-k</i>	<i>-k</i>	<i>-k</i>	<i>-ka</i>	<i>-ka</i>
f. sg.	<i>-ki</i>	<i>-k</i>	<i>-k</i>	<i>-k</i>	<i>-ki</i>	<i>-ki</i>
m. pl.	<i>-kunu</i>	<i>-km</i>	<i>-kem</i>	<i>-kōn</i>	<i>-kum(u)</i>	<i>-kəmmū</i>
f. pl.	<i>-kina</i>	<i>-kn</i>	<i>-ken</i>	<i>-kēn</i>	<i>-kunna</i>	<i>-kən</i>
dual		<i>-km</i>			<i>-kumā</i>	

In Akkadian, this stem is also found in the genitive/accusative and dative second person singular and plural independent pronouns: (m. sg. gen.-acc.) *kāti/a*, (f. sg. gen.-acc.) *kāti*, (m. pl. gen.-acc.) *kunūti*, (f. pl. gen.-acc.) [*kināti*]; (m. sg. dat.) *kāšim*, (f. sg. dat.) *kāši(m)*, (m. pl. dative) *kunūši(m)*, (f. pl. dat.) [*kināši(m)*]. In Egyptian, the second person singular masculine suffix pronoun is *k* ‘thou, thy, thee’, while it appears as *k-* [κ-] and *-k* [-κ] in Coptic. Also, the following are found in East Cushitic: Proto-East Cushitic (m.) **ku*, (f.) **ki* second person singular personal pronoun (object) ‘thee’ > Saho *ku*; Afar *ko-o*; Burji *šee*; Somali *ku*; Rendille *ki*; Boni *ku*; Dasenech *kuu-ni* ‘thou’, *ko* ‘thee’; Galla / Oromo *si*; Konso *ke*; Gidole *he(dē)*; Sidamo *hee*; Hadiyya *ke(e)s*; Dullay *ho-* ~ *he-*. In Southern Cushitic, the following forms occur: Proto-Southern Cushitic **ki* second person singular feminine personal pronoun ‘your’ > Iraqw *ki*, *kiŋ* ‘you’ (f. sg.), *-k* in *-ok* ‘your’; Burunge *igi* ‘you’ (f. sg.), *-g* in *-og* ‘your’; Alagwa *ki* ‘you’ (f. sg.), *-k* in *-ok* ‘your’; Dahalo *ki* ‘your’ (cf. Ehret 1980:243). Proto-Southern Cushitic **ku* second person singular masculine personal pronoun ‘your’ > Iraqw *ku*, *kuŋ* ‘you’ (m. sg.), *ku-* in *kunga* ‘you’ (pl.), *-k* in *-ok* ‘your’; Burunge *ugu* ‘you’ (m. sg.), *-g* in *-og* ‘your’; Alagwa *ku* ‘you’ (m. sg.), *ku-* in *kungura* ‘you’ (pl.), *-k* in *-ok* ‘your’; K’wadza *-ku* ‘your’; Asa *-ku* ‘your’; Dahalo *-ku* ‘your’ (cf. Ehret 1980:245—246). Diakonoff (1988:75) lists the following Chadic second person object pronouns (suffixed in Musgu and Logone, but not in Hausa and Mubi): (A) singular: Hausa (m.) *ka*, (f.) *ki* ‘you, your’; Musgu *-ku(nu)*; Logone *-kú*, *-ku*, *-kəm*; Mubi *ka*, *ki*; (B) plural: Hausa *ku* ‘you, your’; Musgu *-ki(ni)*; Logone *-kún*; Mubi *kan*. Note also Ngizim: *ka(a)* ‘you’, second person singular (m. or f.) used as subject pronoun in verbal and locative sentences (cf. Schuh 1981:89); *kəm* ‘you’, second person feminine singular pronoun used as: (1) independent pronoun, (2) indirect object pronoun, (3) associative pronoun, and (4) independent associative pronoun (cf.

- Schuh 1981:87); *kùn* ‘you’, second person plural pronoun used as: (1) independent pronoun, (2) indirect object pronoun, (3) bound suffix pronoun, and (4) independent associative pronoun (cf. Schuh 1981:98); *cì* ‘you’, second person singular masculine pronoun used as: (1) independent pronoun, (2) indirect object pronoun, (3) bound suffix pronoun, and (4) independent associative pronoun (cf. Schuh 1981:31).
- B. Indo-European: Greenberg (2000:193) cites evidence from Balto-Slavic for an imperative ending **-kV*: Baltic imperative suffix *-k* ~ *-ki* (cf. Lithuanian *dùo-k*, *dùo-ki* ‘give!’); Slavic modal particle *-ka* (*-ko*, *-ku*, *-ki*, *-kъ*, *-če*, *-čĭ*, *-ču*) (cf. Russian *-ka*, *-ko*, “which are sometimes put after the imperative to make a request more pressing”, Serbo-Croatian *-ka*, and Ukrainian *-ko*). In Russian and South Slavic, these particles may also occur after pronouns. Cf. Stang 1966:427 (proto-form **-ke*); Walde 1927—1932.I:326. Greenberg’s comments regarding the Hittite middle imperative form *-hut(i)* are not convincing.
- C. Uralic-Yukaghir: Proto-Finno-Ugrian imperative **-k*, **-ka/*-kă* (cf. Collinder 1960:303—304, §§963—974; Abondolo 1998a:28; Aikio 2022:17; Décsy 1990:75; Raun 1988b:562—563). Collinder (1965:131—132) remarks: “**k* apparently had two functions in the C[ommon]U[ralic] verb paradigm, occurring as a tense characteristic in the present tense, and as a mood characteristic in the imperative. The latter function is no doubt secondary, but it is so widespread that it must date from CU. Probably the imperative characteristic was **-k* (or **-kō* ~ **-ke*) in the 2sg, and **-ka* ~ **-kă* in the other persons. In Finnish **-k* is preserved in some eastern dialects, elsewhere it has disappeared *in pausa* or changed into a faint glottal stop, as in *anna*’, Savo *annak* ‘give!’ (stem: *anta-*). In Lappish, **-k* has disappeared or changed into an unvoiced vowel, but the weak grade of the stem shows that the second syllable was once closed, as in *poađě* ‘come!’ (stem: *poahte-*). In Mordvin, the **-k* is preserved, as in *e’rak* ‘live!’. In Northern Samoyed and Kamassian, **-k* has changed into a glottal stop. It is worth noting that in Tavgi the 2nd sg imper has, contrary to expectation, the strong grade. For example, [Yurak] *mada*’, [Tavgi] *matu*’, [Yenisei] *mota*’ ‘cut!’. In Selkup the 2nd imper ends in *-k* (Castrén) or *-ăšik* (Prokof’ev). In the Ket dialect the stem is, as was to be expected, in the weak grade.” Proto-Yukaghir imperative affix **-k* (> Northern / Tundra *-k*) (cf. Nikolaeva 2006:81).
- D. Altaic: Greenberg (2000:194) lists several non-Chuvash Turkic languages with imperatives ending in *-k*: Old Turkic *-ok*; Noghay *-ok*; Shor *-ok*; Karakalpak *-ak*; Tatar and Bashkir *-uk*. For Tungus, Greenberg (2000:194) notes that Benzing reconstructed a Proto-Tungus imperative built from a suffix **-ki* (or **-gi*). Greenberg further notes (2000:195) that the second person singular imperative is *-ka* in Nanay / Gold. As noted by Gorelova (2002:299—300), the optative suffix *-ki* is used in Manchu as an imperative when addressing equals.

16.52. Conditional **ba* (Greenberg: §41. Adverbial Participle P)

It appears that the original form was **ba* and not **P*, though this creates problems with the Turkish data, which point to **pa* instead. That the Eurasiatic stem was **ba* instead of **pa* seems particularly likely, however, in view of the fact that Greenberg derives the Anatolian forms from an Indo-European particle that Pokorny (1959:113) reconstructs as **bhē*, **bhō*. Note also the consistent single writing in Hittite, which points to a voiced stop in Proto-Indo-European, according to “Sturtevant’s Law”. The evidence from Mongolian also points to original **ba*. The material from Uralic is phonologically ambiguous.

- A. Dravidian: Note the causative suffix reconstructed for Proto-Dravidian by McAlpin (1981:46): “Similarly, there seems little trouble in reconstructing a causative P[roto]-Dr[avidian] **-pi* (*vi*, *ppi*) as a true causative. Although less commonly attested, it does occur widely in Dravidian languages”. Likewise, Krishnamurti (2003:283—285) reconstructs a Proto-Dravidian causative suffix **-pi-* (allomorphs **-pi-* ~ **-wi-* ~ **-ppi-*): “The causative *-pi-* [-*wi-*] ~ *-ppi-* is attested in the Tamil-Brahmi inscriptions of the second century BCE, e.g. *koṭupitōn* (= /koṭu-ppi-tt-ōn/) ‘he caused something to be given’, *arupita* (= /aru-ppi-tta/) rel. ppl. ‘that caused to be cut’ (Mahadevan 1971:90—1). This causative is also found in South Dravidian II and in Brahui.” A little later on, Krishnamurti notes: “Comparison of the Telugu causative stems with Old Tamil inflectional stems permits reconstruction of Proto-Dravidian causative stems as follows”:

Proto-Dravidian **key-* ‘to do’: Tamil *cey*, Telugu *cēyu*

Proto-Dravidian **naṭ-a-* ‘to walk’: Tamil *naṭa*, Telugu *naḍa*

	Old Tamil	Old Telugu	Proto-Dravidian
Past:	<i>cey-vi-tt- naṭa-ppi-tt-</i>	<i>cēy-i-nc- naḍa-pi-nc-</i>	<i>*key-pi-ntt- *naṭa-ppi-ntt-</i>
Non-past:	<i>cey-vi-pp- naṭa-ppi-pp-</i>	<i>cēy-i-mp- naḍa-pi-mp-</i>	<i>*key-pi-mpp- *naṭa-ppi-mpp-</i>

- B. Kartvelian: According to Fähnrich (1993:139—140), in Georgian, intransitive verbs form the causative through the addition of the character vowel *a-* and the suffix *-eb*: *v-a-muša-v-eb* ‘I let work’ (*v-muša-ob* ‘I work’). In transitive verbs, on the other hand, the causative is formed by means of the character vowel *a-* and the suffix chains *-in-eb* or *-ev-in-eb*, the latter occurring only in verbs with present stem formants *-i*, *-am*, and *-av* and without a root vowel. (The situation is actually a bit more complicated — for details on causative formations in Georgian, cf. Hewitt 1995:215—216 and 407—422; Vogt 1971:127—133; Fähnrich 1993:139—140.) In Modern Georgian, *-eb* is not only the most

common verbal thematic suffix, it also has multiple functions. First, it is one of several thematic suffixes (-*av*, -*am*, -*eb*, -*ob*, -*i*) used to mark present(/future) verb forms. Comparable forms are found in Mingrelian (-*ap* [*< *-ab < *-eb*]) and Laz (-*ap* [*< *-ab < *-eb*]) (but not in Svan) (cf. Klimov 1964:78 *-*eb* and 1998:45 *-*eb*; Fähnrich—Sardshweladse 1995:119 *-*eb*; Schmidt 1962:106; Fähnrich 1994:240 and 2007:144—145). Next, it is used, as indicated above, as a causative present stem formant. In this use, it may be related to the forms under discussion here.

- C. Indo-European: The Indo-European forms Greenberg cites from Gothic (*ba* conditional particle: ‘if, even though’) and Old Church Slavic (*bo* ‘for’) correspond very well with the Mongolian conjunction *ba* ‘and, also’. (On Gothic *ba*, cf. Lehmann 1986:55; see also Krause 1968:210. On the same page, Lehmann lists a Gothic adverbial suffix -*ba* and illustrates its use with an example, namely, *baitraba* ‘bitterly’. He remarks: “Isolated, both in G[ermanic] and the I[ndo-]E[uropean] languages; origin obscure”.) Similarly, in Mongolian, “There are modal adverbs with the meaning ‘completely’, derived by reduplication of the first syllable of the word with the inserted consonant -*b*. If the first syllable of the word concerned is *no*, the adverb is *nob*; if the first syllable is *qa*, the adverb is *qab*, and so on” (quote from Poppe 1974:59—60, §218). The parallel between Gothic and Mongolian is striking.
- D. Uralic: The Proto-Finno-Ugrian present participle suffix *-*pa*/*-*pä* probably belongs here as well: cf. Finnish present participle ending -*pa* ~ -*pä* (preserved after a few monosyllable stems, elsewhere: -*va* ~ -*vä*) (cf. *käy-vä* ‘walking’, present participle of *käy-* ‘to go, to walk’; *käy-pä raha* ‘legal tender’; *elä-vä* ‘living, alive, lively’, present participle of *elä-* ‘to live’; *syö-vä* ‘eating’, present participle of *syö-* ‘to eat’; *syö-pä* ‘cancer’; *kumarta-va* [Agricola *kumarta-pa*] ‘bowing’, present participle of *kumarta-* ‘to bow’); Veps *el’äb* ‘living’; Livonian *jelaa’b* ‘living’; in Lapp / Saami, this suffix is found in the 1st plural, 2nd plural, 2nd dual, and 3rd dual of the present indicative, as in: (1st pl.) *mannap*, (2nd pl.) *mannapehtiht*, (2nd dual) *mannapæhtte*, (3rd dual) *mannapa* (*manna-* ‘to go’); in Ob-Ugric and Samoyed, this suffix forms participles and *nomina actoris*, etc.: Vogul / Mansi *l’ušəp nee* ‘a weeping woman’ (*l’uš-* ‘to weep or cry’), *minpä* ‘going’ (present participle of *min-* ‘to go’), *holp* ‘dead’ (*hool-* ‘to die’), *seŋkəp* ‘mortar’ (*seŋk-* ‘to beat’); Ostyak / Xanty *ŋyntəw, ŋyntəp* ‘needle’ (*ŋant-* ‘to sew’); Yurak Samoyed / Nenets *pohoopa* ‘vigorous’ (*poho-* ‘to be near to the end, to come near, to be near to recovering’); Yenisei Samoyed / Enets *kaabe* ‘dead’ (*kaa-* ‘to die’); Selkup Samoyed *kuubie* ‘dead’ (*kuu-* ‘to die’); Kamassian *kube* ‘dead’ (cf. Collinder 1960:270 and 1965:114).
- E. Altaic: The Classical (Written) Mongolian conditional gerund -*basu* (also -*besü* and -*ubasu/-ubesü* after *b* and *r*; Modern Mongolian has -*bala/-bele*) is used to indicate an act which is the necessary condition of the following action coming into effect (as Greenberg notes, -*basu* is made up of the past converb [i.e. adverbial participle] -*ba-* plus *a-su* ‘would be’; the suffixes used to indicate past tense are -*ba/-be* and -*bai/-bei*, as in *ögbe* or *ögbei* ‘he gave’, *odba* or *odbai* ‘he went, he departed’ — for details, cf. Poppe 1974:164—165, §§588—

589). Constructions using the conditional gerund are usually translated with ‘when, if’, as ‘when this happens, then that’, ‘if this happens, then that’, so that there is an implied temporal relationship as well as an implied cause and effect relationship (cf. Poppe 1974:95, §366): cf. *yabubasu* ‘if he goes, when he went’, *γarubasu* (*γar-*) ‘if he goes out, when he went out’, *abubasu* (*ab-*) ‘if he takes, when he took’, *bosbasu* ‘if he rises, when he rose’, *ögbesü* ‘if he gives, when he gave’. Thus, this construction could easily develop into a causative, as Greenberg notes.

According to Menges (1968b:135—136), there is a syndetic gerund suffix *-p/-Vp* in Turkic, which is used to indicate “the expression of successive actions whose time-levels are not essentially different or distant from each other. A further formation is that in *-pan/-pän//ban/-bän*, the instrumental or an ancient allative of the preceding, found in the Inscriptions and in the older layer of [Uighur] with *n < ñ*, but otherwise rare in [Uighur].” Menges (1968b:136) also notes, in particular: “In Mongol, this suffix is found implicit only in combination with other suffixes, while in Tungus it has an exact equivalent in South Tungus [Manchu] and [Jurchen] *-fi* and [Nanay] and [Udihe] *-pi* where also the ancient [Proto-Altaic] final vowel has been preserved, while in North-Tungus it exists, as in Mongolian, only in combination with other suffixes. As to Uralic, RÄSÄNEN (“Mat. Morph.”, 191) compares it correctly, as it seems, with the Finno-Ugric suffix *-pa/-pä* of the Participium praesentis.” Regarding Turkic *-p/-Vp*, Greenberg (2000:175) notes: “In Turkic its syntax and meaning are much like the Russian adverbial participle (*dejeprichastije*) in *-ja*, e.g. ‘weeping, he came.’ Since Turkic languages do not mark adjectives for number, gender, person, or case, there are no participles in the proper sense. Moreover, as with the Russian adverbial participle, the subjects of the subordinate and main verbal form are the same. With such a form as the probable starting point a number of developments, syntactic and semantic, can take place. The adverbial participle can become an ordinary participle (‘weeping he came’ becomes ‘he the weeping one came’). Moreover, simultaneous or nearly simultaneous action easily takes on a causal or conditional nuance.”

It is worth noting that Starostin—Dybo—Mudrak (2003:226) reconstruct a Proto-Altaic passive/causative formant **-b-*.

- F. Gilyak / Nivkh: Proto-Gilyak / Nivkh **-ba* ‘as soon as, since’: Amur *-ba/-bə* (also *-ge*) ‘as soon as, since’; East Sakhalin *-ba/-fke* (also *-rkē*) ‘as soon as, since’. Cf. Fortescue 2016:174 (table of affixes).

On the basis of what has been discussed above, I think we are justified in setting up a Proto-Nostratic particle **ba* meaning ‘then, therefore’, just as Greenberg suggests. This particle was inherited by Eurasiatic. Originally, **ba* could be used with verbs to indicate a conditional relationship, but without necessarily any reference to time, that is to say that the actions could be either simultaneous or successive, thus: ‘when this happens, then that happens (at the same time)’, ‘when this happens, then that comes about (at a later time)’. This is basically the situation found in Turkic. The

next stage is found in Mongolian, where there is an implied temporal relationship as well as an implied cause and effect relationship. The implied cause and effect relationship develops into causatives in Dravidian and Kartvelian.

16.53. Hortatory-precative **-li* (Greenberg: §48. Hortatory L)

- A. Afrasian: A precative *l*-prefix occurs in Semitic (cf. Moscati 1964:144: “*l*-, which occurs in Talmūdic Aramaic *lehēwē* ‘he is’, may be considered a remnant of precative *l*”). Lipiński (1997:356) notes: “Widespread is the use of the proclitic *lu-/li-/la-*, especially with the third person, to express the optative or precative... Prefixing of the proclitic *l*- to a verb occasionally entails graphic deletion of imperfect *y*-; e.g. Sabaic [Sabaean] *lhšlhnn* < *l+yhšlhnn* ‘may they grant prosperity’.”
- B. Elamite: In Old Elamite, there is a precative-hortatory marker *-li* (cf. McAlpin 1981:80—81, §242.443). Grillot-Susini (1987:40), however, considers *-li* to be “an ancient or dialectal form [used to] mark the optative”. Achaemenid Elamite uses *-ni* in the same function. Cf. also Khačikjan (1998:34, 38, and 50) for more information on the Elamite precative/optative particles *-ni*, *-LI* (Old Elamite), *-na*.
- C. Indo-European: Here, we may compare Hittite imperative first person singular *-allu* (after consonants), *-llu* (after vowels): *pí-iš-ki-el-lu* ‘I will give’, *me-ma-al-lu* ‘I will speak’, *i-ya-al-lu* ‘I will make’, etc. (cf. Sturtevant 1951:141—142; Greenberg 2000:196).
- D. Altaic: Menges (1968b:139) notes that the suffix of the imperative (hortatory) first person plural in Turkic has the basic form *-aly*, to which either *-m* (of the first person singular) or *-q* (of the first person plural) or *-n*, *-ŋ* may be attached. Menges cites the following forms from Uighur as examples of *-(a)lym*: *ötün-älim* ‘let us venerate!’, *biti-lim* ‘let us write!’. Décsy (1998:73) reconstructs Proto-Turkic imperative first person plural endings **-alym/*-älim*. Greenberg (2000:196) compares this form with those under discussion here.
- E. Eskimo: Greenberg (2000:197) notes that “[a]ll dialects of Eskimo use a verb suffix *-li* to express an optative or imperative of the first and third person”. Fortescue (1984:291—292) notes that West Greenlandic has the optative markers *-li* (3rd person) and *-la* (1st person). Greenberg (2000:197) discusses the patterning in several other Eskimo dialects.

16.54. Causative **-sV* (Greenberg: §50. Causative S; Nafiqoff 2003:107)

- A. Afrasian: There are various causative prefixes in Semitic, the most common of which is *š-*, which is found in Akkadian, Ugaritic, and South Arabian (except Sabaean): cf. Akkadian *ušamqit* ‘he caused to fall’, from *maqātu* ‘to fall down, to collapse; to fall, to fall to the ground’. A similar formation, with prefix *s-*, is found in Egyptian: *s-sdm* ‘to cause to hear’, from *sdm* ‘to hear’, *s-nfr* ‘to make

beautiful', *s-hr* 'to cause to fall', etc. The same goes for Berber: cf. Tamazight *ssərɁəl* 'to cause to flee, to rout', from *rwəl* 'to run, to flee'. In several Afrasian languages (such as East Cushitic and Hausa, for example), causatives are formed with a suffix *-s*: cf. Burji *gat-is-* 'to cause to sell', from *gat-* 'to sell', etc. Causatives in *-s* (or extended forms) are also found in Omotic: cf. the Aari causative suffix *-sis-* in *wur-sis-* 'to cause to hear', from *wur-* 'to hear', or the Dime causative suffix *-s-* in *wuy-s-u* 'cause to stand!, stop!', from *wuy* 'stand!'. For Proto-Southern Cushitic, Ehret (1980:63) reconstructs causative **-Vs-* > Iraqw, Burunge, Alagwa *-Vs-*; K'wadza, Asa *-Vs-*; Ma'a *-V-*, *-s* in complexes of the form *-sV*, and *-ti* (< **Vtis*, which historically was a sequence of a continuative and a causative); Dahalo *-Vð-*, *-VVð-*, *-VðVð-*. The **s* causative in Afrasian is discussed by Ehret (1995:34): "The causative in **s* continues to be productive in many of the languages of the Afroasiatic family today, although in the Boreafasian [Semitic, Berber, and Egyptian] division of the family it long ago became a prefixed rather than a suffixed marker."

- B. Indo-European: As noted by Greenberg (2000:200—201), remnants of a causative *-s* can be deduced from a number of formations in Indo-European (the common causative suffix has been reconstructed as **-eyo-* [cf. Szemerényi 1996:274—279; Beekes 1995:229; Burrow 1973:331 and 357—357]). Perhaps the strongest evidence comes from Tocharian, which is the only branch to have a **-se/o-* verb formative identical in meaning to **-sk^{he}/o-* (cf. Adams 1988:76 and 102, fn. 48) — elsewhere, **-s-* is used as a present-tense suffix, as a desiderative marker, and to form future forms (cf. Beekes 1995:231). We may venture a guess here that the original meaning of the **-se/o-* formative in Tocharian was causative as distinct from the **-sk^{he}/o-* formative, which was durative or iterative-intensive, meanings well attested for this suffix in other Indo-European daughter languages (cf. Beekes 1995:230; Fortson 2010:99; Szemerényi 1996:273). With the phonological merger of these two formants in Tocharian, the causative meaning mostly prevailed.
- C. Uralic-Yukaghir: According to Greenberg (2000:201), there is a causative *-se-* in the Tundra dialect of Yukaghir (cf. *tire-se-* 'to drown [tr.]' versus *tire-* 'to drown [intr.]'). This appears as *-š-* in the Kolyma dialect (cf. *modo-š-* 'to cause to sit' versus *modo-* 'to sit'). Cf. Maslova 2003b:213—215; Nikolaeva 2006: 83 (Proto-Yukaghir causative affix, transitive **-sə-*).
- D. Altaic: Menges (1968b:161) discusses a rare Turkic denominative suffix *-sy/-si-* used to form the simulative aspect. He notes that the specifically simulative meaning of this suffix has been lost in the modern Turkic languages. Menges compares the Turkic suffix with the Mongolian formation in *-mi-ši-ja*. Greenberg (2000:201) further mentions South Tungus formations in *-si*. None of the Altaic formations discussed by Greenberg have a specifically causative meaning. Starostin—Dybo—Mudrak (2003:226) reconstruct a desiderative/inchoative formant **-s-* for Proto-Altaic.
- E. Eskimo: Greenberg (2000:202) notes: "In Eskimo the *s* causative is found in Sirenik *-səχ-*. In Siberian Yupik the causative marker *-sta* of Chaplino is analyzed by Emeljanova (1982: 157) as consisting of *-s-* causative and *-ta*

transitivizer. The so-called ‘half-transitive’ in *-si-* found in West Greenlandic and other Eskimo dialects (the term is Kleinschmidt’s, in modern terminology it is called ‘antipassive’) may belong here. When added to an instrumental base it allows it to take an object in the instrumental case. In Aleut, *-sa-* derives transitive from intransitive verbs, for example, in the Siberian Aleut of Bering Island, we find contrasts such as *ukaya-kuχ* ‘he gives’ vs. *ukaya-sa-kuχ* ‘he brings’.”

16.55. Inchoative **-na* (not in Greenberg 2000)

The original meaning of this extension appears to have been inchoative (also called “inceptive” or “ingressive”): ‘starts to...’, ‘becomes such’. This sense is preserved in Afrasian and Uralic. In Dravidian, it first acquired an inceptive-continuative connotation, from which it developed a future-habitual meaning: ‘starts to and continues...’ This is reminiscent of the situation in Korean, where, according to Ultan (1978:108), the derivational suffix indicating inchoative may also occur in the sense of future existence. In Indo-European, on the other hand, it acquired an inceptive-completive connotation: ‘starts to and finishes...’ An inchoative **-n-* is posited for Proto-Nostratic by John C. Kerns in our joint monograph (cf. Bomhard—Kerns 1994:170).

- A. Afrasian: Ehret (1995:31) reconstructs a Proto-Afrasian verb extension **n*, which “can have the connotation either of unboundedness of an action (hence “non-finitive”) or of inceptivity of the action involved. The extension in **n* has an inceptive effect especially commonly, and that may thus have been its original meaning.” Ehret further notes that **n* “was once very productive in the Agaw branch of Cushitic.” Finally, Ehret claims that “[i]n Semitic the verbal prefix **n-*, conveying a passive or reflexive meaning, would seem a probable reflex of PAA **n*.” According to Diakonoff (1988:106): “Stirpes of the N-/M-type have reflexive (and reciprocal) semantics; later they evolve in direction of Passive. In Old Egyptian *n-* is attested almost exclusively as a means of lengthening biconsonantal roots (thus sometimes also in Semitic). In Berber and Cushitic the stirpes of the M-type are commonly used instead of stirpes of the N-type, i.e. as reflexive and reciprocal stirpes (in the Semitic languages the marker *mV-* is widely used only in the formation of verbal nouns, but not finite verbal forms).”

Regarding stems in Semitic with prefix *n-*, Moscati (1964:126—127, §16.15) notes: “This stem has passive and reflexive meaning. It is attested over the entire Semitic area (with some traces in Egyptian) with the exception of Aramaic. In Ethiopic it is rare but occurs in some quadriradical verbs. Examples: Akk[adian] *naprusu* ‘to be separated’, root *prs*; Heb[rew] *niš'al* ‘he was asked’, root *š'l*; Ar[abic] *'inqaṭa'a* ‘he was cut to pieces’, root *qt'*. In Akkadian this theme adopts in part the vowel distribution of the simple stem (cf. §16.2 and von Soden GAG, p. 118); with stative verbs its meaning is

predominantly ingressive: e.g. *ibašši* ‘he is’, *ibbašši* ‘he becomes’; *našā’um* ‘to carry’, *nanšūm* ‘to shoulder’. In Ugaritic this stem is attested but the *n* is almost invariably assimilated to the following consonant (cf. however *nkbd* ‘honored’, root *kbd*). In Ethiopic — as has been mentioned — this stem appears with some quadriconsonantal verbs, e.g. *ʾanfarʾaša* ‘he jumped’; from the semantic point of view, however, Ethiopic shows a development towards a causative connotation which is, perhaps, connected with the formal identity of the prefixes (Brockelmann, GVG, I, p. 536).” According to Lipiński (1997:393—395), *n*-stems denote reflexive, reciprocal, and passive meaning. He points out that similar formations (usually with *m*- in place of *n*-) also exist in Libyco-Berber, where they give a reflexive or reciprocal meaning, as well as in Cushitic. Lipiński suggests that “reciprocity may indeed have been the original semantic value of the N-stem”.

- B. Dravidian: As noted by Krishnamurti (2003:307), “Koṇḍa has *-n-* as non-past (future-habitual) marker in finite and non-finite verbs, *ki-n-an* ‘he does/will do’, *ki-n-i* adj ‘the one doing’.” He also cites Pengo, Kui, and Kuwi evidence for use of *-n-* as a non-past (future-habitual) marker in South Dravidian: “Pengo future is marked by *-n-* and it corresponds in every aspect to Koṇḍa *-n-*, e.g. *hur-* ‘to see’: *hur-n-*, *in-* ‘to say’: *in-Ø-*; non-past adjective *hur-n-i*. In Kui *-d-* and *-n-* occur as future markers in complementary distribution... Kuvi [Kuwi] also has parallel distribution of *-d-* and *-n-* as future markers...”
- C. Kartvelian: Svan has two distinct future paradigms: imperfective and perfective. The imperfective is based on the present stem, except that the series marker is changed to *-i*, preceded by the suffixes *-(n)-un* (Upper Bal), *-wn-*, *-ən-*, *-ōl-n-* (Lašx), *-(i)n-*. The perfective future is almost invariably preceded by one or two preverbs. Cf. Tuite 1997:29—30. The *n* element may be derived from the formative under discussion here, with a shift from inchoative to future as in South Dravidian.
- D. Indo-European: Indo-European contained a nasal infix **-n-* that could be added to type II verbal stems according to the following pattern: **CC-n-éC-* (cf. Benveniste 1935:159—163 [note especially the table on p. 161]; see also Szemerényi 1996:270—271; Sihler 1995:498—499), but only when the verbal stems ended in obstruents or laryngeals (cf. Lehmann 2004:118). According to Gray (1939:137), the nasal infix denotes “the point from or to which action proceeds, so that [it] characterize[s] terminative verbs (Sanskrit *yu-ñ-ja-ti*, Latin *iu-n-g-it* ‘starts to put on a yoke and carries the process through’...).” Another, less widely-accepted theory derives the nasal infix from an earlier suffix through metathesis.
- E. Uralic-Yukaghir: According to Collinder (1960:279—280 and 1965:117), Proto-Uralic had a verbal **n* formant denoting ‘becoming such’ (cf. Finnish *parane-* ‘to grow better, to recover, to improve’, *vanhene-* ‘to grow old, to grow older’; Lapp / Saami *buorranâ-* ‘to grow better, etc.’; Cheremis / Mari *jahne-* ‘to become dirty’), while Décsy (1990:63) notes that **-na/*-nā* could be used to create momentaneous/inchoative verb stems. According to Raun (1988b:567—568), this suffix (along with several others) indicates “becoming like what is

meant by the noun stem”. Yukaghir: Northern / Tundra *-na:-* inchoative affix (cf. Nikolaeva 2006:82).

- F. Gilyak / Nivkh: The (Amur) future marker *-ny-* (cf. Gruzdeva 1998:33) may belong here, assuming semantic development as in South Dravidian.

VII. NEGATIVE/PROHIBITIVE PARTICLES

- 16.56. Negative **na* (~ **nə*), **ni* (~ **ne*), **nu* (~ **no*) (Greenberg: §56. Negative N; Dolgopolsky 2008, no. 1524, **ñi* ‘not’)

Negative/prohibitive **nV* occurs throughout Nostratic (cf. Bomhard—Kerns 1994: 681—682, no. 562).

- A. Afrasian: Egyptian *n*, *nn*, *ny*, *nw* negative particle: ‘not’; Coptic *n-* [**n-**] negative particle. A negative *n* is also found in Omotic (cf. Bender 2000:219).
- B. Elamite: Elamite *in-*, element of negation, *inni*, negative particle, and *ani*, prohibitive particle should be included here.
- C. Kartvelian: Proto-Kartvelian **nu* ‘no, not’ (prohibitive particle) > Georgian *nu* ‘no, not’; Mingrelian *nu* ‘no, not’; Svan [*no*]. Proto-Kartvelian **numa* ‘no, not’ (prohibitive particle) > Mingrelian *numu*, *nəmə* ‘no, not’; Svan *nōma*, *nōm-* ‘no, not’. Cf. Schmidt 1962:128; Klimov 1964:148—149 and 1998:144; Fähnrich—Sardshveladse 1995:267; Fähnrich 1994:260 and 2007:323.
- D. Indo-European: Proto-Indo-European negative particles **nē*, **ney-*, negative prefix **n̥-*: Sanskrit *ná*, *nā* ‘not’, negative prefix *a-/an-*; Old Persian *na-* ‘not’; Avestan negative prefixes *na-*, *naē-*, *a-/an-* ‘not’; Greek negative prefixes *ἀ-/ἀν-*, *νῆ-*, *νῆ-*; Latin negative prefixes *nē-*, *in-*, *nē* ‘not’, *nec*, *neque* (adv.) ‘not’, (conj.) ‘and not’; Oscan *nei*, *ni* ‘not’; Umbrian *nei* prohibitive: ‘not’, *neip* negative and prohibitive: ‘not’; Old Irish *ní*, *nī* ‘not’, *ne-ch* ‘someone, anyone, something, anything; nobody, nothing’, negative prefixes *ne-*, *nī-*, *in-/é-/an-*; Gothic *ni* ‘not’, *nei* ‘nor’, negative prefix *un-*; Old Icelandic *ne* ‘not’, (adv.) *né* ‘neither, nor’, (adv.) *nei* ‘no’; Norwegian *ni* ‘not’; Old English *ne*, *ni* ‘not’, negative prefix *un-*; Old Frisian *ne*, *ni* ‘not’; Old Saxon *ne*, *ni* ‘not’; Old High German *ne*, *ni* ‘not’; New High German *nicht* ‘not’, *nie* ‘never, at no time’; Lithuanian *nė*, *neĩ* ‘not’; Old Church Slavic *ne* ‘not’; Hittite *na-at-ta* ‘not’ (cf. Pokorny 1959:756—758; Watkins 2000:57; Greenberg 2000:212).
- E. Uralic: Proto-Uralic negative particle **ne* > Hungarian *nē*, *nēm* ‘not’; Cheremis / Mari *nō*, *ni*: *nō-mat*, *ni-ma-at*, *ni-mat* ‘nothing’, *ni-gū* ‘nobody’; Votyak / Udmurt *ni*: *ni-no-kin* ‘nobody’, *ni-no-ku* ‘never’, *ni-no-mer* ‘nothing’; Ostyak / Xanty (Northern) *nem-hōjat* ‘nobody’, *nem-huntta* ‘never’, *nemätti*, *nəmättə* ‘nothing’; Zyrian / Komi *nōm*, *nem*, *ñem* ‘nothing’; Vogul / Mansi (Northern) *nee-mäter* ‘nothing’, *neem-hot* ‘nowhere’, *neem-huuñt* ‘never’ (cf. Greenberg 2000:212; Collinder 1955:38; Rédei 1986—1988:301). (?) Yukaghir (Southern / Kolyma) *ñə-* negative pronominal marker, *ñ-irkin/ñ-irkid* ‘no one’, *ñə-qon* ‘nowhere’, *ñə-leme* ‘nothing’ (cf. Nikolaeva 2006:294).

- F. Altaic: Turkic: In Chuvash, there is a preposed prohibitive particle *an* ‘no, not’ which is used to negate second and third person imperatives. Greenberg (2000:212—213) also notes that, “[i]n Tungus there is a widespread form *ana* found in Oroch, Orok, and Ulch that typically negates adjectives...”
- G. Chukchi-Kamchatkan: Proto-Chukotian **nuŋ-* negative formant.
- H. Eskimo-Aleut: Proto-Eskimo **na-* and **na(a)ŋŋa* ‘no’ > Alutiiq Alaskan Yupik (Koniag) *naa* ‘no! don’t!’; Naukan Siberian Yupik *naami* ‘no’; Central Siberian Yupik *na(a)*, *nalaa* ‘no’; Sirenik *naayya* ‘no’; North Alaskan Inuit *naayya*, *naakka* ‘no’; Western Canadian Inuit (Siglit) *naaka* ‘no’; Eastern Canadian Inuit (Iglulik) *naayya* ‘no’; Greenlandic Inuit *naaxxa* ‘no’. Aleut *naŋaa* ‘no’. Cf. Fortescue—Jacobson—Kaplan 1994:204.

Sumerian: Note the following: *na* ‘not’, *na-* modal prohibitive prefix (imperfect root), *nu* ‘not’, *nu-* negative prefix. Cf. Thomsen 1987:190—199.

- 16.57. Prohibitive particle **ma(?)* (\sim **mə(?)*) (Greenberg: §57. Negative M; Möller 1911:158; Illič-Svityč 1971—1984.II:56—57, no. 290, **mä* prohibitive particle; Dolgopolsky 2008, no. 1353, **mä* \rightarrow **mäh[o]* ‘do not’ [prohibitive particle] and ‘not’ [negative])
- A. Afrasian: Proto-Semitic **ma(?)* negative/prohibitive particle: ‘no, not’ > Arabic *mā* ‘not’; Harari *mē?* ‘not’. Egyptian *m* imperative of the negative verb *imi*: ‘do not!’ (cf. Hannig 1995:312; Faulkner 1962:100; Erman—Grapow 1921:59 and 1926—1963.2:3; Gardiner 1957:567). Proto-East Cushitic **ma(?)* negative particle > Afar *ma*; Somali *ma?* (Central Somali *mə* main sentence negative particle); Rendille *ma-* negative prefix; Dasenech *ma*. Ongota negative imperative verb prefix *ma-*, negative non-imperative verb prefix *mi-* (cf. Fleming 2002b:40). Cf. Diakonoff 1988:83, §4.4.3; Ehret 1995:301, no. 572, **ma-* ‘to not have’.
- B. Kartvelian: Proto-Kartvelian **ma-* negative/prohibitive particle: ‘no, not’ > Laz *mo(t)* verbal prohibitive particle; Svan *mā-d(e)*, *mō-d(e)* particle of modal negation: ‘no, not’, *mām(a)* ‘not’, *māma* ‘no’. Cf. Klimov 1964:124—125 **mad* and 1998:113 **mad* verbal negative particle; Fähnrich—Sardshweladse 1995:227 **ma-*; Fähnrich 2007:277.
- C. Indo-European: Proto-Indo-European prohibitive particle **mē* > Sanskrit *mā* prohibitive particle: ‘not, that not’; Old Persian, Avestan *mā* prohibitive particle: ‘not’; Greek *μή* ‘not’; Armenian *mi* prohibitive particle: ‘do not!’; Tocharian B *mā* ‘not, no’ (simple negation and prohibition); Albanian *mos* ($<$ **mē+k^{wh}e*) prohibitive particle: ‘do not!’ (cf. Greenberg 2000:213; Pokorny 1959:703; Walde 1927—1932.II:236—237; Mallory—Adams 1997:395; Mann 1984—1987:738).
- D. Altaic: Proto-Altaic **ma* negative/prohibitive particle > (A) Proto-Tungus **-me* prohibitive particle > Manchu *ume* used for negating imperatives (stands before the imperfect participle); Spoken Manchu (Sibo) *emə* ‘do not’; Jurchen *ume*

prohibitive particle; Nanay / Gold *em* prohibitive particle; Oroch *em* prohibitive particle; (B) Proto-Turkic **-ma-* negative particle > Old Turkic *-ma-* negative particle; Karakhanide Turkic *-ma-* negative particle; Turkish *-ma-* negative particle; Gagauz *-ma-* negative particle; Azerbaijani *-ma-* negative particle; Turkmenian *-ma-* negative particle; Uzbek *-ma-* negative particle; Uighur *-ma-* negative particle; Karaim *-ma-* negative particle; Tatar *-ma-* negative particle; Bashkir *-ma-* negative particle; Kirghiz *-ma-* negative particle; Kazakh *-ma-* negative particle; Noghay *-ma-* negative particle; Oyrot (Mountain Altai) *-ma-* negative particle; Tuva *-ma-* negative particle; Chuvash *-ma-* negative particle; Yakut *-ma-* negative particle (cf. Menges 1968b:144; Johanson—Csató 1998). Cf. Greenberg 2000:213—214; Starostin—Dybo—Mudrak 2003:893 **ma* a negative particle. Starostin—Dybo—Mudrak remark: “A monosyllabic root, but, unlike the 1st p. pron. or the accusative particle, it did not undergo denasalization in P[roto]-A[ltaic]. This may be explained by the fact that it was in most cases already incorporated into the verbal form as a suffix. It is interesting to note Mong[olian] **büi*, **bu* ‘neg. particle’ — which may be originally the same morpheme, but functioning as a separate word and thus subject to the rule **mV* > **bV*.”

- 16.58. Negative particle **ʔal-* (~ **ʔəl-*) (perhaps also **ʔel-*, **ʔul-*) (originally a negative verb stem, as in Dravidian: ‘to be not so-and-so’ — later used in some branches as a negative particle), probably also **li* (~ **le*) ‘no, not’ (Greenberg: §58. Negative E/ELE; Illič-Svityč 1971—1984.I:263—264, no. 128, **ʔāla* particle of categorical negation; Dolgopolsky 2008, no. 22, **ʔāla* particle of negation and categorical prohibition)
- A. Afrasian: Proto-Semitic **ʔal-/ʔul-* (< **ʔəl-*) element of negation > Akkadian *ūl* ‘not’; Ugaritic *āl* ‘not’; Hebrew *ʔal* (negative particle) ‘certainly not’, (with verb) ‘not’; Phoenician *ʔl* element of negation; Sabaeen *ʔl* (negative particle) ‘not, no one’; Ḥarsūsi *ʔel* ‘not’; Šḥeri / Jibbāli *ʔəl* ‘not’; Mehri *ʔəl* ‘not’; Arabic *lā* (negative particle) ‘not’, (with apoc. expressing negative imptv.) ‘no!’, Geez / Ethiopic *ʔal-* element of negation in *ʔalbə-*, *ʔalbo*; Tigre *ʔālā-* in *ʔālā-bu* ‘there is not’; Amharic *al-* used to express a negative verb in the perfect. Cf. D. Cohen 1970— :19, no. 3, prohibitive particle. Berber: Kabyle *ala* ‘no’.
- B. Dravidian: Proto-Dravidian **al-* ‘to be not so-and-so’ > Tamil *al-* ‘to be not so-and-so’; Malayalam *alla* ‘is not that, is not thus’; Kolami *ala* ‘to be not so-and-so’; Kannaḍa *alla* ‘to be not so-and-so, to be not fit or proper’; Koḍagu *alla* ‘to be not so-and-so’; Malto *-l-* negative morpheme; Brahui *all-* base of past negative tenses of *anning* ‘to be’, *ala*, *alavā* ‘certainly not, not a bit of it’. Cf. Burrow—Emeneau 1984:22, no. 234; Krishnamurti 2003:354—356.
- C. Indo-European: Hittite *li-e* element used with the present indicative to express a negative command (cf. Sturtevant 1951:139, §242; J. Friedrich 1960:139, §264a, and 145, §280; Luraghi 1997:56; Kloekhorst 2008b:523 Proto-Indo-European **leh₁* prohibitive particle). The Hittite form is isolated within Indo-

- European, unless, as suggested by Sommer, it is related to Old High German *lā* ‘do not!’. Many scholars take Hittite *li-e* to be from **ne*.
- D. Uralic-Yukaghir: Proto-Uralic **elä* imperative of the negative auxiliary verb (cf. Collinder 1977:26). Marcantonio (2002:239) describes the patterning in Finnish as follows: “A negative verbal form is used in Finnish also in the Imperative, as shown by the pair *lue* ‘read’ vs *älä lue* ‘do=not read’ (2nd Person Singular). The negative form *älä* is often compared with the equivalent Yukaghir *el* ~ *ele*. Equivalent negative verbs and related isomorphic constructions are found in the majority of the Tungusic languages (*e*- ~ *ä*-), in Mongolian (*e-se*) (UEW 68; SSA 100) and in Dravidian.” Rédei (1986—1988:68—70) treats the negative verb **e-* and the imperative **elä* together, as do many others, including Collinder and TAILLEUR. As noted by Greenberg (2000:214), these two forms are so closely intertwined, often through suppletion, that it is difficult to distinguish one from the other. In Yukaghir, all verbs except (Northern / Tundra) *l'e-* ‘to be, to exist’ form the negative by means of a prefix *el-* (cf. Greenberg 2000:214—215). Clearly, we are dealing with two separate forms here. The first is the Proto-Nostratic negative particle **ʔe* ‘no, not’, and the second is the negative verb *ʔal-* (~ **ʔəl-*) ‘to be not so-and-so’. The latter is to be distinguished from the Uralic verb **elä-* ‘to live, to be’ (cf. Rédei 1986—1988:73; Collinder 1955:10 and 1977:31). Greenberg’s (2000:215) analysis of the situation is as follows: “As we have just seen, the Yukaghir verb ‘to be’ is *l'e*, a form that has cognates in other Eurasiatic languages. The theory tentatively suggested to account for this and other intricate facts is that there was a Eurasiatic negative verb **e(i)* that, when combined with the positive verb ‘to be’ *le*, formed a negative existential verb **e-le* that in some instances lost either its initial or final vowel.” Contrary to Greenberg, the Proto-Nostratic verb under discussion here must be reconstructed as **ʔil-* (~ **ʔel-*) ‘to live, to be alive; to be, to exist’ (cf. Illič-Svityč 1965:341 ЖИТЬ¹ ‘to live’: **elʌ*), not **le*. To complicate matters further, there may have also been a separate Proto-Nostratic negative particle **li* (~ **le*) ‘no, not’ (note here the Proto-Yukaghir prohibitive affix **-lə* [cf. Nikolaeva 2006:81]). The interrelationship among these forms is extremely complex — note, for example, the discussion by Aikio (2022:13—14).
- E. Altaic: Proto-Altaic **ule* (~ *-i*) negative particle: Proto-Mongolian **ülü-* negative element preceding verbs > Written Mongolian *ülü*; Khalkha *ül*; Buriat *üle*; Kalmyk *üle*; Ordos *üle*, *ülü*; Moghol *la*, *lū*, *le*; Dagur *ul*, *ule*; Dongxiang *ulie*; Shira-Yughur *lə*; Monguor *li*, *lī*. Cf. Poppe 1955:287, 288, 289, 290, and 291; Starostin—Dybo—Mudrak 2003:1493 **ule* (~ *-i*) negative particle.
- F. Chukchi-Kamchatkan: According to Greenberg (2000:216): “In the Koryak group reflexes of **ele* form sentence negations or are equivalent to English ‘no!’, a natural use for a negative existential. Examples are Palana Koryak *elle* and Kerek *ala* ‘not.’ Kerek has lost its vowel harmony system through merger so that *a* is the expected reflex of **e*. Aliutor has gone through similar phonetic changes and has *al*, *alla* ‘no, not’. In addition, for prohibitives, Kerek uses the imperative of a negative auxiliary verb *illa*, which follows the negative

infinitive...” Fortescue (2005:31) reconstructs Proto-Chukchi-Kamchatkan **æ/(læ)* ‘not’.

- G. Gilyak / Nivkh: Greenberg (2000:215) compares the Gilyak / Nivkh verb stem *ali-* ‘to be unable,’ “which may be considered to represent the full form of the negative existential **ele*.”

Sumerian: *li* negative particle: ‘not, un-’.

- 16.59. Negative particle **ʔe* (Greenberg: §58. Negative E/ELE — Greenberg treats **e* and **ele* together; Dolgopolsky 2008, no. 3, **ʔe* [~ ? **ʔä*] ‘not’)

- A. Uralic: Proto-Uralic **e-* negative particle: ‘no, not’. For details, see the discussion above under Proto-Uralic **elä* imperative of the negative auxiliary verb (cf. Collinder 1955:31 and 1977:26; Rédei 1986—1988:68—70; Aikio 2022:13).
- B. Altaic: Proto-Altaic **e* negative particle: Proto-Tungus **e-* ‘not’ > Negidal *e-* ‘not’; Jurchen *ey-ʒe*, *esi(n)-in* ‘not’; Ulch *e-* ‘not’; Oroch *e-* ‘not’; Nanay / Gold *e-* ‘not’; Evenki *e-* ‘not’; Lamut / Even *e-* ‘not’; Oroch *e-* ‘not’; Udihe *e-* ‘not’; Solon *e-* ‘not’. Proto-Mongolian *e-se* ‘not’ > Written Mongolian *ese* ‘not’; Khalkha *es* ‘not’; Buriat *ehe* ‘not’; Kalmyk *es* ‘not’; Ordos *ese* ‘not’; Moghol *sa*, *se* ‘not’; Dagur *es* ‘not’; Monguor *sə*, *sī* ‘not’. Cf. Poppe 1955:287, 290, and 291 — Poppe points out that “[t]he negative *ese* is the stem of the verb *ese-* ‘not to be’ = Tungus *esi-*.” Cf. Starostin—Dybo—Mudrak 2003:488 **e* ‘not’.
- C. Etruscan: *ei* ‘not’.
- D. Chukchi-Kamchatkan: Chukchi negative prefix *e-* ~ *a-*; Koryak negative prefix *e-* (or its expected phonetic outcomes). Cf. Greenberg 2000:216.

Sumerian: *e* ‘no’.

VIII. INTERROGATIVE, RELATIVE, AND INDEFINITE STEMS

- 16.60. Relative **kwhi-* (~ **kwhē-*), interrogative **kwha-* (~ **kwhə-*) (Greenberg: §60. Interrogative K; Nafiqoff 2003:55—58 **Kō*, **Kē*; Dolgopolsky 2008, no. 981, **Kō* ‘who’; Illič-Svityč 1971—1984.I:348, no. 223, **Kē* ‘who’, I:355—356, no. 232, **Kō* ‘who’; Fortescue 1998:96—123 and 153—154)

- A. Afrasian: This stem is not widespread in Afrasian. It is preserved in relic forms in several Semitic languages: Proto-Semitic **ka-m* ‘how much?, how many?’ > Arabic *kam* ‘how much?, how many?’; Ḥarsūsi *kem* ‘how much?, how many?’; Mehri *kəm* ‘how much?’; Soqotri *kəm* ‘how much?’. It also occurs in Cushitic: Rendille interrogative suffix *-koh* ‘which?’; Arbore *kaakó* ‘how much?, how many?’; Galla / Oromo interrogative pronoun *kam(i)* ‘which?’. Finally, it

- occurs in the Kefoid branch of Omotic (cf. *kon(n)e*, *koonni*, *ko* ‘who?’) and in the Dizoid branch as well (cf. *yiki* ‘who?’) (cf. Bender 2000:209 and 226).
- B. Indo-European: Proto-Indo-European **k^{wh}e-/k^{wh}o-*, **k^{wh}i-* stem of interrogative and relative pronouns > Sanskrit *ká-h* ‘who?’ (Vedic *ki-h* ‘who?’), *cid* ‘even, at least’; Avestan *kō* ‘who?’; Latin *quī, quae, quod* ‘which?, what?, what kind of?’, *quis, quid* ‘who?, what?’; *quī* ‘how?, in what manner?’; Greek τίς, τί (indefinite) ‘anyone, anything’, (interrogative) ‘who?, which?, what?’; Old Irish *cía* ‘who?’, *cid, ced* ‘what?’; Gothic *hvas* ‘who?’, *hva* ‘what?, why?’; Old English *hwā* ‘who?’, *hwæt* ‘what?’; Lithuanian *kàs* ‘who?, what?’; Old Church Slavonic *kъ-to* ‘who?’; Hittite *ku-iš, ku-it* (interrogative) ‘who?, what?’ (relative) ‘who, what’, (indefinite) ‘someone, anyone’, *ku-(u-)wa-at* ‘why?’ (cf. Pokorny 1959:644–648; Walde 1927–1932.I:519–523; Brugmann 1904:402; Beekes 1995:203–207; Szemerényi 1996:208–210; Watkins 1985:34 and 2000:46; Fortson 2010:144–145).
- C. Uralic: Proto-Uralic **ki-*, **ke-* relative pronoun stem > Finnish *ken* ~ *kene* ~ *ke-* ‘who’; Lapp / Saami *gi* ~ *gæ-* ‘who, which, what sort of’; Mordvin *ki* ‘who, somebody’; Cheremis / Mari *ke, kö, kü* ‘who’; Votyak / Udmurt *kin* ‘who’; Zyrian / Komi *kin* ‘who’; Hungarian *ki* ‘who’; Yurak Samoyed / Nenets (Southern) *kin* ‘who’ (cf. Joki 1973:268; Collinder 1955:24, 1965:138–139, and 1977:44; Rédei 1986–1988:140–141; Décsy 1990:100). Proto-Uralic **ku-*, **ko-* interrogative pronoun stem > Finnish *kuka* ~ *ku-* ‘who?’, *kussa* ‘where?’, *koska* ‘when?’; Lapp / Saami *gutti* ‘who?’; Mordvin *kodamo* ‘which?, what kind of a...?’, *kona* ‘which?’, *koso* ‘where?’, *koda* ‘how?’; Cheremis / Mari *kudō* ‘who?, which?’; Votyak / Udmurt *kudiz* ‘which?’, *ku* ‘when?’; Zyrian / Komi *kod* ‘which?’, *ko* ‘when?’; Vogul / Mansi *hoo, kon* ‘who?’, *hoot* ‘where?’, *qun* ‘when?’; Ostyak / Xanty *koji* ‘who?’, *kōti* ‘what?’; Hungarian *hol* ‘where?’, *hova* ‘whither?’, *hogy* ‘how?’; Yurak Samoyed / Nenets *hu* ‘who?’, *huñany* ‘which?’; Selkup Samoyed *kutte, kudō* ‘who?’, *kun* ‘where?’; etc. (cf. Collinder 1955:26, 1965:139, and 1977:46; Aikio 2022:13 **ke* ‘who’, **ku* ‘a general content interrogative’; Rédei 1986–1988:191–192; Décsy 1990:100).
- D. Altaic: Proto-Altaic **k^ha(y)* interrogative pronoun: ‘who?, what?’ > (A) Proto-Tungus **χia* (**χai*) ‘who?, what?’ > Manchu *ai, ya* ‘who?, what?, which?’; Evenki *ē* ‘who?’, *ēkūn* ‘what?’; Lamut / Even *āq* ‘what?’; Negidal *ēχun, ēkun* ‘who?, what?’, *ēwa* ‘what?’; Ulch *χay* ‘what?’; Orok *χai* ‘what?’; Nanay / Gold *χai* ‘what?’; Solon *ī* ‘what?’; (B) Proto-Mongolian **ken, *ka-* ‘who?, which?’ > Written Mongolian *ken* ‘who?, which?’; Khalkha *χen* ‘who?, which?’; Buriat *χen* ‘who?, which?’; Kalmyk *ken* ‘who?, which?’; Ordos *ken* ‘who?, which?’; Moghol *ken* ‘who?, which?’; Dagur *ken, χen* ‘who?, which?’, *χā-, hā-* ‘where?’; Monguor *ken* ‘who?, which?’ (cf. Poppe 1955:45 and 229); (C) Proto-Turkic **kem-, *ka-* ‘who?, which?’ > Old Turkic (Old Uighur) *kem* ‘who?’, *qayu, qanu* ‘which?’; Karakhanide Turkic *kem, kim* ‘who?’, *qayu* ‘which?’; Turkish *kim* ‘who?’; Gagauz *kim* ‘who?’; Azerbaijani *kim* ‘who?’; Turkmenian *kim* ‘who?’, *qay* ‘which?’; Uzbek *kim* ‘who?’, *qay* ‘which?’; Uighur *kim* (dialectal *kem*) ‘who?’, *qay* ‘which?’; Karaim *kim* ‘who?’; Tatar *kem* ‘who?’, *qay*

- ‘which?’; Bashkir *kem* ‘who?’ (dialectal) *qay* ‘which?’; Kirghiz *kim* ‘who?’; *qay* ‘which?’; Kazakh *kim* ‘who?’; *qay* ‘which?’; Noghay *kim* ‘who?’; Oyrot (Mountain Altai) *kem* ‘who?’; *qay* ‘which?’; Tuva *qim* ‘who?’; *qay* ‘which?’; Chuvash *kam* ‘who?’; Yakut *kim* ‘who?’; *χaya* ‘which?’; Dolgan *kim* ‘who?’; *kaya* ‘which?’ (cf. Menges 1968b:134–135; Róna-Tas 1998:74). Cf. Starostin—Dybo—Mudrak 2003:754 **k’a(j)* interrogative pronoun: ‘who’.
- E. Chukchi-Kamchatkan: Greenberg (2000:223) compares Kamchadal / Itelmen *k’e* ‘who?’ here. Fortescue (2005:175) derives this from Proto-Chukchi-Kamchatkan **mikæ* ‘who?’ (but cf. Fortescue 1998:154). Clearly, **mikæ* is a combination of **mi-* plus **-kæ*. See below for more information.
- F. Eskimo: Proto-Eskimo **ki(na)* ‘who’ > Alutiiq Alaskan Yupik *kinaq* ‘who’; Central Alaskan Yupik *kina* ‘who’; Naukan Siberian Yupik *kina* ‘who’; Central Siberian Yupik *kina* ‘who’; Sirenik *kin* ‘who’; Seward Peninsula Inuit *kina* ‘who’; North Alaskan Inuit *kin’a* ‘who’; Western Canadian Inuit *kina* ‘who’; Eastern Canadian Inuit *kina* ‘who’; Greenlandic Inuit *kina* ‘who’. Aleut *kiin* ‘who’. Cf. Fortescue—Jacobson—Kaplan 1994:173–174. Proto-Eskimo **kitu* ‘who’ or ‘which’ > Alutiiq Alaskan Yupik *kitu-* ‘who’; Central Alaskan Yupik *kitu-* ‘who’; Naukan Siberian Yupik *kitu-* ‘who’; Central Siberian Yupik *kitu-* ‘who’; Seward Peninsula Inuit *kitu* ‘which’; North Alaskan Inuit *kisu* ‘which’; Eastern Canadian Inuit *kituuna* ‘who is that’; Greenlandic Inuit (North Greenlandic / Polar Eskimo) *kihu* ‘what’. Cf. Fortescue—Jacobson—Kaplan 1994:174. Proto-Inuit **qanuq* ‘how’ > Seward Peninsula Inuit *qanuq* ‘how’; North Alaskan Inuit *qanuq* ‘how’; Western Canadian Inuit *qanuq* ‘how’; Eastern Canadian Inuit *qanuq* ‘how’; Greenlandic Inuit *qanuq* ‘how’. Cf. Fortescue—Jacobson—Kaplan 1994:284. Proto-Eskimo **qana* ‘when (in past)’ > Sirenik *qanən* ‘when (in past?)’; Seward Peninsula Inuit *qana* ‘when (in past)’; North Alaskan Inuit *qana* ‘when (in past)’; Western Canadian Inuit *qana* ‘when (in past)’; Eastern Canadian Inuit *qana* ‘when’; Greenlandic Inuit *qana* ‘when (in past)’. Aleut *qana-* ‘which, where’, *qanayaam* ‘when’, *qanaay* ‘how many’. Cf. Fortescue—Jacobson—Kaplan 1994:284. Proto-Eskimo **qaku* ‘when (in future)’ > Alutiiq Alaskan Yupik *qaku* ‘when (in future)’; Central Alaskan Yupik *qaku* ‘when (in future)’; Naukan Siberian Yupik *qaku* ‘when’; Central Siberian Yupik *qakun* ‘when (in future)’; Sirenik *qaku* ‘when’; Seward Peninsula Yupik *qayu(n)*, *qayurun* ‘when (in future)’; North Alaskan Inuit *qakuyu* ‘when (in future)’; Western Canadian Inuit (Siglit) *qaku(yu)* ‘when (in future)’; Eastern Canadian Inuit *qaku* ‘when (at last, after lengthy waiting)’; Greenlandic Inuit *qaquyu* ‘when (in future)’. Cf. Fortescue—Jacobson—Kaplan 1994:278. Proto-Yupik-Sirenik **qayu(q)* ‘how’ > Alutiiq Alaskan Yupik *qayu* ‘how’; Central Alaskan Yupik *qayumi* ‘indeed, as expected’; Naukan Siberian Yupik *qay* ‘I wonder, is that so?’, *qaywa* ‘really?, is that so?’; Central Siberian Yupik *qayuq* ‘how’; Sirenik *qaynun* ‘really?’. Cf. Fortescue—Jacobson—Kaplan 1994:293.

- 16.61. Interrogative-relative stem **ʔay-*, **ʔya-* (Greenberg: §61. Interrogative J; Illič-Svityč 1971—1984.I:277—278, no. 142, **ja* interrogative and relative stem: ‘which, who’; Nafiqoff 2003:57—58 **ja*; Dolgopolsky 2008, no. 2616, **ya* ‘which?’)

This stem is one of the strongest Nostratic etymologies. The data supporting this etymology are extremely rich, and derivatives are found in nearly every branch of Nostratic. Rather than list all of the data, I will only give a summary here.

- A. Afrasian: Proto-Afrasian **ʔay(y)-* interrogative-relative pronoun stem: ‘who, which, what; here; who?, which?, what?; where?’ > Proto-Semitic **ʔay(y)-* interrogative stem: ‘who?, which?, what?; where?’ > Hebrew *ʔē* ‘where?’, Aramaic *ʔē* ‘what?, where?, how?’, *ʔēḫā* ‘where now?’, Syriac *ʔaynā* ‘what?’, *ʔaykā* ‘where?’, Ugaritic *īy* ‘where?’, Akkadian *ayyu* ‘who?, what?’, Arabic *ʔayy* ‘which?, what?’, Epigraphic South Arabian *ʔy* ‘whatsoever’, Geez / Ethiopic *ʔayy* ‘which?, what?, what kind?, what sort of?’, Tigre *ʔayi* ‘which?’, Tigrinya *ʔayyān*, *ʔayyā-nay* ‘which?’, also in: *nabāy* ‘whither?’ (from *nab ʔay*) and *kāmāy* ‘how!’ (from *kāmā ʔay*); Harari *āy* ‘which?’, *āyde* ‘where?’, *āyku(t)* ‘how?’, Gurage (Chaha) *e* ‘where?’ (cf. D. Cohen 1970— :16—17; Moscati 1964:114—115; Klein 1987:20; Leslau 1963:38, 1979:1, and 1987:49). Proto-East Cushitic **ʔay(y)-* > Saho *ay* ‘who?’, Boni *ay* ‘who?’, Somali *ayy-o* ‘who?’, Burji *áyye* ‘who?’, Hadiyya *ay*, *ayy-e* ‘who?’ (cf. Sasse 1979:46 and 1982:30; Hudson 1989:167). This stem also occurs in Proto-Southern Cushitic **ʔayi* ‘here’, (combining form) **yi* ‘here’ > K’wadza *ayīye* ‘here’, Ma’a *iʔi* ‘here’, Dahalo **ji-* in *jiko* ‘who?’ (cf. Ehret 1980:288). Bender (2000:209) reconstructs an interrogative stem **ay* ‘who?, what?, why?’ for Proto-Omoti. Cf. Diakonoff 1988:83, §4.4.4.
- B. Dravidian: Proto-Dravidian **yā-* interrogative stem: ‘who?, which?, what?’ > Kannada *yā-*, *ā-*, *ē-*, *e-* interrogative base; Malayalam *yāvan/ēvan*, *yāvaḷ/ēvaḷ*, *yāvar/ēvar/yār/ār* ‘who?’, *yā/yātu/ētu/ēn* ‘what?’, Tamil *yā*, *yāvai* ‘what or which things?’, *ēvan* ‘who?’, *ēn* ‘why?, what?, how?’ (cf. Krishnamurti 2003: 256—258 **yaH-/yāH-*; Burrow—Emeneau 1984:465—467, no. 5151).
- C. Kartvelian: Svan (interrogative) *jār* ‘who?’, (relative) *jerwāj* ‘who’, (indefinite) *jer* ‘somebody, something’, *jerē* ‘someone, somebody’, *jerwāle* ‘anybody’.
- D. Indo-European: Proto-Indo-European **ʔyo-* relative pronoun stem > Greek *ὅς*, *ὅ* ‘which’; Phrygian *ioç* ‘which; this’; Sanskrit *yá-h* ‘which’ (cf. Greenberg 2000:225—227; Pokorny 1959:283 **io-*; Mann 1984—1987:452). According to Szemerényi (1996:210), among others, **yo-* is to be derived from the anaphoric stem **i-*. However, Greenberg successfully refutes this view.
- E. Uralic: Proto-Finno-Ugrian relative and indefinite pronoun **yo-* ‘who, which’ > Finnish *jo-* in *joka* ‘who, which’, *joku* ‘someone, anyone’, *jos* ‘when’; Lapp / Saami *juokkē* ‘each, every’; Mordvin *ju-* in *juza toza* ‘to and fro, back and forth’; Cheremis / Mari (Western) *juž*, (Eastern) *južā* ‘someone, anyone’ (cf. Greenberg 2000:227; Joki 1973:264; Rédei 1986—1988:637 **jo*).

- F. Altaic: Proto-Altaic **yā-* interrogative stem: ‘who?, which?, what?’ > (A) Manchu *ya* ‘which?, what?’, *yaba* ‘where?’, *yade* ‘where?, whither?, to whom?’; Evenki *ēma* (< **yāma*) ‘what kind?’, *ēdu* (< **yādu*) ‘why?, for what?’; (B) Mongolian *yaγun* ‘what?’, *yambar* ‘which?, what kind?’; Dagur *yō* ‘what?’; Moghol *yan* ‘what?, which?’, *yem* ~ *yema* ‘what?’; Ordos *yū* ‘what?’; Buriat *yūŋ* ‘which?’. Cf. Greenberg 2000:227; Poppe 1955:126, 226, 229, 230 and 1960:32, 33; Street 1974:29 **yā-* ‘to do what?; who, what’. Starostin—Dybo—Mudrak (2003:754) derive the Manchu-Tungus forms cited above from Proto-Altaic **k’a(j)* ‘who?’ (interrogative pronoun), while they (2003:2034) derive the Mongolian forms from Proto-Altaic **ŋ[iV]* ‘what?, who?’ (interrogative pronoun). In view of the data from other Nostratic languages, it seems more likely that a Proto-Altaic interrogative stem **yā-* needs to be reconstructed here to account for the Tungus and Mongolian forms. Proto-Altaic **k^ha(y)*, then, was the source of Proto-Tungus **χai* but not Proto-Tungus **yā-*. This agrees with the traditional etymology as opposed to what Starostin—Dybo—Mudrak propose.
- G. Gilyak / Nivkh: Proto-Gilyak / Nivkh **ja(nəŋ)* ‘how’: Amur *janut* / *janur* ‘how’ (West Sakhalin Amur *januŋ* ‘how’, *janko* ‘where’); North Sakhalin *janagut* ‘how’; East Sakhalin *jan’r* / *janř* ‘how’, *janəg* ‘why’. Cf. Fortescue 2016:81

The *CVC-* root structure patterning points to the ultimate verbal origin of this stem. I take it to be a derivative of an interrogative verbal stem **ʔay-* (~ **ʔəy-*) meaning ‘to do what?, to act in what manner?’ (cf. Bomhard—Kerns 1994:595—596, no. 468):

- A. Dravidian: Proto-Dravidian **iya-* originally an interrogative verb stem meaning ‘to do what?, to act in what manner?’, later ‘to do, to effect, to cause, to induce, to cause to act; to be possible, to be proper’ > Tamil *iyal* ‘to be possible, to befall, to be associated with; to accept, to agree to, to approach, to resemble’, *iyalpu* ‘nature, proper behavior, goodness, propriety’, *iyalvu* ‘nature, means of attaining’, *iyarru* ‘to do, to effect, to cause to act; to control the movements of, to create, to compose’, *iyarri*, *iyarral* ‘effort’, *iyarkai* ‘nature, custom’, *iyai* ‘to join, to connect, to adapt’, *iyaipu* ‘union, harmony, appropriateness’, *iyaivu* ‘union, joining together’; Malayalam *iyaluka* ‘to agree, to go fairly, to be proper’, *iyal* ‘what is proper; nature, condition; strength, power’, *iyarruka* ‘to cause, to induce’, *iyappu* ‘joint, joining together’, *iyaykkuka* ‘to join’, *iyayuka* ‘to be agreeable, to harmonize’; Tulu *iyaruni*, *iyavuni* ‘to be sufficient’; Telugu *īya-konu*, *īyya-konu* ‘to consent’ (cf. Burrow—Emeneau 1984:45, no. 471).
- B. Indo-European: Proto-Indo-European **ʔ(e)yo-* originally an interrogative verb stem meaning ‘to do what?, to act in what manner?’, later simply ‘to do, to make, to perform’ > Proto-Anatolian **iya-* ~ **aya-* ~ **ya-/yē-* (< **HyeH-*) ‘to do, to make, to perform, etc.’ > Hittite (3rd sg. pres. active) *i-ya-(az-)zi*, *i-e-iz-zi* ‘to do, to make, to treat, to beget, to perform (duty, ritual), to celebrate (deity, feast)’; Luwian (3rd sg. pres. passive) *a-a-ya-ri* ‘to make’; Hieroglyphic Luwian *a(i)a-* ‘to make’; Lycian (3rd sg. pres.) *ati* (< **ayati*) ‘to make’; Lydian

i- ‘to make’. The stem is also found in Tocharian A/B *yām-* ‘to do, to make, to commit, to effect’. Cf. Puhvel 1984— .1/2:335—347; Van Windekens 1976—1982.I:586; Adams 1999:490—492; Mallory—Adams 1997:362 **ieh₁-* ‘to do, to make; to act vigorously’; Tischler 1977— .2:338—343; Kloekhorst 2008b: 381—382.

- C. Altaic: Common Mongolian **yaya-*, **yeyi-* (< **yayi-*), **yeki-* interrogative verb stem (derived form — the root is **yā-*): ‘to do what?, to act in what manner?’ > Mongolian *yaki-*, *yeki-*, *yeyi-*, *yayaki-* ‘how to act?, what to do?, how to proceed?’; Dagur *yā-* ‘to do what?’; Ordos *yā-*, *yā^kχi-* ‘to do what?’; Khalkha *yā-* ‘to do what’, *ī-* (< **yī-* < **yeyi-*) ‘to act in what manner?’; Monguor *yā-* ‘to do what?’; Buriat *yā-* ‘to do what?’; Kalmyk *yā-* ~ **yayv-* ‘to do what?’. Cf. Poppe 1955:230—231; Street 1974:29 **yā-* ‘to do what?; who, what’.
- D. Gilyak / Nivkh: Amur *ja-d^v* ‘to do what?’. Cf. Fortescue 2016:81. Proto-Gilyak / Nivkh **aj-* ‘to do’ (originally an interrogative verb stem meaning ‘to do what?, to act in what manner?’, later simply ‘to do, to make, to build’): Amur *ai-d^v* / *jai-d^v* ‘to do’; East Sakhalin *aj-d* / *jaj-d* ‘to build, to make, to do’; South Sakhalin *jai-nt* ‘to do’. Cf. Fortescue 2016:9.

- 16.62. Interrogative **mi-* (~ **me-*), relative **ma-* (~ **mā-*) (Greenberg: §62. Interrogative M; Illič-Svityč 1971—1984.II:66—68, no. 300, **mi* ‘what’; Dolgopolsky 2008, no. 1355, **mi* ‘what?’; Nafiqoff 2003:53—55 **mi*)

- A. Afrasian: Proto-Afrasian **ma-* ~ **mi-* interrogative and relative pronoun stem > Proto-Semitic **mā-* ~ **mī-* interrogative and relative pronoun stem > Akkadian *mā* ‘what?, why?’, *man* ‘who?’; Arabic *mā* (interrogative) ‘what?’, (relative) ‘that, which, what’, *matā* ‘when?, at what time?’, *man* ‘who?, which one?, which ones?’; Ugaritic *mh* ‘what?’, *my* ‘who?’; Hebrew *māh* ‘what?, how?’; Sabaeen *mhn* ‘what, what thing?’; Geez / Ethiopic *mi* ‘what?’, *mannu* ‘who?’, *mənt* ‘what?’. Egyptian *m* ‘who?, what?’. Berber: Tuareg *mi* ‘when?’, *ma* ‘what?’; Tamazight *ma* ‘who?’. Proto-East Cushitic **ma?* ‘what?’ > Kambata *ma’a* ‘what?’; Alaba *ma* ‘what?’; Sidamo *mai* ‘what?’; Gedeo / Darasa *maa* ‘what?’; Hadiyya *maha* ‘what?’; Somali *maḥaa* ‘what?’; Burji *míya* ‘what?’. Proto-East Cushitic **me?* (or **mee?*) ‘how many?’ > Burji *mí’a* ‘how many?’; Sidamo *me’e* ‘how many?’; Kambata *me’o* ‘how many?, how much?’; Dullay *mee’e* ‘how many?’; Galla / Oromo *meek’a* ‘how many?’; Hadiyya *mee’o* ‘how many?’. Proto-Highland East Cushitic **mi-ha* ‘why?’ > Hadiyya *mahi-na* ‘why?’; Kambata *mii(-ha)*, *mahiha* ‘why?’; Burji *miyaa-ga* ‘why?’; Gedeo / Darasa *maya* ‘why?’; Sidamo *mae-ra* ‘why?’. Proto-Southern Cushitic **ma* ‘which?’ > Iraqw *-ma-* in *amaga* ‘how many?’, *ahema* ‘who?’, *asma* ‘why?’, *ama* ‘when?’; Ma’a *-ma* in *-hamá* ‘which?’, *-mo* in *kimomo* ‘how?’ (verb enclitic) *-mo* ‘how many?’; K’wadza *-ma-* in *ga’amayo* ‘when?’. Proto-Southern Cushitic **me* ‘how many?’ > Ma’a *mé* ‘how many?’; Dahalo *méék’a* ‘how many?’. Proto-Southern Cushitic *mi* ‘what kind of?’ > Alagwa *mi* ‘what?’, *miya* ‘who?’; Iraqw *-mi-* in *amila* ‘what?’; K’wadza *-mi* in *homi*

- ‘what?’, *mi* ‘so that’. Proto-Chadic **mi*, **mə* ‘what?’ > Ngizim *t-âm* ‘what?’; Dangla *maa* ‘what?’; Ron *mi* ‘what?’; Margi *mi* ‘what?’; Bachama *munə* ‘what?’; Nancere *me*, *mene* ‘what?’; Zime *mi* ‘what?’. Perhaps also Ongota *mìyá* ‘how much?’. Cf. Ehret 1995:301, no. 571, **ma*, **mi* ‘what?’; Diakonoff 1988:83, §4.4.2; Lipiński 1997:328—331; Hudson 1989:83, 166, and 167; Sasse 1982:143 and 146; Ehret 1980:153, 157, and 158; Newman 1977:34; Fleming 2002b:50.
- B. Kartvelian: Proto-Kartvelian **mi-n-* (?) interrogative pronoun: ‘who?’ > Georgian *vin-* ‘who?’; Mingrelian *mi(n)-* ‘who?’; Laz *min-* ‘who?’ (cf. Klimov 1964:135). (The Proto-Kartvelian form has also been reconstructed **wi-n-* or **wi-* [cf. Klimov 1998:53 **wi-n-*; Fähnrich—Sardshweladse 1995:135 **wi-*; Fähnrich 2007:162—163 **wi-*].) Proto-Kartvelian **ma-* ‘what’ > Georgian [*ma-*] ‘what’; Mingrelian *mu-* ‘what’; Laz *mu-* ‘what’; Svan *ma(j)*, *mäj* ‘what’ (cf. Klimov 1964:124 and 1998:112; Gamkrelidze—Mačavariani 1982:34; Fähnrich 2007:276; Fähnrich—Sardshweladse 1995:226—227).
- C. Indo-European: Proto-Indo-European **me-/mo-* interrogative and relative pronoun stem > Cornish (conjunction) *ma*, *may* ‘that’; Breton (conjunction) *ma*, *may*, Middle Breton *maz* (from *ma+ez*) ‘that’; Tocharian B *mäksu* (A) interrogative pronoun: ‘which?, who?’, (B) interrogative adjective: ‘which?, what?’, (C) relative pronoun: ‘which, who’, B *mäkte* (A) interrogative pronoun: ‘how?’, (B) comparative: ‘as’, (C) causal: ‘because’, (D) temporal: ‘as, while’, (E) final: ‘so, in order that’, (F) manner: ‘how’, A *mänt*, *mät* ‘how?’; Hittite *maši(ya)-* ‘how much?, how many?’, *ma-a-an*, *ma-an* (adverb and conjunction) ‘how, whether, like, (even) as, if’. Cf. J. Friedrich 1952:138; Adams 1999:451 and 451—452; Kloekhorst 2008b:538—539 (*mähhan*), 552, and 564; Puhvel 1984—.6:39—43 and 6:94—97; Van Windekens 1976—1982.I:285—286 and I:287—288; Lewis—Pedersen 1937:127 and 241—242.
- D. Uralic: Collinder (1965:141) reconstructs a Proto-Uralic **mi* ~ **my* (?) interrogative-relative stem (cf. Finnish *mikä* ~ *mi-* ‘which?, what kind?; which?’; Lapp / Saami *mi* ~ *mâ-* ‘what, which, what kind; [that] which; which, who, what’; Mordvin *meze* ‘what’; Cheremis / Mari *ma*, *mo* ‘what, which, what kind’; Votyak / Udmurt *ma* ‘what, which, what kind’; Zyrian / Komi *myj* ‘what, which, what kind’; Vogul / Mansi *män* ‘which, what kind’; Ostyak / Xanty *mögi* ‘which, what’, *mätä* ‘any, which, who’; Hungarian *mi* ‘what, which, what kind’; Tavgi Samoyed / Nganasan *ma* ‘what’; etc.). Cf. Rédei 1986—1988:296 **m3*; Collinder 1977:54.
- E. Altaic: Proto-Altaic **mV* interrogative stem > (A) Proto-Mongolian **-mu*, **-mi* suffixed interrogative particle > Middle Mongolian *-mu*, *-mi* suffixed interrogative particle; (B) Proto-Turkic **-mi* suffixed interrogative particle > Old Turkic *-mu* suffixed interrogative particle; Karakhanide Turkic *-mu* suffixed interrogative particle; Turkish *-mi/-mu/-mu/-mü* suffixed interrogative particle; Gagauz *-mi* suffixed interrogative particle; Azerbaijani *-mi* suffixed interrogative particle; Turkmenian *-mi* suffixed interrogative particle; Uzbek *-mi* suffixed interrogative particle; Uighur *-mu* suffixed interrogative particle; Karaim *-mo* suffixed interrogative particle; Tatar *-mi* suffixed interrogative

particle; Bashkir *-mī* suffixed interrogative particle; Kirghiz *-bī* suffixed interrogative particle; Kazakh *-ma/-me* suffixed interrogative particle; Noghay *-ma/-me* suffixed interrogative particle; Oyrot (Mountain Altai) *-ba/-be* suffixed interrogative particle; Tuva *-be* suffixed interrogative particle; Chuvash *-im* suffixed interrogative particle. Starostin—Dybo—Mudrak 2003:958. Note also: Chuvash *měn*, *měsker* ‘what?’, *miše* ‘how much (in number)?’, *měňšěn* ‘why?’, *měňle* ‘what kind of?’ (cf. Greenberg 2000:230; Larry Clark 1998:440).

- F. Chukchi-Kamchatkan: Proto-Chukchi-Kamchatkan **mikæ* ‘who?’ > Chukchi *mik(ə)*- ‘who?, someone’; Kerek *maki* ‘who?’; Koryak *meki* (Kamen *maki*) (< **mæki*, metathesized form of **mikæ*) ‘who?’; Alyutor *miyya* ‘who?’, *min* ‘whose’; (?) Kamchadal / Itelmen *k’e* (pl. *k’nəntx*) ‘who?’. Cf. Fortescue 1998:154 and 2005:175; Greenberg 2000:231. As noted above, **mikæ* is a combination of **mi-* plus **-kæ*. Proto-Chukchi-Kamchatkan **miŋ(kə)* ‘where?’ > Chukchi *miŋkə* ‘where?’, *miŋkəri(lə)* ‘to where?’; Kerek *miŋkiil* ‘to where?’; Koryak *miŋkə* ‘where?’, *miŋkəje* ‘to where?’, *meŋqo* ‘from where?’; Alyutor *məʔannu* (Palana *miŋkə*, *meje*) ‘where?’, *maŋkət(əŋ)* ‘to where?’; Kamchadal / Itelmen *maʔ* ‘where?’, *manke* ‘to where?’, *manxʔal* ‘from where?’. Cf. Fortescue 2005:177. Proto-Chukchi-Kamchatkan **miŋkəði* ‘how?’ > Chukchi *miŋkəri* ‘how?, what kind?’; Kerek *miŋkii* ‘how?’; Koryak *miŋkəje* ‘how?, what kind?’; Alyutor *maŋkət* ‘how?’; Kamchadal / Itelmen (Sedanka) *mank* ‘how?’. Cf. Fortescue 2005:177. Proto-Chukchi-Kamchatkan **mæŋin* ‘what kind?’ > Chukchi *meŋin* used as the suppletive absolutive case form of *mik(ə)*- ‘who?, someone’; Kerek *maŋin ippa* ‘which?’; Koryak *meŋin* ‘what kind of?’; Alyutor *maŋin* ‘what kind of?’; Kamchadal / Itelmen *min* ‘what kind?’. Cf. Fortescue 2005:173.
- G. Eskimo: Proto-Eskimo (enclitic) **-mi* ‘what about?’: Alutiiq Alaskan Yupik *+mi* ‘I wonder, how about?’; Central Alaskan Yupik *+mi* ‘how about?, contrast’; Naukan Siberian Yupik *#mi* ‘...or other’ (with question words); Central Siberian Yupik *+mi* ‘how about?, contrast’; Sirenik *+mi* emphatic enclitic; Seward Peninsula Inuit *(+)mi* ‘why (not)?’; North Alaskan Inuit (Uummarmiut) *+mi* ‘what about?’; Greenlandic Inuit *+mi* ‘but, indeed, what about? (contrastive emphasis)’. Cf. Fortescue—Jacobson—Kaplan 1994:411.

Sumerian: Note the interrogative stem **me-* found in *me-na-àm* ‘when?’, *me-a* ‘where?’, *me-šè* ‘where to?’.

- 16.63. Interrogative-relative **na-* (~ **nə-*) (Greenberg: §64. Interrogative N; Dolgopolsky 2008, no. 1633, **ŋ[U]* (1) ‘thing’, (2) ‘what?’)

- A. Afrasian: Semitic: Geez / Ethiopic *-nu* interrogative particle; Amharic *-nə* interrogative particle; Ancient Harari *-n* in *mist-n* ‘how much?’. East Cushitic: Burji *-na* positive affirmative copula; Sidamo *-ni* interrogative copula; Gedeo / Darasa *-n* positive affirmative copula (cf. Sasse 1982:150). Proto-Omoti **oon*

- ‘who?’ (cf. Bender 2000:197): Gemu nominative-accusative *oon+i/a* ‘who?’, (pl.) *oon+anta*; Kullo accusative *oni+n* ‘whom?’, Welaitta subject/object *oon+i/oon+a* ‘who?’. Note also the Mao (Hozo) interrogative stem *na* ‘when?’ (cf. Bender 2000:230). Ongota *na* ‘what?’, *neeni* ‘what?, why?’, *niike* ‘what?’ (cf. Fleming 2002b:61).
- B. Indo-European: Proto-Indo-European interrogative particles **ʔan-*, **-ne*: cf. Latin *an* particle indicating alternative answers, *-nē* interrogative enclitic particle; Gothic *an* interrogative particle indicating uncertainty of speaker (cf. Ernout—Meillet 1979:30—31; Feist 1939:41; Lehmann 1986:30). Lindsay (1894:605) elaborates: “In class. Latin *-nē* is the general interrogative particle, while *nonnē* is limited to questions which expect an affirmative, *num* to those which expect a negative, answer.” Further on (1894:605—606), he notes: “*-Ne* is probably I[ndo-]Eur[opean] **nē* (Zend *-na* appended to Interrogatives, e.g. *kas-nā* ‘who then?’; cf. O[ld] H[igh] G[erman] *na weist tu na*, ‘nescisne?’)...” Finally (1894:606), he derives Latin *an* from the pronominal stem found in Lithuanian *aĩs* ‘that’, Old Church Slavic *onъ* ‘that’.
- C. Altaic: Starostin—Dybo—Mudrak (2003:1034) reconstruct Proto-Altaic **ŋ[iV]* ‘what?, who?’ (interrogative pronoun) > (A) Proto-Tungus **ŋũ* ‘who?’ > Evenki *ŋĩ*, *nĩ* ‘who?’; Lamut / Even *ńĩ*, *ŋĩ* ‘who?’; Negidal *nĩ*, *ŋĩ* ‘who?’; Manchu *we* ‘who?’ (*webe* ‘whom?’); Ulch *ŋui*, *ui* ‘who?’; Oroch *ŋui* ‘who?’; Nanay / Gold *ui* ‘who?’; Oroch *ńĩ* ‘who?’; Udihe *nĩ* ‘who?’; Solon *nĩxē* ‘who?’; (B) Proto-Turkic **nē-* ‘what; what?’ > Old Turkic (Orkhon, Old Uighur) *ne* ‘what; what?’; Karakhanide Turkic *ne* ‘what; what?’; Turkish *ne*, *neme* ‘what?; what, whatever, how’, *nere* ‘what place?, what part?’, *nekadar* ‘how much?’; Gagauz *ne* ‘what; what?’; Azerbaijani *nā* ‘what; what?’; Turkmenian *nā*, *nāmā* ‘what; what?’; Uzbek *ne* ‘what; what?’; Uighur *nā* ‘what; what?’; Karaim *ne* ‘what; what?’; Tatar *nĩ*, *nerse* ‘what; what?’; Bashkir *nĩ*, *nāmā* ‘what; what?’; Kirghiz *ne*, *neme* ‘what; what?’; Kazakh *ne* ‘what; what?’; Noghay *ne* ‘what; what?’; Oyrot (Mountain Altai) *ne*, *neme* ‘what; what?’; Chuvash *məʷn* (metathesis from **ne-me*) ‘what; what?’. Cf. Starostin—Dybo—Mudrak 2003:1034 **ŋ[iV]* ‘what?, who?’ (interrogative pronoun). Proto-Turkic **nē-* ‘what; what?’ and its derivatives are likely to be archaisms since no other native forms in Turkic begin with *n-* (cf. Johanson 1998a:31). Róna-Tas (1998:74), on the other hand, remarks that “[i]t is unlikely that Old Turkic *ne* ‘what’ reflects a Proto-Turkic form, since it would be the only native Turkic word with initial *n*”. Décsy (1998:117) lists the following Old Turkic forms beginning with *n*: *nā* ‘what; what?’, *nāčā* ‘how many?’, *nāčūk* ‘how?’, *nāčükläti* ‘why?’, *nägü* ‘what sort?’, *nägüdä* ‘due to’, *nägül* ‘how?’, *nägülüğ* ‘how?’, *nälük* ‘really?, or what?’, *nāmā* ‘whatever’, *nāmān* ‘wie?, wie!’, *nān* ‘not the least’, *nānčā* ‘according to’, *nāñäyü* ‘special’, *nätäg* ‘just as’.
- D. Gilyak / Nivkh: Proto-Gilyak / Nivkh **nar* ‘who’: Amur *aŋ* ‘who’ (according to Fortescue 2016:111, “probably from **narŋa* with focal interrogative affix **-ŋa*”) (West Sakhalin Amur *aŋ(ŋ)a* ‘who’); North Sakhalin *nař* / *narata* ‘who’; East Sakhalin *nař* / *nar* ‘who’, *nařciŋ* ‘anyone, no one’; South Sakhalin *nat* ‘who’. Cf. Gruzdeva 1998:28; Fortescue 2016:111.

- E. Eskimo: Proto-Eskimo **na-* ‘where’ > Alutiiq Alaskan Yupik *na-* ‘where’; Central Alaskan Yupik *na-* ‘where’; Naukan Siberian Yupik *na-* ‘where’; Central Siberian Yupik *na-* ‘which’; Sirenik *na-* ‘where’; Seward Peninsula Inuit *na-* ‘where’; North Alaskan Inuit *na-* ‘where’; Western Canadian Inuit *na-* ‘where’; Eastern Canadian Inuit *na-* ‘where’; Greenlandic Inuit (North / Polar Greenlandic) *na-* ‘where’ (cf. Fortescue—Jacobson—Kaplan 1994:204). Proto-Eskimo **nallir* ‘which’ > Alutiiq Alaskan Yupik *naliq* ‘which (of them)’; Central Alaskan Yupik *naliq* ‘which (of them)’; Naukan Siberian Yupik *naliq* ‘which (of them)’; Central Siberian Yupik *naliq* ‘which (of them)’; Sirenik *nacaX* ‘which’; Seward Peninsula Inuit *nalliq* ‘which’; North Alaskan Inuit *nalli(q)* ‘which’; Western Canadian Inuit *nalliat* ‘which of many’; Eastern Canadian Inuit *nalli(q)* ‘which’; Greenlandic Inuit (North / Polar Greenlandic) *nalliq* ‘which’ (cf. Fortescue—Jacobson—Kaplan 1994:204). Proto-Eskimo **nayū* and **na(C)uy* ‘where (is it)?’ > Central Alaskan Yupik *nauwa*, *nauxa* ‘where’; Naukan Siberian Yupik *naa* ‘where’; Central Siberian Yupik *naayu* ‘where is it?’; Seward Peninsula Inuit *nauy* ‘where have you come from?’; North Alaskan Inuit *nauy* ‘where’; Western Canadian Inuit *nauk* ‘where’; Eastern Canadian Inuit *nauk* ‘where’; Greenlandic Inuit *naak* ‘where’ (cf. Fortescue—Jacobson—Kaplan 1994:204). Proto-Yupik-Sirenik **natə* ‘which (part)’ > Alutiiq Alaskan Yupik *natə* ‘what part’; Central Alaskan Yupik *natə* ‘what part’; Central Siberian Yupik *natə* ‘where’; Sirenik *natəljux* ‘which’, *natu* ‘where’ (cf. Fortescue—Jacobson—Kaplan 1994:204).
- F. Etruscan: Relative pronoun *an* (*ana*, *ane*, *anc*, *ancn*, *ananc*) ‘who, which’ (also ‘he, she, this, that’) (cf. Bonfante—Bonfante 2002:214). Perhaps also in *nac* ‘how, as, because, since’.

Sumerian: I cannot help wondering whether the Sumerian inanimate interrogative stem *a-na* ‘what?’ may be related to the forms under discussion here. *a-na* can also be used as an indefinite or relative pronoun (cf. Thomsen 1987:75). Note also the indefinite pronoun (animate and inanimate) *na-me* ‘anyone, anything; (with negative verb) no one, nothing’ (cf. Thomsen 1987:78).

- 16.64. Indefinite **ma-* (~ **mə-*), **mi-* (~ **me-*), **mu-* (~ **mo-*) (not in Greenberg 2000; Illič-Svityč 1971—1984.II:70—71, no. 303, **mu* demonstrative pronoun: ‘this, that’; Nafiqoff 2003:47—49 **mu*; Dolgopolsky 2008, no. 1510, **mu[wV]* ‘this, that’)

This may originally have been a demonstrative stem (as suggested by Illič-Svityč), with three degrees of distance: **ma-* (~ **mə-*) (proximate), (B) **mu-* (~ **mo-*) (distant), and (C) **mi-* (~ **me-*) (intermediate), as in the stems: **k^ha-* (~ **k^hə-*) (proximate), (B) **k^hu-* (~ **k^ho-*) (distant), and (C) **k^hi-* (~ **k^he-*) (intermediate) and **t^ha-* (~ **t^hə-*) (proximate), (B) **t^hu-* (~ **t^ho-*) (distant), and (C) **t^hi-* (~ **t^he-*) (intermediate), cited above.

- A. Afrasian: Ehret (1995:300, no. 568) reconstructs a Proto-Afrasian indefinite pronoun stem **m-* ‘one, someone, somebody’ (cf. Ugaritic *mn* ‘any, a certain’; Arabic *man* ‘he/she/those who, the one who; those who’; Egyptian *mn* ‘someone, so-and-so’). According to Lipiński (1997:330), “indefinite pronouns strictly speaking do not exist in Semitic. The forms used as a kind of indefinite pronouns are based on the interrogative pronoun” (see also Moscati 1964:115). Instead of being derived from the interrogative pronoun, as is commonly assumed, the Semitic forms may indeed be relics of an old indefinite (< demonstrative) stem as proposed by Ehret.
- B. Kartvelian: Proto-Kartvelian **a-ma-* ‘this, that’, **ma-* pronominal stem of the third person: ‘this, he; this one, that one’: Georgian *ama-/am-* ‘this, that’, *ma-* ‘this, he; this one, that one’; Mingrelian *amu-* ‘this, that’, *mu-* ‘this, he; this one, that one’; Laz (*h*)*amu-* ‘this, that’, *mu-* ‘this, he; this one, that one’; Svan *am(a)-* ‘this, that’ (cf. Klimov 1964:44 **a-ma-*, 124 **ma-* and 1998:2 **a-ma-* ‘this, that’, 112—113 **ma-* pronominal stem of the third person; Fähnrich—Sardshweladse 1995:226 **ma-*; Fähnrich 2007:276 **ma-*).
- C. Indo-European (?): Welsh *yíma* (poetical *yíman*) ‘here’; Breton *ma*, *mañ* ‘here’; Cornish *ma* ‘here’. Cf. J. Morris Jones 1913:433; Lewis—Pedersen 1937:221.
- D. Uralic: Proto-Finno-Ugrian **mu* ‘other, another’ > Finnish *muu* ‘(somebody, something) else; other, another’; Estonian *muu* ‘other, something (or somebody) else’; Lapp / Saami (Ume) *mubbe* ‘one (of two); the other; another, other; (the) second’ (contains the suffix of the comparative); Votyak / Udmurt (derivative) *myd*, *möd* ‘other’ (cf. Collinder 1955:100 and 1977:115; Rédei 1986—1988:281—282 **mu*).
- E. Altaic: Common Turkic (**mū/*mō* >) **bū/*bō* ‘this’ > Middle Kipchak *bu* ‘this’; Chagatay *bu* ‘this’; Turkish *bu* ‘this’; Azerbaijani *bu* ‘this’; Turkmenian *bu* ‘this’ (oblique *mun-*); Tatar *bu* ‘this’; Kazakh *bul* ‘this’; Noghay *bu* ‘this’; Kirghiz *bul* ‘this’; Uzbek *bu* ‘this’; Yakut *bu* ‘this’ (cf. Menges 1968b:121—122; Róna-Tas 1998:74; Décsy 1998:61; examples from Johanson—Csató 1998). Mongolian *mōn* deictic particle serving as a demonstrative pronoun, adjective, adverb, and copula: ‘just this one; certainly, surely, really’.

Sumerian: *mìn* ‘other, another’.

16.65. Indefinite **dʷi-* (~ **dʷe-*) ‘this one, that one’ (not in Greenberg 2000)

- A. Afrasian: Proto-Afrasian **dʷi-* ‘this one, that one’ > Proto-Semitic **dʷā*, **dʷī* ‘this one, that one’ > Arabic (m.) *dā*, (f.) *dī* ‘this one, this’; Hebrew (m.) *zeh*, (f.) *zōh*, (poetical) *zū* ‘this’; Biblical Aramaic *dā* ‘this’; Sabaeen *d* ‘(he) who, (that) which’; Mehri *d(ə)-* ‘who, which, what’; Šheri / Jibbāli *d-* ‘one who, whoever’; Ḥarsūsi *d(e)-* ‘who, which, that’; Geez / Ethiopic *za-* ‘who, that, which’ (*ziʔa-* with possessive suffix pronouns), (m. sg.) *zə-*, (f. sg.) *zā-* ‘this’ (adj. and pronoun); Tigrinya *zə* ‘he who, that’, *ʔazu* ‘this’; Gurage *za* ‘that, that one, that one here’, *zə* ‘this’; Harari *zi* ‘he, who, that’, *-zo* ‘the’. Cf. D. Cohen

1970—:324; Klein 1987:194; Leslau 1979:701 and 1987:629—630. Cf. Ehret 1995:260, no. 470, **ji* or **dzi* ‘one, someone, somebody’ (indefinite pronoun). Note: the putative Egyptian and Chadic cognates adduced by Ehret are not convincing.

- B. Uralic: Proto-Uralic **ve/*vi* ‘this one, that one’ > Finnish *se/si-* ‘this, that, it’; Mordvin *še* ‘this, that one’; Cheremis / Mari *sede* ‘this one, that one’; Ostyak / Xanty (Northern) *šī, šīt* ‘this, that one’, (Southern) *t’i* ‘this one’; Tavgi Samoyed / Nganasan *sete* ‘he’, *seti* ‘both of them’, *setej* ‘they’; Kamassian *šōō* ‘that one here’. Cf. Collinder 1955:56 and 1977:73; Rédei 1986—1988:33—34 **će ~ *či*; Décsy 1990:109 **tje* ‘that’.

IX. INDECLINABLES

- 16.66. Post-positional intensifying and conjoining particle **k^{wh}a-* (*~ *k^{wh}ə-*) (does not appear in Greenberg 2000 as a separate entity but is discussed under §60. Interrogative K; Illič-Svityč 1971—1984.I:325—326, no. 201, **k/o/* post-positional intensifying and conjoining particle; Nafiqoff 2003:42 **k/o/*)

This particle is derived from relative **k^{wh}i-* (*~ *k^{wh}e-*), interrogative **k^{wh}a-* (*~ *k^{wh}ə-*) (see above).

- A. Elamite: Elamite coordinating conjunction *ku-da*, *ku-ud-da*, *ku-ut-te* ‘and’, assuming that it is a compound form composed of the elements **ku-* ‘and’ plus *da* ‘also’.
- B. Kartvelian: Proto-Kartvelian **kwe* intensifying and affirming particle > Georgian *k(v)e*; Mingrelian *ko*; Laz *ko* (cf. Klimov 1964:198 and 1998:216; Fähnrich—Sardshveladse 1995:376—377; Fähnrich 2007:464).
- C. Indo-European: Proto-Indo-European **k^{wh}e* intensifying and conjoining particle: ‘moreover, and, also, etc.’ > Sanskrit *ca* ‘and’; Greek *-τε* ‘and’; Latin *-que* ‘and, and also, and indeed’; Hittite *-k(k)u* ‘and, now, even’ (cf. Pokorny 1959:635—636; Walde 1927—1932.I:507—508; Mann 1984—1987:1021; Brugmann 1904:621—622 and 668 **q^{ue}*; Gamkrelidze—Ivanov 1984.I:353—354, I:365, I:366 and 1995.I:188; Watkins 1985:33 and 2000:44; Fortson 2010:149).
- D. Uralic: Proto-Uralic **-ka/*-kä* intensifying and conjoining particle > Finnish *-ka/-kä* in: *ei-kä* ‘and...not, nor’ (*ei...eikä* ‘neither...nor’), *jo-ka* (indefinite pronoun) ‘who?’; Lapp / Saami (Norwegian) *juo-kke ~ juo-kkē* ‘each, every’; Vogul / Mansi *ää-k*, *ää-ki* (in combination with a finite verb in the indicative mood) ‘not’; etc.
- E. Altaic: As noted by Greenberg (2000:221), “[m]any languages of the Tungus group have *-ka* ‘but, and’” (cf. Evenki *-ka/-kä/-kö* intensifying particle).
- F. Etruscan: Etruscan *-c* ‘and’ (cf. Bonfante—Bonfante 2002:104).

- 16.67. Particle **k^{wh}ay-* ‘when, as, though, also’ (derived from **k^{wh}i-* [*~* **k^{wh}e-*] relative pronoun stem, **k^{wh}a-* [*~* **k^{wh}ə-*] interrogative pronoun stem) (not in Greenberg 2000)
- A. Afrasian: Proto-Afrasian (?) **k^way-* ‘when, as, though, also’ > Proto-Semitic **kay-* ‘in order that, for, when, so that’ > Akkadian *kī* ‘according to, concerning’; Hebrew *kī* ‘that, for, when’; Syriac *kay* ‘therefore’; Ugaritic *k*, *ky* ‘for, because, when, if, that’; Arabic *kay* ‘in order that, so that’; Sabaeen *ky* ‘when’. Egyptian non-enclitic particle *k3* ‘so, then’.
 - B. Indo-European: Proto-Indo-European **k^{wh}ay-* ‘when, as, though, also’ > Lithuanian *kaĩ* ‘when, as’; Old Church Slavic *čě* ‘as, as also’. Cf. Pokorny 1959:519; Walde 1927—1932.I:327; Mann 1984—1987:1039.
 - C. Gilyak / Nivkh: Proto-Gilyak / Nivkh **-qaj* or **-gaj* (conditional) ‘if’: East Sakhalin *-qaj* (conditional) ‘if’; Amur *-qa/-ra* (also *-tara*) (conditional) ‘if’; South Sakhalin *-χai* (conditional) ‘if’. Cf. Fortescue 2016:174 (table of affixes).
- 16.68. Particle **har^y-*: (1) particle introducing an alternative: ‘or’, (2) conjoining particle: ‘with, and’, (3) inferential particle: ‘then, therefore’ (not in Greenberg 2000)
- A. Afrasian: Egyptian *hr* ‘upon, in, at, from, on account of, concerning, through, and, having on it; because’. Cf. Hannig 1995:546; Erman—Grapow 1921:113 and 1926—1963.3:131—132; Faulkner 1962:174; Gardiner 1957:582.
 - B. Indo-European: Proto-Indo-European **h₁her-* [**h₁har-*]/**h₂hr-* ‘then, therefore; and’ > Greek ἄρα (Epic Greek ῥα [enclitic] and, before a consonant, ἄρ) inferential particle: (Epic usage) ‘then, straightway, at once’, (Attic usage) ‘then, therefore’ (much like οὐν, only less strongly); Lithuanian *ar̃* ‘whether, if’, *iṛ* ‘and, and then, and so’; Latvian *ir* ‘and, and also’. Cf. Pokorny 1959:62; Walde 1927—1932.I:77; Mann 1984—1987:31 and 1105; Boisacq 1950:72; Frisk 1970—1973.I:127; Chantraine 1968—1980.I:100; Hofmann 1966:21.
 - C. Altaic: Proto-Altaic **ar^yV* ‘or’ > Proto-Turkic **ar^yu* ‘or’ > Old Turkic (Old Uighur) *azu* ‘or’; Karakhanide Turkic *azu* ‘or’; Tuva *azi* ‘or’. Cf. Starostin—Dybo—Mudrak 2003:316 **ar^yV* ‘or’.
- 16.69. Particle **ʔin-* (*~* **ʔen-*), **(-)ni* ‘in, into, towards, besides, moreover’ (originally a nominal stem **ʔin-a* meaning ‘place, location’) (not in Greenberg 2000 as a separate entry; Dolgopolsky 2002:48—49 **ʔin[ṇ]a/ä* ‘place’ [*→* ‘in’ in daughter languages])

This form underlies locative **-ni* (see above, §16.29).

- A. Afrasian: Semitic: Akkadian *ina* ‘in, on, from, by’; Geez / Ethiopic *ʔən- ... -ta* ‘through, by way of, by, at, into, in the direction of, because’; Tigre *ʔət* ‘on, in, by, with, because of’. Egyptian *in* ‘in, to, for, because, by’.
- B. Indo-European: Proto-Indo-European **ʔen-* ‘in, into, among, on’ > Greek *ἐν, ἐνι, ἐνί* ‘in, on, among, into, and, besides, moreover’; Latin *in* ‘in, on, among, into, on to, towards, against’; Old Irish *ini-, en-, in-* ‘in, into’; Gothic *in* ‘in’; Old English *in* ‘in, on, among, into, during’; Old High German *in* ‘in’; Old Prussian *en* ‘inside, within’. Cf. Pokorny 1959:311—314; Walde 1927—1932.I:125—127; Mann 1984—1987:241; Watkins 1985:17 and 2000:23.
- C. Uralic: Proto-Finno-Ugrian **[i]n3* ‘place’ > Votyak / Udmurt *in, iñ* ‘place, spot’; Zyrian / Komi (Sysola) *-in* in: *kos-in* ‘dry place, dry land’, (Letka) *in* ‘place, spot’; (?) Hungarian (dialectal) *eny, enyh* ‘shelter; covered or sheltered place where men and animals take cover from wind, rain, snow, or heat’. Cf. Rédei 1986—1988:592—593.

16.70. Sentence particle **wa* (~ **wə*) ‘and, also, but; like, as’ (not in Greenberg 2000; Dolgopolsky 2008, no. 2452, **wa* ‘also, same’ [(in descendant languages) → ‘and’])

- A. Afrasian: Proto-Afrasian sentence particle **wa* ‘and, also, but’ > Proto-Semitic sentence particle **wa* ‘and, also, but’ > Arabic *wa* ‘and, and also, with’; Hebrew *wə* ‘and, also, even, and indeed, with, and in addition, but’; Geez / Ethiopic *wa-* ‘and’. Cushitic: Beja / Beɣawye *wā* ‘and’. Cf. Klein 1987:189; D. Cohen 1970— :473—480; Leslau 1987:602; Reinisch 1895:236.
- B. Kartvelian: Georgian enclitic particle *-ve*.
- C. Indo-European: Proto-Indo-European sentence particle **we, *u* ‘and, also, but; like, as’ > Sanskrit *va* ‘like, as’; Gothic enclitic particle *-u*; Tocharian B *wai* ‘and’. Cf. Pokorny 1959:73—75; Walde 1927—1932.I:187—189.

16.71. Coordinating conjunction **ʔaw-*, **ʔwa-* (~ **ʔwə-*) ‘or’ (not in Greenberg 2000)

- A. Afrasian: Proto-Semitic **ʔaw-* ‘or’ > Arabic *ʔaw* ‘or’; Hebrew *ʔō* ‘or’; Akkadian *ū* ‘or’; Tigrinya *wāy* ‘or’. Cf. D. Cohen 1970— :11; Murtonen 1989:84—85; Klein 1987:9; Leslau 1987:47. East Cushitic: Saho *oo* ‘or’.
- B. Indo-European: Proto-Indo-European **ʔwe* ‘or’ > Sanskrit *-vā* ‘or’; Latin *-ve* ‘or’. Cf. Pokorny 1959:75; Walde 1927—1932.I:188—189; Burrow 1973:284.
- C. Uralic: Finnish *vai* ‘or’; Estonian *või* ‘or’.

CHAPTER SEVENTEEN

NOSTRATIC MORPHOLOGY II: RECONSTRUCTIONS

17.1. INTRODUCTION

In the preceding chapter, morphological evidence from the Nostratic daughter languages was gathered together. In this chapter, a systematic reconstruction of Proto-Nostratic morphology will be attempted based upon that evidence.

According to Dolgopolsky (1994:2838):

The parent language had, most probably, an analytic grammatical structure with a strict word order (sentence-final predicate; object preceding the verb; nonpronominal attribute preceding the head; a special position for unstressed pronouns) and with grammatical meanings expressed by word order and auxiliary words (e.g., postpositions: **nu* for genitive, **ma* for marked accusative, and others). In the descendant languages this analytic grammar evolved towards a synthetic one.

My own research tends to support Dolgopolsky's views. The evidence indicates that, in its earliest phases of development, the Nostratic proto-language had mostly an analytic morphological structure, though, in its latest phases, a certain amount of evolution toward a synthetic structure must already have taken place, inasmuch as a synthetic grammatical structure is reconstructed for Afrasian, which was the earliest branch to separate from the rest of the Nostratic speech community. That a good deal of this evolution took place within Proto-Afrasian proper is beyond doubt, inasmuch as a variety of analytic formations can be found in other branches of Nostratic, some of which can be traced back to the Nostratic parent language.

17.2. PROTO-NOSTRATIC AS AN ACTIVE LANGUAGE

The assumptions we make about the morphological and syntactical structure of a given proto-language profoundly affect the reconstructions that we propose. For example, in what follows, I will be proposing that Proto-Nostratic was an active language. Now, active languages exhibit specific characteristics (see below) that set them apart from other morphological types. Therefore, it follows that the reconstructions I posit will conform with an active structure. However, I believe quite emphatically that reconstructions must never be driven by theory alone. Rather, they must be fully consistent with the supporting data. Moreover, not only must our reconstructions be consistent with the supporting data, they must be consistent from a typological perspective as well, and they must be able to account

for later developments in the descendant languages in as straightforward a manner as possible, without recourse to ad hoc rules. When reconstructions are driven by theory alone, the results can be disastrous. Here, I will mention first the Moscow School reconstruction of the Proto-Nostratic obstruent system as an example. On the basis of a few seemingly solid cognates in which glottalized stops in Proto-Afrasian and Proto-Kartvelian correspond to what are traditionally reconstructed as plain voiceless stops in Proto-Indo-European, Illič-Svityč assumes that voiceless stops in the Indo-European data he cites always means that glottalized stops are to be reconstructed in Proto-Nostratic, even when there were no corresponding glottalized stops in Afrasian and Kartvelian. He goes so far as to set up an ad hoc rule to account for counter-examples. Another example is Décsy's 2002 book on Afrasian. Here, Décsy makes certain ad hoc assumptions about what must have existed in language in general at a certain time depth and then applies those assumptions to his reconstruction of Proto-Afrasian. Though it is not known where or when human language first appeared, the fossil record indicates that anatomically modern humans have been around for at least 200,000 years, perhaps longer. That is more than enough time for language to develop. To assume that complicated linguistic structures could not have existed 12,000 years ago, a mere fraction of the length of time that our species has been on this planet, is not a view that I can support. It should be noted here that this criticism does not apply to Décsy's books on Uralic (1990), Indo-European (1991), and Turkic (1998) in the same series.

Several scholars have recently presented persuasive arguments in favor of reconstructing an early phase of Proto-Indo-European as an active language (cf. especially Karl Horst Schmidt 1980; Gamkrelidze—Ivanov 1995; Lehmann 1995 and 2002; and Pooth—Kerckhoff—Kulikov—Barðdal 2018). Proto-Afrasian is also assumed to have been an active language (cf. Diakonoff 1988:85), as is Elamite (cf. Khačikjan 1998:61—66). Moreover, Nichols (1992:314, note 3) classifies Georgian as active. In active languages, subjects of both transitive and intransitive verbs, when they are agents semantically, are treated identically for grammatical purposes, while non-agent subjects and direct objects are treated differently (cf. Trask 1993:5—6). An “agent” may be defined as the entity responsible for a particular action or the entity perceived to be the cause of an action (cf. Trask 1993:11).

Thus, there are two types of intransitive verbs in active languages (also called “Split-S” or “Fluid-S” languages) (this will be explained in more detail below):

1. Those whose subjects have the same grammatical marking as the subjects of transitive verbs. These are Trask's “agent [subjects]”. This type is referred to in this chapter as “active constructions”.
2. Those whose subjects have the same grammatical marking as direct objects of transitive verbs. These are Trask's “non-agent subjects”. This type is referred to in this chapter as “stative constructions”.

To complicate matters, some verbs are “ambitransitive”, that is, they can occur in either a transitive clause or an intransitive clause. Semantic and morphosyntactic considerations play an important role here.

Trask's (1993:5—6) complete description/definition of active type languages is as follows:

active language *n.* (also agentive language) A language in which subjects of both transitive and intransitive verbs which are semantically agents are treated identically for grammatical purposes, while non-agent subjects and direct objects are treated differently. Among languages exhibiting this pattern are Sumerian, Batsbi (NE Caucasian), Crow (Siouxan) and Eastern Pomo (Hokan). The following examples from Eastern Pomo show the use of the two subject pronouns *há*: 'I' (agent) and *wí* 'I' (non-agent): *Há: mí:pal šá:ka* 'I killed him'; *Há: wádu:kiya* 'I'm going'; *Wí ?éčkiya* 'I sneezed'. The correlation is rarely perfect; usually there are a few verbs or predicates which appear to be exceptional. In some active languages lexical verbs are rigidly divided into those taking agent subjects and those taking non-agent subjects; in others some lexical verbs can take either to denote, for example, differing degrees of control over the action. See Merlan (1985) for discussion. Cf. ergative language, accusative language, and see also split intransitive, fluid-intransitive. Sapir (1917).

Nichols (1992:9—10) lists the sets of typical features of active type languages established by Klimov (1977) as follows:

Lexical properties:

1. Binary division of nouns into active vs. inactive (often termed *animate* and *inanimate* or the like in the literature).
2. Binary division of verbs into active and inactive.
3. Classificatory verbs or the like (classification based on shape, animacy, etc.).
4. Active verbs require active nouns as subject.
5. Singular-plural lexical suppletion in verbs.
6. The category of number absent or weakly developed.
7. No copula.
8. "Adjectives" are actually intransitive verbs.
9. Inclusive/exclusive pronoun distinction in first person.
10. No infinitive, no verbal nouns.
11. Etymological identity of many body-part and plant-part terms (e.g., "ear" = "leaf").
12. Doublet verbs, suppletive for animacy of actant.

Syntactic properties:

13. The clause is structurally dominated by the verb.
14. "Affective" (inverse) sentence construction with verbs of perception, etc.
15. Syntactic categories of nearer or farther object rather than direct or indirect object.
16. No *verba habendi*.
17. Word order usually SOV.

18. Direct object incorporation into verb.

Morphological properties:

19. The verb is much more richly inflected than the noun.
20. Two series of personal affixes on the verb: active and inactive.
21. Verbs have aspect or Aktionsarten rather than tense.
22. The noun has possessive affixes.
23. Alienable-inalienable possession distinction.
24. Inalienable possessive affixes and inactive verbal affixes are similar or identical.
25. Third person often has zero affix.
26. No voice opposition (since there is no transitivity opposition). Instead, there can be an opposition of what is called *version* in Kartvelian studies (roughly active vs. middle in the terminology of Benveniste 1966, or an opposition of normal valence vs. valence augmented by a second or indirect object, or an opposition of speech-act participant vs. non-participant in indirect-object marking on the verb).
27. Active verbs have more morphological variation or make more morphological distinctions than inactive verbs.
28. The morphological category of number is absent or weakly developed.
29. There are no noun cases for core grammatical relations (no nominative, accusative, genitive, dative). Sometimes there is an active/inactive case opposition.
30. Postpositions are often lacking or underdeveloped in these languages. Some of them have adpositions inflected like nouns.

Nichols (1992:8) notes that Klimov's definition of active type languages is close to, though not identical with, her definition of dominant stative-active alignment (see also Nichols 1992:8—9):

According to Klimov, the basic determinant of linguistic type is what I call the *conceptual cast* of a language's predictions and its categorization of basic nominal and verbal notions; whether they are based on subject-object relations, agent-patient relations, an active/inactive distinction, referential properties, or others. The salient indicator of the conceptual cast is the stative-active, ergative, or accusative alignment of the clause, and this in turn determines the occurrence of a number of other categories. The whole set of properties — conceptual cast, alignment type, and attendant categories — constitutes the *type* of the language. (Klimov 1977 divides the relevant grammatical features into those that are more or less direct implicanda of type and those that are frequently observed secondary properties.) There are four basic types: the ACCUSATIVE TYPE, which grammaticalizes subject-object relations, the ERGATIVE TYPE, which grammaticalizes agent-factive relations (for *factive* — a semantic role essentially coinciding with the formal category of S/O of Dixon 1979 — see Kibrik 1979); the ACTIVE TYPE, which grammaticalizes an active/inactive or animate/inanimate principle; and (singled out only in the 1983 book) the CLASS TYPE, based on referential properties of nominals and having well-developed gender or class inflection. The first three types are

named for their typical clause alignments, but in Klimov's view clause alignment is merely one of several symptoms (albeit a salient one) of the conceptual cast and hence type. Thus the active type is almost identical in extension but different in intension from the set of languages exhibiting stative-active alignment. Since the active type is focal in Klimov's sense, I will use his term *active* in his sense while using *stative-active* in what I take to be the current standard sense. Klimov carefully distinguishes type from features, faulting most contemporary typology for failing to make this distinction and pointing out that much of what is called typology is actually the cross-linguistic study of features rather than types. A type, in Klimov's view, is a set of independent but correlated features from different levels of grammar accompanied by a theory explaining the correlation.

What is of particular interest to cross-linguistic comparison is the sets of typical features Klimov establishes for each type. For instance, he shows that the active type is associated with underdevelopment of number inflection, an inclusive/exclusive opposition in pronouns, an opposition of alienable to inalienable possession, classificatory verbs, grammaticalized animacy in nouns, and other features. The active and class types display the largest number of distinctive, interesting, and testable properties, and it is these traits that will be surveyed here.

Nichols (1992:65–66) describes various types of clause alignment as follows — note, in particular, her description of stative-active alignment (E):

2.0.4. *Clause alignment.* This term (taken from relational grammar) will be used here as generic for accusative, ergative, stative-active, etc. Only morphological alignment is surveyed in this study. The following categories are used, based on the morphological distinction or nondistinction of A, O, S (as those abbreviations are used by Dixon 1979 to refer to subject of transitive, direct object, and subject of intransitive respectively). The first five are standard and the last, hierarchical, is a well-described pattern with no standard label (Mallinson and Blake 1981 use the term *relative-hierarchical*).

- (A) Neutral: A = O = S, i.e., no inflectional oppositions.
- (B) Accusative: S = A; O distinct.
- (C) Ergative: S = O; A distinct. When a language has a major tense- or person-based ergative/accusative split and both patterns are salient, I count the language as primarily ergative, on the grounds that (following Silverstein 1976) most ergative systems are split and hence the split is part of the definition of “ergative”.
- (D) Three-way: A, O, and S all distinct.
- (E) Stative-Active: $S_1 = A$, $S_2 = O$, the language has two different kinds of intransitive verbs, one taking ordinary subject marking (or the same subject marking as used with transitive verbs) and the other taking a subject whose marking is the same as that of the direct object of a transitive. The choice of S_1 or S_2 is usually determined by the verb: “stative” verbs take S_2 , “active” verbs S_1 . (For this definition see Merlan 1985.)

If $S_1 = A$ is the clear majority type in stative-active languages, the language can be described as having an accusative bias or slant: most

intransitive subjects are formally identical to transitive subjects, so for the most part $S = A$. If $S_2 = O$ is the clear majority type, the language has an ergative bias. I will speak of such languages as being stative-active on an accusative BASE or stative-active on an ergative base.

- (F) Hierarchical: Access to inflectional slots for subject and/or object is based on person, number, and/or animacy rather than (or no less than) on syntactic relations. The clearest example of the hierarchical type in my sample is Cree. The verb agrees in person and number with subject and object, but the person-number affixes do not distinguish subject and object; that is done only by what is known as direct vs. inverse marking in the verb. There is a hierarchical ranking of person categories: second person > first person > third person. The verb takes direct marking when subject outranks object in this hierarchy, and inverse marking otherwise. In addition, verbs inflect differently depending on whether their S and O arguments are animate or not, a pattern which could be viewed either as another instance of hierarchical agreement or as different conjugation classes (rather than hierarchical access to agreement slots).

Next, Nichols (1992:100—105) describes head/dependent marking and alignment with regard to the various types of clause alignment mentioned above as follows (the tables given in the original are omitted here):

The frequencies of the dominant alignment types exhibited by the various head/dependent types are shown in table 18. The accusative alignment has almost the same distribution as the total of all three alignment types; in other words, its distribution is not affected by head/dependent marking and we can conclude that it is equally compatible with all head/dependent types. The ergative alignment favors dependent-marking morphology: of the 28 ergative languages in the sample, 16 are dependent-marking and only four are strongly head-marking (Abkhaz, Wishram, and Tzutujil, all with 0.0 proportions; Yimas with 0.25). The ergative type is well installed and stable in these languages, however: the first three (Abkhaz, Wishram, Tzutujil) belong to well-described families (Northwest Caucasian, Chinookan, Mayan) that are consistently ergative.

The stative-active and hierarchical types strongly prefer head-marking morphology, consistent with the fact that the verb is the favored part of speech for showing stative-active marking. It is of course possible for a dependent-marking language to have stative-active dominant alignment. The dependent-marking stative-active languages in my sample, plus one (Batsbi; see Holisky 1987) not in my sample, are listed below, with their head/dependent ratios, alignment of noun and verb, and whether the structural semantics of the oppositions is of the split-S or fluid-S type in the terms of Dixon 1979.

The fluid-S type is rare overall among stative-active languages (Merlan 1985), and these examples show that the fluid-S type has a strong affinity for case-marking languages. Head-marking stative-active languages are split-S with only one exception. Acehnese uses head marking to implement a fluid-S type (Durie 1985:185ff.). We can conclude that the unmarked kind of stative-active language is head-marking and split-S.

The correlation of head/dependent marking and alignment emerges more clearly if we plot the head-marking points in the clause against the alignment of the verb, as shown in table 19. The high frequency of neutral alignment in languages with no head marking in the clause is to be expected by definition: a language having no clause head marking has no marking on the verb, and no marking is neutral alignment. What requires comment is the non-neutral examples with zero clause head-marking. These include two languages that use detached marking, which I somewhat arbitrarily counted as marking of alignment on the verb. These two languages are Haida (stative-active) and Luiseño (accusative). Otherwise, once again the distribution of the accusative alignment is much like that of the total, and the stative-active and hierarchical alignments are concentrated in the head-marking end of the scale (higher numbers of H points in S). The ergative alignment is fairly evenly distributed throughout the scale except that it does not occur in languages with zero head marking in the clause (since ergativity cannot be marked on the verb if the verb has no marking).

It is apparently possible to combine any of the three major alignment types with any head/dependent type, though there are preferred and dispreferred combinations and there are gaps (which I interpret as accidental) in the distribution of the low-frequency types. The accusative alignment is equally compatible with all types, as is consistent with its generally preferred and unmarked status. The less frequent types have interesting asymmetries and limitations. The ergative alignment favors dependent marking. This is consistent with the fact that ergative, of all alignment types is prone to be marked on the noun (see §2.3.1), and this in turn may have to do with the fact that ergative alignment grammaticalizes nominal semantic roles. Stative-active and hierarchical alignments prefer head marking, and this is consistent with what they grammaticalize: the stative-active type grammaticalizes lexical categories of verbs, and the hierarchical type grammaticalizes relative ranking (for referential properties: animacy, person, etc.) rather than absolute functional status of clause arguments. The dependent-marked stative-active type is generally fluid-S, which is to say that it codes nominal semantic roles and not verb categorization. In general, the alignments that favor marking on nominals (ergative; fluid-S stative-active) are associated with grammaticalization of nominal semantic functions; those that favor marking on verbs are associated with the grammaticalization of verbal semantics and/or the semantics of the whole clause. Thus we have a functional explanation, albeit a rather abstract one. But on a more general level, the distributional constraints on alignment types suggest that there is some kind of consistency between the morphological form of coding (head-marked or dependent-marked) and the semantics coded; fluid categories and NP relational semantics favor dependent marking, while split categories and verbal notions favor head marking. If the function of the part of speech bearing the marking influences the semantics coded, it is also true that the form of the coding, specifically its location, restricts its possible semantics.

The correlation of stative-active type with head marking and ergative with dependent marking is difficult to demonstrate areally, partly because nonaccusative alignments are not common enough to form clear patterns in any but the largest areas and partly because ergative and stative-active alignments

are roughly in complementary distribution across the areas. Table 20 shows that wherever the ergative alignment is at all frequent it is associated with dependent marking, and wherever the stative-active alignment is frequent it is associated with head marking. Even when neither is frequent, as in the smaller areas, there is still conformity in that in most cases the few stative-active entries are no more dependent-marking, and often more nearly head-marking, than the few ergative entries. The only counterexample is the Caucasus. The correlation emerges as significant by Dryer's test (reliably so if only the six continent-sized areas are considered; less reliably, but numerically more strongly, if all areas are counted).

As mentioned in §2.0.4, stative-active languages can be described as having an ergative or accusative base, depending on whether the object-inflecting ("stative") or subject-inflecting ("active") set of intransitives is an open set. A base alignment can also be determined by considering the nominal and pronominal inflection, and sometimes also the inflection of transitive verbs. Information on closed and open classes of intransitives is not always available, but where available it indicates that most stative-active languages have an accusative base. Inflectional paradigms yield the same conclusion: ergative base alignment is rare outside of the Old World (where it is found in Georgian and Elamite). Languages with hierarchical dominant alignment have an accusative or neutral base without exception.

Regarding Georgian, Nichols (1992:314, note 3) remarks:

Georgian is classified as stative-active because of its split transitivity. Hewitt 1987 gives detailed arguments against it on the grounds that the semantics of agent and patient does not determine case choice in intransitive subjects, but my definition of stative-active is not based on nominal semantic roles. Klimov 1977, 1983a classifies Georgian as belonging to the active type, although his classification is not based entirely on alignment: see the summary of his typology in §1.1.1 above.

Finally, Nichols (1992:116—117) discusses alienable and inalienable possession and its relationship to stative-active structure:

Klimov 1977 finds that an opposition of alienable/inalienable possession is associated with the stative-active type. Nichols 1988, a survey limited to North America and Northern Eurasia, argues that the association is rather with head/dependent marking: inalienable possession almost always involves head marking, and head marking in NP's almost always entails an alienable/inalienable opposition. Chappell and McGregor 1989 give a more comprehensive structural analysis along comparable lines, placing alienable and inalienable possession in a hierarchy which continues on to lexical compounds and classificatory nouns. (Welmers 1971:132ff. finds evidence for a further connection — in this case historical rather than typological — of bound vs. free possession with nominal classes.) The present survey has supported most of the findings of Nichols 1988 and Chappell and McGregor 1989. Only possessive constructions taking the form of NP's are surveyed here.

In the literature, the opposition of inalienable to alienable possession is generally presented as a semantic one, but Chappell and McGregor 1989 and Nichols 1988 show that it is best approached as a structural opposition rather than a semantic one. Languages with an opposition of inalienable to alienable possession have split systems of possession marking, and alienable and inalienable are not cross-linguistic semantic constants but simply the extremes of the nominal hierarchy defined by the splits. The term *inalienable*, then, refers not to a semantic constant having to do with the nature of possession, but to whatever set of nouns happens to take inalienable possession marking in a given language. In terms of its grammatical form, inalienable possession always involves a tighter structural bond or closer connection between possessed and possessor, and the tightness of the bond can be described in terms of head and dependent marking. One of the most common patterns is that where possession is head-marked and there is no formal difference between alienable and inalienable possession, other than that there is an inalienable set of nouns that cannot occur with possessive affixation while alienables can be used alone. In some languages there is a formal difference between alienable and inalienable possessive affixes: both are head-marking, and those for inalienables are shorter, simpler, or more archaic than those for alienables...

There are several recurrent types of splits in the marking of possession, and all of them lend themselves to a single generalization: the inalienables take marking which is more nearly head-marking or less dependent-marking than the marking of alienables. Commonly, inalienable possession is head-marked while alienable is dependent marked...

The generalizations to be made about inalienable possession thus resemble, in the abstract, those made in §3.2 about the stative-active alignment: both are associated with head marking, and both involve split rather than fluid systems. Stative-active alignment is typically but not necessarily split (occasionally as fluid, as in Batsbi, Acehnese, Eastern Pomo, and Tonkawa) and typically but not necessarily associated with head marking (occasionally with dependent marking, as in Batsbi, Eastern Pomo, and Tonkawa). Inalienable possession appears to be necessarily split (never fluid) and necessarily associated with head/dependent marking. The correlation with head/dependent marking is shown in the fact that no language in my sample (and no language that I know of) uses only dependent marking to implement an alienable/inalienable distinction. (A language that did so would have two genitive cases, one for alienables and one for inalienables.) Inalienable possession is split rather than fluid in that the choice of marking is determined by the possessed noun rather than by the speaker's decision about semantics. No language has what one would want to call fluid possessive marking, which would require the speaker to decide, for each possessed noun, whether (say) the possessor could part with the possessed item, whereupon the speaker would choose the formal marking accordingly...

Additional information on the salient morphological characteristics of active type languages is presented at the beginning of Chapter 20, especially as it pertains to positing an active-type structure for an early period of development in Proto-Indo-European. See also Andréasson 2001; Dixon 1994; Dixon—Aikhenvald (eds.) 2000,

2003, 2009; Donohue—Wichmann (eds.) 2008; and Mithun 1991. For information on the typologically rare marked-S languages, cf. Handschuh 2014.

The distribution of agent and patient markers (cases) in an accusative system, an ergative system, and an active system may be summarized as follows:

		Accusative	Ergative	Active	
Subject	Transitive	Nominative	Ergative	Agentive	
	Intransitive				
Object		Accusative	Absolutive		Patientive

17.3. ABLAUT IN PROTO-NOSTRATIC

An analysis of the Afrasian data seems to indicate that there was an alternation between the vowels **a*, **i*, and **u* in Proto-Afrasian roots and that that alternation may have had some sort of morphological or semantic significance. This is most evident in the Proto-Afrasian reconstructions proposed by Orël—Stolbova (1995), where different root vowels are sometimes posited by them for two (or more) stems, all of which are clearly variants of the same root. Each stem is listed by them as a separate entry, though the stem is usually cross-referenced to the related entry or entries. At the present state of research, however, it is simply not possible to ascertain the details of that patterning and what that patterning may have signified. In this book, Proto-Nostratic roots are reconstructed with stable vowels (and their subphonemic variants). Tone may also have played a role in Proto-Nostratic.

17.4. ROOT STRUCTURE PATTERNING IN PROTO-NOSTRATIC

As noted in Chapter 12, §12.3, comparison of the various Nostratic daughter languages makes it possible to determine the rules governing the structural patterning of roots and stems in Proto-Nostratic. Most likely, the patterning was as follows:

1. There were no initial vowels in Proto-Nostratic. Therefore, every root began with a consonant.
2. There were no initial consonant clusters either. Consequently, every root began with one and only one consonant. Medial clusters were permitted, however.
3. Two basic root types existed: (A) **CV* and (B) **CVC*, where *C* = any non-syllabic, and *V* = any vowel. Permissible root forms coincided exactly with these two syllable types.
4. A stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: **CVC+C-*. Any consonant could serve as a suffix. Note: In nominal stems, this derivational suffix was added directly to the root: **CVC+C-*. In verbal stems, it was added to the root plus formative vowel: **CVC+V+C-*.

5. A stem could thus assume any one of the following shapes: (A) **CV-*, (B) **CVC-*, (C) **CVC+C-*, or (D) (reduplicated) **CVC-CVC-*. As in Proto-Altaic, the undifferentiated stems were real forms in themselves and could be used without additional suffixes or grammatical endings. However, when so used, a vowel had to be added to the stem: (A) **CV-* > **CV* (no change), (B) **CVC-* > **CVC+V*, (C) **CVC+C-* > **CVC+C+V*, or (D) (reduplicated) **CVC-CVC-* > **CVC-CVC+V*. Following Afrasian terminology, this vowel may be called a “terminal vowel” (TV). Not only did terminal vowels exist in Proto-Afrasian (cf. Ehret 1995:15; Bender 2000:214—215 and 2007:737—739; Hayward 1987; Mous 2012:364), they are also found in Dravidian, where they are called “enunciative vowels” (cf. Steever 1998a:15; W. Bright 1975; Krishnamurti 2003:90—91; Zvelebil 1990:8—9), and in Elamite (cf. Khačikjan 1998:11; Grilhot-Susini 1987:12; Stolper 2004:73), where they are called “thematic vowels”. In Proto-Dravidian, the enunciative vowel was only required in stems ending in obstruents, which could not occur in final position.

Concerning enunciative vowels in Dravidian, Zvelebil (1990:8—9) notes:

No obstruents can occur finally. When they do, they are followed by a “non-morphemic” automatic (so-called epenthetic, or ‘enunciative’ or ‘euphonic’, i.e. predictable morphophonemic) vowel **-ə* which is regularly dropped according to morphophonemic rules...

While Krishnamurti (2003:90—91) writes:

If the stem ends in a stop, it is followed by a non-morphemic or enunciative vowel /u/. Roots of (C)VC- and (C)VCC- contrast when followed by formatives or derivative suffixes beginning with vowels. It is not clear if the difference between root-final C and CC is determined by the nature of the derivative suffix that follows. When roots in final obstruents are free forms, the final consonant is geminated followed by a non-morphemic (enunciative) *u*. When roots of the type (C) \bar{V} C- or (C)VCC- are followed by a formative vowel, $V_2 = /i\ u\ a/$, they merge with (C)VC-.

Ehret (1995:15) makes the following observations about the terminal vowels in Proto-Afrasian:

The Omotic, Cushitic, and Chadic evidence conjoin in requiring the existence in PAA of an additional element in word formation, a terminal vowel (TV) in nouns and modifiers, the original function and meaning of which remain obscure. TVs have been subjected to comparative-historical investigation in only two groups of Afroasiatic languages. In Omotic they have no reconstructible function beyond their necessary attachment to singular noun stems in semantically predictable fashion. With the exception of Kafa, in which two TVs, *-o* and *-e*, have been grammaticalized respectively as masculine and feminine markers, they carry no grammatical or recognizable semantic load (Hayward 1987). In proto-Southern Cushitic, pairs of TVs formed a variety of

singular-plural markers. Particular paired sets tended to go with either masculine or feminine nouns, but an individual TV on a singular noun generally gave no indication of the grammatical gender of that noun (Ehret 1980:49–50).

From these indicators it seems reasonable to conclude that TVs are fossils of a nominal morphology productive in pre-proto-Afroasiatic and predating the rise of grammatical gender in the family. Having lost their original grammatical function, they have been reanalyzed as markers of the singular or sometimes, as in the case of Southern Cushitic, of the plural in nominals. In the Boreafasian subgroup (Semitic, Egyptian, and Berber: see Chapter 6 for this classification), the TVs have generally been dropped entirely, leaving most nouns and adjectives as consonant-final words.

The existence of TVs at early stages of Afroasiatic evolution obviates the need to reconstruct any syllabic consonants for PAA. The usual word structure of nouns and adjectives would have been $*C_1(VC_2)(C_s)V_{TV}$, in which the only possible structures are CVC and CV and never just C. The presence of syllabic C in Boreafasian languages can be understood as the natural outcome of vowel loss, whether word-internal or word-final, within that particular subgroup (as is also separately the case in a few modern Omotic languages, notably Bench and Maji, where the same kind of sound change has independently been at work).

While Bender (2000:214–215) makes the following comments about Omotic:

Hayward (1987, 1980a, 1980b) reported in some detail on the matter of “terminal vowels” (TVs) found in sg. nouns in Omotic languages and Ari. Hayward states that the TVs in Ari are often independent of the root (1990b:440) and that in Zaysé, they are appendages, not part of the root, but being unpredictable, must be included in lexical entries (1990a:242). In some cases, final vowels distinguish gender. This is much more the case with pronominals, but I restrict the term “TVs” to the nominal category in non-derived and non-inflected form (except insofar as TV may mark gender)...

In the 1990c article, variation of vowels beyond the “cardinal” *i, e, a, o, u* did not seem to be significant in TVs. TVs are prominent in all branches except Gimira, where CVC is the norm, with tone carrying a high functional load. It would be tidy if TVs were reconstructable: they would thus be predictable across languages if not within languages according to lexical items. But first of all, there is no unanimity among the sources: different investigations record different TVs and even one source may have alternative forms.

As noted above, terminal vowels are only used with nouns and modifiers in Afrasian, while in Dravidian, the single reconstructible terminal vowel, $*-u$, is used after any free-form stem ending in an obstruent. For Proto-Nostratic, the patterning may be assumed to have been as follows: If an undifferentiated nominal or verbal stem was used as a free-form, a terminal vowel had to be added. In Proto-Nostratic, the terminal vowels were: $*a$, $*i$, and $*u$. The origin of terminal vowels will be investigated below.

The original root structure patterning was maintained longer in Afrasian, Dravidian, and Altaic than in the other branches, while the patterning found in Proto-Indo-European and Proto-Kartvelian has been modified by developments specific to each of these branches. The root structure constraints found in Proto-Indo-European were an innovation. In Proto-Uralic, the rule requiring that all words end in a vowel (cf. Décsy 1990:54) was an innovation and arose from the incorporation of the so-called “terminal vowel” into the stem. It should be noted that reduplication was a widespread phenomenon in Proto-Nostratic. It was one of the means used to indicate plurality in nouns, while, in verbs, it may have been used in frequentive and habitual formations.

On the basis of the evidence of Proto-Indo-European, Proto-Kartvelian, Proto-Afrasian, Proto-Dravidian, and Proto-Altaic, it may be assumed that there were three fundamental stem types: (A) verbal stems, (B) nominal (and adjectival) stems, and (C) pronominal and indeclinable stems. Some stems were exclusively nominal. In the majority of cases, however, both verbal stems and nominal stems could be built from the same root. In Proto-Nostratic, only pronominal and indeclinable stems could end in a vowel. Verbal and nominal stems, on the other hand, had to end in a consonant, though, as noted above, when the undifferentiated stems were used as real words in themselves, a “terminal vowel” had to be added to the stem. As we shall see below, the “terminal vowels” were morphologically significant. Adjectives did not exist as an independent grammatical category in Proto-Nostratic.

As in Proto-Kartvelian, it appears that Proto-Afrasian underwent several syntactic shifts in its prehistoric development. Surely, the VSO pattern found in Semitic, Egyptian, and Berber is an innovation. While it is not possible to trace the exact developments, it seems likely that the original pattern was SOV, which is what is found in the majority of Cushitic languages. Ehret (1995:52) arrives at the same conclusion for Proto-Afrasian. He notes that nominalizing morphology in Proto-Afrasian was predominantly suffixal. One little aside: The more I look at the matter, the more I am convinced that, within Afrasian, Semitic is the most aberrant branch. In view of this, notions of what Proto-Afrasian might have been like, based primarily upon the Semitic model, are likely to be false.

17.5. PREHISTORY OF ROOT STRUCTURE PATTERNING AND THE DEVELOPMENT OF TERMINAL VOWELS

During the earliest period of Proto-Nostratic, *roots* could only have the forms: (A) *CV- and (B) *CVC-. Type (A) was restricted to pronominal stems and indeclinables, while type (B) characterized nominal and verbal stems. A single *derivational suffix* could be placed after root type (B): *CVC+C (derivational suffix [DS]). Grammatical relationships were indicated by placing *particles* either after the undifferentiated stem or after the stem plus a derivational suffix: (A) *CVC + CV (particle [P]) or (B) *CVC+C (derivational suffix [DS]) + CV (particle [P]). In nominal stems, a morphologically significant *terminal vowel* (TV) had to be added directly after the root, while in verbal stems, a *formative vowel* (FV) had to be

added between the root and any following element, be it derivational suffix or particle; thus, we get the following patterns:

- (A) (noun stem) $*CVC(+C_{DS})+V_{TV}$ (plus particle): $*CVC(+C_{DS})+V_{TV}+CV_P$
 (B) (verb stem) $*CVC+V_{FV}(+C_{DS})$ (plus particle): $*CVC+V_{FV}(+C_{DS})+CV_P$

The derivational suffixes were derivational rather than grammatical in that they either changed the grammatical category of a word or affected its meaning rather than its relation to other words in a sentence. Cf. Crystal 2008:138 and 243.

This is essentially the stage represented in Proto-Dravidian, though Proto-Dravidian has added long vowels to the equation as well as stems beginning with a vowel (no doubt arising from the loss of initial laryngeals) (cf. Krishnamurti 2003:179—184 and 277—279). Next, the formative vowel was reinterpreted as part of the derivational suffix in verbal stems: $*CVC+VC+CV$. This is the stage represented by Proto-Afrasian (cf. Diakonoff 1988:85—110; Ehret 1995:15 and 27—34) and is the basis for the root structure patterning found in Proto-Kartvelian and Proto-Indo-European as well. From an Afrasian perspective, there is no such thing as “formative vowels” — they are only preserved in Dravidian and Elamite, though, in Elamite, their status is disputed (cf. Reiner 1969:78).

In Proto-Dravidian, the original meaning of the formative vowels was lost. According to Krishnamurti (2003:97), the formative vowels “apparently had an epenthetic role of splitting clusters without affecting the syllable weight ...” Note the following examples given by Krishnamurti (2003:181):

1. $*tir-a-y-$ ($*-p-/ *-mp-$, $*-nt-$) ‘to roll (intr.)’; $*tir-a-y-$ ($*-pp-/ *-mpp-$, $*-ntt-$) ‘to roll up (tr.)’, (n.) $*tir-a-y$ ‘wave, screen, curtain’; $*tir-a-nku$ ‘to be curled up (intr.)’, $*tir-a-nkku$ ‘to shrivel (tr.)’;
2. $*tir-a-l-$ ($*-p-$, $*-nt-$) ‘to become round (intr.)’, $*tir-a-l-$ ($*-pp-$, $*-ntt-$) ‘to make round (tr.)’;
3. $*tir-i-$ ($*-p-$, $*-nt-$) ‘to turn (intr.)’, $*tir-i-$ ($*-pp-$, $*-ntt-$) ‘to turn (tr.)’; $*tir-u-ku$ ‘to twist (intr.)’, $*tir-u-kku$ ‘to twist (tr.)’; $*tir-u-mpu$ ‘to twist, to turn (intr.)’, $*tir-u-mppu$ ‘to twist, to turn (tr.)’;
4. $*tir-u-ntu$ ‘to be corrected, to be repaired (intr.)’, $*tir-u-nttu$ ‘to correct, to rectify (tr.)’.

As stated by Krishnamurti (2003:181), “[t]he Proto-Dravidian root is obviously $*tir-$, meaning ‘turn, roll, twist, change shape’ → ‘correct’, etc. The formatives occur in two layers. The first layer is $V = i, a, u$; and the second layer, either a sonorant (L) as in y, l ; or a simple or geminated stop ± homorganic nasal: P as in $*ku$; PP as in $*kku$; NP as in $*nku, *ntu, *mpu$; NPP as in $*nkku, *nttu, *mppu$.”

In Elamite, verbal stems consisted either of a root ending in a vowel or of a root extended by a thematic vowel if the root ended in a consonant: $kuk-i$ ‘to protect’ (< $kuk-$) (cf. Khačikjan 1998:13). Khačikjan (1998:11) also notes:

Elamite was an agglutinative suffixal language. The suffixes joined either the root or the stem.

The root morpheme consisted mostly of two consonants and one or two vowels: *nap* ‘deity’, *ruh* ‘man’, *zana* ‘lady’, *kap* ‘treasure’, *kik* ‘sky’, etc.

The stem consisted of a root ending in a consonant, with thematic vowels *-i*, *-u*, *-a*, cf. *per-i-*, *mur-u-*, *tahh-a-* (< *tah-*). The thematic vowels *-u* and *-a* were only attested with verbal stems, whereas *-i* with nominal and nominal-verbal ones: *tir-i-* ‘to speak’, *kukk-i* ‘vault, roof’, *peti-* ‘enemy; to revolt’.

Reiner (1969:78) notes, likewise, that the Elamite verb base always ended in a vowel: CVCV, CVCCV, and, though more rarely than the first two types, CV. Reiner argues against treating the thematic vowel (“stem-vowel”) as a separate morpheme. Khačikjan, however, follows Paper in considering the thematic vowel to be a separate morpheme. Grillet-Susini (1987:32) simply states: “The structure of the verb is analogous to that of the noun. It consists of a base (simple root or enlarged by *-i/u/a*) to which the inflections of the verbal conjugation, the participial formants, and/or the nominal person suffixes are attached.”

Now, it is curious that the formative vowel can take different shapes in Proto-Dravidian: **a*, **i*, or **u*. This seems to indicate that the different formative vowels must have had some sort of morphological significance at an earlier point in time, though this distinction was lost in Proto-Dravidian proper. Not only must the formative vowels have had morphological significance, the terminal vowels must also have had morphological significance.

The formative vowels found in verbal stems may have been aspect markers, as Zaborski has tried to show for Omotic (cited in Bender 2000:217). Here, according to Zaborski, the patterning was as follows: *a* marks present (imperfective), *i* ~ *e* mark past (perfective), and *u* ~ *o* mark subordinate. Though originally supportive of Zaborski’s views, Bender later became skeptical, pointing out that he finds the consonantal markers to be more significant. Indeed, for Omotic or even Afrasian, this is what we would expect. But Zaborski’s views are not so easily dismissed. What he may have uncovered is a more archaic pattern, as Bender himself admits. In Finno-Ugrian, the ending **-i-* shows up as a past tense marker (cf. Collinder 1960:305—307 and 1965:132—134; Décsy 1990:76). Likewise in Dravidian, where the suffix **-i-* is one of several used to mark past tense (cf. Krishnamurti 2003:296—298). These may ultimately be derived from a perfective marker **-i-*.

As noted above, when the unextended root (**CVC-*) served as the verbal stem, the formative vowel (aspect marker) was added directly to the root: **CVC+V_{FV}*.

For nominal stems, the situation is a bit more complicated. Diakonoff (1988:59—61) reconstructs two “abstract” case forms for Proto-Afrasian: (A) **-i/* **-u* and (B) **-Ø/*-a*. Diakonoff notes that the best preserved case marker was **-i*. It served two functions: (A) nominative-ergative and (B) genitive (in the sense ‘belonging to’). In Cushitic, it often has two variants: (A) a short one in *-i* and (B) an “expanded” one in *-iya* or *-ii*. Given the identical form of the nominative-ergative and genitive, Diakonoff assumes that the nominative-ergative function arose from the genitive function. For **-Ø/*-a*, Diakonoff assumes that it represented “the noun outside of grammatical links (the so-called ‘*status indeterminatus*’) or the noun-

predicate (the so-called ‘*status praedicativus*’), but also the subject of a state or condition, including the subject of the state that resulted from the action.” Finally, it should be noted that Sasse (1984:117) reconstructs the following two declensional paradigms for nouns with short final vowels for Proto-East Cushitic (see also Appleyard 1996:7 — for Omotic parallels, cf. Zaborski 1990):

	Masculine	Feminine
Absolute Case	*-a	*-a
Subject Case	*-u/i	*-a

Sasse (1984) discusses the development of this system within Cushitic and ends by noting that traces of the above patterning can also be found in Semitic and Berber (Proto-Semitic nominative *-u, accusative *-a, genitive *-i [cf. Hasselbach 2013]).

I assume that the following patterning existed in early Proto-Nostratic:

1. *-u was used to mark the subject (the agent) in active constructions — these subjects “perform, effect, instigate, and control events” (Mithun 1991:538);
2. *-i indicated possession;
3. *-a was used to mark:
 - (A) The direct object (the patient) of transitive verbs;
 - (B) The subject (“non-agent subject” [= the patient]) in stative constructions — these subjects are “affected; things happen or have happened to them”, just like direct objects (Mithun 1991:538);
 - (C) The so-called “*status indeterminatus*”.

In later Proto-Nostratic, this patterning became disrupted, though, as we have seen, it may have survived into Proto-Afrasian. In later Proto-Nostratic, the relational markers *-ma and *-na came to be used to mark the direct object of transitive verbs as well as the subject in stative constructions. Eventually, these relational markers became the primary means of marking the direct object of transitive verbs or the subject in stative constructions, with the result that the older patterning became disrupted. Thus, in the latest stage of the Nostratic parent language, we find the following patterning:

1. *-u: used to mark the subject in active constructions:
 - (A) *CVC+u
 - (B) *CVC+C_{DS}+u
 - (C) *CVC-CVC+u
2. *-a ~ *-ma/*-na: used to mark the direct object of transitive verbs as well as the subject in stative constructions:

- | | |
|----------------------------------|--|
| (A) <i>*CVC+a</i> | plus <i>*-ma/*-na: *CVC+a+ma/na</i> |
| (B) <i>*CVC+C_{DS}+a</i> | plus <i>*-ma/*-na: *CVC+C_{DS}+a+ma/na</i> |
| (C) <i>*CVC-CVC+a</i> | plus <i>*-ma/*-na: *CVC-CVC+a+ma/na</i> |

**-ma/*-na* was the first case form (bound relational marker) to develop in Proto-Nostratic. The second was the genitive (in the sense ‘belonging to’) in **-nu*. Indeed, these are the only two bound relational markers that can be confidently reconstructed for the latest period of Proto-Nostratic (see below for more information). Finally, it seems likely that unextended **-a* remained as the indicator of the *status indeterminatus*.

In Elamite, the **-a* (and **-u* ?) variant was eliminated in nominals. Dravidian, on the other hand, underwent further developments. Here, **-i* ~ **-a* were reinterpreted as oblique markers (on which, cf. Krishnamurti 2003:225—226), while **-u* assumed the role of enunciative vowel (cf. Krishnamurti 2003:91: “[w]hen roots in final obstruents are free forms, the consonant is geminated followed by a non-morphemic [enunciative] *u*.”).

This, then, explains the origin of both the so-called “formative vowels” and “terminal vowels”. It may be noted here that Ehret (1995:15) concludes that the terminal vowels found in Afrasian “are fossils of a nominal morphology productive in pre-proto-Afroasiatic and predating the rise of grammatical gender in the family. Having lost their original grammatical function, they have been reanalyzed as markers of singular or sometimes, as in the case of Southern Cushitic, of the plural in nominals.” As a further note, the terminal vowel **-a* may ultimately be the source of the highly productive thematic stems in later Proto-Indo-European.

Ehret does not reconstruct formative vowels for Proto-Afrasian. In this, he is correct. As noted above, in Proto-Afrasian, the earlier formative vowels have been reinterpreted as part of the derivational suffixes.

17.6. RULES OF PROTO-NOSTRATIC SYNTAX

Dolgopolsky (1984:92—93 and 2005) sets up the following rules of Proto-Nostratic syntax:

- A. Words are classified into three groups (which differ in their syntactic behaviour):
 - a) Full Words (in the sense of the Chinese traditional grammar, i.e. semantic counterparts of nouns, adjectives, adverbs and verbs of modern languages),
 - b) Pronouns,
 - c) Grammatical Words (i.e. case-markers).
- B. Pronouns (if stressed) can behave syntactically according to the rules of Full Words as well.
- C. The predicate is the last Full Word of the sentence.
- D. Any object precedes its verb (i.e. its Full Word with verbal meaning).
- E. Any attribute (expressed by a Full Word) precedes its *regens*.

- F. A pronoun (personal or demonstrative) functioning as attribute follows its *regens*. In this case a personal pronoun has possessive meaning.
- G. A pronoun functioning as subject follows its predicate.
- H. Case-markers follow the corresponding Full Word. Some of these (genitive-marker **nu*, accusative-marker **ma*) follow immediately after its Full Word, while others (such as locative postpositions) can be used in a construction Full Word + **nu* + postposition. This accounts for **-n-* preceding the case-ending in the oblique cases of the IE heteroclitica, for the increment **-in-/-n-* preceding the case endings of the oblique cases in D[ravidian], for some F[inno-] U[grian] case forms (locative **-na < *nu Ha*), as well as for the **-n-*increment in the personal pronominal stems in the oblique cases (→ all cases) in U[ralic], T[urkic], T[ungusia]n, and D[ravidian]...

A logical corollary of rules C—E is that the subject (if it is a Full Word) occupied the remaining place: somewhere in the initial part of the sentence.

These rules have been preserved almost entirely (either as syntactic rules of word-order or as morpheme-order in grammatical forms) in Uralic, Turkic, Mongolian, Tungusian, Gilyak, Korean, Japanese, Dravidian, Early Indo-European, Cushitic, and have determined the order of morphemes within words in the rest of the Nostratic languages.

Proto-Nostratic syntax was head-final, or left-branching, that is, dependents preceded their heads according to the so-called “rectum-regens rule”. In other words, “adverbs” preceded verbs, “adjectives” preceded nouns, and auxiliaries followed the main verb, though it must be emphasized here that adjectives did not exist as an independent grammatical category in Proto-Nostratic (see below for details). The unmarked syntactical order was Subject + Object + Verb (SOV).

From a typological perspective, the native American language Yuki of northern California (cf. Kroeber 1911) may be cited as an example of a language structurally similar to Proto-Nostratic. Hurrian (cf. Bush 1964; J. Friedrich 1969a; Laroche 1980; Speiser 1941; Wegner 1999 and 2007; Wilhelm 2004a) may be mentioned as another language that was structurally similar to Proto-Nostratic during the latest period of development, when bound morphemes had started to appear, though Proto-Nostratic had active alignment, while Hurrian had ergative alignment.

17.7. PRONOMINAL, DEICTIC, AND ANAPHORIC STEMS

17.7.1. FIRST PERSON STEMS

First person singular (active): **mi*

First person plural (inclusive, active): **ma*

First person (stative): **k^ha*

First person (stative): **ha*

First person singular: **na*

First person plural (exclusive, active): **na*

First person (postnominal possessive/preverbal agentive): **ɣiya*

17.7.2. SECOND PERSON STEMS

Second person: **thi*, (oblique) **tha*

Second person: **si*

Second person: **ni*

17.7.3. ANAPHORIC AND DEICTIC STEMS

Pronominal base of unclear deictic function: **-gi* (~**-ge*)

Deictic particle: (A) **ɣa-* (~**ɣə-*) (distant), (B) **ɣi-* (~**ɣe-*) (proximate), and (C) **ɣu-* (~**ɣo-*) (intermediate)

Deictic particle: (A) **kha-* (~**kə-*) (proximate), (B) **ku-* (~**ko-*) (distant), and (C) **ki-* (~**ke-*) (intermediate)

Deictic particle: (A) **tha-* (~**tə-*) (proximate), (B) **tu-* (~**to-*) (distant), and (C) **ti-* (~**te-*) (intermediate)

Deictic particle: **ša-* (~**śə-*)

Anaphoric pronoun stem: **si-* (~**se-*)

Anaphoric pronoun stem: **na-*, **ni-*

Deictic particle: **ʔha-* ‘that over there, that yonder (not very far)’

Note: The deictic particles (A) **ɣa-* (~**ɣə-*) (distant), (B) **ɣi-* (~**ɣe-*) (proximate), and (C) **ɣu-* (~**ɣo-*) (intermediate) often combined with other deictic stems, as follows:

1. **ɣa+na-*, **ɣi+na-*, **ɣu+na-*;
2. **ɣa+kha-*, **ɣi+kha-*, **ɣu+kha-*;
3. **ɣa+tha-*, **ɣi+tha-*, **ɣu+tha-*;
4. **ɣa+ša-*, **ɣi+ša-*, **ɣu+ša-*.

17.7.4. INTERROGATIVE, RELATIVE, AND INDEFINITE STEMS

Relative: **kwhi-* (~**kwe-*); interrogative: **kwha-* (~**kwe-*)

Interrogative-relative stem: **ɣav-*, **ɣya-*

Interrogative: **mi-*; relative: **ma-*

Interrogative-relative: **na*

Indefinite: **ma-*, **mi-*, **mu-*

Indefinite: **dʷi-* (~**dʷe-*) ‘this one, that one’

17.7.5. SUMMARY

The following two tables correlate the reconstructions for the Proto-Nostratic first and second person personal pronoun stems proposed in this book (column A) with those proposed by Illič-Svityč (1971—1984; also V. Dybo 2004) (column B),

Dolgopolsky (1984, 2005, and 2008) (column C), Greenberg (2000) (column D), and Kortlandt (2010b/d/e) (column E):

A. First person personal pronouns:

	A	B	C	D	E
1st pers. sg. (active)	* <i>mi</i>	* <i>mi</i>	* <i>mi</i>	* <i>m</i>	* <i>mi</i>
1st pers. pl. (incl., active)	* <i>ma</i>	* <i>mā</i>		* <i>m</i>	* <i>me</i>
1st pers. (stative)	* <i>k^ha</i>			* <i>k</i>	
1st pers. (stative)	* <i>ḥa</i>				
1st pers. sg.	* <i>na</i>	* <i>naHe-na</i> , * <i>na</i>		* <i>n</i>	
1st pers. pl. (excl., active)	* <i>na</i>		* <i>nó</i>	* <i>n</i>	
1st pers. (postnominal)	* <i>ɣiya</i>		* <i>HoyV</i>		

B. Second person personal pronouns:

	A	B	C	D	E
2nd pers.	* <i>t^hi</i> , * <i>t^ha</i>	* <i>t^hna</i> , * <i>ta</i>	* <i>t[ü]</i> (> * <i>t^hi</i>)	* <i>t</i>	* <i>te</i>
2nd pers.	* <i>si</i>	* <i>si-</i> possessive	* <i>ś[ü]</i> (> * <i>śi</i>)	* <i>s</i>	
2nd pers.	* <i>ni</i>			* <i>n</i>	

This table correlates the reconstructions for the Proto-Nostratic anaphoric, deictic, interrogative, relative, and indefinite stems proposed in this book (A) with those proposed by Illič-Svityč (B), Dolgopolsky (C), Greenberg (D), and Kortlandt (E):

	A	B	C	D	E
Deictic particle	*- <i>gi</i> (~ *- <i>ge</i>)			* <i>ge</i>	
Deictic particle	* <i>ɣa-</i> (~ * <i>ɣə-</i>), * <i>ɣi-</i> (~ * <i>ɣe-</i>), * <i>ɣu-</i> (~ * <i>ɣo-</i>)	* <i>ɣa</i> , * <i>ɣi</i> /* <i>ɣe</i>	* <i>ḥa</i> , * <i>[h]e</i> , * <i>[h]i</i> , * <i>[h]u</i>	* <i>i</i> ~ * <i>e</i> , * <i>a</i> ~ * <i>e</i>	* <i>i</i> /* <i>e</i>
Deictic particle	* <i>k^ha-</i> (~ * <i>k^hə-</i>), * <i>k^hu-</i> (~ * <i>k^ho-</i>), * <i>k^hi-</i> (~ * <i>k^he-</i>)		* <i>Ḳ[ü]</i>	* <i>ku</i>	
Deictic particle	* <i>t^ha-</i> (~ * <i>t^hə-</i>), * <i>t^hu-</i> (~ * <i>t^ho-</i>), * <i>t^hi-</i> (~ * <i>t^he-</i>)	* <i>ta</i>	* <i>tā</i>	* <i>t</i>	* <i>t</i>
Deictic particle	* <i>ša-</i> (~ * <i>šə-</i>)			* <i>s</i>	* <i>s</i>
Anaphoric stem	* <i>si-</i> (~ * <i>se-</i>)	* <i>šā</i>	* <i>sE</i>		
Anaphoric stem	* <i>na-</i> , * <i>ni-</i>		* <i>nE</i> (dual)		

	A	B	C	D	E
Deictic particle	* <i>ʋ^ha-</i>		* <i>ʕE</i>		
Relative	* <i>k^{wh}i-</i> (~ * <i>k^{wh}e-</i>)				
Interrogative	* <i>k^{wh}a-</i> (~ * <i>k^{wh}ə-</i>)	* <i>k_o</i>	* <i>K_o</i>	* <i>k</i>	* <i>k</i>
Interrogative -relative	* <i>ʔay-</i> , * <i>ʔya-</i>	* <i>ja</i>	* <i>ya</i>	* <i>j</i>	
Interrogative	* <i>mi-</i>	* <i>mi</i>	* <i>mi</i>	* <i>m</i>	
Relative	* <i>ma-</i>				
Interrogative -relative	* <i>na-</i>	* <i>na</i>		* <i>n</i>	
Indefinite	* <i>ma-</i> , * <i>mi-</i> , * <i>mu-</i>	* <i>mu</i>			
Indefinite	* <i>d^yi-</i> (~ * <i>d^ye-</i>)				

17.8. NOMINAL MORPHOLOGY

17.8.1. INTRODUCTION

The overall structure of nominals (nouns and “adjectives”) was as follows:

Root (+ derivational suffix) + terminal vowel (**a*, **i*, **u*)
(+ relational marker) (+ number marker)

A stem could consist of the unextended root (**CVC-*) or the root extended by a single derivational suffix (**CVC+C-*). As noted above, it is necessary to recognize two distinct periods of development in Proto-Nostratic. In the earliest phase of development, the relational markers listed below were free relational morphemes (postpositional particles). In later Proto-Nostratic, however, at least two of them were well on their way to becoming bound relational morphemes (case suffixes).

As just stated, only the following two bound relational markers (case suffixes) can be confidently reconstructed for the latest period of Proto-Nostratic: (A) direct object **-ma*, **-na* and (B) genitive **-nu*. Other case relationships were expressed by postpositions (see below for a list), some of which developed into bound case morphemes in the individual daughter languages. This is confirmed by Dravidian, where only the accusative (**-ay*, **-Vn*), dative (**-kk-*/**-k-*), and genitive (**-a*, **-in* [*< *-i + *-nu*]) can be confidently reconstructed for the Dravidian parent language (cf. Krishnamurti 2003:227; Steever 1998a:20 [Steever adds nominative **-Ø*]). Other case forms developed in the Dravidian daughter languages (for discussion, cf. Krishnamurti 2003:227—243). Likewise, only the following two grammatical cases can be reconstructed for Proto-Uralic (cf. Abondolo 1998a:18; Raun 1988:558—559; Aikio 2022:14): (A) accusative **-m*, which probably was used to mark the definite direct object of finite verbs, and (B) a subordinate suffix **-n*, which functioned as a genitive/nominalizer with nouns and as an adverb formant with verbs. Abondolo (1998a:18) further points out that there were also at least three

local cases in Proto-Uralic: (A) locative **-nA*, (B) separative **-tA* ~ **-tI*, and (C) and perhaps the latives **-k* (and/or **-ŋ*) and **-tʷ* (traditional **-č*) (and/or **-nʷ* [traditional **-n̥*]). Sinor (1988:714—725) devotes considerable attention to the question of common case markers between Uralic and Altaic. He, too, posits a Proto-Uralic accusative in **-m* and a genitive in **-n*. For the former, he notes that nothing comparable can be posited for Proto-Turkic or Proto-Mongolian, but he does reconstruct a Proto-Tungus accusative **-m*, which is in agreement with what is found in Uralic. The clearest parallels for the latter are to be found in the Proto-Mongolian genitive **-n* (cf. Poppe 1955:187—194) and in the Proto-Turkic genitive **-n* (cf. Róna-Tas 1998:73). Poppe (1955: 187—194) mentions that the genitive and accusative have converged in some Mongolian languages. This seems to indicate that Proto-Mongolian may have preserved the **-n* variant accusative form as opposed to the **-m* variant found in Uralic and Tungus. Sinor (1988:715—725) also discusses the Uralic and Altaic parallels between various local cases. Finally, it is worth mentioning here that, within Afrasian, Zaborski (1990:628) tentatively reconstructs the following case morphemes for Proto-Omoti: (A) nominative **-i*, (B) genitive-instrumental-directional **-kV*, (C) dative **-s*, (D) dative-comitative **-rV*, (E) accusative **-a* and **-nV*, (F) instrumental-locative-directional-dative **-nV*, and (G) ablative **-pV*. Zaborski (1990:618) notes that some of these case forms may go back to earlier postpositions. Parallels with Cushitic show that at least some of these case forms go back to Proto-Afrasian. Diakonoff (1988:61) notes that the following cases can be established for Proto-Afrasian with reasonable certainty: (A) **-Vš*, **-šV* locative-terminative; (B) **-dV*, **-Vd* comitative, dative; (C) **-kV* ablative and comparative; (D) **-Vm* locative-adverbialis; (E) **-l* directive; and (F) **-p* (also **-f*) ablative (in Omoti — conjunction, demonstrative pronoun in other languages). The ultimate Nostratic origin of several of the case forms posited by Zaborski for Proto-Omoti and by Diakonoff for Proto-Afrasian is completely transparent.

In Proto-Nostratic, adjectives did not exist as a separate grammatical category. They were differentiated from nouns mainly by syntactical means — a noun placed before another noun functioned as an attribute to the latter. Moreover, they did not agree with the head noun in number or gender. Caldwell (1913:308—318) describes similar patterning for Dravidian: “...adjectives have neither number, gender, nor case, but are mere nouns of relation or quality, which are prefixed without alternation to substantive nouns”. Krishnamurti (2003:389) points out, however, that not all Dravidian adjectives are of the derived types described by Caldwell. Krishnamurti considers adjectives to form a separate part of speech in Dravidian, as does Zvelebil (1977:59—69 and 1990:27—28), though Zvelebil mentions the fact that primary, underived adjective stems are statistically very rare in the Dravidian daughter languages. According to Steever (1998a:19): “The reconstruction of further parts of speech such as adjectives and adverbs to the proto-language is controversial. While some scholars have projected the category of adjectives to Proto-Dravidian, many of the candidates for adjectival status appear to be defective nouns or verbs. Although the scholarly literature speaks of certain forms as having adjectival function, viz., modifying a nominal, conclusive evidence that those forms constitute a formally distinct class is largely lacking. Further, none of the putative

adjectives in Dravidian exhibits a comparative or superlative degree. These degrees are expressed instead by syntactic means...” (see also Andronov 2003:180 and 300). As for Elamite, Khačikjan (1998:17) notes: “There was no special class of adjectives in Elamite. The mechanism of forming adjectives was the same as that used to express attributive relationships.” According to Diakonoff (1988:57), adjectives did not form a separate grammatical category in Proto-Afrasian, and this appears to have been the situation in Proto-Berber (cf. Kossmann 2012:34) and probably Proto-Cushitic (cf. Mous 2012:359) as well. Likewise in Proto-Uralic (cf. Abondolo 1998a:18): “Nouns were probably not morphologically distinct from adjectives in proto-Uralic, although the distribution of the comparative suffix **=mpV* suggests that an adjective category may have been developing before the breakup of Finno-Ugric”. In later Proto-Indo-European, on the other hand, adjectives formed a distinct grammatical category, and they agreed with the head noun in number and gender (for details and examples, cf. Szemerényi 1996:192—202; Beekes 1995:196—200 and 2011:219—223; Fortson 2010:134—136; Meillet 1964:408—409; Meier-Brügger 2003:218—223). Adjectives also form a separate part of speech in the Kartvelian languages. In Turkic, adjectives are not usually clearly distinguished from nouns morphologically. However, several suffixes are used primarily to form adjectives. In Modern Mongolian, there is no difference between adjectives and nouns. A noun placed before another noun functions as an attribute to the latter (cf. Grønbech—Krueger 1993:18). In Gilyak / Nivkh, adjectives do not exist as a distinct word-class, the semantic function of adjectives being performed by qualitative verbs (cf. Gruzdeva 1998:16).

17.8.2. RELATIONAL MARKERS

Direct object: **-ma*

Direct object: **-na*

Possessive: **-nu* ‘belonging to’

Possessive: **-lV* ‘belonging to’

Dative: **-na* ‘to, for’

Directive: **-k^{ha}* ‘direction to or towards, motion to or towards’

Directive(-locative): **-ri* ‘direction to or towards, motion to or towards’ (?)

Locative-Directive: **-la* ‘direction to or towards, motion to or towards’, ‘near to, near by’

Locative: **-ni* ‘the place in, on, or at which something exists or occurs’

Locative, instrumental-comitative: **-ma* ‘in, from, with’

Locative: **-bi* ‘in addition to, together with’

Locative: **-i* ‘near to, near by’ (?)

Comitative-locative: **-da* ‘together with’

Oblique: **-t^{ha}*

The following table correlates the reconstructions for the Proto-Nostratic relational markers proposed in this book (A) with those proposed by Illič-Svityč (B), Dolgopolsky (C), Greenberg (D), and Kortlandt (E):

	A	B	C	D	E
Direct object	*- <i>ma</i>	*- <i>mΛ</i>	*- <i>mA</i>	*- <i>m</i>	*- <i>m</i>
Direct object	*- <i>na</i>				
Possessive	*- <i>nu</i>	*- <i>n</i>	*- <i>nu</i>	*- <i>n</i>	*- <i>n</i>
Possessive	*- <i>lV</i>			*- <i>l</i>	
Dative	*- <i>na</i>				*- <i>nV</i>
Directive	*- <i>k^ha</i>	*- <i>kΛ</i>	*- <i>kV</i> [= *- <i>kV</i> ?]	*- <i>ka</i> Dative	*- <i>ka</i> Dative
Directive(-locative)	*- <i>ri</i>			*- <i>ru</i>	*- <i>rV</i>
Locative	*- <i>ni</i>	*- <i>na</i>		*- <i>n</i>	*- <i>nV</i>
Locative, instr.-comit.	*- <i>ma</i>			*- <i>m</i>	
Locative	*- <i>bi</i>			*- <i>bh-</i>	
Locative	*- <i>i</i>			*- <i>i</i>	
Comitative-locative	*- <i>da</i>	*- <i>da</i> Loc.	*- <i>d[E]H₁a</i>	*- <i>ta</i> Locative	*- <i>du</i> , *- <i>da</i> (Altaic)
Oblique	*- <i>t^ha</i>	*- <i>tΛ</i> Instr.		*- <i>ta</i> Ablative	*- <i>t</i> Ablative

17.8.3. DUAL AND PLURAL MARKERS

Dual: **k^hi(-nV)*

Plural: *-*t^ha*

Plural: *-*ri*

Plural: *-*k^hu*

Plural: *-*s^ya*

Plural/collective: *-*la*

Plural: *-*nV*

The following table correlates the reconstructions for the Proto-Nostratic dual and plural markers proposed in this book (A) with those proposed by Illič-Svityč (B), Dolgopolsky (C), Greenberg (D), and Kortlandt (E):

	A	B	C	D	E
Dual	* <i>k^hi(-nV)</i>		*- <i>qV</i>	* <i>ki[n]</i>	*- <i>ki</i>
Plural	*- <i>t^ha</i>	*- <i>t</i>	*- <i>tV</i>	*- <i>t</i>	*- <i>t</i>
Plural	*- <i>ri</i>		*- <i>r[i]</i>	*- <i>ri</i>	
Plural	*- <i>k^hu</i>		*- <i>kU</i>	*- <i>ku</i>	
Plural	*- <i>s^ya</i>			*- <i>s</i>	
Plural/collective	*- <i>la</i>	*- <i>lA</i>	*- <i>lA</i>	*- <i>l</i>	
Plural	*- <i>nV</i>	*- <i>nA</i>	*- <i>n[ä]</i>	*- <i>n</i>	

17.8.4. DERIVATIONAL SUFFIXES

Nominalizer: **-r-*
 Nominalizer: **-m-*
 Nominalizer: **-y-*
 Nominalizer: **-t^h-*
 Nominalizer: **-n-*
 Nominalizer: **-l-*
 Nominalizer: **-k^h-*
 Nominalizer: **-k'-*

Note: No doubt, there were additional derivational suffixes in Proto-Nostratic. Indeed, it appears that any consonant could serve as a derivational suffix. Ehret (1995:15—54) lists and discusses a great variety of nominal and verbal extensions in Afrasian, while Starostin—Dybo—Mudrak (2003:173—220) do the same for Altaic (see Chapter 18 for details). For a comprehensive, though dated, treatment of Indo-European derivational morphology, cf. Brugmann—Delbrück 1897—1916, vol. II/1, and Brugmann 1904:281—354, and for Uralic, cf. Collinder 1960:255—281, Décsy 1990:58—66, and Aikio 2022:19—21.

17.8.5. NOUN MORPHOLOGY IN THE DAUGHTER LANGUAGES

In an important study, Leonid Kulikov (2009) discusses the various ways in which new cases can arise; specifically, he lists five main mechanisms (2009:439):

New cases may arise (i) by adding adverbs, postpositions, and (rarely) prepositions (see section 28.1.1); (ii) by adding existing case markers to other case forms, which results in ‘multilayer’ case marking (see 28.1.2); (iii) from demonstrative pronouns or articles (see 28.1.4). New case forms may also go back to (iv) denominal adjectives and adverbials incorporated into the case paradigm (see 28.1.3). An important mechanism of the rise of new case(s) is (v) splitting of one case into two by borrowing of a new case marker from a different declension type (see 28.1.5).

These were the very mechanisms that were at work in the development of the case systems found in the various Nostratic daughter languages. Here, we may cite the paper entitled “Indo-European Nominal Inflection in Nostratic Perspective” (2014) by Václav Blažek, in which he shows that the same mechanisms were at work in the prehistoric development of the Proto-Indo-European case system (2014:35):

Aharon Dolgopolsky (2005: 35) used to wonder if the original grammatical structure of Nostratic was synthetic or analytic. The present analysis of the Indo-European nominal inflection in Nostratic context confirms his preference of the analytic structure, with regard to the fact that most of the Indo-European case endings are derivable from various deictic or adverbial particles, some on

the Indo-European level (usually with Nostratic roots), e.g. loc. sg. in **-en-* (Skt. *udān*) vs. **H₁en-* “in”, others on the Nostratic level at least, e.g. loc. pl. in **-su* vs. Kartvelian **š_uwa-* “in the middle” or Central Cushitic **šəw-* “heart” (Dolgopolsky 2005: 17–19).

As far back as 1958, Winfred P. Lehmann had proposed a similar model regarding the early development of the Proto-Indo-European case system.

Zhivlov (2023:153–154) reconstructs the following case/number endings for Proto-Uralic (cf. also Abondolo 1998a:18; Aikio 2022:14, Table 1.4; Austerlitz 1968:1378–1379; Cavoto 1998:26; Collinder 1960:282–297 and 1965:54–57; Décsy 1990:68–72; Hajdú 1972:41; Janhunen 1982:30; Marcantonio 2002:206; Raun 1988:558–560):

	Singular	Dual	Plural
Nominative	<i>*-Ø</i>	<i>*-ki</i>	<i>*-t</i>
Accusative	<i>*-m</i>		<i>*-j</i>
Genitive	<i>*-n</i>		
Lative	<i>*-ŋ</i>		
Locative	<i>*-nA</i>		
Ablative	<i>*-tA</i>		

Zhivlov notes that a plural marker **-n* can be reconstructed for possessive paradigms.

According to Abondolo (1998a:18), there were at least two grammatical cases in Proto-Uralic: an accusative **-m* and a subordinate suffix **-n*, which functioned as a genitive/pronominalizer. There were at least three local cases: a locative **-nA*, a separative **tA* ~ **tI*, and perhaps the latives **-k* (and/or **-ŋ*) and **-tʷ* (and/or **nʷ*). See Nichols 1973 for a discussion of suffix ordering in Proto-Uralic.

In an important study in which he argues forcefully and persuasively for a genetic relationship between Uralic and Yukaghir, Merlijn De Smit (2017, §2.8 and §5) tentatively reconstructs the following case endings for Proto-Uralo-Yukaghir — he does not reconstruct plural endings:

	Singular	Plural
Nominative	<i>*-Ø</i>	(?)
Genitive	<i>*-n</i>	
Locative 1 (“Proximal”)	<i>*-me</i>	
Locative 2 (“Distal”)	<i>*-na</i>	
Ablative	<i>*-ta</i>	
Lative	<i>*-ka</i>	

At this point, it is interesting to compare the case endings (properly, tightly bound postpositions) reconstructed for Proto-Dravidian by Zvelebil (1977:33) (see also Krishnamurti 2003:217–243; Steever 1998a:20–21; Caldwell 1913:252–308 — Caldwell also notes parallels with Uralic):

Nominative	*-Ø and, possibly, *- <i>m</i> /*- <i>n</i> with non-personal
Accusative	*-(<i>V</i>) <i>n</i>
Genitive	*- <i>in</i> (adnominal); *- <i>atu</i> (pronominal); *- <i>ā</i> (possessive)
Dative	*-(<i>k</i>) <i>ku</i>
Instrumental	*- <i>ān</i> /* <i>āl</i>
Ablative	*- <i>in</i> (?)
Locative	*- <i>u</i> !; *- <i>in</i> /*- <i>il</i> (?); *- <i>kaŋ</i>
Sociative (Comitative)	*- <i>ō</i> ! <i>u</i> or *-(<i>t</i>)- <i>ō</i> ! <i>u</i> < * <i>tō</i> ! <i>V</i> (?)

This system can be derived from an earlier, simpler system, as is shown by comparison with Elamite (cf. McAlpin 1981:108—112). Clearly, several of the endings must have had a common origin (such as the genitive ending *-*in*, the ablative *-*in*, and the locative *-*in*/*-*il*). McAlpin (1981:111) reconstructs the following case endings for Proto-Elamo-Dravidian:

Nominative	*-Ø
Accusative	*-(<i>V</i>) <i>n</i>
Adessive/ Purposive (Dative)	*- <i>akkə</i> (?)
Genitives:	
1. Possessive	*- <i>a</i>
2. Adnominal	*- <i>in</i>
3. Oblique/Locative	*- <i>tə</i>

McAlpin (1981:109) notes:

The so-called cases in both Elamite and Dravidian are merely tightly bound postpositions with no immediately available lexical source.

According to Ramstedt (1952—1957.I:25—27), Greenberg (2000:133—135), and Poppe (1955:187—191), a genitive in *-*n* also existed in Proto-Altaic. This ending is still found in several Mongolian and Turkic languages, though the Turkic forms vary between -*n* and -*ŋ*. However, Sinor (1988:715) cautions that it is premature to assume a Common Altaic genitive in *-*n*, though “... there can be little or no doubt concerning the identity of the -*n* genitive suffix actually attested in some Uralic, Turkic, Mongol, and Tunguz languages.”

To fill out the picture, let us look at the case endings traditionally reconstructed for Late Proto-Indo-European, that is, for the stage of development immediately prior to the emergence of the non-Anatolian Indo-European daughter languages (cf. Adrados—Bernabé—Mendoza 1995—1998.II:45—94; Beekes 2011:185—217; Brugmann 1904:373—399; Clackson 2007:92—100; Fortson 2010:113—139; Fulk

2018:141—180; Hirt 1921—1927.3:33—81; Lundquist—Yates 2018:2083; Meier-Brügger 2003:195—199; Meillet 1964:292—300; Schmalstieg 1980:46—87; Sihler 1995:248—256; Schmitt-Brandt 1998:180—220; Shields 1982; Szemerényi 1996:157—192; Watkins 1998:65—66) (the following table is a composite from multiple sources and aims to be as comprehensive as possible; some of the reconstructions are more certain than others):

Case	Singular	Plural	Dual
Nominative	*-s, *-Ø	*-es	} *-H ₁ (e)
Vocative	*-Ø	*-es	
Accusative	*-m/*-m̃	*-ms/-ms or *-ns/-ns	
Genitive	*-es/*-os/*-s	*-om/*-ōm	*-ows (?), *-oH ₁ s (?)
Ablative	*-es/*-os/*-s; *-ēth/*-ōth (< *-e/o-H ₁ (e)t ^h)	*-b ^h (y)os, *-mos	*-b ^h yō (?), *-mō (?)
Dative	*-ey	*-b ^h (y)os, *-mos	*-b ^h yō (?), *-mō (?)
Locative	*-i, *-Ø	*-su/-si	*-ow (?)
Instrumental	*-(e)H ₁	*-b ^h is, *-mis	*-b ^h yō (?), *-mō (?)

Missing from this table is the thematic nominative-accusative neuter singular ending *-m — this form is to be derived from the accusative singular ending. The *-b^h- and *-m- endings found in several of the concrete cases are usually considered to be late additions, and some have even questioned whether or not they should even be posited for the Indo-European parent language. They are not found in Hittite. No doubt, these endings were originally adverbs that were gradually incorporated into the case system, with some daughter languages choosing *-b^h- and others choosing *-m-. They should not be reconstructed as case endings at the Proto-Indo-European level. In like manner, the genitive plural probably arose from the accusative singular, while the genitive singular and nominative singular endings in *-s must have had a common origin — these endings later spread from the genitive singular to the ablative singular. The dual was a late addition, while the plural originally had a reduced set of endings compared to what was found in the singular — this is the picture that emerges when the Hittite and other Anatolian data are brought into consideration. We may note here that the Proto-Uralic ablative ending *-ta and the Proto-Elamo-Dravidian oblique/locative ending *-tə are most likely related to the Anatolian instrumental singular endings within Indo-European: Hittite -it, -et, (rare) -ta; Palaic -az; Luwian -ati; Lycian -adi, -edi; Lydian -ad.

In his book *Indo-European Prehistory*, John C. Kerns (1985:109—111) devotes considerable attention to describing an oblique-*n* marker, which he claims is a major component in Indo-European heteroclitic stems, and he elaborates upon his ideas in his treatment of Nostratic declension in Bomhard—Kerns (1994:173—179, §3.5.3.1). He notes that this oblique-*n* is the source of the -*n* found in the genitive, ablative, and instrumental case endings in Dravidian — it is also found in the

genitive, dative-lative (palatalized before a front vowel), and locative case endings in Uralic. Kerns even finds traces of this oblique-*n* in Eskimo and Japanese. Thus, this is a widespread and ancient feature. Greenberg (2000:130) also discusses this ending (see also Cavoto 1998:26):

There is an *-n* genitive in Eurasiatic that frequently serves as a marker of the oblique case along with more specific indicators of location, instrument, etc. When this occurs it invariably precedes the specific indicator. In certain cases it has also spread to the nominative.

Finally, Tuite (2023:9, Table 8) lists the following case endings for the modern Kartvelian languages:

	Proto-Kartvelian	Georgian	Mingrelian	Laz		Svan
				Arhavi	Ardeşen	
NOM	*-i, *-Ø, (*-e)	-i, -Ø	-i, -Ø	-Ø	-Ø	-i, -Ø, (-e)
ERG		-m(a)	-k	-k	-Ø	-em, -d
DAT	*-s	-s	-s	-s	-Ø	-s, -w, -am
INS	(?) *-it	-it	-it	-te(n)	-te	-šw, -wš
ADV	*-(a)d	-ad	-o(t)			-d
LOC	(?) *-n	(-n)				-n
GEN	*-iś	-is	-iś	-ši	-ši	-iś, -eś
ALL			-iša	-ša	-ša	
ABL			-išen	-šen		
BEN			-išo(t)			
VOC		-o				

17.9. VERBAL MORPHOLOGY

17.9.1. INTRODUCTION

In Proto-Nostratic, verbs fell into two types of construction: (1) active and (2) stative. In active constructions, which usually involved transitive verbs, the grammatical subject of the verb represented the agent performing the action, and the direct object represented the patient, or recipient, of the action (cf. Trask 1993:5). Stative constructions, on the other hand, expressed a state of affairs, rather than an event (cf. Trask 1993:259). Verbs expressed aspectual contrasts rather than temporal contrasts. Tense relates the time of the situation referred to to some other time, usually to the moment of speaking (cf. Comrie 1976:1—2), while aspect marks the duration or type of temporal activity denoted by the verb (cf. Crystal 1992:29; Comrie 1976:3). Proto-Nostratic had two aspects: (A) perfective (past) and (B) imperfective (non-past). Here, we may note that Diakonoff (1988:85) posits two aspects for the earliest form of Proto-Afrasian: (A) punctive (instantaneous) and (B) durative (protracted, or continuous). He assumes that these later developed into

perfective and imperfective aspects and then, eventually, in the individual Afrasian daughter languages, into past and present-future tenses. He does not posit tenses for the Afrasian parent language. Proto-Nostratic had, at the very least, the following moods: (A) indicative; (B) imperative; (C) conditional; (D) inchoative; (E) hortatory-precative; and (F) prohibitive. In addition to a causative marker **-sV*, there may also have been other valency-changing markers.

The overall structure of verbs was as follows:

Root + formative vowel (**a, *i, *u*) (+ derivational suffix)
(+ mood marker) (+ person marker) (+ number marker)

A stem could consist of the unextended root or the root extended by a single derivational suffix (preceded, as indicated above, by a formative vowel). The position of the number marker seems to have been flexible — it could also be placed before the person marker. Gender was not marked. There were no prefixes in Proto-Nostratic. We may note here that Krishnamurti (2003:279 and 312) posits the following structure for verbs in Proto-Dravidian:

Stem + tense-mood + (gender-)number-person marker

Paper (1955:44) analyzes the Royal Achaemenid Elamite verb structure as follows:

1 2 3 4 5
Verb base + stem vowel + tempus + person + mode

Stative verbs were indifferent to number and, therefore, had no plural forms. They also had a special set of person markers different from those of active verbs:

Person	Active		Stative
	Singular	Plural	Singular only
1	<i>*-mi</i> <i>*-na</i>	<i>*-ma</i> (inclusive) (+ plural marker) <i>*-na</i> (exclusive) (+ plural marker)	<i>*-k^ha</i> <i>*-ḥa</i>
2	<i>*-t^hi</i> <i>*-si</i> <i>*-ni</i>	<i>*-t^hi</i> (+ plural marker)	<i>*-t^hi</i>
3	<i>*-ša</i> (~ <i>*-šə</i>) <i>*-na, *-ni</i>	<i>*-ša</i> (~ <i>*-šə</i>) (+ plural marker) <i>*-na, *-ni</i> (+ plural marker)	<i>*-Ø</i>

Morphologically, verbs could be either finite or non-finite. Finite forms could be marked for aspect, mood, person, and number, but not for gender or tense. Non-finite forms exhibited nominal inflection. In unmarked word order, verbs occupied the end position of a clause (see above, §17.6. Rules of Proto-Nostratic Syntax).

17.9.2. NON-FINITE VERB FORMS

The following non-finite verb forms are widespread enough in the Nostratic daughter languages to guarantee their common origin, and, consequently, they are listed separately here. However, at the Proto-Nostratic level, they were indistinguishable from the nominalizing suffixes listed above.

Participle: **-n-*

Participle: **-t^h-*

Gerundive-participle: **-l-*

The following table correlates the reconstructions for the Proto-Nostratic non-finite verb forms proposed in this book (A) with those proposed by Illič-Svityč (B), Dolgopolsky (C), Greenberg (D), and Kortlandt (E):

	A	B	C	D	E
Participle	<i>*-n-</i>		<i>*ñV</i>	<i>*n</i>	<i>*n</i>
Participle	<i>*-t^h-</i>		<i>*tV</i>	<i>*t</i>	<i>*t</i>
Gerundive-participle	<i>*-l-</i>			<i>*l</i>	<i>*l</i>

Note: Greenberg (2000:182—186, no. 44) also posits a participle in **-nt-* for Proto-Eurasiatic on the basis of reflexes found in Indo-European, Finno-Ugrian, and Gilyak / Nivkh. However, this is best seen as a compound suffix: **-n-* + **-t^h-*.

17.9.3. FINITE VERB FORMS: MOOD MARKERS

Indicative: unmarked

Imperative: **-k^ha*, **-k^hi*, **-k^hu*; **-a*, **-i*, **-u* (< **-ʔa*, **-ʔi*, **-ʔu*)

Conditional: **-ba*

Hortatory-precativ: **-li*

Inchoative: **-na*

Note: The bare stem could also serve as imperative, in which case the vowels **-a*, **-i*, or **-u* were added to the stem. These were different than the formative vowels (aspect markers) previously discussed. Ultimately, they may go back to the deictic particles (A) **ʔa-* (~ **ʔə-*) (distant), (B) **ʔi-* (~ **ʔe-*) (proximate), and (C) **ʔu-* (~ **ʔo-*) (intermediate).

The following table correlates the reconstructions for the Proto-Nostratic mood markers proposed in this book (A) with those proposed by Illič-Svityč (B), Dolgopolsky (C), Greenberg (D), and Kortlandt (E):

	A	B	C	D	E
Imperative	*-k ^h a, *-k ^h i, *-k ^h u		*kV ~ *gV	*ka	
Conditional	*-ba			*p	
Hortatory-precative	*-li			*l	
Inchoative	*-na				

17.9.4. FINITE VERB FORMS: OTHERS

Causative: *-sV

The following table correlates the reconstruction for the Proto-Nostratic causative marker proposed in this book (A) with that proposed by Illič-Svityč (B), Dolgopolsky (C), Greenberg (D), and Kortlandt (E):

	A	B	C	D	E
Causative	*-sV			*s	

17.9.5. VERB MORPHOLOGY IN THE DAUGHTER LANGUAGES

Comparison of the various Nostratic daughter languages reveals many striking similarities in verb morphology. This comparison, for example, allows us to ascertain the ultimate origin of the athematic verb endings in Proto-Indo-European: they can be nothing other than possessive suffixes similar to what are found in Proto-Uralic and Proto-Altaic. Ultimately, these possessive suffixes had a pronominal origin. The earliest forms of the athematic endings in Proto-Indo-European may have been as follows (cf. Bomhard 1988; see also Villar 1991:244—252; for details, cf. Chapters 19 and 20 of this book):

Person	Singular	Plural
1	*-m	*-me
2	*-t ^h	*-t ^h e
3	*-s, *-Ø	*-en

This earlier system may be partially preserved in Tocharian A, where the athematic endings are as follows:

Person	Singular	Plural
1	-(ä)m	-mäś
2	-(ä)t	-c
3	-(ä)ś	-(i)ñc

Note: There are phonological problems with the 3rd singular ending $-(\ddot{a})s$ in Tocharian — had this been inherited directly from Proto-Indo-European $*-si$, we would expect $-(\ddot{a})s$, not $-(\ddot{a})\dot{s}$. The best explanation is that of Pedersen (1941:142—143, §65), who derived this ending from an enclitic $*se-$.

Traces of the earlier system are also found in the Anatolian languages. Note, for example, the Hittite 2nd singular active preterite ending $-ta$.

Now compare the following system of personal endings, which are traditionally assumed to have existed in Proto-Uralic (cf. Cavoto 1998:127; Collinder 1965: 134—135; Décsy 1990:66—68; Hajdú 1972:40 and 43—45; Raun 1988:563—564; Marcantonio 2002:225—227; Sinor 1988:725):

Person	Singular	Plural
1	$*-me$	$*-me$ (+ Plural)
2	$*-te$	$*-te$ (+ Plural)
3	$*-se$	$*-se$ (+ Plural)

Aikio (2022:18), on the other hand, reconstructs a slightly more elaborate system of subject person suffixes for Proto-Uralic verbs (see also Zhivlov 2023:155—158):

Conjugation	Person	Singular	Dual	Plural
Default / Subjective (?)	1	$*-m$	$*-mi(j)n$	$*-mAt$
	2	(?) $*-t$ / (?) $*-n$	$*-ti(j)n$	$*-tAt$
	3	(?) $*-\emptyset$	(?) $*-kA(j)n$	(?) $*-t$
Objective (?)	1	(?) $*-mi$	(?) $*-mi(j)n$	(?) $*-mAt$
	2	(?) $*-ti$	(?) $*-ti(j)n$	(?) $*-tAt$
	3	(?) $*-sA$	(?) $*-sA(j)n$	(?) $*-sAt$

Traces of these endings are found in the Altaic languages as well. Sinor (1988:725) reconstructs the following possessive suffixes for Proto-Turkic and Proto-Tungus (for details about comparative Altaic verb morphology, see especially Johanson—Robbeets [eds.] 2010; Robbeets 2015, 2016, 2020c):

Proto-Turkic:

Person	Singular	Plural
1	$*-m$	$*-m$ (+ Plural)
2	$*-\eta$	$*-\eta$ (+ Plural)
3	$*-s$	$*\emptyset$

Proto-Tungus:

Person	Singular	Plural
1	*- <i>m</i>	*- <i>m</i> (+ Plural) (excl.)
2	*- <i>t</i>	*- <i>t</i>
3	*- <i>n</i>	*- <i>t</i>

It may be noted here that Common Mongolian did not have special verbal endings to indicate person or number. However, at a later date, personal pronouns were added enclitically to the verbal forms (cf. Poppe 1955:251).

In an unpublished paper entitled “Cross-Bering Comparisons”, Stefan Georg lists the following possessor suffixes in “Uralo-Eskimo”, Samoyed, and Eskimo-Aleut (see also Seefloth 2000):

	Uralo-Eskimo		Samoyed		Eskimo-Aleut	
	Singular	Plural	Singular	Plural	Singular	Plural
1sg	- <i>m</i>	- <i>t-m</i>	- <i>mə</i>	- <i>t-mə</i>	- <i>m-(ka)</i>	- <i>t-m-(ka)</i>
2sg	- <i>t</i>	- <i>t-t</i>	- <i>tə</i>	- <i>t-tə</i>	- <i>n/t</i>	- <i>tə-n/t</i>
3sg	- <i>sa</i>	- <i>i-sa</i>	- <i>sa</i>	- <i>i-sa</i>	- <i>sa</i>	- <i>i-sa</i>
1pl	- <i>mə-t</i>	- <i>n/t-mə-t</i>	- <i>ma-t</i>	- <i>t/n-ma-t</i>	- <i>mə-t</i>	(= sg.)
2pl	- <i>tə-t</i>	- <i>t-mə-t</i>	- <i>ta-t</i>	- <i>t-ta-t</i>	- <i>tə-t</i>	(= sg.)
3pl	- <i>sa-t</i>	- <i>i-sa-t</i>	- <i>i-to-n</i>	- <i>to-n</i>	- <i>sa-t</i>	- <i>i-sa-t</i>

The personal endings survive in Elamite as well, especially in the 2nd and 3rd persons (by the way, the Elamite 1st singular ending, *-h*, is, of course, related to the 1st singular perfect ending *- ϱ_2e of traditional Proto-Indo-European, which is found, for example, in Luvian in the 1st singular preterite ending *-ha*, in Hittite in the 1st singular ending *-hi*, and in Greek in the 1st singular perfect ending *-α*; this ending may also be related to the Proto-Kartvelian 1st person personal prefix of the subject series, **xw-* [Gamkrelidze—Mačavariani 1982:85 reconstruct **w-* here, however], as suggested by Ivanov and Palmaitis) — compare, for example, the Middle Elamite conjugation of *hutta-* ‘to do, to make’ (cf. Reiner 1969:76; Grilhot-Susini 1987:33):

Person	Singular	Plural
1	<i>hutta-h</i>	<i>hutta-hu</i> (< <i>-h+h</i>)
2	<i>hutta-t</i>	<i>hutta-ht</i> (< <i>-h+t</i>)
3	<i>hutta-š</i>	<i>hutta-hš</i> (< <i>-h+š</i>)

Traces of the 2nd singular ending are also found in Dravidian — McAlpin (1981:120) reconstructs Proto-Elamo-Dravidian 2nd person ending *-*ti* (> Proto-Elamite *-*tə*, Proto-Dravidian *-*ti*). This is a significant archaism, since it bears no apparent resemblance to the common Elamo-Dravidian 2nd person personal pronoun stem, which McAlpin (1981:114—115) reconstructs as **ni* and which may

be an innovation (cf. Dolgopolsky 1984:87—88 and 100; Dolgopolsky posits Proto-Elamo-Dravidian **nūn*, which he derives from **tūn* through assimilation), though Greenberg (2000:76—77) discusses the possibility that there may have been a second person pronoun stem **nV* in Eurasiatic.

Traces of these endings are also found within Afrasian in Highland East Cushitic, where the suffixes of the simple perfect in Gedeo / Darasa, Hadiyya, Kambata, and Sidamo are as follows (cf. Hudson 1976:263—264):

Person	Gedeo / Darasa	Hadiyya	Kambata	Sidamo
1 sg.	-enne	-ummo	-oommi	-ummo
2 sg.	-tette	-titto	-toonti	-itto
3 sg. m.	-e	-ukko	-o(?i)	-í
3 sg. f.	-te	-to'o	-too(?i)	-tú
3 sg. pol.	—	-aakko'o	-semma(?i)	-ní
Person	Gedeo / Darasa	Hadiyya	Kambata	Sidamo
1 pl.	-nenne	-nummo	-moommi	-nummo
2 pl.	-tine	-takko'o	-teenta(?i)	-tiní
3 pl.	-ne	-to'o	-too(?i)	-tú

While the suffixes of the present perfect in Hadiyya, Kambata, and Sidamo are as follows (cf. Hudson 1976:264—265):

Person	Hadiyya	Kambata	Sidamo
1 sg.	-aammo	-eemmi	-oommo
2 sg.	-taatto	-tenti	-otto
3 sg. m.	-aakko	-ee'i	-inó
3 sg. f.	-ta'okko	-tee'i	-tinó
3 sg. pol.	-aakka'okko	-eemma(?i)	-noonni
1 pl.	-naammo	-neemmi	-noommo
2 pl.	-takka'okko	-teenta	-tinonni
3 pl.	-ta'okko	-tee'i	-tinó

The suffixes of the imperfect are as follows (cf. Hudson 1976:265):

Person	Gedeo / Darasa	Hadiyya	Kambata	Sidamo
1 sg.	-anno	-oommo	-aammi	-eemmo
2 sg.	-tatto	-tootto	-taanti	-atto
3 sg. m.	-aani	-ookko	-ano	-anno
3 sg. f.	-taani	-tamo	-taa'i	-tanno
3 sg. pol.	—	-aakkamo	-eenno	-nanni
1 pl.	-nanno	-noommo	-naammi	-neemmo
2 pl.	-tinaa	-takkamo	-teenanta	-tinanni
3 pl.	-naani	-tamo	-taa'i	-tanno

The suffixes of the subordinate conjugation in Kambata and Sidamo are as follows (cf. Hudson 1976:270):

Person	Kambata	Sidamo
1 sg.	-a	-a
2 sg.	-ta	-ta
3 sg. m.	-a	-a
3 sg. f.	-ta	-ta
3 sg. pol.	-eena	-na
1 pl.	-na	-na
2 pl.	-teena	-tina
3 pl.	-ta	-ta

According to Ehret (1980:65), in Southern Cushitic, “[t]he basic person marking was constructed of the verb stem plus suffixes of the two shapes -V and -VCV, as the following comparison of West Rift and Dahalo conjugations indicates”:

Person	Proto-SC	Burunge	Iraqw	Dahalo
1 sg.	*-o	-Ø	-Ø	-o
2 sg.	*-ito	-id	underlying *-it	-V _{to}
3 sg. m.	*-i	-i	underlying *-i	-i
3 sg. f.	*-ito	-id	*-t	-V _{to}
1 pl.	*-anu	-an	-an	-V _{nu}
2 pl.	*-ite	-idey	underlying *-ta	-V _{te}
3 pl.	*-eye and *-iye	-ey, -i	underlying *-iya, also -ir	-ee

Finally, Bender (2000:202) lists the following verbal affixes in the *ta/ne* (TN) branch of Omotic:

Person	NWO	SEO	C'	MO	G	Y	K	TN
1 sg.	*n; a	t(i)	e ?	*n ~ t	u	an; ut	*n; *e	—
2 sg.	*-; a	n(i)	a ?	*a	u/en	at+á;	*i(n)	—
3 sg.	*-; i	(e)s	e ?	*e ~ i	u	é; na	*é	*e
3 sg. f.	*u; a	is	—		u	à	*a	*a
1 pl.	*n; i	uni	i ?	*ni	u	ni	*o/u(n)	*uni
2 pl.	*et+i; i	t ~ n	i ?	*ti	end	eti	*ot; *no	*eti
3 pl.	*on+a; i	usi	i ?	*i	end	son+e	*et; *no	*on-

Abbreviations: NWO = Northwest Omoto; SEO = Southeast Omoto; C' = C'ara; MO = Macro-Omoto; G = Bench / Gimira; Y = Yemsa / Janjero; K = Kefoid; TN = *ta/ne* branch of Omotic.

The 1st person possessive suffix in **-m* was thus common to Indo-European, part of Afrasian (Highland East Cushitic), Uralic, and, within Altaic, Turkic and Tungus, while the 2nd person in **-t* was common to Indo-European, Uralic, Tungus, Elamo-Dravidian, and Afrasian, and the 3rd person in **-s* was common to Indo-European, Uralic, Turkic, Elamite, and Kartvelian (cf. Old Georgian *c'er-s* 'writes'). The 3rd singular possessive suffix was **-n* in Proto-Tungus, and this mirrors what is found in the 3rd plural in Indo-European and Kartvelian (cf. Old Georgian 3rd plural suffix *-en* in, for example, *c'er-en* 'they write', Mingrelian 3rd plural suffix *-an*, *-a*, *-n*, Laz 3rd plural suffix *-an*, *-n*), in Berber (cf. Kossmann 2012:44–47) and Beja / Beḍawye (cf. Appleyard 2007a:467), and partially in the 3rd singular and plural suffixes and Highland East Cushitic, with traces in Omotic (see above) and perhaps Semitic (R. Stempel [1999:105–106] takes the 3rd plural forms in **-n(a)* to be late formations taken over from the 2nd plural, while Moscati [1964:140] suggests that they are due to analogy with certain personal pronouns) — there is also a parallel here in Sumerian (see Chapter 15). As noted by Fortescue (1998:99), it is also found in Chukchi-Kamchatkan:

Although, as we have seen, C[hukchi-]K[amchatkan] does not have personal possessor affixes of the E[skimo-]A[leut] type, it seems that there are traces of a 3rd person possessor marker remaining, of the same type found in Yukaghir before case endings (to be discussed in 5.1.2). Thus the 3rd person marker *-(ə)n* is frozen into position following the stem in the 'Class 2' noun declension for definite, individualized persons (in Chukchi mainly proper names, elder kinship terms and some other animates, including nicknames for domestic reindeer and names of animals in myths).

Within Indo-European, the 2nd singular ending **-t^h* is preserved in Hittite and Tocharian. This was later replaced by what had been the 3rd singular, namely, **-s*. In his 1962 book entitled *Indo-European Origins of the Celtic Verb. I: The Sigmatic Aorist*, Calvert Watkins discusses the extensive evidence from the Indo-European daughter languages for an original 3rd singular ending in **-s*. It was Watkins who also showed that the 3rd singular indicative was originally characterized by the fundamental ending *zero*. The **-n-* found in the 3rd plural was a relic of the 3rd person ending found in Tungus, Kartvelian, and Sumerian. The development of the 3rd singular ending **-t^h* was a later change, though this still occurred fairly early since it is found in Hittite and the other Anatolian daughter languages — this **-t^h* was added to the 3rd plural ending **-n-* at the same time, yielding the new ending **-nt^h-*. This **-t^h* probably had the same origin as the 3rd singular possessive suffix **-t* found in Ugric and some of the Samoyed languages on the one hand and in the Proto-Tungus 3rd plural possessive suffix **-t* on the other (cf. Sinor 1988:727–728). It is also found in Berber (cf. Tuareg 3rd person pronominal affix: [m. sg.] *-t*, [f. sg.] *-tət*; [m. pl.] *-tən*, [f. pl.] *-tənət*). The most recent change must have been the development of the so-called “primary” endings, which were built upon the so-called “secondary” endings by the addition of the deictic particle **-i* meaning “here and now”, as shown by Kerns and Schwartz in their book on Indo-European verb morphology (1972:4). It may be mentioned that this deictic particle had a Nostratic

origin, coming from a widely-represented proximate demonstrative stem meaning ‘this one here’.

Now, Proto-Uralic is assumed to have had two conjugational types (cf. Hajdú 1972:43—44; Collinder 1960:308): (A) a determinative (objective) conjugation, which was characterized by the 3rd singular in **-s* and which was used with transitive verbs, and (B) an indeterminative (subjective) conjugation, which was characterized by the 3rd singular in *zero* and which was used with intransitive verbs. The same two conjugational types existed in Proto-Indo-European, except that the contrast was between active and stative. Indeed, the active ~ stative contrast appears to be the more ancient in both Proto-Uralic and Proto-Indo-European.

After all of the changes described above had taken place, the resulting Proto-Indo-European athematic endings were as follows (cf. Brugmann 1904:588—594; Beekes 1995:232—233; Burrow 1973:306—319; Szemerényi 1990:356—357 and 1996:327; Fortson 2010:92—93; Clackson 2007:123—125; Shields 1992; Meillet 1964:227—232; Watkins 1998:60; Meier-Brügger 2003:178; Sihler 1995:454; Adrados 1974.II:619—663; Ringe 2006:31):

Person	I. Primary		II. Secondary	
	Singular	Plural	Singular	Plural
1	<i>*-mi</i>	<i>*-me</i>	<i>*-m</i>	<i>*-me</i>
2	<i>*-si</i>	<i>*-t^{he}</i>	<i>*-s</i>	<i>*-t^{he}</i>
3	<i>*-t^{hi}</i>	<i>*-nt^{hi}</i>	<i>*-t^h</i>	<i>*-nt^h</i>

Note: The 1st person plural endings have different extensions in the various daughter languages: **-me-s(i)*, **-mo-s(i)*, **-me-n(i)*, **-mo-n(i)*. In these endings, the plural markers **-s* and **-n* have been added to **-me/*-mo*. It may be noted that the plural marker **-n* is also found in Tungus — in Evenki, Even, Solon, Negidal, for example, the 2nd plural possessive suffix is made up of the 2nd singular possessive suffix plus the plural marker **-n* (cf. Sinor 1988:727).

In volume 1, *Grammar*, of his book *Indo-European and Its Closest Relatives: The Eurasiatic Language Family*, Greenberg (2000:67) discusses the evidence for a Eurasiatic first-person singular pronoun stem **k*. He writes:

Less widely distributed than *m* for the first-person singular is *k*. Wherever they both appear, the general contrast is *m* as ergative versus absolutive *k*, *m* as active versus middle or passive *k*, and *m* as active versus stative *k*. I am inclined to believe that this last contrast is the basic one from which the others developed. A contrast of this kind between *m* and *k* seems to be attested only in the first-person singular.

Over the past quarter century or so, several scholars have tried to show that Indo-European is to be reconstructed as an active language (for a brief discussion, cf. Schwink 1994:86—87 and 89—110; see also Lehmann 2002). Indeed, such an interpretation seems to clarify many problems in the early dialects. According to

this interpretation, the so-called “perfect” of traditional Indo-European is seen as originally stative (cf. Lehmann 1993:218 and 2002:169—172; see Chapters 19 and 20 for details). Comparison with other Nostratic languages allows us to confirm this view.

The perfect reconstructed by the Neogrammarians for Proto-Indo-European was distinguished from the present and aorist by a unique set of personal endings in the indicative, namely, first person singular $^{*}\text{-}\mathfrak{z}_2a$ (cf. Sanskrit *véd-a* ‘I know’, Greek $\omicron\iota\delta\text{-}\alpha$, Gothic *wait*), second person singular $^{*}\text{-}t\mathfrak{z}_2a$ (cf. Sanskrit *vét-tha* ‘you know’, Greek $\omicron\iota\sigma\text{-}\theta\alpha$, and Gothic *waist*), third person singular $^{*}\text{-}e$ (cf. Greek $\omicron\iota\delta\text{-}\epsilon$ ‘he/she knows’, Sanskrit *véd-a*, and Gothic *wait*). Except for Armenian and Balto-Slavic, the perfect remained in all branches. It was least changed in Indo-Iranian, Celtic, and Germanic. In Greek, however, it was mixed up with a κ -formation and, in Italic, with a whole series of non-perfect tense forms. According to Greenberg, the perfect of traditional comparative grammar was originally stative in Proto-Indo-European, and, as noted above, others have recently made similar assertions. Sihler (1995:564—590) gives an excellent overview of the stative in Indo-European.

Now, Greek has a unique formation, the so-called “ κ -perfect”. However, this formation arose exclusively within prehistoric Greek. It is already found, to a limited extent, in Homer and in the earliest records of other dialects. In Homer, the formation is found in some 20 roots, all ending in a long vowel, and, in all of them, the κ -stem is virtually limited to the singular stems which actually contain a long vowel. Later, the formation spread to other stems ending in a long vowel, then to stems ending in any vowel (including denominatives), and finally to stems ending in consonants, and to all persons and numbers. Thus, it is clear that we are dealing with developments specific to Greek itself. For a discussion of the Greek perfect, cf. Chantraine 1927; see also Kerns—Schwartz 1972:14.

In Latin, we find first singular perfect forms *fēcī* ‘I did’ and *iēcī* ‘I threw’. As in Greek, the $-c$ [k] is found in all persons (cf. third singular *fecit*), and, as in Greek, the $-c$ [k] has given rise to secondary formations (such as *faciō* and *iaciō*, for example).

The $-k$ - forms are also found in Tocharian, as in first singular preterite active *tākā* ‘I was’, and, as in Greek and Latin, the $-k$ - is found in all persons and has given rise to secondary formations. Van Windekens (1976—1982.I:495—496) goes so far as to posit Proto-Indo-European $^{*}dh\bar{e}q\text{-}$, $^{*}dh\bar{e}_1q\text{-}$ as the source of Tocharian *tākā* ‘I was’.

On the basis of the evidence from Greek, Latin, and Tocharian, we may assume that a “suffix” $^{*}\text{-}k\text{-}$ is to be reconstructed for late-stage Proto-Indo-European, that is, what I refer to as “Disintegrating Indo-European”. This “suffix” originally had a very limited distribution — it seems to have appeared only in the perfect singular of verbs that ended in a long vowel, when the long vowel originated from earlier short vowel plus laryngeal. All of the other formations found in Greek, Italic, and Tocharian are secondary elaborations. But, we can go back even farther — we can speculate that the $-k\text{-}$ originally characterized the first person exclusively, from which it spread to other persons. This suggestion is not new. Sturtevant (1942:87—88) suggested that $^{*}\text{-}k\text{-}$ developed in the first person singular when a root-final

laryngeal was followed by the ending **-xe* (that is, **-H₂e* [Kuryłowicz would write **-ǵ₂e*]). Though a laryngeal explanation along these lines has not been generally accepted (cf. Messing 1947:202–203), the suggestion that the *-k-* was originally confined to the first person singular is still a viable hypothesis, especially in view of the evidence from other Nostratic languages. Thus, both in function and form, the first singular **-k-* ending would belong with the Eurasiatic first person singular pronoun stem **k* reconstructed by Greenberg. It should be noted that this explanation is different than that given by Greenberg, who compares the Proto-Indo-European first person perfect (stative) ending **-Ha* with the **-k-* endings found in the other Eurasiatic languages. On purely phonological grounds, I find Greenberg's proposal less convincing than the alternative suggested here. Moreover, the first person perfect ending **-Ha* has an exact match in Elamite (see above), which clearly shows that it was inherited from Proto-Nostratic and, thus, not related to the **-k-* endings under discussion here.

17.10. PROHIBITIVE/NEGATIVE PARTICLES AND INDECLINABLES

The following negative/prohibitive particles and indeclinables can be reconstructed for Proto-Nostratic:

Negative particles: **na*, **ni*, **nu*

Prohibitive particle: **ma(?)*

Negative particle: **ǵal-* (*~ *ǵal-*)

Negative particle: **li* (*~ *le*) (?)

Negative particle: **ǵe*

Post-positional intensifying and conjoining particle: **k^{wh}a-* (*~ *k^{wh}ǵ-*)

Particle: **k^{wh}a^y-* 'when, as, though, also'

Particle: **har^y-* 'or; with, and; then, therefore'

Particle: **ǵin-* (*~ *ǵen-*), **(-)ni* 'in, into, towards, besides, moreover'

Sentence particle: **wa* (*~ *wǵ*) 'and, also, but; like, as'

Coordinating conjunction: **ǵaw-*, **ǵwa-* (*~ *ǵwǵ-*) 'or'

Note: The *CVC-* root structure patterning of some of these forms points to their ultimate nominal or verbal origin. For example, the negative particle **ǵal-* (*~ *ǵal-*) must ultimately have been a negative verb stem meaning 'to be not so-and-so', as in its Dravidian derivatives, while **ǵin-* (*~ *ǵen-*), **(-)ni* was originally a nominal stem meaning 'place, location' (cf. Dolgopolsky 2008, no. 45, **ǵiñ[A]* 'place' [(in descendant languages) → 'in']).

17.11. ILLIČ-SVITYČ'S VIEWS ON PROTO-NOSTRATIC MORPHOLOGY

Illič-Svityč never published his views on Nostratic morphology during his lifetime. However, his notes were gathered together and published by Vladimir Dybo in 2004

in the proceedings of the Pécs Centennial Conference, edited by Irén Hegedűs and Paul Sidwell. According to Illič-Svityč, Proto-Nostratic was an inflected language, apparently of the accusative type. It had both nouns and adjectives. Nominal declension was only available in the singular. Adjectives were declined only if they were substantivized and used independently. Illič-Svityč reconstructs the nominal paradigm as follows:

1. Nominative-accusative: **-Ø* (zero); used for subject and unmarked object;
2. Marked object: **-mΛ*; used if the object had to be topicalized in the sentence if the possibility existed for an ambiguous interpretation of the phrase and if a definite object was indicated;
3. Genitive (connective): **-n*; possessive, etc.;
4. Instrumental: **-tΛ*;
5. Local cases: Lative: **-ka*;
Ablative: **-da*;
Essive (locative): **-n*.

Plurality was primarily indicated by a special marker: **-t*. Illič-Svityč also reconstructs an oblique plural marker **-j*, though he notes that this is less certain.

Illič-Svityč reconstructs the following types of personal pronouns:

1. Independent pronouns — specifically for indicating the pronominal subject;
2. Forms of the subject standing by a verb, mainly in a position preceding a noun;
3. Forms of the direct object of a verb, mainly in a position preceding a noun after the form of the subject;
4. Possessive forms next to nouns, mainly in a position after a noun.

Only the first and second person singular and plural pronouns were represented in these four types.

Illič-Svityč reconstructs the following stems for these types:

1. Independent pronouns; these stems could be extended by a facultative emphatic element **-na*:

1st person singular: **Λke-na*;

2nd person singular: **tΛ-na*;

1st person plural: **naHe-na*;

2nd person plural: ?

2. Forms of the subject of verbs:

1st singular: **a-*;

2nd singular: **ta-*;

1st plural: **na-*;

2nd plural: ?

3. Forms of the direct object:

1st singular: **mi-*;
 2nd singular: **k-*;
 1st plural: ?
 2nd plural: ?

4. Possessive forms:

1st singular: **mi-*;
 2nd singular: **si-*;
 1st plural: **man*;
 2nd plural: **san*.

Illič-Svityč also posits the following demonstrative stems (fulfilling the function of 3rd person pronouns): **ta-*, **šā-*, **mu-*; the following interrogative stems: **ko* ‘who?’, **mi* ‘what?’, and the following interrogative-relative stems: **ja*, **na* (?).

Illič-Svityč’s views on verb morphology were not as well developed. He reconstructs an imperative as well as the following two opposing verb categories: (1) The first designated the action itself (transferred to the object in the case of transitive verbs). This was used with the subject pronoun and (in the case of transitive verbs) with the object pronoun. Here, the nominal direct object was the marked form, and the verb stem coincided with the infinitive. (2) The other verb form was a derived noun ending in **-a*. It indicated the state of the subject. If the verb were transitive, it contained only the prefix of the subject, and, in this case, the object noun could not be marked and thus always appeared in the subjective-objective case. Finally, Illič-Svityč suggests that there existed a temporal (or aspectual) distinction between these two basic verb categories, which was probably realized with the help of deictic particles of pronominal origin.

17.12. DOLGOPOLSKY’S VIEWS ON PROTO-NOSTRATIC MORPHOLOGY

Dolgopolsky’s views on Proto-Nostratic morphology differ from those of Illič-Svityč. According to Dolgopolsky (2005), Proto-Nostratic was a highly analytic language. Dolgopolsky notes that Illič-Svityč, although recognizing the analytical status of many grammatical elements in Proto-Nostratic, still believed that some of them were agglutinated suffixes, specifically, the marker of oblique cases **-n* (= Dolgopolsky’s **nu* ‘of, from’), the formative of marked accusative **-m[ʌ]* (= Dolgopolsky’s **mA*), the plural marker **-NA* (= Dolgopolsky’s **n[ä]*, used to mark collectivity and plurality), and several others. Dolgopolsky points out that Illič-Svityč’s position is unacceptable inasmuch as the Proto-Nostratic formants in question still preserve the following traces of their former analytic status: (1) mobility within a sentence (a feature of separate words rather than suffixes); (2) the fact that several particles are still analytic in some of the Nostratic descendant

languages; and (3) the fact that Proto-Nostratic etyma with grammatical and derivational function are sometimes identical with “autosemantic words”. Specifically, Dolgopolsky states (2008:26—27, §4. Grammatical Typology [lightly edited here]):

As we can see, Proto-Nostratic was a highly analytic language. In this point, there is a certain disagreement between Illič-Svityč and myself. Illič-Svityč, albeit recognizing the analytical status of many grammatical elements in Nostratic, still believed that some grammatical elements were agglutinated affixes: the marker of oblique cases **-n* (= my **nu* ‘of, from’), the formative of marked accusative **-m* (= my **mA*), the plural marker **-NA* (= my **ñ[ä]* of collectiveness and plurality), and several others. This interpretation is hardly acceptable because the Nostratic etyma in question still preserve traces of their former analytic status: (1) they preserve some mobility within the sentence (a feature of separate words rather than affixes), (2) several Proto-Nostratic particles are still analytic in some descendant languages, (3) Nostratic etyma with grammatical and derivational function are sometimes identical with autosemantic words. Thus, the element **nu* ‘of, from’ functions in the daughter languages not only as a case suffix (genitive in Uralic, Turkic, Mongolian, Tungus, formative of the stem of oblique case in the Indo-European heteroclitic nouns, part of the ablative case ending in Turkic, Kartvelian, and in Indo-European adverbs), but also as a preverb of separation/withdrawal in Indo-European (Baltic), as an analytic marker of separation/withdrawal (ablative) in Baltic (functioning in post-verbal and other positions). The element **mA* is still analytic in Manchu (*be*, postposition of the direct object) and Japanese (Old Japanese *wo* > *Jo*). On the analytical status of *Jo* (< Nostratic **mA*), *no* (< N **nu*), cf. Vrd.JG 278-82. The element **ñ[ä]* functions not only as a post-nominal and post-verbal marker of plurality (> plural suffix of nouns in Kartvelian, Hamito-Semitic, and Altaic, ending of 3 pl. of verbs in Kartvelian, part of the Indo-European ending **-nti* ~ **-nt* of 3 pl.), but also as the initial marker of plurality or abstractness (← collectiveness) in Uralic and Egyptian pronouns: Finnish *nuo* (pl.) ‘those’ ↔ *tuo* (sg.) ‘that’, *ne* (pl.) ‘those’ ↔ *se* (sg.) ‘that’, Egyptian *n*’ abstract ‘this’ and ‘these (things)’ ↔ *p*’ ‘this’ (m.) ↔ *ḥ* (f.). The animate plural deictic element (?) **yE* ‘these, they’ functions not only as the post-nominal marker of plurality (> plural ending in Indo-European, Uralic, Altaic, and Cushitic), but also as a pre-nominal and pre-pronominal plural marker (in Baltic, Beja, and Old English). The affix forming causative verbs in Hamito-Semitic may both precede the verbal root and follow it (e.g., in deverbal nouns), which points to an original analytic status of the corresponding Nostratic etymon. Hamito-Semitic **tw-* (prefix of reflexivization in derived verbs > Berber **tw-* → *t-* id., Semitic prefix and infix **[-]/t-*, etc.) and the Anatolian Indo-European reflexive particle **-ti* (> Hieroglyphic Luwian *-ti* ‘sich’, Luwian *-ti*, Lycian *-ti*, reflexive particle, Hittite *z-*, *-za* id.) are etymologically identical with Nostratic **tVwV* ‘head’ (preserved with this meaning in Kartvelian and Omotic), which proves the analytic origin of the marker of reflexivization. In the descendant languages, most of these grammatical auxiliary words and some pronouns turned into synthetic affixes (agglutinative in Early Uralic and Altaic, inflectional [fusional] in Indo-European and, to a certain extent, in Hamito-Semitic and Kartvelian).

Though Dolgopolsky seems to be implying that nominative-accusative structure is to be reconstructed for Proto-Nostratic, grammatical typology is actually not discussed by him. Some of the daughter languages do, indeed, exhibit nominative-accusative structure (Proto-Uralic, Proto-Altaic, and later stages of Proto-Indo-European), but others exhibit ergative-absolutive structure (Proto-Eskimo-Aleut and Proto-Chukchi-Kamchatkan), and still others exhibit stative-active structure (Proto-Afrasian, Proto-Kartvelian, early Proto-Indo-European, and probably Proto-Elamo-Dravidian [definitely Elamite]), with each of these different grammatical structures requiring a different type of clause alignment. No details are given as to how the inherited system was transformed into the systems found in the different daughter languages, nor is there any discussion of non-Nostratic languages or language families to show that the morphological structure being posited by Dolgopolsky for the Nostratic parent language has typological parallels in attested languages.

In actual fact, the type of grammatical structure that seems to be able to account best for the circumstances found in the Nostratic daughter languages is not nominative-accusative but, rather, stative-active, as explained earlier in this chapter. As noted above, this type of grammatical structure was found in Proto-Afrasian and Proto-Kartvelian. In addition, stative-active structure has been convincingly posited for earlier stages of Proto-Indo-European by a number of distinguished scholars (Karl Horst Schmidt; Winfred P. Lehmann; Thomas V. Gamkrelidze; Vjačeslav V. Ivanov, among others — for details, cf. Chapter 20 of this book).

Dolgopolsky (2005) reconstructs the following Proto-Nostratic morphemes:

1. **nu* postposition, adverb, and preverb ‘from’; postposition ‘of’
2. **mA* postposition denoting a direct object
3. **{y}iyo* ‘which’, ‘that which, related to’; it underlies (A) suffixes of relative adjectives and (B) suffix of the genitive base. According to Dolgopolsky, the etymon in question also functions as a separate word.
4. ?? **h{a}ya* directive-designative particle ‘for’
5. **t{ā}* ‘away (from), from’; ablative (separative) particle
6. **bayV* ‘place’; ‘to be (somewhere)’ (= Spanish *estar*)
7. **d[oy]a* ‘place (within, below), inside’ (→ locative particle)
8. **mENV* (= **mEñV*?) ‘from’
9. **yu[⊥]t[i]* ‘with, beside’ (⊥ = unspecified consonant)
10. **ʔVrV* (> **rV*) theme-focusing (topicalizing) particle
11. **ʔiñ{A}* ‘place’ (→ ‘in’ in daughter languages)
12. **šawV* ‘(in the) middle’

The origin of the nominative singular markers in the daughter languages:

1. Proto-Indo-European **-s* < Proto-Nostratic **sE* demonstrative stem ‘he/she’;
2. Proto-Semitic **-u* < Proto-Nostratic **{h}u* = demonstrative particle ‘iste’;
3. Proto-East Cushitic **-i* and Proto-Kartvelian **-i* < Proto-Nostratic **{h}i* demonstrative particle ‘iste’ (or ‘hic’). Dolgopolsky notes that all of these demonstrative stems still function as pronouns or definite articles.

The origin of the genitive case markers:

1. **nu* (see above)
2. **{y}iyo* (see above)
3. The pronominal particle **ha* ‘ille’ or **he* ‘that’ + pronominal **sE* ‘he/she’ (see above)

The origin of the gender markers (masculine):

1. **ʔa* marker of the male sex [from ‘(young) man’ ?]

The origin of the gender markers (feminine):

1. **{ʔ}atV* ‘female, woman’
2. **ʔ{ä}yV* (or **h{ä}yV* ?) ‘mother’ (originally a nursery word)
3. **ʔemA* ‘mother’
4. **ʔaʔV* ‘female’

The origin of the gender markers (neuter):

1. **!ä* demonstrative pronoun of non-active (inanimate) objects
2. **mA* postposition denoting a direct object. This is the source of the Proto-Indo-European neuter marker **-m* in thematic nouns and adjectives (cf., for example, Latin [nom. sg. masc.] *novus* ‘new’, [nom. sg. ntr.] *novum*), which goes back to the accusative marker **-m*.

The origin of the plural forms:

1. **yE* (= **y{i}* ?) ‘these, they’ (animate plural deictic element)
2. **{ʔ}VʒV* ‘they’
3. **ʔa{h}a* ‘thing(s)’ (collective particle of animate) (= French *de ça*)
4. **n|ñ{ä}* pronoun of collectivity and plurality
5. **l|arwV* ‘together, many’
6. **rV yE* (= **rV y{i}* ?) a compound pronoun of plurality
7. **tV* marker of plurality (‘together’)
8. **ʔ{o}mV* ‘kin, clan, everybody’

The origin of the nominal derivational affixes:

1. **mA* marker of nominalized syntactic constructions (= subordinate sentences), nominalizer (originally a pronoun) that formed analytic equivalents of *nomina actionis*, *nomina agentis*, and other derived nouns
2. **ti* syntactic particle; it is combined with verbs to build *nomina actionis*
3. **!V* marker of passive participial constructions

4. $*\bar{n}V$ marker (pronoun) that formed analytic equivalents of passive participles (→ derived passive verbs)
5. $*\bar{V}ntV$ ‘he’; relative ‘he who, that which’ (in daughter languages → a suffix of participles and derived *nomina*)
6. $*c|ća \sim *c|ca$ (= $*Hiç|ç|ća$?) marker of relative constructions (in daughter languages → suffix of adjectives)
7. $*[e[?V]]$ (or $*[e[?V]]V$?) ‘being, having’ → analyticial (> synthetical) adjectivizer (→ formant of adjectives)
8. $*y\{a\}$ particle of hypocoristic (?) address (vocative)

The origin of the verbal affixes:

1. $*mi$ ‘I’
2. $*t\{ü\}$ (> $*ti$) and its assibilated variant $*s\{ü\}$ (> $*si$) ‘thou’
3. $*HoyV$ (= $*hoyV$?) ‘by me, my’
4. $*n|\bar{n}ā\{i\}$ pronoun of collectivity and plurality (see above)
5. $*n|\bar{n}a\{i\}$ ‘to go’ (→ ‘to go to do something’)
6. $*ç|ci$, $*ç|ci$, or $*ç|ci$ marker of verbal frequentativity/iterativity
7. $*\{s\}Ew[0]V$ ‘to want, to beg’ (→ desiderative)
8. $*H\{e\}tV$ ‘to make’ (> causitizing morpheme)
9. $*SuwVV$ ‘to push, to cause’ (→ ‘to ask for’, → causative)
10. $*t\{a\}wV$ ‘head’ (→ ‘oneself’)
11. $*woy[?]E \sim *wo[?]yE$ ‘power, ability’
12. $*me[y]\bar{n}U$ ‘oneself, one’s own; body’

Concerning the origin of root extensions, Dolgopolsky (2005) notes:

But we cannot say the same about those elements of roots that are called “Wurzelerweiterungen”, “Wurzeldeterminative”, “root extensions”, “élargissements”, that is of those parts of roots of daughter languages (mostly root-final consonants) that are added or alternate without clear-cut and regular change of meaning. Some of them are probably explainable by lexical interaction of roots (Reimbildungen, influence of synonymic roots, etc.), but we cannot rule out the possibility that some of them reflect ancient (synthetic?) derivation. In order to elucidate this matter we need a systematic comparative investigation of all these “root extensions” [the extant literature (Persson 1901 for Indo-European, Hurwitz 1913 and Ehret 1989 for Semitic) has not produced satisfactory results, probably because each scholar worked with one daughter-family only without broader comparison]. Up to now the question of these determinatives remains open.

Unfortunately, Dolgopolsky gives far too much weight to later stage branches such as Uralic and Altaic, and his reconstructions, consequently, are, for the most part, more applicable to Eurasiatic than to Nostratic. The same is true for Illič-Svityč.

17.13. STAROSTIN'S LIST OF PROTO-NOSTRATIC PRONOUNS AND PARTICLES

At the end of his paper “Nostratic and Sino-Caucasian”, Sergej Starostin (1989: 64—65) compares various Proto-Nostratic pronouns and particles with Proto-Sino-Caucasian. Though it is beyond the scope of this book to discuss the merits or demerits of the Sino-Caucasian hypothesis, it is worth repeating Starostin's list, leaving out the Sino-Caucasian data he cites. Curiously, even though he specifically rejects (1989:45—46) my revision of the Proto-Nostratic phonological system and the sound correspondences that are used as the basis for that revision, it is my reconstructions that Starostin uses for the Proto-Nostratic stops as opposed to the reconstructions of Illič-Svityč and Dolgopolsky. Here is his list (my reconstructions are given in a separate column for comparison, together with the number of each item as it appears in Chapter 16 of this book):

Starostin	Bomhard (this book)
1. Proto-Nostratic <i>*mi</i> (<i>*mV</i>) ‘I’	<i>*mi</i> 16.3
2. Proto-Nostratic <i>*mä</i> prohibitive particle	<i>*ma(?)</i> 16.57
3. Proto-Nostratic <i>*mu</i> ‘this, that’	<i>*ma/i/u</i> 16.64
4. Proto-Nostratic <i>*mi</i> ‘what’	<i>*mi</i> 16.62
5. Proto-Nostratic <i>*t'ä</i> ‘this, that’	<i>*t^ha/i/u</i> 16.15
6. Proto-Nostratic <i>*ʔi/*ʔe</i> ‘this’	<i>*ʔi</i> 16.13
7. Proto-Nostratic <i>*ʔa</i> ‘that’	<i>*ʔa</i> 16.13
8. Proto-Nostratic <i>*sa</i> demonstrative pronoun	<i>*ša</i> 16.16
9. Proto-Nostratic <i>*k'a/*k'o</i> ‘who’	<i>*k^{wh}a</i> 16.60
10. Proto-Nostratic <i>*da</i> locative particle	<i>*da</i> 16.36
11. Proto-Nostratic <i>*ʔe</i> negative particle	<i>*ʔe</i> 16.59
12. Proto-Nostratic <i>*ja</i> ‘which, what’	<i>*ʔay-</i> 16.61
13. Proto-Nostratic <i>*-jV</i> diminutive suffix	(<i>*-y-</i> 16.41)
14. Proto-Nostratic <i>*-j(V)</i> plural particle	
15. Proto-Nostratic <i>*-k'a</i> diminutive suffix	(<i>*-k^h-</i> 16.45)
16. Proto-Nostratic <i>*k'o/</i> postpositive emphatic particle	<i>*k^{wh}a</i> 16.66
17. Proto-Nostratic <i>*k'V</i> directive particle	<i>*-k^ha</i> 16.31
18. Proto-Nostratic <i>*-l/a/</i> collective suffix	<i>*-la</i> 16.25
19. Proto-Nostratic <i>*lA</i> locative particle	
20. Proto-Nostratic <i>*-nV</i> oblique noun suffix	<i>*-nu</i> 16.28
21. Proto-Nostratic <i>*NA</i> demonstrative pronoun	<i>*na</i> 16.18
22. Proto-Nostratic <i>*-NA</i> plural suffix	<i>*-nV</i> 16.26

Note: Starostin indicates aspiration by /^ç/ (= my /^h/).

17.14. CONCLUDING OBSERVATIONS

In this chapter, an attempt has been made to show that Proto-Nostratic exhibited many of the characteristics of an active-stative language. One of the objections that has been raised against this view is the alleged comparative rarity of active-stative languages in Eurasia. This problem has been admirably dealt with by Johanna Nichols in her 2008 paper entitled “Why are Stative-Active Languages Rare in Eurasia? A Typological Perspective on Split-Subject Marking”, and it is well worth repeating her conclusions (2008:134):

Why are stative-active languages rare in Eurasia? On the basis of what has been argued here, three different answers might be given to this question. The first is that they are not in fact rare in Eurasia; S.g and S.poss, which are variants or counterparts or allo-codings of S.o, are common in Eurasia, where they take the form of dative experiencer subjects.

A different, narrower answer can be given using the classical definition of stative-active and excluding S.g marking: they are rare in Eurasia because primary object alignment is rare there.

A third answer would be that they are only rare in *northern* Eurasia. S.g coding of experiencer subjects is common across southern Eurasia from the Pyrenees through the Caucasus to the Himalayas and South Asia. There is a northward extension in the form of Germanic and Balto-Slavic, but the north central and northeast of Eurasia (including Siberia, Manchuria, Mongolia, and Central Asia) is almost entirely lacking in oblique subject marking of any kind.

And, further (2008:135):

The lexical-typological approach taken here has shown the complementarity and fundamental non-distinctness of S.o and S.g coding, and it has also shown that alignment is a continuum. Once a set of the same verb glosses is surveyed across a sample of languages, discrete types such as accusative, ergative, and stative-active begin to fade and run together. Furthermore, we have seen that, even if discreteness is not required for identifying types, stative-active or split-subject is not a third major alignment type; the difference between it and either ergative or accusative is one of degree.

The conclusions reached by Nichols are complemented by a study done by Gregory D. S. Anderson (2006b:25—26), who points out that there has been a long and complicated interaction among the indigenous languages of Siberia, which has led to the development of a cluster of shared features (at the expense of earlier ones):

From a macro-areal perspective, despite the obvious fact that the indigenous languages of Siberia exhibit considerable genetic and typological diversity with respect to one another, they nevertheless possess a cluster of features that pattern with one another but are not logically or typologically connected. These include features of the phonology, systems of nominal and verbal morphology, and the syntax of the simple and complex sentence. With regards to nominal morphology, two characteristic features of case systems

commonly attested in the languages of Siberia were discussed in some detail above. These include on the one hand, an opposition between dative and allative case forms, and on the other, a formal contrast between instrumental and comitative case functions.

In the first instance (the dative: allative opposition), the feature primarily clusters around languages that have had significant and prolonged interaction with Tungusic languages (except Turkic, where the opposition is clearly old). In the case of the instrumental: comitative opposition, the directions of influence are more complex. Some groups clearly reflect an old opposition (Yukaghiric, Chukotko-Kamchatkan, Mongolic). With others (e.g. Tungusic, Turkic, Ob-Ugric) the situation is less clear. Northern Tungusic languages might reflect Chukotko-Kamchatkan influence, but Yukaghiric influence is perhaps more likely in this instance (large numbers of Yukaghiric speakers shifted to Northern Tungusic). The northeastern Turkic varieties on the other hand may well reflect secondary and later Northern Tungusic influence, albeit reinforcing a potentially archaic contrast. The situation with the western and central Siberian languages is also not clear at present. Ob-Ugric seems to have innovated this contrast fairly early, at the proto-language level; however, its trigger is currently opaque. Sel'kup is even more confusing as the opposition is quite recent, and Khanty influence is possible as an explanation, but this is far from certain.

As is probably obvious from the present discussion, the features of the Siberian linguistic macro-area cluster around those of the Northern Tungusic languages and this is not by accident. Indeed, the highly mobile Evenki (and to a lesser degree its sister language Even) have both the local bilingualism relationships and wide-spread distribution necessary to make them likely vectors of diffusion for at least certain of these features, whether they be older Tungusic features (the dative: allative contrast) or seemingly later innovations (the instrumental: comitative opposition). However, Tungusic > non-Tungusic is in no sense the only direction of influence apparent in these developments, but rather one in a highly complex mosaic of linguistic interactions operative over centuries and millennia across the languages of the macro-region. To be sure, an understanding and elucidation of the multifaceted dynamics of diffusion and borrowing evidenced by the distribution of these and numerous other potential areal features unfortunately still remain in their infancy. Further insights into the complex histories of the case systems and other features of the languages of the Siberian linguistic area must await future research.

Finally, as noted by Vajda (2000:610) in his review of *The Languages of Native North America* (1999) by Marianne Mithun:

The prevalence in the Americas of variations of the agentive/active agreement patterns (as defined in Mithun 1991) is typologically noteworthy, but examples also illustrate large numbers of Native American languages with nominative/accusative, ergative/absolutive, and direct/inverse patterns of noun/verb coordination, as well as certain combinations of these strategies. The exploitation of these and other grammatical strategies for discourse purposes, while not given a separate section, is mentioned in passing throughout the discussion.

CHAPTER EIGHTEEN

NOSTRATIC MORPHOLOGY III: DERIVATIONAL MORPHOLOGY

18.1. INTRODUCTORY REMARKS

The fundamental principles governing derivational morphology will be outlined in this chapter. We will begin by discussing the individual branches before discussing Proto-Nostratic. Some of what follows is repeated elsewhere in this book.

Derivational morphology, or “word formation”, is the process of adding an affix to a word to change its grammatical category or to alter the meaning of a word — that is, to create nouns from verbs, verbs from nouns, adverbs from adjectives, new nouns from existing nouns, new verbs from existing verbs, etc. Derivational affixes can be added to both underived and derived stems. Conversely, inflectional morphology specifies the grammatical relationships among words in a sentence — inflectional morphology does not change the grammatical category of a word, nor does it alter its meaning. Cf. Booij 2006; Matthews 1972 and 1991; Arkadiev 2023. In Proto-Nostratic, the distinction between derivational morphology and inflectional morphology was clear-cut, though this is not always the case cross-linguistically.

18.2. AFRASIAN

1. AFRASIAN: According to Ehret (1995:15–54), there were two fundamental stem shapes in Proto-Afrasian: **CVC-* and **C(V)-*, the latter of which had the possible alternative shape **VC-* in verb stems. Any number of nominalizing suffixes and a great variety of verb extensions in the shape **(V)C-* could be added to the stem. Ehret notes that the underlying form of such suffixes was probably **-C-*, with the surfacing of a preceeding vowel depending upon the syllable structure rules of the particular Afrasian daughter branches. Accordingly, the reconstructed Proto-Afrasian stems in Chapter 5 of Ehret’s book are given as **C₁VC₂C_S*, where **C_S* represents the suffix. Two exceptions to these rules were the nominal suffixes **-w-* and **-y-*, which probably did not have fixed vowel accompaniments and **-VC-* shapes. Ehret devotes several other papers to the study of root structure patterning in the individual Afrasian daughter languages (cf. Ehret 1989 for Arabic, 2003a for Ancient Egyptian, 2003b for Chadic, and 2008a for Chadic and Afrasian). It may be noted here that Militarev (2005:83) dismisses Ehret’s proposals as “arbitrary conclusions”.

Now, let us turn to the individual derivational suffixes. Ehret (1995:15–54) lists and defines seventeen Proto-Afrasian noun suffixes and thirty-seven Proto-Afrasian verb extensions — the following is a complete list (Ehret’s transcription has been retained) (see also Hayward 1984b):

Proto-Afrasian Noun Suffixes:

Suffix	Meaning
*-b-	animate nominal and deverbative nominal
*-l-	adjective forming
*-l-	attributive and complement deverbative
*-m-	adjective forming
*-m-	attributive nominal
*-n-	adjective forming
*-n-	attributive nominal
*-ŋ-	attributive nominal
*-r-	adjective forming
*-r-	instrument and complement deverbative
*-s-	deverbative complement
*-t-	adjective forming
*-t-	associative nominal
*-w- (-aw-)	deverbative
*-y- (-ay-, -iy-)	adjective forming
*-y- (-ay-, -iy-)	attributive deverbative and attributive nominal
*-ʔ-	adjective deverbative

Proto-Afrasian Verb Extensions:

Suffix	Meaning
*-b-	extendative
*-c'-	extendative
*-d-	durative
*-dl-	middle voice
*-dz-	extendative fortative
*-f-	iterative
*-g-	finitive fortative
*-ɣ-	intensive (of effect)
*-g ^w -	durative
*-ɣ ^w -	complementive
*-h-	amplificative
*-h-	iterative
*-k-	durative
*-k'-	intensive (of effect)
*-k ^w -	finitive
*-k' ^w -	andative
*-l-	finitive
*-ɭ-	ventive
*-m-	extendative
*-n-	non-finitive
*-p-	intensive (of manner)
*-p'-	finitive fortative

*-r-	diffusive
*-s-	causative
*-š-	non-finitive
*-s' -	fortative
*-t-	durative
*-t' -	durative intensive
*-tl' -	focative
*-ts-	diffusive
*-w-	inchoative/denominative
*-x-	precipitive
*-x ^w -	extendative fortative
*-y-	inchoative/denominative
*-z-	intensive (of manner)
*-ʔ-	concisive
*-ʕ-	partive

Ehret notes (1995:27—28) that these extensions have become lexicalized in Semitic and Egyptian, with the result that their meanings have mostly been lost. Ehret further notes that these extensions must originally have been fully productive in Chadic, while Cushitic occupies an intermediate position between Semitic and Egyptian, on the one hand, and Chadic, on the other hand, in the preservation and productivity of these extensions.

2. CUSHITIC: For Proto-Southern Cushitic, Ehret (1980:45—46) proposes an underlying system of two primary stem shapes for nouns, verbs, and adjectives: **CVC-* and **CVVC-*. Ehret considers the three relatively uncommon stem types **CVNC-*, **CVNCVC-*, and **CVVCNC-* to be varieties of the two primary stem types. Demonstrative, locational, and pronoun stems in Proto-Southern Cushitic, on the other hand, had the shape **CV-*.

For Proto-East Cushitic, Sasse (1979:6) outlines the following root structure rules:

1. Each root began with one and only one consonant — there were no initial consonant clusters.
2. No (or very few) words ended in a consonant, that is to say that all inflectional morphemes consisted of or ended in vowels.
3. There were no **CCC* clusters and possibly some rigorous restrictions on **CC* clusters as well.
4. The following root shapes mainly occurred: **CV(C)*, **CVCCVC*, **CVCC*, **CVVC*.
5. In addition to the root shapes listed above under 4, Proto-East Cushitic had a considerable number of verbs with a discontinuous consonantal root structure similar to what is found in Semitic verbs of the prefix conjugation: **C₁-C₂* or **C₁-C₂-C₃*, from which stems were derived by fixed vocalic patterns.

3. SEMITIC: Semitic requires special consideration. Semitic has developed a system of non-concatenative morphology in which the consonants (almost always three: C₁-C₂-C₃) indicate the basic meaning of a root while the alternation of vowels according to fixed patterns within the root indicates various morphological, derivational, and syntactic functions (cf. Moscati 1964:72—75; Brockelmann 1910:113—114 and 1916:96—97; Bergsträsser 1928:6—7 and 1983:5—6; Coghil 2015; Diakonoff 1970; Hurwitz 1913; Kuryłowicz 1962 and 1973; Lipiński 1997:201—209 and 331—335; Rubin 2010:26—28 and 43—47; A. K. Simpson 2009; R. Stempel 1999:69—74; Weninger 2011a:152—155). No doubt, this system began in verbs and then spread to nouns as well (see below on the origin of apophony). These patterns are referred to as “binyans” / “binyānīm” (בִּנְיָנִים) in Hebrew grammar. Though this patterning was incipient in the latest period of development of Proto-Afrasian, Semitic (as well as Ancient Egyptian [cf. Loprieno—Müller 2012:117—119; Ehret 2003a] and Berber [cf. Kossmann 2012:34—36]) has greatly expanded this system, with the result that parts of the earlier patterning have either been lost or modified to conform with the trilateral system (see below [Militarëv]). The system is further enhanced by the addition of various prefixes and/or suffixes, again, in accordance with predefined templates. Pronouns and particles, however, fall outside of this system. The use of prefixes, infixes, and suffixes occurs in every branch of Afrasian, as do gemination and reduplication (cf. Frajzingier 2012:529—532).

Militarëv (2005) identifies a set of “triconsonantizers” (T) for Proto-Semitic (specifically, *w, *y, and *ʔ — probably also *t, *ʕ, and *h) which were added to biconsonantal roots to bring them into conformity with the trilateral system. These “triconsonantizers” (T) could be added initially (*T+C₁-C₂), medially (*C₁+T+C₂), or finally (*C₁-C₂+T). The addition of a “triconsonantizer” did not affect the meaning of the root. However, when the meaning of the root was modified, Militarëv classifies the additional consonant element as a “fossilized formant” (or “class marker”) (= “derivational suffix” according to my views [cf. Chapter 17, §17.5]). Though any consonant could theoretically have functioned as a fossilized formant, Militarëv lists the following as being more firmly established: *m, *n, *t, *r, *l, *ʔ, *b, and *k (and possibly *h). Finally, Militarëv identifies a set of “root extenders” (RE), which were added to roots with three (or more) consonants: *C₁-C₂-C₃+C_{RE}.

According to Weninger (2011a:164), the following affixes are the most important in noun derivation in Semitic: *ma-, *mi-, *mu-, *ta-, *ti-, *ʔa-, *ʔi-, *ʔu-, and *-ān. Most nouns, however, can be classed into a somewhat limited set of patterns in Proto-Semitic — Weninger (2011a:164) lists the following such patterns, using *ktl as an example (Weninger writes *qtl): *kāt, *kitl, *kutl, *katal, *kātīl, *katul, *kātāl, *kātīl, *kātūl, *kutul, *kutūl, *kītal, *kūtal, *kītāl, *kutāl, *kātīl, *kātāl, *kātīl, *kātūl, *kūtūl, and *kūtūl. Weninger discusses Semitic verb stem formation and derivation on pp. 155—159.

Proto-Semitic also had a set of root structure constraints that restricted which consonants could co-occur in a trilateral root (that is, C₁-C₂-C₃) (cf.

Greenberg 1950; Moscati 1964:74—75; Rubin 2010:27). Thus, the first (C_1) and second (C_2) consonants within a root could not be identical. Moreover, they could not share the same point of articulation. The first constraint did not apply to the second (C_2) and third (C_3) consonants, while the second constraint did. Initial and final consonant clusters were avoided, as were medial clusters of more than two consonants (cf. Gragg—Hoberman 2012:163).

As noted by Lipiński (1997:201—209), there were three fundamental stem types in Proto-Semitic: (1) verb stems, (2) noun and adjective stems, and (3) pronoun and indeclinable stems, though the distinction between nouns and verbs was not always clear. Uninflected forms included adverbs, prepositions, and various connective and deictic particles. Lipiński further notes that there were many deverbative nouns and denominative verbs in Proto-Semitic.

4. THE ORIGIN OF APOPHONY: In Chapter 7 (§7.14), the Proto-Afrasian root structure patterning was reconstructed as follows:
 1. There were no initial vowels in the earliest form of Proto-Afrasian. Therefore, every root began with a consonant. (It may be noted that Ehret [1995] assumes that roots could begin with vowels in Proto-Afrasian.)
 2. Originally, there were no initial consonant clusters either. Consequently, every root began with one and only one consonant, exactly as in Proto-East Cushitic mentioned above. There must also have been restrictions on permissible medial and final consonant clusters, again, as in Proto-East Cushitic and also Semitic.
 3. Two basic syllable types existed: (A) $*CV$ and (B) $*CVC$, where C = any consonant and V = any vowel. Permissible root forms coincided with these two syllable types.
 4. A verb stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: $*CVC-(V)C-$. Any consonant could serve as a suffix.
 5. Primary (that is, non-derivational) noun stems displayed similar patterning, though, unlike verb stems, they were originally characterized by stable vocalism.

As noted above, one of the most striking characteristics of the Semitic verb is the overwhelming preponderance of triconsonantal roots (C_1 - C_2 - C_3). Another salient characteristic is that the lexical meaning falls exclusively on the consonants. The vowels, on the other hand, alternate according to well-defined patterns that indicate specific inflectional, derivational, and syntactic functions. That is to say that the vowels have morphological rather than semantic significance. This alternation of vowels is technically known as “apophony”. The triconsonantal template and the apophonic alternations form a tightly integrated system. Cf. Del Olmo Lete 2003, 2007, and 2010.

In the previous chapter (§17.5), it was suggested that the formative vowels may have been aspect markers. According to Zaborski, the patterning was as

follows: *a* marks present (imperfective), *i ~ e* mark past (perfective), and *u ~ o* mark subordinate. Thus, following Zaborski's views, the Proto-Afrasian active verb stems would have had the following patterning:

Imperfective aspect	* <i>CVCaC-</i>
Perfective aspect	* <i>CVCiC-</i>
Subordinate	* <i>CVCuC-</i>

At this stage, the vowel of the first syllable was stable, while that of the second syllable changed as indicated above.

The innovation that led to the rise of apophony was the modification of the vowel of the first syllable to indicate different morphological functions in imitation of the patterning of the second syllable. A repercussion of the rise of apophony was the need to bring all verbal roots into conformity with the triconsonantal scheme, at the expense of other root types. The reason for this was that the emerging apophonic patterning could only function properly within the context of a fairly rigid structure. This system became so tightly integrated that it was, for all practical purposes, impervious to further change. Even to the present day, the verbal patterning is highly homologous among the Semitic daughter languages. These patterns may be illustrated by the Arabic verb *ḡatala* (root *ḡtl*) 'to kill, to slay, to murder' (table from Kaye 2007:217):

Form	Voice	Perfect	Imperfect	Imperative	Participle	Verbal Noun
I	Active	<i>ḡatala</i>	<i>yaghtulu</i>	<i>uḡtul</i>	<i>ḡātil</i>	<i>ḡatl</i> , etc.
	Passive	<i>ḡutila</i>	<i>yughtalu</i>		<i>maḡtūl</i>	
II	Active	<i>ḡattala</i>	<i>yugattilu</i>	<i>ḡattil</i>	<i>muḡattil</i>	<i>taḡtūl</i>
	Passive	<i>ḡuttila</i>	<i>yugattalu</i>		<i>muḡattal</i>	
III	Active	<i>ḡātala</i>	<i>yugātilu</i>	<i>ḡātil</i>	<i>muḡātil</i>	<i>muḡātala</i>
	Passive	<i>ḡūtila</i>	<i>yugātalū</i>		<i>muḡātal</i>	
IV	Active	<i>ʔaḡtala</i>	<i>yughtilu</i>	<i>ʔaḡtil</i>	<i>muḡtil</i>	<i>ʔiḡtāl</i>
	Passive	<i>ʔuḡtila</i>	<i>yughtalu</i>		<i>muḡtal</i>	
V	Active	<i>taḡattala</i>	<i>yataḡattalu</i>	<i>taḡattal</i>	<i>mutaḡattil</i>	<i>taḡattul</i>
	Passive	<i>tugattila</i>	<i>yutagattalu</i>		<i>mutaḡattal</i>	
VI	Active	<i>taḡātala</i>	<i>yutaḡātalu</i>	<i>taḡātal</i>	<i>mutaḡātil</i>	<i>taḡātul</i>
	Passive	<i>tugātila</i>	<i>yutaḡātalu</i>		<i>mutaḡātal</i>	
VII	Active	<i>inḡatala</i>	<i>yanḡatilu</i>	<i>inḡatil</i>	<i>munḡatil</i>	<i>inḡitāl</i>
VIII	Active	<i>iḡtatala</i>	<i>yaghtatilu</i>	<i>iḡtatil</i>	<i>muḡtatil</i>	<i>iḡtitāl</i>
	Passive	<i>uḡtutila</i>	<i>yughtatalu</i>		<i>muḡtatal</i>	
IX	Active	<i>iḡtalla</i>	<i>yaghtallu</i>	<i>iḡtalil ~ iḡtalla</i>	<i>muḡtall</i>	<i>iḡtilāl</i>
X	Active	<i>istaḡtala</i>	<i>yastaḡtilu</i>	<i>istaḡtil</i>	<i>mustaḡtil</i>	<i>istiḡtāl</i>
	Passive	<i>ustuḡtila</i>	<i>yustaḡtalu</i>		<i>mustaḡtal</i>	

Notes:

1. The *hamzatu lwaʃl* (“eliding glottal stop”) is not shown in the table.
2. Kaye writes /q/ instead of /ḳ/. The emphatics are written with an underdot in this book (/ṭ/, /ḳ/, /ṣ/, etc.) — they are pronounced as pharyngealized consonants in Arabic (see Chapter 7, §7.2).

For more information, cf. Diakonoff 1988:85—110; Kurylowicz 1962; Rubio 2005; and A. K. Simpson 2009. Rössler 1981 is also of interest.

5. FROM PROTO-NOSTRATIC TO PROTO-AFRASIAN: Though significant progress has been made in reconstructing the Proto-Afrasian phonological system and vocabulary, Proto-Afrasian morphology has not yet been reconstructed. Nevertheless, it is possible to trace, in broad outline, some of the developments that may have occurred, though much still remains uncertain.

Though Afrasian plays a critical role in the reconstruction of Proto-Nostratic morphology, there were many developments that occurred within Proto-Afrasian proper after it became separated from the rest of the Nostratic speech community. In this section, an attempt will be made to provide explanations for how some of the unique characteristics of Proto-Afrasian morphology may have come into being.

- A. GENDER AND CASE: Proto-Nostratic nouns did not distinguish gender, and Pre-Proto-Afrasian nouns must also have lacked this category. However, based upon the evidence of the Afrasian daughter languages, gender must be reconstructed as an inherent part of noun morphology in Proto-Afrasian proper (cf. Frajzingier 2012:522—523).

Like Proto-Nostratic, Proto-Afrasian was most probably an active language. Two declensional types were inherited by Proto-Afrasian from Proto-Nostratic, each of which was distinguished by a special set of markers (see Chapter 17, §17.5):

1. *-u was used to mark the subject in active constructions;
2. *-a was used to mark:
 - (a) The direct object of transitive verbs;
 - (b) The subject in stative constructions;
 - (c) The so-called “*status indeterminatus*”.

Note: As in Proto-Nostratic, the marker *-i indicated possession in Proto-Afrasian. It was preserved as such in Proto-Semitic (cf. Gragg—Hoberman 2012:170; Rubin 2010:36; Moscati 1964:94, §12.64; Weninger 2011a:165) and partially in Cushitic (cf. Appleyard 2011: 44—48) and Omotic (cf. Zaborski 1990:619—620).

Importantly, Sasse (1984:117) reconstructs the following two declensional paradigms for nouns with short final vowels for Proto-East Cushitic:

	Masculine	Feminine
Absolute Case	*-a	*-a
Subject Case	*-u/i	*-a

Note: The absolute case is not to be confused with the “absolute” case of ergative languages. It is a translation of Italian *forma assoluta* first used by Moreno in 1935 (cf. Mous 2012:369).

Sasse notes:

Regardless of whether the neutralization of the case forms in the feminine nouns was inherited from the proto-language (that is, case forms for feminines never developed) or represents a historical stage during the reduction of the case-marking system which was once more elaborate, it is obvious that the lack of subject-object distinction with feminine nouns can be explained in functional terms. It is well known that in addition to the semantic category of neutral sex which is of minor importance the Cushitic gender categories primarily denote the notions of social significance (masculine) vs. social insignificance (feminine)... Since the primary function of subject and object cases is the distinction of agent and patient nouns, it is clear that case marking is more important for those noun classes that are designated to denote items which normally occur on both agents and patients (i.e. animates, big and strong beings, etc.) than for those noun classes which do not (inanimates, insignificant things, etc.). There is an interesting parallel in Indo-European, where neuter nouns generally do not distinguish subject and object. The personal pronouns and the demonstratives are naturally excluded from this neutralization, because they are more likely to refer to animates.

Thus, the feminine case markers reconstructed for Proto-East Cushitic by Sasse are to be derived from the *-a found in the masculine absolute. The masculine case markers shown above represent the oldest patterning, and, inasmuch as there are traces of this patterning in Semitic and Berber, it must ultimately go back to Proto-Afrasian.

As the category of gender began to emerge in Afrasian, the individual daughter languages exploited other means to indicate the feminine, such as, for example, the formant *-t- (perhaps derived from the form preserved in Egyptian *it* ‘vulva, external female reproductive organs’ [cf. Erman—Grapow 1926—1963.1:142]). For more information on how the category of gender is treated in the various branches of Afrasian, cf. especially D. Cohen (ed.) 1988 and Fajzyngier—Shay (eds.) 2012.

- B. PRONOUNS: Proto-Afrasian had independent personal pronouns distinct from subject and object pronouns. The following independent personal pronouns may be reconstructed for Pre-Proto-Afrasian:

	Singular	Plural
1	* <i>ʔV-</i>	* <i>nV+Plural</i>
2	* <i>tV-</i>	* <i>tV+Plural</i>
3	* <i>sV-</i>	* <i>sV+Plural</i>

Notes:

1. The first and second person forms were exactly as given above for the prefix conjugation personal prefixes, except that the third person prefix was based upon the stem **yV-* (cf. Satzinger 2003:394). This is an important piece of information, for it allows us to ascertain what the most archaic forms of the personal pronouns may have been and to speculate about their later development.
2. In Omotic, the first person is built upon the stem **ta-* and the second upon the stem **ne-* (cf. Welaitta 1st sg. subject *ta-ni*, 2nd sg. subject *ne-ni*). Curiously, similar forms show up in Elamite in the possessive pronouns of the second series: 1st sg. *-ta*, 2nd sg. *-ni*.

It should be noted that the first person singular and plural were originally two distinct stems. The first innovation was the combining of the two first person stems into a new compound form (cf. Militarev 2011:77):

	Singular	Plural
1	* <i>ʔV+nV-</i>	* <i>ʔV+nV+Plural</i>
2	* <i>tV-</i>	* <i>tV+Plural</i>
3	* <i>sV-</i>	* <i>sV+Plural</i>

Then, **ʔV-* was extended to the second and third person forms in imitation of the first person forms:

	Singular	Plural
1	* <i>ʔV+nV-</i>	* <i>ʔV+nV+Plural</i>
2	* <i>ʔV+tV-</i>	* <i>ʔV+tV+Plural</i>
3	* <i>ʔV+sV-</i>	* <i>ʔV+sV+Plural</i>

Next, **-n-* was analogically inserted into the second person forms on the basis of the first person forms (for Egyptian developments, cf. Stauder 2023:61—68, §4.1.2):

	Singular	Plural
1	* $\mathcal{P}V+nV-$	* $\mathcal{P}V+nV+\text{Plural}$
2	* $\mathcal{P}V+n+tV-$	* $\mathcal{P}V+n+tV+\text{Plural}$
3	* $\mathcal{P}V+sV-$	* $\mathcal{P}V+sV+\text{Plural}$

Finally, separate feminine third person forms were created, and $*-kV$ was appended to the 1st person singular pronoun (cf. Akkadian *anāku* ‘I’; Egyptian *in-k* ‘I’ // Coptic *anok* [ANOK] ‘I’; Moroccan Tamazight *nəkk* ‘I’).

No doubt, the changes described above occurred over a long period of time and may not have been fully completed by the time that the individual Afrasian daughter languages began to appear. Each daughter language, in turn, modified the inherited system in various ways (for Semitic developments, cf. Del Olmo Lete 1999; for Cushitic, cf. Appleyard 1986). Here are attested forms in select Afrasian daughter languages (only the singular and plural forms are given) (cf. Frajzngier—Shay [eds.] 2012; Diakonoff 1988:72—73; Gardiner 1957:53; Lipiński 1997:298—299; Moscati 1964:102; Rubin 2004:457—459; R. Stempel 1999:82):

	Semitic: Arabic	Semitic: Akkadian	Egyptian	Berber: Tuareg	Cushitic: Rendille
Singular					
1	<i>ʔanā</i>	<i>anāku</i>	<i>in-k</i>	<i>n-ək</i>	<i>an(i)</i>
2 (m.)	<i>ʔanta</i>	<i>atta</i>	<i>nt-k</i>	<i>kay</i>	<i>at(i)</i>
(f.)	<i>ʔanti</i>	<i>atti</i>	<i>nt-t</i>	<i>kəm</i>	<i>at(i)</i>
3 (m.)	<i>huwa</i>	<i>šū</i>	<i>nt-f</i>	<i>nt-a</i>	<i>us(u)</i>
(f.)	<i>hiya</i>	<i>šī</i>	<i>nt-s</i>	<i>nt-a</i>	<i>iče</i>
Plural					
1 (m.)	<i>naḥnu</i>	<i>nīnu</i>	<i>in-n</i>	<i>n-əkkā-ni</i>	<i>inno</i>
(f.)	<i>naḥnu</i>	<i>nīnu</i>	<i>in-n</i>	<i>n-əkkā-nəti</i>	<i>inno</i>
2 (m.)	<i>ʔantum(ū)</i>	<i>attunu</i>	<i>nt-tn</i>	<i>kāw-ni</i>	<i>atin</i>
(f.)	<i>ʔantunna</i>	<i>attina</i>	<i>nt-tn</i>	<i>kāmā-ti</i>	<i>atin</i>
3 (m.)	<i>hum(ū)</i>	<i>šunu</i>	<i>nt-sn</i>	<i>əntā-ni</i>	<i>ičo</i>
(f.)	<i>hunna</i>	<i>šina</i>	<i>nt-sn</i>	<i>əntā-nəti</i>	<i>ičo</i>

- C. CONJUGATION: Proto-Afrasian had two conjugations: (1) a prefix conjugation (active) and (2) a suffix conjugation (stative). The prefix conjugation became fixed early on in Proto-Afrasian, while the suffix conjugation was still very much a work in progress. Thus, the various daughter languages inherited a common prefix conjugation from Proto-Afrasian (except for Egyptian, which has no trace of the prefix conjugation [cf. Satzinger 2003:393]), while the suffix conjugations differed from branch to branch. The Proto-Afrasian personal prefixes were as follows (cf. Diakonoff 1988: 80; D. Cohen 1968:1309; Lipiński 1997:370—371; Satzinger 2003:394):

	Singular	Plural
1	* <i>ʔV-</i>	* <i>nV-</i>
2	* <i>tV-</i>	* <i>tV-</i>
3 (m.)	* <i>yV-</i>	* <i>yV-</i>
(f.)	* <i>t-</i>	

Note: Masculine and feminine are not distinguished in the 3rd plural.

It is immediately obvious that these prefixes are based upon earlier Proto-Nostratic pronominal elements. Banti (2004:40) reconstructs a nearly identical set of forms for the Proto-Cushitic *suffix* conjugation (SC1):

	Singular	Plural
1	*Stem- <i>ʔV</i>	*Stem- <i>anV</i> (?)
2	*Stem- <i>tV</i>	*Stem- <i>tin</i>
3 (m.)	*Stem- <i>i</i>	*Stem- <i>in</i>
(f.)	*Stem- <i>tV</i>	

Notes:

1. The 2nd and 3rd plural forms contain the plural marker **-n* (see Chapter 16, §16.26).
2. Masculine and feminine are not distinguished in the 3rd plural.

Compare the personal prefixes reconstructed for Proto-Semitic by Lipiński (1997:370) (singular and plural only) (see also Appleyard 1999:299):

	Singular	Plural
1	* <i>ʔa-</i>	* <i>ni-</i>
2 (m.)	* <i>ta-</i>	* <i>ti- ... -ū</i>
2 (f.)	* <i>ta- ... -t</i>	* <i>ti- ... -ā</i>
3 (m.)	* <i>ya-</i>	* <i>yi- ... -ū</i>
3 (f.)	* <i>ta-</i>	* <i>yi- ... -ā</i>

The Beja / Beḍawye personal prefixes are (cf. Appleyard 2007a:467):

	Singular	Plural
1	<i>ʔa-</i> , <i>-Ø-</i>	<i>ni-</i> , <i>-n-</i>
2 (m.)	<i>ti-</i> , <i>Ø-</i> , <i>-t-+-`a</i>	<i>ti-</i> , <i>-t-+-`na</i>
2 (f.)	<i>ti-</i> , <i>Ø-</i> , <i>-t-+-`i</i>	
3 (m.)	<i>ʔi-</i> , <i>Ø-</i> , <i>-y-</i>	<i>ʔi-</i> , <i>-y-+-`n(a)</i>
3 (f.)	<i>ti-</i> , <i>Ø-</i> , <i>-t-</i>	

Note: Masculine and feminine are not distinguished in the 2nd and 3rd plural.

- D. STATE: Proto-Semitic nouns had two distinct forms, depending upon their syntactic function (cf. Frajzingier 2012:533—534; Rubin 2010:38—40): (1) construct state (bound); and (2) free state (unbound) (additional states developed in the daughter languages). The construct state was used when a noun governed a following element. It had no special marker and was the unmarked form. The free state was used elsewhere and was the marked form. It was indicated by the markers **-m(a)/*-n(a)*, which were appended after the case endings (cf. Rubin 2010:38—40). Ultimately, these markers had the same origin as the relational markers **-ma* and **-na*, which were originally used to mark the direct object of transitive verbs as well as the subject in stative constructions (see Chapter 17, §17.5; see also Michalove 2002a:94, note 2; Blažek 2014:28; Del Olmo Lete 2008). In Proto-Semitic, they were reinterpreted as markers of the free state.

18.3. ELAMITE

The following discussion is based mainly on Khačikjan 1998 — see also Grillot-Susini 1987, McAlpin 1981, Paper 1955, Reiner 1969, and Stolper 2004.

Like Proto-Dravidian, Elamite was an agglutinating language and strictly suffixal. According to Khačikjan (1998:11), roots consisted mostly of two consonants and one or two vowels: *CVC* (*nap* ‘deity’, *ruh* ‘man’, *kap* ‘treasure’, *kik* ‘sky’), *CVCV* (*zana* ‘lady’). It should be noted that the following root types were also found: *CV* (*da-* ‘to place’, *ki* ‘one’), *VC* (*ap(i)* ‘these’ [animate plural]), and *CVCC-* (*sunk-i-* ‘king’). Verb stems consisted either of a root ending in a vowel or of a root extended by a thematic vowel if the root ended in a consonant: *CV-* (rare), *CVC-V-*, or *CVCC-V-*. Thus, verb stems always ended in a vowel (cf. Khačikjan 1998:13; Reiner 1969:78; Grillot-Susini 1987:32). Derivational suffixes were added to these stems. Reduplication and compounding were also common.

Stems were formed from roots ending in a consonant plus a thematic vowel: *CVC(C)-V-*. The thematic vowels *-u* and *-a* were found only on verb stems, while *-i* was found both on noun and noun-verb stems (cf. Khačikjan 1998:11).

Adjectives did not constitute a separate grammatical class in Elamite. They were denoted by the personal class markers (see below) and postpositions.

According to Khačikjan (1998:11), nouns consisted of:

1. Roots ending in a consonant (*CVC*: *nap* ‘god, deity’, *ruh* ‘man’, *kap* ‘treasure’, *kik* ‘sky’) or a vowel (*CVCV*: *zana* ‘lady’).
2. Enlarged roots (*CVCC-V*: *kukk-i* ‘vault, roof’).
3. Stems followed by class markers (see below).
4. Stems followed by derivational suffixes (see below).
5. Compound stems followed by derivational suffixes.

There were two genders (animate and inanimate) and two numbers (singular and plural — the plural ending was *-p(e)*, *-(i)p*, *-pi*). There was also a series of animate and inanimate class markers, as follows (cf. Grilhot-Susini 1987:13—14; Khačikjan 1998:12; Stolper 2004:73):

Animate:

Singular:	1st	-k	locutive	<i>sunki-k</i> ‘I, king’
	2nd	-t	allocutive	<i>hutta-n-t</i> ‘you, doing’; <i>katu-k-t</i> ‘you, living’
	3rd	-Ø	delocutive	<i>nap[-Ø]</i> ‘he, deity’; <i>zana[-Ø]</i> ‘she, lady’
		-r		<i>nap-i-r</i> ‘he, deity’; <i>sunki-r</i> ‘he, king’
Plural:	3rd	-p	delocutive	<i>nap-i-p</i> ‘they, deities’; <i>sunki-p</i> ‘they, kings’

Inanimate:

Singular:	3rd	-Ø	delocutive	<i>hal[-Ø]</i> ‘town, land’; <i>mur[-Ø]</i> ‘place’
		-me		<i>sunki-me</i> ‘kingdom, kingship’
		-n		<i>siya-n</i> ‘temple’; <i>mur-n</i> ‘earth’
		-t		<i>hala-t</i> ‘clay, mud brick’

Notes:

1. The 3rd person inanimate class markers were derivational.
2. The animate class markers indicated agent nouns, members of a class, or persons.
3. The inanimate class marker *-me* indicated abstracts (see below).

There were no case endings on nouns. However, personal pronouns distinguished an object case denoted by the ending *-n* (*u-n* ‘me’, *nuku-n* ‘us’; *nu-n* ‘you’, *numu-n* [pl.] ‘you’; etc.). Clearly, this is descended from the Proto-Nostratic direct object marker (*-*ma*/)*-*na* (see Chapter 17, §17.5). In Royal Achaemenid Elamite, there was a genitive ending *-na* (cf. Khačikjan 1998:16; Paper 1955:70—74). According to Khačikjan (1998:16), this ending was a combination of the neutral classifier *-ni* and the relative/connective particle *-a*. In Middle Elamite, *-ni* and *-a* were used separately to indicate possession (cf. Khačikjan 1998:16) — the class markers *-r*, *-me*, and *-p* were also used to indicate possession. No doubt, *-ni* is descended from the Proto-Nostratic possessive marker *-*nu* (cf. Chapter 16, §16.28, for details).

Next, Khačikjan (1998:12) lists the following derivational suffixes (see also Grilhot-Susini 1987:14—15; McAlpin 1981:66—67):

1. *-r(a)* and its plural variant *-p(e)*:
 - a. Formed personal nouns indicating a member of a group (*-ra*) or the group itself (*-pe*);
 - b. Added to verbal stems, these suffixes formed actor nouns (for example, *liba-r* ‘servant’, *liba-p* ‘servants’);
 - c. Added to toponyms, they were used to denote ethnic groups (for example, *hinduya-ra* ‘Indian’, *hinduš-pe* ‘Indians’ [*< Hinduš* ‘India’]);

- d. These suffixes were also used with loanwords (for example, *kurtaš-ra* ‘worker’, *kurtaš-pe* ‘workers’);
- e. Attributes with delocutive classifiers could be used as substantives (for example, *kat-ri* ‘lord, master’, literally, ‘(that) of the throne’).
2. *-me* (< Proto-Elamite **-may*) was mostly used to form abstract nouns (for example, *sunki-me* ‘kingship, kingdom’, *liba-me* ‘service’, *tit-me* ‘tongue’).
3. *-t(e)* formed generalized nouns from nouns and nouns from adjectives (for example, *hal-te* ‘door’, *hala-t* ‘brick’).
4. *-um*, *-in*, *-am*, *-un*, *-n* formed neutral nouns with a weakly expressed abstract meaning, often connected with buildings or localities (for example, *bal-um* ‘storehouse’, etc.)
5. *-(a)š* was used for nonhumans. It formed words connected with agriculture, animal husbandry, or food terminology. It was common in place names, and it was also used with Old Persian loanwords.

The following postpositions were used to express spatial relationships. Though they functioned as case endings, they were, in fact, postpositions and not case endings.

Simple:

- | | |
|------------------------|--|
| 1. Directive-Allative | <i>-ikki</i> ‘to, towards, into’ |
| 2. Locative | <i>-ma</i> ‘in(to), on(to)’ (temporal and spatial) |
| 3. Superessive | <i>-ukku</i> ‘on, in, according to’ |
| 4. Ablative-Separative | <i>-mar</i> ‘from, out of’ (temporal and spatial) |

Compound:

- | | |
|--------------------------|---|
| 5. Ablative-Instrumental | <i>-ikki-mar</i> ‘from, by’ (with animates)
<i>-ma-mar-</i> ‘from, near’ (with inanimates) |
|--------------------------|---|

Elamite verbs had two aspects: perfective (past) and imperfective (non-past). The perfective aspect had two forms: (1) transitive and (2) intransitive. The imperfective aspect was used to express the present and future tenses, in addition to the oblique moods.

18.4. DRAVIDIAN

The following discussion is taken mostly from Krishnamurti 2003:179—204 — see also Andronov 2003:101—103; Caldwell 1913:196—204; Steever 1990. Proto-Dravidian roots (both verbal and nominal) were monosyllabic with the canonical shape $*(C_1)\check{V}(C_2)-$, that is, two fundamental types: closed roots (ending in a consonant) and open roots (ending in a vowel, short or long). Extended stems were formed by the addition of the following suffixes to open roots: $*-C(V)$, $*-CC(V)$, or $*-CCC(V)$. If a root ended in a consonant (closed roots), a formative vowel (that is, $*-a$, $*-i$, or $*-u$) was added to the root as the first layer of suffixes. Additional suffixes in the forms $*-C-CC-$ or $*-CCC-$ could then be added after the vowel

suffix. When closed roots were used as free forms, the final consonant was doubled and a non-morphemic enunciative vowel was added. The enunciative vowel was lost before words beginning with a vowel (cf. Krishnamurti 2003:93). Note: Contrastive vowel length was a specific Proto-Dravidian development and was not inherited from Proto-Nostratic (cf. McAlpin 1974a:95). The variation in vowel length was originally governed by metrical considerations — thus, $*(C_1)\check{V}C_2-$ (with long vowel) alternated with $*(C_1)\check{V}C_2-C_3-$ (with short vowel) as in $*k\bar{a}\eta-$ ‘to see’ as opposed to $*ka\eta-$ (cf. Steever 1990:179).

In the preceding chapter (§17.5), a series of *formative vowels* was posited for verb stems in Proto-Nostratic, and it was proposed that they may have been aspect markers: $*a$ = imperfective aspect; $*i$ = perfective aspect; and $*u$ = subordinate. In Proto-Dravidian, the original meaning of the formative vowels was lost. According to Krishnamurti (2003:97), the formative vowels “apparently had an epenthetic role of splitting clusters without affecting the syllable weight ...” Note the following examples given by Krishnamurti (2003:181):

1. $*tir-a-y-$ ($*-p-$ / $*-mp-$, $*-nt-$) ‘to roll (intr.)’; $*tir-a-y-$ ($*-pp-$ / $*-mpp-$, $*-ntt-$) ‘to roll up (tr.)’, (n.) $*tir-a-y$ ‘wave, screen, curtain’; $*tir-a-nku$ ‘to be curled up (intr.)’, $*tir-a-nkku$ ‘to shrivel (tr.)’;
2. $*tir-a-l-$ ($*-p-$, $*-nt-$) ‘to become round (intr.)’, $*tir-a-l-$ ($*-pp-$, $*-ntt-$) ‘to make round (tr.)’;
3. $*tir-i-$ ($*-p-$, $*-nt-$) ‘to turn (intr.)’, $*tir-i-$ ($*-pp-$, $*-ntt-$) ‘to turn (tr.)’; $*tir-u-ku$ ‘to twist (intr.)’, $*tir-u-kku$ ‘to twist (tr.)’; $*tir-u-mpu$ ‘to twist, to turn (intr.)’, $*tir-u-mppu$ ‘to twist, to turn (tr.)’;
4. $*tir-u-ntu$ ‘to be corrected, to be repaired (intr.)’, $*tir-u-nttu$ ‘to correct, to rectify (tr.)’.

As stated by Krishnamurti (2003:181), “[t]he Proto-Dravidian root is obviously $*tir-$, meaning ‘turn, roll, twist, change shape’ → ‘correct’, etc. The formatives occur in two layers. The first layer is $V = i, a, u$; and the second layer, either a sonorant (L) as in y, l ; or a simple or geminated stop ± homorganic nasal: P as in $*ku$; PP as in $*kku$; NP as in $*nku, *ntu, *mpu$; NPP as in $*nkku, *nttu, *mppu$.” Thus, the overall structure was as follows:

Root + formative vowel ($*a, *i, *u$) + resonant ($*y, *w, *l/\bar{l}, *r/\bar{r}$)
or simple or geminated stop ± homorganic nasal

Inflectional suffixes followed derivational suffixes, thus: root + derivational suffix + inflectional suffix (cf. Steever 1990:179). Roots ending in a vowel were followed by derivational suffixes beginning with a consonant, while roots ending in a consonant could be followed by derivational suffixes beginning with either a consonant or a vowel, though those beginning with a vowel were by far the most common type. Derivational suffixes beginning with a vowel could consist of (A) the simple vowel itself ($*-V-$), (B) the vowel plus a single consonant ($*-VC-$), (C) the vowel plus a geminate stop ($*-VCC-$), (D) the vowel plus the sequence of nasal and its

corresponding homorganic stop (*-VNC-), or (E) the vowel plus the sequence of a nasal and its corresponding homorganic geminate stop (*-VNCC-). In primary nominal stems, the derivational suffix *-VCC- could be further extended by adding another suffix of the type *-VC-. The derivational suffixes probably originally modified the meaning in some way, though, as noted by Caldwell (1913:209), it is no longer possible, in most cases, to discern their original meaning.

It should be noted that deverbative nouns also occurred, such as **tir-a-y* ‘wave, screen, curtain’, cited above (> Malayalam *tira* ‘wave, billow, curtain’; Tamil *tirai* ‘wrinkle [as in the skin through age], curtain [as rolled up], wave, billow, ripple’; Kannada *tere* ‘wave, billow, curtain’; Kodagu *tere* ‘wave, dress, screen’; Telugu *tera* ‘screen, curtain, wave’; etc. [cf. Burrow—Emeneau 1984:281, no. 3244]). From the stem **tir-i-*, there are: Tamil *tirikai* ‘roaming, wandering, potter’s wheel’, *tiripu* ‘change, alternation’; etc. (cf. Burrow—Emeneau 1984:282—283, no. 3246). And from **tir-u-*, there are: Tamil *tiruttam* ‘correction, repair, improvement, amendment, orderliness, regularity, exactness’, *tiruttal* ‘correctness (as of writing)’; etc. (cf. Burrow—Emeneau 1984:283, no. 3251).

Krishnamurti (2003:181—184) further notes the important distinction made in Proto-Dravidian between transitive and intransitive verbs. This distinction was encoded in a series of suffixes (cf. Krishnamurti 2003:182). The development of the system marking this distinction occurred in stages within Proto-Dravidian. The first stage involved the addition of the suffixes *-l, *-l̥, *-r, *-r̥ (Krishnamurti writes *z), *w, *y onto *(C)V̄- or *(C)VC-V-stems to form extended intransitive/middle voice stems. Next, a series of suffixes was added. These suffixes encode both tense and voice as well as the distinction between intransitive and transitive — they are as follows:

	Non-past		Past
Intransitive	*p	*k	*t
	*mp	*nk	*nt
Transitive	*pp	*kk	*tt
	*mpp	*nkk	*ntt

Notes:

1. These suffixes were modified in various ways in the Dravidian daughter languages (cf. Krishnamurti 2003:197—199).
2. The non-past paradigms include present, future, aorist (habitual), infinitive, imperative, negative, etc. (cf. Krishnamurti 2003:182).
3. In the daughter languages, the tense meaning was lost, and the above suffixes only encode a voice distinction (cf. Krishnamurti 2003:182—183).

The next stage involved the addition of different auxiliary verbs to nonfinite forms of the main verb. Krishnamurti (2003:184—197) supports the above theories with a set of case studies.

Krishnamurti (2003:199—200) also lists and discusses various deverbative noun affixes. These include:

1. Addition of the suffix **-ay* to monosyllabic verb roots.
2. Gemination of the final stop of the root in disyllabic stems or the formative in stems consisting of two or more syllables, as in **āṭṭ-am* ‘game, dancing’, **āṭṭu* ‘playing, a game’ < **āṭu* ‘to play’.
3. Addition of the suffix **-al* to verb roots.
4. Addition of **-t-al* ~ **-tt-al* (also **-t-am*) to roots ending in **-t*.
5. Gemination of the post-nasal stop of a formative suffix in stems of two or more syllables.
6. Lengthening of the root vowel.
7. Addition of **-am* to an intransitive or transitive verb stem.
8. Addition of multiple noun formatives: (1) **-am+t+am* > **-antam*; (2) **-t + *al+ay* > **-talay*.
9. Addition of **(i)kay*.
10. Addition of **(i)kk-ay*.

Krishnamurti (2003:200—204) ends his discussion of Dravidian word formation with the following types of compounds: (1) verb + verb (2003:201); (2) noun + noun (2003:201—202); (3) adjective + noun (2003:202—203); (4) verb + noun (2003:203—204); and (5) compounds with doubtful composition (2003:204). For a complete list of grammatical markers in Dravidian, cf. Krishnamurti 2003:532—533. For somewhat different views on Dravidian word formation, cf. Andronov 2013:115—119; see also Steever 1998a:18—26.

18.5. KARTVELIAN

This section is repeated, in part, from Chapter 6, §6.4. Comparison of Proto-Kartvelian with other Nostratic languages, especially Proto-Indo-European and Proto-Afrasian, makes it seem probable that the root structure patterning developed as follows (cf. Aronson 1997:938):

1. There were no initial vowels in the earliest form of Pre-Proto-Kartvelian. Therefore, every root began with a consonant. (At a later stage of development, however, loss of laryngeals resulted in roots with initial vowels: **HVC-* > **VC-*. Similar developments occurred in later Proto-Indo-European.)
2. Though originally not permitted, later changes led to the development of initial consonant clusters.
3. Two basic syllable types existed: (A) open syllables (**V* and **CV*) and (B) closed syllables (**VC* and **CVC*). Permissible root forms coincided exactly with these two syllable types. Loss of laryngeals and vowel syncope in early Proto-Kartvelian led to new roots in the form **C-*.

4. A verbal stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: **CVC-VC-*. Any consonant could serve as a suffix. (Inflectional endings could be of the form **-V*, as in the case of the 3rd singular aorist ending **-a*.)
5. Similar patterns occurred in nominal stems.

At this time, there were three fundamental stem types: (A) verbal stems, (B) nominal and adjectival stems, and (C) pronominal and indeclinable stems. That this distinction remained in Proto-Kartvelian proper is shown by the fact that prefixes mostly maintained their original structural identity, being only partially involved in the system of vowel gradation (cf. Gamkrelidze 1967:715) as well as by the fact that nominal stems were sharply distinguished from verbal stems in that they had the same ablaut state throughout the paradigm, while extended (that is, bimorphemic) verbal stems had alternating ablaut states according to the paradigmatic pattern (cf. Gamkrelidze 1967:714—715).

The phonemicization of a strong stress accent in Early Proto-Kartvelian disrupted the patterning outlined above. The positioning of the stress was morphologically distinctive, serving as a means to differentiate grammatical categories. All vowels were retained when stressed but were either weakened (= “reduced-grade”) or totally eliminated altogether (= “zero-grade”) when unstressed: the choice between the reduced-grade versus the zero-grade depended upon the position of the unstressed syllable relative to the stressed syllable as well as upon the laws of syllabicity in effect at that time. Finally, it was at the end of this stage of development that the syllabic allophones of the resonants came into being and possibly the introvertive harmonic consonant clusters as well. These alternations are discussed in detail in Gamkrelidze—Mačavariani 1982 and Tuite 2017 — see also Harris 1985. It was probably at this time that the complex consonant clusters came into being.

The stress-conditioned ablaut alternations gave rise to two distinct forms of extended stems:

State 1: Root in full-grade and accented, suffix in zero-grade: **C₁VC₂-C₃-*.

State 2: Root in zero-grade, suffix in full-grade and accented: **C₁C₂-VC₃-*.

These alternating patterns, which characterize the bimorphemic verbal stems, may be illustrated by the following examples (cf. Gamkrelidze 1966:74 and 1967:714):

State 1 (Intransitive)

**der-k’*- ‘to bend, to stoop’

**šker-t’*- ‘to go out’

**k’er-b-* ‘to gather’

State 2 (Transitive)

**dr-ek’*- ‘to bend’

**škr-et’*- ‘to extinguish’

**k’r-eb-* ‘to collect’

When a full-grade suffix was added to such stems, the preceding full-grade vowel was replaced by either reduced-grade or zero-grade:

State 1	State 2
<i>*der-k'- > *dʁ-k'-a</i>	<i>*dr-ek'- > *dr-ik'-e</i>
<i>*šker-t'- > *škʁ-t'-a</i>	<i>*škr-et'- > *škr-it'-e</i>
<i>*k'er-b- > *k'ʁ-b-a</i>	<i>*k'r-eb- > *k'r-ib-e</i>

Nominal stems also displayed these patterns, though, unlike the bimorphemic verbal stems, the same ablaut state was fixed throughout the paradigm (cf. Gamkrelidze 1967:714):

State 1	State 2
<i>*šax-ʃ- 'house'</i>	<i>*km-ar- 'husband'</i>
<i>*žax-ʃ- 'dog'</i>	<i>*cm-el- 'fat'</i>
<i>*k'wen-ʃ- 'marten'</i>	<i>*žm-ar- 'vinegar'</i>

Morphologically, the Kartvelian languages are all highly inflected; Georgian, for example, has six basic grammatical cases as well as eleven secondary cases. A notable characteristic of noun declension is the distinction of ergative and absolutive cases; the ergative case is used to mark the subject of transitive verbs, while the absolutive case is used to mark direct objects and the subject of intransitive verbs. It is the dative case, however, that is used to mark the subject of so-called “inverted verbs”. There are several other departures from canonical ergative-type constructions, so much so in Mingrelian, for instance, that this language no longer possesses any true ergative features. Adjectives normally precede the nouns they modify. Postpositions are the rule. Very important, and fully in agreement with the views expressed in this book, is the fact that Tuite (2017: 10—12) reconstructs stative-active alignment for the earliest phase of Proto-Kartvelian. (Nichols 1992:101 classifies Georgian as a stative-active language.)

Kartvelian verb morphology is particularly complicated — for example, Tuite (2004:978—981) lists thirteen distinctive functional elements that may be arrayed around a given verb root in Early Georgian, though they may not all appear simultaneously (Fähnrich 1994:78 lists twenty-three elements, including the root; Boeder 2005:22 lists sixteen elements for Modern Georgian); the overall scheme is as follows:

1. Preverb with more or less predictable directional meaning
 2. Preverb *mo-* ('hither')
 3. Preverbal clitic
 4. Morphological object prefix
 5. Morphological subject prefix
 6. Character or version vowel (German *Charaktervokal*)
- ROOT
7. Passive/inchoative or causative suffix

8. Plural absolutive suffix
9. Series marker (or “present/future stem formant”)
10. Imperfect stem suffix
11. Tense/mood vowel
12. Person/number suffix
13. Postposed clitics

This patterning can be reconstructed for Proto-Kartvelian as well. Specifically, Tuite (2017:2) notes that the core slots in Proto-Kartvelian verb structure include the root and a chain of suffixical morphemes of the shape *-VC-*. Lexically-specified elements are closest to the root, while productive derivational morphemes (such as causative and inchoative suffixes) are toward the middle, and inflectional elements are to the right. Tuite states that the verb suffixes originated as *-VC-* formants used to modify the Aktionsart (“lexical aspect”), aspect, or valence of the root.

The inflectional slots come next and include a character or version vowel to the left of the root — it is used to mark the relationship between the verb and its arguments (cf. Boeder 2005:34—38 for a discussion of the role of the character or version vowel; see also Rostovtsev-Popiel 2014). Next come the imperfect suffix and tense/aspect/mood suffix to the right of the root. A little further out are the subject and object prefixes to the left of the root and a suffix to the right indicating the plurality of the 1st and 2nd person grammatical subject.

The outermost slots include morphemes which appear to have originated as clitics. Tuite (2017:15) appends a rather helpful chart summarizing the structure of the Kartvelian verb.

Tuite (2017:12—13) summarizes his views on the structure of the verb in early Proto-Kartvelian as follows:

The early Kartvelian verb would have consisted in a verbal root optionally followed by a chain of */VC/* morphemes (modifying the Aktionsart or other semantic features of the root), surrounded by inflectional prefixes and suffixes. Only 1st- and 2nd-person core arguments would have governed agreement affixes in the verb; the paired singular and plural 3rd-person suffixes found in Georgian and Laz-Mingrelian took on those functions after Svan separated from the ancestral speech community.

On either side of the Proto-Kartvelian verb stem, and in the root itself, vowels contrasted with each other in paradigmatic sets. All four Kartvelian languages have a four-way contrast among preradical vowels (PRV), with strongly similar functions, which specialists have related to the categories of “version”, voice, valence or applicativity... A contrasting set of three vowels in the suffixal slot after the verb stem indicated past tense, subjunctive mood, and possibly iterative or permansive aspect (TAM). As for the Kartvelian verb root, it is likely that more than one grammatical category was signaled by vowel contrasts. In addition to the */a/ ~ /e/* alternation in the active-inactive verb-stem pairs discussed in this paper, the */i/* vocalism marking statives derived from theme-centered verbs also appears to be old in Kartvelian.

The structure of nouns in Modern Georgian is relatively simple: stem + plural + case + postposition. Modern Georgian has seven cases: nominative, ergative, dative, genitive, instrumental, adverbial, and vocative (Cherchi 1999:5—8; Fähnrich 1993:46—53). The dative also functions as the object case. Moreover, in addition to the basic grammatical cases listed above, there are eleven secondary cases. Old Georgian had an absolutive case as well — Fähnrich (1982:35) lists nine grammatical cases for Old Georgian. For Modern Svan, Tuite (1997:15) lists eight declension classes and six cases: nominative, dative, instrumental, adverbial, ergative, and genitive.

Kartvelian derivational morphology is rather complex and includes a large variety of prefixes and suffixes (for Georgian, cf. Fähnrich 1993:32—46). Rather long chains of such prefixes and suffixes are possible. Though Kartvelian verbs make use of both prefixes and suffixes, nouns, pronouns, and adjectives tend to prefer suffixes — prefixes are extremely rare. In early and medieval Georgian and Svan, preverbs were separable prefixes, and this was, undoubtedly, the situation in Proto-Kartvelian as well. Various types of compounds, as well as reduplication, are also common. Cf. Boeder 2005:42—47 for a synopsis of derivational morphology in the Kartvelian daughter languages.

Klimov (1964 and 1998) lists the following derivational affixes for Proto-Kartvelian (the transcription has been changed to conform with what is used in this book) (see also Fähnrich—Sardschweladse 1995; Fähnrich 2007):

Affix	Meaning
*a-	Verb prefix of causative
*-a	Suffix of deverbative action noun
*a-	Verb character (version) vowel
*-a	Subjective suffix
*-ad	Affix of adverbial derivation
*a- ... -en/-in	Circumfix of the causative verbs
*-am : *-m	Verb thematic suffix
*ga(n)-	Preverb of direction: ‘outside, outwards’
*gw-	Objective prefix
*-d	Verb suffix
*-d	Passive suffix
*-d	Subjective suffix
*-da	Clitic of condition
*da-	Preverb of direction: ‘down(wards) on surface’
*e-	Verb character (version) vowel
*-e	Conjunctive suffix
*-eb	Verb thematic suffix
*-eb	Plural suffix
*-ed : *-id	Verb extension
*-et	Toponymic suffix
*-et	Verb extension
*-ek’ : *-(i)k’	Verb extension

*-el	Affix of noun derivation
*-en : *-in	Derivatory suffix of causative verbs
*-es : *-(i)s	Verb extension
*-ex : *-ix	Verb extension
*-wn	Stem-forming enlargement
*i-	Subjective prefix
*i-	Objective prefix
*-ia	Diminutive suffix on substantives
*-ik'	Diminutive affix
*-il	Affix producing participles
*-il	Affix producing deverbative nouns
*-(i)s	Topoformative element
*-iš-eul-	Affix producing adjectives of similarity
*m-	Word-formation prefix (Georgian <i>m-</i> participial prefix)
*m- ... -e	Word-forming circumfix
*m- ... -el	Word-forming circumfix
*ma-	Word-forming prefix (found mainly on present participles)
*me-	Word-forming prefix
*me- ... -al	Word-forming circumfix
*me- ... -e	Word-forming circumfix
*mi-	Preverb of direction: 'aside from the speaker'
*mo-	Preverb of direction: 'in the direction towards the speaker'
*na-	Word-forming prefix of the past participle
*ne-	Word-forming prefix
*ni-	Word-forming prefix
*-(s)a-	Word-forming prefix
*-(s)i-	Word-forming prefix
*u-	Verb character vowel
*u-	Derivational prefix of participles
*-u	Derivational suffix of pejoratives
*u- ... -eš	Derivational circumfix of elative (in adjectives)
*-un	Suffix of causative verbs
*c'ar-	Preverb of direction: 'down, away, off'

18.6. INDO-EUROPEAN

18.6.1. ROOT STRUCTURE PATTERNING

In this section, we will be particularly concerned with tracing the most ancient patterning (see Chapter 20 of this book for more information).

Comparison of Proto-Indo-European with the other Nostratic daughter languages, especially Proto-Kartvelian and Proto-Afrasian, allows us to refine

Benveniste's theories concerning Proto-Indo-European root structure patterning (cf. Benveniste 1935:170—171; see also Lehmann 1952:17—18 and 2002:141—142). The most ancient patterning was probably as follows:

1. There were no initial vowels in the earliest form of Pre-Proto-Indo-European. Therefore, every root began with a consonant.
2. Originally, there were no initial consonant clusters either. Consequently, every root began with one and only one consonant.
3. Two basic syllable types existed: (A) $*C_1V$ and (B) $*C_1VC_2$, where C = any non-syllabic and V = any vowel. Permissible root forms coincided exactly with these two syllable types.
4. A verb stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root, as follows: $*C_1VC_2-VC_3-$. Any consonant could serve as a suffix.
5. Nominal stems, on the other hand, could be further extended by additional suffixes.

In the earliest form of Proto-Indo-European, there were three fundamental stem types: (A) verbal stems, (B) nominal and adjectival stems, and (C) pronominal and indeclinable stems.

The phonemicization of a strong stress accent during the Phonemic Stress Stage of Proto-Indo-European disrupted the root structure patterning outlined above. The positioning of the stress was morphologically distinctive, serving as a means to differentiate grammatical categories. All vowels were retained when stressed but were either weakened (= “reduced-grade”) or totally eliminated altogether (= “zero-grade”) when unstressed: the choice between the reduced-grade versus the zero-grade depended upon the position of the unstressed syllable relative to the stressed syllable as well as upon the laws of syllabicity in effect at that time. During the Phonemic Stress Stage of development, the basic rule was that only one full-grade vowel could occur in any polymorphemic form. Finally, it was at the end of this stage of development that the syllabic allophones of the resonants came into being.

Roots were monosyllabic and consisted of the root vowel between two consonants (cf. Benveniste 1935:170; Lehmann 2002:141): $*C_1VC_2-$. Unextended roots could be used as stems (also called “bases” or “themes”) by themselves (when used as nominal stems, they are known as “root nouns”), that is to say that they could function as words in the full sense of the term (cf. Burrow 1973:118; Lehmann 2002:142), or they could be further extended by means of suffixes.

The stress-conditioned ablaut alternations gave rise to two distinct forms of extended stems:

Type 1: Root in full-grade and accented, suffix in zero-grade: $*C_1\acute{V}C_2-C_3-$.

Type 2: Root in zero-grade, suffix in full-grade and accented: $*C_1C_2-\acute{V}C_3-$.

When used as a verb stem, Type 1 could undergo no further extension. However, Type 2 could be further extended by another suffix on the pattern $*C_1C_2-\acute{V}C_3-C_4-$, or

*-*n*- could be infix after the root and before the suffix, as follows: $*C_1C_2-n-\acute{V}C_3$ - (cf. Lehmann 1952:17—18 and 2002:142). Further addition of a determinative or suffixes pointed to a nominal stem (cf. Benveniste 1935:171; Lehmann 1952:17). In keeping with the rule that only one full-grade vowel could occur in any polymorphemic form, when a full-grade suffix was added to any stem, whether unextended or extended, the preceding full-grade vowel was replaced by either reduced-grade or zero-grade. We should note that this rule was no longer in effect in the Phonemic Pitch Stage of Proto-Indo-European. During the Phonemic Pitch Stage, many of these reduced-grade or zero-grade vowels were analogically replaced by full-grade vowels. Fortunately, enough traces of the earlier system remain in the early dialects, especially Sanskrit, that it is possible to reconstruct the original patterning.

Proto-Indo-European had the following root structure constraints:

1. When two non-glottalics appeared in a given root, they had to agree in voicing. A rule of progressive voicing assimilation may be set up to account for the elimination of roots whose consonantal elements originally did not agree in voicing: $*T \sim *B \rightarrow *T \sim *P$, $*B \sim *T \rightarrow *B \sim *D$, etc.
2. Two glottalics could not co-occur in a given root. A rule of regressive deglottalization may be set up to account for the elimination of roots containing two glottalics: $*C'VC' \rightarrow *CVC'$.

18.6.2. THE FORMATION OF NOUNS

This section is condensed from Chapter 20, §20.6. Disintegrating Indo-European distinguished a great many derivational suffixes, and these are described in detail in the traditional comparative grammars of Brugmann—Delbrück, Hirt, Meillet, and Meier—Brügger, among others. By far, the most common types were those ending in the thematic vowel $*-e/o-$, which could be added either directly to the undifferentiated root or to the root extended by one or more suffixes. The majority of these suffixes were not ancient, and it is possible to trace how the system was built up over time. It is clear, for example, that the thematic suffixes proliferated during the Disintegrating Indo-European period at the expense of other types (cf. Burrow 1973:122; Lehmann 2002:143) — thematic stems were rare in Hittite (cf. Sturtevant 1951:79, §114; Burrow 1973:120). The overall structure was as follows: root + suffix (one or more) + inflectional ending.

In Chapter 17, §17.4, we discussed the root structure patterning of the Nostratic parent language. Roots had the shape $*C_1VC_2-$. We saw that a stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: $*C_1VC_2+C_3-$. Any consonant could serve as a suffix. This was the patterning inherited by Pre-Proto-Indo-European, which means that the earliest suffixes predate the appearance of Proto-Indo-European proper as a distinct language. This is an important point.

It is not possible to discern any distinction in meaning or function in the suffixes that were inherited by Proto-Indo-European from Proto-Nostratic.

However, the newer suffixes that arose within Proto-Indo-European proper were most likely assigned specific meanings or functions. During the course of its development, Proto-Indo-European continued to create new lexical items, with the result that the original meaning or function of suffixes that had been created in Proto-Indo-European at earlier stages were mostly obscured by later developments. By the time the Disintegrating Indo-European period had been reached, the number of productive suffixes in use had grown considerably (see below).

During both the Phonemic Stress Stage and the Phonemic Pitch Stage of Proto-Indo-European, accentuation played a prominent role in nominal derivation, as noted by Burrow (1973:119—120):

The most important distinction in nominal derivation in early Indo-European was not between the different suffixes simple or compound, but in a difference of accentuation according to which a word formed with the same suffix functioned either as an action noun or agent noun/adjective. Accented on the root it was an action noun and neuter, accented on the suffix it was an agent noun or adjective and originally of the co-called ‘common gender’. The system is preserved to some extent in Sanskrit and is exemplified by such doublets as *bráhma* n. ‘prayer’ : *brahmā* m. ‘priest’, *yáśas* n. ‘glory’ : *yaśás-* m. ‘glorious’. The Sanskrit examples are not very numerous, and are only found in the case of a small number of suffixes; they are in fact the last remnants of a system dying out. In earlier Indo-European on the other hand the system was of very great extension and importance, and it is fundamental to the understanding not only of the formation of nouns but also of their declension.

According to Burrow, the rules governing the position of the accent may be stated as follows:

1. Neuter action nouns were accented on the stem in the so-called “strong” cases but on the ending in the so-called “weak” cases (cf. Burrow 1973:220—226).
2. Common gender agent noun/adjectives were accented on the suffix throughout the paradigm (cf. Burrow 1973:119).
3. Athematic verbs were accented on the stem in the singular but on the ending in the plural (and, later, in the dual as well) in the indicative but on the ending throughout the middle (cf. Burrow 1973:303).

This fairly simple system was replaced by a more elaborate one during the Disintegrating Proto-Indo-European period (note: Lundquist—Yates 2018 use the term “Proto-Nuclear Indo-European” [PNIE] for this period of development). For Disintegrating Proto-Indo-European, Fortson (2010:119—122) recognizes four distinct types of athematic stems, determined by the position of the accent as well as the position of the full-grade (or lengthened-grade) vowel (Fortson notes that additional types developed in individual daughter languages) (see also Watkins 1998:61—62; Beekes 1985:1 and 1995:174—176):

1. Acrostatic: fixed accent on the stem throughout the paradigm, but with ablaut changes between the strong and weak cases.
2. Proterokinetic (or proterodynamic): the stem is accented and in full-grade vowel in the strong cases, but both accent and full-grade vowel are shifted to the suffix in the weak cases.
3. Amphikinetic (or holokinetic or amphidynamic): the stem is accented in the strong cases, while the case ending is accented in the weak cases. Typically, the suffix is characterized by a lengthened *o*-grade vowel in the nominative singular and a short *o*-grade vowel in the accusative singular.
4. Hysterokinetic (or hysterdynamic): the suffix is accented in the strong cases, and the case ending in the weak cases.

Szemerényi (1996:162) adds a fifth type:

5. Mesostatic: the accent is on the suffix throughout the paradigm.

The thematic formations require special comment. It seems that thematic agent noun/adjectives were originally accented on the ending in the strong cases and on the stem in the weak cases. This pattern is the exact opposite of what is found in the neuter action nouns. The original form of the nominative singular consisted of the accented thematic vowel alone, **-é/ó*. It is this ending that is still found in the vocative singular in the daughter languages and in relic forms such as the word for the number ‘five’, **phenk^{wh}e* (**penq^ue* in Brugmann’s transcription [cf. Sanskrit *pāñca*, Greek *πέντε*]), perhaps for earlier **ph^hek^{wh}é*. The nominative singular in **-os* is a later formation and has the same origin as the genitive singular (cf. Szemerényi 1972a:156).

Benveniste (1935:174—187) devotes considerable attention to describing the origin of the most ancient nominal formations. He identifies the basic principles of nominal derivation, thus: An adjective such as Sanskrit *prthú-* ‘broad, wide, large, great, numerous’ is based upon a root **ph^hel-* ‘to stretch, to extend’ (Benveniste writes **pel-*), suffixed by the laryngeal **H* (Benveniste writes **-ə-*) found in Hittite *pal-ḫi-iš* ‘broad’. Adding the suffix **-t^h-* to the root yields two alternating stem types: type 1: **ph^hél-t^h-*, type 2: **ph^hl-ét^h-* (Benveniste writes **pél-t-* and **pl-ét-* respectively). Next, the laryngeal determinative **-H₂-* (Benveniste writes **-ə₂-*) is added to type 2, followed by **-ú-* (Benveniste writes *-éu-*). The addition of the accented **-ú-* results in the loss of the stem vowel: **ph^hl^{t^h}H₂ú-* (Benveniste writes **p^ltə₂éu-*) (> Sanskrit *prthú-ḥ* ‘broad, wide, large, great, numerous’, Greek *πλατύς* ‘wide, broad’). Benveniste then illustrates these principles with further examples.

18.6.3. SUMMARY / EARLIER STAGES OF DEVELOPMENT

Proto-Indo-European had a long and complex developmental history. Pre-Proto-Indo-European began as a branch of Eurasiatic, itself a branch of Nostratic. Most likely, it took shape on the Eurasian steppes to the north and east of the Caspian Sea. Its closest relatives at the time were Uralic and Altaic (cf. Greenberg 2000—

2002; Kortlandt 2010a [various papers]), with which it was in close geographical proximity. Gradually, its speakers migrated westward, reaching the shores of the Black Sea around 5,000 BCE (see Chapter 13, §13.2). There, they encountered early Caucasian languages (see Chapter 21 for details). That contact brought about profound changes in the phonology and morphology of Pre-Proto-Indo-European, eventually producing the proto-language reconstructed in the standard handbooks through a direct comparison of the attested daughter languages.

As shown by Lehmann (1995 and 2002), among others, there is persuasive evidence that Pre-Proto-Indo-European was an active-type language (see Chapter 20 of this book for details). The root structure patterning outlined above (§18.6.1) may be assigned to Pre-Proto-Indo-European and to early Proto-Indo-European. The history of Proto-Indo-European proper began with the phonemicization of a strong stress accent (see above). That change initiated the restructuring of the inherited vowel system, including the development of syllabic variants of the resonants in unaccented syllables: **CVRCV̇* > **CəRCV̇* > **CR̥CV̇* (see Chapter 4, §4.7). The restructuring of the vowel system was a lengthy, on-going process which continued throughout the history of Proto-Indo-European (that development is traced in Chapter 4). In part, through the normal process of language change over time and, in part, through contact with Caucasian languages, the morphology was also restructured. New case forms began to appear — some developed as a result of language contact (see Chapter 21), some developed from earlier forms that were assigned new functions, while others, such as the dual and plural endings in **-bʰi-* and **-mo-*, developed from earlier particles (cf. Blažek 2014; Lehmann 2002:146—150; R. Kim 2012). At the same time, new derivational elements began to appear in abundance, including preverbs. For more information, cf. Chapter 20, §20.10.

18.6.4. DERIVATIONAL SUFFIXES IN LATE PROTO-INDO-EUROPEAN

Regrettably, there is no comprehensive modern treatment of Proto-Indo-European derivational morphology (though there is a valuable synopsis in Lundquist—Yates 2018:2106—2113; see also Meier-Brügger 2010:321—373, 416—436; Blanc—Boehm [eds.] 2021). The following list summarizes what is found in Brugmann—Delbrück (1897—1916, vol. II/1 [1906]) and Brugmann (1904:311—354, summary 353—354, §433):

Derivational Suffixes	Brugmann— Delbrück	Function
<i>*-e/o-</i>	(<i>*-e/o-</i>)	Masculine/neuter nouns/adjectives
<i>*-eA-</i> [<i>*-aA-</i>] (> <i>*-ā-</i>)	(<i>*-ā-</i>)	Feminine nouns/adjectives
<i>*-tʰ(u)w-o-</i>	(<i>*-t(u)u-o-</i>)	Masculine/neuter adjectives
<i>*-tʰ(u)w-eA-</i>	(<i>*-t(u)u-ā-</i>)	Feminine adjectives
<i>*-tʰr-o-/*-tʰl-o-</i>	(<i>*-tr-o-/*-tl-o-</i>)	Masculine/neuter: instrument or place of action
<i>*-tʰr-eA-/*-tʰl-eA-</i>	(<i>*-tr-ā-/*-tl-ā-</i>)	Feminine: instrument or place of action

-(i)yo-	(-(i)io-)	Masculine/neuter nouns/adjectives
-(i)yeA-	(-(i)īā-)	Feminine nouns/adjectives
-(u)wo-	(-(u)uo-)	Masculine/neuter nouns/adjectives
-(u)weA-	(-(u)ūā-)	Feminine nouns/adjectives
-(ŋ)no-	(-(ŋ)no-)	Masculine/neuter deverbative nouns/adjectives
-(ŋ)neA-	(-(ŋ)nā-)	Feminine deverbative nouns/adjectives
-eno-	(-eno-)	Masculine/neuter participles and abstract nouns
-eneA-	(-enā-)	Feminine participles and abstract nouns
-i(H)no-/-Vyno-	(*-īno-/*-a ^x ino-)	Masculine/neuter secondary adjectives
-i(H)neA-/-VyneA-	(*-īnā-/*-a ^x inā-)	Feminine secondary adjectives
-th(ŋ)no-	(-t(ŋ)no-)	Masculine/neuter adjectives formed from adverbs of time
-th(ŋ)neA-	(-t(ŋ)nā-)	Feminine adjectives formed from adverbs of time
*-m(ŋ)no-/*me/ono-	(*-m(ŋ)no-/ *me/ono-)	Masculine/neuter middle (passive) participles from tense stems ending in the thematic vowel (*-e/o-)
*-m(ŋ)neA-/*me/oneA-	(*-m(ŋ)nā-/ *me/onā-)	Feminine middle (passive) participles from tense stems ending in the thematic vowel (*-e/o-)
-(ŋ)mo-	(-(ŋ)mo-)	Masculine/neuter participial suffix and superlative suffix; also nouns/adjectives
-(ŋ)meA-	(-(ŋ)mā-)	Feminine participial suffix and superlative suffix; also nouns/adjectives
-th(ŋ)mo-	(-t(ŋ)mo-)	Masculine/neuter superlative suffix
-th(ŋ)meA-	(-t(ŋ)mā-)	Feminine superlative suffix
-(r)ro-	(-(r)ro-)	Masculine/neuter nouns/adjectives
-(r)reA-	(-(r)rā-)	Feminine nouns/adjectives
-(th)ero-	(-(t)ero-)	Masculine/neuter comparative suffix
-(th)ereA-	(-(t)erā-)	Feminine comparative suffix
-(l)lo-/-e-lo-	(*-(l)lo-/*-e-lo-)	Masculine/neuter nouns/adjectives
-(l)leA-/-e-leA-	(*-(l)lā-/*-e-lā-)	Feminine nouns/adjectives
-dh-ro-/-dh-lo-	(*-dh-ro-/*-dh-lo-)	Masculine/neuter nouns/adjectives
-dh-reA-/-dh-leA-	(*-dh-rā-/*-dh-lā-)	Feminine nouns/adjectives
-bho-	(-bho-)	Masculine/neuter nouns
-bheA-	(-bhā-)	Feminine nouns
-tho-/-e-tho-	(*-to-/*-e-to-)	Masculine/neuter participial adjectives and nouns connected with them
-theA-/-e-theA-	(*-tā-/*-e-tā-)	Feminine participial adjectives and nouns connected with them
-theA-/-e-theA-)	(*-tā-[/-e-tā-])	Abstract nouns

*-tho-	(*to-)	Masculine/neuter suffix of comparison
*-theA-	(*tā-)	Feminine suffix of comparison
*-istho-	(*isto-)	Masculine/neuter superlative suffix
*-istheA-	(*istā-)	Feminine superlative suffix
-mṇ-tho-/-wṇ-tho-	(*mṇ-to-/*-uṇ-to-)	Masculine/neuter nouns
-mṇ-theA-/-wṇ-theA-	(*mṇ-tā-/*-uṇ-tā-)	Feminine nouns
*-kyho-	(*ko-)	Masculine/neuter nouns/adjectives
*-kyheA-	(*kā-)	Feminine nouns/adjectives
-(V)k ^h o-	(-(a ^x)qo-)	Masculine/neuter nouns/adjectives
-(V)k ^h eA-	(-(a ^x)qā-)	Feminine nouns/adjectives
-(i)sk ^h o-	(-(i)skō-)	Masculine/neuter nouns; verb suffix forming present stems (iteratives, duratives, or distributives)
-(i)sk ^h eA-	(-(i)skā-)	Feminine nouns; verb suffix forming present stems (iteratives, duratives, or distributives)
*-k'o-	(*go-)	Masculine/neuter nouns/adjectives
*-k'eA-	(*gā-)	Feminine nouns/adjectives
-ey/-oy-/-i-	(-eḷ-/-oḷ-/-i-)	Nouns/adjectives
-(ṇ)ni-/-e/o-ni-	(*-(ṇ)ni-/*-e/o-ni-)	Masculine/neuter nouns/adjectives
*-mi-	(*mi-)	(?)
-(ṛ)ri-/-(ḷ)li-	(*-(ṛ)ri-/*-(ḷ)li-)	(?)
*-thi-	(*ti-)	Agent nouns; abstract nouns
-theAth(i)-/-thuAth(i)-	(*-tāt(i)-/*-tūt(i)-)	Feminine abstract nouns from nouns and adjectives
-ew/-ow-/-u-	(-eṷ-/-oṷ-/-u-)	Nouns/adjectives
*-yu-	(*iṷ-)	(?)
-(ṇ)nu-	(-(ṇ)nu-)	Nouns/adjectives
-(ṛ)ru-/-(ḷ)lu-	(*-(ṛ)ru-/*-(ḷ)lu-)	Nouns/adjectives
*-thu-	(*tu-)	Deverbative nouns
-iE-/-yeE-	(*-ī-/*-iē-)	Feminine nouns
*-en-	(*en-)	Nouns
*-yen-	(*ien-)	Nouns
*-wen-	(*uēn-)	Nouns
*-men-	(*men-)	Nouns
-ṛ-/-r-/*-ṛH-	(*-ṛ-/*-r-/*-ṛ-)	Neuter nouns
-(th)er-	(-(t)er-)	Agent nouns
*-th-	(*t-)	Nouns/adjectives
*-nt ^h -	(*nt-)	Active participles
*-went ^h -	(*uent-)	Denominative adjectives
*-t'-	(*d-)	(?)
-kyh _h -/-kh-	(*k-/*-q-)	(?)
*-k'- (and *k'y ?)	(*g- [and *-ḡ- ?])	(?)
*-es-	(*es-)	Neuter nouns; adjectives; masculine/feminine nouns

-s-	(-s-)	Nouns
-H _o -s-	(-ə-s-)	Nouns
-i-s-	(-i-s-)	Nouns
-u-s- (-wes-)	(*-u-s- [*-ues-])	Nouns
-(i)yes-	(-(i)ies-)	Primary comparative suffix
-wes-	(-ues-)	Active perfect participle

Notes:

1. Taking into consideration Hittite and the other Anatolian languages, it is clear that a majority of the above derivational suffixes developed after the Anatolian languages became separated from the main speech community. Moreover, the Anatolian languages make use of several derivational suffixes not found in the Non-Anatolian daughter languages. For information on Hittite derivational morphology, cf. Hoffner—Melchert 2008:51—63; Sturtevant 1951:67—81.
2. Some of the above derivational suffixes have a rather limited distribution, and it may be questioned whether they should even be reconstructed for the Indo-European parent language.

18.7. YUKAGHIR

Nikolaeva (2006:79—83) lists a great variety of inflectional and derivational affixes found in both Tundra (Northern) and Kolyma (Southern) Yukaghir, together with their proposed Proto-Yukaghir reconstructions. They are listed in full below — the first column gives the attested affixes in Kolyma (Southern) Yukaghir, the second column gives the attested affixes in Tundra (Northern) Yukaghir, the third column gives the Proto-Yukaghir reconstructions, and the fourth column gives the meaning of the affix (in abbreviated form) (Nikolaeva's transcription has been retained):

Southern / Kolyma	Northern / Tundra	Proto-Yukaghir	Meaning
-a:/-e:		*-əW	ADV.LAT
-aj-/ej-/j-		*-(ə)j-	PERF
-a:q	-a:q	*-a:k	ADV.LOC
-bə-		*-wə/*-mpə-	INCH
-bə-/b-	-bə-/b-	*-mpə-	N
-bo:-	-bo:l-	*-mpəwl-	QUAL
	-buń-	*-mpuń-	DES
-č-	-č-	*-č-	CAUS, TR
-č-		*-č-	ITER
-ča:/-če:	-ča:/-če:	*-čəW	N
	-či:-	*-či:-	CAUS
-či:-		*-či:-	DEL
	-ča:n	*-či:	DIM
	-čəń-	*-čəń-	STAT
-də		*-də/*-ntə	INDEF

-də	-dəŋ	*-ntəŋ	ADV.DIR
-də-	-də-	*-ntə-	3POS
-də	-rə	*-δə	SS.ITER
-də-/-d-	-rə-/-r-	*-δə-	INTR, V
-də-	-də-	*-ntə-	CAUS, TR, V
-de:	-de:	*-nte:	DIM
-di:		*-δi:/*-nti:	TR
-d'ə	-d'ə	*-ńčə	FREQ
-d'ə-	-d'ə-	*-ńčə-	INTR
-d'ə-		*-ńčə-	TR
-d'ə-		*-ńčə-	N
-d'a:-/-d'e:-	-d'a:-/-d'e:-	*-ńčəW-	HAB
-di:-	-ri:-	*-δi:-	TR
-daj-/-dej-		*-δəj-/*-ntəj-	CAUS.PERF, TR.PERF
	-dək/-rək/-dəŋ/ -rəŋ	*-δək	SS.IMPF
-dik		*-ntik	PRON.PRED
-din	-din	*-ntin	DAT.POS, SUP
	-dič-/-rič-	*-δič-	CAUS.MULT
-(də)llə		*(ntə)llə	SS.PERF
-dejlə		*-ntəγələ	POS.ACC
-dejnə		*-ntəγənə	DS
-e:-	-e:-	*-e:-	CAUS, TR
-gə-/-γə-	-gə-/-γə-	*-ŋkə-/*-γə-	ITER
-gə-	-γə-	*-ŋkə-/*-γə-	HORT
-gə/-γə	-gə/-γə	*-ŋkə/*-γə	ITRJ
-gə	-γə	*-ŋkə	LOC.DS
-gə/-γə	-gə/-γə	*-ŋkə/*-γə	N, INTJ
-gi	-gi	*-γi	3POS
-gi:-	-gi:-	*-ŋki:/*-γi:-	TR
-gət	-γət	*-ŋkət	ABL
-gən	-γən	*-ŋkən	PROL
-gələ/-jlə		*-γələ	ACC
-gənə/-jnə		*-γənə	LOC, DS
	-γənə	*-γənə	LOC, DS, ACC
-gu(də)/-γu(də)	-gu(də)/-γu(də)	*-ŋku(ntə)/ *-γu(ntə)	ADV.DIR
-gətə/*-γətə		*-ŋkətə/*-γətə	ADV
	-γənək	*-ŋkənək/ *-γənək	IMP.FUT
-i:-	-i:-	*-i:-	CAUS, TR
-i:	-i:	*-i:	N
	-i:čə-	*-i:čə-	DIR
-j	-j	*-j	TR.1PL

-j	-j	*-j	INTR.3
-ja:-/-je:-		*-jəW-	INCH
-jə/-j	-jə/-j	*-jə	IMPF.PART
-ji:-	-ji:-	*-ji:-	ITER
-ji:-		*-ji:-	DIR
-jo:-		*-jəw-	QUAL
	-ji:l	*-ji:l	COLL
-jək	-jək	*-jək	INTR.2SG
-jə	-jəŋ	*-jəŋ	INTR.1SG
-(j)o:n-/-(j)o:d-		*-(j)o:nt-	SN
-j(ə)l'i	-j(ə)l'i	*-jəl'i	INTR.1PL
-j(ə)mət	-j(ə)mut	*-jəmət/*-jəmut	INTR.2PL
-k	-k	*-k	PRED
-k	-k	*-k	INTER.2SG
-k	-k	*-k	IMP
-l	-l	*-l	N, AN, OF, IPL, SF
-l	-l	*-l	PRON.ACC K
	-(l)a:-/(l)e:	*-(l)əW	INCH
-lə		*-lə	INSTR
-l'ə-	-l'ə-	*-l'ə-	INTR
-lə-	-lə-	*-lə-	PROH
-lə	-lə	*-lə	ACC
-l'ə	-l'ə	*-l'ə	POS
-l'ə-	-l'ə-	*-l'ə-	N
-le:		*-le:	DIM
-l(u)		*-l(u)	1/2
-lbə		*-lpə	INCH
	-ləŋ	*-ləŋ	PRED
-lək	-lək	*-lək	PRED, INSTR
-lək	-lək	*-lək	PROH
-l'əl	-l'əl	*-l'əl	EV
	-l'əl̩k	*-l'əl̩k	PRON.NOM
	-lədə	*-lədə/*-ləntə	INSTR
-m	-m	*-m	TR.3SG
-m	-m	*-m	INTER.1SG
-m-		*-m-	BP
-m-	-m-	*-m-	INCH
-mə	-mə	*-mə	PERF.PART
-mə	-mə	*-mə	N
-mə	-mə	*-mə	TEMP
-mə	-məŋ	*-məŋ	OF.1/2SG
-me:-		*-me:-	QUAL
	-mo:l-	*-məwl-	DEL
	-mk	*-mk	TR.2PL

-mək	-mək	*-mək	TR.2SG
-mət		*-mət	TR.2PL
-mələ/-mlə	-mələ/-mlə	*-mələ/*-mlə	OF.3SG
-n	-n	*-n	HORT.3SG
-n	-ń	*-ń	DAT
-n	-ń	*-ń	ADV
-n/-d	-n/-d	*-nt	GEN, ATTR
	-ŋ	*-ŋ	EMPH
-ŋ	-ŋ	*-ŋ	PRON.ATTR
	-ŋ	*-ŋ	TR.1SG
-na:-	-na:-	*-na:-	INCH
-n(ə)	-n(ə)	*-n(ə)	ADV.LOC, ADV.LAT
-nə-	-nə-	*-nə-	INTR
-ńə	-ńəŋ	*-ńəŋ	COM
-ńə/-ń-	-ńə/-ń-	*-ńə-	PROPR
-n-	-n-	*-n-	IMPF
	-na:-	*-na:-	INCH
-ńo:		*-ńöw	COM
-ŋi-	-ŋi-	*-ŋi-	PL
-ŋu-	-ŋu-	*-ŋu-	PL
-ŋa:	-ŋa:	*-ŋam	TR.3PL
	-ŋo:-	*-ŋəw-	RES
-ŋin	-ŋin	*-ŋin	DAT
-ńit, -ńut		*-ńit/*-ńut	SS.CONN
-ŋo:n		*-ŋəwn	TRANS
-ŋo:t		*-ŋəwt	TRANS
-ŋidə		*-ŋidə/*-ŋintə	COND.CONV
-ŋidə	-ŋidə	*-ŋintə	ADV.LAT
-ŋilə	-ŋilə	*-ŋilə	OF.3PL
	-ŋo:ri:-/-mo:ri:-	*-ŋəwri:-	TR
-nun(n)-	-nun(n)-	*-nun(n)-	HAB
-o:-	-o:-	*-əw-	RES, V
-o:l'-		*-o:l'-	DES
	-o:l-	*-əwl-	RES
	-o:l-	*-əwl-	TRANS
-o:k	-o:k	*-o:k	INTER.1PL
	-pə-	*-pə-	V
-pə/-p-	-pə/-p-	*-pə-	PL
-qa:-/-ke:-	-qa:-/-ke:-	*-kəW-	INCH
-qə/-kə		*-kə	ADJ
-rə- /-r-	-rə/-r-	*-rə-	CAUS, TR, APPL
	-rə/-r-	*-rə-	NONIT
-ri:-	-ri:-	*-ri:-	APPL
-raj-/-rej-	-raj-/-rej-	*-rəj-	PERF

-rkə-/rqə-	-rkə-/rqə-	*-rkə-	N
	-rəldə	*-rəltə	SS.PERF
	-rələk	*-rələk/*-δələk	SS.PERF
-š-		*-s-	ORD
-šə-/š-	-sə-/s-	*-sə-	CAUS, TR
-ši:-		*-si:-	CAUS
-šaj-/šej-		*-səj-	PERF
	-sči:-	*-sči:-	CAUS
	-səsči:-	*-səsči:-	CAUS
-ščil'e-		*-ščil'ə-	CAUS
-t	-t	*-t	ADV.ABL
-t	-r	*-δ	SS.IMPF
-t	-r	*-δ	N
-tə-/t-	-tə-/t-	*-tə-	FUT
-tə-/t-	-tə-/t-	*-tə-	CAUS, TR
	-ttə-	*-ttə-	CAUS, TR
	-tnə	*-tnə	ADV
-taj-/tej-	-taj-/tej-	*-təj-	PERF
	-ti:l'ə	*-ti:l'ə	CAUS
	-ttərəj/-ttrəj-	*-ttərəj	INT.CAUS
-təgə-/tkə-	-təgə-/tkə-	*-təγə/*-təŋkə-	AUGM
	-təgi-/tki-	*-təγi/*-təŋki-	AUGM
-u:	-u:	*-u:	N
-u:-	-u:-	*-u:-	INTR
	-wə	*-wə	INTR
	-wrə	*-wrə	N
-žə-/žu-		*-nčə-	ITER
-žə-		*-nčə-	TR
-ži:-		*-nči:-	CAUS, TR

Note: Cf. Nikolaeva 2006:xii—xiii for an explanation of the abbreviations.

18.8. URALIC

The Proto-Uralic root structure patterning was fairly straightforward (cf. Bakró-Nagy 1992, especially pp. 133—158):

1. There were no initial consonant clusters in Proto-Uralic (cf. Décsy 1990:26). Medial clusters were permitted, however (cf. Décsy 1990:27).
2. Three syllable types were permitted: **V*, **CV*, **CVC* (cf. Décsy 1990:34—35). Initially, **V* comes from earlier **HV*, upon loss of the preceding laryngeal.
3. All Proto-Uralic words ended in a vowel (cf. Décsy 1990:26 and 54).

4. Derivational suffixes had the form **-CV* (cf. Décsy 1990:58). Note: Proto-Uralic did not have prefixes or infixes (cf. Décsy 1990:58).

Proto-Uralic did not differentiate between nominal and verbal stems (cf. Décsy 1990:56). Only pronouns existed as an independent stem type. Moreover, adjectives probably did not exist as a separate grammatical category (cf. Abondolo 1998a:18).

Bakró-Nagy (1992:8 and 14) reconstructs the general structure of Proto-Uralic root morphemes as follows:

$$\#C(V) \left\{ \left\{ \begin{matrix} CCC \\ CC \\ C \end{matrix} \right\} V \right\} (+CV)\#$$

Bakró-Nagy (1992:14—15) divides the above root structure into the following two patterns (see also Collinder 1965:44—45):

Vowel-initial Patterns

V
VCV
VCCV
VCCCV
VCCCV
VCVCV
VCCVCV
VCV-CV
VCCV-CV
VCV-CCV

Consonant-initial Patterns

CV
CVCV
CVCCV
CVCCCV
CVCV-CV
CVCCV-CV
CVCCV-CCV
CVCCV-CV-CCV

Furthermore, she notes (1992:15):

1. Monosyllabic patterns (V and CV) reflect non-lexical morphemes like particles or pronouns.
2. In patterns below the horizontal line, the sequences following the hyphen (-CV, -CCV) represent derivational suffixes. Note: According to Collinder (1965:39), Proto-Uralic had the following kinds of suffixes (in the broadest sense): (1) derivational suffixes; (2) inflectional endings; and (3) enclitics (see also Décsy 1990:58). The suffixes had two variants, one with a front vowel (C \ddot{V} [Rédei writes C \check{s}]) and one with a back vowel (C \ddot{V} [Rédei writes C \check{x}]), which alternated in accordance with the rules of vowel harmony.
3. Several of the above patterns (#VCVCV#, #VCCVCV#, #VCCCV#, and #CVCCCV#) are extremely rare.

Collinder (1965:44) states that the most frequent stem types in Common Uralic and Common Finno-Ugrian were:

VCV, CVCV, VC₁C₂V, CVC₁C₂V

Stems with medial geminated consonants (*-pp-*, *-tt-*, *-kk-*) also occurred:

VC₁C₁V, CVC₁C₁V.

Aikio (2022:19—21) lists the following derivational suffixes, together with their functions, that are probably to be reconstructed for Proto-Uralic (see also Raun 1988b:565—568; Collinder 1960:220—228, 255—281 and 1963:104—122; Décsy 1990:60—65) (Aikio's transcription has been retained). Aikio also gives examples — these are not included here:

	Suffix	Function
Deverbative Nouns	*- <i>mA</i>	general nominalizer
	(?) *- <i>o</i> / (?) *- <i>w</i>	general nominalizer
	*- <i>pA</i>	active participle
	*- <i>ntA</i>	action noun
	*- <i>jA</i>	agent noun
	*- <i>śA</i>	participle with unclear semantics
	*- <i>kkAs(i)</i>	inclinator adjective or agent noun
	*- <i>mAktAmA</i>	negative participle
Denominative Nouns	*- <i>kA</i>	unclear semantics, forms both nouns and adjectives
	*- <i>kkA</i>	unclear semantics, forms both nouns and adjectives
	*- <i>kśi</i>	relational animate noun
	*- <i>ńśA</i>	collective animate noun
	*- <i>ksi</i>	unclear semantics
	*- <i>wiksi</i>	unclear semantics
	*- <i>ηA</i>	propriative adjective
	*- <i>ji</i>	propriative adjective
	*- <i>ktAmA</i>	caritive adjective
	*- <i>mpA</i>	moderative or comparative adjective
	*- <i>mtV</i>	ordinal number
Denominative Verbs	*- <i>tA-</i>	general verbalizer
	*- <i>ji-</i>	general verbalizer
	*- <i>li-</i>	general verbalizer
	*- <i>mi-</i>	transformative
	*- <i>mtA-</i>	factive
	*- <i>mtAw-</i>	transformative / stative (?)
	(?) *- <i>o-</i>	unclear semantics

Deverbative Verbs	*-tA-	causative
	*-ptA-	causative
	*-ktA-	causative
	*-w-	stative / automative passive
	*-li-	momentative / inchoative (?)
	*-lta	momentative (?)
	*-nti-	frequentive / imperative (?)
	*-kši-	frequentive (?)
	*-ji-	unclear semantics

Aikio (2022:21) mentions that compounding must have also been a highly productive means of word formation in Proto-Uralic, though he notes that relatively few such compounds can be reconstructed. He further mentions that all known examples involve nouns. Finally, he lists and discusses a rather small set of copulative compounds with the meanings ‘mother-in-law’ and ‘father-in-law’.

18.9. ALTAIC

Like Uralic-Yukaghir and Elamo-Dravidian, the Altaic languages are agglutinating in structure. Pronominal stems and particles were monosyllabic $*(C)V$, while nominal and verbal stems were typically disyllabic $*(C)VCV$ or $*(C)VCCV$. Polysyllabic stems could be derived from the disyllabic stems by the addition of suffixes. The addition of suffixes caused no changes in the vowel of the stem, but the vowels of the suffixes were subject to vowel harmony, which means that their vowels were adjusted to the vowel of the stem. The undifferentiated stems were real forms in themselves and could be used without additional suffixes. The suffixes, both derivational and inflectional, were added mechanically to the stem.

According to Starostin—Dybo—Mudrak (2003:22—24), the most common root structure pattern in Proto-Altaic was $*CVCV$, occasionally with a medial consonant cluster — $*CVCCV$. The final vowel, however, was very unstable: it is best preserved in (Manchu-)Tungus languages (though it is not always easily reconstructable due to morphological processes), and it is frequently dropped in Korean, Mongolian, and Turkic (in the latter family, in fact, in the majority of cases). Japanese usually preserves the final vowel, although its quality is normally lost; however, in cases where the final (medial) root consonant is lost, Japanese reflects original disyllables as monosyllables.

Japanese also has quite a number of monosyllabic verbal roots of the type $*CVC-$. These roots were originally disyllabic as well. However, reconstructing them as $*CVCa-$ is certainly incorrect. The Old Japanese verbal conjugation shows explicitly that the verbal stems can be subdivided into three main types: $*CVCa-$ (those having the gerund in $-e < *-a-i$), $*CVCə-$ (those having the gerund in $-i < *-ə-i$), and $*CVC-$ (those having the gerund in $-ji < *-i$). Here, there is a possibility that the latter type reflects original verbal roots $*CVCi$ (occasionally perhaps also $*CVCu$, though there are reasons to suppose that some of the latter actually merged

with the type **CVCə-*). The gerund form in **-i* may actually reflect the original final root vowel that had earlier disappeared before other verbal suffixes of the type **-V(CV)-*.

A small number of trisyllabic roots such as **alak^hu* ‘to walk’, **kabari* ‘oar’, **k^hobani* ‘armpit’, etc. can also be reconstructed for Proto-Altaic. It cannot be excluded that, in many or most of these cases, the final syllable was originally a suffix, but the deriving stem was not used separately, and the derivation had already become obscure in the proto-language.

The monosyllabic structure **(C)V* was typical for pronominal and auxiliary morphemes, but a small number of verbal (and, quite exceptionally, nominal) monosyllabic roots can also be reconstructed.

A special case involves a number of verbal roots that appear as monosyllables of the type **CV* in some languages but have the structure **CVl(V)* or, less frequently, **CVr(V)* in others. Starostin—Dybo—Mudrak reconstruct disyllables here, but note that the exceptional loss of **r* and **l* remains unexplained. A possible solution would be to reconstruct those roots as **CVC*, with occasional loss of the root-final resonant. However, the number of examples is not large, and the roots in question are frequently used as auxiliary verbs, which by itself could explain the exceptional phonetic development. It is also possible that **-r-* and **-l-* were originally suffixed and that the roots belonged instead to the rare type **CV*. Starostin—Dybo—Mudrak note that the problem requires further investigation.

There were four fundamental stem types in Proto-Altaic:

1. Verbal stems
2. Nominal and adjectival stems
3. Pronouns
4. Particles

There was a strict distinction between nominal and verbal stems.

Starostin—Dybo—Mudrak (2003:173—220 [summary on page 220]) identify the following Proto-Altaic derivational suffixes (the transcription has been changed to conform with what is used in this book):

- *-b-* a) deverbative verbal passive/causative
b) denominative nominal (collective?)
- *-ph-* deverbative passive/instrumental
- *-m-* a) deverbative nominal
b) denominative nominal (adjectival)
- *-d-* denominative/deverbative adjectival
- *-t-* a) deverbative verbal intransitive/passive
b) denominative/deverbative adjectival
- *-th-* deverbative verbal transitive/motional
- *-kt^h-* denominative/deverbative adjectival
- *-n-* a) deverbative verbal intransitive (reflexive)
b) denominative nominal

- *-l- a) deverbative nominal
b) denominative nominal (attributive)
- *-r- a) deverbative nominal (intransitive)
b) denominative nominal (attributive)
- *-čh- a) denominative diminutive
b) deverbative verbal intensive
- *-ž- a) adjectival
b) intransitive (medial?)
- *-ly- verbal reciprocal
- *-ry- a) deverbative transitive
b) suffix of paired body parts
- *-y- denominative expressive
- *-s- a) denominative nominal (= pronominal)
b) deverbative/denominative desiderative/inchoative
- *-g- a) denominative/deverbative nominal
b) factitive/intensive deverbative verbal
- *-k- denominative nominal; suffix of small animals
- *-kh- a) attributive (→ denominative nominal)
b) diminutive
c) deverbative verbal
- *-ŋ- deverbative/denominative nominal

In her study of Transeurasian (TEA) verb morphology, Robbeets (2015) identifies the following shared forms (she includes Japonic and Korean):

Proto-TEA (Altaic)	Proto- Japonic	Proto- Korean	Proto- Tungusic	Proto- Mongolic	Proto- Turkic
* <i>ana</i> - negation	* <i>ana</i> - negation	* <i>an</i> - negation	* <i>ana</i> - negation		[* <i>an</i> -] negation
* <i>ə</i> - negation			* <i>e</i> - negation	* <i>e-se</i> - negation	* <i>e</i> - negation
*-l <i>A</i> - manipu- lative	*-r <i>a</i> - manipu- lative		*-l <i>Ā</i> - manipu- lative	*-l <i>A</i> - manipu- lative	*-l <i>A</i> - manipu- lative
*-n <i>A</i> - processive	*-n <i>a</i> - processive	*-n <i>O</i> - processive	*-n <i>A</i> - processive	*-n <i>A</i> - processive	*-(<i>X</i>)n- processive
*(-)k <i>i</i> - 'do, make' iconic	*-k <i>a</i> - iconic	*-k <i>i</i> - iconic	*-k <i>i</i> - iconic	*(-)k <i>i</i> - 'do, make' iconic	*k <i>i</i> (-) <i>l</i> -/ *-k <i>l</i> - 'do, make' iconic
*-m <i>A</i> - inclination	*-m <i>a</i> - inclination	*-m <i>O</i> - inclination	*-m <i>A</i> - inclination	*-m <i>A</i> - inclination	
*-g <i>A</i> - inchoative	*-k <i>a</i> - inchoative	*-k(<i>O</i>)- inchoative	*-g <i>A</i> - inchoative	*-g <i>A</i> - inchoative	*-(<i>X</i>)k- ~ *-(<i>X</i>)g- inchoative

Proto-TEA (Altaic)	Proto-Japonic	Proto-Korean	Proto-Tungusic	Proto-Mongolic	Proto-Turkic
*-ti- causative	*-ta- causative passive	*-ti- causative passive	*-ti- causative passive	*-ti- causative	*-tI- causative passive
*-pU- reflexive anticaus.	*-pa- reflexive anticaus.	*-pO- anti- causative	*-p- reflexive anticaus.	*-βU- reflexive anticaus.	*-U- reflexive anticaus.
*-dA- fientive	*-ya- fientive passive		*-dĀ- fientive	*-dA- fientive passive	*-(A)d- fientive anticaus.
*-rA- anticaus.	*-ra- anticaus.	*-(u)l- anticaus.	*-rA- anticaus.	*-rA- anticaus.	*-rA- anticaus.
*-gi- creative causative	*-(k)i- creative causative anticaus.	*-ki- creative causative passive	*-gĭ- creative causative		
*-rA lexical NML	*-ra lexical NML	*-l lexical NML	*-rA lexical NML	*-r lexical NML	*-rV lexical NML
	*-wo-ra clausal NML	*-wo-l clausal NML	*-rA clausal NML	*-r clausal NML	
	*-wo-ra relativizer	*-wo-l relativizer	*-rA relativizer		*-rV relativizer
	*-wo-ra finite	*-wo-l finite	*-rA finite	*-r finite	*-rV finite
*-mA lexical NML	*-m lexical NML	*-m lexical NML	*-mA lexical NML	*-mA ~ *-m lexical NML	*-mA ~ *-m lexical NML
	*-wo-m clausal NML	*-wo-m clausal NML	*-mA clausal NML	*-mA ~ *-m clausal NML	
	*-wo-m finite	*-wo-m finite	*-mA finite	*-mA ~ *-m finite	
*-n lexical NML	*-n lex. NML	*-n lexi. NML	*-nA ~ *-n lex. NML	*-n lex. NML	*-n lex. NML
	*-wo-n clausal NML	*-wo-n clausal NML	*-nA ~ *-n clausal NML	*-n clausal NML	*-n clausal NML
	*-wo-n relativizer	*-wo-n relativizer			*-n relativizer
	*-wo-n finite	*-wo-n finite	*-nA ~ *-n finite	*-n finite	*-n finite

Proto-TEA (Altaic)	Proto- Japonic	Proto- Korean	Proto- Tungusic	Proto- Mongolic	Proto- Turkic
* <i>-xA ~ *-kA</i> resulative lexical NML	* <i>-ka</i> resulative lexical NML	* <i>-ka(-)i</i> resulative lexical NML	* <i>-xĀ ~ *-kĀ</i> resulative lexical NML	* <i>-xA ~ *-kA</i> resulative lexical NML	* <i>-xA ~ *-kA</i> resulative lexical NML
			* <i>-xĀ ~ *-kĀ</i> clausal NML	* <i>-xA ~ *-kA</i> clausal NML	
	* <i>-ka</i> relativizer		* <i>-xĀ ~ *-kĀ</i> relativizer	* <i>-xA ~ *-kA</i> relativizer	* <i>-xA ~ *-kA</i> PFV.FUT relativizer
	* <i>-ka</i> finite		* <i>-xĀ ~ *-kĀ</i> past finite	* <i>-xA ~ *-kA</i> past finite	* <i>-xA ~ *-kA</i> future finite
* <i>-sA</i> resultative lexical NML	* <i>-sa</i> resultative lexical NML		* <i>-sA ~ *-sĪ</i> < * <i>sA-Ī</i> resultative lexical NML	* <i>-sA ~ *-sĪ</i> < * <i>sA-Ī</i> resultative lexical NML	
			* <i>-sA ~ *-sĪ</i> clausal NML	* <i>-sA ~ *-sĪ</i> clausal NML	* <i>-sA</i> perfective clausal NML
			* <i>-sA ~ *-sĪ</i> relativizer		
	* <i>-sa</i> finite		* <i>-sA ~ *-sĪ</i> finite	* <i>-sA ~ *-sĪ</i> finite	* <i>-sA</i> past finite
* <i>-i ~ -∅</i> nominal- izer	* <i>-i ~ -∅</i> nominal- izer infinitive converb	* <i>-i ~ -∅</i> nominal- izer converb adverb	* <i>-ī ~ -∅</i> nominal- izer	* <i>-i ~ -∅</i> nominal- izer converb adverb	* <i>-I ~ -∅</i> nominal- izer infinitive converb adverb
* <i>-xU ~ *-kU</i> nominal- izer infinitive	* <i>-ku</i> nominal- izer converb adverb	* <i>-k(Λ) ~</i> * <i>-kū</i> nominal- izer infinitive converb adverb	* <i>-xū ~ *-kū</i> nominal- izer converb adverb	* <i>-xU ~ *-kU</i> nominal- izer infinitive converb	* <i>-xU ~ *-kU</i> nominal- izer infinitive
* <i>-∅</i> imperative	* <i>-∅</i> imperative	* <i>-∅</i> imperative	* <i>-∅</i> imperative	* <i>-∅</i> imperative	* <i>-∅</i> imperative

Note: Abbreviations: NML = nominalizer; PFV = perfective; FUT = future.

Let us now look at the individual branches. According to Johanson (1998a:35):

The structure of the Turkic word is agglutinative, that is characterised by a highly synthetic structure with numerous bound morphemes, and a juxtaposing technique with clear-cut morpheme boundaries and predictable allomorphic variation.

As Johanson (1998a:36) further points out, long sequences of morphs are possible. Moreover, there is a considerable morphological regularity in the Turkic languages:

The morphemes have few and phonologically predictable allomorphs, added rather mechanically to the stem according to the rules of assimilation mentioned above. The agglutinative technique yields transparency: regular, easily segmentable structures.

As a general rule (Johanson 1998a:36):

... Turkic languages basically lack declensional and conjugational classes, irregular verbs, suppletive forms, etc.

Finally (Johanson 1998a:37):

The order of suffixes is subject to rigid rules. Suffixes form distributional classes according to their ability to occupy relative positions within the word, that is their relative distance to the primary stem. Suffixes modifying the primary stem directly are closest to it, which means that derivational suffixes precede inflectional ones. Each added suffix tends to modify the whole preceding stem, e.g. Kirghiz *üylörömdö* ('house + plural + my + in') 'in my houses'.

In the Turkic languages, verb stems are sharply distinguished from noun stems. As noted above, derivational suffixes can be added directly to such stems, yielding the following four derivational types:

1. Denominative verb stems;
2. Deverbative verb stems;
3. Denominative noun stems;
4. Deverbative noun stems.

However, as noted by Erdal (2004:138—139, §3.01), in Old Turkic, the rule that derivational suffixes precede inflectional suffixes applies mainly to verb stems. In noun stems, on the other hand, derivational suffixes can follow inflectional suffixes. Nonetheless, the distinction between the above four types of suffixes is clear.

Proto-Mongolic word structure was also agglutinative, with derivational and inflectional suffixes added fairly mechanically to a noun or verb stem (cf. Janhunen 2003a:10). Noun stems were not as sharply distinguished from verb stems in Proto-

Mongolic as in Turkic, and both stem types could have an identical shape — Janhunen (2003a:10) cites **emkü*- ‘to put into the mouth’ as against **emkü* ‘bite’ as examples. As in Turkic, the following four derivational types existed:

1. Denominative verb stems;
2. Deverbative verb stems;
3. Denominative noun stems;
4. Deverbative noun stems.

For (Manchu-)Tungus, we will focus here exclusively on Manchu derivational morphology. It should be noted that, in her 2002 *Manchu Grammar*, Liliya M. Gorelova brings in a lot of information from other Altaic languages to illustrate and contrast points of Manchu grammar.

According to Gorelova (2002:123), Manchu is the most analytical Altaic language, with a relatively underdeveloped inflectional morphology. Different parts of speech are not sharply distinguished. Nonetheless, verb classes can be clearly identified by their suffixes, which are both uniform and specific. Gorelova (2002: 123) lists the following verb suffixes: *-mbi*, *-mbumbi*, *-ka/-ko/-ke*, *-ha/-ho/-he*, *-ra/-ro/-re*, *-habi/-hobi/-hebi*, *-mbihe*, *-kini*, *-me*, *-fi* (*-pi*), *-ci*, and *-cibe*. Noun suffixes, on the other hand, are not as numerous and uniform as verb suffixes. Most nouns are derivative (cf. Gorelova 2002:194). The rules of vowel harmony apply to the majority of these suffixes, both nominal and verbal. (Similar rules are found in Turkic [cf. Johanson 1998a:32—34] and Mongolic [cf. Janhunen 2003a:8—12].)

As noted by Sinor (1968:260), each Manchu word is, or can be, composed of the following elements: root + one or several derivational suffixes + one or several inflectional endings (see also Gorelova 2002:239). Unextended roots can be used as full words in and of themselves. In general, adding suffixes does not cause any changes to the root. The same four derivational types existed in (Manchu-)Tungus as in Turkic and Proto-Mongolic (see above).

For more information on Old Turkic noun derivation, cf. Erdal 2004:145—156, and for verb derivation, cf. Erdal 2004:227—228; see also Erdal 1991. For details on Manchu noun derivation, cf. Gorelova 2002:194—200, and for verb derivation, cf. Gorelova 2002:233—239. For specifics on Written Mongolian noun derivation, cf. Hambis 1945:5—13, and for verb derivation, cf. Hambis 1945:41—47; see also Kempf 2013.

18.10. CHUKCHI-KAMCHATKAN

The Chukchi-Kamchatkan languages are agglutinating (cf. Fortescue 2005:439). In Chukchi, however, some fusion has occurred, particularly in the verb. Chukchi nouns distinguish singular from plural. Fortescue (2005:426—427) lists seven cases for Proto-Chukchi-Kamchatkan: absolutive, dative, locative, comitative 1 (‘together with’), comitative 2 (‘in the presence of’), instrumental, and referential (‘oriented

towards, about, concerning, because of’); with the following additional four cases for Proto-Chukotian: ablative, vialis (‘past or via’), allative, and attributive. Typical of the Chukotian branch is case marking of subjects and direct objects on the basis of an ergative-absolutive system (cf. Fortescue 2005:426), while Kamchadal / Itelmen has nominative-accusative alignment. There are two inflectional classes: class 1 covers inanimates and also human common nouns, while class 2 covers individualized persons, including certain kinship terms. Chukchi and Koryak also exhibit a certain degree of incorporation, though it is not as extensively used as in Eskimo-Aleut. Verbs clearly distinguish between transitive and intransitive, with the ergative being used in conjunction with transitive verbs (verb morphology is summarized in Fortescue 2005:428—432). Chukchi employs postpositions exclusively. Chukchi word order is rather free, with OV being slightly more predominant than VO.

Proto-Chukchi-Kamchatkan syllable structure was relatively simple *(C)V(C), with strict restrictions on consonant clusters (cf. Fortescue 2005:439).

Fortescue (2005:402—425) lists and discusses a great variety of Chukchi-Kamchatkan derivational affixes. The following is a summary of these affixes (PCK = Proto-Chukchi-Kamchatkan; PC = Proto-Chukotian; PI = Proto-Itelmen):

1. PCK *æ- -kæ = predicative (negative) formant (?)
2. PCK? *æm- ‘only’
3. PC *æmqən- ‘every’
4. PCK *-æt- = verbalizer [from *-ηæt- (?); less intensive/active than *-æv-]
5. PCK? *-æv- = verbalizer
6. PC *-cæ(η)- ‘times’
7. PC *-cir- ‘repeatedly (over a time)’
8. PCK? *-cit- ‘one after another’
9. PC *-cηat- = intensifier
10. PC *-c(ə)ηə(n) ‘big or bad’
11. PC *-cræt- ‘repeatedly’
12. PC *-crə(n) ‘(one that is) most’
13. PC *-crenaη ‘something like’
14. PC *-curm(ə)n ‘edge of’
15. PC *cəyi- ‘almost’
16. PC *-cəku(n) ‘inside’
17. PC *ðæ- -η(ə)- ‘want to’
18. PCK *ðən- = transitivity
19. PC *yəmyæ- ‘every or any’
20. PCK? *-yiniv ‘collection or group’
21. PC *-yiη ‘underneath’
22. PCK? *-yəηə(n) ‘quality or action of’
23. PC *-icηə(n) ‘instrument for -ing’
24. PCK *inæ- = antipassive [or detransitivizer]
25. PCK *-inæ = possessive (‘pertaining to’)
26. PCK *-inæη(æ) ‘instrument for -ing’

27. PC *-janv(ə) 'place with much'
28. PCK? *-jyut 'in order to'
29. PC *-jikwi- 'along'
30. PC *-jɨə(n) 'big'
31. PCK? *-jo = passive participle
32. PC *-jolɣə(n) 'container for'
33. PC *-jut(æ) 'each (a certain quantity)'
34. PC *-jərr(ən) 'set or group of'
35. PC *-jəv- = intensifier
36. PCK *kæ- -linæ '(one) having'
37. PCK? *-kinæ 'something associated with'
38. PC *-kv(ən) 'something covering'
39. PCK? *-la- 'several (do)'
40. PC *-læŋu 'at a time'
41. PC *-(no)lɨ(ən) 'edge or slope of'
42. PC *-lq(ən) '(on) top of'
43. PC *-lqiv- = semifactive (?)
44. PC *-lqəl 'something intended for'
45. PCK? *-lræt- = continuous or repeated action
46. PCK *-lrə(n) 'one who -s'
47. PC *-lwən 'collection of'
48. PCK *ləyi- 'real(ly)'
49. PC *-ləku(n) 'between or among'
50. PI *mæc- 'somewhat (more)'
51. PC *-macə(ŋ) 'while -ing'
52. PC *-mil 'like'
53. PC *-mk(ən) 'group of'
54. PCK *næ- = passive
55. PC *-næqu 'big'
56. PC *nuŋ- = negative formant
57. PCK *-nv(ə) 'place of -ing'
58. PCK? *nə- -qinæ = adjective formant
59. PC *nə- -ræw = adverb formant
60. PCK? *-(ə)ŋ = (comparative) adverb formant
61. PC *-ɨit '(whole) period of'
62. PC *-ɨtæt- = intensifier
63. PC *-ɨvo- 'begin to'
64. PC *-ɨərtə- 'catch'
65. PC *-pil 'little'
66. PCK? *pəl- 'completely'
67. PC *-pət 'piece of'
68. PCK *-q = adverb formant
69. PC *qæj- 'young (of animal)'
70. PC *-qæv(kinæ) = ordinal formant
71. PC *-ræt 'set of'

72. PCK *-ryæri 'a group of (so many)'
73. PC *-ril 'set or frame of' [inanimate only]
74. PCK *-rur- = inchoative or collective [that is, intensive (?)]
75. PCK? *tæ- -ŋ(ə) 'make'
76. PC *-tæyən 'near or at the edge of'
77. PCK *-tku- = frequent or protracted action
78. PCK? *-tkən 'on (tip or top of)'
79. PC *-turæ(v)- 'un-'
80. PC *-tva- = resultative state
81. PCK *-tvi- 'become'
82. PC *-təvæ- 'remove'
83. PC *-u- 'acquire or consume'
84. PCK? *-vəlŋə- = reciprocal action
85. PC *-vərrə(n) 'likeness of'

Nearly all of the above derivational affixes arose within Chukchi-Kamchatkan proper and do not go back to Proto-Nostratic.

18.11. GILYAK / NIVKH

According to Gruzdeva (1998:16):

Nivkh is an agglutinating synthetic language which admits, however, polysemy of morphemes. *ESD* [East Sakhalin Dialect] displays also some analytical features. One of [the] moot points of Nivkh morphology is a problem of incorporation. The question is about such constructions as *attribute + head word* ... and *direct object + verb* ..., which are sometimes considered as incorporated complexes. This point of view is based on the fact that within these two constructions the words form particularly close units not only syntactically, but also phonologically in terms of alternation of the initial segments of second words...

It is generally said that Nivkh distinguishes eight word classes, i.e., nouns, numerals, pronouns, verbs, adverbs, graphic words, connective words (including postpositions, sentence connectives, and particles), and interjections. The class 'adjective' does not exist, the semantic function of adjectives being performed by qualitative verbs, which are characterized by all verbal categories...

Gilyak / Nivkh nouns make use of both prefixes and suffixes, following two basic patterns: (1) root + suffix(es) and (2) prefix + root + suffix(es). There are currently two numbers: singular and plural. However, a dual also once existed, and it has left traces in the modern dialects. The general scheme is as follows: stem + number + case. Amur has eight cases (nominative, dative-accusative, comparative, locative, locative-ablative, dative-additive, limitative, and instrumental), while East Sakhalin has seven, lacking the locative (cf. Gruzdeva 1998:18). There is also a vocative.

Gruzdeva (1998:22) notes that there are three means of noun derivation in Gilyak / Nivkh: (1) suffixation, (2) substantivization, and (3) compounding of stems. She lists the following derivational suffixes:

1. Amur *-s*, East Sakhalin *-r* indicating an instrument of action;
2. *-f* indicating place of action;
3. *-k* indicating an object/person;

Nouns can also be derived from finite verb forms by means of the suffixes (Amur) *-dy/-tv*, (East Sakhalin) *-d/-nd/-nt*. Compound nouns are formed in accordance with the following patterns: (1) attribute + head noun and (2) direct object + attribute (participle) + head noun. Cf. Gruzdeva 1998:22—23.

As with nouns, Gilyak / Nivkh verbs make use of both prefixes and suffixes, following two basic patterns: (1) root + suffix(es) and (2) prefix + root + suffix(es). Typically, the suffixes follow the root in the following order: root + transitive / negative / tense-aspect / causative / modal / evidential / mood / number. More than one aspect or modal marker may appear on the verb.

Verb derivation makes use of both suffixes and compounding of stems.

Fortescue (2016:168—179) lists the following Gilyak / Nivkh affixes:

	Amur	East Sakhalin	South Sakhalin	Proto-Nivkh
<i>Number and Case</i>				
plural	-ku/-yu/-xu/ -gu	-kun/-yun/ -xun/-gun	-kun/-xun	*-kun
comitative/associative (dual)	-ke/-ye/-ge	-kin/-yin	-kin/-xin	*-kin
comitative/associative (plural)	-ko(n)/ -yo(n)/ -go(n)	-kunu/-yunu	-kun/-xun	*-kunu
instrumental	-kir/-yir/ -xir/-gir	-kis/-yis/ -kir/-yir	-kis/-xis	*-kir
comparative standard	-ək	-ak		*-ak
causative	-(a)χ	-(a)χ	-(a)χ	*-ar or *-ay
ablative/locative	-ux	-ux	-ux/-uf	*-uy
perlative	-uye	-(u)ye/-uxe		*-uye
locative	-(u)in			
allative/dative	-toχ/-doχ/ -r(o)χ	-toχ/-rχ	-doχ/-roχ/ -toχ/-rχ	*-tor or *-dor
terminative/limitative	-toyo/-thəkə/ -thχa	-toyo	-toyo/-tayo	*-toro/ *-doro; *-taka, *-tra
vocative/exclamatory	-a/-o/-e/-əj	-aj/-ej/-e/-o	-a/-e/-ei/-o	*-aj, *-o, *-e, *-a

	Amur	East Sakhalin	South Sakhalin	Proto-Nivkh
<i>Person</i>				
1st sg.	nʸ(i)-	nʸ(i)-	nʸ(i)-/n-	*nʸi-
2nd sg.	čʰ(i)-	čʰ(i)-	č(i)-/d-	*či-
3rd sg.	i-/j-/v-	i-/j(a)-	j(i)-	*ivŋ-
reflexive	pʰ(i)-	pʰ(i)-	p(i)-	*pi-
reciprocal	u-/v-	u-/w-	o-	*w(u)-

	Amur	East Sakhalin	South Sakhalin	Proto-Nivkh
<i>Verbal</i>				
indicative/nominalizer	-dʸ	-d/-nt/-nd	-nt	*-nt
future	-nə-	-i-/j-	-i-	*-inə-
causative	-gu-/ku-	-(ŋ)ku-/gu-/ -ŋ-/ŋg-	-ŋk(u)-	*-ŋku-
transitivizer	-u-	-u-	-u-	*-u-
completive	-kət-/xət-	-rar-/γar-	-γar-/χar-	*-gar- or *-kar-
resultative	-kəta-	-rare-		*-gare- or *-kare-
stative continuative	-tata-/data-	-data-	-data-	*-data-
dynamic continuative	-turŋu-/ -durŋu-			
progressive	-ivi-/ivu-	-ifu-/ivu-	-fo-	*-ivu-
iterative	-čū-			
onomatopoeic iterative	-ju-	-jo-	-jo-/ju-	*-ju-/*-jo-
habitual	-xə-	-xə-		*-yə-
permanent property	-la	-la	-la	*-la
diminutive	-jo	(-jo)	-lə	*-jo
elative	-kar	-katn		*-gar or *-kar
negative	-qavr-/ləγə	-qavr-/ -ravr-	-qavr-/ -ravr-	*-qavr-
negative habitual, never	-ksu-/əγzu-	-aγzu-	-xsu-	*-kzu-
intentional	-inə-	-inə-	-i-	*-inə-
desiderative		-arnʸi-	-arnʸi-	*-aγnʸi-
negative desiderative	-molo-			
negative disposition	-ker-	-ger-		*-ker- or *-ger-

	Amur	East Sakhalin	South Sakhalin	Proto-Nivkh
<i>Verbal</i> (continued)				
negative potential	-jiki-/iki-/ -iručez-	-rer-/ter-		*-der-
negative purposive (lest)	-iləkr-	-ilakr-		*-ilakr-
epistemic (apparently)	-bən ^y evo-	-jaq(na)-/ -jeq(na)-		*-jaq(a)na- or *-jeq(a)na-
narrative/quotational	-qan(a)/ -(ja)ṛana	-qan(a)/ -jara(n)a		*-qana or *-gana
imperative 2nd sg.	-j(a)	-j(a)	-ja	*-ja
imperative 2nd pl.	-pe/-ve	-(n)ave/-ve	-ve	*-be
hortative 1st du.	-nəte	-nate	-nta/-nate	*-nade or *-nate
hortative 1st pl.	-da	-da		*-da or *-ra
permissive	-nəhta/-gira/ -gīrla			
subjunctive	-qar	-qar		*-qar or *-gar
optative	-razo	-raro/-ṣajro		*-ra(j)ro
suggestion ('should')		-ṇqa/-ṇra		
no doubt	-kide/-kida/ -ṡitlo/-bara/ -rar	-ṡido/-ṡidi/ -rar		*-kide/ *-kitlo or *-gitle/ *-gitlo
mirative	-čari	-čari		*-čari
mock surprise/ nevertheless	-rej/-vej			
negative assumption	-tla/-rla	-tlo/-rlo		*-rla or *-rlo
preventative	-jra/-nəra	-inəṇra/ -jaṇra		*-(inə)ṇra
interrogative	-la/-l(o)	-la/-l(u)	-l(u)/-lo	*-la or *-lo
focal interrogative	-ṇa/-at(a)	-ṇa/-ṇə/-ara	-at(a) -ṇu/-ṇa	*-ṇa and *-ata
indirect speech	-vur/-vut	-vur/-vut		*-vur/*-vut
hearsay	-furu	-furu		*-puru
irreal apodosis	-for(a)			

	Amur	East Sakhalin	South Sakhalin	Proto-Nivkh
<i>Focal and Scalar</i>				
parallel focus	-lu	-lu	-lu	*-lu
here and now focus	-nʲi			
exhaustive focus	-at		-at	*-at
even (focus)	-ri/-ti	-čij/-ziŋ	-čij/-ziŋ/ -dʲiŋ	*-čij or *-dʲiŋ
negative focus	-tə/-rə/-də			
even (topical)	-aqr/-ar	-aχr/-arr	-anqř	*-aqr
expressive	-χra/-ro	-χra/-rra/ -ŋro		*-rra
ironic focus	-qʰnar	-qʰnar		*-qŋar
also	-an	-an		*-an
only/(one)self	-park	-pəřk	-bařk	*-bark
maybe/-ever	-avr/-uvr/ -əvr(in)	-avr(i)/ -afir(i)/-afu	-avř/-vari	*-avr
still, yet	-para			
highlighting focus/ predicativizer	-ta/-ra	-ra	-ra	*-ra or *-da
what about	-qa/-ra	-qa/-ra		*-ra or *-ga

	Amur	East Sakhalin	South Sakhalin	Proto-Nivkh
<i>Converbs</i>				
general converb	-r/-t	-ř/-t/-n	-t/-ř/-n	*-r/*-t
anterior converb	-ror/-tot	-roř/-tot/ -non	-roř/-dot	*-ror/ *-dot
enumerative (coordinative)	-ra/-ta/-hara	-ra/-ta/-na/ -hara	-hara/-ra	*-ra or *-da
when, after, if, because	-ŋan	-ŋa(n)	-ŋa	*-ŋa(n)
before	-ənke	-anke	-anke	*-anke
in order to	-guin			
when (respectful)		-ful/-vul		
as soon as, since	-ba/-bə/-ge	-ba/-fke/-rra		*-ba
while, because, through	-ke	-ke	-fke	*-vke
rather than	-ibarara	-inbaraχa		*-inbarara
by, while, when	-ivo/-tʰāruχ	-ivo/-ifo/ -vuγe/ -tajrusk	-fo	*-ivo
if (conditional)	-qa/-ra/-tara	-qaj	-χai	*-qaj or *-gaj

	Amur	East Sakhalin	South Sakhalin	Proto-Nivkh
<i>Converbs (continued)</i>				
although	-kin/-kirn/ -kirk/ -χajnapə	-kirk/-kisk/ -χajnapə	-χainappu/ -nappa	*-gir(k) and *-qajnapə
because	-xrə(γ)rə	-ftoχ		
for/because	-lax	-lax		*-lay
supine (purpose)	-(nə)(f)toχ	-(f)toχ	-(n)toχ	*-(v)tor or *-(v)dor

	Amur	East Sakhalin	South Sakhalin	Proto-Nivkh
<i>Derivational</i>				
participial (one that is such)	-k	-k		*-k
participial		-ŋ	-ŋ	*-ŋ
deverbal instrument	-s	-ř	-ř ₂	*-r
some- (indefinite pronouns)	-lu/-laq	-lu/-laq		*-lu and *-laq
hearsay	-furu	-furu	-furu	*-puru
irreal apodosis	-for(a)			
place of -ing	-f	-f	-f ₂	*-v-
denominal verbalizers	-ət/-u/-ju- -r/-ki/-ke-	-z/-u/-ju-	-ju-	*-r- and *-u- and *-ju-
precise location in a direction	-r	-s	-ř/-z	*-r
non-precise location	-kr/-qr	-kř/-qř	-kř/-qř	*-kr
close (in direction)	-ŋa	-ŋa		*-ŋa
be or live at	-m-	-m-		*-m-
transport in a direction	-č-	-č-		*-č- or *-dy-
approximate area in a direction	-nx	-nx/-nux		*-n(u)γ
deictic (over there in a direction)	e-	e-		*e-

	Amur	East Sakhalin	South Sakhalin	Proto-Nivkh
<i>Postpositions/Relational Morphemes</i>				
under	-və	-waj	-waj	*-waj
on	-t ^h xə/-rxə	-t ^h xə	-txə	*-t ^h ye
next to/at side of	-q ^h omi	-q ^h omi	-qomi	*-qomi

	Amur	East Sakhalin	South Sakhalin	Proto-Nivkh
<i>Postpositions/Relational Morphemes (continued)</i>				
next to, near	-lara(j)/-le	-laxiŋk/-lef	-lef, -lanko	*-laye
between	-t ^h ayr	-t ^h ayr	-tayr(ux)	*-tayr
among	-hutə	-həta/-hətə		*-hutə
in	-mi	-mi	-mi	*-mi
from, in a direction	-erq	-xeřqŋ	-eřqŋ/-esqŋ	*-erqŋ
in front of	-ətə/-at	-at		*-at
in front, before	-ənk(i)	-ank		*-ank
opposite	-t ^h ara	-t ^h ara/-kiu		*-tara
behind, back	-alverq	-alyaf		*-alyav
behind	-əri		-ari	*-ari
alongside, by, past	-ləs	-las		*-laz
through	-tulku	-tulku, -osqoŋg	-dulku	*-dulku and *-orqo
over	-t ^h məsk	-t ^h məsk	-tməŋk	*-tmə-
around	-laqv	-tarvgo, -tayvř	-layvnt	*-takv or *-taqv
concerning	-lax	-lax		*-lay
together with	-tomsk /-romsk	-tomsk	-dos/-ros	*-domr-
outside	-kutli	-kutla	-gučla	*-gudli or *-gudla

18.12. SUMMARY / PROTO-NOSTRATIC

Proto-Nostratic root structure patterning (cf. Chapter 12, §12.3):

1. There were no initial vowels in Proto-Nostratic. Therefore, every root began with a consonant. (Loss of initial laryngeals in the early prehistory of the individual branches resulted in roots beginning with a vowel: **HVC-* > **VC-*.)
2. There were no initial consonant clusters either. Consequently, every root began with one and only one consonant. Medial clusters were permitted, however. (Changes specific to the individual branches later led to the development of initial consonant clusters in them.)
3. Two basic root types existed: (A) **C₁V* and (B) **C₁VC₂*, where *C* = any non-syllabic, and *V* = any vowel. Permissible root forms coincided exactly with these two syllable types.
4. A stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: **C₁VC₂+C_{DS}-* (*DS* = derivational suffix) Any consonant could serve as a suffix. Note: In nominal stems, this derivational suffix was added directly to the root: **C₁VC₂+C_{DS}-*. In

verbal stems, it was added after the formative vowel: $*C_1VC_2+V_{FV}+C_{DS}$. (FV = formative vowel.)

5. A stem could thus assume any one of the following shapes: (A) $*C_1V-$, (B) $*C_1VC_2-$, (C) $*C_1VC_2+C_3-$, or (D) (reduplicated) $*C_1VC_2-C_1VC_2-$. As in Proto-Altaic, the undifferentiated stems were real forms in themselves and could be used without additional suffixes or grammatical endings. However, when so used, a vowel had to be added to the stem: (A) $*C_1V- > *C_1V$ (no change), (B) $*C_1VC_2- > *C_1VC_2+V$, (C) $*C_1VC_2+C_3- > *C_1VC_2+C_3+V$, or (D) (reduplicated) $*C_1VC_2-C_1VC_2- > *C_1VC_2-C_1VC_2+V$. Following Afrasian terminology, this vowel may be called a “terminal vowel” (TV). Not only did terminal vowels exist in Proto-Afrasian (cf. Ehret 1995:15; Bender 2000:214—215 and 2007:737—739), they are also found in Dravidian, where they are called “enunciative vowels” (cf. Steever 1998a:15; W. Bright 1975; Krishnamurti 2003:90—91; Zvelebil 1990:8—9), and in Elamite (cf. Khačikjan 1998:11; Grillot-Susini 1987:12), where they are called “thematic vowels”. In Proto-Dravidian, the enunciative vowel was only required in stems ending in obstruents, which could not occur in final position.

The derivational suffixes were derivational rather than grammatical in that they either changed the grammatical category of a word or affected its meaning rather than its relation to other words in a sentence. Cf. Crystal 2008:138 and 243. Any consonant could serve as a derivational suffix.

While there were noun-deriving and verb-forming suffixes, the presence of a suffix was not necessary to the use of a noun or verb in grammatical constructions. Unextended roots could be used as either nouns or verbs.

Active verbs could be used as nouns denoting either (1) the action of the verb or (2) the agent or instrument of the action, while stative verbs could be used as nouns to indicate state. Noun stems could also be used as verbs. Thus, the distinction between nouns and verbs was not always clear. There was also a solid core of primary (underived) nouns. Reduplication was a widespread phenomenon. Undoubtedly, compounds also existed.

As can be seen from the earlier sections of this chapter, the original root structure patterning was maintained longer in Afrasian, Dravidian, and Altaic than in the other branches, while the patterning found in Proto-Indo-European and Proto-Kartvelian has been modified by developments specific to each of these branches. The root structure constraints found in Proto-Indo-European were an innovation as were the homorganic consonant clusters found in Kartvelian. In Proto-Uralic, the rule requiring that all words end in a vowel was an innovation and arose from the incorporation of the so-called “terminal vowel” into the stem.

On the basis of the evidence of Proto-Indo-European, Proto-Kartvelian, Proto-Afrasian, Proto-Dravidian, and Proto-Altaic, it may be assumed that there were three fundamental stem types: (A) verbal stems, (B) nominal (and adjectival) stems, and (C) pronominal and indeclinable stems. Some stems were exclusively nominal. In the majority of cases, however, both verbal stems and nominal stems could be built from the same root. In Proto-Nostratic, only pronominal and indeclinable

stems could end in a vowel (**CV*). Verbal and nominal stems, on the other hand, had to end in a consonant, though, as noted above, when the undifferentiated stems were used as real words in themselves, a “terminal vowel” had to be added to the stem. As explained in Chapter 17, the terminal vowels were morphologically significant. Adjectives did not exist as an independent grammatical category in Proto-Nostratic. Instead, intransitive verbs could function as “adjectives”. Also, “adjectives” were differentiated from nouns mainly by syntactical means — a noun placed before another noun functioned as an attribute to the latter.

No doubt, the similarity in form between denominative verbs and denominative nouns (both derived from noun stems: **C₁VC₂+C_{DS}-*), on the one hand, and between deverbative verbs and deverbative nouns (both derived from verb stems: **C₁VC₂+V_{FI}+C_{DS}-*), on the other hand, must have caused some confusion, resulting in a certain amount of restructuring in the various Nostratic daughter languages. This restructuring tends to make it difficult to discern the original patterning.

On the basis of evidence presented in this chapter (and Chapter 16), it appears that the following derivational suffixes are the ones that can most confidently be reconstructed for Proto-Nostratic:

Nominalizer: *-r-
 Nominalizer: *-m-
 Nominalizer: *-y-
 Nominalizer: *-t^h-
 Nominalizer: *-n-
 Nominalizer: *-l-
 Nominalizer: *-k^h-
 Nominalizer: *-k’-

Notes:

1. The term “nominalizer” covers both deverbative and denominative nouns. Though highly speculative, we can venture a guess, mainly on the basis of the Afrasian, Dravidian, and Elamite evidence, at a more precise meaning for some of these suffixes:
 - A. *-r- may have been used to form actor nouns;
 - B. *-m- may have been used to form abstract nouns;
 - C. *-y- may have been used to form deverbative nouns — it may also have been added to nouns to form attributives (cf. Ehret 1995:16 concerning the functions of this suffix in Afrasian: “[t]his suffix can operate as a noun-forming deverbative in Semitic, Egyptian, Chadic, and Cushitic instances, but is also often added to nominals to form attributives — names of things having the attribute(s) of, or associated by location or resemblance with, the item named by the stem to which *y is suffixed”);
 - D. *-t- may have been used to form generalized nouns;
 - E. *-n- may have been used to form abstract nouns;
 - F. *-l- may have been used to form deverbative nouns;

- G. **-k^h*- exact meaning uncertain — perhaps deverbative;
 - H. **-k'*- exact meaning uncertain — perhaps diminutive.
2. Supporting data for these derivational suffixes are given in Chapter 16, IV. Derivational Suffixes, §§16.39—16.46.
 3. Several of these suffixes are used in the daughter languages to form adjectives.
 4. There must also have been a great variety of verb extensions. However, the data from the various Nostratic daughter languages are too divergent to allow these extensions to be reconstructed with certainty at the present time. But all is not lost — there are important clues as to what may have existed. As stated above, Militarev (2005) reconstructs the following “fossilized formants” (= “derivational suffixes”) for Proto-Semitic: **m*, **n*, **t*, **r*, **l*, **ʔ*, **b*, and **k* (and possibly **h*). Militarev does not assign meanings, nor does he differentiate between nominal roots and verbal roots. Without a doubt, these “fossilized formants” go back not only to Proto-Afrasian but to Proto-Nostratic as well. Moreover, at the Proto-Nostratic level, these formants must have been fully productive derivational suffixes.

The fact that there are relatively few, if any, matches among several of the daughter branches (Kartvelian, Indo-European, Yukaghir, Chukchi-Kamchatkan, and Gilyak / Nivkh) indicates that most of their derivational morphology, though originally based upon the same principles, later developed independently and over a long period of time and was not directly inherited from Proto-Nostratic. In the case of Indo-European, the evidence from the Anatolian daughter languages provides explicit confirmation that this is exactly what has happened. But there is more: thanks to the work of Émile Benveniste (1935 and 1948), the most ancient Proto-Indo-European root structure patterning and derivational morphology have been recovered, and their Nostratic origins are unmistakable (cf. Chapter 17, §17.5). In the case of Chukchi-Kamchatkan, on the other hand, the grammaticalization of what were once independent forms has clearly occurred (on grammaticalization theory in general, cf. Fischer—Norde—Perridon [eds.] 2004; Haspelmath 1998; Heine—Claudi—Hünemeyer 1991; Hopper—Traugott 1993 and 2003; B. Joseph 2004; C. Lehmann 2002 and 2015; Nurse—Kuteva 2002 and 2005).

Eskimo-Aleut presents unique challenges (cf. Fortescue 2004) and, therefore, has been left out of the above discussion. For a list of Proto-Eskimo postbases, cf. Fortescue—Jacobson—Kaplan 1994:393—438.

CHAPTER NINETEEN

PROTO-INDO-EUROPEAN MORPHOLOGY I: TRADITIONAL RECONSTRUCTION

19.1. INTRODUCTION

In this chapter, we will discuss traditional views on the reconstruction of the Proto-Indo-European morphological system. Several topics, such as root structure patterning, accentuation, and ablaut, have already been discussed in the chapters on phonology — some of that material will be repeated in this chapter. The next chapter will focus on an investigation of the possible prehistoric development of Proto-Indo-European morphology.

The traditional reconstruction of the Proto-Indo-European morphological structure represents the stage of development just before the emergence of the individual daughter branches. Prior to the discovery of Hittite and the other Indo-European languages of ancient Anatolia, the morphological system that was assumed to have existed in the Indo-European parent language closely resembled that of Classical Sanskrit and Ancient Greek. As the Hittite material began to be taken into consideration, the earlier views had to be modified, and many points are still being debated.

Morphologically, Proto-Indo-European was a highly inflected language — except for particles, conjunctions, and certain quasi-adverbial forms, all words were inflected. The basic structure of inflected words was as follows: root + suffix (one or more) + inflectional ending (see below for details). A notable morphophonemic characteristic was the extensive use of a system of vocalic alternations (“Ablaut” in German) as a means to mark morphological distinctions. Verbs were strongly differentiated from nouns. For nouns and adjectives, three genders, three numbers, and as many as eight cases have been reconstructed (mainly on the basis of what is found in Classical Sanskrit), though it is doubtful that all of these features were ancient — it is indeed possible to discern several chronological layers of development. The traditional reconstruction of the Proto-Indo-European verbal system sets up two voices, four moods, and as many as six tenses. Syntactically, Proto-Indo-European seems to have had many of the characteristics of an SOV language, though there must, no doubt, have been a great deal of flexibility in basic word order patterning. For details on Proto-Indo-European syntax, cf. Brugmann 1904:623—705; Clackson 2007:157—186; Fortson 2004:137—152 and 2010:152—169; Paul Friedrich 1975; Lehmann 1975, 1993:187—207, and 2002:100—133; Meier-Brügger 2003:238—276 (by Matthias Fritz); Watkins 1977.

19.2. ROOT STRUCTURE PATTERNING IN PROTO-INDO-EUROPEAN

A shorter version of this section can be found in Chapter 4 (§4.11), “The Reconstruction of the Proto-Indo-European Phonological System”.

Before beginning, it is necessary to define several key terms. A *root* may be defined as the base form of a word. It carries the basic meaning, and it cannot be further analyzed without loss of identity (cf. Crystal 2003:402). A *stem*, on the other hand, may be defined as an inflectional base. A stem may or may not be coequal with a root. Cf. Crystal 2003:433.

There have been several attempts to formulate the rules governing the structural patterning of roots in Proto-Indo-European. Without going into details, it may simply be noted that none of the proposals advanced to date has escaped criticism, including the theories of Émile Benveniste (1935:147—173, especially pp. 170—171). The problem is complicated by the fact that the form of Proto-Indo-European traditionally reconstructed — what I call “Disintegrating Indo-European” — is the product of a very long, largely unknown evolution. Disintegrating Indo-European contained the remnants of earlier successive periods of development.

For Disintegrating Indo-European, Jerzy Kuryłowicz’s (1935:121) description is adequate (see also Szemerényi 1996:98—99):

... the root is the part of the word (it is a question of only the simple word) made up of (1) the initial consonant or consonantal group, (2) the fundamental vowel, (3) the final consonant or consonantal group. — The final group can consist of no more than two consonantal elements, the first of which has greater syllabicity than the second. In other words, the first consonantal element is *i*, *u*, *r*, *l*, *n*, *m*, while the second is a consonant in the strictest sense of the term: stop, *s*, or laryngeal (*ǵ*₁, *ǵ*₂, *ǵ*₃).

Fortson (2004:70 and 2010:76) gives the following examples of Proto-Indo-European roots, arranged by structure (the notation has been modified to agree with what is used in this book) (cf. also Gamkrelidze—Ivanov 1995.I:185—189):

- *CeC- **p^het^h*(*H*)- ‘to fly’ (Fortson **pet*-)
 **p^het*- ‘foot’ (Fortson **ped*-)
 **d^heg^{wh}*- ‘to burn’ (Fortson **d^heg^{wh}*-)
 **sew*- ‘to press out juice’ (Fortson **seu*-)
 **p^hel*- ‘strength’ (Fortson **bel*-)
 **H₁es*- ‘to be’ (Fortson **h₁es*-)
 **t^hoH^w*- ‘to give’ (Fortson **deh₃*-)
 **wes*- ‘to buy, to sell’ (Fortson **ues*-)
 **leg^h*- ‘to lie down’ (Fortson **leg^h*-)
 **sem*- ‘one’ (Fortson **sem*-)
- *CRēC- **d^hwer*- ‘door’ (Fortson **d^huer*-)
 **sneH₁*- ‘to sew’ (Fortson **sneh₂*-; Rix 1998a:520 **sneh₁*-)
 **t^hyek^w*- ‘to revere’ (Fortson **t^hieg^w*-)

	<i>*swep^h-</i> ‘to sleep’ (Fortson <i>*suep-</i>)
	<i>*smey-</i> ‘to smile’ (Fortson <i>*smei-</i>)
	<i>*k’noH-</i> ‘to know’ (Fortson <i>*ġneh₃-</i>)
	<i>*k^hlew-</i> ‘to hear’ (Fortson <i>*kleu-</i>)
	<i>*srew-</i> ‘to flow’ (Fortson <i>*sreu-</i>)
<i>*CeRC-</i>	<i>*d^heyg^h-</i> ‘to shape with the hands’ (Fortson <i>*dheiġ^h-</i>)
	<i>*t’erk^h-</i> ‘to see’ (Fortson <i>*derk̑-</i>)
	<i>*melk’-</i> ‘to wipe’ (Fortson <i>*melġ-</i>)
	<i>*meld^h-</i> ‘to speak solemnly’ (Fortson <i>*meldh-</i>)
	<i>*k’emb^h-</i> ‘to bite’ (Fortson <i>*ġembh-</i>)
	<i>*Horb^h-</i> ‘to change social status’ (Fortson <i>*h₃erbh-</i>)
	<i>*noHt^h-</i> ‘buttocks’ (Fortson <i>*neh₃t-</i>)
<i>*CReRC-</i>	<i>*g^hrend^h-</i> ‘to grind’ (Fortson <i>*ghrendh-</i>)
	<i>*k^hrewH₂-</i> ‘to gore’ (Fortson <i>*kreuh₂-</i>)
	<i>*sweH₂t’-</i> ‘sweet’ (Fortson <i>*sueh₂d-</i>)
	<i>*mlewH₂-</i> ‘to speak’ (Fortson <i>*mleuh₂-</i>)

Fortson (2004:71) also points out that a small number of roots began with a cluster consisting of two stops; he cites the following examples:

<i>*t^hkk^hey-</i>	‘to settle’ (Fortson <i>*tkei-</i>)
<i>*p^ht^her-</i>	‘wing’ (Fortson <i>*pter-</i>)

A careful analysis of the root structure patterning led Benveniste to the discovery of the basic laws governing that patterning. According to Benveniste (1935:170—171), these laws may be stated as follows (see also Lehmann 1952:17—18):

1. The Proto-Indo-European root is monosyllabic, composed of the fundamental vowel *ē* between two different consonants.
2. In this constant scheme, consonant plus *e* plus consonant, the consonants can be of any order provided that they are different; however, the cooccurrence of both a voiceless stop and an aspirated voiced stop is forbidden.
3. The addition of a suffix to the root gives rise to two alternating stem types: Type I: root in full grade and accented, suffix in zero-grade; Type II: root in zero-grade, suffix in full-grade and accented.
4. A single determinative can be added to the suffix, either after the suffix of stem Type II, or, if *n*, inserted between the root element and the suffix of stem Type II.
5. Further addition of determinatives or suffixes points to a nominal stem.

Benveniste’s views are not necessarily incompatible with those of Kuryłowicz. These theories can be reconciled by assuming that they describe the root structure patterning at different chronological stages.

Now, comparison of Proto-Indo-European with the other Nostratic languages, especially Proto-Kartvelian and Proto-Afrasian, allows us to refine Benveniste's theories. The most ancient patterning was probably as follows:

1. There were no initial vowels in the earliest form of Pre-Proto-Indo-European. Therefore, every root began with a consonant.
2. Originally, there were no initial consonant clusters either. Consequently, every root began with one and only one consonant.
3. Two basic syllable types existed: (A) **CV* and (B) **CVC*, where *C* = any non-syllabic and *V* = any vowel. Permissible root forms coincided exactly with these two syllable types.
4. A verbal stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: **CVC-VC-*. Any consonant could serve as a suffix.
5. Nominal stems, on the other hand, could be further extended by additional suffixes.

In the earliest form of Proto-Indo-European, there were three fundamental stem types: (A) verbal stems, (B) nominal and adjectival stems, and (C) pronominal and indeclinable stems.

The phonemicization of a strong stress accent in Early Proto-Indo-European disrupted the patterning outlined above. The positioning of the stress was morphologically distinctive, serving as a means to differentiate grammatical relationships. All vowels were retained when stressed but were either weakened (= "reduced-grade") or totally eliminated altogether (= "zero-grade") when unstressed: the choice between the reduced-grade versus the zero-grade depended upon the position of the unstressed syllable relative to the stressed syllable as well as upon the laws of syllabicity in effect at that time. Finally, it was at this stage of development that the syllabic allophones of the resonants came into being.

The stress-conditioned ablaut alternations gave rise to two distinct forms of extended stems:

Type 1: Root in full-grade and accented, suffix in zero-grade: **CṼCC-*.

Type 2: Root in zero-grade, suffix in full-grade and accented: **CCṼC-*.

The following examples may be given to illustrate this patterning (cf. Benveniste 1935:151, 152, and 161; Gamkrelidze—Ivanov 1995.I:194—201; Lehmann 1952: 17):

Type 1: **CṼCC-*

**p^hér-k^h-* Lithuanian *persù* 'I woo, I pester'; Umbrian *persklum* (< **perk-sk-lo-*) 'prayer'

**t^hér-H₂-* Hittite *tar-aḫ-zi* 'controls'

Type 2: **CCṼC-*

**p^hr-ék^h-* Latin *precor* 'to ask'

**t^hr-éH₂-* Latin *intrāre* 'to enter'

<i>*g^héy-m-</i>	Greek χειμών ‘winter’; Sanskrit <i>hemantá-h</i> ‘winter’; Lithuanian <i>žiemà</i> ‘winter’	<i>*g^hy-ém-</i>	Greek χιών ‘snow’; Latin <i>hiems</i> ‘winter’; Armenian <i>jìwn</i> ‘snow’; Avestan <i>zyā</i> ‘winter’
<i>*p^hét^h-r/n-</i>	Sanskrit <i>pátra-m</i> ‘wing, feather’; Old English <i>feðer</i> ‘feather’; Old Icelandic <i>ffjöðr</i> ‘feather’; Old High German <i>fedara</i> ‘feather’; Hittite <i>pát-tar</i> ‘wing’	<i>*p^ht^h-ér/n-</i>	Greek πτερόν ‘wing, feather’, πτέρυξ ‘wing’
<i>*t^héy-w-</i>	Sanskrit <i>devá-h</i> ‘deity, god’; Latin <i>deus</i> ‘god’; Lithuanian <i>diēvas</i> ‘god’	<i>*t^hy-éw-</i>	Sanskrit <i>dyáu-h</i> ‘sky, heaven’
<i>*p^hél-H₂-</i>	Hittite <i>pal-ḫi-iš</i> ‘broad’	<i>*p^hl-éH₂-</i>	Latin <i>plānus</i> ‘even, level, flat’; Lithuanian <i>plónas</i> ‘thin’
<i>*k^hén-H₁-</i>	Greek γένος ‘race, family, stock’	<i>*k^hn-éH₁-</i>	Greek γνήσιος ‘of or belonging to the race, lawfully begotten’
<i>*p^hél-H₂-</i>	Greek πέλας ‘near, near by’	<i>*p^hl-éH₂-</i>	Greek πλησίον (Doric πλᾱτίον) ‘near, close to’

When used as a verbal stem, Type 1 could undergo no further extension. However, Type 2 could be further extended by means of a *determinative* (also called *extension* or *enlargement*). Further addition of a determinative or suffixes pointed to a nominal stem (cf. Benveniste 1935:171; Lehmann 1952:17). According to Benveniste (1935:148), a *suffix* was characterized by two alternating forms (**-et-/*-t-*, **-en-/*-n-*, **-ek-/*-k-*, etc.), while a *determinative* was characterized by a fixed consonantal form (**-t-*, **-n-*, **-k-*, etc.). Benveniste further (1935:164) notes:

... in the numerous cases where the initial [consonant group has been reconstructed in the shape] **(s)k-*, **(s)t-*, **(s)p-*, etc., with unstable sibilant, it is generally a question of prefixation, and it may be observed that the root begins with the [plain] consonant [alone excluding the sibilant].

The German word *Ablaut* refers to the alternation of vowels in a given syllable. In the earliest form of Proto-Indo-European, ablaut was merely a phonological alternation. During the course of its development, however, Proto-Indo-European gradually grammaticalized these ablaut alternations. For information on ablaut, cf. Chapter 4, §§4.9–4.10; Beekes 2011:174–177; Brugmann 1904:138–150; Hirt 1900; Fortson 2010:79–83; Fulk 1986; Gamkrelidze—Ivanov 1995.I:131–167; Hübschmann 1885; Meier-Brügger 2003:144–152; Meillet 1964:153–168; Schmidt-Brandt 1973; Szemerényi 1996:83–93; Watkins 1998:51–53.

Undifferentiated roots could serve as nominal stems (these are called *root nouns*), though the majority of nominal stems were derived from roots by the

addition of determinatives and/or suffixes (these are called *derived nouns*) (cf. Szemerényi 1996:163; Beekes 2011:179—183). There was considerable variety in the determinatives/suffixes, though several were more frequently used than others. In later Proto-Indo-European, stems ending in a thematic vowel, in particular, became increasingly common, while heteroclitic stems had started to decline as a productive category — they are best preserved in Hittite. In the majority of cases, it is not possible to discern any difference in meaning or function among the determinatives/suffixes, though several of them had developed specialized functions. Benveniste devotes an entire book (1935) to the study of the origins of the formation of nouns in Proto-Indo-European — Chapter X on the structure of the most ancient nominal derivations is particularly important. He elaborates on his views in his 1948 book on agent nouns and action nouns in Proto-Indo-European.

Proto-Indo-European had constraints on permissible root structure sequences (cf. Fortson 2004:54, 72, and 2010:59, 78; Meillet 1964:173—174; Szemerényi 1996:99—100; Watkins 1998:53) — Szemerényi (1996:99) lists the following possible and impossible root structure types (his notation has been retained):

Possible	Impossible
1. Voiced-voiced aspirate (* <i>bedh-</i>)	I. Voiced-voiced (* <i>bed-</i>)
2. Voiced-voiceless (* <i>dek-</i>)	II. Voiced aspirate-voiceless (* <i>bhet-</i>)
3. Voiced aspirate-voiced (* <i>bheid-</i>)	III. Voiceless-voiced aspirate (* <i>tebh-</i>); III is, however, possible after * <i>s-</i> : * <i>steigh-</i> ‘to go up’
4. Voiced aspirate-voiced aspirate (* <i>bheidh-</i>)	
5. Voiceless-voiced (* <i>ped-</i>)	
6. Voiceless-voiceless (* <i>pet-</i>)	

In terms of the radical revision of the Proto-Indo-European consonant system proposed by Gamkrelidze, Hopper, and Ivanov, these constraint laws may be restated as follows (cf. Hopper 1973:158—161, §3.2.6; Gamkrelidze 1976:404—405 and 1981:608—609):

1. Each root had to contain at least one non-glottalic consonant.
2. When both obstruents were non-glottalic, they had to agree in voicing.

The Proto-Indo-European root structure constraint laws thus become merely a voicing agreement rule with the corollary that two glottalics cannot cooccur in a root. Comparison with the other Nostratic languages indicates, however, that the forbidden root types must have once existed. Two rules may be formulated to account for the elimination of the forbidden types:

1. A rule of progressive voicing assimilation may be set up to account for the elimination of roots whose consonantal elements originally did not agree in voicing: **T* ~ **B* > **T* ~ **P*, **B* ~ **T* > **B* ~ **D*, etc.

2. A rule of regressive deglottalization may be set up to account for the elimination of roots containing two glottalics: $*C'VC' - > *CVC' -$. This rule finds a close parallel in Geers' Law in Akkadian (cf. Ungnad—Matouš 1969:27).

According to Gamkrelidze (1976:405 and 1981:608), Bartholomae's Law is a later manifestation of the progressive voicing assimilation rule, applied to contact sequences (for details on Bartholomae's Law, cf. Szemerényi 1996:102—103; Collinge 1985:7—11 and 263—264; Burrow 1973:90).

A notable feature of Proto-Indo-European root structure patterning was the use of *reduplication* (cf. Brugmann 1904:286—287; Gamkrelidze—Ivanov 1995. I:189—191; Beekes 2011:183; Meillet 1964:179—182). Two main types of reduplication occurred: (1) partial (also called “normal” reduplication) and (2) full (also called “intensive” reduplication). In partial reduplication, only the initial consonant of the root was repeated: $*CV-CVC-$ (cf. Homeric γέ-γον-ε ‘was born’, Sanskrit *ja-jān-a* ‘gave birth’). When the root began with a consonant cluster, the cluster was simplified in the reduplicated syllable (cf. Greek πί-πλη-μι ‘I fill’). In full reduplication, the entire root was repeated: $*CVC-CVC-$ (cf. Sanskrit *vár-var-ti* ‘turns’, Avestan *zao-zao-mi* ‘I call’, Hittite *ḫu-ul-ḫu-li-ya-* ‘to entwine, to embrace; to wrestle, to struggle’).

As noted by Beekes (2011:173), neither preverbs nor prepositions nor postpositions existed as such in Proto-Indo-European. Instead, Proto-Indo-European had adverbs (which later became preverbs, prepositions, or postpositions in the individual daughter languages).

Finally, it must be noted that a number of roots could also be optionally preceded by $*s-$ (cf. Meillet 1964:171—172; Brugmann 1904:195, note 3; Beekes 2011:172). Inasmuch as such roots sometimes occur with and sometimes without the initial $*s-$, this element is called “s-mobile”, “mobile *s*”, or “movable *s*”. Fortson (2004:71—72 and 2010:76—77) gives the following examples (the parentheses indicate that the initial $*s-$ may or may not occur): $*(s)p^{hek}h-$ ‘to see’, $*(s)t^{hek}h-$ ‘to cover’, $*(s)neyg^{wh}-$ ‘snow’, $*(s)rew-$ ‘to flow’, $*(s)t^{hren}k^{h}-$ ‘tight’. As noted by Burrow (1973:81), no theory has yet been proposed that can satisfactorily account for this variation, but he further remarks:

Most probably it is the result of some kind of external sandhi affecting initial *s*- in the Indo-European period. It seems fairly clear that the phenomenon is due to loss of initial *s*, and if this is so the theory that would regard the *s* as the remains of some kind of prefix is out of the question.

Burrow's statement is contrary to the views of Benveniste (1935:164), who regards the *s* as the remains of some kind of prefix (see quotation above). Szemerényi (1996:94) mentions both of these theories without deciding which offers the more probable explanation. Fortson (2010:76—77) mentions neither theory. Lehmann (1993:135—136), on the other hand, supports Burrow, as do I. Gamkrelidze—Ivanov (1995.I:102—104) stand alone in positing a separate phoneme, which they write $*\hat{s}$, to account for examples of “movable *s*” in the daughter languages.

19.3. OVERVIEW OF NOUNS AND ADJECTIVES

Proto-Indo-European distinguished nouns and adjectives. The adjectives had essentially the same inflection as nouns (cf. Beekes 2011:173; Meillet 1964:254; Meier-Brügger 2003:187—188; Szemerényi 1996:155). In some cases, adjectives were derived from nouns by means of possessive suffixes (such as **-yo-*, for example). Demonstrative pronouns and numerals are also usually classed with nouns and adjectives.

In the latest period of development, the gender of nouns was fixed (as either masculine, feminine, or neuter) — adjectives, on the other hand, had no fixed gender but agreed in gender and number with the nouns they modified (cf. Szemerényi 1996:192—193). Nouns were also characterized by three numbers (singular, dual, and plural) and a set of case endings (as many as eight cases are traditionally reconstructed [cf. Szemerényi 1996:159] — nine, if we allow for the possibility of a directive or allative case as some have suggested [cf. Fortson 2004: 102 and 2010:113; Haudry 1979:36; Watkins 1998:65]). The following cases are traditionally reconstructed:

1. Nominative: subject of verbs (both transitive and intransitive)
2. Vocative: direct address
3. Accusative: direct object
4. Genitive: possession (“of, belonging to”)
5. Dative: indirect object (“to, for”)
6. Ablative: source of movement (“from”)
7. Locative: place in, on, or at which something occurs (“in, on, at”)
8. Instrumental: means by which something is done (“with, by [means of]”)
9. (Allative/directive: goal or direction of an action or a motion; motion to or towards [“to, toward(s), in the direction of”])

The nominative and vocative singular, dual, and plural and the accusative singular and dual are known as *strong* cases, while the remaining cases are known as *weak* cases (also called *oblique* cases). In Early Proto-Indo-European, the accent was on the stem in the strong cases, which also had a full-grade (or lengthened-grade) vowel, while in the weak cases, the accent was shifted to the suffix or to the case ending (with a corresponding shift in full-grade vowel) (cf. Burrow 1973:220). During the earlier period of development, the accent shift typically resulted in the reduction or loss of the vowel of the unaccented syllable, unless such a reduction or loss would have resulted in unpronounceable consonant clusters (cf. Burrow 1973:220). In later Proto-Indo-European, there was a tendency to level out the paradigm, either in terms of accent or vowel grade or both, though enough traces of the older patterning remained in the later stages of development so that it is possible to discern its underlying characteristics.

An important distinction must be made between *thematic* stems and *athematic* stems. Thematic stems ended in a so-called “thematic vowel” (**-e/o-*), while athematic stems did not end in such a vowel (cf. Fortson 2010:83—85 and 126).

Finally, mention must be made of a special type of declension in which the nominative-accusative singular is characterized by **-r-*, while the remaining cases are characterized by **-n-*. Nouns exhibiting this patterning are known as *heteroclititic stems*. Though common in Hittite, this declensional type was in decline in the other daughter languages (cf. Fortson 2004:110—111, 165, and 2010:123, 181—182; Kloekhorst 2008b:108—109). For details on heteroclititic stems, cf. Szemerényi 1996:173; Burrow 1973:226—229. The following examples illustrate the general patterning:

	Nominative Singular	Genitive Singular
Hittite	<i>wa-a-tar</i> ‘water’ <i>pa-aḫ-hur</i> , <i>pa-aḫ-hu-wa-ar</i> ‘fire’ <i>e-eš-ḫar</i> , <i>e-eš-ḫa-ar</i> , <i>iš-ḫar</i> ‘blood’ <i>ut-tar</i> ‘word, affair’ <i>me-hur</i> ‘time’	<i>ú-i-te-na-aš</i> <i>pa-aḫ-hu-e-na-aš</i> <i>iš-ḫa-na-aš</i> <i>ud-da-na-aš</i> <i>me-(e)-hu-na-aš</i>
Sanskrit	<i>yákr̥t</i> ‘liver’ <i>áhar</i> ‘day’ <i>úddhar</i> ‘udder’ <i>ásrk̥</i> ‘blood’ <i>śákr̥t</i> ‘dung’	<i>yaknás</i> <i>ahnás</i> <i>úddhnas</i> <i>asnás</i> <i>śaknás</i>
Greek	<i>ὕδωρ</i> ‘water’ <i>οὐθαρ</i> ‘udder, breast’	<i>ὕδατος</i> (< <i>*ud-η-to-s</i>) <i>οὐθατος</i> (< <i>*ōudh-η-to-s</i>)
Latin	<i>femur</i> ‘thigh’ <i>iecur</i> ‘liver’	<i>feminis</i> (also <i>femoris</i>) <i>iocineris</i> (also <i>iecoris</i>)

Notes:

1. The *-t* and *-k* that have been added to the nominative singular in Sanskrit are innovations.
2. In Greek, *-το-* has been added to the “oblique-*n*”, which is in the reduced-grade (**-η-* > *-α-*).

19.4. NOMINAL INFLECTION

As noted above, nouns were inflected for number and case, while adjectives were also inflected for gender in Proto-Indo-European. Inasmuch as their gender was fixed, nouns were not inflected for gender. Gender in Proto-Indo-European was grammatical and might or might not have accorded with natural gender. In the Anatolian branch, masculine and feminine did not exist as separate gender classes; rather, there was a combined common gender, which included both masculine and feminine (see below). Different sets of case endings must be reconstructed for athematic stems, on the one hand, and for thematic stems, on the other hand. In thematic stems, the case endings were added after the thematic vowel **-e/o-*.

The Proto-Indo-European athematic case endings may be reconstructed as follows (cf. Adrados 1975.I:329; Adrados—Bernabé—Mendoza 1995—1998.II: 45—94; Beekes 1995:172—195 and 2011:185—217; Brugmann 1904:373—399; Burrow 1973:230—242; Clackson 2007:92—100; Fortson 2004:113—116 and 2010:126—129; Fulk 2018:141—180; Haudry 1979:34—37; Kapović 2017c:63—67; Kulikov 2011:290; Lehmann 1993:144—146; Lundquist—Yates 2018:2083; Meier-Brügger 2003:195—199; Meillet 1964:292—300; Schmalstieg 1980:46—87; Schmitt-Brandt 1998:180—220; Shields 1982; Sihler 1995:248—256; Szemerényi 1996:157—192; Watkins 1998:65—66 [the preceding references are for both athematic and thematic endings]):

Case	Masculine/feminine	Neuter
Singular:		
Nominative	*-s	
Nominative-accusative		*-Ø
Vocative	*-Ø	
Accusative	*-m/-m (or *-n/-n)	
Genitive-ablative	*-es/-os/-s	*-es/-os/-s
Dative	*-ey	*-ey
Locative	*-i, *-Ø	*-i, *-Ø
Instrumental	*-(e)H ₁	*-(e)H ₁
(Directive/allative)	(*-oH)	(*-oH)
Dual:		
Nominative-accusative	*-H ₁ (e)	*-iH ₁
Genitive	*-oH ₁ s (?), *-ows (?)	*-oH ₁ s (?), *-ows (?)
Dative	*-b ^h yō (?), *-mō (?)	*-b ^h yō (?), *-mō (?)
Locative	*-ow (?)	*-ow (?)
Instrumental	*-b ^h yō (?), *-mō (?)	*-b ^h yō (?), *-mō (?)
Plural:		
Nominative-vocative	*-es	
Nominative-accusative		(collective *-(e)H ₄)
Accusative	*-ms/-ms or *-ns/-ns	*-ms/-ms or *-ns/-ns
Genitive	*-ōm	*-ōm
Locative	*-su/-si	*-su/-si
Dative-ablative	*-b ^h (y)os, *-mos	*-b ^h (y)os, *-mos
Instrumental	*-b ^h i(s), *-mi(s)	*-b ^h i(s), *-mi(s)

The above table is a composite and aims to be as comprehensive as possible. Some of the reconstructions are more certain than others — the dual and plural oblique endings are particularly controversial, and there is considerable disagreement among different scholars here.

The thematic case endings may be reconstructed as follows:

Case	Masculine/feminine	Neuter
Singular:		
Nominative	*-o-s	
Nominative-accusative		*-o-m
Vocative	*-e	
Accusative	*-o-m (or *-o-n)	
Genitive	*-o-s(y)o	*-o-s(y)o
Ablative	*-ōt ^h (< *-o-H ₁ (e)t ^h)	*-ōt ^h (< *-o-H ₁ (e)t ^h)
Dative	*-ōy (< *-o-ey)	*-ōy (< *-o-ey)
Locative	*-e/o-y	*-e/o-y
Instrumental	*-e/o-H ₁	*-e/o-H ₁
(Directive/allative)	(*-ōH [< *-o-oH])	(*-ōH [< *-o-oH])
Dual:		
Nominative-accusative	*-oH ₁ , *-oy	*-oH ₁ , *-oy
Genitive	*-oH ₁ os (?)	*-oH ₁ os (?)
Dative	*-o-b ^h yō(m) (?), *-o-mō (?)	*-o-b ^h yō(m) (?), *-o-mō (?)
Locative	*-ow (?)	*-ow (?)
Instrumental	*-o-b ^h yō(m) (?), *-o-mō (?)	*-o-b ^h yō(m) (?), *-o-mō (?)
Plural:		
Nominative-vocative	*-ōs (< *-o-es)	
Nominative-accusative		*-e-H ₄
Accusative	*-ōns (< *-o-ons) (or *-ōms [< *-o-oms])	*-ōns (< *-o-ons) (or *-ōms)
Genitive	*-ōm (< *-o-om)	*-ōm (< *-o-om)
Locative	*-oysu/-oysi	*-oysu/-oysi
Dative-ablative	*-o-b ^h (y)os, *-o-mos	*-o-b ^h (y)os, *-o-mos
Instrumental	*-ōys (< *-o-oys), *-o-mis	*-ōys (< *-o-oys), *-o-mis

In the non-Anatolian daughter languages, the most complete declensional system is found in Indo-Iranian, where all eight cases are represented. Baltic has seven cases (the genitive and ablative have merged). Sabinian also has seven cases, as does Umbrian (counting the vocative), while Oscan has six, as does Classical Latin (counting the vocative), and Literary Greek has five, as does Gothic (counting the vocative). The dual is found in the early stages of several branches and is still represented in modern Lithuanian, Slovenian, Sorbian, and Icelandic (albeit serving as plural forms in the colloquial language), though, in general, it has been lost. Cf. Sihler 1995:246.

19.5. NOMINAL INFLECTION IN ANATOLIAN

Nominal inflection in the Anatolian daughter languages differs in many respects from what is given above. First, there is no feminine gender (cf. Lehmann 1993:150). Instead, there is a two gender system consisting of a common gender and a neuter gender (cf. Sturtevant 1951:82—83; Kronasser 1956:97 and 1966.1:106; Luraghi 1997:7 and 1998:177; Laroche 1959:135; Werner 1991:25; Carruba 1970:41). The common gender corresponds to both the masculine and feminine genders of the other Indo-European daughter languages. There is no trace of a dual number. There is evidence (in Old Hittite) for the existence of a directive or allative case (cf. Hoffner—Melchert 2008:76; Held—Schmalstieg—Gertz 1988:26; Luraghi 1997:13). The singular is more complete than the plural (cf. Sturtevant 1951:83; Luraghi 1997:8 and 1998:179—180). The heteroclitic stems are more widespread. The thematic stems are far less prominent. These differences can be accounted for in several ways. First, the common gender clearly represents an earlier stage of development in which the feminine had not yet developed. The same may be said of the dual number. Here, it is not a question of loss — there is absolutely nothing to indicate that the dual ever existed at any point in the Anatolian branch (cf. Sihler 1995:246; Fortson 2004:156 and 2010:172—173; Lehmann 1993:151). The fact that heteroclitism is still an active process in Anatolian, while it is in decline in the non-Anatolian daughter languages, also points to a more archaic stage of development. The fact that the plural is less well developed than the singular could be due either to loss or to the fact that the plural may not yet have been fully filled out. There are several features unique to the Luwian branch, in particular, that are certainly innovations (such as the thematic genitive singular ending and the thematic plural endings). We will look into these differences in more detail later.

- I. Athematic case endings: we may use *(t)t*-stems (and *-nt*-stems) to illustrate the general patterning of athematic case endings (cf. Meriggi 1980:304; Hoffner—Melchert 2008:105—131, especially 121—123; Sturtevant 1951:100—101; J. Friedrich 1960.I:52 and I:53; Kronasser 1956:128—131; Luraghi 1998:177—180; Neu 1979; Carruba 1970:41—43; Laroche 1959:135—140; Gusmani 1964:35—40; Werner 1991:29; Watkins 2004:560):

Singular	Hittite	Palaic	Luwian	Hiero.	Lycian	Lydian
Nom. (c.)	<i>-az</i>	<i>-az, -za</i>	<i>-az</i>	<i>-zas</i>	<i>-s (?)</i>	
Acc. (c.)	<i>-attan</i>		<i>-atan</i>	<i>-zan</i>		<i>-tn</i>
Nom.-Acc. (n.)	<i>-at</i>		<i>-i</i>			
Genitive	<i>-attaš</i>			<i>-tas, -tis</i>		
Dat.-Loc.	<i>-atti, -itti</i>	<i>-az, -za</i>	<i>-ati (?)</i>	<i>-ti</i>	<i>-ti (?)</i>	<i>-tλ (?)</i>
Ablative	<i>-az, -za</i>			<i>-tati</i>		
Instrumental	<i>-ita</i>					

Plural	Hittite	Palaic	Luwian	Hiero.	Lycian	Lydian
Nom. (c.)	- <i>tt/uš</i> , -(<i>i</i>) <i>ttaš</i> , - <i>ittiyaš</i> , - <i>nteš</i>					
Acc. (c.)	- <i>adduš</i>					
Nom.-Acc. (n.)	- <i>atta</i> , - <i>nta</i>					
Genitive	- <i>attan</i> , - <i>attaš</i>					
Dative	- <i>attaš</i>					

Notes:

1. In Hittite, Palaic, and Cuneiform Luwian, graphemic <z> = /ts/.
 2. In Hittite, Palaic, and Cuneiform Luwian, graphemic <š> = /s/.
 3. For Palaic, the endings cited are for *ḫa-ša-(a-)(u-)wa-an-za* and *Ti-ya-az* (cf. Carruba 1970:55 and 75).
 4. The Hieroglyphic Luwian forms are for -*nt*-stems.
- II. Thematic case endings (cf. Meriggi 1980:275; J. Friedrich 1960.I:45—46 [see also the table of case endings on p. 43]; Hoffner—Melchert 2008:79—85; Sturtevant 1951:91—92 [overall discussion of the case endings on pp. 84—91]; Kronasser 1956:99—109 [summary on p. 108]; Luraghi 1997:15—16 [table of case endings on p. 15] and 1998:177—180 [table of case endings on p. 178]; Carruba 1970:41—43; Werner 1991:27; Laroche 1959:135—140 [table of case endings on p. 137]; Gusmani 1964:35—40; Watkins 2004:560):

Singular	Hittite	Palaic	Luwian	Hiero.	Lycian	Lydian
Nom. (c.)	- <i>aš</i>	- <i>aš</i>	- <i>aš</i>	- <i>as</i>	- <i>a</i>	- <i>aš</i>
Acc. (c.)	- <i>an</i>	- <i>an</i>	- <i>an</i>	- <i>an</i>	- <i>ā</i> , - <i>u</i>	- <i>av</i>
Vocative	-Ø	- <i>a</i>	- <i>a</i>			
Nom.-Acc. (n.)	- <i>an</i>			- <i>aza</i>	(- <i>a</i>)	- <i>ad</i>
Genitive	- <i>aš</i>	- <i>aš</i>	- <i>ašši</i> , - <i>alli</i>	- <i>assa/i-</i>	- <i>asi</i> > - <i>ahi</i>	- <i>ali</i>
Dat.-Loc.	- <i>i</i> , - <i>ya</i>	(Dat.) - <i>i</i>	- <i>a(i)</i>	- <i>a</i> , - <i>aya</i>	- <i>i</i> , - <i>a</i>	- <i>aλ</i>
Ablative	- <i>az(a)</i>	- <i>az</i>	- <i>ati</i>	- <i>ati</i>	- <i>adi</i> , - <i>edi</i>	- <i>ad</i>
Instrumental	- <i>it</i>	- <i>az</i>	- <i>ati</i>	- <i>ati</i>	- <i>adi</i> , - <i>edi</i>	- <i>ad</i>
Directive	- <i>a</i>	(Loc.) - <i>a</i>				

Plural	Hittite	Palaic	Luwian	Hiero.	Lycian	Lydian
Nom. (c.)	-e/iš	-uš	-anzi	-a(n)zi		
Acc. (c.)	-uš		-anza	-a(n)zi	(Milyan) -āz, -uz	
Nom.-Acc. (n.)	-a		-a	-a, -aya	-iya	-a
Genitive	-an, -aš				-āi	
Dative	-aš		-anza	-a(n)zi	-(iy)a, -(iy)e	-av
Ablative	-az(a)		-anzati		-a/ede (?)	
Instrumental	-it		-anzati		-a/ede (?)	

Notes:

1. The Hittite case endings are for Old Hittite (for details on the case endings in Hittite, as well as nominal declension in general, cf. J. Friedrich 1960.I:42—59; Held—Schmalstieg—Gertz 1988:12—26; Hoffner—Melchert 2008:79—131; Kronasser 1956:97—139; Luraghi 1997:15—22; Sturtevant 1933:161—178 and 1951:81—101; Van den Hout 2011).
2. The Hittite ablative and instrumental plural endings are identical to the singular endings for these cases.
3. The genitive singular has been replaced in the Luwian branch (Cuneiform and Hieroglyphic Luwian and Lycian) by a suffix of adjectival origin (cf. Luraghi 1998:179).
4. In the Luwian branch, the plural endings are most likely based upon the accusative plural ending *-ons (or *-ns) reconstructed for Proto-Indo-European on the basis of the evidence of the non-Anatolian daughter languages (cf. Melchert 1994b:278 and 323; Luraghi 1998:177).
5. In the Lycian genitive singular, the -ahi form is found in Lycian, while the more archaic -asi form is found in Milyan.

19.6. COMMENTS ON NOMINAL INFLECTION

GENDER: The feminine gender reconstructed for Proto-Indo-European on the basis of the evidence of the non-Anatolian daughter languages is generally assumed to be a late development, which appeared after the Anatolian branch had split off from the main speech community (cf. Comrie 1998:82; Kuryłowicz 1964:207; Szemerényi 1996:156; Beekes 2011:189; Lehmann 1993:160; Shields 1982:14; Haudry 1982:72). Now, the similarity in form between the Late Proto-Indo-European feminine ending *-e-H₄ (> *-ā) and the collective ending *-e-H₄ (> *-ā) has been noted by several Indo-Europeanists, and there has been some speculation that the two may somehow be related (cf. Fortson 2010:133—134; Lehmann 1993:152; Shields 1982:72—81; Watkins 1998:63). Watkins (1998:63) makes an important point in noting that both feminine and collective function occurs in the more widely

attested ending $*-i-H_4$ ($> *-ī$) as well. As noted by Lehmann (1993:152), the common element here is the laryngeal and not the vowel. That the collective function of $*-e-H_4$ is ancient is indicated by the fact that it is found in Hittite, where it appears as $-a$. Curiously, and importantly, in Anatolian, Greek, and Gatha Avestan, neuter plurals took singular verb agreement (cf. Beekes 1985:28; Fortson 2010:131—132; Watkins 1998:63; Meillet 1964:291—292; Luraghi 1997:8 [for Hittite]). The following scenario may be proposed: The thematic declension ending $*-e-H_4$ was originally a collective with the meaning ‘group of ...’, as in Hittite (nom.-acc. pl. n. [= collective]) *alpa* ‘(group of) clouds’ (besides regular plural *alpeš*, *alpuš* ‘clouds’), Greek (collective) *μῆρα* ‘(group of) thighs’ (besides regular plural *μῆροί* ‘thighs’), and Latin *loca* ‘(group of) places’ (besides regular plural *locī* ‘places’) (examples from Fortson 2010:131—132). The lack of a laryngeal reflex in Hittite points to $*H_4$ as the laryngeal involved here (cf. Sturtevant 1951:91 [Sturtevant writes $*-eh$]; Kuryłowicz 1964:217 [Kuryłowicz writes $*_2$]). It was accompanied by singular verbs, whereas the regular plural forms were accompanied by plural verbs. Inasmuch as it took singular verb agreement, it was partially reinterpreted as a nominative(-accusative) singular ending in early post-Anatolian Proto-Indo-European (cf. Lehmann 1993:150; J. Schmidt 1889; Gamkrelidze—Ivanov 1995.I:246). Later, an independent accusative singular was formed on the analogy of the thematic accusative singular ending $*-o-m$: $*-eH_4+m$ ($> *-ā-m$ [cf. Sanskrit acc. sg. *sénām* ‘army’, *kanyām* ‘girl’]). The fact that there were two competing thematic nominative singular endings ($*-o-s \sim *-e-H_4$) brought about a split in which $*-o-s$ was reinterpreted as a masculine marker and $*-eH_4$ as a feminine marker. A new, specifically feminine declension was then built around the nominative singular ending $*-eH_4$. The final change that took place was the analogical extension of this patterning to $*-i-H_4$ (and $*-u-H_4$) stems, which are feminine in the older non-Anatolian daughter languages (cf. Shields 1982:80). We should note that the $*-o-s$ declension remained the default when no specific gender was indicated, and that a few archaisms have survived into the non-Anatolian daughter languages in which the $*-o-s$ declension is used for both masculine and feminine — an example here would be Greek *θεός*, meaning both ‘god’ and ‘goddess’ (beside the specifically feminine form *θεά* ‘goddess’). In some cases, the $*-o-s$ declension was even used with feminine nouns, such as $*snusó-s$ ‘daughter-in-law’ (cf. Greek *νύος* ‘daughter-in-law’ and Armenian *nu* ‘daughter-in-law’, Latin *nurus* ‘daughter-in-law’, but not Sanskrit, which has *snusā* ‘daughter-in-law’). Nonetheless, the majority of $*-o-s$ stems were masculine. Thus, it emerges that the system of two genders found in the Anatolian languages represents a more archaic state of affairs (cf. Gamkrelidze—Ivanov 1995.I:328—329; Matasović 2004). It was replaced in post-Anatolian Proto-Indo-European by a system of three genders (cf. Beekes 2011:189; Brugmann 1897; Luraghi 2011; Szemerényi 1996:156). One additional remark is needed here: as I see the situation, the abstract nominal stems in $*-VH_2$ played no part whatsoever in the development of distinct feminine forms. It was only after a feminine had already been formed and laryngeals had been lost that a superficial resemblance between the two materialized.

We may close by making one final remark about gender. Above, the two genders found in the Anatolian languages were called *common* and *neuter*. It is clear that the distinguishing characteristic was animacy. Consequently, better terms would be *animate* and *inanimate* (cf. Haudry 1979:33; Luraghi 1997:8; Meier-Brügger 2003:188—189; Meillet 1982:211—228; Shields 1982:14).

NUMBER: The dual reconstructed for Late Proto-Indo-European on the basis of the evidence found in the non-Anatolian daughter languages is controversial. Indeed, some scholars have questioned whether a dual should even be reconstructed at all for Proto-Indo-European. However, it appears likely that the rudiments of a dual had already started to form in later Proto-Indo-European. That the process was not complete before the parent language began to disintegrate into different dialect groups is shown by the fact that the endings, especially those for the oblique cases, differ in important details among the various daughter languages. In other words, it was left to the individual daughter languages to fill out the paradigm (cf. Meier-Brügger 2003:190). This being the case, it is easy to understand why it is virtually impossible to reconstruct a common Proto-Indo-European set of dual endings that can account for all of the developments in the various daughter languages. The reconstructions given in the above tables are taken mainly from Szemerényi (1996:160 and 186). Szemerényi's reconstructions are based almost exclusively on what is found in Indo-Iranian (especially Old Indic). Other scholars have proposed either different reconstructions or none at all. That there are uncertainties about the reconstructions given in the above tables is indicated by the question marks. Some of the daughter languages did not carry the process of creating a full set of dual endings very far and eventually dropped the dual altogether, while others (notably Indo-Iranian) built quite elaborate systems. Here, again, the Anatolian languages represent a more archaic state of affairs in which the dual had not yet developed.

The singular and plural were well established in all stages of development of the Indo-European parent language. However, the system of plural case endings was less well developed than the corresponding system of singular endings (cf. Gamkrelidze—Ivanov 1995.I:244—245; Szemerényi 1996:159) — this is especially clear in Hittite (cf. Sturtevant 1951:83; Fortson 2010:182; Luraghi 1997:8 and 1998:179—180). In the non-Anatolian daughter languages, the plural (and dual) system was filled out, in part, by the incorporation of endings based on **-bh(y)o-* ~ **-bhi-* (in Indo-Iranian, Greek, Armenian, Italic, Venetic, and Celtic) and **-mi-* ~ **-mo-* (in Germanic and Balto-Slavic) (cf. Gamkrelidze—Ivanov 1995.I:332—335; Meillet 1964:298; Shields 1982:50—52; Fortson 2010:129; Lehmann 2002:184), both of which were originally independent particles, and both of which still exist in Germanic: (1) **me-thi* 'with, along with, together with' (> Proto-Germanic **mið* 'with, along with, together with' > Gothic *miþ* 'with, among'; Old Icelandic *með* 'with, along with, together with'; Old English *mid*, *miþ* 'together with, with, among'; Old Frisian *mithi* 'with'; Old Saxon *mid* 'with'; Middle High German *mite*, *mit* 'with, by, together' [New High German *mit*]); but **me-thá* in Greek μετά '(with gen.) in the midst of, among; (with dat.) among, in the company of; (with acc.) into the middle of, coming among'; and (2) **bhi-* 'in, with, within, among' (>

Proto-Germanic **bi* '[near] by, at, with, in, on, about' > Gothic *bi* 'about, over; concerning, according to; at'; Old English *be*, *bi*; *bī* [preposition, with dat., indicating place and motion] 'by [nearness], along, in'; Old Saxon *be-*, *bī-* 'by, about, in, on'; Old High German *bi-*; *bī* adverb indicating nearness, preposition meaning [with dat.] '[near] by, at, with', as adverb 'from now on [von jetzt an]' [New High German *bei*]). There is a compound in Sanskrit, namely, *abhi* (either < **e-/o-+b^{hi}-* or **m̥-+b^{hi}-*), whose primary meaning is 'moving or going towards, approaching' — as an independent adverb or preposition, it means (with acc.) 'to, towards, in the direction of, against, into'; as a prefix, it means 'to, towards, into, over, upon'. Another compound is found in Greek ἀμφί (**m̥-+b^{hi}-*), preposition used with the genitive, dative, and accusative with the basic meaning 'on both sides', as opposed to περί, whose basic meaning is 'all around' — (with gen., causal) 'about, for, for the sake of', (of place) 'about, around'; (with dat., of place) 'on both sides of, about'; (with acc., of place) 'about, around'; (as independent adverb) 'on both sides, about, around'. This compound is also found in the Latin inseparable prefix *amb-*, *ambi-*, meaning 'on both sides; around, round about'.

CASE ENDINGS: A more comprehensive analysis of the prehistoric development of the case endings will be undertaken in the next chapter. Here, we will make some preliminary observations concerning the traditional reconstructions.

A comparison of the case endings found in the Anatolian branch with those traditionally reconstructed indicates that, while there was a basic core of endings common to all branches, both Anatolian and non-Anatolian, the nominal inflectional system had not yet been completely filled out by the time that the Anatolian languages split off. It was very much a work in progress (cf. Lehmann 1993:153—155 and 2002:202). We have already seen that the feminine gender, the dual number, and the case endings based upon **-b^h(y)o-* ~ **-b^{hi}-* and **-mi-* ~ **-mo-* arose after the split. Moreover, we can no longer assume, as did the Neogram-marrians, that, if something existed in Indo-Iranian, it must also have existed in the Indo-European parent language. Of late, there has been a growing recognition on the part of specialists that the complex inflectional system of Indo-Iranian was partially due to special developments in that branch, and the same may be said for some of what is found in Greek, Italic, Balto-Slavic, etc. (cf. Lehmann 1993:154—155). That said and done, the division between athematic and thematic declensional types was ancient.

The core case endings include the following: common (animate) gender nominative singular **-s* and accusative singular **-m* (and **-n*); genitive singular **-s*; dative-locative singular **-ey/*-i*; nominative plural common gender **-es*; genitive plural **-om*; nominative-accusative neuter plural (= collective) **(e)H₄*. According to Lehmann (2002:185), the earliest nominal declension consisted of the following three cases: nominative, accusative, and vocative. He further states that the genitive was probably the first additional case. The dative and locative singular endings appear to be ablaut variants (cf. Haudry 1979:35—36; Gamkrelidze—Ivanov 1995.I:249; Lehmann 2002:186), though a relationship between these two forms is disputed by some. A distinct ablative ending is found only in the thematic

declension (cf. Beekes 2011:212—213; Burrow 1973:233; Fortson 2010:127—128; Lehmann 2002:184; Szemerényi 1996:183—184; Weiss 2009:202) (cf. Sanskrit *-āt* [*-ād*]; Oscan *-ud*, *-úd*; Old Latin *-ē/ōd*; Cuneiform and Hieroglyphic Luwian *-ati*; Lycian *-adi*, *-edi*; Lydian *-ad*). The original form probably ended in **-t^h*, though this is not completely certain (cf. Burrow 1973:233; Kapović 2017c:64; Sihler 1995:250—251). This ending is best seen as an adverb that has been incorporated into the thematic declension: **-ō/ē-t^h-* < **-o/e-+H₁(e)t^h(i)* (cf. Lundquist—Yates 2018:2087 [**-oh₁ad*]; R. Kim 2012 [**(h₁)éti*]). The accusative plural was clearly built upon the accusative singular by the addition of **-s* to the accusative singular (cf. Burrow 1973:236; Meier-Brügger 2003:163). The extension of the genitive singular in the thematic declension by **-o* and **-yo* was a later development, whose distribution had not yet been completely worked out at the time that Proto-Indo-European began to split up into the individual non-Anatolian daughter languages.

Thus, the following athematic case endings may be reconstructed with a high degree of certainty for the period of development just prior to the separation of the Anatolian branch:

Case	Animate	Inanimate
Singular:		
Nominative	<i>*-s</i>	
Nominative-accusative		<i>*-Ø</i>
Vocative	<i>*-Ø</i>	
Accusative	<i>*-m/-m</i> (or <i>*-n/-n</i>)	
Genitive-ablative	<i>*-es/-as/-s</i>	<i>*-es/-as/-s</i>
Dative-Locative	<i>*-ey/-i</i>	<i>*-ey/-i</i>
Plural:		
Nominative-vocative	<i>*-es</i>	
Nominative-accusative		(collective <i>*-(e)H₄</i>)
Genitive	<i>*-am</i>	<i>*-am</i>

The following thematic case endings may be reconstructed for the same period:

Case	Animate	Inanimate
Singular:		
Nominative	<i>*-a-s</i>	
Nominative-accusative		<i>*-a-m</i>
Vocative	<i>*-e</i>	
Accusative	<i>*-a-m</i> (or <i>*-a-n</i>)	
Genitive	<i>*-a-s</i>	<i>*-a-s</i>
Ablative	<i>*-āt^h</i> (< <i>*-a-H₁(e)t^h</i>)	<i>*-āt^h</i> (< <i>*-a-H₁(e)t^h</i>)
Dative-Locative	<i>*-āy</i> (< <i>*-a-ey</i>)/ <i>*-e/a-y</i>	<i>*-āy</i> (< <i>*-a-ey</i>)/ <i>*-e/a-y</i>

Plural:		
Nominative-vocative	*-ās (< *-a-es)	
Nominative-accusative		*-e-H ₄
Genitive	*-ām (< *-a-am)	*-ām (< *-a-am)

Note: At this stage of development, apophonic **a* had not yet become apophonic **o* (for details, cf. Chapter 4, §4.9. The Vowels and Diphthongs).

19.7. ACCENTUATION AND ABLAUT IN PROTO-INDO-EUROPEAN

This section is repeated from Chapter 4 (§4.10), “The Reconstruction of the Proto-Indo-European Phonological System”.

Disintegrating Indo-European was a *stress-accent* language (for details on accentuation in Proto-Indo-European, cf. Bubenik 1979:90—106; Halle—Kiparsky 1977:209—238; Adrados 1975.I:311—323; Hirt 1895; Meillet 1964:140—143; Szemerényi 1996:73—82; Meier-Brügger 2003:152—158; Fortson 2010:68; Burrow 1973:113—117; Sihler 1995:233—234; Lubotsky 1988; for a good general discussion of stress and *stress-accent* systems, cf. Hyman 1975:204—212, especially p. 207, and for *pitch-accent* systems, pp. 230—233). Correlating with the stress was changing pitch: rising from an unstressed syllable to a stressed syllable and falling from a stressed syllable to an unstressed syllable. Every word, except when used clitically, bore an accent. However, each word had only one accented syllable. (It should be noted here that there was a rule by which the surface accent appeared on the leftmost syllable when more than one inherently accented syllable existed in a word [cf. Lundquist—Yates 2018:2125].) The position of the accent was morphologically conditioned, accentuation being one of the means by which Proto-Indo-European distinguished grammatical relationships. Though originally not restricted to a particular syllable, there was a tendency to level out the paradigm and fix the position of the accent on the same syllable throughout (cf. Adrados 1975.I:317; Kurylowicz 1964a:207—208). This tendency began in Disintegrating Indo-European and continued into the individual non-Anatolian daughter languages. Therefore, the Disintegrating Indo-European system is only imperfectly preserved in even the most conservative of the daughter languages, Vedic Sanskrit.

Fortson (2010:119—122) recognizes four distinct types of athematic stems in later (Pre-divisional or “Disintegrating”) Proto-Indo-European, determined by the position of the accent as well as the position of the full-grade (or lengthened-grade) vowel (Fortson notes that additional types developed in individual daughter languages) (see also Watkins 1998:61—62; Beekes 1985:1 and 2011:190—191):

1. Acrostatic: fixed accent on the stem throughout the paradigm, but with ablaut changes between the strong and weak cases.
2. Proterokinetic (or proterodynamic): the stem is accented and in full-grade vowel in the strong cases, but both accent and full-grade vowel are shifted to the suffix in the weak cases.

3. Amphikinetic (or holokinetic or amphotodynamic): the stem is accented in the strong cases, while the case ending is accented in the weak cases. Typically, the suffix is characterized by a lengthened *o*-grade vowel in the nominative singular and a short *o*-grade vowel in the accusative singular.
4. Hysterokinetic (or hysterodynamic): the suffix is accented in the strong cases, and the case ending in the weak cases.

Szemerényi (1996:162) adds a fifth type:

5. Mesostatic: the accent is on the suffix throughout the paradigm.

An even more elaborate system is set up by Meier-Brügger (2003:205—218).

The rules governing the position of the accent in early Disintegrating Indo-European may be stated rather simply (this was later replaced by the more elaborate system just described):

1. Neuter action nouns were accented on the stem in the so-called “strong” cases but on the ending in the so-called “weak” cases (cf. Burrow 1973:220—226).
2. Common gender agent noun/adjectives were accented on the suffix throughout the paradigm (cf. Burrow 1973:119).
3. Athematic verbs were accented on the stem in the singular but on the ending in the plural (and dual) in the indicative but on the ending throughout the middle (cf. Burrow 1973:303).

The thematic formations require special comment. It seems that thematic agent noun/adjectives were originally accented on the ending in the strong cases and on the stem in the weak cases. This pattern is the exact opposite of what is found in the neuter action nouns. The original form of the nominative singular consisted of the accented thematic vowel alone. It is this ending that is still found in the vocative singular in the daughter languages and in relic forms such as the word for the number ‘five’, **p^henk^{wh}e* (**penq^ue* in Brugmann’s transcription). The nominative singular in **-os* is a later formation and has the same origin as the genitive singular (cf. Szemerényi 1972a:156; Van Wijk 1902).

The system of accentuation found in Disintegrating Indo-European was by no means ancient. The earliest period of Proto-Indo-European that can be reconstructed appears to have been characterized by a strong stress accent (cf. Burrow 1973:108—112; Lehmann 1952:111—112, §15.4, and 1993:131—132; Szemerényi 1996:111—113) — following Lehmann, this period may be called the Phonemic Stress Stage. This accent caused the weakening and/or loss of the vowels of unaccented syllables. There was a contrast between those syllables with stress and those syllables without stress. Stress was used as an internal grammatical morpheme, the stressed syllable being the morphologically distinctive syllable. The phonemicization of a strong stress accent in Early Proto-Indo-European caused a major restructuring of the inherited vowel system and brought about the development of syllabic liquids and nasals (cf. Lehmann 1993:138).

In the latest period of Proto-Indo-European, quantitative ablaut was no longer a productive process. Had there been a strong stress accent at this time, each Proto-Indo-European word could have had only one syllable with full-grade vowel, the vowels of the unstressed syllables having all been eliminated. However, since the majority of reconstructed Proto-Indo-European words have more than one full-grade vowel, the stress accent must have become non-distinctive at some point prior to the latest stage of development.

TO SUMMARIZE: The earliest form of Proto-Indo-European was characterized by a system of vowel gradation in which the normal-grade contrasted with either the reduced-grade or the zero-grade (the choice between the reduced-grade on the one hand or the zero-grade on the other depended upon the relationship of the unstressed syllable to the stressed syllable — functionally, reduced-grade and zero-grade were equivalent). The normal-grade was found in all strongly stressed, morphologically significant syllables, while the reduced-grade or zero-grade were found in all syllables that were morphologically non-distinctive and, therefore, unstressed. The lengthened-grade was a later development and was functionally equivalent to the normal-grade. During the Phonemic Stress Stage of Proto-Indo-European, the basic rule was that no more than one morpheme could have a full-grade vowel in a given polymorphic form, the other morphemes in the syntagmatic sequence being in either zero-grade or reduced-grade.

Proto-Indo-European also made extensive use of inflectional endings as a means to indicate grammatical relationships. The rule that no more than one morpheme could have a full-grade vowel in a given polymorphic form must have caused conflicts between the system of indicating grammatical relationships based upon the positioning of the accent versus that based upon the use of inflectional endings. In other words, it must often have happened that more than one syllable of a word was considered morphologically significant. For example, according to the rules of derivation and inflection, the initial syllable of a word may have received the stress. At the same time, an inflectional ending may have been added, and this ending, in order not to be morphologically ambiguous may also have had a full-grade vowel in addition to that found in the stressed syllable. By the same token, when the shift of accent from, say, the stem to the ending would have produced unpronounceable consonant clusters, the vowel of the stem was retained.

It is likely that the Proto-Indo-European stress was pronounced with special intonations that helped make the accented syllable more discernable. When words with more than one full-grade vowel came into being, stress ceased to be phonemically distinctive. Phonemic pitch then replaced stress as the primary suprasegmental indicator of morphologically distinctive syllables (cf. Burrow 1973:112—113; Lehmann 1952:109—110, §1.53 and 1993:132 and 139), and the accent lost its ability to weaken and/or eliminate the vowels of unaccented syllables — following Lehmann, this period may be called the Phonemic Pitch Stage. The primary contrast was then between morphologically distinctive syllables with full-grade vowel and high pitch and morphologically non-distinctive syllables with full-grade vowel and low pitch.

Concurrent with the morphologically-conditioned development of the system of vowel gradation, another method of indicating grammatical relationships was developing, that being the use of inflectional endings. Some of these markers were inherited by Pre-Proto-Indo-European (for remarks on the prehistoric development of these markers, see Chapter 20 of this book), while others — the majority — arose after Proto-Indo-European had assumed its own independent identity (cf. Blažek 2014). No doubt, the phonemicization of a strong stress accent and the rule that no more than one morpheme could have a full-grade vowel in a given polymorphic form must have wrecked havoc with the original system. Gradually, the vast majority of the earlier markers were replaced by newer forms, and the use of inflectional endings became the primary means of indicating grammatical relationships, with the result that vowel gradation and accentuation became mostly unnecessary and redundant features. It was not long before the earlier system of vowel gradation began to break down as analogical leveling took place. Also, in its later stages, Proto-Indo-European, as well as the individual daughter languages, it may be noted, continued to create new formations that, unlike older formations, were not affected by the causes of vowel gradation. Therefore, the patterns of vowel gradation are only imperfectly preserved in the final stage of the Indo-European parent language and in the various daughter languages.

19.8. PERSONAL PRONOUNS

Szemerényi (1996:216) reconstructs the following first and second person personal pronoun paradigms for Proto-Indo-European (see also Brugmann 1904:407—413; Meillet 1964:332—336; Fortson 2010:141—143; Beekes 2011:232—234; Meier-Brügger 2003:225—227; Watkins 1998:67; Haudry 1979:61—63; Adrados 1975.II:784—813; Schmitt-Brandt 1998:228—231; Adrados—Bernabé—Mendoza 1995—1998.III:27—68; Buck 1933:216—221; Sihler 1995:369—382; Burrow 1973:263—269; Liebert 1957) (Szemerényi's notation is retained):

Case	First Person	Second Person
Singular:		
Nominative	*eg(h)om, *egō	*tū, *tu
Accusative	*(e)me, *mē, *mēm	*twe/*te, *twē/*tē, *twēm/*tēm
Genitive	*mene, (encl.) *mei/*moi	*tewe/*tewo, (encl.) *t(w)ei/*t(w)oi
Ablative	*med	*twed
Dative	*mei/*moi, *mebhi	*t(w)ei/*t(w)oi, *tebhi
Plural:		
Nominative	*wei, *ǵsmés	*yūs, *usmés (*uswes ?)
Accusative	*nes/*nos, *nēs/*nōs, *ǵsme	*wes/*wos, *wēs/*wōs, *usme, *uswes
Genitive	*nosom/*nōsom	*wosom/*wōsom

Ablative	<i>*ηsed, *ηsmed</i>	<i>(*used ?)/*usmed</i>
Dative	<i>*ηsmei</i>	<i>*usmei</i>

A notable feature of the personal pronouns is the use of *suppletion* — in the first person personal pronoun, four distinct stems have been combined into a single paradigm, while three are combined in the case of the second person. At an earlier stage of development, there were also four distinct stems involved in the second person as well. However, the original nominative singular form (** t^hi* , see below) was analogically remodeled on the basis of the oblique form (** t^hu*) in post-Anatolian Proto-Indo-European. The personal pronouns do not distinguish gender.

The situation is not as straightforward as the above table seems to indicate. The daughter languages actually show a great deal of variation, and this makes it difficult to reconstruct a set of forms for the Indo-European parent language that can account for all of the developments in the daughter languages (cf. Fortson 2010:140). Moreover, bringing the Anatolian data into the picture only adds further complications. Mainly on the basis of the Anatolian data, Sturtevant (1951:103) posited an extremely reduced set of forms for Proto-Indo-Hittite:

Case	First Person	Second Person
Singular:		
Nominative	<i>*'ég</i>	<i>*t\acute{e}</i>
Oblique	<i>*mé, *'bmé</i>	<i>*twé, *t\acute{w}</i>
Plural:		
Nominative	<i>*wéys</i>	?
Oblique	<i>*'nós, *'bns(-smé)</i>	<i>*'wós, *'ws(-smé)</i>

The first person singular personal pronoun has a number of different reflexes in the individual daughter languages — they may be divided into several groups: (1) Greek *ἐγώ*(v), Latin *egō*, Venetic *.e.go*; (2) Gothic *ik*, Runic *eka* [ᚱᚰ], Old Icelandic *ek*, Old English *ic*, Middle High German *ich*; (3) Sanskrit *ahám*, Old Persian *adam*, Avestan *azəm*; (4) Armenian *es*, Lithuanian *ąš* (Old Lithuanian *eš*), Latvian *es*, Old Prussian *es, as*; (5) Old Church Slavic (*j*)*azъ*; (6) Old Hittite *ú-uk* (later *ú-uk-ga*). The first group points to Proto-Indo-European ** $\mathcal{P}ek'$ -oH(m)* (traditional **eġō(m)*), the second to ** $\mathcal{P}ek'$ -om* (traditional **eġom*), the third to ** $\mathcal{P}eg^h$ -om* (traditional **eġhom*), the fourth to ** $\mathcal{P}ek^h$* (traditional **ek̂*), the fifth to ** $\mathcal{P}ēk'$ -om* or ** $\mathcal{P}ēg^h$ -om* (traditional **ēġom* or **ēġhom*), while the guttural in the sixth group (Hittite) is too phonetically ambiguous to be sure which group it should be assigned to — according to Sturtevant (1951:103, §170b), the *u-* is due to the influence of the oblique forms of the second person personal pronoun (but cf. Kloekhorst 2008b:113—114). For additional forms, cf. Pokorny 1959:291. The variation seems to indicate that this pronoun stem was a late development (cf. Lehmann 1993:157). The common element is ** $\mathcal{P}e-$* to which one or more than one additional elements have been added. The first element is always a guttural: ** $\mathcal{P}e+k^h-$* , ** $\mathcal{P}e+k'-$* , ** $\mathcal{P}e+g^h-$*

(cf. Adrados 1975.II:785, II:789, and II:794). In the fourth group, no additional element has been added after the guttural (Armenian *es*, etc. < $*\mathcal{P}e+k^h$). In the first group, the element following the guttural is $*-oH$ (> $*-\bar{o}$), which could be further extended by $*-m$ (as in Greek $\acute{\epsilon}\gamma\acute{\omicron}\nu$ — even $\acute{\epsilon}\gamma\acute{\omicron}\nu\epsilon$ in Laconian). In the second group, the element following the guttural is $*-om$ (Gothic *ik*, etc. < $*\mathcal{P}e-k'-om$), and the same element characterizes the third (Sanskrit *ahám*, etc. < $*\mathcal{P}e-g^h-om$) and fifth groups as well, though the gutturals are different. Finally, the fifth group points to an earlier long vowel (Old Church Slavic $(j)azъ$ < $*\mathcal{P}\bar{e}-k'-om$ or $*\mathcal{P}\bar{e}-g^h-om$). The origin of this pronoun is rather transparent — it was a compound deictic stem meaning something like ‘this one here’ (cf. Lehmann 2002:188—189; Georgiev 1981:58). The elements $*-oH$ and $*-om$ are most likely due to the influence of the first person verbal endings (cf. Lehmann 2002:189; Szemerényi 1996:216).

The data from the Anatolian languages demonstrate that the original form of the second person nominative singular was $*t^hi$. This form has been preserved intact in Palaic (nom. sg. *ti-i*) and Hieroglyphic Luwian (*tī*), while, in Hittite, it was extended by a guttural, and the initial stop was affricated before the high front vowel (nom. sg. *zi-ik*, *zi-ga*). The oblique cases were based upon $*t^hu$ (cf. Palaic acc.-dat. sg. *tu-ú*; Hittite acc.-dat. sg. *tu-uk*, *tu-ga*, gen. sg. *tu-(e-)el*; Hieroglyphic Luwian acc. sg. *tu-wa-n*), while the enclitic forms were based upon both $*t^hi$ (cf. Hittite nom. sg. c. *-ti-iš*, *-te-eš*, acc. sg. c. *-ti-in*) and $*t^ha$ (cf. Hittite gen. sg. *-ta-aš*).

The second person forms based on $*t^hw$ - found in the non-Anatolian daughter languages are derived from $*t^hu$ (cf. Meier-Brügger 2003:226; Szemerényi 1996:213 and 216).

The first person plural form $*\mathcal{P}us$ - and second person plural form $*us$ - are merely reduced-grade variants of $*nos$ and $*wes$ respectively. $*\mathcal{P}us$ - was optionally extended by $*-me$ (> $*\mathcal{P}us-me$ -), while $*us$ - was optionally extended by $*-we$ - (> $*us-we$ -) (cf. Meier-Brügger 2003:226, who credits Joshua Katz for the idea). Later, $*us-we$ - was analogically refashioned to $*us-me$ - after the first person plural form, though traces of the original patterning survive in the daughter languages (cf. Gothic dat. pl. *izwis* ‘to you’).

Fortson (2010:142—143) notes that there was also a series of unstressed enclitic object personal pronouns in Proto-Indo-European (see also Meier-Brügger 2003:225—226). Fortson reconstructs the following forms:

Case	First Person	Second Person
Singular:		
Accusative	$*me$	$*te$
Dative-Genitive	$*moi$	$*toi$
Plural:		
Oblique (all cases)	$*nos$	$*\mathcal{P}os$

It was the enclitic forms that served as the base for the oblique cases of the independent personal pronouns (cf. Lehmann 1993:157). A series of enclitic

possessive pronouns is well represented in Hittite (cf. Meriggi 1980:319—320; Sturtevant 1951:105—106; Kronasser 1956:145—147; Luraghi 1997:22—23; Hoffner—Melchert 2008:137—141; J. Friedrich 1960.I:64—66).

On the basis of the above discussion, the following personal pronoun stems may be reconstructed for the stage of development of the Indo-European parent language immediately prior to the separation of the Anatolian languages from the main speech community (cf. Kloekhorst 2008b:112—116):

Case	First Person	Second Person
Singular:		
Nominative	* <i>ʔe+kʰ-</i> , * <i>ʔe+k'-</i> , * <i>ʔe+g-</i>	* <i>tʰi</i>
Oblique/Enclitic	* <i>me</i>	* <i>tʰu</i> , * <i>tʰa/e</i>
Plural:		
Nominative	* <i>wey(s)</i>	* <i>yuH(s)</i>
Oblique/Enclitic	* <i>nas</i>	* <i>was</i>

Notes:

1. As noted above, at this stage of development, apophonic **a* had not yet become apophonic **o*.
2. Likewise, voiced aspirates had not yet developed.

19.9. DEMONSTRATIVE, INTERROGATIVE, AND RELATIVE PRONOUNS

Proto-Indo-European did not possess third person personal pronouns. It did, however, possess various *deictic* and *anaphoric* elements, which served as the basis for demonstratives in later Proto-Indo-European and in the individual daughter languages (cf. Lehmann 2002:190). Brugmann—Delbrück (1897—1916.II/2:1/2:320—347) list the following stems (see also Adrados 1975.II:813—838; Adrados—Bernabé—Mendoza 1995—1998.III:73—90; Beekes 2011:225—227; Brugmann 1904:399—402; Burrow 1973:269—278; Fortson 2010:144; Lehmann 1993:158—159 and 2002:190; Lundquist—Yates 2018:2101; Meier—Brügger 2003:228—231; Meillet 1964:325—332; Sihler 1995:384—395; Szemerényi 1996:203—207; Watkins 1998:66; Kapović 2017c:85—88) (Brugmann's notation is retained):

1. **so-*, **to-* (**si̯o-*, **sīo-*, **ti̯o-*, **tīo-*), neutrally deictic
2. **ko-* (with the particle **ke*), **kī-*, **k(i)io-*, “I”-deictic
3. **i-*, **i̯-*: **(i)īā-* and **e-*, **a-*, general deictic
4. the *n*-demonstratives: **no-*, **eno-* (< **e-no-*), **ono-*, **oino-*, **aino-*, distal or yonder-deictic
5. *l*-demonstratives, “that”-deictic (Brugmann 1904:402 reconstructs **ol-* here)

6. μ -demonstratives, distal or yonder-deictic (cf. Avestan *ava-* ‘that’; Old Persian *ava-* ‘that’; Sanskrit gen.-loc. du. *avóṣ* ‘of those two’; Old Church Slavic *ovъ* ‘that, he’ [see also Burrow 1973:274])

According to Beekes (2011:226), there were only two demonstratives in Proto-Indo-European (his notation has been retained):

1. $*so$, (f.) $*seh_2-$, (n.) $*tod$ ‘this, that’
2. $*h_1e$, (f.) $*(h_1)ih_2$, (n.) $*h_1id$ anaphoric pronoun: ‘that, the (just named)’

Beekes also posits three particles/adverbs, which served as the basis for pronouns in later Proto-Indo-European:

1. $*k_i$ ‘here’
2. $*h_2en$ ‘there’
3. $*h_2eu$ ‘away, again’

There was also a reflexive pronoun $*s(w)e-$ ‘(one)self’ (cf. Fortson 2004:130 and 2010:145; Meier-Brügger 2003:226—227; Szemerényi 1996:220—221; Watkins 1998:67). According to Watkins, it was used to mark reference to the subject or topic of a sentence.

The declension of the demonstratives differed somewhat from what is found in nominal stems (cf. Fortson 2010:143—144). The nominative-accusative singular neuter ended in a dental stop (cf. Sanskrit *tá-t*; Latin *(is)tu-d*; Gothic *þat-a*; etc.), while the nominative plural masculine ended in $*-i$ (cf. Sanskrit *té*; Homeric *toí*; Latin *(is)tī*; Old Church Slavic *tī*; etc.). Several of the oblique cases were built on a formant $*-sm-$, which was inserted between the stem and the case endings. The stems $*so-$ and $*tho-$ ‘this, that’ were joined in a suppletive relationship in which $*so-$ was found in the nominative singular masculine (but without the typical nominative ending $*-s$ [cf. Sanskrit *sa*, when followed by a word beginning with a consonant; Greek *ó*; Gothic *sa*], though this ending was added later in some daughter languages [cf. Sanskrit masc. sg. *sá-h*]) and feminine ($*seH_4 > *sā$), while $*tho-$ served as the basis for the nominative-accusative neuter as well as the remaining cases (cf. Sihler 1995:384—385; Lehmann 1993:158). Fortson (2010:144) also notes that the genitive singular ending was $*-eso$ in pronominal stems (cf. Gothic *þis* ‘of the’; Old Church Slavic *česo* ‘of what’; etc.), while a special genitive plural ending $*-sōm$ can be reconstructed as well. Several of the pronominal endings spread to the nominal declensions, both in the later Indo-European parent language as well as in the older daughter languages.

Hittite possessed the following demonstratives (cf. Luraghi 1997:25—26; Kronasser 1956:147—148; Sturtevant 1951:108—112; Meriggi 1980:322—324; J. Friedrich 1960.I:66—68; Hoffner—Melchert 2008:143—144):

- (nom. sg. c.) *ka-a-aš* ‘this’ (‘I’-deictic)
 (nom. sg. c.) *a-pa-(a)-aš* ‘that’ (‘that’-deictic and ‘you’-deictic)

There were also several rare and/or defective stems in Hittite (this is a sampling; not all attested forms are given) (cf. Hoffner—Melchert 2008:144—146):

- (dat. sg.) *e-di, i-di, e-da-ni* ‘that one; he’
 (nom. sg.) *a-ši* ‘that one, that thing; he, it’
 (acc. sg.) *u-ni, u-ni-im* ‘that one’
 (nom.-acc. n.) *e-ni* ‘that thing; it’
 (dat. sg.) *ši-e-ta-ni* ‘he, she, it’
 (nom. sg.) *an-ni-iš* ‘that yonder’

The following enclitic is also found in Hittite: (nom. c.) *-aš* ‘that one; he’.

The stems **so-* and **to-* served as the basis for the connective particles *šu* and *ta* found in Hittite (cf. Sturtevant 1951:108—109). They, along with the stem *na-*, were also combined with enclitic *-aš* as follows (cf. Sturtevant 1951:108—109 and 113; Kronasser 1956:143—144; J. Friedrich 1960.I:63—64; Luraghi 1997:25 and 1998:181):

Case	Enclitic	<i>ša-</i> + Enclitic	<i>ta-</i> + Enclitic	<i>na-</i> + Enclitic
Singular:				
Nom. c.	<i>-aš</i>	<i>ša-aš</i>	<i>ta-aš</i>	<i>na-aš</i>
Acc. c.	<i>-an</i>	<i>ša-an</i>	<i>ta-an</i>	<i>na-an</i>
Neut.	<i>-at</i>		<i>ta-at</i>	<i>na-at</i>
Dat. (Obl.)	<i>-še/-ši</i>			
Plural:				
Nom. c.	<i>-e</i>	<i>še</i>		
	<i>-at</i>			<i>na-at</i>
Acc. c.	<i>-uš</i>	<i>šu-uš, šu-ša</i>	<i>tu-(u-)uš</i>	<i>nu-uš</i>
	<i>-a</i>		<i>ta-a</i>	
Neut.	<i>-e/-i</i>			<i>ne-it-ta</i>
	<i>-at</i>			<i>na-at</i>
Dat. (Obl.)	<i>-šmaš</i>			

Luwian had the following demonstratives: (nom. sg. c.) *za-a-aš* ‘this’ (= Hittite *ka-a-aš*) (nom.-acc. sg. n. *za-a*, nom. pl. c. *zi-(i-)in-zi*, etc.) and (nom. sg. c.) *a-pa-aš* ‘that (one); he, she, it; they’. The same stems are found in Hieroglyphic Luwian. Hieroglyphic Luwian also has the stem *ṛ-* ‘this (one)’. Lycian has *ebe-* ‘this (one)’ and *ē* ‘him, her; them’, while Lydian has (nom. sg. c.) *ešš* ‘this’ and (nom. sg. c.) *bis* ‘he, she’. Palaic has the demonstrative *(-)apa-* ‘that (one)’. The common Anatolian demonstrative **aba-* seems to be a uniquely Anatolian development (cf. Puhvel 1984— .1/2:90; Klockhorst 2008b:191—192).

Most of the anaphoric and deictic elements reconstructed by Brugmann for later Proto-Indo-European (as given above) can be reconstructed for the stage of

development of the Indo-European parent language immediately prior to the separation of the Anatolian languages from the main speech community as well:

1. **sa-*, **tha-*
2. **kha-*/**khe-*, **khi-*
3. **ṛi-*, **ṛe-*/**ṛa-*
4. **na-*; **ṛe-na-*/**ṛa-na-*

The interrogative stem that Brugmann (1904:402) reconstructs as **q^uo-*, **q^ui-*, **q^uu-* is attested in every branch of the family, including Anatolian. The same stem is used to form indefinite pronouns. Szemerényi (1996:208) reconstructs the Proto-Indo-European paradigm of **k^whi-* ‘who?, which?’, ‘what?’ (Szemerényi writes **k^wi-*, Brugmann **q^ui-*) as follows (see also Watkins 1998:67; Beekes 2011:227—231; Kapović 2017c:88) (Szemerényi’s notation has been retained):

	Singular		Plural	
	Masc.-Fem.	Neut.	Masc.-Fem.	Neut.
Nom.	<i>*k^wis</i>	<i>*k^wid</i>	<i>*k^weyes</i>	<i>*k^wī</i>
Acc.	<i>*k^wim</i>	<i>*k^wid</i>	<i>*k^wins</i>	<i>*k^wī</i>
Gen.	<i>*k^wesyō</i>		<i>*k^weisōm</i>	
Dat.	<i>*k^wesm-ei</i> , <i>-ōi</i>		<i>*k^weibh(y)os</i>	
Loc.	<i>*k^wesmi</i>		<i>*k^weisu</i>	
Instr.	<i>*k^wī</i>			

The Hittite, Palaic, and Luwian paradigms are as follows (cf. Sturtevant 1951:115; Luraghi 1997:26; J. Friedrich 1960.I:68—69; Held—Schmalstieg—Gertz 1988:33; Kronasser 1956:148; Carruba 1970:60; Kimball 1999:266; Hoffner—Melchert 2008:149; Laroche 1959:55; Meriggi 1980:325—327):

	Hittite	Palaic	Luwian
Singular:			
Nom. c.	<i>ku-iš</i>	<i>kuiš</i>	<i>ku-(i-)iš</i>
Acc. c.	<i>ku-in</i>	<i>ku-in</i>	<i>ku-i-in</i>
Nom.-acc. n.	<i>ku-it</i> , <i>ku-wa-at</i>	<i>ku-it-</i>	
Gen.	<i>ku-e-el</i>		
Dat.	<i>ku-e-da-(a-)ni</i>	(?) <i>ku-i</i>	
Abl.	<i>ku-e-iz(-za)</i>		
Plural:			
Nom. c.	<i>ku-(i-)e-eš</i> , <i>ku-e</i>		<i>ku-in-zi</i>
Acc. c.	<i>ku-i-e-eš</i> , <i>ku-i-uš</i>		
Nom.-acc. n.	<i>ku-e</i> , <i>ku-i-e</i>		<i>ku-i</i>
Dat.	<i>ku-e-da-aš</i> , <i>ku-e-ta-aš</i>		

Thus, we may confidently posit Early Proto-Indo-European interrogative/indefinite stems **k^{whi}-* and **k^{wha}-* ‘who?, which, what?’. Anatolian, Tocharian, Italic, and Germanic also use this stem as a relative (cf. Szemerényi 1996:210). The stem **yo-* is used to form relative pronouns, however, in Indo-Iranian, Greek, Phrygian, Gaulish, and Slavic (cf. Adrados—Bernabé—Mendoza 1995—1998.III:96—97; Fortson 2010:144; Kapović 2017c:88—89; Lewis—Pedersen 1961:243; Meier-Brügger 2003:228—229; Meillet 1964:327—328; Szemerényi 1996:210).

Finally, there is some evidence for an interrogative/relative stem **mo-* (cf. Adrados—Bernabé—Mendoza 1995—1998.III:94). It only occurs sporadically in relic forms in Celtic, Tocharian, and Anatolian: Cornish (conjunction) *ma*, *may* ‘that’; Breton (conjunction) *ma*, *may*, Middle Breton *maz* (from *ma+ez*) ‘that’; Tocharian B *māksu* (a) interrogative pronoun: ‘which?, who?’, (b) interrogative adjective: ‘which?, what?’, (c) relative pronoun: ‘which, who’, B *mākte* (a) interrogative pronoun: ‘how?’, (b) comparative: ‘as’, (c) causal: ‘because’, (d) temporal: ‘as, while’, (e) final: ‘so, in order that’, (f) manner: ‘how’, A *mānt*, *māt* ‘how?’; Hittite *maši-* ‘how much?, how many?’ (cf. Rosenkranz 1978:73).

19.10. NUMERALS

Though there are problems with the reconstruction of a common form for the numeral ‘one’ (see below), the following cardinal numerals ‘one’ to ‘ten’ are traditionally reconstructed for later (“Disintegrating”) Proto-Indo-European (for additional information, cf. Adrados 1975.II:871—877; Adrados—Bernabé—Mendoza 1995—1998.III:127—131; Beekes 1995:212—213 and 2011:237—240; Blažek 1999b:141—324 and 2012; Fortson 2010:145—147; Gamkrelidze—Ivanov 1995.I:740—744; Gvozdanović [ed.] 1992; Justus 1988; Kapović 2017c:89—91; Meillet 1964:409—413; Sihler 1995:404—433; Szemerényi 1960):

	Brugmann (1904:363—365)	Szemerényi (1996:222—224)	Meier-Brügger (2003:233—234)	Fortson (2004:131)
1	<i>*oi-no-s</i> <i>*oiuō-</i>	<i>*oinos</i> <i>*oikos</i>	<i>(*Hoi-)</i>	<i>*oi-no-</i> <i>*oi-uō-</i> <i>*oi-ko-</i>
	<i>*sem-</i>	<i>*sem-</i>	<i>*sem-</i>	<i>*sem-</i>
2	<i>*d(u)uō(u)</i>	<i>*duwō/*dwō</i>	<i>*d(u)uō-</i>	<i>*d(u)uoh₁</i>
3	<i>*trei-</i> , <i>*tri-</i>	<i>*treyes</i>	<i>*tréi-es</i>	<i>*tréjes</i>
4	<i>*q^uetuor-</i>	<i>*k^wetwores</i>	<i>*k^wétuor-</i>	<i>*k^wétuores</i>
5	<i>*penq^ue</i>	<i>*penk^we</i>	<i>*penk^we</i>	<i>*pénk^we</i>
6	<i>*s(u)ek^s</i>	<i>*s(w)eks</i>	<i>*s(u)uék^s</i>	<i>*suék^s</i>
7	<i>*septm̥</i>	<i>*septm̥</i>	<i>*septm̥</i>	<i>*septm̥</i>
8	<i>*oktō(u)</i>	<i>*oktō</i>	<i>*okt-</i>	<i>*oktō(u)</i>
9	<i>*neu^{m̥}</i> , <i>*enu^{m̥}</i>	<i>*new^{m̥}</i>	<i>*h₁néu^{m̥}</i>	<i>*neu^{m̥}</i>
10	<i>*dek^{m̥}</i>	<i>*dek^{m̥}tl/*dek^{m̥}</i>	<i>*dék^{m̥}</i>	<i>*dek^{m̥}</i>

The numerals in Anatolian are, for the most part, not known inasmuch as they are written ideographically (cf. Luraghi 1997:27). The numeral ‘seven’ occurs in Hittite in the ordinal (dat.) *ši-ip-ta-mi-ya* ‘seventh’ (cf. Sanskrit *saptamā-h* ‘seventh’; Latin *septimus* ‘seventh’) (cf. Sturtevant 1951:30, 44, 60, 63, 77, and 87; Kronasser 1956:152; Benveniste 1962:83). The numeral ‘three’ is also represented in Hittite in (adv.) *te-ri-ya-an-na* ‘for the third time’, and the military title *te-ri-ya-al-la*, *tar-ri-ya-na-al-li* ‘third-in-command, officer of the third rank’ (cf. Kronasser 1956:151; Benveniste 1962:82; Blažek 1999b:186—187), apparently to be read **tri-* ‘three’ (cf. Benveniste 1962:86), while ‘two’ is found in Hittite in the military title *du-ya-na-al-li* ‘second-in-command, officer of the second rank’, the compound *ta-a-i-ú-ga-aš*, *da-a-i-ú-ga-aš*, *ta-a-ú-ga-aš* ‘two years old’ (*da-/ta-* ‘two’ + *i-ú-ga-aš* ‘yearling’), *da-a-an*, *ta-a-an* ‘a second time; (before a substantive) second’, and (nom. sg. c.) *da-ma-a-(i-i)š* ‘second, other’ (cf. Benveniste 1962:81; Kronasser 1956:151; Sturtevant 1951:34, 58, 61, 67, and 110), and in Hieroglyphic Luwian *tu-wa/i-zi* ‘two’ (cf. Laroche 1960:206; Meriggi 1962:136; Blažek 1999b:164). All three of these forms agree with what is found in the non-Anatolian Indo-European daughter languages. The forms in the Anatolian languages for the numeral ‘four’, however, differ from those that are found elsewhere: Proto-Anatolian **meyu-* ‘four’ > Hittite (nom. pl.) *mi-e-(ya-)wa-aš*, (acc. pl.) *mi-e-ú-uš*, (gen. pl.) *mi-i-ú-wa[-aš]* ‘four’, Luwian *mauwa-* ‘four’ (instr. pl. *ma-a-u-wa-a-ti*) (cf. Benveniste 1962:81; Laroche 1959:70; Blažek 1999b:201—202; Kloekhorst 2008b:571—572).

Two basic stems may be reconstructed for the numeral ‘one’: **H₁oy-* and **sem-* (cf. Sihler 1995:404—407; Fortson 2010:145). The underlying meaning of the first stem appears to have been ‘single, alone’, while that of the second stem appears to have been ‘together (with)’ (cf. Szemerényi 1996:222; Blažek 1999b:155). The first stem only occurs with various suffixes: (1) **H₁oy-no-* (cf. Latin *ūnus* ‘one’ [Old Latin *oinos*]; Old Irish *óen*, *óin* ‘one’; Gothic *ains* ‘one’; Old English *ān* ‘one’; Old High German *ein* ‘one’; Old Church Slavonic *inъ* ‘some(one), other’ — it is also found in Greek οἷνῃ, οἷνός ‘roll of one [in dice]’); (2) **H₁oy-wo-* (cf. Avestan *aēva-* ‘one’; Old Persian *aiva-* ‘one’ — it is also found in Greek οἷος ‘alone, lone, lonely’ [Cyprian οἷος]); (3) **H₁oy-k^{wh}o-* or **H₁oy-k^ho-* (cf. Sanskrit *éka-h* ‘one’; Mitanni [“Proto-Indic”] *aika-* ‘one’). The second stem is found in Greek: Attic (nom. sg. m.) εἷς ‘one’, Doric ἥς ‘one, Cretan ἔνς (< *ἔνς < *ἔμς < *sems) ‘one’; Attic (f.) μία (< *σμη-α) ‘one’. It is also found in Armenian *mi* ‘one’. To complicate matters, the various forms of the ordinal found in the daughter languages are based upon yet another Proto-Indo-European stem: **p^{her}(H)-*/**p^hr(H)-* ‘first’ (> **p^hrH-wo-*, **p^hrH-mo-*, **p^hrey-mo-*, **p^hrey-wo-*, **p^hroH-t^ho-*, **p^hroH-mo-*, etc. [for details, cf. Blažek 1999b:141—162; see also Szemerényi 1996:228; Sihler 1995:427—428]). The Hittite word for ‘one’ was **šia-*, cognate with Greek (Homeric) (f.) ἓα ‘one’ (cf. Kloekhorst 2008b:750—751), with traces in Tocharian and Indo-Iranian.

There was a variant form **t’w-i-* (traditional reconstruction **dw-i-*) ‘two’ in Proto-Indo-European that was used in compounds (cf. Gamkrelidze—Ivanov 1995.I:742) and in the adverbial form **t’w-i-s* ‘twice’ (cf. Latin *bis* ‘twice’ [Old Latin *duis*]; Sanskrit *d(u)vīḥ* ‘twice’; Avestan *biš* ‘twice’; Greek δῖς ‘twice’; Middle High German *zwir* ‘twice’). The regular form for the numeral ‘two’ is traditionally

reconstructed as a dual **duwō/*dwō* (Szemerényi's reconstruction), though the dual forms may have arisen in the early prehistory of the individual daughter languages themselves (cf. Sihler 1995:408). This view is quite attractive, and I would reconstruct **t'(u)w-o-* as a plural (originally indeclinable) and not as a dual at the Proto-Indo-European level (the plural is still found, for example, in forms such as Greek [nom. pl.] δύο, [nom.-acc. pl.] δύοῖν). Attempts to come up with an etymology within Indo-European itself for this numeral have met with little success (cf. Blažek 1999b:175—179). That the core was **t'(u)w-* (cf. Blažek 1999b:178; Villar 1991a:136—154; Ernout—Meillet 1979:187—188) is shown by the fact that the thematic vowel **-o-* could be added to the core, on the one hand, to yield the form traditionally reconstructed for the independent word for the numeral 'two', while, when used in compounds or to express 'twice', the extension **-i-* could be added to the core instead. Thus, we get **t'(u)w-o- ~ *t'(u)w-i-* 'two'.

There are several forms in Hittite that point to an alternative form for 'two' in Proto-Indo-European — these are: the compound *ta-a-i-ú-ga-aš*, *da-a-i-ú-ga-aš*, *ta-a-ú-ga-aš* 'two years old' (*da-/ta-* 'two' + *i-ú-ga-aš* 'yearling'), *da-a-an*, *ta-a-an* 'a second time; (before a substantive) second', and (nom. sg. c.) *da-ma-a-(i-)iš* 'second, other'. These forms point to a Proto-Indo-European **t'e-/*t'o-* (earlier **t'e-/*t'a-* 'two' (cf. Sturtevant 1951:61 [Sturtevant reconstructs Proto-Indo-Hittite **do-* 'two']; Benveniste 1962:78—86 [Benveniste brings in data from non-Anatolian Indo-European daughter languages to support his views]). There is absolutely no way to reconcile **t'e-/*t'o-* with **t'(u)w-o/i-* phonologically so that they can be convincingly combined in a single reconstruction (Adrados—Bernabé—Mendoza 1995—1998.III:138 note the problems involved and discuss proposed solutions). Consequently, two competing forms must be reconstructed for the numeral 'two' in Proto-Indo-European. If the Proto-Indo-European numeral 'ten' were originally a compound meaning 'two hands', that is, **t'e-* 'two' + **k^hṛ̥ṇ̥(t^h)-* 'hand', as some have suggested (cf. Szemerényi 1960:69 and 1996:224, fn. 16; Markey 1984:284—285; Justus 1988:533; Gamkrelidze—Ivanov 1995.I:747; Adrados—Bernabé—Mendoza 1995—1998.III:131; but rejected by Bengtson 1987:258—259 and Blažek 1999b:295—296), it would provide additional evidence for reconstructing two separate forms for the numeral 'two'.

This situation raises the question as to why there should be two alternative forms for the numeral 'two' in Proto-Indo-European. A possible answer is that **t'e-/*t'o-* may have been the native form (its original meaning may have been 'other, another'), while **t'(u)w-o/i-* may have been a borrowing. Given the geographical location of the Indo-European homeland in the vicinity of the Black Sea near speakers of early Northwest Caucasian languages, these languages might have been a possible source for the **t'(u)w-o/i-* form. Indeed, there is a striking resemblance between Proto-Indo-European **t'(u)w-o/i-* 'two' and similar forms for this numeral in Northwest Caucasian: Proto-Northwest Caucasian **t'q'o-* 'two' > Proto-Circassian **t'ʔwə* 'two', Proto-Ubykh **t'q'wə* (> **t'q'wə*) 'twice', Proto-Abkhaz-Abaza **t'ʕwə* 'two' (cf. Colarusso 1992a:45). Kuipers (1975:19) reconstructs Proto-Circassian **Tq'ʔ(a)* 'two' (> Bžedux *t'ʔ(a)/t'(a)w*, *-t'(a)* 'two [twice]'; Kabardian *-t'a* only in *məzamət'a* 'more than once, repeatedly', literally, 'not-once-not-twice').

Colarusso (1992a:45) derives the Proto-Indo-European form for the numeral ‘two’ from $*t'\partial^w\partial$, which he claims first became $*t'\partial\partial^w$ and then $*t'(u)w-o-$ (traditional $*d(u)w-o-$). Colarusso (1992a) documents many other similarities between Indo-European and Northwest Caucasian. These similarities lead Colarusso to think about possible genetic relationship. I prefer to see the similarities to be due to the fact that the Indo-Europeans occupied territory north of and between the Black and Caspian Seas that was originally inhabited by speakers of early Northwest Caucasian languages (see Chapter 21 for details). We can further speculate that $*t'(u)w-o/i-$ ‘two’ eventually replaced the native Proto-Indo-European word for ‘two’, which survived only in relic forms and in the word for the numeral ‘ten’ ($*t'e-k^h\eta_i(th)$, literally, ‘two hands’).

The Proto-Indo-European word for the numeral ‘three’ is completely straightforward and can be reconstructed $*thr-ey-/ *thr-i-$. Sanskrit (nom.-acc.) *tisráh* and related forms in Celtic (cf. Old Irish [f.] *téoir*) are dissimilated from $*thri-sr-es$ (cf. Sihler 1995:410; Burrow 1973:259; Matasović 2009:390).

The word for the numeral ‘four’ is traditionally reconstructed $*k^wetwores$ (so Szemerényi; Brugmann reconstructs $*q^wetwōr-$). The most convincing etymology is that offered by Burrow (1973:259) (see also Beekes 1987a:219):

4. This numeral is formed on the basis of a root k^wet which seems originally to have meant something like ‘angle’ (cf. Lat. *triquetrus* ‘triangular’), whence ‘square’ and from that ‘four’. In the masc. and neut. (*catvāras*, *catvāri*, Lat. *quattuor*, etc.) the stem is formed by means of the suffix *-var*, with adjectival accent and *vṛddhi* in the nominative. In the other cases (acc. *catúras*, etc.) the suffix has the weak form according to the general rule. A neuter noun $*cátvar$, or its IE prototype, is presupposed by the thematic extension *catvara-* ‘square, crossroads’. Elsewhere the simple *r*-suffix may appear (Gk. Dor. *τέτορες*, Lat. *quarter*), or the elements of the suffix may be reversed (Av. *čathru-*).

In accordance with Burrow’s views, the form $*k^wheth-wor-$ ‘four-sided, square’ may be reconstructed for later Proto-Indo-European. It was preserved in Sanskrit in the thematic derivative *catvará-m* ‘quadrangular place, square, crossroads’ (cf. Mayrhofer 1956—1980.I:371). It was this form that served as the basis for the numeral ‘four’ found in the non-Anatolian daughter languages: (nom. pl.) $*k^wheth-wōr$. Curiously, the suffix $*-wor-$ is replaced by $*-sor-$ in the feminine (cf. Sanskrit *cátasrah*). Thus, the root was $*k^wheth-$, to which different suffixes could be added. It is intriguing to speculate that $*k^wheth-wor-$ may have replaced an earlier form for ‘four’, which is preserved in Anatolian. On the other hand, some have suggested that the original form for the numeral ‘four’ was $*H_2ok^htho-$ and that ‘eight’ was simply the dual of this stem, whose underlying meaning was ‘two groups of four’ (cf. Gamkrelidze—Ivanov 1995.I:747; Burrow 1973:260 $*oktō(u)$). This suggestion finds support in Kartvelian (cf. Blažek 1999b:268). The numeral ‘four’ is reconstructed as $*otxo-$ in Proto-Kartvelian, and this is generally taken to be a loan from Proto-Indo-European (cf. Fähnrich—Sardshweladse 1995:269; Fähnrich 2007:325—326; Klimov 1964:150—151 and 1998:145—146; Schmidt 1962:128; Gamkrelidze—Ivanov 1995.I:775). I favor this explanation and consider $*H_2ok^htho-$

to be the original form of the numeral ‘four’ in Proto-Indo-European (perhaps to be derived from an even earlier **H₂oth-k^{ho}-* through metathesis, as suggested by the Kartvelian loan **otxo-*). It was replaced in Anatolian by **meyu-* (cf. Kassian 2009), while, in the non-Anatolian daughter languages, it was replaced by **k^{wh}eth-wor-*. It only survives in the form for the numeral ‘eight’, **H₂ok^hthoH₁(w)*, a dual formation originally meaning ‘two groups of four’. No doubt, this replaced an earlier form for the numeral ‘eight’, which, regrettably, can no longer be recovered.

One final comment may be made here: in Etruscan, there is a numeral *huθ*. Its exact meaning is uncertain — it could be ‘six’, or it could be ‘four’ (cf. Cristofani 1991:77; Blažek 1999b:235; Bonfante—Bonfante 2002:94—95). If it is ‘six’, then the numeral *ša* is ‘four’. On the other hand, if it is ‘four’, then the numeral *ša* is ‘six’. Without going into the whole question here of whether Etruscan and Proto-Indo-European are ultimately genetically related, we can say that *huθ* more closely resembles Proto-Indo-European **H₂ok^htho-* ‘four’, while *ša* more closely resembles Proto-Indo-European **s(w)eks* ‘six’ (Szemerényi’s reconstruction). As noted by Blažek (1999b:211 and 235) and Briquel (1994:329), support for considering the meaning of *huθ* to be ‘four’ comes from the identification of *huθ* in the Pre-Greek name Ὑττηνία for the city Tetrapolis (Τετράπολις, composed of τέτρα- ‘four’ and πόλις ‘city’) in Attica.

The numeral ‘five’ was **phenk^{wh}e* (Brugmann **penq^{ue}e*) in Late Proto-Indo-European. It is usually identified with words for ‘fist’ and ‘finger’: (1) Proto-Indo-European **ph^hkw^h-st^{hi}-* ‘fist’ > Proto-Germanic **funχstiz* > West Germanic **fūχsti-* > **fūsti-* > Old English *fīst* ‘fist’; Old Frisian *fest* ‘fist’; Middle Low German *füst* ‘fist’ (Dutch *vuist*); Old High German *fūst* ‘fist’ (New High German *Faust*) (cf. Mann 1984—1987:968 **pnkstis* [**pnqustis* ?] ‘fist’; Onions 1966:358; Kluge—Mitzka 1967:187; Kluge—Seebold 1989:205); Serbian Church Slavic *pěstb* ‘fist’; (2) Proto-Indo-European **phenk^{wh}-ró-* ‘finger’ > Proto-Germanic **fingraz* ‘finger’ > Gothic *figgrs* ‘finger’; Old Icelandic *fingr* ‘finger’; Old English *finger* ‘finger’; Old Frisian *finger* ‘finger’; Old Saxon *finger* ‘finger’; Old High German *finger* ‘finger’ (New High German *Finger*) (cf. Feist 1939:150; Lehmann 1986:114; De Vries 1977:120; Kluge—Mitzka 1967:198; Kluge—Seebold 1989:215; Orël 2003: 99 **fengraz*; Kroonen 2013:141 **fingra-*). Though not without problems from a phonological point of view, the above comparisons can hardly be questioned. Ultimately, all of these forms may indeed go back to a verbal stem **phenk^{wh}-* ‘to take in hand, to handle’, as suggested by Horowitz (cited by Blažek 1999b:228), though it should be mentioned that this putative verb stem is not attested in any of the daughter languages. Blažek (1999b:229) notes that the meanings ‘fist’, etc. are primary.

Several different reconstructions are possible for the Proto-Indo-European word for the numeral ‘six’: **sek^hs*, **swek^hs*, **k^hsek^hs*, **k^hswek^hs*, **wek^hs* (for more information, cf. Blažek 1999b:234—242; see also Sihler 1995:413). This numeral was also borrowed by Kartvelian: Proto-Kartvelian **ekšw-* ‘six’ (cf. Gamkrelidze—Ivanov 1995.I:775 **ekšw-*; Klimov 1998:48 **eks₁w-*; Schmidt 1962:107 **ekšw-/ekšu*; Fähnrich—Sardshweladse 1995:125—126 **eks₁w-*; Fähnrich 2007:151—152). Sihler (1995:413) takes **wek^hs* (he writes **weks*) to be the original form and considers the initial **s-* to be a secondary development (imported from the numeral

‘seven’) (Szemerényi 1996:222 and Beekes 2011:240 express the same view; but cf. Viredaz 1997). Thus, following Sihler, the earliest form of the Proto-Indo-European numeral ‘six’ may be reconstructed as **wek^hs*. As Sihler notes, when **s-* was merely added to **wek^hs*, the result was **swek^hs*, but when it replaced the initial consonant, the result was **sek^hs*. The Iranian forms pointing to original **k^hswek^hs* (cf. Avestan *xšvaš* ‘six’) appear to be due to developments specific to Iranian and should not be projected back into Proto-Indo-European (cf. Sihler 1995:413).

The Proto-Indo-European word for the numeral ‘seven’, **sep^ht^hη* (Brugmann **sept^hη*), is sometimes considered to be a loan from Semitic (cf. Blažek 1999b: 256—257; Gamkrelidze—Ivanov 1995.I:747). That this numeral is ancient in Indo-European is clear from the fact that it is found in Hittite.

We have already discussed the numerals ‘eight’ and ‘ten’ above. For ‘nine’, Proto-Indo-European most likely had **new^hη* (cf. Szemerényi 1996:223). Other possible reconstructions are **new^hη* and **H₁new^hη/η* (cf. Brugmann 1904:365 **neu^hη*, **en^hη*; Meier-Brügger 2003:234 **h₁néu^hη*; Watkins 1998:67 **h₁néw^hη*; Haudry 1979:68 **néw^hη/η*; Gamkrelidze—Ivanov 1995.I:744 **neu(e)n*; Burrow 1973:260; Sihler 1995:415 **H₁néw^hη*; Buck 1933:230 [Buck takes Greek *έννέα* to be “a blend of **évFa* and **veFa*”]; Rix 1992:172 **ǵ₂néu^hη*; Blažek 1999b:283).

The Proto-Indo-European word for the numeral ‘hundred’ is traditionally reconstructed as **(d)k^hmtóm* — it is usually considered to be a derivative of **dek^hη(t)* ‘ten’ and meant something like ‘ten tens’ (cf. Beekes 2011:240; Gamkrelidze—Ivanov 1995.I:744; Meier-Brügger 2003:235; Szemerényi 1996:226; Watkins 1998:67).

Though there was probably no common Proto-Indo-European word for ‘thousand’, the form **g^heslo-* served as the basis for the Indo-Iranian, Greek, and Latin terms (cf. Szemerényi 1996:227; Beekes 2011:241; Meier-Brügger 2003:235; Meillet 1964:414; Brugmann 1904:368).

Lacking Anatolian corroboration for several numerals (cf. Hoffner—Melchert 2008:153), it is difficult to reconstruct the earliest Proto-Indo-European forms for the numerals ‘one’ to ‘ten’ with complete confidence. Consequently, the following reconstructions must be considered provisional:

- 1 **H₁oy-* (with original, non-apophonic *-o-*), **sem-*, **p^her(H)-*/**p^hṛ(H)-*, **sya-*
- 2 **t’e/a-*; (later also) **t’(u)w-a-*, **t’(u)w-i-*
- 3 **t^hr-ey-*/**t^hr-i-*
- 4 **H₂ok^h-t^ha-* (< **H₂ot^h-k^ha-* ?) (perhaps with original, non-apophonic *-o-* in the first syllable, as indicated by Proto-Kartvelian **otxo-* ‘four’, which is considered to have been borrowed from Proto-Indo-European [see above])
- 5 **p^henk^{wh}e* (perhaps for earlier **p^hηk^{wh}é*)
- 6 **wek^hs*
- 7 **sep^ht^hη*
- 8 ?
- 9 **new^hη*
- 10 **t’e-k^hη(t^h)*

19.11. PRELIMINARY REMARKS ON PROTO-INDO-EUROPEAN VERB MORPHOLOGY

Verb morphology in Proto-Indo-European was considerably more complicated than noun morphology (cf. Meier-Brügger 2003:163). The system reconstructed by the Neogrammarians was modeled mainly on what is found in Greek and Indo-Iranian (especially Sanskrit) (cf. Lehmann 1993:161; Meier-Brügger 2003:163). However, most Indo-Europeanists now consider the complicated systems found in these branches to be due, at least in part, to secondary developments (cf. Schmalstieg 1980:88), and they would, consequently, reconstruct a less complex system for the Indo-European parent language than what was reconstructed by the Neogrammarians, though there is still considerable disagreement on important details. Anatolian verb morphology has played an enormous role in changing the views of the scholarly community. Though based on common elements, the Anatolian system differs sufficiently from what is found in the non-Anatolian daughter languages that it cannot possibly be derived from the system of verb morphology reconstructed for Proto-Indo-European by the Neogrammarians (cf. Lehmann 1993:164). Finally, recent advances in linguistic theory as well as insights gained from the study of typological data have also been instrumental in changing opinions.

In addition to the standard comparative grammars, there exists a large body of literature devoted exclusively to the study of aspects of Proto-Indo-European verb morphology — some of these studies are: Adrados 1963, 1974, 1975, and 1981a; Bammesberger 1982; Benveniste 1949; Bomhard 1988c; Cowgill 1975 and 1979; Disterheft 1980; Drinka 1975; Gonda 1956; Hahn 1953; Hoffmann 1967; Ivanov 1981; Jasanoff 1978b, 1979, and 2003; Kerns—Schwartz 1937, 1946, 1972, and 1981; Kortlandt 1983b; Lehmann 1994 and 2004; Narten 1964; Niepokuj 1997; Puhvel 1960; Shields 1992; Szemerényi 1987a; Watkins 1962 and 1969.

19.12. GENERAL CHARACTERISTICS OF PROTO-INDO-EUROPEAN VERB MORPHOLOGY AND DEFINITION OF TERMS

As with nominal stems, an important distinction was made in Proto-Indo-European between *thematic* and *athematic* verbal stems (cf. Watkins 1998:56; Szemerényi 1996:232; Beekes 2011:252; Meier-Brügger 2003:164—165; Fortson 2010:84 and 95—96). Personal endings were added directly to the verbal stem in the case of athematic stems, while the thematic vowel **-o/e-* was inserted between the stem and the personal endings in the case of thematic stems: cf. athematic (3rd sg. present active) **g^{wh}én-thi* ‘he/she slays’ vs. thematic (3rd sg. present active) **b^hér-e-thi* ‘he/she bears, carries’. Kerns—Schwartz (1972:2—3) consider the thematic stems to be later formations, and this seems to be the common opinion (cf. Fortson 2010:95—96; Meillet 1931; Ringe 1998b:34—39), though Schmalstieg (1980:90—91) argues that the thematic stems were ancient.

Proto-Indo-European distinguished three *persons*:

1. The person(s) speaking;
2. The person(s) spoken to, that is, the person(s) being addressed;
3. The person(s) or thing(s) spoken about, that is, everyone or everything else.

The persons were distinguished by a special set of *personal endings*. These personal endings will be discussed in detail below.

Again, as with the noun, there were three *numbers* in the verb, at least for the latest period of the Indo-European parent language just prior to the emergence of the non-Anatolian daughter languages: *singular*, *dual*, and *plural* (cf. Meillet 1964:243—244). All three numbers were preserved in the verbal systems of Sanskrit, Avestan, Gothic, Older Runic, Old Church Slavic, Lithuanian, and certain Ancient Greek dialects (cf. Meillet 1964:243—244). As is to be expected, there was no separate dual in the Anatolian languages (cf. Kerns—Schwartz 1972:5).

Tense marks the *time* at which an action takes place. The following *tenses* are assumed to have existed in later Proto-Indo-European (cf. Fortson 2010:88—89; Szemerényi 1996:231; Beekes 2011:251; Baldi 1987:57—58 [Baldi does not posit an imperfect for Proto-Indo-European]):

1. Present: occurring in the present;
2. Imperfect: occurring at some unspecified point in the past;
3. Aorist: occurring once and completed in the past;
4. Perfect (now more commonly called *stative*): referring to a state in present time (at a later date, the perfect developed into a *resultative*, and then into a simple *preterite* in the individual daughter languages).

There may have also been:

5. Pluperfect: referring to a state existing in the past;
6. Future: referring to an action or an event that will occur at some unspecified point in the future (the reconstruction of a future is rejected by Beekes 2011:252).

Later Proto-Indo-European had four *moods* (cf. Fortson 2004:83 and 2010:90; Meillet 1964:223—226; Szemerényi 1996:231), which were used to express the speaker's attitude toward the action:

1. Indicative: used to express something that the speaker believes is true;
2. Subjunctive: used to express uncertainty, doubt, or vagueness on the part of the speaker;
3. Optative: used by the speaker to express wishes or hopes;
4. Imperative: used by the speaker to express commands.

Beekes (2011:251) also adds an *injunctive mood* to the above. However, Szemerényi (1996:263—264) maintains that the injunctive was not an independent modal category in Proto-Indo-European.

There was also the category of *voice*, which was used to express the role that the subject played in the action. There were two voices in Proto-Indo-European (cf. Fortson 2010:89—90; Szemerényi 1996:231; Haudry 1979:71; Baldi 1987:56):

1. Active: the subject is performing the action but is not being acted upon;
2. Middle (also called “mediopassive”): the subject is being acted upon: either the subject is performing the action on or for himself/herself, or the subject is the recipient but not the agent of the action.

The *agent* is the entity responsible for a particular action or the entity perceived to be the cause of an action, while the *patient* is the recipient, goal, or beneficiary of a particular action.

While *tense* marks the *time* at which an action takes place, *aspect* refers to the *duration* or *type* of a temporal activity. While tense and aspect are closely related, they must ultimately be carefully distinguished. Aspect can indicate an action that is done once at a single point in time (*punctual aspect*), an action that lasts for a certain length of time (*durative aspect*), an action that is repeated over and over again (*iterative* or *frequentative aspect*), an action that is regularly or habitually performed by someone or something (*habitual aspect*), an action or event that is about to begin (*inceptive aspect*, *inchoative aspect*, or *ingressive aspect*), an action or event that is in progress (*progressive aspect*), etc. A distinction can also be made between *perfective aspect* and *imperfective aspect* — the *perfective aspect* lacks a reference to a particular point of time, while the *imperfective aspect* is a broad term that indicates the way in which the internal time structure of the action is viewed. The imperfective includes more specialized aspects such as *habitual*, *progressive*, and *iterative*. Though the full extent to which Proto-Indo-European employed aspect is not entirely clear, the *imperfect tense* also had *imperfective aspect*, while the *aorist tense* had *perfective aspect* (cf. Fortson 2010:90—91; Haudry 1979:76 [regarding the aorist only]). According to Meier-Brügger (2003:165), the *aorist stem* indicated *perfective aspect*, the *present stem* indicated *imperfective aspect*, and the *perfect stem* indicated a kind of *resultative aspect*. For details about tense and aspect in general, cf. Comrie 1976 and 1985; Crystal 1980 and 2003; Trask 1993.

Several other terms should be defined as well: a *finite* verbal form denotes an action, an event, or a state and is marked for tense, number, mood, aspect, etc. A *finite* verbal form can occur on its own in an independent clause. A *non-finite* verbal form is not marked for tense, number, mood, aspect, etc. and can only occur on its own in a dependent clause. Non-finite forms include *participles*, *infinitives*, *verbal nouns*, and *verbal adjectives* (cf. Kerns—Schwartz 1972:1). A *transitive* verb takes a *direct object*, while an *intransitive* verb does not. A *direct object* denotes the goal, beneficiary, or recipient of the action of a transitive verb (the *patient*). An *indirect object* denotes the person or thing that is indirectly affected by the action of the verb. Additional terms will be defined as they occur. As an aside, it may be noted that research begun in 1980 by Paul J. Hopper and Sandra Thompson and since continued by many others (Comrie, Givón, Kemmer, Langacker, Rice, Slobin, etc.) has greatly enhanced our understanding of transitivity.

We may close by mentioning the special position occupied by **-n-* in verbal derivation in Proto-Indo-European. Unlike other derivational elements, **-n-* was inserted as an infix into type II verbal stems (**CCéC-*) according to the following scheme: **CC-n-éC-* (cf. Benveniste 1935:159—163 [note especially the table on p. 161]; see also Szemerényi 1996:270—271; Sihler 1995:498—499; Fortson 2010:97; Lehmann 1993:170—171), but only when the verbal stems ended in obstruents or laryngeals (cf. Lehmann 2004:118; Milizia 2004). Lehmann further notes that this infix was used in active forms but not in forms that indicated a state. According to Gray (1939:137), the nasal infix denotes “the point from or to which action proceeds, so that [it] characterize[s] terminative verbs (Sanskrit *yu-ñ-ja-ti*, Latin *iu-n-g-it* ‘starts to put on a yoke and carries the process through’...)” (see also Meiser 1993).

19.13. PERSONAL ENDINGS

As noted by Szemerényi (1996:233), there were different sets of personal endings in Proto-Indo-European, each of which had a specialized function. One set of personal endings was used with the active voice and another with the middle voice and still different sets were used with the present and past within each of these voices. Different sets were also used with the perfect and with the imperative. Each person had its own special ending, as did each number. Thus, the distinctions marked by the personal endings may be summarized as follows (cf. Watkins 1998:59):

1. Person: three (1st person, 2nd person, 3rd person)
2. Number: three (singular, dual, plural)
3. Voice: two (active, middle)
4. Tense: two (present, past)
5. Perfect
6. Imperative

There was also a difference between *primary* and *secondary* endings and between *thematic* and *athematic* endings. The terms “primary” and “secondary” are misnomers — the active primary endings arose from the secondary endings through the addition of a particle **-i* indicating ‘here and now’ to the 1st, 2nd, and 3rd persons singular and the 3rd person plural (cf. Watkins 1998:59; Kerns—Schwartz 1972:4; Szemerényi 1996:327; Fortson 2004:85 and 2010:93; Lehmann 1993:173; Sihler 1995:455; Burrow 1973:314). Intraparadigmatic ablaut and accent variations also played a role in determining the form of the personal endings.

We can now look more closely at each set of personal endings, beginning with the active endings of the present/aorist (cf. Meier-Brügger 2003:178; Szemerényi 1996:233—238; Watkins 1969:22—68 and 1998:60—61; Meillet 1964:227—232; Brugmann 1904:589—594; Burrow 1973:306—311; Gamkrelidze—Ivanov 1995.I: 283—286; Beekes 2011:258—261; Adrados 1975.II:601—605; Sihler 1995:454; Fortson 2010:92—93; Clackson 2007:123—125; Baldi 1987:58; Rix 1992:240):

Person	Secondary endings		Primary endings	
	Athematic	Thematic	Athematic	Thematic
1st sg.	*-m	*-o-m	*-m-i	*-o-H ₂
2nd sg.	*-s	*-e-s	*-s-i	*-e-s-i
3rd sg.	*-t ^h	*-e-t ^h	*-t ^h -i	*-e-t ^h -i
1st dual	*-we(H ₁)	*-we-	*-we(s)/*-wo(s)	
2nd dual	*-t ^h om	*-t ^h (H)o	*-t ^h (H)es	
3rd dual	*-t ^h eH ₂ m		*-t ^h es	
1st pl.	*-me	*-o-me	*-me(s)/*-mo(s)	*-o-me-
2nd pl.	*-t ^h e	*-e-t ^h e	*-t ^h e	*-e-t ^h e-
3rd pl.	*-n ^t h/*-ent ^h	*-o-nt ^h	*-n ^t h-i/*-ent ^h -i	*-o-nt ^h -i

Notes:

1. The 1st singular and plural may have had alternative endings in */w/ besides */m/, as indicated by the Luwian 1st singular present indicative ending *-wi* and the Hittite 1st plural present indicative primary endings *-weni/-wani*. The */w/ is also preserved in the 1st singular preterite ending in Tocharian: A *-wā*, B *-wa*.
2. The dual endings given in the above table are extremely controversial.
3. On the basis of the Hittite and Greek evidence, it is possible that the athematic primary endings for the 1st person plural may have had the alternative forms **-men/*-mon* in the Indo-European parent language (cf. Szemerényi 1996:235; Beekes 2011:259). It is clear that the basic ending was **-me-/*-mo-* to which the plural markers **-s* or **-n* could be optionally added. The individual daughter languages chose one or the other of these variants. In the case of Indo-Iranian, the resulting **-mes/*-mos* was further extended by **-i*, yielding, for example, the Vedic 1st plural primary ending *-masi*, Avestan *-mahi* (cf. Burrow 1973: 308—309; Beekes 1988:154), while the same thing happened in Hittite, but with the **-men/*-mon* endings instead.

The primary endings were used in the present, while the secondary endings were used in the aorist (cf. Szemerényi 1996:233; Meier-Brügger 2003:166). In addition, the secondary endings were used in the optative and in the imperfect (cf. Meier-Brügger 2003:166). Finally, both primary and secondary endings could be used in the subjunctive (cf. Meier-Brügger 2003:166). Except for the fact that they were added after the thematic vowel in thematic stems instead of directly to the undifferentiated verbal stem as in athematic stems, the endings were identical in thematic and athematic stems apart from the first person singular thematic primary ending, which was **-o-H₂* (cf. Szemerényi 1996:233 and 236—237; Meier-Brügger 2003:179). Thematic and athematic stems were differentiated, however, by the fact that there was an ablaut variation along with a corresponding shift in the placement of the accent between the singular and plural in active athematic stems, while the

thematic formations do not exhibit such variations between singular and plural forms (cf. Meier-Brügger 2003:168).

The following reconstructed Proto-Indo-European paradigms of **H₁es-* ‘to be’ and **b^her-* ‘to bear, to carry’ illustrate the typical patterning of the active/aorist system (only the singular and plural forms are given) (cf. Szemerényi 1996:314 and 316; Fortson 2004:87, 89, and 2010:96, 98; Sihler 1995:548; Watkins 1969:25 and 40; Buck 1933:242—243; Clackson 2007:124—127; Beekes 2011:258—261):

	Athematic		Thematic	
	Primary	Secondary	Primary	Secondary
Singular				
1	<i>*H₁és-mi</i>	<i>*H₁és-η</i>	<i>*b^hér-o-H₂</i>	<i>*b^hér-o-m</i>
2	<i>*H₁és-si</i>	<i>*H₁és-s</i>	<i>*b^hér-e-si</i>	<i>*b^hér-e-s</i>
3	<i>*H₁és-t^{hi}</i>	<i>*H₁és-t^h</i>	<i>*b^hér-e-t^{hi}</i>	<i>*b^hér-e-t^h</i>
Plural				
1	<i>*H₁s-mé(s)</i>	<i>*H₁s-mé</i>	<i>*b^hér-o-me(s)</i>	<i>*b^hér-o-me</i>
2	<i>*H₁s-t^{hé}</i>	<i>*H₁s-t^{hé}</i>	<i>*b^hér-e-t^{he}</i>	<i>*b^hér-e-t^{he}</i>
3	<i>*H₁s-ént^{hi}</i>	<i>*H₁s-ént^h</i>	<i>*b^hér-o-nt^{hi}</i>	<i>*b^hér-o-nt^h</i>

Notes:

1. The athematic and thematic secondary forms are for the imperfect.
2. The imperfect is characterized by the so-called “augment” in Sanskrit and Greek (see below).
3. There was a change of accent and ablaut in the athematic stems — in the singular, the stem had full-grade vowel and was accented, while, in the plural, the stem had zero-grade vowel, and the accent was shifted to the ending.

In Indo-Iranian and Greek, there is a prefix **H₁e-*, usually termed the “augment”, which is added to imperfect and aorist stems. The same prefix is found in Armenian, but it is only added to the aorist. There is also a trace of the augment in Phrygian (cf. Diakonoff—Neroznak 1985:22—23; Brixhe 1994:173—174 and 2004:785; Fortson 2010:462: cf. Old Phrygian *e-daes*/ε-δαεξ ‘[he/she] put, placed’ [= Latin *fēcit*]). The use of the augment was a later development specific to these branches (cf. Lehmann 1993:165, 180—181, 244 and 2002:32—33; Meier-Brügger 2003:182; Sihler 1995:484—485; Meillet 1964:242—243) and, accordingly, is not to be reconstructed for Proto-Indo-European. According to Beekes (1995:226 and 2011:251—252), Meier-Brügger (2003:182), and Lundquist—Yates (2018:2141), the augment developed from a Proto-Indo-European adverb **H₁e-* meaning ‘at that time’.

The next set of personal endings to be examined are the middle endings of the present/aorist system (only the singular and plural forms are reconstructed in the following table) (cf. Adams 1988:59; Fortson 2004:86—87 and 2010:94—95; Lundquist—Yates 2018:2154; Sihler 1995:471; Watkins 1998:61, table 2.8):

Person	Secondary endings		Primary endings	
	Athematic	Thematic	Athematic	Thematic
1st sg.	*-H ₂ e	*-o-H ₂ e	*-H ₂ e-r	*-o-H ₂ e-r
2nd sg.	*-t ^h H ₂ e	*-e-t ^h H ₂ e	*-t ^h H ₂ e-r	*-e-t ^h H ₂ e-r
3rd sg.	*-t ^h o	*-o	*-t ^h o-r	*-o-r
1st pl.	*-med ^h H	*-o-med ^h H	*-med ^h H	*-o-med ^h H
2nd pl.	*-d ^h we	*-e-d ^h we	*-d ^h we	*-e-d ^h we
3rd pl.	*-nt ^h o, *-ro	*-o-nt ^h o, *-o-ro	*-nt ^h o-r, *-ro-r	*-o-nt ^h o-r, *-o-ro-r

Recently, there has been a shift of opinion regarding the reconstruction of the middle endings. Earlier views based the reconstruction of these endings mainly on the forms found in Indo-Iranian and Greek, and it is these older reconstructions that are given, for example, in Brugmann (1904:594–596), Meillet (1964:232–234), Szemerényi (1996:239), Meier-Brügger (2003:179–180), Rix (1992:240 and 246–249), and Buck (1933:248, §342), among others. However, the primary middle personal endings in *-r found in Anatolian, Italic, Celtic, Tocharian, and Phrygian are now thought to represent the original patterning, while the primary middle personal endings in *-i found in Indo-Iranian, Greek, Germanic, and Albanian are taken to be innovations (cf. Fortson 2010:94). Gamkrelidze—Ivanov (1995.I:286–288), however, suggest that both types of middle personal endings go back to Proto-Indo-European and that there has been contamination between the two types in the individual daughter languages. Beekes (2011:269 and 282), on the other hand, rejects the reconstructions based upon the Indo-Iranian and Greek models and also assumes that the primary middle endings in *-i are innovations and do not represent the situation in the Indo-European parent language. However, he views the endings in *-r as innovations as well and claims, consequently, that there was no difference here between primary and secondary endings in the middle. Beekes (2011:282) summarizes his views in a table (see also the sample paradigm on p. 285). My own thinking is that there was only one set of middle personal endings in Proto-Indo-European — not two as proposed by Gamkrelidze—Ivanov — and that Anatolian, Italic, Celtic, Tocharian, and Phrygian reflect the original patterning (cf. Sihler 1995:473). The middle personal endings were related to the perfect (= stative) personal endings (cf. Kuryłowicz 1964:58 and 61; Watkins 1998:60), as is clear from the forms listed in the above table when compared with the perfect personal endings, which are given below. I further support the view that the middle personal endings found in Indo-Iranian, Greek, Germanic, and Albanian are innovations. The middle personal endings found in these branches may be viewed as having been remodeled after the active endings (cf. Sihler 1995:472; Fortson 2010:93). They have, however, retained traces of the older endings (cf. Burrow 1973:315). Even in the branches that have preserved the middle personal endings in *-r, there has been some contamination by the active personal endings as well as other innovations specific to each branch (for an excellent discussion of the development of

the middle personal endings in the various Indo-European daughter languages, cf. Sihler 1995:474—480). Contamination by the active personal endings is most certainly what has happened, for example, in Hittite in the 3rd plural present endings of the *hi*-conjugation, which are based upon **-nthi* (> Hittite *-anzi*, with *-z-* from earlier **-th-* before *-i*) instead of the expected **-ntho-r* or **-ro-r* (cf. Hittite 3rd pl. pres. *ak-kán-zi* ‘they die’ [but pret. *a-ki-ir*, *a-kir*, *e-ki-ir*, *e-kir*]; 3rd pl. pres. *a-ra-an-zi* ‘they arrive’ [but pret. *e-ri-(e-)ir*, *i-e-ri-ir*]; 3rd pl. pres. *a-še-ša-an-zi*, *a-ši-ša-an-zi* ‘they set up, they found’ [but pret. *a-še-(e-)še-ir*, *a-še-šir*]; 3rd pl. pres. *ha-aš-ša-an-zi*, *hé-eš-ša-an-zi* ‘they open’ [but pret. *hi-e-še-ir*]; *ka-ri-pa-an-zi*, *ka-ra-pa-an-zi* ‘they devour’ [but pret. *ka-ri-e-pi-ir*]; *še-ik-kán-zi* ‘they know’ [but pret. *še-ik-ki-ir*] [the preceding examples are taken from Sturtevant 1951:160—171; for additional examples, cf. J. Friedrich 1960.I:98—106; Kronasser 1966.1:511—569]).

The following reconstructed Proto-Indo-European paradigm of **b^her-* ‘to bear, to carry’ illustrates the typical patterning of the middle system (only the singular and plural thematic forms are given) (cf. Fortson 2004:86—87 and 2010:94—95):

	Primary (Non-past)	Secondary (Past)
Singular		
1	<i>*b^hér-o-H₂e-r</i>	<i>*b^hér-o-H₂e</i>
2	<i>*b^hér-e-t^hH₂e-r</i>	<i>*b^hér-e-t^hH₂e</i>
3	<i>*b^hér-o-r</i>	<i>*b^hér-o</i>
Plural		
1	<i>*b^hér-o-med^hH̥</i>	<i>*b^hér-o-med^hH̥</i>
2	<i>*b^hér-e-d^hwe</i>	<i>*b^hér-e-d^hwe</i>
3	<i>*b^hér-o-ro-r</i>	<i>*b^hér-o-ro</i>

Now, let us take a look at the perfect (= stative) endings (in comparison with the middle endings, repeated here from the above table [cf. Fortson 2004:93 and 2010:103]) (only the singular and plural forms are given) (note also Jasanoff 2003:55):

		Middle endings			
		Secondary endings		Primary endings	
Person	Perfect	Athematic	Thematic	Athematic	Thematic
1st sg.	<i>*-H₂e</i>	<i>*-H₂e</i>	<i>*-o-H₂e</i>	<i>*-H₂e-r</i>	<i>*-o-H₂e-r</i>
2nd sg.	<i>*-t^hH₂e</i>	<i>*-t^hH₂e</i>	<i>*-e-t^hH₂e</i>	<i>*-t^hH₂e-r</i>	<i>*-e-t^hH₂e-r</i>
3rd sg.	<i>*-e</i>	<i>*-t^ho</i>	<i>*-o</i>	<i>*-t^ho-r</i>	<i>*-o-r</i>
1st pl.	<i>*-me-</i>	<i>*-med^hH̥</i>	<i>*-o-med^hH̥</i>	<i>*-med^hH̥</i>	<i>*-o-med^hH̥</i>
2nd pl.	<i>*-e</i>	<i>*-d^hwe</i>	<i>*-e-d^hwe</i>	<i>*-d^hwe</i>	<i>*-e-d^hwe</i>
3rd pl.	<i>*-ēr, *-ŷs</i>	<i>*-ntho,</i> <i>*-ro</i>	<i>*-o-ntho,</i> <i>*-o-ro</i>	<i>*-ntho-r,</i> <i>*-ro-r</i>	<i>*-o-ntho-r,</i> <i>*-o-ro-r</i>

The close resemblance between the two sets of personal endings is obvious, at least in the singular (cf. Burrow 1973:317). The perfect personal endings are most certainly the oldest, and the middle personal endings are later formations derived from them (cf. Burrow 1973:317; Kurzová 1993:120—121 and 157—171).

The perfect of traditional grammar is now commonly interpreted as stative. It referred to a state in present time (cf. Watkins 1998:57; Jasanoff 1979:79) and was restricted to verbs that were semantically appropriate (cf. Lehmann 2002:77 and 78—80; Sihler 1995:564). Later, it developed into a resultative and, from that, into a preterite in the individual Indo-European daughter languages (cf. Watkins 1998: 57; Lundquist—Yates 2018:2167; Kümmel 2000 [for Indo-Iranian]; Chantraine 1926 [for Greek]). The perfect was characterized by reduplication (cf. Fortson 2004:93—95 and 2010:103—105), by a special set of personal endings, and by a change of accent and ablaut between the singular and plural. There was no distinction between “primary” and “secondary” personal endings in the perfect.

The following reconstructed Proto-Indo-European paradigm of **me-mon-* ‘to remember’ illustrates the typical patterning of the perfect system (only the singular and plural forms are given) (cf. Fortson 2004:94 and 2010:104) (Jasanoff 2003:42 reconstructs a different set of plural forms):

	Singular	Plural
1	<i>*me-món-H₂e</i>	<i>*me-mṇ-mé</i>
2	<i>*me-món-t^hH₂e</i>	<i>*me-mn-é</i>
3	<i>*me-món-e</i>	<i>*me-mn-ér</i>

Reduplication, however, was missing in the case of the Proto-Indo-European perfect stem **woyt’-* (traditional **uoid-*) ‘to know’ (< **weyt’-* ‘to see’ [traditional **ueid-*]) (only the singular and plural forms are given) (cf. Beekes 2011:265; Buck 1933:286; Fortson 2004:94 and 2010:104; Rix 1992:255; Szemerényi 1996:243—244; Sihler 1995:570):

	Proto-Indo-European	Sanskrit	Homeric Greek	Gothic	Latin
Singular					
1	<i>*wóyt’-H₂e</i>	<i>véda</i>	(F)οἶδα	<i>wait</i>	<i>vīdī</i>
2	<i>*wóyt’-t^hH₂e</i>	<i>véttha</i>	(F)οἶσθα	<i>waist</i>	<i>vīdistī</i>
3	<i>*wóyt’-e</i>	<i>véda</i>	(F)οἶδε	<i>wait</i>	<i>vīdit</i>
Plural					
1	<i>*wit’-mé</i>	<i>vidmá</i>	(F)ἴδμεν	<i>witum</i>	<i>vīdimus</i>
2	<i>*wit’-é</i>	<i>vidá</i>	(F)ἴστε	<i>witup</i>	<i>vīdistis</i>
3	<i>*wit’-ér</i>	<i>vidúr</i>	(F)ἴσ(σ)ᾶσι	<i>witun</i>	<i>vīdēre, -ērunt</i>

Notes:

1. According to Sihler (1995:571), the Greek 2nd person singular ending $-\sigma\theta\alpha$ cannot be directly derived from $*-t^hH_2e$. Buck (1933:144), however, considers it to be the regular outcome of the combination $\delta + \theta$.
2. The Greek 3rd plural ending has been imported from the active/aorist system (cf. Sihler 1995:572). According to Buck (1933:286), $(F)\acute{\iota}\sigma(\sigma)\tilde{\alpha}\sigma\iota$ is from $*F\acute{\iota}\delta\sigma\alpha\nu\tau\iota$.
3. The Sanskrit 3rd plural ending $-úr$ is most likely from earlier $*-ǵš$ (cf. Burrow 1973:310; Brugmann 1904:597).
4. The Latin forms have been extensively remodeled. However, the 3rd plural ending is archaic. According to Sihler (1995:588), the oldest form of the 3rd plural ending in Latin was $-\tilde{e}re$ ($< *-ēr-i$). The form $-\tilde{e}runt$ is based upon $-\tilde{e}re$, with the active/aorist 3rd person plural ending $-unt$ added (cf. Sihler 1995:589; Buck 1933:296).

As noted by Fortson (2004:94 and 2010:104), lack of reduplication in this stem is taken by some scholars to be a relic from a time when reduplication was not a mandatory feature of the perfect. This view is not shared by all scholars, however.

The imperative also had a special set of personal endings. In athematic verbs, either the bare stem could be used to indicate the 2nd singular imperative or the particle $*-d^hi$ could be added to the bare stem instead: Vedic $\acute{s}ru-dh\acute{i}$ ‘listen!’; Greek $\acute{\iota}\theta\iota$ ‘go!’. In thematic verbs, however, the thematic vowel alone was used to indicate the 2nd singular imperative without any additional ending: Proto-Indo-European $*b^h\acute{e}r-e$ ‘carry!’ $>$ Sanskrit $bh\acute{a}ra$; Greek $\phi\acute{\epsilon}pe$. In the 2nd plural imperative, for both thematic and athematic stems, the personal ending $*-t^he$ was used: Proto-Indo-European 2nd plural imperative thematic $*b^h\acute{e}r-e-t^he$ ‘carry!’ $>$ Sanskrit $bh\acute{a}rata$; Greek $\phi\acute{\epsilon}pete$. There were also special 3rd singular and plural imperative endings in $*-u$: 3rd singular imperative personal ending $*-t^hu$, 3rd plural imperative personal ending $*-nt^hu$. The $*-u$ imperative forms are found in Hittite as well. The imperative personal endings are summarized in the following table (cf. Szemerényi 1996:247; Sihler 1995:601):

	Active		Middle
	Athematic	Thematic	
Singular			
2	$*-\emptyset, *-d^hi$	$*-e$	$*-so$
3	$*-t^h(+u)$	$*-e-t^h(+u)$	$*-t^ho$
Plural			
2	$*-t^he$	$*-e-t^he$	$*-d^hwo$
3	$*-ent^h(+u)$	$*-ont^h(+u)$	$*-nt^ho$

The 2nd singular and the 3rd singular and plural middle forms given above are reconstructed on the basis of what is found in Greek and Latin. They are clearly

derived from the active/aorist personal endings through the addition of **-o*. Only the 2nd plural imperative ending is derived from the regular middle endings. These forms are not ancient — Meier-Brügger (2003:181), for one, considers them to be post-Proto-Indo-European.

Finally, it should be noted that the 3rd singular and plural “future” imperative endings in Greek, Italic, and Celtic go back to **-thōtʰ* (traditional **-tōd < *-to-od*) and **-nthōtʰ* (traditional **-ntōd*) respectively: Archaic Latin *da-tōd* ‘he shall give’. In Sanskrit, the corresponding ending is *-tāt* (cf. Burrow 1973:349—350), which is used for both the 2nd and 3rd singular as well as the 2nd plural imperative (but not the 3rd plural). According to Szemerényi (1996:248), this ending was derived from the ablative singular of the pronoun **tho-* (**thōtʰ < *tho-otʰ*), which was simply appended to the verbal stem (see also Brugmann 1904:558). Szemerényi notes that it meant something like ‘from there, thereafter’, which accounts for its future reference.

For more information on the imperative endings, cf. Beekes 2011:276—277; Brugmann 1904:557—558; Fortson 2004:95 and 2010:105; Sihler 1995:601—606; Meier-Brügger 2003:181; Meillet 1964:235—237; Szemerényi 1996:247—249.

19.14. THE PERSONAL ENDINGS IN ANATOLIAN

Compared to what is found in non-Anatolian Indo-European daughter languages such as Sanskrit, Greek, Latin, Lithuanian, and Old Church Slavic, Anatolian verbal morphology was a model of simplicity (for more information on Anatolian verbal morphology, cf. Melchert 1994b:132—134; Hoffner—Melchert 2008:173—234; Luraghi 1997:27—44 and 1998:182—186; Meriggi 1980:330—366; Sturtevant 1951:116—165; J. Friedrich 1960.I:73—114; Jasanoff 1979 and 2003; Kronasser 1956:162—215 and 1966.1:366—590; Werner 1991:34—35). We have already remarked that the dual number was absent in Anatolian (cf. Melchert 1994b:132). There were three persons, as elsewhere (cf. Melchert 1994b:132). There were two moods (indicative and imperative), two tenses (present-future and preterite), and two voices (active and middle) (cf. Melchert 1994b:132; Luraghi 1997:27—28 and 1998:182; Sturtevant 1951:118). The present tense served as the basis for the future (cf. Melchert 1994b:132). The present in the middle voice (at least in the 3rd person) was characterized by a suffix **-r* similar to what is found in Latin, Celtic, and Tocharian (cf. Yoshida 1990; Melchert 1994b:132). Though simple thematic verbal stems were rare at best in Anatolian, root athematic stems were quite common (cf. Fortson 2010:173; Melchert 1994b:133). The aorist did not exist, nor did the imperfect. Though not all of the aspectual distinctions are completely clear yet (cf. Melchert 1994b:133), iterative/intensive and inchoative aspects have been identified (cf. Luraghi 1997:29—31). Hittite is noted for periphrastic forms constructed mainly with the verbs ‘to be’ (*eš-*) and ‘to have’ (*hark-*) plus the past participle (cf. Melchert 1994b:133; Luraghi 1997:37—44 and 1998:185; Boley 1992b; Sturtevant 1951:148—149). An important characteristic of Hittite was the presence of two conjugational types: the so-called “*mi*-conjugation” and the “*hi*-conjugation” (cf. Sturtevant 1951:118; Melchert 1994b:134; Luraghi 1998:182—183).

While the *mi*-conjugation corresponds unambiguously to similar types in the non-Anatolian Indo-European daughter languages (cf. Luraghi 1998:182—183), the nature of the relationship of the *hi*-conjugation to what is found elsewhere has not yet been completely clarified (cf. Luraghi 1998:184; Fortson 2010:173; Jasanoff 2003).

The present indicative active verbal endings were as follows (cf. Luraghi 1997:34—35 and 1998:183; Meriggi 1980:334; Kronasser 1956:187; Werner 1991:34—35; Hoffner—Melchert 2008:181):

	Hittite	Palaic	Cuneiform Luwian	Hiero. Luwian	Lycian	Lydian
1st sg.	<i>-mi</i> , <i>-(h)hi</i>		<i>-wi</i>	<i>-w</i> , <i>-wi</i>		<i>-u</i> , <i>-v</i>
2nd sg.	<i>-ši</i> , <i>-ti</i>	<i>-ši</i> , <i>-ti</i>	<i>-ši</i>	<i>-ši</i>		<i>-s</i>
3rd sg.	<i>-zi</i> , <i>-i</i>	<i>-ti</i> , <i>-i</i>	<i>-ti</i> , <i>-i</i>	<i>-ti</i> , <i>-i</i> (?)	<i>-t/di</i>	<i>-t</i> , <i>-d</i>
1st pl.	<i>-weni</i>	<i>-wani</i>				
2nd pl.	<i>-teni</i>			<i>-tani</i>		
3rd pl.	<i>-anzi</i>	<i>-anti</i>	<i>-(a)nti</i>	<i>-(a)nti</i>	<i>-ti</i>	<i>-t</i> , <i>-d</i>

The preterite indicative active endings were:

	Hittite	Palaic	Cuneiform Luwian	Hiero. Luwian	Lycian	Lydian
1st sg.	<i>-un</i> , <i>-(h)hun</i>	<i>-ha</i>	<i>-ha</i>	<i>-ha</i>	<i>-χa</i>	<i>-v</i> , <i>-(i)dv</i>
2nd sg.	<i>-š</i> , <i>-(š)ta</i>	<i>-iš</i>	<i>-š</i>			
3rd sg.	<i>-t(a)</i> , <i>-(š)ta</i>	<i>-i</i>	<i>-ta</i>	<i>-ta</i>	<i>-te</i>	<i>-l</i>
1st pl.	<i>-wen</i>		<i>-man</i>	<i>-min</i>		
2nd pl.	<i>-ten</i>					
3rd pl.	<i>-er</i>	<i>-(a)nta</i>	<i>-(a)nta</i>	<i>-(a)nta</i>	<i>-te</i>	

The middle is only attested in Hittite with certainty (cf. Luraghi 1998:183):

	Present	Preterite
1st sg.	<i>-ha</i> , <i>-hari</i> , <i>-haḥari</i>	<i>-har(i)</i> , <i>-haḥat(i)</i>
2nd sg.	<i>-ta</i>	<i>-ta</i> , <i>-tat(i)</i>
3rd sg.	<i>-ta</i> , <i>-tari</i> , <i>-a</i> , <i>-ari</i>	<i>-(t)at(i)</i>
1st pl.	<i>-wašta</i> , <i>-waštari</i> , <i>-waštati</i>	<i>-wašt(i)</i>
2nd pl.	<i>-duma</i> , <i>-dumari</i> , <i>-dumati</i>	<i>-dumat</i>
3rd pl.	<i>-anta</i> , <i>-antari</i>	<i>-antat(i)</i>

Finally, the imperative endings were (cf. Meriggi 1980:350):

	Hittite	Palaic	Cuneiform Luwian	Hiero. Luwian	Lycian	Lydian
1st sg.	<i>-allu, -llu</i>		<i>-allu</i>			?
2nd sg.	<i>-Ø, -i, -t</i>					?
3rd sg.	<i>-tu, -u</i>	<i>-du</i>	<i>-(d)du, -(t)tu</i>	<i>-tu</i>	<i>-tu, -u</i>	?
1st p.	<i>-weni</i>					?
2nd pl.	<i>-ten, -tin</i>	<i>-ttan</i>	<i>-tan</i>	<i>-tanai</i>		?
3rd pl.	<i>-antu, -andu</i>	<i>-ndu</i>	<i>-ndu, -ntu</i>	<i>-(a)ntu</i>	<i>-tu</i>	?

In Hittite, the ending *-ru* could be added to the middle forms to create middle imperatives (cf. Sturtevant 1951:146).

The endings of the Hittite *hi*-conjugation are based upon the Proto-Indo-European stative endings, to which *-i* has been appended: Pre-Hittite **-ha+i*, **-ta+i*, **-a+i* > Hittite *-hi*, *-ti*, *-i* (cf. Beekes 2011:266; Drinka 1995:3; Jasanoff 2003:6). The 1st singular preterite ending *-hun* is a Hittite innovation. The original form of the 1st singular preterite ending, **-ha*, is preserved in the other Anatolian daughter languages: Palaic *-ha*, Cuneiform Luwian *-ha*, Hieroglyphic Luwian *-ha*, Lycian *-χα*. The origin of the Hittite *hi*-conjugation is thus clear, even if all of the details are not yet completely understood. The Proto-Indo-European stative has been changed into a present class in Hittite by the addition of *-i* to the stative personal endings in imitation of the *mi*-conjugation. The original forms of the endings of the stative have been partially preserved in the preterite, though the development of a distinct preterite here is an Anatolian innovation.

19.15. COMMENTS ON THE PERSONAL ENDINGS

While Anatolian nominal morphology provides a great deal of reliable information about Early Proto-Indo-European nominal morphology, Anatolian verbal morphology does not provide the same level of reliability. This is because, in addition to retaining many archaic features, the Anatolian languages have also innovated significantly in verbal morphology. Moreover, certain features may have been lost in Anatolian as well. Consequently, the evidence from the non-Anatolian Indo-European daughter languages plays a more crucial rule in determining Early Proto-Indo-European verbal morphology than it plays in determining early nominal morphology. Nevertheless, the impact of Anatolian has been no less profound.

We can say with complete confidence that the dual number did not exist in Early Proto-Indo-European verbal morphology — it was a later formation (cf. Kerns—Schwartz 1972:5). Simple thematic verbal stems may also be tentatively

regarded as later formations (cf. Watkins 1998:58; Kerns—Schwartz 1972:2—3; Meillet 1931). It appears that they were just beginning to develop at the time when the Anatolian languages separated from the main speech community. We should note here, however, that, except for the 1st person singular, the personal endings of the thematic stems were identical to those of the athematic stems. There were at least two tenses (present/future and preterite [= non-present]), two moods (indicative and imperative), and two voices (active and middle). The preterite was originally neutral as to tense (cf. Meier-Brügger 2003:166). There were two contrasting superordinate aspectual categories (dynamic and stative) (cf. Comrie 1976:48—51 for definitions). The dynamic aspect referred to actions and processes, while the stative aspect referred to states. There was also an iterative aspect.

The present/future and the preterite were built on the same set of personal endings. The distinguishing characteristic was a deictic particle **-i* meaning ‘here and now’ that was appended to the personal endings to differentiate the present, while the undifferentiated endings were used to indicate the preterite, thus:

Person	Preterite	Present/Future
1st sg.	<i>*-m</i>	<i>*-m-i</i>
2nd sg.	<i>*-s</i>	<i>*-s-i</i>
3rd sg.	<i>*-t^h</i>	<i>*-t^h-i</i>
1st pl.	<i>*-me</i>	<i>*-me-/*-ma-</i>
2nd pl.	<i>*-t^he</i>	<i>*-t^he</i>
3rd pl.	<i>*-nt^h/*-ent^h</i>	<i>*-nt^h-i/*-ent^h-i</i>

These are the “secondary” and “primary” personal endings respectively of traditional Indo-European comparative grammar. The secondary endings were used to denote the aorist and imperfect in later Proto-Indo-European. At an even earlier date, before the **-i* was appended to differentiate the present from the preterite, these endings merely indicated an action or a process without reference to time. A remnant of this earlier usage survives in the so-called “injunctive” (cf. Lehmann 2002:172—175). The future sense was denoted with the help of temporal adverbs or was understood from the context.

Next, there was a special set of personal endings for the stative (cf. Lehmann 2002:171):

Person	Endings
1st sg.	<i>*-H₂e</i>
2nd sg.	<i>*-t^hH₂e</i>
3rd sg.	<i>*-e</i>
1st pl.	<i>*-me- (?)</i>
2nd pl.	<i>*-e</i>
3rd pl.	<i>*-ēr, *-īś</i>

These are the endings that served as the basis for the Hittite *hi*-conjugation and for the perfect in the non-Anatolian daughter languages. Inasmuch as the stative indicated a mere state without reference to time, there was no differentiation between “primary” and “secondary” endings here (cf. Lehmann 2002:170; Kerns—Schwartz 1972:10—11). Moreover, except for the 3rd person plural, the plural endings seem to be later additions (cf. Lehmann 2002:169 and 171).

A separate set of middle endings must also be reconstructed for Early Proto-Indo-European:

Person	Secondary	Primary
1st sg.	*-H ₂ e	*-H ₂ e-r
2nd sg.	*-t ^h H ₂ e	*-t ^h H ₂ e-r
3rd sg.	*-t ^h a, *-a	*-t ^h a-r, *-a-r
1st pl.	*-medH	*-medH
2nd pl.	*-dwe	*-dwe
3rd pl.	*-nt ^h a, *-ra	*-nt ^h a-r, *-ra-r

The middle endings were built mostly on the stative endings (cf. Watkins 1962:98). However, the 3rd person singular and plural forms in *-t^ha- and *-nt^ha- respectively were imported from the active conjugation. The 1st and 2nd plural endings, on the other hand, were unique to the middle. The 1st plural was created by the addition of *-dH (> *-d^hH) to the 1st plural active ending *-me- (cf. Sihler 1995:477), while the origin of the 2nd plural ending *-dwe (> *-d^hwe) is not known. The “primary” endings were distinguished from the “secondary” endings by the addition of a suffix *-r. The original meaning of the middle is clear. The middle was used to indicate that the subject was being acted upon — either the subject was performing the action on or for himself/herself, or the subject was the recipient but not the agent of the action (cf. Lehmann 1993:243; Gamkrelidze—Ivanov 1995.I:289—295). Thus, the middle was nothing other than a specialized form of the stative (cf. Lehmann 1993:218, 219, and 243; Luraghi 1998:184). Gamkrelidze—Ivanov (1995.I:288) note that the middle could only have arisen in Proto-Indo-European after subject-object relations and distinct forms for direct and indirect objects had appeared.

The last set of personal endings that we will examine are the imperative endings, which may be reconstructed as follows for Early Proto-Indo-European:

	Singular	Plural
2	*-Ø, *-di	*-t ^h e
3	*-t ^h (+ u)*-ent ^h (+ u)	

The bare stem was the fundamental form of the 2nd person singular imperative (cf. Lehmann 1993:182; Szemerényi 1996:247; Meier-Brügger 2003:181). This could be further extended by a particle *-di (> *-d^hi), the meaning of which is unknown. The 3rd person singular and plural imperative endings were the same as the active

endings to which **-u* was added, while the 2nd person plural imperative ending was identical with the 2nd person plural active ending (cf. Szemerényi 1996:247). The Anatolian first singular imperative ending **(a)llu* may indeed have been a remnant of an old hortatory ending as noted by Greenberg (2000:196). The *hortatory* was used to express an exhortation as in English ‘let’s go’.

We are not quite done yet. In addition to the regular personal endings of traditional grammar, there are irregular forms that need to be examined as well (cf. Villar 1991:248).

First, there is some evidence from Hittite and Tocharian for a 2nd singular active personal ending **-t^h* (cf. Villar 1991:248; Malzahn 2010:30–31). In Hittite, this ending may be preserved in the 2nd singular active preterite ending *-ta* (cf., for example, 2nd sg. pret. *e-eš-ta* ‘you were’, *e-ip-ta* ‘you took’, *ku-en-ta* ‘you struck’, etc.). Note also the following Tocharian A athematic endings (cf. Adams 1988:55; Van Windekens 1976–1982.III:259–297; for paradigms, see Krause–Thomas 1960–1964.I:262–270; Winter 1998:167):

Person	Singular	Plural
1	<i>-(ā)m</i>	<i>-mās</i>
2	<i>-(ā)t</i>	<i>-c</i>
3	<i>-(ā)š</i>	<i>-(i)ñc</i>

Note: There are phonological problems with the 3rd singular ending *-(ā)š* in Tocharian — had this been inherited directly from Proto-Indo-European **-sī*, we would expect *-(ā)s*, not *-(ā)š*. The best explanation is that of Pedersen, who derived this ending from an enclitic **se-*. For details on the development of the personal endings in Tocharian, cf. Van Windekens 1976–1982. II/2:259–297; Adams 1988:51–62; Malzahn 2010:26–49.

Considering that the form of the 2nd plural personal ending was **-t^{he}*, it would make sense if the original form of the 2nd singular personal ending were **-t^h*.

Next, there is also evidence for an original 3rd singular personal ending **-s*. Watkins (1962:97–106) discusses the evidence from the Indo-European daughter languages for an original 3rd singular ending in **-s* in great detail (though Watkins concludes that the **-s-* was an enlargement rather than a personal ending — indeed, some, but not all, of the material examined by Watkins supports such an interpretation). It was Watkins who also showed that the 3rd singular indicative was originally characterized by the fundamental ending *zero* (see also Villar 1991:248). At a later date, the 3rd singular personal ending **-s* was mostly replaced by the new 3rd singular personal ending **-t^h*. This change must have occurred fairly early, however, since the **-t^h* forms are found in Hittite and the other Anatolian daughter languages.

When the personal ending **-t^h* was added to the 3rd singular, it must also have been added to the 3rd plural ending at the same time, yielding the new 3rd plural

ending **-nt^h*. This leads us to conclude that the original form of the 3rd plural ending must have been **-n*.

It thus appears that the earliest recoverable Proto-Indo-European active personal endings may have been as follows (cf. Villar 1991:249, who reconstructs an identical set of personal endings for the singular and 2nd person plural but not for the 1st and 3rd persons plural — Villar reconstructs **-ue* for the 1st plural and **-r* for the 3rd plural):

Person	Singular	Plural
1	<i>*-m</i>	<i>*-me</i>
2	<i>*-t^h</i>	<i>*-t^he</i>
3	<i>*-s, *-Ø</i>	<i>*-en</i>

The important point in this proposal is the regularity between the 1st and 2nd persons singular and plural, which are constructed on the same elements, though it must be noted that there was also an alternative 1st plural ending **-we*, as suggested by Villar (1991:249). That this alternative ending is ancient is shown by the fact that it is found in the Anatolian languages. The difference in form was due to an intraparadigmatic accent shift — the accent was placed on the root in the singular but on the ending in the plural, at least in athematic stems (cf. Burrow 1973:320). An important benefit of this reconstruction is that it provides a means to explain the 1st and 2nd person plural endings in **me-n-* (~ **-we-n-*) and **-t^he-n-* respectively found, for example, in Greek and Anatolian. These endings may be seen as having been analogically remodeled after the 3rd plural. At a later date, this **-n* was partially replaced by **-s* in the 1st person plural in the other non-Anatolian Indo-European daughter languages: cf., for example, Sanskrit active 1st plural personal ending (primary) *-mas(i)* (as in Vedic *smāsi* ‘we are’, Classical Sanskrit *smās*, etc.). It may be noted here that there are alternative forms of the 2nd plural primary and secondary endings in *-na* in Sanskrit: (primary) *-thana*, (secondary) *-tana*. These are now to be seen as reflecting the older patterning and not as Sanskrit innovations (cf. Burrow 1973:309). The link between the **-n* of 3rd person plural and the **-n* of the 1st and 2nd persons plural was permanently broken when the 3rd person plural ending was extended by **-t^h*, as indicated above. An alternative scenario is possible here — the **-n* may be a remnant of an old plural ending. In this scenario, **-n* and **-s* would have been competing plural markers that could have optionally been added to the 1st plural personal endings, with **-n* being the more archaic of the pair.

The fact that the same set of personal endings could be used interchangeably for the 2nd and 3rd persons singular in Hittite in the preterite (cf. Sturtevant 1951:141) seems to indicate that Hittite represents a transitional stage in which the arrangement of the endings had not yet been completely worked out. This gives us a clue about the chronology of the changes we have been talking about here — they must have begun just prior to the time when the Anatolian languages became separated from the main speech community.

19.16. THE FORMATION OF MOODS

As noted above, four moods are traditionally reconstructed for later Proto-Indo-European: indicative, subjunctive, optative, and imperative. Inasmuch as the indicative was the default mood, there were no special markers to distinguish the indicative (cf. Szemerényi 1996:257). Moreover, we have already discussed the imperative in the section on personal markers. Therefore, only the subjunctive and optative require explanation in this section. This is also the place to mention the so-called “injunctive”.

SUBJUNCTIVE: The subjunctive was constructed on the indicative stem and was distinguished by the connecting vowel **-e/o-*, which was inserted between the bare stem and the personal endings in the case of athematic verbs or between the thematic vowel and the personal endings in the case of thematic verbs (cf. Szemerényi 1996:257; Fortson 2010:105—106; Meier-Brügger 2003:176—177), as illustrated by the following examples (athematic **H₁es-* ‘to be’, thematic **b^her-e/o-* ‘to bear, to carry’; note that the accent is on the root throughout the paradigm, and the full-grade vowel is retained in the root as well [cf. Beekes 2011:274—275; Sihler 1995:593]):

	Athematic	Thematic		
Singular				
1	<i>*H₁és-o-H₂</i>	<i>*b^hér-e-oH₂</i>	>	<i>*b^hér-ō-H₂</i>
2	<i>*H₁és-e-s(i)</i>	<i>*b^hér-e-e-s(i)</i>	>	<i>*b^hér-ē-s(i)</i>
3	<i>*H₁és-e-th(i)</i>	<i>*b^hér-e-e-th(i)</i>	>	<i>*b^hér-ē-th(i)</i>
Plural				
1	<i>*H₁és-o-me-</i>	<i>*b^hér-o-o-me-</i>	>	<i>*b^hér-ō-me-</i>
2	<i>*H₁és-e-the</i>	<i>*b^hér-e-e-the</i>	>	<i>*b^hér-ē-the</i>
3	<i>*H₁és-o-nth(i)</i>	<i>*b^hér-o-o-nth(i)</i>	>	<i>*b^hér-ō-nth(i)</i>

As noted by Fortson (2010:106), the subjunctive is only continued in Indo-Iranian, Greek, Celtic, and Latin. However, it has been modified in each of these branches. The subjunctive usually has future meaning in Indo-Iranian (cf. Sihler 1995:592; Fortson 2010:106). Only in Greek has the subjunctive retained its original meaning, though, even there, future meaning is not unknown (Fortson 2010:106 and Palmer 1980:309 cite examples from Homeric Greek). In Latin, what was originally the subjunctive always has future meaning (cf. Beekes 2011:274; Sihler 1995:594—595; Meillet 1964:224; Palmer 1954:271—272). Its limited distribution indicates that the subjunctive was a relatively late formation (cf. Burrow 1973:348; Kerns—Schwartz 1972:24—25). It did not exist in Anatolian. The situation is actually quite a bit more complicated than indicated in this brief discussion, and descriptive and comparative grammars for the individual daughter languages should be consulted for details; see also Hahn 1953 and Gonda 1956:68—116.

OPTATIVE: In athematic stems, the optative was characterized by a special suffix (*-yeH₁- [> *-yē-] in the singular and *-iH₁- [> *-ī-] in the plural), after which the secondary endings were added (cf. Brugmann 1904:554—557; Meillet 1964:224—226; Szemerényi 1996:259—261; Beekes 2011:275—276; Fortson 2010:106—107; Meier-Brügger 2003:177; Sihler 1995:595—600; Burrow 1973:350—353; Haudry 1979:75). Again, the verb *H₁es- ‘to be’ may be cited:

	Singular		Plural
1	<i>*H₁s-yéH₁-m</i>	>	<i>*s-yē-m</i>
			<i>*H₁s-iH₁-mé</i>
			>
			<i>*s-ī-me</i>
2	<i>*H₁s-yéH₁-s</i>	>	<i>*s-yē-s</i>
			<i>*H₁s-iH₁-thé</i>
			>
			<i>*s-ī-the</i>
3	<i>*H₁s-yéH₁-th</i>	>	<i>*s-yē-th</i>
			<i>*H₁s-iH₁-énth</i>
			>
			<i>*s-iy-enth</i>

As noted by Szemerényi (1996:259), this paradigm is most clearly preserved in Old Latin: (singular) *siem*, *siēs*, *siet*; (plural) *sīmus*, *sītis*, *sient*.

In thematic stems, the reduced-grade form of this suffix (*-iH₁-) was added after the thematic vowel, after which the secondary endings were added. The verb *b^her-e/o- ‘to bear, to carry’ may be cited again here (note that the accent is on the root throughout the paradigm, and the full-grade vowel is retained in the root as well):

	Singular		Plural	
1	<i>*b^hér-o-iH₁-m</i>	> <i>*b^hér-o-y-ṃ</i>	<i>*b^hér-o-iH₁-me</i>	> <i>*b^hér-o-i-me</i>
2	<i>*b^hér-o-iH₁-s</i>	> <i>*b^hér-o-i-s</i>	<i>*b^hér-o-iH₁-t^he</i>	> <i>*b^hér-o-i- t^he</i>
3	<i>*b^hér-o-iH₁-t^h</i>	> <i>*b^hér-o-i-t^h</i>	<i>*b^hér-o-iH₁-nt^h</i>	> <i>*b^hér-o-y-ṃt^h</i>

The optative did not exist in Anatolian, which indicates that it was a later development within Proto-Indo-European (cf. Meier-Brügger 2003:178; Fortson 2004:96 and 2010:107).

INJUNCTIVE: Though often treated as a separate mood (cf. Beekes 2011:273—274; Brugmann 1904:579—583; Szemerényi 1996:263—266), the so-called “injunctive” actually falls outside of formal categories such as tense and mood (cf. Buck 1933:238; MacDonell 1916:349—352; Lehmann 2002:174; Burrow 1973:346; Gonda 1956:33—46). It is found only in Indo-Iranian as a separate formation (cf. Meillet 1964:247; Beekes 2011:273—274; Kent 1953:74), and, even there, it is often difficult to determine its meaning (cf. Fortson 2010:101) — it can be translated into English as a past tense or as a present tense; it can have subjunctive or optative or imperative modality (cf. Hahn 1953:38; Szemerényi 1996:264—265). It was characterized by secondary personal endings and by the absence of the augment. It was particularly common in prohibitions: cf. Vedic *mā bhaiṣīḥ* ‘do not be afraid’, *mā na indra pārā vṛṇak* ‘do not, O Indra, abandon us’, *mā bharah* ‘do not carry’ (cf. Hahn 1953:38; Meillet 1964:247; Beekes 2011:273—274; Lehmann 2002:172; Meier-Brügger 2003:255—256; MacDonell 1916:351). Except for

prohibitions, the injunctive went out of use in post-Vedic Sanskrit (cf. Burrow 1973:346).

The injunctive is best seen as a remnant of the earlier verbal system (cf. Lehmann 2002:172; Gonda 1956:33—46; Szemerényi 1996:265; MacDonell 1916:349; Kerns—Schwartz 1972:4). It indicated an action or a process without reference to time (cf. K. Hoffmann 1967:265—279; P. Kiparsky 2005; Lehmann 2002:173; Meier-Brügger 2003:255).

19.17. FORMATION OF TENSES

We have already noted that Late Proto-Indo-European is traditionally assumed to have had the following tenses: present, imperfect, aorist, and perfect. Though there have been attempts to show that Late Proto-Indo-European also had pluperfect and future tenses, these proposals have not met with wide acceptance. To avoid confusion, it must be stressed here that I assume a slightly different situation for early (Pre-Anatolian) Proto-Indo-European — during that stage of development, I posit two tenses: a present/future and a preterite (= non-present). There was no special marker to distinguish the present from the future then — they were identical in form, both being built from the same set of personal endings, as in Hittite. It was not until much later, in Disintegrating Indo-European, or, better, in the formative stages of the individual non-Anatolian daughter languages themselves, that distinct future formations arose (cf. Kerns—Schwartz 1972:19—20) — we have already seen how the subjunctive developed into a future in Latin.

In Late Proto-Indo-European, a variety of tense formations could be made within each modal category, similar to what is reflected in the older non-Anatolian daughter languages. For example, Szemerényi (1996:266) notes that Latin had six tenses in the indicative, four in the subjunctive, and two in the imperative. He also notes that a perfect imperative form still survives in Latin in *mementō (te)*. According to Burrow (1973:298—299), Sanskrit had the following five moods: injunctive, imperative, subjunctive, optative, and precative. The precative (which is also sometimes called “benedictive”) was a form of the optative in which an -s was added after the modal suffix. It was built almost exclusively from aorist stems and was used to express a prayer or a wish addressed to the gods (cf. MacDonell 1916:367). Burrow further notes that, in the older language, modal forms could be made from present, aorist, and perfect stems without any apparent difference in meaning (see also Whitney 1889:201—202, §533). Ancient Greek was likewise quite intricate. Greek had seven tenses in the indicative (present, imperfect, future, aorist, perfect, pluperfect, and future perfect), three in the subjunctive (present, aorist, and perfect), five in the optative and infinitive (present, future, aorist, perfect, and future perfect), and three in the imperative (present, aorist, and perfect) (cf. Smyth 1956:107, §359). Let us look at each tense in turn (the following discussion has been adapted from Szemerényi 1996:266—313).

PRESENT STEMS: The formation of present stems was complicated. Present stems could be thematic or athematic, active voice or middle voice or even both, underived (= root stems) or derived (from verbal stems or from nominal stems) (cf. Kerns—Schwartz 1972:6—8).

- A. ATHEMATIC ROOT STEMS: Athematic root stems consisted of the simple verbal root without further extension. In this type of verbal stem, there was an intraparadigmatic alternation of accent and ablaut between the singular and the plural — in the singular, the accent fell on the root, and the vowel of the root appeared in its full-grade form, while, in the plural, the accent was shifted to the ending, and the vowel of the root appeared in its zero-grade form (that is, it was lost) (cf. Burrow 1973:320). This is an ancient type. (A small number of athematic root stems exhibit fixed root accent — that this type is also ancient is shown by the fact that it is found in Hittite [such as in *wek-* ‘to demand’]). The more common type (with intraparadigmatic accent shift) may be illustrated by the following examples (only the singular and plural forms are given):

	<i>*H₁es-</i> ‘to be’	<i>*H₁ey-</i> ‘to go’	<i>*g^{wh}en-</i> ‘to slay’
Singular			
1	<i>*H₁és-mi</i>	<i>*H₁éy-mi</i>	<i>*g^{wh}én-mi</i>
2	<i>*H₁és-si</i>	<i>*H₁éy-si</i>	<i>*g^{wh}én-si</i>
3	<i>*H₁és-thi</i>	<i>*H₁éy-thi</i>	<i>*g^{wh}én-thi</i>
Plural			
1	<i>*H₁s-més</i>	<i>*H₁i-més</i>	<i>*g^{wh}η-més</i>
2	<i>*H₁s-thé</i>	<i>*H₁i-thé</i>	<i>*g^{wh}η-thé</i>
3	<i>*H₁s-ént^{hi}</i>	<i>*H₁y-ént^{hi}</i>	<i>*g^{wh}n-ónt^{hi}</i>

- B. SIMPLE THEMATIC STEMS: Simple thematic stems consisted of the simple verbal root followed by the thematic extension **-e/o-*. Unlike the athematic type mentioned above, there was no intraparadigmatic accent and ablaut alternation. However, there were two distinct types of simple thematic stems. In the first, the accent was fixed on the root throughout the paradigm, and the root also retained its full-grade vowel. In the second, the accent was fixed on the thematic vowel throughout the paradigm, while the root appeared in its reduced-grade form (these were the sixth-class present stems in Sanskrit of the type represented by *tudáti* ‘strikes’ [cf. Burrow 1973:329—330]). The first type was far more common than the second, which was actually rather rare. Simple thematic stems first arose around the time that the Anatolian languages split off from the main speech community. They became increasingly common in later Proto-Indo-European and are the most common type in the older non-Anatolian Indo-European daughter languages (cf. Burrow 1973:328; Watkins 1998:58). The first type may be illustrated by **weg^h-e/o-* ‘to carry, to convey, to weigh’ (only the singular and plural forms are given):

	Singular	Plural
1	*wég ^h -o-H ₂	*wég ^h -o-mes
2	*wég ^h -e-si	*wég ^h -e-t ^h e
3	*wég ^h -e-t ^h i	*wég ^h -o-n ^h i

- C. REDUPLICATED STEMS: In this type of formation, the root is repeated, either in part or in whole. Szemerényi (1996:268—269) distinguishes the following types of reduplication: (A) total replication of the root (this is also called “intensive” reduplication or “full” reduplication [see above]); (B) total replication of the root, with a vowel (usually *-i-*) inserted between the reduplicated elements; (C) “symbolic” reduplication, in which only part of the root is replicated (this is also called “partial” reduplication or “normal” reduplication). As a general rule, the vowel of the root appeared in the reduplicated syllable in the case of partial reduplication. However, the vowel **-i-* could be substituted instead. This is typically the case in Greek, which almost always has *-i-* in the reduplicated syllable, though it should be noted that Sanskrit is more flexible in this regard (cf. Burrow 1973:322). The position of the accent was also somewhat unstable — it could fall on the reduplicated syllable, or it could fall on the root instead (cf. Burrow 1973:322—323). Both thematic and athematic types were found. These were the third-class or *hu*-class reduplicating present stems of Sanskrit grammar of the type represented by *ju-hó-mi* ‘I sacrifice’ (cf. Burrow 1973:322—323). Reduplicated inflection may be illustrated by the verb **d^he-d^heH₁-* ‘to put, to place’ (Greek points to **d^hi-d^heH₁-*) (only the singular and plural forms are given) (cf. Sihler 1995:457):

	Singular	Plural
1	*d ^h e-d ^h eH ₁ -mi	*d ^h e-d ^h H ₁ -mos
2	*d ^h e-d ^h eH ₁ -si	*d ^h e-d ^h H ₁ -t ^h e
3	*d ^h e-d ^h eH ₁ -t ^h i	*d ^h e-d ^h H ₁ -n ^h t ^h i

- D. STEMS WITH NASAL INFIX: **-n-* occupied a special position in verbal derivation in Proto-Indo-European. Unlike other derivational elements, **-n-* was inserted as an infix into type II verbal stems (**CCVC-*) according to the following pattern: **CC-n-éC-* (cf. Benveniste 1935:159—163 [note especially the table on p. 161]; see also Szemerényi 1996:270—271; Sihler 1995:498—501; Watkins 1998:57; Fortson 2010:97; Lehmann 1993:170—171), but only when the verbal stems ended in obstruents or laryngeals (cf. Lehmann 2004:118). These were the seventh-class present stems of Sanskrit grammar. As noted by Watkins (1998:57) (see also Szemerényi 1996:271), this type was most faithfully preserved in Indo-Iranian. The original system was modified in the other Indo-European daughter languages — typically, they have become thematic formations, as in Latin *findō* ‘to split, to cleave’, *linquō* ‘to leave, to abandon, to forsake, to depart from’, etc. The fact that the thematic formations

are also found in Indo-Iranian indicates that the original system was already moribund at the time of the emergence of the individual non-Anatolian Indo-European daughter languages. This type may be illustrated by **yu-n-ék'-* (traditional **yu-n-ég-*) ‘to join’ (only the singular and plural forms are given; the Sanskrit forms are also listed for comparison [cf. Burrow 1973:327]):

	Proto-Indo-European	Sanskrit
Singular		
1	<i>*yu-n-ék'-mi</i>	<i>yunájmi</i>
2	<i>*yu-n-ék'-si</i>	<i>yunákṣi</i>
3	<i>*yu-n-ék'-t^{hi}</i>	<i>yunákti</i>
Plural		
1	<i>*yu-n-k'-més</i>	<i>yuñjmás</i>
2	<i>*yu-n-k'-t^{hé}</i>	<i>yuñkthá</i>
3	<i>*yu-n-k'-ént^{hi}</i>	<i>yuñjánti</i>

Szemerényi (1996:270—271) points out that similar structures are found in the fifth-class and ninth-class present stems of Sanskrit grammar, and he cites Sanskrit *śru-* ‘to hear’ (< Proto-Indo-European **k^hlew-*; cf. Greek κλύω ‘to hear’; Latin *clueō* ‘to hear oneself called, to be called, to be named’) and (3rd sg. pres.) *pávate* ‘to make clean, to cleanse, to purify’ (< Proto-Indo-European **p^hewH₂-/*p^huH₂-*; cf. **pū-* in Latin *putō* ‘to cleanse, to clear’, *pūrus* ‘clean, pure’) as examples (see also Meier-Brügger 2003:170), thus:

Proto-Indo-European	Sanskrit
<i>*k^hlew-/*k^hlu-</i>	<i>śru-</i>
<i>*k^hl₁-n-éw-t^{hi}</i>	<i>śṛṇóti</i>
<i>*p^hewH₂-/*p^huH₂-</i>	<i>pávate</i>
<i>*p^hu-n-éH₂-t^{hi}</i>	<i>punáti</i>

- E. **-sk^h-* FORMATIONS: The fact that verbal formations employing this suffix are found in Hittite indicates that this type is ancient. In Hittite, this suffix forms iteratives, duratives, or distributives (cf. Luraghi 1997:28 and 1998:185; Kronasser 1966.1:575—576; Beekes 2011:257; Sturtevant 1951:129—131; Sihler 1995:506) — an iterative or durative meaning seems to be its original function (cf. Szemerényi 1996:273; Sihler 1995:507; Meillet 1964:221). This suffix is always thematic and accented and is attached to roots in the zero-grade (cf. Szemerényi 1996:273; Watkins 1998:59; Meier-Brügger 2003:171; Fortson 2010:99; Beekes 2011:257; Sihler 1995:505; Watkins 1998:59). This type may be illustrated by **p^hrek^h-* (**prek^h-* in Brugmann’s transcription) ‘to ask’ and

k^wem-* (g^uem-* in Brugmann’s transcription) ‘to come’ (the 3rd sg. pres. active is cited; Sanskrit forms are also listed for comparison):

Proto-Indo-European	Sanskrit
* <i>p^hrk^h-sk^hé-t^hi</i>	<i>pr̥cchāti</i>
* <i>k^wṛi-sk^hé-t^hi</i>	<i>gácchati</i>

- F. *-*yo-* FORMATIONS: This was a very common suffix in Late Proto-Indo-European verb morphology (cf. Szemerényi 1996:274; Sihler 1995:502—503; Fortson 2010:98; Meier-Brügger 2003:173; Meillet 1964:211 and 217—220). It was used to create present stems from both verbs (“deverbal” or “deverbative” stems) and nouns (“denominal” or “denominative” stems) (cf. Watkins 1998:58). These were the fourth-class or *ya*-class present stems of Sanskrit grammar. There were two basic types: (A) accented suffix, with root in zero-grade and (B) accented root, with both root and suffix in normal grade. It seems that the former was the more ancient type (cf. Sihler 1995:503; Burrow 1973:330). There were several subtypes as well (for details, cf. Beekes 2011:255—256; Brugmann 1904:523—537; Szemerényi 1996:274—279). The basic types may be illustrated by (A) **k^wem-* ‘to come’ and (B) **sp^hek^h-* ‘to see’ (forms from various daughter languages are also listed for comparison):

	Proto-Indo-European	Daughter Languages
A.	* <i>k^wṛi-yé/o-</i>	Greek βαίνω; Sanskrit <i>gamyáte</i>
B.	* <i>sp^hék^h-ye/o-</i>	Latin <i>speciō</i> ; Sanskrit <i>pásyati</i> ; Greek σκέπτομαι (metathesis from * <i>sp^hék^h-ye/o-</i>)

The various *-*yo-* formations attested in the individual Indo-European daughter languages most likely had more than one origin (cf. Kerns—Schwartz 1972:8; Fortson 2010:98—99; Sihler 1995:502) — Szemerényi (1996:277) notes that at least three different classes may be posited. He also notes that these classes “for the most part were again mixed in the individual languages”.

- G. CAUSATIVE(-ITERATIVE) FORMATIONS: Late Proto-Indo-European could form causatives by adding the accented suffix *-*éye/o-* to the *o*-grade form of the root (cf. Meier-Brügger 2003:173; Fortson 2010:99; Watkins 1998:58; Meillet 1964:211—212; Beekes 2011:256; Lehmann 1993:168; Kerns—Schwartz 1972:8). Brugmann (1904:535—537) treats this as a subtype of the preceding. In several daughter languages (Greek and, in part, Slavic), this formation has an iterative meaning — consequently, this formation is often referred to as causative-iterative (cf. Watkins 1998:58; Fortson 2010:99). According to Meier-Brügger (2003:173), this formation conveyed the meaning “a cause of bringing about a state of affairs, or the repeated bringing about of a state of

affairs”. This type may be illustrated by **wes-* ‘to clothe’, causative **wos-éye/o-*, and **men-* ‘to think’, causative **mon-éye/o-* (forms from various daughter languages are also listed for comparison):

Proto-Indo-European	Daughter Languages
<i>*wos-éye/o-</i>	Sanskrit <i>vāsáyati</i> ; Gothic <i>wasjan</i>
<i>*mon-éye/o-</i>	Sanskrit <i>mānáyati</i> ; Latin <i>moneō</i>

This suffix is also found in Hittite (cf. 3rd sg. *wa-aš-ši-e-iz-zi*, *wa-aš-še-iz-zi*, and *wa-aš-ši-ya-zi* ‘to get dressed, to put on clothes’) (cf. Kronasser 1966.1:467—511 for details). In Hittite, however, the regular causative conjugation was formed with the suffix **-new-/ *-nu-* (cf. Luraghi 1997:28; Sturtevant 1951:127—128; Kronasser 1966.1:438—460). Luraghi (1997:28) notes that this suffix could derive transitive verbs from adjectives or from intransitive verbs, or it could derive ditransitive verbs from transitive verbs. Causatives could also be formed in Hittite by means of the infix *-nen-/ -nin-* (cf. Kronasser 1966.1:435—437). As noted by Luraghi (1997:28), causatives in *-nu-* were much more frequent than causatives in *-nen-/ -nin-*.

The causative(-iterative) conjugation reconstructed for Proto-Indo-European on the basis of the non-Anatolian Indo-European daughter languages is best seen as a later, post-Anatolian development. Though the same type of formation is found in Hittite, its use as the regular means to indicate the causative(-iterative) did not arise until later. It was constructed on pre-existing thematic stems, extended with the suffix **-ye/o-* (cf. Kerns—Schwartz 1972:8).

- H. ADDITIONAL FORMATIONS: Szemerényi (1996:279) lists a number of additional, less productive present formations, such as those in dentals and **s* (other formations are listed by Meillet 1964:222—223).

Mention should be made at this point of the factitive suffix **-H₂-*, which was added to adjectives to form verbs with the meaning ‘to make something become what the adjective denotes’ (cf. Watkins 1998:59; Fortson 2010:99—100; Meier-Brügger 2003:168; see also Sturtevant 1951:124—126). This formation may be illustrated by **new-eH₂-* ‘to make new, to renew’, from the adjective **new-o-s* ‘new’ (for Proto-Indo-European, the 3rd sg. pres. active is cited; forms from Hittite and Latin are also listed for comparison):

Proto-Indo-European	Daughter Languages
<i>*new-eH₂-t^{hi}i</i>	Hittite (1st sg. pret.) <i>ne-wa-aḫ-ḫu-un</i> ; Latin (inf.) <i>(re)novāre</i> (< <i>*new-ā-</i>)

AORIST STEMS: As noted above, the aorist indicated an action or an event that occurred once and was completed in the past. There were two distinct types of aorist formations in Late Proto-Indo-European: (A) the sigmatic aorist, in which **-s-* was

added to the verbal root, and (B) asigmatic aorist, without **-s-*. In Indo-Iranian, the sigmatic aorist was accompanied by lengthened-grade of the root in the active (cf. Szemerényi 1996:282; Beekes 2011:262—263), and there is evidence from Slavic and Italic pointing in the same direction (cf. Fortson 2010:102). However, Drinka (1995:8—33) argues that this was a secondary development and should not be projected back into Proto-Indo-European, though Szemerényi (1996:282) maintains that lengthened-grade was original. The asigmatic aorist itself contained two subtypes: (A) the root (athematic) aorist, in which the personal endings were added directly to the root, and (B) the thematic aorist, which, as the name implies, was characterized by presence of the thematic vowel **-e/o-* between the root and the personal endings. In the root asigmatic aorist, the root had full-grade in the active singular but reduced-grade elsewhere. In the thematic asigmatic aorist, on the other hand, the root had reduced-grade (or zero-grade) throughout the paradigm (cf. Szemerényi 1996:281). Finally, a reduplicated aorist can also be reconstructed for Late Proto-Indo-European (cf. Szemerényi 1996:281; Fortson 2010:102—103). The aorist was characterized by secondary personal endings and, in Indo-Iranian, Greek, Armenian, and Phrygian (cf. Brixhe 1994:173 and 2004:785; Diakonoff—Neroznak 1985:22), by the presence of the so-called “augment”.

Inasmuch as the aorist did not exist in Anatolian, it must have arisen in later, post-Anatolian Proto-Indo-European. Its development is fairly transparent. The asigmatic type was the most ancient. It was constructed on the preterite forms (with so-called “secondary endings”) reconstructed above for Early Proto-Indo-European (cf. Austefjord 1988:23—32) and originally exhibited an intraparadigmatic accent and ablaut variation in the root similar to what was found in the present stems. Thematic variants came into being in the aorist at the same time that they began to appear in the present. The thematic variants were accented on the thematic vowel throughout the paradigm, and the root had reduced-grade (or zero-grade). The next change was the development of the sigmatic aorist. According to Fortson (2010:102), the characteristic **-s-* of the sigmatic aorist was most likely derived from the 3rd singular active preterite ending **-s-* found, for example, in the Hittite *hi*-conjugation (cf. *na-(a-)iš* ‘he/she led, turned, drove’, *(a-)ak-ki-iš* ‘he/she died’, *a-ar-aš* ‘he/she arrived’, *ka-ri-pa-aš* ‘he/she devoured’, *ša-ak-ki-iš* ‘he/she knew’, etc.) (see also Drinka 1995:141—143). The next change was the development of lengthened-grade forms in the active in the sigmatic aorist (though not in Greek). The final change was the addition of the augment in Indo-Iranian, Greek, Armenian, and Phrygian. These last two changes belong to the early prehistory of the individual daughter languages and should not be projected back into Proto-Indo-European. Cf. Jasanoff 2003:174—214 for original and stimulating ideas about the possible origin of the sigmatic aorist (but these ideas are rejected by Ronald I. Kim 2005:194).

For an excellent discussion of the differences and similarities between the present and the aorist, cf. Meillet 1964:247—250. One of the things that comes out quite clearly from Meillet’s discussion is that the semantic nuances between the present, aorist, and imperfect are often quite subtle.

IMPERFECT STEMS: The imperfect was formed directly from the present stem (cf. Fortson 2010:100—101). At the same time, it was closely related to the aorist (cf. Burrow 1973:333). It was used to indicate an action or an event occurring at some unspecified point in the past, with no indication that the action had come to an end. Thus, the distinction between the aorist and the imperfect was that the former indicated completed action in the past, while the latter indicated continuous action in the past. Thus, in terms of aspect, the aorist was *perfective*, and the imperfect was *imperfective* (Sihler 1995:446—447 uses the terms “punctual” and “durative”, but see Comrie 1976:16—40 for a description of “perfective” and “imperfective” aspects and 41—44 for a discussion of the difference between “punctual” and “durative”). Like the aorist, it had secondary endings, and, in Indo-Iranian, Greek, Armenian, and Phrygian, it was also characterized by the presence of the augment (cf. Fortson 2010:101). There were both thematic and athematic types. Various means were used to distinguish the aorist from the imperfect in later Proto-Indo-European and in the individual non-Anatolian daughter languages, the most significant being the development of sigmatic forms in the aorist. Nothing comparable existed in the imperfect. There was also a close relationship between the imperfect and the injunctive (they are treated together by Fortson 2010:100—101), and the injunctive is often described as an imperfect without the augment (cf. Burrow 1973:346; Meillet 1964:247; Beekes 2011:273—274).

Szemerényi (1996:303) traces the development of aorist and imperfect as follows:

The opposition of present to aorist, at first simply an opposition of present to non-present (directed towards the past), had to change fundamentally as and when a second past tense, formed directly from the present stem, was created; the binary opposition **bhéugeti* : **(é)bhuget*, whereby the old preterite became for the first time properly the aorist, while the new preterite, identical with the present in its stem, i.e. the imperfect of the south-east area, simply transferred the durative action to the past.

FUTURE STEMS: The future did not exist as a separate tense in Proto-Indo-European (cf. Szemerényi 1996:285; Beekes 2011:252; Sihler 1995:451 and 556; Kerns—Schwartz 1972:19). Consequently, the study of the sundry future formations that appear in the individual non-Anatolian Indo-European daughter languages properly belongs to those languages (for details, cf. Szemerényi 1996:285—288; Fortson 2010:100; Burrow 1973:332—333; Meillet 1964:215—216; Sihler 1995:556—559; Buck 1933:278—281; Palmer 1954:271—272 and 1980:310—312; Lindsay 1894:491—494; Lewis—Pedersen 1937:289—292; Endzelins 1971:231—234).

19.18. NON-FINITE FORMS

Non-finite forms typically include *participles*, *infinitives*, *verbal nouns*, and *verbal adjectives*. Participles have qualities of both verbs and adjectives and can function as adjectival or adverbial modifiers. They can also be combined with auxiliary verbs

to form periphrastic verbal formations — a common development in the Indo-European daughter languages (cf. Meier-Brügger 2003:186—187), including Hittite (cf. Luraghi 1997:38—42 and 1998:185). Infinitives express existence or action without reference to person, number, tense, or mood and can also function as nouns.

Late Proto-Indo-European had a number of non-finite verbal forms, including participles and verbal adjectives (cf. Szemerényi 1996:317; Brugmann 1904:606—610; Fortson 2010:108; Sihler 1995:613—629; Haudry 1979:82—84; Adrados 1975.II:740—745). However, it did not have infinitives, though they did appear later in the individual Indo-European daughter languages (cf. Meier-Brügger 2003:184; Beekes 2011:280; Szemerényi 1996:317; Lehmann 1993:164—165; Adrados 1975.II:745—750). On the other hand, Late Proto-Indo-European must have had a variety of verbal nouns (so Beekes 2011:280—281, Brugmann 1904:603—606, and Lehmann 1993:165, but not according to Szemerényi 1996:317 and Meier-Brügger 2003:184) — that this was indeed the case is shown by the fact that verbal nouns already existed in Hittite (cf. Luraghi 1997:37—38 and 1998:185—186; Lehmann 1993:165).

In Late Proto-Indo-European, the suffix **-nth-* was used to form present and aorist participles in the active voice (cf. Szemerényi 1996:317—319; Meier-Brügger 2003:185; Fortson 2010:108; Meillet 1964:278; Adrados 1975.II:740—741 and II:742—744; Sihler 1995:613—618; Haudry 1979:83; Beekes 2011:279—280). For example, the present participle of **H₁es-* ‘to be’ may be reconstructed as **H₁s-(e/o)nth-* (cf. Sanskrit *sánt-* ‘being’), while that of **b^{her}-e/o-* ‘to bear, to carry’ may be reconstructed as **b^{her}-e/o-nth-* (cf. Sanskrit *bhárant-* ‘carrying’). This suffix is preserved in virtually all of the older non-Anatolian daughter languages. It is also found in Hittite. However, in Hittite, this suffix conveyed past meaning when it was added to non-stative verbs, but present meaning when added to stative verbs (cf. Luraghi 1997:38). Clearly, this suffix is ancient. The Hittite usage reflects the original situation (cf. Szemerényi 1996:318), while the usage found in the non-Anatolian daughter languages may be viewed as a later specialization (cf. Burrow 1973:368).

In the perfect (= stative), the suffix **-wos-/ *-us-* was used to form participles in Late Proto-Indo-European (cf. Szemerényi 1996:319—320; Meillet 1964:278—279; Schmitt-Brandt 1998:272; Meier-Brügger 2003:185—186; Fortson 2004:98 and 2010:108—109; Beekes 2011:279; Adrados 1975.II:741; Rix 1992:234—235; Sihler 1995:618—621; Haudry 1979:83). According to Szemerényi (1996:319), the original paradigm of the perfect participle for **weid-* (= **weyt’-*) ‘to know’ is to be reconstructed as follows (Szemerényi only gives the singular forms; his notation has been retained) (see also Beekes 2011:198):

	Masculine	Neuter	Feminine
Nominative	<i>*weid-wōs</i>	<i>*weid-wos</i>	<i>*wid-us-ī</i>
Accusative	<i>*weid-wos-ṃ</i>	<i>*weid-wos</i>	<i>*wid-us-īm</i>
Genitive	<i>*wid-us-os</i>	<i>*wid-us-os</i>	<i>*wid-us-yās</i>
Dative	<i>*wid-us-ei</i>	<i>*wid-us-ei</i>	<i>*wid-us-yāi</i>

As noted by Sihler (1995:620), there is some disagreement about the form of the root in the above paradigm since the evidence from the non-Anatolian daughter languages is contradictory. According to some Indo-Europeanists, the root is to be reconstructed with full-grade throughout (**weyt*'-), while others maintain that the root had reduced-grade (**wit*'-) throughout, and still others (Szemerényi, Rix, and Beekes, for example) maintain that there was an intraparadigmatic ablaut variation (**weyt*'- ~ **wit*'- [traditional reconstruction **uejd*- ~ **uid*-]). Sihler favors the second alternative, namely, **wit*'- throughout.

The suffix *-*meno*-/*-*mno*- was used to form middle participles in Late Proto-Indo-European (cf. Szemerényi 1996:320—321; Meier-Brügger 2003:186; Fortson 2010:108; Meillet 1964:279; Sihler 1995:618; Adrados 1995.II:741; Beekes 2011:279—280; Rix 1992:236): cf. Greek φερό-μενο-ς ‘carrying’; Sanskrit *bhāra-māṇa-h* ‘carrying’; Avestan *barəmnā*- ‘carrying’. Related forms may have existed in Anatolian (cf. Szemerényi 1996:320—321): cf. the Luwian participle (nom. sg.) *ki-i-ša-am-m[i-iš]* ‘combed’ (n. *ki-i-ša-am-ma-an*) (cf. Laroche 1959:55), assuming here that graphemic -*mm*- either represents or is derived from -*mn*-.

In Late Proto-Indo-European, the suffixes *-*tho*- and *-*no*- were used to form verbal adjectives. Both later developed into past participle markers in the individual non-Anatolian daughter languages (cf. Meillet 1964:277; Meier-Brügger 2003:186 — but see Drinka 2009). The suffix *-*tho*- was the more widespread of the pair. It was originally accented and attached to the reduced-grade of the root: **k^hlu-thó-s* ‘famous, renowned’ (cf. Sanskrit *śru-tá-h* ‘heard’; Greek κλυτός ‘heard’; Latin *inclutus* ‘famous, celebrated, renowned’; Old Irish [noun] *cloth* ‘fame’). The same patterning may be observed in *-*no*-: **p^hlH-nó-s* ‘full’ (cf. Sanskrit *pūrṇá-h* ‘full, filled’; Old Irish *lán* ‘full’; Lithuanian *pilnas* ‘full’). For details, cf. Adrados 1975.II:740—745; Beekes 2011:279; Burrow 1973:370—371; Fortson 2010:109; Schmitt-Brandt 1998:268—269; Sihler 1995:621—625 and 628; Szemerényi 1996:323—324. Occasionally, other suffixes were used to form past participles as well in the individual daughter languages: cf. Sanskrit *chid-rá-h* ‘torn apart’ (with *-*ró*-), *pak-vá-h* ‘cooked’ (with *-*wó*-), etc. These, too, were originally verbal adjectives.

19.19. CONCLUDING REMARKS

In this chapter, we have discussed traditional views concerning the reconstruction of the Proto-Indo-European morphological system, though only the most important characteristics have been examined. We have seen that it is possible to discern at least two distinct chronological stages of development, which may simply be called “Early Proto-Indo-European” and “Late Proto-Indo-European”. Early Proto-Indo-European may be defined as the stage of development existing before the separation of the Anatolian branch from the main speech community, while Late Proto-Indo-European may be defined as the stage of development existing after the Anatolian languages had split off and before the emergence of the individual non-Anatolian daughter languages. Even though a fundamental assumption underlying this division is that there were common developments in the non-Anatolian daughter languages

that set them apart as a group from Hittite and the other Anatolian languages, it must be emphasized that much that appeared later was already incipient in Early Proto-Indo-European.

As a result of the preceding analysis, it is clear that the Late Proto-Indo-European morphological system not only contained the remnants of earlier successive periods of development, it also included a substantial number of new formations (cf. Lehmann 1993:185) — Kerns—Schwartz (1972) refer to these new formations as “neologisms”. In many cases, we have been able to trace how and when these new formations came into being. It is even possible to discern different stages within Late Proto-Indo-European, though, for our purposes, it is not necessary to define all of these stages. Moreover, we have also caught glimpses of how the inherited morphological system was modified in the individual daughter languages, though the study of these changes falls outside of the scope of this book, and individual descriptive and comparative grammars should be consulted for more information. These works are listed in Volume 4 of this book.

It may be noted that Drinka (1995:4) reaches many of the same conclusions arrived at in this chapter — specifically, she states:

1. It is incorrect to project all of the morphological complexity of Sanskrit and Greek into Proto-Indo-European. There is no sign of much of this complexity outside the eastern area.
2. The simplicity of the Hittite morphological system represents archaism, to a large extent, not loss.
3. The distribution of morphological features across the Indo-European languages cannot be accounted for by positing a unified proto-language, or even a proto-language which was dialectally diverse on a single synchronic level. Rather, it must be admitted that Indo-European was not a single entity in space or time, that Indo-European languages developed from different chronological levels, that is, that they had different “points of departure” from a dynamic proto-conglomerate.

Similar views are expressed by, among others, Adrados (1992), Lehmann (2002), Shields (2004:175), Watkins (1962:105), and Polomé (1982b:53), who notes:

...the wealth of forms, tenses, and moods that characterize Greek and Sanskrit, and in which an earlier generation saw prototypes of exemplary Indo-European grammatical structure in the verbal system, is nothing by a recent common development of this subgroup of languages.

Drinka (1995:4) further remarks that, among the non-Anatolian daughter languages, Germanic is particularly archaic (likewise Polomé 1972:45: “The particularly conservative character of Gmc. has long been recognized...”), and the same may be said about Tocharian (cf. Jasanoff 2003).

APPENDIX:
THE ORIGIN OF THE VERBAL THEMATIC STEMS

Beyond mentioning that verbal thematic stems were mostly later, post-Anatolian developments, nothing has been said in the previous sections of this chapter about their possible origin. In this Appendix, we will briefly explore how they may have come into being. We will begin by listing the verbal thematic paradigm as traditionally reconstructed (cf. Fortson 2004:89 and 2010:98):

	Primary	
	Singular	Plural
1	<i>*bhér-o-H₂</i>	<i>*bhér-o-me(s)</i>
2	<i>*bhér-e-si</i>	<i>*bhér-e-thē</i>
3	<i>*bhér-e-thi</i>	<i>*bhér-o-nt^hi</i>
	Secondary	
	Singular	Plural
1	<i>*bhér-o-m</i>	<i>*bhér-o-me</i>
2	<i>*bhér-e-s</i>	<i>*bhér-e-thē</i>
3	<i>*bhér-e-th</i>	<i>*bhér-o-nt^h</i>

Fortson (2004:89 and 2010:98) mentions that the first person singular ending was “ultimately the same as the 1st singular ending of the middle (**-h₂e*), and it is widely believed that the thematic conjugation had its origins in the middle.” It is more likely, however, that the middle, the thematic conjugation, and the perfect of traditional Indo-European grammar all ultimately developed from a common source, namely, the undifferentiated stative of Early Proto-Indo-European (cf. Jasanoff 2003:144—145). As shown by Jasanoff (2003), this was also the source of the Hittite *hi*-conjugation.

As noted by Jasanoff (2003:70, 97, 148—149, and 224—227), the starting point for the development of the verbal thematic forms must have been the stative third person singular. In accordance with Jasanoff’s views, I assume that, just as the third person ending **-th* was added to athematic/active stems, replacing the earlier athematic/active ending **-s*, it was also added to the third person in stative stems: (athematic/active) **bhér+th* (earlier **bhér-s*), (stative) **bhér-e+th* (earlier **bhér-e*). Significantly, the ending **-e* was retained here instead of being replaced, as in the case of the athematic/active stems. From there, the pattern was analogically extended to the rest of the paradigm, thus producing a new stem type, the so-called “thematic” stems. The stem was then reinterpreted as **bhér-e/o-*, and the position of the accent was fixed on the root throughout the paradigm. It should be noted here that there may also have existed a second type of thematic formation in which the root was in reduced-grade and the accent was fixed on the thematic vowel throughout the paradigm (cf. Fortson 2004:89 and 2010:98) — this is the *tudāti* or

sixth class of Sanskrit grammar (cf. Burrow 1973:329—330). However, this is often considered to be a post-Proto-Indo-European formation (cf. Watkins 1969:63). For the most part, the personal endings were taken over from the athematic/active conjugation (cf. Jasanoff 2003:149), though the stative ending was retained in the first person singular primary: **b^hér-o-H₂* (< **b^hér-o+H₂e*). Fortson (2004:89 and 2010:98) further observes: “The theme vowel was in the *o*-grade before the 1st person endings and the 3rd plural, i.e. before endings beginning with a resonant or laryngeal; the reason for this is not known”. For additional information on the origin of thematic stems, cf. Watkins 1969:59—68.

According to a recent proposal by Villanueva Svensson (2021), the initial core of simple thematic stems were of denominative origin:

It is now generally agreed upon that the Indo-European simple thematic presents are a post-Anatolian innovation. The origin of this formation, however, remains unclear. In this paper it is argued that the initial core of simple thematic presents was of denominative origin. They go back to an early Core PIE class of denominatives derived from *e*-grade thematic adjectives through conversion, e.g., adj. **léuk-o-* ‘clear’ (Gk. λευκός ‘white’) → vb. **léuk-e/o-* ‘be/make clear’ (Ved. *rócate* ‘shines’, TB *lyúštär* ‘will light up’). This derivational pattern became obsolete already within Core PIE and a number of original denominatives like **léuk-e/o-* were reinterpreted as primary present stems.

CHAPTER TWENTY

PROTO-INDO-EUROPEAN MORPHOLOGY II: PREHISTORIC DEVELOPMENT

20.1. INTRODUCTION

In the preceding chapter, we discussed traditional views on the reconstruction of the Proto-Indo-European morphological system. Two main periods of development were identified:

1. Early Proto-Indo-European
2. Late Proto-Indo-European

Early Proto-Indo-European was defined as the stage of development existing just before the separation of the Anatolian branch from the main speech community, while Late Proto-Indo-European was defined as the stage of development existing between the separation of the Anatolian languages and the appearance of the individual non-Anatolian Indo-European daughter languages. The time period covered was approximately 5000—3000 BCE (these are the dates given by Lehmann 2002:2 for the traditional reconstruction of Proto-Indo-European).

In the Appendix accompanying Chapter 4 of this book, an attempt was made to identify the main stages of development that the Proto-Indo-European phonological system passed through between the time that it became separated from the other Nostratic daughter languages and the appearance of the non-Anatolian Indo-European daughter languages. Four main periods of development were identified:

1. Pre-Proto-Indo-European
2. Phonemic Stress Stage of Proto-Indo-European
3. Phonemic Pitch Stage of Proto-Indo-European (= Proto-Indo-Anatolian)
4. Disintegrating Indo-European

At this point, it would be helpful to correlate the morphological stages of development with the phonological stages. Clearly, Late Proto-Indo-European is equivalent to Disintegrating Indo-European, while Early Proto-Indo-European may be correlated with the Phonemic Pitch Stage of Proto-Indo-European. It was at the end of the Phonemic Pitch Stage of development that the Anatolian languages became separated from the main speech community.

The question now naturally arises as to what the Proto-Indo-European morphological system may have been like during still earlier stages of development. In this chapter, we will attempt to answer that question. In so doing, we will discuss both the Phonemic Pitch Stage and the Phonemic Stress Stage in order to get a more

comprehensive picture of the prehistoric development of the Proto-Indo-European morphological system. The time period covered in this chapter is roughly 7000—5000 BCE. Lehmann (2002:3) uses the term “Pre-Indo-European” to designate this period and (2002:v and 245) dates it to between 8000—5000 BCE. I prefer a more narrow time period and reserve the term “Pre-Proto-Indo-European” for earlier than 7000 BCE.

There have been several serious efforts to ascertain the salient characteristics of the earliest form of the Proto-Indo-European morphological system. Until fairly recently, it was common to think in terms of ergativity (cf. Lehmann 2002:4). In ergative languages, the subjects of intransitive verbs and the direct objects of transitive verbs are treated identically for grammatical purposes, while subjects of transitive verbs are treated differently (cf. Trask 1993:92—93; Crystal 2003:165—166; Comrie 1979:329—394; see Dixon 1994 for a book-length treatment of ergativity). This is what Kenneth Shields proposes, for example, in a number of stimulating works. Beekes (1995:193—194) may be mentioned as another who suggests that Proto-Indo-European may once have had an ergative-type system. However, the majority of Indo-Europeanists no longer consider ergativity to have been a characteristic feature of the Proto-Indo-European morphological system at any stage in its development. Rather, there is a growing recognition that the earliest morphological system of Proto-Indo-European that can be recovered was most likely characterized by an active structure. In active languages, subjects of both transitive and intransitive verbs, when they are agents semantically, are treated identically for grammatical purposes, while non-agent subjects and direct objects are treated differently (cf. Trask 1993:5—6). An “agent” may be defined as the entity responsible for a particular action or the entity perceived to be the cause of an action (cf. Trask 1993:11; Crystal 1992:11 and 2003:16). In her 1992 book, *Linguistic Diversity in Space and Time*, Johanna Nichols discusses many of the distinguishing characteristics of active (and stative-active) languages. We will have more to say about these characteristics later (§20.3 below). Proponents of this view include Lehmann (1974, 1989b, 1995, and 2002), Barðdal—Eythórsson (2009), B. Bauer (2000), Drinka (1999), Gamkrelidze—Ivanov (1984 and 1995), Neu (1976), Oettinger (1976), Piccini (2008), Pooth (2004 and 2018b), K. H. Schmidt (1980), and R. Stempel (1998), among others. The treatment in this chapter is adapted from Lehmann’s 2002 book *Pre-Indo-European*. See also Matasović to appear and Esser 2009. For theoretical background, see Donohue—Wichmann (eds.) 2008.

20.2. NOTES ON PHONOLOGY

As noted above, in the Appendix accompanying Chapter 4, The Reconstruction of the Proto-Indo-European Phonological System, an attempt was made to identify the main stages of development that the Proto-Indo-European phonological system passed through between the time that it became separated from the other Nostratic daughter languages and the appearance of the non-Anatolian Indo-European daughter languages. We shall begin by repeating some of what was discussed there.

Pre-Proto-Indo-European was followed by the Phonemic Stress Stage of Proto-Indo-European, which is the earliest stage of Proto-Indo-European proper that can be recovered. This stage was characterized by the phonemicization of a strong stress accent that caused the reduction and elimination of the vowels of unaccented syllables — that is to say that the phonemicization of a strong stress accent was responsible for the development of quantitative vowel gradation (quantitative ablaut). This change was the first in a long series of changes that brought about the grammaticalization of what began as a purely phonological alternation, and which resulted in a major restructuring of the earlier, Pre-Proto-Indo-European vocalic patterning. This restructuring of the vowel system was a continuous process, which maintained vitality throughout the long, slowly-evolving prehistory of the Indo-European parent language itself and even into the early stages of some of the daughter languages.

It was during the Phonemic Stress Stage of Proto-Indo-European that the syllabic resonants came into being. Lengthened-grade vowels may also have first appeared during this stage of development.

In the latest period of Proto-Indo-European (what I call “Disintegrating Indo-European”), quantitative ablaut was no longer a productive process. Had there been a strong stress accent at this time, each Proto-Indo-European word could have had only one syllable with full-grade vowel, the vowels of the unstressed syllables having all been eliminated. (As an aside, it may be noted that this is the type of patterning reconstructed for Proto-Kartvelian — see Chapter 6 of this book for details.) However, since the majority of reconstructed Proto-Indo-European words have more than one full-grade vowel, the stress accent must have become non-distinctive at some point prior to the latest stage of development.

In the Phonemic Pitch Stage of Proto-Indo-European, pitch accent replaced stress accent, and the accent lost its ability to weaken or eliminate the vowels of unaccented syllables, that is to say, Proto-Indo-European changed from a “stress-accent” language to a “pitch-accent” language. Here, the basic rule was that morphologically significant syllables were marked by high pitch, while morphologically nonsignificant syllables were marked by low pitch.

The phonological system of the Phonemic Pitch Stage of Proto-Indo-European may be reconstructed as follows (this is the system used in this chapter):

Obstruents:	p ^h	t ^h	k ^h	k ^{wh}	(voiceless aspirated)
	b	d	g	g ^w	(plain voiced)
	(p')	t'	k'	k' ^w	(glottalized)
		s			
Laryngeals:	ʔ	h	ḥ	ḥ ^w	
			ḥ	ḥ	
Nasals and Liquids:	m/ṁ	n/ṇ	l/ḷ	r/ṛ	
Glides:	w(/u)	y(/i)			

Vowels:	e	o	a	i	u	ə
	ē	ō	ā	ī	ū	

Notes:

1. The high vowels **i* and **u* had the non-phonemic low variants **e* and **o* respectively when contiguous with *a*-coloring laryngeals (**h*, **h̥h*, and **h̥h̥*), while the vowel **e* was lowered and colored to **a* in the same environment.
2. Apophonic *o* had not yet developed. It arose later in Disintegrating Indo-European from apophonic *a*. However, already during this stage, and even earlier, in the Phonemic Stress Stage of Proto-Indo-European and in Pre-Proto-Indo-European, there was a non-apophonic *o* that had been inherited from Proto-Nostratic.
3. The velar stops developed non-phonemic palatalized allophones when contiguous with front vowels and **y*.
4. There were no voiced aspirates at this time. They developed later in Disintegrating Indo-European from earlier plain voiced stops.

Phonemic analysis:

- A. Obstruents: always non-syllabic.
- B. Resonants (glides, nasals, and liquids): syllabicity determined by surroundings: the resonants were syllabic when between two non-syllabics and non-syllabic when either preceded or followed by a vowel.
- C. Vowels: always syllabic.

Suprasegmentals:

- A. Stress: non-distinctive.
- B. Pitch: distribution morphologically conditioned: high pitch was applied to morphologically-distinctive vowels, while low pitch was applied to morphologically-non-distinctive vowels.

During the Phonemic Pitch Stage of development, the system of vowel gradation assumed the following form:

	Lengthened-Grade	Normal-Grade	Reduced-Grade	Zero-Grade
A.	ē ~ ā	e ~ a	ə	Ø
B.	ēy ~ āy	ey ~ ay	i, əyV	y
	ēw ~ āw	ew ~ aw	u, əwV	w
	ēm ~ ām	em ~ am	ɪ, əmV	m
	ēn ~ ān	en ~ an	ɪ, ənV	n
	ēl ~ āl	el ~ al	ɪ, əlV	l
	ēr ~ ār	er ~ ar	ɪ, ərV	r

C.	Ae [Aa] ~ Aa	Aə	A
D.	Aey [Aay]	Ai, AəyV	Ay
	Aew [Aaw]	Au, AəwV	Aw

Note: The symbol *ə is used here to indicate the reduced-grade vowel corresponding to normal-grade *e and *a. This is the so-called “schwa secundum” of traditional Indo-European grammar. It is usually written *b.

20.3. ACTIVE STRUCTURE

Before discussing the prehistoric development of Proto-Indo-European morphology, it would be helpful to give some background information concerning active-type languages. A great deal of theoretical information on this topic was previously given at the beginning of Chapter 17. Here, we will begin by quoting in full Dixon’s (1994:71—78) description of Split-S systems (that is, active structure or active-type languages), then repeat Klimov’s list of typical features of active-type languages from Chapter 17, and end with Lehmann’s description and interpretation of those features from his 2002 book *Pre-Indo-European*.

Dixon notes (cover symbols: A = subject of transitive; O = direct object; S = subject of intransitive):

The identifications between S, A and O in accusative and ergative systems can be shown graphically as in Figures 4.1 and 4.2. In Figure 4.3 we show the system in a split-S language. Intransitive verbs are divided into two sets, one with S_a (S marked like A) and another with S_o (S marked like O).

For the Siouan Mandan, Kennard (1936) distinguishes verbs which indicate an ‘activity’ from those which indicate a ‘state or condition’. The first class (of ‘active verbs’) can be transitive, occurring with subjective and objective pronominal suffixes (e.g. ‘ignore’, ‘tell’, ‘give’, ‘see’, ‘name’), or intransitive, occurring just with subjective suffixes (e.g. ‘break camp’, ‘enter’, ‘arrive’, ‘think over’, ‘go’). The second class (of ‘neutral verbs’) takes only the objective prefixes, they include ‘fall’, ‘be lost’, ‘lose balance’ and verbs covering concepts that would be included in an adjectival class for other languages such as ‘be alive’, ‘be brave’ and ‘be strong’. One might prefer to say that S_a (intransitive ‘active’) verbs refer to an activity that is likely to be controlled, which S_o (‘neutral’) verbs refer to a non-controlled activity or state.

Types of split system

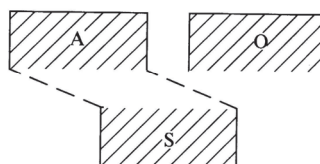


Figure 4.1: Accusative System

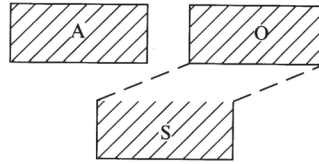


Figure 4.2: Ergative System

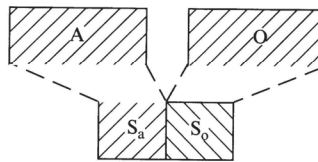


Figure 4.3: Split-S System

Note that in a split-S language like Mandan each intransitive verb has fixed class membership — either S_a or S_o — generally on the basis of its prototypical meaning. If one wanted to use a verb which deals with a proto-typically non-controlled activity to describe that activity done purposely, then it would still take S_o marking (and something like an adverb ‘purposely’ could be added). And similarly for a verb which describes a prototypically controlled activity used to refer to that activity taking place accidentally — S_a marking would still be used (according to the prototypical pattern) together with some-thing like an adverb ‘accidentally’.

Guaraní, a Tupí-Guaraní language from Paraguay, provides a further example of split-S marking. Gregores and Suárez (1967) distinguish three classes of verb. ‘Transitive verbs’ (e.g. ‘give’, ‘steal’, ‘know’, ‘order’, ‘suspect’, ‘like’) take prefixes from both subject and object paradigms (i.e. A and O). ‘Intransitive verbs’ (‘go’, ‘remain’, ‘continue’, ‘follow’, ‘fall’) take subject prefixes (i.e. S_a). Both of these classes can occur in imperative inflection, unlike the third class, which Gregores and Suárez call ‘quality verbs’; these take prefixes (S_o) which are almost identical to object prefixes on transitive verbs. Most quality verbs would correspond to adjectives in other languages, although the class does contain ‘remember’, ‘forget’, ‘tell a lie’ and ‘weep’.

Split-S languages are reported from many parts of the world — they include Cocho, from the Popolocan branch of Oto-Manuean (Mock 1979), Ikan, from the Chibchan family (Frank 1990), many modern languages from the Arawak family and quite possible Proto-Arawak (Alexandra Y. Aikhenvald, personal communication), many Central Malayo-Polynesian languages of eastern Indonesia (Charles E. Grimes, personal communication), and probably also the language isolate Ket from Siberia (Comrie 1982b). The most frequently quoted example of a split-S language is undoubtedly Dakota, another member of the Siouan family (Boas and Deloria 1939; Van Valin 1977; Legendre and Rood 1992; see also Sapir 1917; Fillmore 1968: 54). There are many other languages of this type among the (possibly related) Caddoan, Souan and Iroquoian families, e.g. Ioway-Oto (Whitman 1947) and Onondaga (Chafe 1970).

Mithun (1991a) provides a detailed and perceptive study of the semantic basis of the S_a/S_o distinction in Lakhota (a dialect of Dakota), Caddo (from the Caddoan family) and Mohawk (from the Iroquoian family) — prototypical S_a (like A) ‘perform, effect, instigate and control events’, while prototypical S_o (like O) are ‘affected; things happen or have happened to them’ (Mithun 1991a: 538). She also reconstructs the ways in which semantic parameters underlying the S_a/S_o distinction may have shifted over time.

The essential function of a language is to convey meaning; grammar exists to code meaning. The great majority of grammatical distinctions in any language have a semantic basis. But there are always a few exceptions. As a language develops many factors interrelate — phonological changes which can lead to grammatical neutralization; loans and other contact phenomena — and can lead to temporary loss of parallelism between grammar and meaning. Mithun (1991a: 514) mentions that the Guaraní verb *avuri* ‘to be bored’ is S_a when we would expect it to be S_o from its meaning. But this is a loan from the Spanish verb *aburrir* (*se*) and Guaraní has a convention of borrowing Spanish intransitive verbs as S_a items and Spanish adjectives as S_o verbs. Note that there is a native Guaraní verb *kaigwá* ‘to be or become bored’ which is in the S_o class.

There are split-S language where the two intransitive classes do not have as good a semantic fit as those in Mandan and Guaraní. Thus in Hidatsa, another Siouan language (Robinet 1955), the S_a class includes volitional items like ‘talk’, ‘follow’, ‘run’, ‘bathe’ and ‘sing’, but also ‘die’, ‘forget’ and ‘have hiccups’, which are surely not subject to control. And the S_o class includes ‘stand up’, ‘roll over’ and ‘dress up’, in addition to such clearly non-volitional verbs as ‘yawn’, ‘err’, ‘cry’, ‘fall down’ and ‘menstruate’.

One must of course allow for cultural differences. As mentioned in §3.3, in some societies vomiting plays a social role and is habitually induced, while in other societies it is generally involuntary; the verb ‘vomit’ is most likely to be S_a in the first instance and S_o in the second. In some societies and religions people believe that they can to an extent control whether and when they die, so the verb ‘die’ may well be S_a . But even when taking such factors into account, there is seldom (or never) a full grammatical-semantic isomorphism. The S_a/S_o division of intransitive verbs in a split-S language always has a firm semantic basis but there are generally some ‘exceptions’ (with the number and nature of the exceptions varying from language to language). As Harrison (1986: 419) says of Guajajara, a split-S language from the Tupi-Guaraní family, ‘semantically, a few verbs seem to be in the wrong set’.

The size of the S_a and S_o classes varies a good deal. Merlan (1985) quotes examples of languages with a small closed S_o class and a large open S_a class (e.g. Arikara from the Caddoan family) and with a small closed S_a class and a large open S_o class (e.g. Dakota). In other languages both classes are open (e.g. Guaraní).

In some split-S languages the distinction between S_a and S_o extends far beyond morphological marking. Rice (1991) shows how, in the Northern Athapaskan language Slave, causatives can be based on S_o (her ‘unaccusative’) but not on S_a (her ‘unergative’); passive on S_a but not on S_o ; noun incorporation can involve O and S_o , but not S_a ; and so on.

It might be thought that a split-S language could be described without recourse to an S category, that instead of what I posit as the universal set of syntactic primitives, S, A and O, we should use four primaries for a split-S language: S_a, S_o, A and O. Or perhaps just two, A and O, with the proviso that a transitive clause involves A and O and that there are two kinds of intransitive clause, one with just A and the other with just O.

Careful study of the grammars of split-S languages shows that they do work in terms of a unitary S category with this being subdivided, for certain grammatical purposes, into S_a and S_o. Many languages from the Tupí-Guaraní family have, in main clauses, prefix set 1 cross-referencing A or S_a, and prefix set 2 referring to O or S_o. But in subordinate clauses set 2 is used for O and for all S (i.e. both S_o and S_a). (Jensen 1990; see §4.5 below). Seki (1990) lists a number of other ways in which S_a and S_o are grouped together by the grammar of Kamaiurá, a Tupí-Guaraní language. Wichita, a Caddoan language, has a split-S system with one class of intransitive verbs (e.g. 'go') taking the same prefix as A in a transitive clause, and a second class (including verbs such as 'be cold' and 'be hungry') taking the same prefix as transitive O. Rood (1971) notes two grammatical processes that group together O and S (and take no account at all of the distinction between S_a and S_o): many O or S (but no A) NPs can optionally be incorporated into a verb word, and a single set of verbal affixes indicates plural O or S (another set is used for plural A). Finally, S and A behave the same way in constituent ordering: and O NP (if there is one) will generally precede the verb, and then the subject (A or S NP) can either precede or follow this complex.

Split-S marking relates to the nature of the verb. It is scarcely surprising that for most languages of this type morphological marking is achieved by cross-referencing on the verb (as it is for all languages mentioned above). There are, however, some split-S languages which have syntactic function shown by case markings on an NP, e.g. Laz from the South Caucasian family (Holisky 1991).

Yawa, a Papuan language from Irian Jaya, combines NP marking and cross-referencing. A pronominal-type postposition, inflecting for person and number, occurs at the end of an NP in A function, whereas S and O are marked by prefixes to the verb. This is a split-S language in that S_o intransitive verbs take the same prefix as marks O in a transitive verb, whereas S_a have a prefix that is plainly a reduced form of the postposition on NPs in A function. Singular forms are (dual and plural follow the same pattern):

	A postposition	S _a prefix	O/S _o prefix
1sg.	<i>syo</i>	<i>sy-</i>	<i>in-</i>
2sg.	<i>no</i>	<i>n-</i>	<i>n-</i>
3sg. masc.	<i>po</i>	<i>p-</i>	<i>Ø</i>
3sg. fem.	<i>mo</i>	<i>m-</i>	<i>r-</i>

It will be seen that although intransitive verbs divide into an S_o class (which is closed, with about a dozen members, e.g. 'to be sad', 'to remember', 'to yawn') and an S_a class (which is open and includes 'walk' and 'cry'), Yawa does work in terms of the S category — there is always a prefix indicating S (rather than S_a being marked by a postposition, as A is). (Data from Jones 1986.)

There are also examples of a split-S system where syntactic functions are marked by constituent order. Tolai, an Austronesian language spoken in New Britain, Papua New Guinea, has, in transitive clauses, the A NP before the verb and the O NP following it. Intransitive clauses have a single core NP — this must precede the verb for one set of verbs (e.g. ‘go’, ‘sit’, ‘say’, ‘eat’, ‘be sick’, ‘be cold’) and must follow the verb for another set (e.g. ‘flow’, ‘fall’, ‘burn’, ‘cry’, ‘grow’, ‘be big’, ‘be nice’). We thus have a contrast between S_a and S_o realized through constituent order. (Data from Mosel 1984.)

A very similar pattern is apparent in Waurá, an Arawak language spoken on the Upper Xingu River in Brazil. Here a transitive clause shows basic constituent order AVO; the verb has a pronominal prefix cross-referencing the A NP, as in (1). There are two classes of intransitive verbs. One (which includes ‘work’, ‘flee’, ‘walk’, ‘fly’) has an S_a NP that precedes the verb, and there is a verb prefix cross-referencing it, as in (2). The other (which includes ‘catch fire’, ‘die’, ‘be full’, ‘be born’ and ‘explode’) has an S_o NP that comes after the verb. This is illustrated in (3).

- (1) *yanumaka inuka* *p-itsupalu*
 jaguar 3sg + kill 2sgPOSS-daughter
 the jaguar killed your daughter
- (2) *wekíhi katumala-pai*
 owner 3sg + work-STATIVE
 the owner worked
- (3) *usitya* *ikítsii*
 catch fire thatch
 the thatch caught fire

Thus, S_a behaves exactly like A, and S_o like O. (A full discussion is in Richards 1977; see also Derbyshire 1986: 493—5.)

In conclusion, we can note that some scholars maintain there to be three basic types of system for marking syntactic function: accusative, ergative and split-S (often called ‘active’ or by a variety of other names — see, for example, Dahlstrom 1983; Klimov 1973). Mithun (1991a: 542), for example, insists that split-S systems are ‘not hybrids of accusative and ergative systems’. Despite such scholarly opinions, it is a clear fact that split-S systems do involve a mixture of ergative and accusative patterns — S_a is marked like A and differently from O (the criterion for accusativity) while S_o is marked like O and differently from A (the criterion for ergativity). I would fully agree with Mithun that split-S systems ‘constitute coherent, semantically motivated grammatical systems in themselves’. So do other kinds of split-ergative grammars, e.g. those to be described in §4.2 which involve a split determined by the semantic nature of NPs. The fact that a grammatical system is split does not imply any lack of coherency or stability or semantic basis. There are two simple patterns of syntactic identification, accusative and ergative, and many combinations of these, as exemplified throughout this chapter. The various ways of combining

ergative and accusative features can all yield systems that are grammatically coherent and semantically sophisticated.

The one difficulty we do have is what ‘case names’ to use for A and O in a split-S language. Since each of A and O is like S for some intransitive verbs and unlike S for others the names nominative/accusative and absolutive/ergative are equally applicable — to choose one of these sets over the other would be unmotivated. Using ergative for A and accusative for O is one possibility, although one might also want to take into consideration the relative markedness between A-marking and O-marking in each particular language. One solution is not to employ any of ergative, absolutive, accusative or nominative for a split-S language but just stick to the terms A-marking and O-marking.

According to Klimov, the typical features of active-type languages are as follows:

Lexical properties:

1. Binary division of nouns into active vs. inactive (often termed *animate* and *inanimate* or the like in the literature).
2. Binary division of verbs into active and inactive.
3. Classificatory verbs or the like (classification based on shape, animacy, etc.).
4. Active verbs require active nouns as subject.
5. Singular-plural lexical suppletion in verbs.
6. The category of number absent or weakly developed.
7. No copula.
8. “Adjectives” are actually intransitive verbs.
9. Inclusive/exclusive pronoun distinction in first person.
10. No infinitive, no verbal nouns.
11. Etymological identity of many body-part and plant-part terms (e.g., “ear” = “leaf”).
12. Doublet verbs, suppletive for animacy of actant.

Syntactic properties:

13. The clause is structurally dominated by the verb.
14. “Affective” (inverse) sentence construction with verbs of perception, etc.
15. Syntactic categories of nearer or farther object rather than direct or indirect object.
16. No *verba habendi*.
17. Word order usually SOV.
18. Direct object incorporation into verb.

Morphological properties:

19. The verb is much more richly inflected than the noun.
20. Two series of personal affixes on the verb: active and inactive.
21. Verbs have aspect or Aktionsarten rather than tense.

22. The noun has possessive affixes.
23. Alienable-inalienable possession distinction.
24. Inalienable possessive affixes and inactive verbal affixes are similar or identical.
25. Third person often has zero affix.
26. No voice opposition (since there is no transitivity opposition). Instead, there can be an opposition of what is called *version* in Kartvelian studies (roughly active vs. middle in the terminology of Benveniste 1966, or an opposition of normal valence vs. valence augmented by a second or indirect object, or an opposition of speech-act participant vs. non-participant in indirect-object marking on the verb).
27. Active verbs have more morphological variation or make more morphological distinctions than inactive verbs.
28. The morphological category of number is absent or weakly developed.
29. There are no noun cases for core grammatical relations (no nominative, accusative, genitive, dative). Sometimes there is an active/inactive case opposition.
30. Postpositions are often lacking or underdeveloped in these languages. Some of them have adpositions inflected like nouns.

Lehmann's (2002:59—60) description of the salient morphological characteristics of active languages is as follows:

The inflections of active/animate nouns and verbs differ characteristically from those of the stative/inanimate counterparts in active languages. Active nouns have more inflected forms than do statives. Moreover, there are fewer inflected forms in the plural than in the singular...

Similarly, stative verbs have fewer inflections than do the active...

As another characteristic verbal inflections express aspect, not tense, in active languages...

Stative verbs are often comparable in meaning to adjectives...

Active languages are also characteristic in distinguishing between inalienable and alienable reference in personal pronouns...

Moreover, possessive and reflexive pronouns are often absent in active languages...

A little earlier, Lehmann (2002:4—5) discusses the importance of the lexicon:

As a fundamental characteristic of active languages, the lexicon must be regarded as primary. It consists of three classes: nouns, verbs and particles. Nouns and verbs are either animate/active or inanimate/stative. Sentences are constructed on the basis of agreement between the agent/subject and the verb; they are primarily made up of either active nouns paired with active verbs or of stative nouns paired with stative verbs. Particles may be included in sentences to indicate relationships among nouns and verbs. In keeping with active structure, the lexical items are autonomous. Although Meillet did not refer to active languages, he recognized such autonomy in the proto-language, adding

that “the word ... suffices of itself to indicate its sense and its role in discourse” (1937:356).

In accordance with this structure, two nouns and two verbs may be present in the lexicon for objects and actions that may be regarded on the one hand as being active or on the other hand as representing a state. Among such phenomena is fire, which may be flaring and accordingly viewed as active or animate, as expressed by Sanskrit *Agnis* and Latin *ignis*, which are masculine in gender, or as simply glowing and inactive, as expressed by Hittite *pahhur*, Greek *pûr* [πῦρ], which are neuter in gender. Similarly, the action lying may be regarded as active, i.e. ‘to lie down’, as expressed by Greek *légō* [λέγω] ‘lay, lull to sleep’ (cf. Pokorny 1959:658—59) or as stative, as expressed by Greek *keîtai* [κεῖται], Sanskrit *śéte* ‘is lying’ (cf. Pokorny 1959:539—40). Through their inflection and some of their uses, such lexical items may be recognized in the texts; but by the time of the dialects the earlier distinctions may have been lost. As Pokorny says of reflexes of **legh-*, it was punctual originally but its reflexes subsequently became durative. Other verbs as well as nouns were modified so that specific active or stative meanings of their reflexes were no longer central in the dialects.

As a further characteristic, there is relatively little inflection, especially for the stative words. Inactive or stative verbs were inflected only for the singular and third plural. This restriction is of especial interest because it permits us to account for one of the features of the Indo-European perfect. As will be discussed further below, the perfect has been recognized as a reflex of the Pre-Indo-European stative conjugation. In this way, its stative meaning as well as the inclusion of characteristic forms only for the singular and the third plural find their explanation.

Additional information is given by Lehmann in §2.7 of his book (2002:29—32):

As noted above, the lexicon consists of three parts of speech: nouns, verbs, particles. There are two classes of nouns: active or animate and stative or inanimate. Active nouns may have referents in the animal and plant world; for example, a word may mean ‘leaf’ as well as ‘ear’, cf. Sanskrit *jambha-* ‘tooth’ versus Greek *gómphos* [γόμφος] ‘bolt, pin’. Adjectives are rare, if attested; many of those in Government languages correspond to stative verbs in active languages. Verbs, like nouns, belong to one of two classes: they are either active/animate or stative/inanimate. Members of the active verb class are often associated with voluntary action.

Active languages have no passive voice. Verbs may have, however, a semantic feature known as version. That is, action may be directed centripetally towards a person, or centrifugally away from the person. As an example, the root **nem-* has reflexes in some dialects with the meaning ‘take’ as in German *nehmen*, but in others with the meaning ‘give, distribute’ as in Greek *némō* [νέμω]. Like the two words for some nouns that were given above, only one of the meanings is generally maintained in a given dialect. Version is subsequently replaced by voice, in which the centripetal meaning is expressed by the middle, as in Greek *daneízesthai* [δανείζεσθαι] ‘borrow’ as opposed to *daneízein* [δανείζειν] ‘lend’. Gamkrelidze and Ivanov relate with version the

presence of alienable possessive pronouns having centrifugal value in contrast with inalienable pronouns having centripetal value (1995:291).

Active languages include a third set of verbs that have been labeled involuntary; their ending is that of the third person singular, and they have no overt subject (Lehmann 1991). Some of these refer to the weather, such as Latin *pluit* 'it is raining', others to psychological states, such as Latin *paenitet* (*me*) 'I am sorry'. As the dialects become accusative, these require subjects, as in their English counterparts.

Lacking transitivity, active languages have no verb for 'have'. Instead, the relationship between a possessor and the possessed is expressed by use of a case corresponding to the dative or locative accompanied by the substantive verb, as in the Latin construction illustrated by *mihi est liber* '[to me is the book] I have a book'. Reflexes of this situation are apparent in many of the early Indo-European languages. As they adopt accusative characteristics, however, the languages tend to lose impersonal constructions; to replace them they adapt finite verbs, such as Greek *ékhein* [ἔχειν], Latin *habēre* and English *have* (cf. Lehmann 1993:221–23; Justus 1999; Bauer 2000:186–88).

Syntactically, active languages are generally OV. They construct sentences by usually pairing active nouns with active verbs, and conversely stative nouns with stative verbs. Not related to the verb through transitivity, these elements may be referred to as complements (Comp). The nominal element closest to the verb corresponds to a direct object in Government languages through its complementation of the meaning expressed by the verb, while the more remote nominal element corresponds to an adverbial nominal expression. Active verbs may be associated with two complements, in the order: Subject — Comp-2 — Comp-1 — Verb. Stative verbs do not take Comp-1.

Morphologically, there is little inflection of nouns and verbs, especially of the stative classes. The plural has fewer forms than does the singular. The stative class of nouns may be subdivided into groups according to the shape of their referent; for example, the active class may be divided into groups by persons as opposed to animals. Verbs have richer inflection than do nouns, although that for stative verbs is not as great as that for active verbs. The inflectional system of verbs expresses aspect, rather than tense.

There is no passive. Instead, active verbs may express centrifugal as well as centripetal meaning, such as produce versus grow in accordance with version. We have illustrated its effect by citing the two meanings of reflexes of **nem-*.

In somewhat the same way, possession may be expressed differently for alienable and inalienable items, like *his shirt* (centrifugal) vs. *his hand* (centripetal). In keeping with such reference, pronouns may differ for exclusive and inclusive groupings, as illustrated by the old story about the missionary who used the exclusive pronoun in saying: "We are all sinners," to the satisfaction of his native audience. These oppositions in active verbs and nominal relationships are in accord with the opposition between active (alienable, exclusive) and stative (inalienable, inclusive) reference.

Finally, particles play a major role in indicating sentential and inter-sentential relationships.

Much as the basic force of stativity in active languages may be associated with the expression of inalienability and exclusivity, transitivity as a major

force in Government languages affects not only the relationship between verbs and nouns but also that between adpositions and nouns. A major shift between Pre-Indo-European and Proto-Indo-European involved the introduction of transitivity with gradual replacement of stativity. The shift in the verb system was recognized by Szemerényi at the conclusion of his ‘Introduction,’ but he did not associate the earlier system with active language structure (1996:326—38). The recognition of active language structure will help us in accounting for more residues than he did, also in the nominal and particle system.

Finally, Lehmann (2002:52—53) makes an important distinction between “agreement languages” and “government languages”. He notes:

[In agreement languages, s]entences are bound by agreement rather than government. Agreement between agent and verb is carried out by usually pairing an active noun with an active verb, and similarly by pairing stative nouns and verbs.

As we have stated above (Chapter 2.7), these fundamental differences distinguish two basic language types: Agreement and Government. Each has two sub-types: in Agreement languages these are class and active/stative, generally referred to as active; in Government languages these are ergative and nominative/accusative, referred to by either label, of which I use accusative.

For more information on split-S languages, see Donohue—Wichmann (eds.) 2008.

20.4. EVIDENCE INDICATIVE OF EARLIER ACTIVE STRUCTURE

By use of the Comparative Method, the regular morphological patterning of the Indo-European parent language can be reconstructed. Ever so often, items and patterns are identified that do not fit the regular morphological patterning. These items and patterns may be archaisms left over from earlier stages of development, in which case, they are called “residues” (also known as “irregular forms”, “anomalous forms”, “exceptions”, “survivals”, or “relic forms”). The identification and analysis of these residues can provide important clues about these earlier stages. Lehmann (2002:47—63) begins his investigation by looking for such residues.

Lehmann (2002:51) notes that one of the first to suggest that Proto-Indo-European may have belonged to a different type during an earlier stage of development was Christianus Cornelius Uhlenbeck, though Oleksandr Popov, in a series of articles published between 1879 and 1881, was probably the first (cf. Danylenko 2016). In a short article published in 1901, Uhlenbeck proposed that the distinction between the (masculine) nominative and the (masculine) accusative cases may originally have been between agent and patient. Though not properly a residue, this interpretation would fit well with an active-type structure.

Lehmann (2002:53—61) examines, in turn: (A) the Proto-Indo-European lexicon for patterning indicative of earlier active structure; (B) reflexes in nouns, verbs, and particles that point to earlier active structure; (C) syntactic patterns in the

early dialects that may be interpreted as reflecting an earlier active structure; and (D) morphological patterns indicative of an earlier active structure.

- A. LEXICON: In active languages, nouns and verbs fall into two large groups: active/animate and stative/inanimate. Lehmann emphasizes that the classification by speakers of nouns into one of these groups may not coincide with what may seem “logical”. For instance, trees and plants, moving natural items (such as the sun, moon, smoke, etc.), animals, and exterior body parts (such as legs and hands) are typically classified as active/animate in the Indo-European daughter languages, while internal body parts (such as heart and liver), stationary natural items (such as mountain peaks and cliffs), and grains and fruits are typically classified as inanimate. Lehmann (2002:66–74) cites, among others, Latin (f.) *manus* ‘hand’ and (m.) *pēs* ‘foot’ as examples of external body parts, Latin (n.) *cor* ‘heart’ and (n.) *iecur* ‘liver’ as examples of internal body parts, Latin (f.) *mālus* ‘apple tree’, (f.) *ornus* ‘ash’, (m.) *quercus* ‘oak’, and (m.) *flōs* ‘flower’ as examples of trees and plants, Latin (n.) *mālum* ‘apple’, (n.) *hordeum* ‘barley’, (n.) *fār* ‘spelt’, and (n.) *mīlium* ‘millet’ as examples of fruits and grains, Latin (m.) *sōl* ‘sun’ and (m.) *fūmus* ‘smoke’ as examples of moving natural items, Latin (f.) *avis* ‘bird’ as an example of animal, and Hittite (n.) *hé-kur* ‘mountain peak’ and (n.) *te-kán* ‘earth’ (cf. J. Friedrich 1991:68 and 220) as examples of stationary natural items. All of these and other such examples may be counted as residues of an earlier active structure.

Lehmann also cites examples of doublets from the individual daughter languages for common words like ‘fire’ (= ‘flaming, burning’) (as in Latin *ignis* ‘fire, flame’) vs. ‘fire’ (= ‘glowing’) (as in Hittite *pa-aḫ-hur* ‘fire’ and Greek *πῦρ* ‘fire’), ‘thunderbolt’ (as in Sanskrit *vájra-h* ‘thunderbolt [= Indra’s weapon]’ and Avestan *vazra-* ‘club, mace’) vs. ‘lightning’ (as in Gothic *lauhmuni* ‘lightning’ and New High German *Blitz* ‘lightning’), ‘to sustain, to nourish’ (as in Latin *alō* ‘to nourish, to support’ and Old Irish *alim* ‘to nourish’) vs. ‘to grow’ (as in Gothic *alan* ‘to grow’). The first forms are active/animate, while the second forms are inactive/inanimate. These doublets can be seen as residues of an earlier active structure. Such doublets are also noted by Gamkrelidze—Ivanov (1995.I:238–239).

- B. NOUNS, VERBS, AND PARTICLES: Lehmann points out that the gender of nouns in the individual Indo-European daughter languages indicate whether particular objects (persons or things) were viewed by speakers as active/animate or inactive/inanimate. For instance, in Latin, tree names are masculine or feminine (= active/animate), while names for grains or fruits are neuter (= inactive/inanimate) (see above for examples). Lehmann concludes that active/animate nouns became masculine or feminine, whereas inactive/inanimate nouns became neuter when the earlier classification was replaced by the threefold gender classification (masculine ~ feminine ~ neuter) found in Late Proto-Indo-European and the early dialects. As noted in the previous chapter, Hittite

represents a stage of development in which the feminine gender had not yet appeared (cf. Luraghi 1997:7; Lehmann 1993:150). Hittite nouns inherently fall into one of two gender classes, usually referred to as “common” and “neuter”. Common gender corresponds to masculine and feminine in the non-Anatolian Indo-European daughter languages. Though common nouns can be both inanimate and animate, neuter nouns are almost always inanimate. Luraghi (1997:7) prefers to call them “inactive”, inasmuch as neuter nouns cannot be utilized as the subject of action verbs. Thus, Hittite provides direct evidence for an earlier, two gender system (cf. Lehmann 2002:66) comparable to what is found in active languages. Residues of this earlier system are also preserved here and there in other daughter languages (Lehmann cites kinship terms as examples).

In like manner, verbs associated with actions (Lehmann cites Latin *ferō* ‘to bear, to bring, to carry’ and *fodiō* ‘to dig, to excavate’ as examples) show active inflection in the individual daughter languages, while verbs associated with states (such as Latin *sequor* ‘to follow’) show middle/passive inflection, the former of which reflect an earlier active pattern, and the latter, an earlier stative pattern. Moreover, verbs referring to natural events (such as Latin *tonat* ‘[it is] thundering’, *fulget* ‘[it is] lightning’, *pluit* ‘[it is] raining’, *ningit* ‘[it is] snowing’) or psychological states (such as Latin *me piget* ‘it disgusts me’, *me pudet* ‘I am ashamed’, *eos paenitebat* ‘they were sorry’, *me miseret* ‘I pity’, *eum taedet* ‘he is disgusted’) are typically rendered in the third person singular in the daughter languages. In the Indo-European parent language, active and stative conjugations were distinguished by a special set of endings (these are discussed in detail in the preceding chapter). The stative developed into the perfect in the non-Anatolian Indo-European daughter languages (cf. Lehmann 2002:78—80); it also served as the basis for the middle (cf. Lehmann 2002:80—81). This patterning is in full agreement with what occurs in active languages.

Lehmann (2002:83) points out that the verb ‘to have’ was lacking in Proto-Indo-European. Possession was expressed by constructions such as Latin *mihi est* ‘it is to me’ [= ‘it is mine, I own it’]. Each of the daughter languages has introduced various means to indicate possession. Active languages lack the verb ‘to have’ (cf. Klimov 1977).

Finally, Lehmann discusses the use of particles in the daughter languages. Particles include what are commonly designated adverbs, adpositions (prepositions and postpositions), conjunctions, etc. (cf. Lehmann 2002:86). In particular, he discusses how the Proto-Indo-European particle **b^{hi}* served as the basis for the instrumental/dative/ablative dual and plural case endings in Sanskrit. In a lengthy section, Lehmann (2002:87—99) lists and analyzes the particles traditionally reconstructed for Proto-Indo-European. Importantly, he notes that the demonstrative pronouns of traditional comparative grammar can be traced back to earlier anaphoric and deictic particles. Lehmann convincingly demonstrates that the class of particles is comparable to those found in active languages.

- C. SYNTACTIC PATTERNS: Lehmann begins by describing the syntactic patterns typically found in active languages. He notes that active verbs are associated with active/animate nouns as agents and also with “complements”. Word order is typically (S)OV. The complement closest to an active verb may be compared to objects in accusative languages — it indicates the recipient, goal, or beneficiary of the action (that is, the “patient”). If another complement is included in the sentence, it has adverbial value. Thus, the patterning for sentences with active verbs is: Subject + Adverbial Expression + Object + Verb. Inasmuch as stative verbs generally have a stative noun as patient, the patterning for sentences with stative verbs is: Subject (= Patient) + Adverbial Expression + Verb. Lehmann then goes on to cite examples from Hittite and Homeric Greek that appear to maintain the earlier word order patterning.

Later, in Chapter 5, Lehmann devotes considerable attention to the important role that participles play in the early Indo-European daughter languages and compares their use with similar constructions in several non-Indo-European languages to support his contention that basic Proto-Indo-European word order was OV. He concludes (2002:112):

As illustrated above, in the early dialects non-finite forms supplement the principal clause in numerous ways, comparable to dependent clauses though with relationships that are less specifically indicated. Klimov described the use of non-finite constructions in the East Caucasian languages similarly. According to him “the use of participial and gerundial verb forms that take the place of predicates of subordinate clauses corresponds to the use of subordinate clauses in Indo-European languages. Relative pronouns and conjunctions are only rarely used in the East Caucasian languages; there are also indications that some conjunctions in these languages developed only later from various verbal and nominal forms” (1969:53). The East Caucasian languages then provide comparable syntactic evidence on the uses of non-finite forms in OV languages as do Japanese and Turkish among other verb-final languages. In this way they support reconstruction of the sentence structure proposed above for Pre-Indo-European, with its general use of participial and other non-finite elements instead of subordinate clauses.

Lehmann (2002:114—124) examines the evidence for subordinate clauses in Proto-Indo-European in great detail. He reaches the conclusion that subordinate clauses, whether relative or adverbial, probably did not exist either in early Proto-Indo-European or in Pre-Indo-European but, rather, were introduced later, especially in the early dialects themselves.

Lehmann (2002:132—133) sums up his views on early Proto-Indo-European and Pre-Indo-European syntax as follows:

The earliest Greek texts, as by Homer, are similarly simple in syntax, as are those in the other early dialects. We may posit such syntax for Pre-Indo-European as well as for Proto-Indo-European. Many sentences consist of simple clauses. Particles may suggest a relationship between

them, but only in the later dialects do these and other forms function as conjunctions that indicate subordinate clauses. Such clauses came to be further distinguished from principal clauses by verb forms such as the subjunctive and optative. Complex sentences were supported by the introduction of writing as demonstrated in Greek, Latin and other dialects with continuous textual tradition. The earliest texts before writing was introduced in any given dialect were basically paratactic, as were those of Proto-Indo-European and Pre-Indo-European.

- D. MORPHOLOGICAL PATTERNS: In active languages, stative nouns and verbs typically have fewer inflectional forms than active nouns and verbs. In the preceding chapter, we saw that this was also the case in Proto-Indo-European, especially in the earlier, Pre-Anatolian period of development (“Early Proto-Indo-European”), where, for example, the stative conjugation lacked forms for the first and second persons plural. Forms for these persons were added later — they were borrowed from the active conjugation in order to fill out the paradigm. Lehmann mentions this example as well and also mentions that the lack of differentiation between nominative and accusative in neuter nouns is a reflex of the earlier patterning. He then notes that verbs are marked for aspect rather than tense in active languages and that the present is used to indicate activity, while the so-called “perfect” is used to indicate state in the early dialects. The situation in the early dialects is actually more complicated here than what Lehmann makes it out to be, but, as a generalization, his point still stands. Lehmann continues by discussing the position of adjectives. He claims that adjectives did not exist as a separate class in the period he calls “Pre-Indo-European” but were later developments. To support his claim, he takes note of the fact that a recent study of Germanic adjectives found few cognates in other Indo-European daughter languages, and he mentions that no common Proto-Indo-European forms can be securely reconstructed for comparative and superlative on the basis of what is found in even the earliest attested dialects, though there is evidence that a restricted set of formations were beginning to be reserved for these functions in at least some of the dialects. Finally, Lehmann tries to find evidence for inalienable and alienable reference in personal pronouns, and he asserts that the great variety of forms for possessive and reflexive pronouns found in the individual daughter languages points to them being later formations, which did not exist in Proto-Indo-European. Lehmann observes that possessive and reflexive pronouns are often absent in active languages, thus providing another piece of evidence in corroboration of his views.

In his investigation, Lehmann convincingly shows that there is abundant evidence from the lexicon, from nouns, verbs, and particles, from syntactic patterns, and from morphological patterns pointing to an earlier stage of development in which the Indo-European parent language exhibited many of the characteristics typical of active languages. Lehmann then devotes separate chapters to elaborating on each of these points: Chapter 4: Lexical Structure (pp. 64—99), Chapter 5: Syntax (pp.

100—133), Chapter 6: Derivational Morphology (pp. 134—166), and Chapter 7: Inflectional Morphology (pp. 167—193). Material from these chapters has been incorporated into the above discussion. In what follows, we will focus on the formation of nouns, the declension of nouns, pronouns, and verb morphology.

20.5. ROOT STRUCTURE PATTERNING

We have dealt with root structure patterning in detail in the preceding chapter. Here we will only be concerned with summarizing the most ancient patterning.

The phonemicization of a strong stress accent during the Phonemic Stress Stage of Proto-Indo-European disrupted the inherited root structure patterning. The positioning of the stress was morphologically distinctive, serving as a means to differentiate grammatical relationships. All vowels were retained when stressed but were either weakened (= “reduced-grade”) or totally eliminated altogether (= “zero-grade”) when unstressed: the choice between the reduced-grade versus the zero-grade depended upon the position of the unstressed syllable relative to the stressed syllable as well as upon the laws of syllabicity in effect at that time. During the Phonemic Stress Stage of development, the basic rule was that only one full-grade vowel could occur in any polymorphemic form. Finally, it was at the end of this stage of development that the syllabic allophones of the resonants came into being.

Roots were monosyllabic and consisted of the root vowel between two consonants (cf. Benveniste 1935:170; Lehmann 2002:141): **CVC-*. Unextended roots could be used as stems (also called “bases” or “themes”) by themselves (when used as nominal stems, they are known as “root nouns”), that is to say that they could function as words in the full sense of the term (cf. Burrow 1973:118; Lehmann 2002:142), or they could be further extended by means of suffixes.

The stress-conditioned ablaut alternations gave rise to two distinct forms of extended stems:

Type 1: Root in full-grade and accented, suffix in zero-grade: **C[́]VC-C-*.

Type 2: Root in zero-grade, suffix in full-grade and accented: **CC-[́]VC-*.

When used as a verb stem, Type 1 could undergo no further extension. However, Type 2 could be further extended by another suffix on the pattern **CC-[́]VC-C-*, or **-n-* could be infixes after the root and before the suffix on the pattern **CC-n-[́]VC-* (cf. Lehmann 1952:17—18 and 2002:142). Examples of these alternating patterns are given in the preceding chapter and need not be repeated here. Further addition of a determinative or suffixes pointed to a nominal stem (cf. Benveniste 1935:171; Lehmann 1952:17). In keeping with the rule that only one full-grade vowel could occur in any polymorphemic form, when a full-grade suffix was added to any stem, whether unextended or extended, the preceding full-grade vowel was replaced by either reduced-grade or zero-grade. We should note that this rule was no longer in effect in the Phonemic Pitch Stage of Proto-Indo-European. During the Phonemic Pitch Stage, many of these reduced-grade or zero-grade vowels were analogically

replaced by full-grade vowels. Fortunately, enough traces of the earlier system remain in the early dialects, especially Sanskrit, that it is possible to reconstruct the original patterning.

20.6. THE FORMATION OF NOUNS

Disintegrating Indo-European distinguished a great many derivational suffixes, and these are described in detail in the traditional comparative grammars of Brugmann—Delbrück, Hirt, and Meillet, among others. By far, the most common types were those ending in the thematic vowel **-e/o-*, which could be added either directly to the undifferentiated root or to the root extended by one or more suffixes. The majority of these suffixes were not ancient, and it is possible to trace how the system was built up over time. It is clear, for example, that the thematic suffixes proliferated during the Disintegrating Indo-European period at the expense of other types (cf. Burrow 1973:122; Lehmann 2002:143) — accordingly, thematic stems were relatively less common in Hittite than in later stage daughter languages such as Sanskrit, Greek, and Latin (cf. Sturtevant 1951:79, §114; Burrow 1973:120).

In the chapter on Proto-Nostratic morphology, we discussed the root structure patterning of the Nostratic parent language. Roots had the shape **CVC-*. We saw that a stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: **CVC+C-*. Any consonant could serve as a suffix. This was the patterning inherited by Pre-Proto-Indo-European, which means that the earliest suffixes predate the appearance of Proto-Indo-European proper as a distinct language. This is an important point.

It is not possible to discern any distinction in meaning or function in the suffixes that were inherited by Proto-Indo-European from Proto-Nostratic. However, the newer suffixes that arose within Proto-Indo-European proper were most likely assigned specific meanings or functions. During the course of its development, Proto-Indo-European continued to create new lexical items, with the result that the original meaning or function of suffixes that had been created in Proto-Indo-European at earlier stages were mostly obscured by later developments. By the time the Disintegrating Indo-European period had been reached, the number of productive suffixes in use had grown considerably.

During both the Phonemic Stress Stage and the Phonemic Pitch Stage of Proto-Indo-European, accentuation played a prominent role in nominal derivation, as noted by Burrow (1973:119—120):

The most important distinction in nominal derivation in early Indo-European was not between the different suffixes simple or compound, but in a difference of accentuation according to which a word formed with the same suffix functioned either as an action noun or agent noun/adjective. Accented on the root it was an action noun and neuter, accented on the suffix it was an agent noun or adjective and originally of the co-called ‘common gender’. The system is preserved to some extent in Sanskrit and is exemplified by such doublets as *bráhma* n. ‘prayer’ : *brahmā* m. ‘priest’, *yásas* n. ‘glory’ : *yaśás-* m. ‘glorious’.

The Sanskrit examples are not very numerous, and are only found in the case of a small number of suffixes; they are in fact the last remnants of a system dying out. In earlier Indo-European on the other hand the system was of very great extension and importance, and it is fundamental to the understanding not only of the formation of nouns but also of their declension.

According to Burrow, the rules governing the position of the accent may be stated as follows:

1. Neuter action nouns were accented on the stem in the so-called “strong” cases but on the ending in the so-called “weak” cases (cf. Burrow 1973:220—226).
2. Common gender agent noun/adjectives were accented on the suffix throughout the paradigm (cf. Burrow 1973:119).
3. Athematic verbs were accented on the stem in the singular but on the ending in the plural (and, later, in the dual as well) in the indicative but on the ending throughout the middle (cf. Burrow 1973:303).

This fairly simple system was replaced by a more elaborate one during the Disintegrating Proto-Indo-European period. For Disintegrating Proto-Indo-European, Fortson (2004:107—110 and 2010:119—122) recognizes four distinct types of athematic stems, determined by the position of the accent as well as the position of the full-grade (or lengthened-grade) vowel (Fortson notes that additional types developed in individual daughter languages) (see also Watkins 1998:61—62; Beekes 1985:1 and 1995:174—176):

1. Acrostatic: fixed accent on the stem throughout the paradigm, but with ablaut changes between the strong and weak cases.
2. Proterokinetic (or proterodynamic): the stem is accented and in full-grade vowel in the strong cases, but both accent and full-grade vowel are shifted to the suffix in the weak cases.
3. Amphikinetic (or holokinetic or amphidynamic): the stem is accented in the strong cases, while the case ending is accented in the weak cases. Typically, the suffix is characterized by a lengthened *o*-grade vowel in the nominative singular and a short *o*-grade vowel in the accusative singular.
4. Hysterokinetic (or hysterdynamic): the suffix is accented in the strong cases, and the case ending in the weak cases.

Szemerényi (1996:162) adds a fifth type:

5. Mesostatic: the accent is on the suffix throughout the paradigm.

The thematic formations require special comment. It seems that thematic agent noun/adjectives were originally accented on the ending in the strong cases and on the stem in the weak cases. This pattern is the exact opposite of what is found in the neuter action nouns. The original form of the nominative singular consisted of the

accented thematic vowel alone, **-é/ó*. It is this ending that is still found in the vocative singular in the daughter languages and in relic forms such as the word for the number ‘five’, **p^henk^{wh}e* (**penq^ue* in Brugmann’s transcription [cf. Sanskrit *pāñca*, Greek πέντε]), perhaps for earlier **p^hηk^{wh}é*. The nominative singular in **-os* is a later formation and has the same origin as the genitive singular (cf. Szemerényi 1972a:156).

Benveniste (1935:174—187) devotes considerable attention to describing the origin of the most ancient nominal formations. He begins by identifying the basic principles of nominal derivation, thus: An adjective such as Sanskrit *pṛthú-* ‘broad, wide, large, great, numerous’ is based upon a root **p^hel-* ‘to stretch, to extend’, suffixed by the laryngeal **H* (Benveniste writes **-ə-*) found in Hittite *pal-ḫi-iš* ‘broad’. Adding the suffix **-t^h-* to the root yields two alternating stem types: type 1: **p^hél-t^h-*, type 2: **p^hl-ét^h-* (Benveniste writes **pél-t-* and **pl-ét-* respectively). Next, the laryngeal determinative **-H₂-* (Benveniste writes **-ə₂-*) is added to type 2, followed by **-ú-* (Benveniste writes *-éu-*). The addition of the accented **-ú-* results in the loss of the stem vowel: **p^hlthH₂ú-* (Benveniste writes **p^hlthə₂éu-*) (> Sanskrit *pṛthú-ḥ* ‘broad, wide, large, great, numerous’, Greek πλατύς ‘wide, broad’). Benveniste then goes on to illustrate these principles with further examples.

Next, according to Benveniste, two fundamental types of nominal formations can be established on the basis of the two alternating stem types mentioned above. The first is built upon type 1. These are often characterized by a long vowel, though normal-grade is also found (where they are different, the transcriptions used in this book are given first, followed by those used by Benveniste in parentheses):

TYPE 1 (**CVC-C-*):

<i>*t’er-w-</i> (<i>*der-w-</i>) > <i>*t’ōrw-</i> (<i>*dōrw-</i>)	(cf. Greek δόρυ ‘tree; [wooden] plank or beam’; Hittite <i>*ta-ru</i> ‘wood’; Sanskrit <i>dāru-</i> ‘piece of wood, wood, wooden implement’)
<i>*k’en-w-</i> (<i>*gen-w-</i>) > <i>*k’ēnw-</i> (<i>*gēnw-</i>)	(cf. Greek γόνυ ‘knee’ [<i>o</i> -grade]; Hittite <i>gi-e-nu</i> ‘knee’; Sanskrit <i>jānu-</i> ‘knee’)
<i>*Héy-w-</i> (<i>*ə₂éi-w-</i>) > <i>*Hēyw-</i> (<i>*ə₂ēi-w-</i>)	(cf. Sanskrit <i>āyu-</i> ‘vital power, life force’)
<i>*sén-w-</i> > <i>*sēnw-</i> (<i>*sōnw-</i>)	(cf. Sanskrit <i>sānu</i> ‘summit, top’)
<i>*p^hél-w-</i> (<i>*pél-w-</i>) > <i>*p^helw-</i> (<i>*pelw-</i>)	(cf. Gothic <i>filu</i> ‘much’; Greek <i>*πόλυ</i> ‘much, many’ [<i>o</i> -grade])
<i>*t^hér-w-</i> (<i>*tér-w-</i>) > <i>*therw-</i> (<i>*terw-</i>)	(cf. Greek [Hesychius] τέρυ)
<i>*p^hék^h-w-</i> (<i>*pék-w-</i>) > <i>*p^hek^hw-</i> (<i>*pek^hw-</i>)	(cf. Sanskrit <i>pásu</i> ‘domestic animal’; Latin <i>pecu</i> ‘sheep, flock’)

Note: The apophonic **ō* reconstructed above developed from earlier apophonic **ā*. Thus, **t’ōrw-* (**dōrw-*) < **t’ārw-*, **sōnw-* < **sānw-*, etc.

TYPE 2 (*CC-*V*C-):

* <i>t</i> ' <i>r</i> - <i>éw</i> - (* <i>dr</i> - <i>éu</i> -)	>	* <i>t</i> ' <i>r</i> - <i>w-és</i> (* <i>dr</i> - <i>w-és</i>)	(cf. Greek [gen.] ὄρνυός)
		* <i>t</i> ' <i>r</i> - <i>w-én</i> - (* <i>dr</i> - <i>w-én</i>)	(cf. Avestan <i>drvan</i> -)
* <i>k^hr</i> - <i>éw</i> - (* <i>kr</i> - <i>éu</i> -)	>	* <i>k^hr</i> - <i>w-ér</i> - (* <i>kr</i> - <i>w-ér</i> -)	(cf. Greek κρυερός 'icy, chilling')
		* <i>k^hr</i> - <i>w-én</i> - (* <i>kr</i> - <i>w-én</i> -)	(cf. Latin <i>cruen-tus</i> 'bloody')
		* <i>k^hr</i> - <i>w-és</i> (* <i>kr</i> - <i>w-és</i>)	(cf. Greek *κρύός 'icy cold, frost')
* <i>k</i> ' <i>r</i> - <i>éw</i> - (* <i>gr</i> - <i>éu</i> -)	>	* <i>k</i> ' <i>r</i> - <i>w-és</i> (* <i>gr</i> - <i>w-és</i>)	(cf. Avestan [gen. sg.] <i>zrū</i> = <i>zrvō</i>)
		* <i>k</i> ' <i>r</i> - <i>w-én</i> - (* <i>gr</i> - <i>w-én</i> -)	(cf. Avestan <i>zrvan</i> - 'time')
* <i>b^hr</i> - <i>éw</i> - (* <i>bhr</i> - <i>éu</i> -)	>	* <i>b^hr</i> - <i>w-én</i> - (* <i>bhr</i> - <i>w-én</i> -)	(cf. Sanskrit <i>bhurván</i> - 'restless motion [of water]')
* <i>p^hkh</i> - <i>ét^h</i> - (* <i>pk</i> - <i>ét</i> -)	>	* <i>p^hkh</i> - <i>t^h-én</i> - (* <i>pk</i> - <i>t-én</i> -)	(cf. Greek κτείς 'a comb')
* <i>k^hr</i> - <i>ét</i> '- (* <i>kr</i> - <i>éd</i> -)	>	* <i>k^hr</i> - <i>t'-éy</i> - (* <i>kr</i> - <i>d-éi</i> -)	(cf. Lithuanian <i>širdis</i> 'heart' [- <i>ir</i> - < * <i>-r</i> -])
* <i>Hw</i> - <i>ét</i> '- (* <i>əw</i> - <i>éd</i> -)	>	* <i>Hu</i> - <i>t'-én</i> - (* <i>əu</i> - <i>d-én</i> -)	(cf. Sanskrit <i>udán</i> - 'water')
		* <i>Hu</i> - <i>t'-ér</i> - (* <i>əu</i> - <i>d-ér</i> -)	(cf. Greek ὕδωρ 'water')
* <i>k^hr</i> - <i>ét^h</i> - (* <i>kr</i> - <i>ét</i> -)	>	* <i>k^hr</i> - <i>t^h-ér</i> - (* <i>k^hr</i> - <i>t-ér</i> -)	(cf. Greek κρατερ-ός 'strong, stout, mighty')
		* <i>k^hr</i> - <i>t-^hés</i> (* <i>k^hr</i> - <i>t-és</i>)	(cf. Greek κράτος 'strength, might')

Note: The voiced aspirates reconstructed above (**b^hr*-*éw*-, etc.) did not appear until the Disintegrating Indo-European stage of development. The voiced aspirates developed from earlier plain (that is, unaspirated) voiced stops. I follow Gamkrelidze—Ivanov (1995.I:12—15) in reinterpreting the plain voiceless stops traditionally reconstructed for Proto-Indo-European as voiceless aspirates and the plain voiced stops as glottalics (ejectives).

Benveniste goes on to point out that such formations can be further extended according to the same scheme: the new suffix takes full-grade vowel, and everything preceding it passes into zero-grade (meanings are not given for forms built on those cited in the preceding charts):

* <i>t</i> ' <i>r</i> - <i>w-én</i> - (* <i>dr</i> - <i>w-én</i> -)	>	* <i>t</i> ' <i>r</i> - <i>u-n-és</i> (* <i>dr</i> - <i>u-n-és</i>)	(cf. Vedic [gen. sg.] <i>drúnaḥ</i>)
* <i>b^hr</i> - <i>w-én</i> - (* <i>bhr</i> - <i>w-én</i> -)	>	* <i>b^hr</i> - <i>u-n-én</i> - (* <i>bhr</i> - <i>u-n-én</i> -)	(cf. Proto-Germanic * <i>brunan</i> - 'to rush' > Old Icelandic <i>bruna</i> 'to rush, to advance with great speed', etc.)
* <i>k</i> ' <i>r</i> - <i>w-én</i> - (* <i>gr</i> - <i>w-én</i> -)	>	* <i>k</i> ' <i>r</i> - <i>u-n-éy</i> (* <i>gr</i> - <i>u-n-éi</i>)	(cf. Avestan [dat. sg.] <i>zrunē</i>)
* <i>Hw</i> - <i>t'-én</i> - (* <i>əu</i> - <i>d-én</i> -)	>	* <i>Hu</i> - <i>t'-n-és</i> (* <i>əu</i> - <i>d-n-és</i>)	(cf. Sanskrit [gen. sg.] <i>udnáḥ</i>)

20.7. THE DECLENSION OF NOUNS

In Proto-Nostratic, relationships within a sentence were indicated by means of particles. Particles also played an important role in both Pre-Proto-Indo-European and the Phonemic Stress Stage of Proto-Indo-European. Though many relationships were still indicated by means of particles during the Phonemic Pitch Stage of Proto-Indo-European, their role was beginning to change. Particles employed with verbs were developing into conjunctions, while those used with nouns were developing into postpositions. Moreover, a more prominent role was being assigned to case forms as Proto-Indo-European was beginning to change from an active-type language to an accusative-type language.

In the preceding chapter, the following case forms were reconstructed for the end of the Phonemic Pitch Stage of Proto-Indo-European just prior to the separation of the Anatolian branch from the main speech community:

Case	Animate	Inanimate
Singular:		
Nominative	*-s	
Nominative-accusative		*-Ø
Vocative	*-Ø	
Accusative	*-m/-m (or *-n/-n)	
Genitive-ablative	*-es/-as/-s	*-es/-as/-s
Dative-Locative	*-ey/-i	*-ey/-i
Plural:		
Nominative-vocative	*-es	
Nominative-accusative		(collective *-(e)H ₄)
Genitive	*-am	*-am

The following thematic case endings may be reconstructed for the same period:

Case	Animate	Inanimate
Singular:		
Nominative	*-a-s	
Nominative-accusative		*-a-m
Vocative	*-e	
Accusative	*-a-m (or *-a-n)	
Genitive	*-a-s	*-a-s
Ablative	*-ā th (< *-a-H ₁ (e)t ^h)	*-ā th (< *-a-H ₁ (e)t ^h)
Dative-Locative	*-āy (< *-a-ey)/*-e/a-y	*-āy (< *-a-ey)/ *-e/a-y

Plural:

Nominative-vocative	$*-\tilde{a}s$ (< $*-a-es$)	
Nominative-accusative		$*-e-H_4$
Genitive	$*-\tilde{a}m$ (< $*-a-am$)	$*-\tilde{a}m$ (< $*-a-am$)

According to Lehmann (2002:185), three endings represent the most ancient layer and came to provide the basis for the development of the central case system; these endings are: $*-s$, $*-m$, and $*-H$ (Lehmann writes $*-h$). $*-s$ indicated an individual and, when used in clauses, identified the agent; $*-m$ used in clauses indicated the target; and $*-H$ supplied a collective meaning.

According to Gamkrelidze—Ivanov (1995.I:233—236), there were two distinct genitive formatives in the earliest form of Proto-Indo-European:

Original Oppositions

Genitive singular/plural	Genitive singular/plural
$*-os$	$*-om$

Gamkrelidze—Ivanov claim that the first formative ($*-os$) marked the genitive singular/plural on animate nouns, while the second ($*-om$) marked the genitive singular/plural on inanimate nouns. At a later date, these formatives were completely redistributed.

Gamkrelidze—Ivanov also note (1995.I:236—242) that the genitive singular ending $*-os$ coincides formally with the nominative singular ending, while the genitive singular ending $*-om$ coincides with the accusative singular ending. This cannot be an accident. Rather, it points to an original connection between these endings. They propose that the ending $*-os$ was originally used to form semantically animate nouns, while $*-om$ was used to form semantically inanimate nouns. They regard the animate class as active (that is, capable of action) and the inanimate class as inactive (that is, incapable of action). Semantically active nouns were characterized by the inactive formative $*-om$ when they functioned as the target or patient of an action. Thus, for the Phonemic Stress Stage of Proto-Indo-European, the following set of formatives may be posited (replacing the $*o$ posited by Gamkrelidze—Ivanov with $*a$ to reflect the reconstructions used in this chapter):

Animate/Active Agent	Inanimate/Inactive Animate Patient
$*-(a)s$	$*-(a)m$

The endings $*-as$ and $*-am$ (Gamkrelidze—Ivanov write $*-os$ and $*-om$, respectively) could also mark attributive syntactic constructions. These later gave rise to possessive constructions (= genitive case of traditional Indo-European grammar). Specifically, Gamkrelidze—Ivanov note (1995.I:241—242):

The endings **-os* and **-om* were not only markers of the active and inactive noun classes; the nature of their functions enabled them to mark attributive syntactic constructions that later gave rise to possessive constructions. Where the modifying noun (the possessor) in such a syntagma belonged to the active class, the syntagma was marked with **-os* regardless of the class of the head (possessed) noun; and when the determiner was inactive, the syntagma was marked with **-om* regardless of the class membership of the head word (A = noun of active class, In = noun of inactive class; modifier [possessor] precedes modified [head] noun):

- (1) A — A-[o]s
- (2) A — In-[o]s
- (3) In — In-[o]m
- (4) In — A-[o]m

Constructions types (1) and (2) give rise to appositive forms that yield compounds such as Skt. *rāja-putra-* ‘son of king’, *mānuṣa-rākṣasa-* ‘man-demon’, i.e. ‘demon in human form’, Gk. *iātró-mantis* [iātró-μάντις] ‘doctor-soothsayer’, Ger. *Werwolf* ‘werewolf’, ‘man-wolf’ (Thumb and Hauschild 1959:II, §661, 401).

On the other hand, constructions type (2) and (4), where inactive nouns had the ending **-os* and active nouns had **-om* provide the source for a separate case form which subsequently developed (in Indo-European proper) into a distinct genitive, both determining and possessive. As dictated by the modifying word in the construction, the ending **-os*, identical to the active class marker **-os*, becomes the genitive marker of the inactive class, while the ending **-om*, identical to the inactive class marker **-om* and the structural-syntactic inactive with two-place predicates, becomes the genitive markers with both attributive and possessive functions, on respectively inactive and active nouns. This account of the origin and development of **-om* genitive explains its formal identity to the ending **-om* which marked the structural syntactic inactive and subsequently developed into the accusative case.

Types (1) and (4) later led to a separate class of adjectives (Gamkrelidze—Ivanov 1995.I:242—244). As noted by Lehmann (2002:187—188), stative verbs largely filled the role of adjectives in early Proto-Indo-European. See also Bozzone 2016.

At the beginning of the Phonemic Pitch Stage of Proto-Indo-European, simple plural forms first started to appear in active/animate stems. They were built upon the same elements described above. According to Gamkrelidze—Ivanov (1995.I: 244), the plural of active nouns in **(a)s* (they write **-s/*-os*) was formed by changing the ablaut grade of the ending to **-es*. At first, there was no change to the **(a)m* form, though it was later extended by **-s*, yielding the form usually reconstructed for the genitive plural in Disintegrating Indo-European: **(o)ms*. Later, though still within the Phonemic Pitch Stage, separate dative-locative forms came into being (cf. Gamkrelidze—Ivanov 1995.I:247—250). They were based upon earlier adverbial particles that came to be incorporated into the case system (cf. Blažek 2014; Burrow 1973:234; Lehmann 2002:186). Thus, we arrive at the case forms reconstructed in

the preceding chapter (and repeated above) for the end of the Phonemic Pitch Stage of Proto-Indo-European.

It was during the Phonemic Pitch Stage of Proto-Indo-European that the accent rules mentioned above were in effect. In light of what we have been discussing about the active structure at this stage of development, these rules should now be restated as follows:

1. Active/animate nouns were accented on the stem in the so-called “strong” cases (nominative-accusative) but on the ending in the so-called “weak” cases (dative-locative).
2. Stative/inanimate (= inactive) nouns were accented on the suffix throughout the paradigm.

The change of accent from the stem to the ending in the weak cases in active nouns may be an indication of the more recent origin of these cases. The strong cases were inherited by Proto-Indo-European from Proto-Nostratic. In Proto-Nostratic, these case markers were originally independent relational markers. The relational marker **-ma* was used in Proto-Nostratic, as in early Proto-Indo-European, to indicate semantically inactive/inanimate nouns as well as the patient (that is, the recipient, target, or goal of an action). The dative-locative case marker also developed from a Proto-Nostratic relational marker, and there are parallels in other Nostratic daughter languages. However, it was not fully incorporated into the system of case endings until the Phonemic Pitch Stage of Proto-Indo-European. During the Phonemic Stress stage, what later became the dative-locative case ending was still an independent adverbial particle.

20.8. PRONOUNS

In the preceding chapter, the following personal pronoun stems were reconstructed for the stage of development of the Indo-European parent language immediately prior to the separation of the Anatolian languages from the main speech community (cf. Kloekhorst 2008b:112—116 for a discussion of the Anatolian developments):

Case	First Person	Second Person
Singular:		
Nominative	<i>*ǵe+kʰ-, *ǵe+kʰʼ-, *ǵe+g-</i>	<i>*tʰi</i>
Oblique/Enclitic	<i>*me</i>	<i>*tʰu, *tʰa/e</i>
Plural:		
Nominative	<i>*wey(s)</i>	<i>*yuH(s)</i>
Oblique/Enclitic	<i>*nas</i>	<i>*was</i>

As both Lehmann (2002:31 and 60) and Gamkrelidze—Ivanov (1995.I:251—252) have tried to show, Proto-Indo-European probably differentiated alienable and inalienable possession at an early period of development. Gamkrelidze—Ivanov cite evidence from Hittite to support their claim. Furthermore, Gamkrelidze—Ivanov (1995.I:253—254) have tried to show that Proto-Indo-European originally differentiated inclusive and exclusive in the first person plural. They suggest that **wey-* (**wes-*) was inclusive, while **mes* was exclusive.

The demonstrative, relative, and interrogative pronoun stems traditionally reconstructed for Disintegrating Indo-European were derived from earlier deictic and anaphoric elements.

20.9. VERB MORPHOLOGY

As noted above, according to Benveniste's theories, Proto-Indo-European verb stems could either be identical with the root, in which case they had the form **CVC-*, or they could have two possible extended forms:

Type 1: Root in full-grade and accented, suffix in zero-grade: **CVC-C-*.

Type 2: Root in zero-grade, suffix in full-grade and accented: **CC-VC-*.

When used as a verb stem, Type 1 could undergo no further extension. However, Type 2 could be further extended by a single additional suffix on the pattern **CC-VC-C-*, or **-n-* could be infix after the root and before the suffix on the pattern **CC-n-VC-* (cf. Lehmann 1952:17—18 and 2002:142). This represents the most ancient patterning.

Furthermore, athematic verbs were accented on the stem in the singular but on the ending in the plural (and, later, in the dual as well) in the indicative but on the ending throughout the middle (cf. Burrow 1973:303). The general patterning may be represented as follows (this is what was reconstructed for "Late Proto-Indo-European" [= Disintegrating Indo-European] in the preceding chapter):

**H₁es-* 'to be' **H₁ey-* 'to go' **g^{wh}en-* 'to slay'

Singular

1	<i>*H₁és-mi</i>	<i>*H₁éy-mi</i>	<i>*g^{wh}én-mi</i>
2	<i>*H₁és-si</i>	<i>*H₁éy-si</i>	<i>*g^{wh}én-si</i>
3	<i>*H₁és-thi</i>	<i>*H₁éy-thi</i>	<i>*g^{wh}én-thi</i>

Plural

1	<i>*H₁s-més</i>	<i>*H₁i-més</i>	<i>*g^{wh}η-més</i>
2	<i>*H₁s-thé</i>	<i>*H₁i-thé</i>	<i>*g^{wh}η-thé</i>
3	<i>*H₁s-ént^{hi}</i>	<i>*H₁y-ént^{hi}</i>	<i>*g^{wh}n-ón^{thi}</i>

In thematic verbs, the accent was fixed on the stem throughout the paradigm, as follows (this is what was reconstructed for “Late Proto-Indo-European” [= Disintegrating Indo-European] in the preceding chapter):

	Primary	Secondary
Singular		
1	<i>*bhér-o-H₂</i>	<i>*bhér-o-m</i>
2	<i>*bhér-e-si</i>	<i>*bhér-e-s</i>
3	<i>*bhér-e-t^{hi}</i>	<i>*bhér-e-t^h</i>
Plural		
1	<i>*bhér-o-me(s)</i>	<i>*bhér-o-me</i>
2	<i>*bhér-e-t^{he}</i>	<i>*bhér-e-t^he</i>
3	<i>*bhér-o-nt^{hi}</i>	<i>*bhér-o-nt^h</i>

Though thematic stems were the most common type in the early non-Anatolian dialects, they were relatively late formations. They arose mostly in Disintegrating Indo-European, where they gradually replaced the earlier, athematic stems (cf. Lehmann 2002:160).

The athematic stems represent the most ancient layer and go back to the Phonemic Stress Stage of Proto-Indo-European. Originally, this conjugational type distinguished active verbs (cf. Lehmann 2002:171; Gamkrelidze—Ivanov 1995.I: 256—260). During the Phonemic Stress Stage of development, there was no difference between primary and secondary endings. The primary endings arose during the Phonemic Pitch Stage of Proto-Indo-European when the deictic particle **-i* meaning ‘here and now’ was appended to the secondary endings. Thus, it is clear that the so-called “primary endings” are really secondary, while the so-called “secondary endings” reflect the earliest forms.

As noted in the preceding chapter, the earliest recoverable Proto-Indo-European active personal endings may have been as follows (there may also have been alternative first person endings: sg. **-w*, pl. **-we* — the primary evidence for these endings comes from the Anatolian branch):

Person	Singular	Plural
1	<i>*-m</i> / <i>*-w</i>	<i>*-me</i> / <i>*-we</i>
2	<i>*-t^h</i>	<i>*-t^{he}</i>
3	<i>*-s</i> , <i>*-Ø</i>	<i>*-en</i>

Gamkrelidze—Ivanov (1995.I:283—286), among others, note the agglutinative character of the active personal endings in Proto-Indo-European. The relationship of these endings to the personal pronoun stems is obvious.

In active verbs, the plural was distinguished from the singular by an intra-paradigmatic accent shift. In the singular, the root was accented and had full-grade,

while the endings had zero-grade. In the plural, the position of the accent was shifted to the ending, with the result that the root had zero-grade, while the endings had full-grade. This patterning has been most clearly preserved in Sanskrit, which is particularly archaic in this regard. The patterning was as follows, using the verbal root **H₁es-* ‘to be’ for illustration:

Singular			Plural			
1.	<i>*H₁és+me</i>	>	<i>*H₁és-m</i>	<i>*H₁es+mé</i>	>	<i>*H₁s-mé</i>
2.	<i>*H₁és+th^e</i>	>	<i>*H₁és-th</i>	<i>*H₁es+thé</i>	>	<i>*H₁s-thé</i>
3.	<i>*H₁és+e</i>	>	<i>*H₁és-Ø</i>	<i>*H₁es+é</i>	>	<i>*H₁s-é</i>

An important assumption here is that the original ending of the third person, both singular and plural, was **-e* — the same ending found in the stative verbs. This assumption is based upon the observation that the form of the third plural found in the daughter languages is anomalous. Unlike the first and second person plural personal endings, which had the form **-Cé*, the third plural had the form **-éC*. The following scenario may be proposed to account for this anomaly: The third plural was formed by the addition of a deictic element **ne/a-*, which is the same stem found in Hittite *na-aš* ‘that’; Armenian **na* ‘that; he she, it; him, her’. Had **ne* been added directly to the root, the expected form would have been as follows: **H₁es+né* > **H₁s-né*, just like in the first and second persons plural. However, the actual form was **H₁s-én* (> **H₁s-én-th-i*, after **-th-* and **-i-* were added [cf. Sanskrit *sánti* ‘they are’]). This indicates that **ne* was not added directly to the root but, rather, to **H₁s-é*, thus: **H₁s-é+ne* > **H₁s-é-n*. Here, the accent was kept on the ending **-é-*, and, consequently, the element **ne* had zero-grade. By the way, the same patterning may be observed in the third plural of stative verbs, where **-ér* is to be derived from earlier **-é+re*.

Active verbs were used with active nouns, while stative (= inactive) verbs were used with inactive nouns (cf. Gamkrelidze—Ivanov 1995.I:256). However, this only represents part of the picture. Gamkrelidze—Ivanov (1995.I:258) note that verbs used active endings in two-place constructions in which both nouns were active. They represent the paradigmatic conjugational model for verb forms with active arguments in a convenient chart (A = active noun; V = verb; In = inactive noun; superscripts show structural syntactic status):

	Agent		Predicate		Patient
1p.	A	—	V- <i>mi</i>	—	A ^{In}
2p.	A	—	V- <i>si</i>	—	A ^{In}
3p.	A	—	V- <i>thi</i>	—	A ^{In}
	Person		kills		animal

They also note that there must have also been two-place constructions in which the first noun was active and the second inactive, such as in the phrase “person moves

stone”. In an active language, this construction would be marked by a different verb structure than that with two active nouns. In this case, the inactive (= stative) endings would be used. Gamkrelidze—Ivanov represent this type of construction as follows:

	Agent		Predicate		Patient
1p.	A	—	V- <i>Ha</i>	—	In
2p.	A	—	V- <i>t^hHa</i>	—	In
3p.	A	—	V- <i>e</i>	—	In
	Person		moves		stone

Stative verbs (these are the so-called “perfect” stems of traditional grammar) were characterized by a special set of personal endings (originally, the first and second person plural endings were lacking — they were later borrowed from the active conjugation) (cf. Szemerényi 1996:243—244; Gamkrelidze—Ivanov 1995.I:260; Lehmann 1993:174—175 and 2002:170—171; Beekes 1995:238—239; Watkins 1998:62; Meier-Brügger 2003:180—181; Adrados 1975.II:617—621; Sihler 1995: 570—572; Rix 1992:255—257; Fortson 2010:103—104):

Person	Endings
1st sg.	*- <i>H₂é</i>
2nd sg.	*- <i>t^hH₂é</i>
3rd sg.	*- <i>é</i>
3rd pl.	*- <i>ér</i>

Unlike the active verbs, which were accented on the stem in the singular but on the ending in the plural, the stative forms were originally accented on the ending throughout the paradigm (as was the middle, which, as we saw in the preceding chapter, was derived from the stative). During the Phonemic Stress Stage of Proto-Indo-European, the stem was in zero-grade, in accordance with the rule that only one full-grade vowel could occur in any polymorphemic form. However, during the Phonemic Pitch Stage of Proto-Indo-European, the accent was shifted to the stem in the singular in imitation of the active verbs, with the result that the zero-grade was changed to full-grade. The endings remained in full-grade as well, even though they were no longer accented. The fact that the stem appeared in the *o*-grade (earlier **a*) instead of the *e*-grade indicates the secondary nature of the full-grade vowel in the singular forms. It was also during the Phonemic Pitch Stage that reduplication started to be used with stative verbs.

As Proto-Indo-European began changing from an active-type language to an accusative-type language during the Phonemic Pitch Stage of development, tense forms were introduced. At first, only two tenses were distinguished: a present/future and a preterite (= non-present). This is the situation reflected in Hittite. Additional

tenses developed in Disintegrating Indo-European. These are discussed in the preceding chapter.

The only non-finite verb form that can be securely reconstructed for the Phonemic Pitch Stage of Proto-Indo-European is the participle in **-nt^h-* (cf. Lehmann 2002:183). It conveyed active meaning when added to active verbs but stative meaning when added to stative verbs. This is essentially the situation preserved in Hittite. In Disintegrating Indo-European, however, its function was modified. During the Disintegrating Indo-European period, the suffix **-nt^h-* was used to form present and aorist participles in the active voice (cf. Szemerényi 1996:317—319; Meier-Brügger 2003:185; Fortson 2004:97 and 2010:108; Meillet 1964:278; Adrados 1975.II:740—741 and II:742—744; Sihler 1995:613—618; Haudry 1979:83; Beekes 1995:249—250), which is how it is used in all of the non-Anatolian daughter languages. Lehmann (2002:183) ascribes only the etyma of verbal nouns, gerunds, and the participle in **-nt^h-* to what he calls “Pre-Indo-European”.

As we saw in the preceding chapter, the complex verb system traditionally reconstructed for Proto-Indo-European was by no means ancient. Indeed, the complex verb system had only just started to take shape in early Disintegrating Indo-European, and its expansion was not fully completed by the time that the individual non-Anatolian daughter languages began to appear. It was left to the daughter languages to fill out and reshape the system.

In the earlier stages of development, verb morphology was rather simple. There was a binary opposition between active verbs and inactive (= stative) verbs. In general, active verbs were used with active nouns, and inactive verbs were used with inactive nouns. With the change of Proto-Indo-European from an active-type language to an accusative-type language, this earlier system was restructured, and new formations were created in accordance with the new structure.

20.10. SUMMARY: THE STAGES OF PROTO-INDO-EUROPEAN

At the beginning of this chapter, four principal stages of development were assumed for Proto-Indo-European:

1. Pre-Proto-Indo-European
2. Phonemic Stress Stage of Proto-Indo-European
3. Phonemic Pitch Stage of Proto-Indo-European
4. Disintegrating Indo-European (Lundquist—Yates 2018 refer to this stage as “Proto-Nuclear Indo-European” [PNIE])

Now that we have completed our study of the development of Proto-Indo-European from the earliest period (in this chapter) to the latest (in the preceding chapter), we are in a position to summarize our findings (this is partially adapted from Lehmann 2002:44—46, §2.10.1; see also Lehrman 2001:114—116; Tischler 1988; Georgiev 1984), beginning with the Phonemic Stress Stage:

Phonemic Stress Stage of Proto-Indo-European:

1. Phonemicization of a strong stress accent.
2. Restructuring of the inherited vowel system.
3. Reduction or loss of vowels in unaccented syllables.
4. Gradual reduction of the inherited consonant system.
5. Development of syllabic variants of the resonants ($*CVRC\acute{V} > *C\grave{a}RC\acute{V} > *C\grave{R}C\acute{V}$).
6. Strict (S)OV word order.
7. Object-like relationships are indicated by the position of nouns immediately before the verb. The word order patterning for sentences with active verbs is: Subject + Adverbial Expression + Object + Verb; inasmuch as stative verbs generally have a stative noun as patient, the patterning for sentences with stative verbs is: Subject (= Patient) + Adverbial Expression + Verb.
8. Active-type language (with an accusative base alignment).
9. The lexicon distinguishes three fundamental stem types: verbs, nouns, particles.
10. The lexicon is flexible in expression of meaning, such as centripetal (to or towards a person) in contrast with centrifugal (away from a person).
11. Verbs and nouns are either active/animate or stative/inanimate.
12. Sentences are constructed by pairing either stative nouns with stative verbs or active nouns with active verbs, less frequently with stative verbs.
13. Stative verbs have little inflection.
14. There are no tense distinctions in verbs; aspect distinctions are dominant.
15. Active verbs are more highly inflected than stative verbs.
16. Particles play an important role.
17. Nouns have relatively little inflection, especially in the plural.
18. Adjectives are lacking as a separate class; instead stative verbs correspond to many adjectives in accusative-type languages.
19. Pronouns distinguish between alienable and inalienable possession.

Phonemic Pitch Stage of Proto-Indo-European:

1. Phonemic pitch replaces stress.
2. Continued restructuring of the vowel system.
3. Change of the inherited voiceless and voiced pharyngeal fricatives to multiply-articulated voiceless and voiced pharyngeal/laryngeal fricatives respectively ($*\hbar > *\underline{\hbar}\hbar$; $*\zeta > *\underline{\zeta}\zeta$).
4. Velar stops develop non-phonemic palatalized allophones when contiguous with front vowels ($*\acute{e}$, $*\acute{i}$) and $*y$.
5. Strict (S)OV word order.
6. Change from an active-type language to an accusative-type language begins (cf. Harris—Campbell 1995:240—281 for a discussion of various ways in which a language can shift from one type to another).
7. Subordinate clauses with participial forms are the norm rather than finite verbs preceded by principal clause.

8. There are relatively few conjunctions.
9. Case forms are still underdeveloped, though new forms are beginning to appear, some of which arise from postposed particles (cf. Blažek 2014).
10. The plural of nouns is still underdeveloped.
11. Adjectives start to appear.
12. Thematic nominal stems appear, though they are not common.
13. Heteroclititic nominal forms become common.
14. Inflection for verbs is also underdeveloped, especially for stative verbs, though new verbal forms are starting to appear.
15. So-called “primary” personal endings appear.
16. Separate middle forms arise — they are derived from the stative.
17. The verb system begins to change from representation of aspect to representation of tense; two tenses exist: a present/future and a preterite (= non-present).
18. There is only one participle, which is characterized by the suffix **-nt^h-*; it conveys active meaning when added to active verbs but stative meaning when added to stative verbs.
19. Many functions of nouns and verbs are indicated by particles.
20. Particles employed with verbs are developing into conjunctions, while those used with nouns are developing into postpositions.
21. The Anatolian languages become separated from the main speech community at the end of the Phonemic Pitch Stage of the Indo-European parent language.

Disintegrating Indo-European:

1. The earlier plain voiced stops become voiced aspirates (**b*, **d*, **g* > **b^h*, **d^h*, **g^h*), at least in some of the dialects of Disintegrating Indo-European.
2. Apophonic *o* develops from earlier apophonic *a*.
3. First, the laryngeals **ʔ* and **h* are lost initially before vowels. In all other environments, they merge into **h*.
4. Then, the laryngeals **h₁* and **h₂* become **h*.
5. Finally, the single remaining laryngeal (**h*) is lost initially before vowels (except in Pre-Proto-Armenian) and medially between an immediately preceding vowel and a following non-syllabic; this latter change brings about the compensatory lengthening of preceding short vowels (**eHC*, **oHC*, **aHC*, **iHC*, **uHC* > **ēC*, **ōC*, **āC*, **īC*, **ūC*). Note: **h* may have been simply lost without a trace in certain contexts (cf. Byrd 2010).
6. In some of the dialects of Disintegrating Indo-European, the palatovelars (**k^{yh}*, **k^y*, **g^{yh}*) become phonemic.
7. Word order begins to shift from (S)OV to (S)VO.
8. The characteristic sentence structure of OV languages with subordinate clauses based on participles is replaced by clauses with finite verbs that are governed by conjunctions.
9. The change to an accusative-type language is complete, though numerous relic forms from the earlier active period remain.

10. The inflection of nouns and verbs is restructured to reflect the new accusative type.
11. New case forms are created, and several declensional classes are differentiated.
12. The plural of nouns also begins to be filled out.
13. The feminine appears as a separate gender class.
14. Thematic nominal stems proliferate at the expense of other stem types.
15. Adjectives become common.
16. Personal pronouns become more widely used.
17. Rudimentary dual forms begin to appear in both nouns and verbs.
18. The change of the verb system from representation of aspect to representation of tense is completed.
19. Verb inflections are developed for use in subordinate clauses, subjunctives, and optatives.
20. Thematic verbal stems become common.
21. Aorist and imperfect verbal forms develop.
22. The function of the suffix **-ntʰ-* is changed — it is now used to form present and aorist participles in the active voice.
23. Separate past participle forms begin to appear; they are based upon earlier verbal adjectives.
24. Different dialect groups begin to emerge.

Recently, building especially upon the work of David Anthony and Donald Ringe (2015), there has been a growing consensus that new terminology is needed to differentiate the various stages of development of Proto-Indo-European. The term “Proto-Indo-Anatolian” has been coined to describe the period of development prior to the separation of the Anatolian branch from the rest of the Indo-European speech community. This is the stage of development that used to be called “Proto-Indo-Hittite”. The next stage of development is now called “Proto-Indo-Tocharian”. It represents the stage after the separation of the Anatolian branch and before the separation of Tocharian. Next, the term “Proto-Indo-European” is reserved strictly for the stage after the separation of the Tocharian branch from the rest of the speech community. This is the stage that I have called “Disintegrating Indo-European”. Attempts have been made to correlate these various stages of development with genetic, onomastic, and archeological evidence and, in so doing, to refine theories regarding the most likely homeland(s) of the Indo-Europeans and their precursors, to map their migrations, and to determine possible interactions with other languages and cultures. The Maykop and Yamnaya cultures consistently figure prominently in these discussions.

20.11. CONCLUDING REMARKS

In this and the preceding chapter, the Proto-Indo-European morphological system has been systematically analyzed in order to uncover the most ancient patterning. This analysis has relied almost exclusively on Indo-European data with only passing

reference to what is found in cognate Nostratic languages. The picture that emerges, though highly plausible, is unquestionably missing important details. This is due to the fact that we are not able to recover what has been lost in earlier stages of development on the basis of an examination and analysis of the Indo-European data alone.

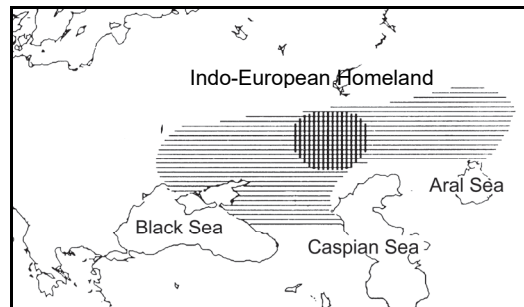
Comparison with other Nostratic daughter languages clearly indicates that a whole series of relational markers can be reconstructed for Proto-Nostratic, and at least some of these must have been inherited by Pre-Proto-Indo-European. As more work is done in reconstructing the proto-languages of the individual branches of Nostratic, future scholars will be able to arrive at a more accurate and more complete reconstruction of Proto-Nostratic. In so doing, the work done in one area will no doubt complement and further the work done in other areas so that we will be in a far better position to fill in the gaps that currently exist in our knowledge concerning the early prehistory of the individual branches themselves. Lehmann (2002:250—251), in particular, identifies the lack of adequate reconstructions for the non-Indo-European Nostratic proto-languages as a crucial problem that needs to be addressed. I could not agree more.

CHAPTER TWENTY-ONE

LANGUAGE CONTACT: INDO-EUROPEAN AND NORTHWEST CAUCASIAN

21.1. INTRODUCTION

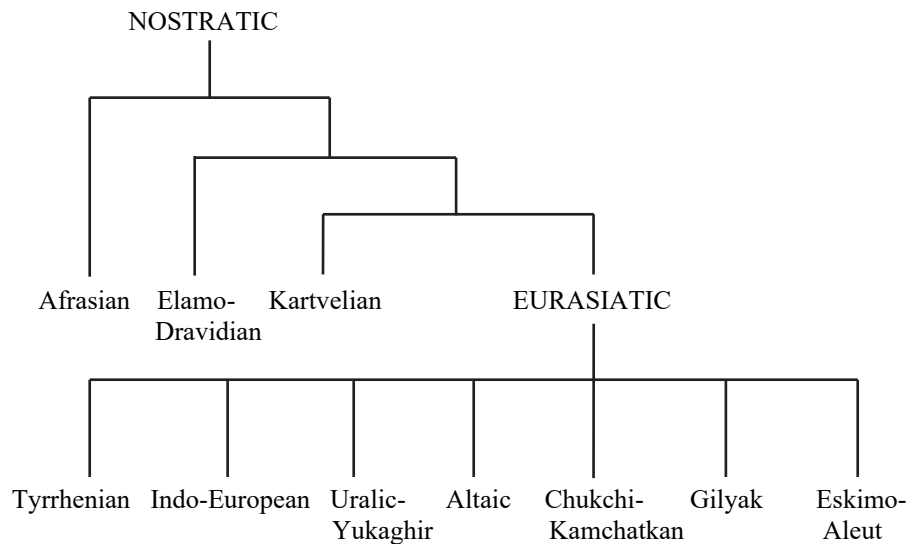
Proto-Indo-European must have come into contact with various other languages in the course of its development, and that contact must have resulted in some sort of influence (probably mutual), such as the introduction of loanwords or changes in pronunciation, morphology, and/or syntactic constructions. In Chapter 13, §13.2, I suggested that, when the Indo-Europeans arrived on the shores of the Black Sea at about 5,000 BCE, they encountered and occupied territory originally inhabited by Caucasian-speaking people, and I listed several possible shared lexical items between Proto-Indo-European and Northwest Caucasian to support this view. Of course, the people they encountered did not speak the Caucasian languages of recorded history but, rather, their ancestral language or languages. The following map (adapted from Villar 1991:15) shows the location of the Indo-Europeans at about 5,000—4,500 BCE, while the hatched area above the Caspian Sea indicates the earliest probable location of the Indo-Europeans:



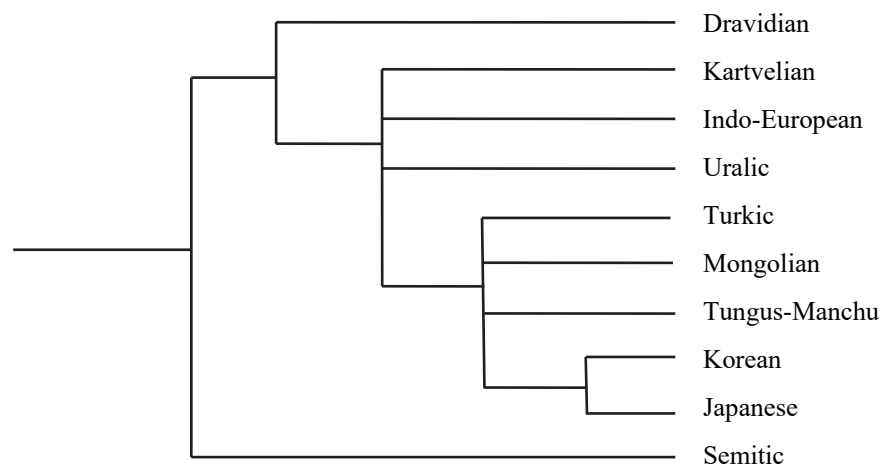
In my previous work as well as in the current book, I present a considerable amount of evidence, both morphological and lexical, for a genetic relationship between Indo-European and certain other languages/language families of northern Eurasia and the ancient Middle East, to wit, Afrasian, Elamo-Dravidian, Kartvelian, Uralic-Yukaghir, Altaic, and Eskimo-Aleut. Following Holger Pedersen (as well as Illič-Svityč and Dolgopolsky), I posit a common ancestor named “Proto-Nostratic”. I also list possible cognates found in Sumerian and note that Tyrrhenian, Gilyak (Nivkh), and Chukchi-Kamchatkan are probably to be included as members of the Nostratic macrofamily as well.

Recently, several scholars have suggested that Afrasian may have been a sister language of Nostratic rather than a descendant language (see Chapter 13 for a brief

discussion of these views), while Indo-European is seen by Greenberg as being more closely related to Uralic-Yukaghir, Altaic, Gilyak, Chukchi-Kamchatkan, and Eskimo-Aleut, these forming a distinct language family called “Eurasianic”. I prefer to see Nostratic as a higher level taxonomic entity that includes Afrasian (along with Elamo-Dravidian, Kartvelian, and Eurasianic) — my thoughts on subgrouping are presented in a chart at the end of Chapter 1 of this book, which is repeated here:



Somewhat similar views are expressed by Sergej Starostin (1999c:66) in a computer-generated Nostratic family tree (see below), though he places Kartvelian closer to Indo-European than what is indicated in my chart, and he lists Semitic as a separate branch of Nostratic — clearly, this should be Afrasian (Afroasiatic):



Now, Proto-Indo-European presents some special problems. On the one hand, its grammatical structure, especially in its earlier periods, more closely resembles those of its sister Eurasiatic languages; on the other hand, its phonological system more closely resembles the phonological systems found in Proto-Afrasian and Proto-Kartvelian, at least when using the revised Proto-Indo-European phonological system proposed by Gamkrelidze, Ivanov, and Hopper. Moreover, there are typological problems with every phonological system proposed to date for Proto-Indo-European — one wonders, for example, why there are no affricates. This leads me to suspect that Proto-Indo-European may be a blend of elements from two (or more?) different languages, as has already been suggested by several other scholars. But a blend of what? In footnote 1 of his 1992a paper, Colarusso notes that “[t]he amateur archeologist Geoffrey Bibby suggested in 1961 that PIE was a Caucasian language that went north and blended with a Finno-Ugrian tongue”. This suggestion merits closer consideration. Note: Here, I am using the term “blend” to conform with Colarusso — nowadays, the term “convergence” would be used to describe this kind of language contact.

In this chapter, I would like to discuss how Colarusso’s theories shed possible light on this and other issues, noting both the strong points and the limitations of his approach, and I will propose an alternative theory that I believe better fits the linguistic evidence.

Before discussing Colarusso’s theories, it might be helpful to outline some of the salient characteristics of the Northwest Caucasian languages. One of the most noteworthy features of the Northwest Caucasian languages is their large consonant inventories and relatively small vowel inventories. Vowel gradation is a notable characteristic. (The phonological systems of the individual Northwest Caucasian languages are discussed in great detail by Colarusso in his 1975 Harvard University Ph.D. dissertation and by Hewitt in his 2005 *Lingua* article, “North West Caucasian”.) The Northwest Caucasian languages are agglutinating languages, with ergative clause alignment. In general, nominal morphology is simple. Nouns are marked for case, number, and definiteness, but not gender (Abkhaz and Abaza / Tapanta are exceptions). Demonstratives are characterized by three degrees of deixis: (1) proximate, (2) intermediate, and (3) distant (Ubykh, however, has only two degrees of deixis). Postpositions are the rule. A particularly notable feature of the Northwest Caucasian languages is their highly complex (polysynthetic) verb systems. Gerundive and participial forms are also widely used. Word order is SOV. The lexicon is analyzable into a small number of short roots.

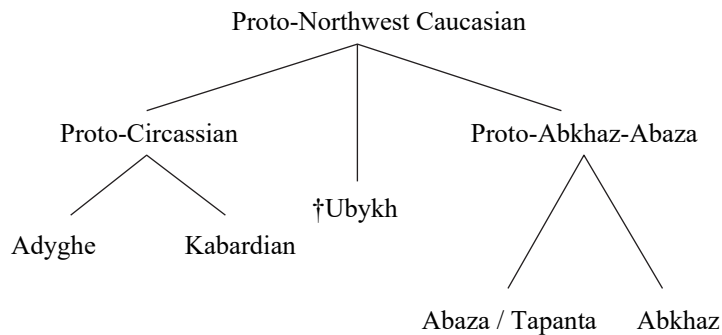
21.2. COLARUSSO’S THEORIES I: INITIAL REMARKS AND PHONOLOGY

The area between and north of the Black and Caspian Seas was undoubtedly the final homeland on Proto-Indo-European — it was where Proto-Indo-European developed its unique characteristics. However, it is probable that this was not the original homeland of the speakers of what was to become Proto-Indo-European. In a

paper published in 1997, Johanna Nichols argued that the earliest Indo-European speech community was located in Central Asia (note also Uhlenbeck 1937). She proposes that Pre-Proto-Indo-European spread westward across the steppes, eventually arriving on the northeastern shores of the Black Sea. I support this scenario. I would place the Pre-Indo-Europeans north of the Caspian and Aral Seas at about 7,000 BCE, and I would date their initial arrival in the vicinity of the Black Sea at about 5,000 BCE — this is somewhat earlier than the date Nichols assigns. No doubt, the immigration occurred in waves and took place over an extended period of time. Though it is not known for certain what language or languages were spoken in the area before the arrival of Indo-European-speaking people, it is known that the Pre-Indo-Europeans were not the first inhabitants of the area — several chronologically and geographically distinct cultural complexes have been identified there. This is an extremely critical point. The contact that resulted between these two (or more) linguistic communities is what produced the Indo-European parent language.

Fortunately, there are clues regarding who may have been there when the Pre-Indo-Europeans arrived on the shores of the Black Sea. In a series of papers published over the past twenty-five years or so, John Colarusso (1992a, 1994, 1997, and 2003) has explored phyletic links between Proto-Indo-European and Northwest Caucasian. Colarusso has identified similarities in both morphology and lexicon — enough of them for Colarusso to think in terms of a genetic relationship between Proto-Indo-European and Northwest Caucasian. (The Northwest Caucasian family tree is shown below.) He calls their common ancestor “Proto-Pontic”, which he dates to roughly 10,000 BP (9,000 to 7,000 BCE).

The Northwest Caucasian family tree:



Notes:

1. Ubykh is now extinct. The last native speaker of the language, Tevfik Esenç, passed away in 1992.
2. Abaza is also called Tapanta (T'ap'anta).
3. Chirikba (1996a) considers Hattic to have also been a Northwest Caucasian language.

4. The Adyghe (also called “West Circassian”) branch of Circassian is made up of many dialects, the most important of which are Temirgoy, Bžedux, and Šapsegh.
5. Kabardian is also called “East Circassian” — East Circassian also includes Besleney.

Colarusso begins by discussing the phonology of Proto-Indo-European, and he proposes a revised (“fortified”) phonemic inventory for Proto-Indo-European. He then lists several grammatical formants common to both language families. Next, he presents a number of lexical parallels, including preverbs, numerals, particles, and “conventional cognates”. On the basis of his study, he concludes that there is evidence, albeit preliminary, for a genetic relationship between Proto-Indo-European and Proto-Northwest Caucasian, and he posits a common proto-language, which he names “Proto-Pontic”.

Colarusso (1992a:48, 1994:18, and 1997:146) reconstructs the following phonological system for Proto-Pontic (the alleged ancestor of Proto-Indo-European and Proto-Northwest Caucasian), which he dates to roughly 10,000 BP:

Consonants:	p ^h	p	b	-			m			w
	t ^h	t	d	t'			n	r	l	
	c ^h	c	ʒ	c'	s	z				
	č ^h	č	ž	č'	š	ž				y
	λ ^h	λ	λ	λ'						
	k ^h	k	g	k'	χ	g̃				
	q ^h	q	-	q'	x	ɣ				
					h	ʕ				
				ʔ	h					
Vowels:				i		u				
				e	ə	o				
					a					

Though there are many points of agreement between the phonological systems posited by Colarusso for Proto-Pontic and by me for Proto-Nostratic, the main differences are: (A) I do not posit a separate series of plain (unaspirated) voiceless obstruents; (B) I posit a series of rounded gutturals (“labiovelars”); (C) I posit a series of palatalized alveolars; (D) I do not posit a series of lateral approximants, and (E) I posit fewer laryngeals. The Proto-Nostratic phonological system may be reconstructed as follows (see Chapter 12 for details):

Stops and Affricates:

p ^h	t ^h	c ^h	č ^h	ty ^h	tʃ ^h	k ^h	k ^{wh}	q ^h	q ^{wh}		
b	d	ʒ	ž	d ^y	ɟ ^h (?)	g	g ^w	g	g ^w		
p'	t'	c'	č'	t'y	tʃ'	k'	k' ^w	q'	q' ^w	ʔ	ʔ ^w

Fricatives:

s	š	sʸ	x	xʷ	h	ħ	ħʷ
z	ž (?)	zʸ (?)	ɣ			ʕ	

Glides:

w	y
---	---

Nasals and Liquids:

m	n	nʸ	ŋ
	l	lʸ	
	r	rʸ	

Vowels:	i (~ e)	u (~ o)
	e	o
	(ə ~) a	

Also the sequences:	iy (~ ey)	uy (~ oy)	ey	oy	(əy ~) ay
	iw (~ ew)	uw (~ ow)	ew	ow	(əw ~) aw

For Proto-Nostratic, I set up a series of non-phonemically aspirated obstruents. There is some evidence, albeit limited, that two series may be warranted: (A) aspirated voiceless obstruents and (B) unaspirated voiceless obstruents — exactly what Colarusso has set up for Proto-Pontic. The evidence comes from Afrasian. For Proto-Afrasian, a separate phoneme **f* must be posited in addition to a voiceless bilabial stop **p*, and both of these correspond to voiceless bilabial stops in the other Nostratic daughter languages. Setting up two series at the Proto-Nostratic level would make it easy to account for Proto-Afrasian **f*, which would be seen as the reflex of an original phonemic voiceless bilabial aspirated stop **pʰ* distinct from **p*. In this scenario, we would then have to assume that the aspirated and the unaspirated obstruents have merged in the remaining Nostratic daughter languages (as well as in Proto-Afrasian except in the bilabial series).

Now, let us look a little more closely at Proto-Indo-European itself. Colarusso sets up a three-way contrast for his “Fortified PIE”: (A) voiceless aspirated, (B) plain voiced, and (C) glottalized, thus:

Consonants:	p ^h	b	-	m	w		
	t ^h	d	tʼ	s	n	r	l
	k ^{hy}	g ^y	kʼ ^y				
	(k ^h)	g	kʼ)				
	k ^{hw}	g ^w	kʼ ^w				
	q ^h	-	qʼ	x	ɣ		
	q ^{hw}	-	qʼ ^w	x ^w	ɣ ^w		

	h	ʃ
	h ^w	ʃ ^w
ʔ	h	
ʔ ^w		

Vowels: ə ~ a (plus tonal stress)

Note: According to Colarusso, the laryngeals were lost in stages. The earliest to be lost were *ʔ, *h, and *ʔ^w. The loss of these laryngeals between preceding short vowels and a following obstruent gave rise to “inherently” long vowels. The remaining laryngeals underwent various changes and were eventually lost altogether prior to the emergence of the non-Anatolian daughter languages. Some laryngeal reflexes persisted in Anatolian.

Gamkrelidze—Ivanov, in a number of works, also set up a three-way contrast: (A) voiceless (aspirated), (B) voiced (aspirated), and (C) glottalized. In their system, the feature of aspiration is viewed as phonemically irrelevant, and the phonemes in question can be realized either with or without aspiration depending upon the paradigmatic alternation of root morphemes. They set up this alternation mainly to account for instances of Grassmann’s Law. However, as pointed out by Brian Joseph in a paper read before the 1994 Annual Meeting of the Linguistic Society of America, this reconstruction runs into problems in Italic (cf. Joseph—Wallace 1994; see also Stuart-Smith 2004). Indeed, it will probably turn out that Grassmann’s Law should not be viewed as pan-Indo-European but, rather, as operating strictly in certain dialect groups. Now, most scholars, regardless of whether they follow the traditional reconstruction of Proto-Indo-European or the radical revisions proposed by Gamkrelidze, Hopper, and Ivanov, set up a three-way contrast for the obstruents — in other words, they do not set up phonemic unaspirated voiceless beside phonemic aspirated voiceless obstruents. The main exception is Oswald Szemerényi, who argued forcefully that two separate series should be set up. The fact is that, in most instances, the traditional voiceless aspirates can be explained as secondarily derived. Moreover, the evidence for their existence is restricted to two or three branches of Indo-European, and the examples found there are usually explained as developments specific to these branches. Nonetheless, there have always been a handful of examples that cannot be explained as secondarily derived. In light of Colarusso’s proposals, the whole question may merit re-examination. It may turn out that Szemerényi was right all along. Moreover, setting up phonemic aspirated voiceless beside phonemic unaspirated voiceless obstruents may eliminate some of the objections that have been raised against the reinterpretation of the Proto-Indo-European consonant system proposed by Gamkrelidze—Ivanov.

It seems to me that Colarusso posits a greater number of “laryngeal” phonemes for Proto-Indo-European than required either by internal Indo-European evidence or by evidence from the other Nostratic daughter languages. Extremely good and plentiful cognates containing “laryngeals” can be established between Proto-Indo-European and Proto-Afrasian, and the “laryngeals” are better preserved in the

Afrasian branch than in any of the other Nostratic daughter languages. For Proto-Afrasian, either four or six “laryngeals” are typically posited, though there is not unanimity here: (A) *ʔ (glottal stop), (B) *h (voiceless laryngeal fricative), (C) *ħ (voiceless pharyngeal fricative), (D) *ʕ (voiced pharyngeal fricative), (E) *x (voiceless velar fricative), and (F) *ɣ (voiced velar fricative). There may also have been rounded “laryngeals” in Proto-Afrasian. I would set up the same “laryngeals” for Pre-Proto-Indo-European. I assume that the voiceless and voiced velar fricatives first merged with the voiceless and voiced pharyngeals, respectively, and that these became multiply-articulated pharyngeal/laryngeals in later Proto-Indo-European (for details, see the Appendix to Chapter 4). This assumption is made to account for their vowel-coloring properties. The whole question concerning the “laryngeals” remains open, though. The quality and quantity of the cognates that can be established between Proto-Indo-European and related languages, especially Afrasian, may require that additional “laryngeal” phonemes be set up for Proto-Nostratic. Indeed, there is good evidence to support the reconstruction of rounded “laryngeals” in Proto-Nostratic as well.

21.3. RECONSTRUCTED PHONOLOGICAL SYSTEMS AND SOUND CORRESPONDENCES

The phonological system reconstructed for Common Abkhaz by Chirikba (1996a: 58—59 and 1996b:xi) is as follows (his transcription has been retained; where different, the symbols used in this chapter are shown in parentheses):

	Stops	Affricates	Spirants	Resonants	Glides
Labial:	b p p' p ^ʷ		(v) f	m	w
Dental:	d t t' d ^o t ^o t' ^o	ʒ c c'	z s	n r	
Dental-Alveolar:		ʒ̣ ć ć' ʒ̣ ^o ć ^o ć' ^o	ʒ̣ ś ʒ̣ ^o ś ^o		
Alveolar:		ʒ̣̣ č č' ʒ̣̣ ^o č ^o č' ^o ʒ̣̣' č' č''	ʒ̣̣ š ʒ̣̣ ^o š ^o ʒ̣̣' š'		
Palatal:					j
Lateral:				l	
Velar:	g k k' g ^o k ^o k' ^o g' k' k''				
Uvular:	q q' q ^o q' ^o q''			ɣ (= ʏ) ǰ ɣ ^o (= ʏ ^o) ǰ ^o ɣ' (= ʏ')	

							ǰ'
Pharyngeal:							ħ ħ
							ħ ^o ħ ^o
Vowels:	a	ə					
Labials:	p ^h	p:	b	p'			
Dental Stops:	t ^h	t:	d	t'			
Dental	ç ^h	c:	ʒ	c'	s	z	
Affricates/ Sibilants:							
Alveolopalatals:					ʃ (ś)	ʒ (ž)	ʃ' (ś')
Alveolopalatals:	ç ^{h^o}	ç: ^o	ʒ ^o				
labialized:	(ç ^{h^o})	(ç: ^o)	(ʒ ^o)				
Palatals:	č ^h	č:		č'	š ^h	š:	ž
Palatals:	č ^{h'}	č:'	ž'	č''	š ^{h'}	š:'	ž'
palatalized:							
Laterals:					λ	l	λ'
Velars:	k ^h	k:	g	k'	x	ġ (ɣ)	
Velars:	k ^{h^o}	k: ^o	g ^o	k' ^o	x ^o		
labialized:							
Uvulars:	q ^h	q:		q'	χ	ġ	
Uvulars:	q ^{h^o}	q: ^o		q' ^o	χ ^o	ġ ^o	
labialized:							
Pharyngeal:					ħ		
Others:	h, y, w, m, n, r						
Vowels:	a	ə					

Note: The Proto-Circassian voiced uvular fricative *ġ is from an earlier voiced uvular stop *g, on the one hand, and from an earlier voiced pharyngeal fricative *ħ, on the other hand.

The Ubykh phonemic system is discussed at length by Vogt (1963:13—33). Cf. Colarusso 1975 for a comprehensive treatment of Northwest Caucasian phonology in general. See also Hewitt 2005:94—102.

Finally, it may be noted that Chirikba (2016:9—11) reconstructs the early Proto-Northwest Caucasian phonological system as follows (his transcription has been retained):

Consonants:	b	p ^h	p'						
	d	t ^h	t'					m	w
				ʒ	c	c'	z	s	n
				ʒ̣	č	č'	ž	š	r
				Ł	λ	λ'	L	λ	l
	g	k ^h	k'		ĝ	x			j
	g	q ^h	q'		γ	χ			
			ʔ		ʕ	H			
Vowels:	i	ü		u					
	e	ö	ə	o					
			a						

Note: Cf. Colarusso (1989:28) for a slightly different reconstruction. The biggest difference between Colarusso and Chirikba is that Colarusso reconstructs a four-way contrast in the system of stops and affricates of (1) voiceless aspirated, (2) plain voiceless, (3) voiced, and (4) glottalized (ejectives), thus (using the dentals for illustration): *t^h, *t, *d, *t'. Colarusso also reconstructs a smaller set of vowels than Chirikba.

The Proto-Indo-European phonological system used in this chapter is as follows:

Obstruents:	I	p ^h	t ^h	k ^h	k ^{wh}	
	II	b ^h	d ^h	g ^h	g ^{wh}	
	III	(p')	t'	k'	k' ^w	
			s			
Laryngeals:		ʔ (= ʔ ₁)	h (= ʔ ₄)	ḥh (= ʔ ₂)		
				ʕh (= ʔ ₃)		
Resonants:	m/ṃ	n/ṇ	l/ḷ	r/ṛ	w/u	y/i
Vowels:	e	o	a	i	u	
	ē	ō	ā	ī	ū	

Note: Series I is voiceless aspirated (= traditional plain voiceless stops: *p, t, k, k^w); series II is voiced aspirated (= traditional voiced aspirates: *b^h, *d^h, *g^h, *g^{wh}); and series III is glottalized (ejectives) (= traditional plain voiced stops: *b, *d, *g, *g^w).

The following sound correspondences can be provisionally established between Proto-Indo-European, Common Abkhaz, and Proto-Circassian:

Proto-Indo-European	Common Abkhaz	Proto-Circassian
*p ^h	*p	*p ^h , *p:
*t ^h	*t, *c, *č, *č', *č'	*t ^h , *t:, *c ^h , *c:, *č ^h , *č:, *č ^h ', *č:'
*k ^h	*k, *k', *q	*k ^h , *k:, *q ^h , *q:
*k ^{wh}	*k ^o , *q ^o	*k ^h ^o , *k: ^o , *q ^h ^o , *q: ^o
*p ^h Vs-	*psV-	*PsV-
*p ^h V ^{hh} -	*p ^x V-	
*p'	*p'	*p'
*t'	*t', *c', *č', *č', *č''	*t', *c', *č', *č''
*k'	*k', *k'', *q', *q''	*k', *q'
*k' ^w	*k' ^o , *q' ^o	*k' ^o , *q' ^o
*b ^h	*b	*b
*b ^h Vs-	*bzV-, bžV-	*PzV-
*d ^h	*d, *ǰ, *ǰ, *ǰ, *ǰ'	*d, *ǰ, *ǰ, *ǰ'
*g ^h	*g, *g', *γ (< *g), *γ'	*g, *ǵ (< *g), *γ
*g ^{wh}	*g ^o , *γ ^o (< *g ^o)	*g ^o , *ǵ ^o (< *g ^o)
*s	*s, *ś, *š, *z, *ž, *ž'	*s, *ś, *š, *š ^h , *š ^h ', *š:, *š:', *z, *ž, *ž'
*ʔ (= *ǵ ₁)	*Ø	*Ø
*h (= *ǵ ₄)	*Ø	*h
* <u>h</u> h (= *ǵ ₂) (< *h)	*h, *x, *x'	*h, *x, *x'
* <u>ǵ</u> h (= *ǵ ₃) (< *ǵ)	*h (< *ǵh < *ǵ)	*ǵ (< *ǵ)
*w	*w	*w
*y	*j	*y
*m	*m	*m
*n	*n	*n
*ŋ	*a	*a
*l	*l	*l, *λ
*r	*r	*r
*a, *e, *o	*a, *ə	*a, *ə
*i, *u	*ə	*ə

21.4. COLARUSSO'S THEORIES II:
MORPHOLOGICAL PARALLELS BETWEEN
PROTO-INDO-EUROPEAN AND PROTO-NORTHWEST CAUCASIAN

Colarusso (1992a:26—30) presents a series of nominal suffixes that he claims are common to Proto-Indo-European and Proto-Northwest Caucasian — these are:

Proto-Indo-European	Proto-Northwest Caucasian
1. Athematic <i>*-Ø</i>	Athematic stems
2. Thematic <i>*-e/o-</i>	Thematic stems
3. Adjectives in <i>*-(e)w-</i>	Predicative and adverbial <i>*-u</i> , <i>*-(ə)w</i>
4. Adjectives in <i>*-yo-</i>	Adjectives in <i>*-ġa-</i>
5. Abstract adjectives in <i>*-iyo-</i>	Adjectives in <i>*-ya-</i>
6. Opposition with other stems: <i>*-yo-</i>	Enclitic copula <i>*-g^{va}a-</i> ‘and’
7. Used in oblique cases: <i>*-en-</i>	Oblique case, genitive formant <i>*-n-</i> or <i>*-m-</i>
8. Secondary NPs: <i>*-no-</i>	Derivational suffix <i>*-nə-</i>
9. Participle endings <i>*-eno-</i> , <i>*-ono-</i>	“Pro-tense” <i>*-ən-</i> (replaces tense in concatenated or subordinated [“dependent”] forms)
10. Old kinship suffix <i>*-(t)er-</i>	Participle <i>*X-t^h-ər</i>
11. Heteroclititic <i>*-r-/*-n-</i>	<i>*-(ə)r</i> in absolutive, <i>*-əm-</i> or <i>*-ən-</i> in oblique cases
12. Comparative <i>*-yes-/*-yos-</i> , superlative <i>*-is-t(h)o-</i>	Comparative <i>*-y-č^h</i> , superlative <i>*-y-č^h-(də)da</i>
13. Agents in <i>*-ter-</i> , <i>*-tel-</i>	Instrumental (Abaza) <i>-la-</i>
14. Instrumentals in <i>*-tro-</i> , <i>*-tlo-</i> , <i>*-dhro-</i> , <i>*-dhlo-</i>	Instrumental <i>*-la-</i> (same as no. 13)
15. Nominal action suffix <i>*-men-</i>	Old affix <i>*-ma</i>

Though I have reservations about several of the comparisons made by Colarusso, for the most part, I find his examples to be reasonably straightforward. What strikes me is the nature of the examples more than the form. First, as I tried to show in a previous chapter of this book, Early Proto-Indo-European did not have adjectives as a separate grammatical category. Rather, they arose at a later date. Moreover, even at a fairly late date in its development, Proto-Indo-European may not have possessed comparative and superlative degrees. Consequently, the above comparisons between Proto-Indo-European and Proto-Northwest Caucasian involving adjectives, including formants indicating comparative and superlative degrees, if they are real, point to language contact at a late date rather than genetic relationship. Next, the development and proliferation of thematic stems was a late development in Proto-Indo-European. Again, if the comparison here with Northwest Caucasian is real, it is another indication of language contact. Finally, the same may be said about the remaining comparisons as well — nearly all of the Proto-Indo-

European examples cited by Colarusso are relatively late formations, most of which arose within the Indo-European parent language proper long after it had separated from the other Nostratic daughter languages.

Colarusso (1992a:30—32) then turns his attention to a discussion of several other endings, such as participles, abstracts, cases, etc.:

Proto-Indo-European

Proto-Northwest Caucasian

Participles, abstracts, etc.

- | | |
|---|---|
| 1. Active participle <i>*-ent-</i> , <i>*-ont-</i> , <i>*-nt-</i> | Old participle endings: Abaza <i>-n</i> ;
Ubykh <i>-nə</i> , <i>-na</i> , plus (Circassian)
durative <i>-t^h-</i> |
| 2. Perfect active participle <i>*-we/os-</i> ,
<i>*-we/ot-</i> | Aspect suffix <i>*-w(a)-</i> |
| 3. Feminines and abstracts in <i>*-ā</i> , <i>*-y-ā</i>
(<i>< *-eA</i> , <i>*-y-eA</i>) | <i>*-xa</i> ‘woman’ |
| 4. Collectives in <i>*-yā</i> | Collective <i>*-ġa</i> |

Case forms

- | | |
|--|---|
| 5. Accusative <i>*-m/*-n</i> | Oblique: Circassian <i>-m</i> , Ubykh <i>-n</i> |
| 6. Genitive/ablative <i>*-(e/o)s</i> | Old genitive <i>*-š</i> |
| 7. Genitive (thematic) <i>*-o-s(y)o</i> | <i>*-š-y-a > *-š^y</i> oblique of pronouns in
West Circassian |
| 8. Ablative (thematic) <i>*-ō</i> | Ubykh <i>-x^ya</i> , Abkhaz-Abaza <i>-x^ya</i>
‘place’ |
| 9. Dative <i>*-ey-</i> | Directive-dative <i>*-y(-a)</i> |
| 10. Locative <i>*-i</i> | Old Bžedux dative of pronouns <i>-y</i> |
| 11. Instrumental <i>*-ē</i> , <i>*-ō</i> | <i>*-ə-a > *-ē</i> , <i>*-a-a > *-ā</i> , with <i>*-a</i> the
same as in the thematic ablative |

Here, once again, we are dealing with late formations in Proto-Indo-European. In Chapter 18 (§18.6), we saw how and when the feminine arose within Proto-Indo-European and how the system of case endings was gradually built up.

Colarusso (1992a:32—33) next discusses anaphoric, deictic, and relative stems. He then moves on to personal pronoun stems.

Proto-Indo-European

Proto-Northwest Caucasian

- | | |
|---|---|
| 1. Anaphora: <i>*so-</i> , <i>*to-</i> | <i>*śa</i> ‘what’, <i>*t^hə</i> ‘where’ |
| 2. Deixis: <i>*-w-</i> > Sanskrit <i>asau</i> | <i>*wə-</i> ‘that (near hearer)’ |
| 3. Relative: <i>*yo-</i> | Abkhaz-Abaza <i>y-</i> relative initial verbal
index |

- | | |
|--|--|
| 4. Nominative first person personal pronoun <i>*egō</i> , oblique <i>*(e)m</i> | <i>*m-</i> ‘that near me’ |
| 5. Second person personal pronoun <i>*tu</i> | <i>*w-</i> (< <i>*t^hw-</i>) (f.) ‘you’ |

Most of these comparisons seem just a little contrived. Interestingly, Colarusso derives the Proto-Indo-European first person personal pronoun stem **egō* from Proto-Pontic **ʔə-k’-*, which is the same type of derivation I have proposed: traditional Proto-Indo-European **egō* < Early Proto-Indo-European **ʔe-k’-* (see Chapter 19, §19.8). The origin of this pronoun in Proto-Indo-European is rather transparent — it was a compound deictic stem meaning something like ‘this one here’ (cf. Lehmann 2002:188—189; Georgiev 1981:58).

Colarusso (1992a:33—35) lists three preverbs (old nouns) common to Proto-Indo-European and Proto-Northwest Caucasian and also compares Proto-Indo-European “final **s*” with Proto-Northwest Caucasian old oblique in **-š*. Most of these are convincing comparisons. Two of the three preverbs have cognates in other Nostratic languages.

Proto-Indo-European	Proto-Northwest Caucasian
1. <i>*per₂-</i> ‘before’ (< ‘front’)	<i>*p^ha-r-(a-y-)</i> ‘front-along- (dat.-dir.-)’
2. <i>*en-</i> ‘in’ (< ‘interior, inside’)	Abaza <i>-n-</i> in <i>n-c’ a-ra</i> ‘in-place-inf.’ = ‘to place inside’
3. <i>*et-</i> ‘without, outside’ (< ‘exterior, outside’)	Abaza <i>-t-</i> ‘from inside out; from below upwards’ (cf. <i>t-ga-ra</i> ‘out-drag-inf.’ = ‘to drag something out’)
4. Final <i>*s</i>	Old oblique in <i>*-š</i>
5. <i>*j-</i> ‘and’	<i>*-ra</i> ‘and’
6. <i>*ge</i> ‘because; terminus’	Dative-instrumental <i>*-y-k’</i>

Note: For the last form, Colarusso reconstructs Proto-Pontic **k’ə* ‘because, arising from, issuing from’.

Colarusso (1992a:35—40) finishes his discussion of morphology by comparing verbal desinences and suffixes. Some of the parallels presented by Colarusso are intriguing and deserve further investigation. Specifically, I would like to see more about what Proto-Northwest Caucasian might be able to tell us about the Proto-Indo-European athematic ~ thematic conjugational types.

I am skeptical about the Proto-Indo-European perfects (1992a:37, no. 48) discussed by Colarusso, while the Proto-Indo-European primary active present athematic ending **-i* (1992a:38, no. 50) is usually derived from a deictic particle meaning ‘here and now’ (cf. Kerns—Schwartz 1972:4; Watkins 1969:46).

The explanation given by Colarusso (1992a:39, no. 52) for Proto-Indo-European “*s*-movable” is not convincing and should be abandoned, and the same goes for the derivation of the 1st person singular thematic personal ending **-ō* from **-o-s* through compensatory vowel lengthening upon loss of the **-s* (1992a:39, no. 53).

Lastly, the following is a list of the verbal desinences and suffixes discussed by Colarusso:

Proto-Indo-European

Proto-Northwest Caucasian

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Athematic: Sanskrit <i>ád-mi</i>
'I am eating';
Thematic: Sanskrit
<i>rod-ā-mi</i> 'I am crying' 2. Intensive reduplication: Sanskrit
<i>dediṣ-te</i> 'he teaches and teaches' 3. Proto-Indo-European themes with
*-ē-, *-ō-, *-ā-:
I. *-ē- (< *-e₂-) stative sense
II. *-ā- (< *-e₂-) iterative sense
III. *-ō- (< *-e₂-) indicating excess 4. Causative-iterative: *-eyo-, *-ī-, *-y- 5. Sigmatic aorist: *-s- 6. *-n-infix presents 7. Primary active 3rd plurals in *-n-;
extended by *-ti > *-(e/o)-n-ti 8. Middle voice in *-dh- 9. Perfects in *-k-, *-g-, *-gh- 10. Optative in *-yē-, *-yā- 11. Primary, active, present, athematic *-i 12. Relic impersonals in *r (cf. Sanskrit
<i>śe-re</i> 'they are lying down'; Old Irish
<i>berir</i> 'he is carried'; Umbrian <i>ier</i> 'one
goes') 13. Futures in *-(ǵ)s(y)e-/*-(ǵ)s(y)o- 14. Intensives in *-sk(e/o)- 15. Augment *-e- (marks the past) | <p>Basic verb athematic: *-t^h- 'to be';
*-w-k'- -valence-kill-, Ubykh
<i>Ø-s-k^w-q'á</i> 'it-I-kill- past' = 'I
killed it';
Verbs with stem final -a- showing
thematic conjugation: West Circassian
<i>psaaḷa</i> 'word', <i>t-zara-psaḷa-a-ya</i> 'we-
reciprocal-converse-thematic V-past' =
'we talked'
West Circassian -śa-śa- 'fall-fall' = 'to
Fall (as of leaves)'</p> <p>*-q'a-V- affix for action of intimate
concern to the speaker
*-x- iterative
*-q^wa 'excess'
Ubykh -aay- 'again, finally'
Circassian -z- stative or accomplished
past participle with past pt.
Ubykh -n dynamic present
Ubykh 3rd plural -na-</p> <p>Abaza optative of self-interest
<i>s-č'a-n-da</i> 'I-eat-dep.-middle' = 'O, if
I could eat!'
*-q'a past
*-əy- optative, concessive
*-y- present
-ra optional present</p> <p>-š- future
*-šxō > Proto-Circassian *-šx^wə
*ǵ(a) > Proto-Circassian *q'(a)</p> |
|---|---|

Colarusso derives the augment from Proto-Pontic *ǵ(a) '(in) hand', which was "originally an independent adverb before the verb denoting accomplishment of action".

Colarusso (1992a:40—42) continues by presenting an alternative explanation for certain stem patterns to that offered by Benveniste’s theory of the Proto-Indo-European root (cf. Benveniste 1935:147—173). While Colarusso’s views on stem patterning accurately describe what is found in Northwest Caucasian, they are a poor fit for Proto-Indo-European.

21.5. LEXICAL EVIDENCE FOR CONTACT BETWEEN PROTO-INDO-EUROPEAN AND NORTHWEST CAUCASIAN

Colarusso completes his study (1992a:42—48) by listing twenty possible cognates (“conventional cognates”) between Proto-Indo-European and Northwest Caucasian. Over half of these alleged “cognates” are not convincing. Colarusso subsequently proposed additional “cognates” (Colarusso 2003), and I have also proposed a substantial number of possible lexical comparisons (Bomhard 2019a). Altogether, there are enough good comparisons to demonstrate that there must have been prolonged and substantial contact between Proto-Indo-European and Northwest Caucasian. The following is a complete list of the lexical comparisons between Proto-Indo-European and Northwest Caucasian that have been gathered to date (this list includes several comparisons proposed by Colarusso as well as those listed in Chapter 13, §13.2 of this book):

As indicated above, the Proto-Indo-European forms given in the following lexical parallels are reconstructed in accordance with the Glottalic Model of Proto-Indo-European consonantism (for specifics on the Glottalic Theory, cf. Bomhard 2016a, Salmons 1993, and especially Gamkrelidze—Ivanov 1995.1:5—70).

It should be noted that, while investigating possible lexical parallels between Proto-Indo-European and Northwest Caucasian, new interpretations regarding a number of existing Indo-European etymologies presented themselves. These are discussed in detail below.

The following lexical parallels are arranged by semantic fields, on the model of Carl Darling Buck’s *A Dictionary of Selected Synonyms in the Principal Indo-European Languages* (1949).

I. Particles

1. (1) Proto-Indo-European **ʔen-* ‘in, into, among, on’ (**ʔ* = **ʔ_l*): Greek *ἐν*, *ἐνί*, *ἐνί* ‘in, on, among, into, and besides’; Latin *in* (Old Latin *en*) ‘in, on, among, into, on to, towards, against’; Oscan *en* ‘in’; Old Irish *ini-*, *en-*, *in-* ‘in, into’; Welsh *in* ‘in’; Breton *en* ‘in’; Gothic *in* ‘in, into, among, by’, *inn* ‘into’; Old Icelandic *í* ‘in, within, among’, *inn* ‘in, into’; Old English *in* ‘in, on, among, into, during’, *inn* ‘in’; Old Frisian *in* ‘in’; Old Saxon *in* ‘in’; Old High German *in* ‘in’; Old Prussian *en* ‘inside, within’; Old Church Slavic *vb(n)* ‘in(to)’. (2) Proto-Indo-European locative singular ending **-n*: Greenberg (2000:150) considers various evidence for a locative ending in **-n*. The most convincing evidence he cites is the Vedic pronominal locatives *asmín* ‘in that’, *tásmín* ‘in

this', and *kásmin* 'in whom?'. In these examples, the pronoun stem has been enlarged by an element *-sm(a)-*, to which a locative ending *-in* has been added. Since the final *-n* is missing in the cognate forms in Iranian, Burrow (1973:271) considers this to be a secondary formation, unique to Sanskrit. However, as Greenberg rightly points out, the Vedic forms can be compared with Greek pronominal datives in *-i(v)* such as Lesbian ἄμμιν, ἄμμι 'to us'. Benveniste (1935:87—99) also explores locative forms in *-n* in Indo-European — he (1935:88) cites the following examples from Sanskrit: *jmán*, *kṣāmán* 'in the earth', *áhan* 'on [this/that] day', *udán* 'in the water', *patan* 'in flight', *āsán* 'in the mouth', *śīrśán* 'in the head', *hemán* 'in winter', *akṣán* 'in the eye'.

Northwest Caucasian: (1) Common Abkhaz **nə* locative: South Abkhaz *a-nə-z-aa-ra* 'to be (on something)'. (2) Common Abkhaz locative **nə*, **-n-*. (3) Common Abkhaz *-nə* 'place, country' in, for example: Abzhywa *aps-nə* 'Abkhazia'; Sadz *aps-nə* 'Abkhazia'; Ahchypsy *aps-nə* 'Abkhazia'.

2. Proto-Indo-European **ǵey-th-* 'then, next' (**ǵ = *ǵ₁*) (only in Greek): Greek εἴτα (Ionic, Boeotian, Messenian εἴτεν) 'and so, therefore, accordingly; then, next', ἔπ-εἰτα (Ionic, Doric ἔπ-εἰτε(v)) 'thereupon, thereafter, then; afterwards, hereafter'.

Northwest Caucasian: Common Abkhaz **ajta* 'again': South Abkhaz *ajta* 'again'; Abaza / Tapanta *jata-r-k'a-š* 'again'.

3. Proto-Indo-European **ǵo-p^hh(-i)* 'in front of, before, towards' (**ǵ = *ǵ₁*; **h = *ǵ₄*): Latin *ob* 'towards; about, before, in front of, over; for, because of, by reason of', *op-* in *optimus* 'best' (< 'foremost'); Venetic *op* (< **opi*) 'because of, for'; (?) Oscan **úp**, *op* (preposition with ablative) 'at, near, close to'.

Notes:

1. The above forms are sometimes derived from Proto-Indo-European **ǵep^hi/*ǵop^hi* 'at, by', but this seems unlikely given the semantics of the Latin and Venetic forms, which point instead to 'in front of, before, towards' as the base meaning of their Proto-Indo-European ancestor (cf. Ernout—Meillet 1979:454; Untermann 2000:799—800).
2. The position of Venetic is uncertain. Some scholars have stressed the features it shares with the Italic languages, while others have stressed the features it shares with the Celtic languages. Still others consider Venetic to be an independent branch of Indo-European.
3. Oscan **úp**, *op* (preposition with ablative) 'at, near, close to' may belong here or it may be a derivative of Proto-Indo-European **ǵep^hi/*ǵop^hi* 'at, by' (cf. Untermann 2000:800).
4. As in Northwest Caucasian, the above Proto-Indo-European form is in all likelihood a combination of **ǵo+p^hh(-i)*. The second component, namely, **p^hh(-i)*, is preserved in the following: (1) Proto-Indo-European (extended

form) **p^heh-s-* [**p^hah-s-*] (> **p^hās-*) ‘to puff, to blow; to reek (of), to smell (of)’ (Slavic only) (**h* = **₂₄*): Russian *paxnúť* [пахнуть] ‘to puff, to blow’, *páxnūt’* [пахнут] ‘to smell (of), to reek (of)’; Czech *páchnouti* ‘to be fragrant’; Polish *pachnąć* ‘to smell (of)’; (2) perhaps also: Proto-Indo-European (extended form) **p^heh-k-* [**p^hah-k-*] (> **p^hāk-*) ‘face, surface’ (Indo-Iranian only) (**h* = **₂₄*): Sanskrit *pā́ja-h* ‘face, surface’; Khotan Saka *pāysa-* ‘surface’. All of these forms can be derived from an unattested Proto-Indo-European root **p^heh-* [**p^hah-*] ‘nose, face’ (> ‘front, beginning’, as in Northwest Caucasian [below]). It is on the basis of these forms that a second laryngeal (**h*) is reconstructed in **₂o-p^hh(i)-* ‘in front of, before, towards’.

Northwest Caucasian:

- A. Common Abkhaz **a+pə* ‘before, in front’ (**pə* ‘nose’) in: (1) Common Abkhaz Common Abkhaz **á+pə-ǰ’a* ‘at the front, earlier, at the beginning’; (2) **a+pə-ǰ’a* ‘earlier, previously, before’; (3) Common Abkhaz **a+p-qá* ‘ahead, before, earlier; at first’; (4) Common Abkhaz **pə-n-é’a* (< **pə* ‘nose’, **-n-* locative, **-é’a* ‘nose’ > Abaza / Tapanta *pánc’a* ‘nose’; Abkhaz *a-pánc’a* ‘nose’; Ashkharywa *a-pánc’a* ‘nose’. Cf. Bomhard 2019a:42—43, no. 40.
 - B. Ubykh *fač’á* ‘nose, tip’.
 - C. Circassian: (1) Proto-Circassian **p^ha* ‘nose, front, beginning’: Bžedux *p^ha* ‘nose, front, beginning’; Kabardian *pa* ‘nose, front, beginning’; (2) Proto-Circassian **p^ha* in **nap^ha* ‘face’: Bžedux *nāp^ha* ‘face’; Kabardian *nāpa* ‘face’.
4. Proto-Indo-European **₂ot^h(i)-* ‘back, away (from)’ (**₂* = **₂₁*): Lithuanian (pref.) *at-* ‘back’; Latvian (pref.) *at-* ‘back’; Old Prussian (pref.) *at-*, *et-* ‘back, away’; Old Church Slavic (prep.) *otъ* ‘from’; Russian (prep. with gen.) *ot(o)* [ot(o)] ‘from, out of, for, against’; Czech (prep.) *od(e)* ‘from, away from’. Note: The Balto-Slavic forms are usually compared with the following, all pointing to Proto-Indo-European **₂et^hi*, with a wide range of meanings in the various daughter languages: Sanskrit *áti* ‘beyond, over; very, exceedingly’; Old Persian *atīy-* ‘beyond, across’; Avestan *aiti* ‘over, back’; Greek *ἔτι* ‘moreover, further, still’; Gaulish *eti* ‘also, further’; Latin *et* ‘and’; Gothic *ip* ‘but’.

Northwest Caucasian: Common Abkhaz **áta-* in **áta-k’ə* ‘to answer, to respond’ (**k’ə* = ‘to catch, to grab, to hold’); South Abkhaz *ata-k’-ra* ‘to answer, to respond’.

Notes:

1. Chirikba (1996b:4) does not give a meaning for **áta-* — it may have been something like ‘back, away (from)’.
2. Assuming semantic development as in Gothic *and-haffjan* ‘to answer’ (*and-* ‘along, through, over’; *anda-* ‘towards, opposite, away from’ + **haffjan* ‘to

lift' [< Proto-Indo-European **k^hap^h-* 'to seize, to grasp, to hold', preserved as such in Gothic **haftjan* 'to hold fast'; cf. Latin *capiō* 'to take, to seize']).

5. Proto-Indo-European **ṛoy-wo-* 'one, a certain one, the same one' (**ṛ = *ṛ₁*): Sanskrit *evá* 'so, just so, exactly so; like; indeed, truly, really; just, exactly, very, merely, only, even, at the very moment, immediately, scarcely, still, already, etc.'; Avestan *aēva-* 'one; (adv.) thus, so'; Old Persian *aiva-* 'one'; Greek *οἷος* 'alone, only, single; the only one'; Tocharian B *-aiwenta* 'group' (?) (only in compounds).

Northwest Caucasian: Common Abkhaz **ajə-wa* 'part of something, example, similar, like' (**ajə-* reciprocal prefix, **wa* 'similar'): Bzyp *ajə-wa* 'part of something, example, similar, like'; Abzhywa *aj-wa* 'part of something, example, similar, like'. Note also: Common Abkhaz **aj-pšə* 'like, as, similar' (**aj-* 'together', **pšə* 'to look'); South Abkhaz *ajpš* 'like, as, similar'; Ashkharywa *ajpš-nə* 'like, as, similar'.

6. Proto-Indo-European **ḥiō-* (prefix) 'near, near to, close to, towards' (**ḥi = *ḥ₃*): Sanskrit *ā-* (prefix) 'near, near to, towards, from all sides, all around', *ā* (separable adverb) 'near, near to, towards; thereto, further, also, and', *ā* (separable preposition with accusative or ablative) 'near to, up to, to, as far as'; (with ablative) 'away from, from; out of, of, from among'; (with locative) 'in, at'; Greek (prefix) *ὀ-* 'close by, near, with'.

Northwest Caucasian: Common Abkhaz **ḥa-* (< **ḥi₃a-* < **ḥa-*) 'hither, near to' in, for example, **ḥa-ś-k''a* 'recently, nearby': Bzyp *aa-śk''á* 'recently, in the nearby', *áa-śk''a-ra* 'to move closer (hither)'; Abzhywa *aa-sk''á* 'recently, in the nearby', *áa-sk''a-ra* 'to move closer (hither)'.

Note: According to Chirikba (1999:157): "... for Proto-Circassian I reconstruct the voiced pharyngeals **ḥ*, **ḥ^w*. In my view, in Common Circassian and in Ubykh they merged with the uvular **ɣ*, **ɣ^w* [note: Kuipers writes **ḡ*, **ḡ^w*], while in Common Abkhaz they changed into **ḥ*, **ḥ^w* (i.e. the weakened variants of **ḥ*, **ḥ^w*)." A similar development for **ḥi₃* (= **ḥ₃*) can be posited for Post-Anatolian Proto-Indo-European (cf. Bomhard 2018.1:72): **ḥi₃ > *ḥ > *h > *Ø* initially before vowels (except in Pre-Proto-Armenian, where **ḥi₃* [and **ḥh* (= **ḥ₂*)] appears as *h* initially before vowels, as illustrated by the following example: Proto-Indo-European **ḥi₃owī-s* 'sheep' > Armenian *hov-iw* 'shepherd', but Sanskrit *ávi-h* 'sheep'; Greek *οἷς*, *οἷς* 'sheep'; Latin *ovis* 'sheep'; etc.) — **ḥi₃*, however, is preserved initially before vowels in the Anatolian Indo-European daughter languages: Hittite (nom. sg. or pl. ?) *ḥa-a-u-e-eš* 'sheep'; Luwian (nom. sg.) *ḥa-a-ú-i-iš* 'sheep'; Hieroglyphic Luwian *hawis* 'sheep'; Lycian *ḫava-* 'sheep'.

7. Proto-Indo-European **bhē/*bhō* emphatic particle: Gothic *ba* (encl. ptc.) ‘if, even though’; Avestan *bā* ‘truly’; Greek *ὅ* ‘as, like as’; Lithuanian *bà* ‘yes, certainly’; Old Church Slavonic *bo* ‘for’; Russian (dial.) *bo* [бо] ‘if, for, because’.

Northwest Caucasian:

- A. Common Abkhaz **ba* interrogative particle: South Abkhaz *ba* interrogative particle used in echo-questions, as in *d-aá-j-t* ‘he came’ ~ *d-aá-j-t’ ba?* ‘did he?’ // ‘are you saying that he has come?’; it also occurs, for example, in *j-abá* ‘where?’ (< *j(ə)* ‘it’ + **a* deixis of place + **ba* interrogative element) and *j-an-bá* ‘when?’ (< **an* ‘when’ + **ba* interrogative element).
- B. Ubykh *-ba* verb suffix indicating uncertainty.
8. Proto-Indo-European **ghi-* enclitic particle of unknown meaning: Sanskrit *hi* enclitic particle: ‘for, because, on account of; assuredly, certainly; indeed’; Greek *-χι* in: *οὐ-χί*, *μή-χι* ‘not’, *ναί-χι* ‘yea, verily; aye, yes’.

Northwest Caucasian:

- A. Common Abkhaz **-g’ə* ‘and, even, too’: Abkhaz *-g’ə* ‘and, even, too’, as in *wəj-g’ə* ‘he/she too’.
- B. Ubykh *-g’ə* enclitic particle.
9. Proto-Indo-European **Heh_h* - (> **ā-*) ‘to, towards, up to, in the direction of’ (Indo-Iranian only) (**h_h* = **₂*): Sanskrit *ā-* as a prefix to verbs, *ā-* indicates movement to or towards; as a separable adverb, *ā* indicates ‘near, near to, towards; thereto, further, also, and; especially, even’; as a separable preposition with accusative or ablative, *ā* indicates ‘near to, up to, to, as far as’; Old Persian *ā* ‘to’; Avestan *ā* ‘hither, towards’; Khotan Saka (preverb) *ā-* ‘towards’. For more information, cf. Mayrhofer 1986—2001.1:157—158.

Northwest Caucasian: Common Abkhaz **ač’ə* (postposition) ‘to, in the direction of’: South Abkhaz *ač’* (postposition) ‘to, in the direction of’; Abaza / Tapanta *ač’ə-la* (postposition) ‘to, in the direction of’.

10. Proto-Indo-European **hen-* [**han-*]/(**h_h-*) in **hen-t^hero-* [**han-t^hero-*], **hen-yo-* [**han-yo-*] ‘other’ (**h* = **₂*): Sanskrit *ántara-h* ‘different, other, another’, *anyá-h* ‘other, different’; Avestan *anyō* ‘other’; Khotan Saka *aña-* ‘other’; Gothic *anþar* ‘other, second’; Old English *ōþer* ‘other, second; one of two’; Old Frisian *ōther* ‘second one (of two)’; Old High German *andar* ‘other, different, second’ (New High German *ander*); Lithuanian *añtras* ‘other, second’; Old Prussian *antars* ‘second, other’.

Notes:

1. Some scholars consider these forms to be derived from Proto-Indo-European **₂eno-/no-* demonstrative pronoun: ‘this, that’ (see

above), while others consider them to be derived from a separate stem. Here, the second alternative is favored.

2. The bare stem may be preserved in Greek in the conditional particle *ǎv* ‘if, whether’.

Northwest Caucasian:

- A. Common Abkhaz **a-* in: (1) Common Abkhaz **a-čá* ‘other’: South Abkhaz *ačá* ‘other’; Abaza / Tapanta *ačá* ‘other’; Ashkharywa *ačá* ‘other’; Bzyp (indef. sg.) *ačá-k* ‘other’; (2) Common Abkhaz **a-g’ǵ-j(ǵ)* ‘another, the other’ (**a*, **jǵ* deictics, **g’ǵ* ‘and’): South Abkhaz *ag’ǵj* ‘another, the other’; Abaza / Tapanta *ag’ǵj* ‘another, the other’; (3) Common Abkhaz **d-ačá* ‘other, another’: South Abkhaz *dačá* ‘other, another’; Ashkharywa *dačá* ‘other, another’; Abaza / Tapanta *dačá* ‘other, another’.
- B. (?) Proto-Circassian **ha* ‘that’: Bžedux *ā-r* ‘that’; Kabardian *ha-r* ‘that’.

Note: Proto-Indo-European **ŋ* is reflected as **a* in Northwest Caucasian.

11. Proto-Indo-European **hew-* [**haw-*] ‘and, but, also’ (**h* = **ǵ₄*): Gothic *auk* ‘but, also’; Old English *ēac* ‘and, also’; Latin *aut* ‘either...or’, *au-tem* ‘but, on the other hand, indeed’; Oscan *aut* ‘but, or’; Greek *αὔ* ‘again, on the contrary’.

Northwest Caucasian: Proto-Circassian **hawa* ‘but’: Kabardian *hawa* ‘but’.

12. Proto-Indo-European **-k’e* particle of unknown meaning: Greek *γε* (Doric *γα*) enclitic particle, serving to call attention to the word or words which it follows, by limiting or strengthening the sense — added to the 1st sg. personal pronoun: *ἐγὼ γε* (Laconian *ἐγὼ γα*), *ἐμοί γε*, also added to demonstrative pronouns: *κεῖνός γε*, *τοῦτό γε*, etc. and (rarely) to interrogative pronouns: *τίνα γε*; Gothic *-k* added to the 1st and 2nd sg. personal pronouns: (acc. sg.) *mi-k* (< **me+k’e*) ‘me’, (acc. sg.) *þu-k* (< **t^hu+k’e*) ‘you’; Tocharian B *-k(ä)* strengthening particle, B *-ke* intensifying particle; Hittite *-k* added to the 1st and 2nd sg. personal pronouns: (acc. sg.) *am-mu-uk* ‘me’, (acc. sg.) *tu-uk* ‘you’. Note: Adams (2013:166) prefers derivation of Tocharian B *-k(ä)* from Proto-Indo-European **-g^(h)u*, though he notes that the etymology is uncertain and lists other possibilities, including the one suggested here.

Northwest Caucasian:

- A. Common Abkhaz **-q’a* directional postposition ‘to/in the place’ in, for example, **a-q’a*: South Abkhaz *áq’a-ra* ‘this much, about (of size, quantity)’, *z-aq’á* ‘how much (relative and interrogative)’; Ashkharywa *áq’a-ra* ‘this much, about (of size, quantity)’; Abaza / Tapanta *áǵa-ra* ‘this much, about (of size, quantity)’, *z-ǵa-rá(-ha)* ‘how much (relative and interrogative)’, locative prefix *q’a-* in *q’a-č’oǵ-ra* ‘to hide’.

- B. Common Circassian **q'ə-* local preverb and **q'a* local element, found in **lə-q'a* 'trace', **q'a-g'ə* 'courtyard', **g'ə-q'a* 'emplacement, place where something is placed'.
- C. Ubykh **q'a* 'place', found in **q'a:la* 'place' (only used in compounds, such as *bləq'a:la* 'in seven places'), *la-q'a* 'trace' (cf. Common Circassian **lə-q'a* 'trace'), *q'a-ʒ* 'to approach a place' (*-ʒ* 'to reach').

Note: For a detailed discussion of the Northwest Caucasian forms cited above, cf. Chirikba 1996a:218.

An alternative comparison may be with the following Northwest Caucasian forms:

- A. Common Abkhaz **-q''a* in **-č''-q''a* affirmative suffix: 'precise, accurate'.
- B. Common Circassian **-q'a* affirmative suffix in **s'-q'a* 'to know': Šapsegh *s'q'ä* 'to know'.

Note: Chirikba (1996a:219—220) reconstructs Common Northwest Caucasian **-q''a* affirmative suffix.

- 13. Proto-Indo-European **mē* negative/prohibitive particle: 'no, not': Sanskrit *mā* prohibitive particle: 'not, that not'; Armenian *mi* prohibitive particle: 'do not!'; Greek μή 'not'; Tocharian A/B *mā* 'not, no' (simple negation and prohibition); Albanian *mos* (< **mē+k^{wh}e*) prohibitive particle: 'do not!'.

Northwest Caucasian:

- A. Proto-Circassian **mə-* negative prefix: Bžedux *mə-* negative prefix; Kabardian *mə-* negative prefix.
- B. Common Abkhaz **m(ə)-* ~ **m(a)-* negative prefix, in, for example, (reduplicated) **ma(-wə)-ma-wə* 'no' (< **ma* negation + **-wə* adverbial suffix): South Abkhaz *mamáw*, *mawmáw* 'no'; Abaza / Tapanta *mamáw*, *mmaw* 'no'.
- C. Ubykh *-m(a)-* negative affix.

- 14. Proto-Indo-European **mo-* enclitic particle: 'and, but' (only in Anatolian): Hittite *-ma* enclitic clause conjunctive particle: 'and, but'; Palaic *-ma* enclitic particle: 'but'; Lycian *-me* sentence particle.

Northwest Caucasian: Common Abkhaz **ma* 'and, but; either...or': Abaza / Tapanta *ma* 'but'; South Abkhaz *ma* 'or, or else', *ma ... ma* '(n)either ... (n)or'.

- 15. Proto-Indo-European **-mos* dative-ablative plural ending, **-mi(s)* instrumental plural ending (only in Germanic and Balto-Slavic). For more information, cf. Leskien 1876; Prokosch 1939:240—241.

Northwest Caucasian: Common Northwest Caucasian **-ma* instrumental suffix (cf. Chirikba 1996a:304). Note: Chirikba compares the following Circassian and Ubykh instrumental suffixes with Common Abkhaz **ma* ‘hand’. However, this comparison is doubtful:

- A. Proto-Circassian **-ma* instrumental suffix.
- B. Ubykh *-ma* instrumental suffix.

16. Proto-Indo-European (sentence particle) **ne-/no-* ‘well, so; than, as’: Sanskrit *ná* ‘like, as’; Greek (enclitic particle) *-ve*; Armenian *na* ‘then’; Latin *nam* ‘certainly, for, well’, (enclitic particle) *-ne* ‘then?; whether’; Lithuanian *nė*, *nėgi*, *nėgu* ‘than’; Latvian *ne* ‘than’; Old Church Slavic **ne* in *neže* ‘than’; Czech *než* ‘than’. Note also: Tocharian A (a particle which characterizes certain indefinite and relative pronouns) *-ne*, B ([intensifying] particle) *nai* ‘indeed, then, surely’; Lithuanian *nei* ‘as’; Greek (affirmative particle) *vai* ‘really, yes, truly’.

Northwest Caucasian: Common Abkhaz **na-* ‘thither’ in: (1) South Abkhaz *nas* (< **ná-sə*: **na-* ‘thither’, **sə* ‘to go’) ‘then, afterwards’ (see below); (2) Bzyp *naq* (< **ná-q’a*) ‘thither’, *nač’ə* (< **n-a+č’ə*: **na-* ‘thither’, **a+č’ə* directional postposition) ‘there’; (3) Common Abkhaz **a-ná* ‘there’: South Abkhaz *aná* ‘there’; Abaza / Tapanta *aná-ʔa* ‘there’; (4) Ashkharywa *anas* ‘yes’ (with the interrogative connotation ‘well, then’).

17. Proto-Indo-European **ne/o-+*se/o-* ‘then, for, because’: Hittite *na-aš-šu*, *na-aš-šu-ma*, *na-aš-ma* ‘either, or’; Latin *nisi* ‘if not, unless; except that, save, only; but, than; except, because’; Lithuanian *nės*, *nės*, *nėsà* ‘then, namely; for, because’.

Note: This etymology was proposed by Mann (1984—1987:839), who reconstructs Proto-Indo-European **nes-*. However, in each case (Latin, Lithuanian, and Hittite), we are clearly dealing with a compound form (as in Common Abkhaz **ná-sə* cited below). For more information on Hittite *na-aš-šu*, cf. Puhvel 1984— .7:62—64; Kloekhorst 2008:596—597 (Hittite *na-aš-šu* < **no-sue*), and, for Latin *nisi*, cf. Walde 1927—1932.II:170; Ernout—Meillet 1979:441—442 (Latin *nisi* < **ně sī*); Sihler 1995:79 (Old Latin *ne sei* ‘unless’). According to Endzelin (cited by Fraenkel 1962—1965.II:496), Lithuanian *nės*, *nės*, *nėsà* is from **ne est* ‘is it not so?’, as in French *n’est-ce pas?* See also Smoczyński 2007.I:422—423.

Northwest Caucasian: Common Abkhaz **ná-sə* ‘then, afterwards’ (**na* ‘thither’, **sə* ‘to go’): South Abkhaz *nas* ‘then, afterwards’; Ashkharywa *nas*, (Kuv) *anas* ‘yes’ (with the interrogative connotation ‘well, then’).

18. Proto-Indo-European **pher-/p^hor-/p^hγ-* base of prepositions and preverbs with a wide range of meanings such as ‘in front of, forward, before, first, chief, forth, foremost, beyond, etc.’: Sanskrit *pāraḥ* ‘far, distant’, *purāḥ* ‘in front, forward, before’, *purati* ‘to precede, to go before’, *prā* ‘before, in front’, *prāti* ‘towards, near to, against’, *pratarām* ‘further’, *prathamā-ḥ* ‘foremost, first’; Greek *πέπᾱν*, *πέπῃν* ‘across, beyond, on the other side’, *παρά*, *παράι* ‘beside’, *πάρως* ‘before’, *πρό* ‘before’, *πρότερος* ‘before, in front of, forward’, *πρῶτος* ‘first, foremost’, *πρόμος* ‘chief, foremost, first’, *πρόκα* ‘forthwith’, *πρός*, *πρὸς* ‘from’; Latin *per* ‘through, along, over’, *prae* ‘before, in front’, *prior* ‘former, first’, *prīmus* ‘first, foremost’, *prō* ‘before, in front of’; Gothic *faur* ‘for, before’, *frauja* ‘master, lord’, *fairra* ‘far’, *faura* ‘before, for, on account of, from’, *fram* ‘from, by, since, on account of’, *framis* ‘further, onward’, *frumists* ‘first, foremost, best, chief’, *fruma* ‘the former, prior, first’, *frums* ‘beginning’; Old Icelandic *for-* ‘before’, *ffarri* ‘far off’, *fram* ‘forward’, *fyr* ‘before, sooner’, *fyrstr* ‘first’; Old English *feorr* ‘far’, *feorran* ‘from afar’, *for*, *fore* ‘before’, *forma* ‘first’, *fram* ‘from’, *frum* ‘first’, *fyrst*, *fyrest* ‘first’, *fyrmost* ‘first’; Old Frisian *for* ‘before’, *fara*, *fore* ‘before’, *ferest* ‘first’, *forma* ‘first’, *vorsta*, *fersta* ‘prince’; Old Saxon *for*, *fur* ‘before’, *for(a)*, *far* ‘before’, *forma* ‘first’, *furi* ‘before’, *furist* ‘first, foremost’, *furisto* ‘prince’; Old High German *furi* ‘before, for’, *fora* ‘before’, *furist* ‘first’, *fir(i)-* ‘opposite’; Lithuanian *prō* ‘through, past, by’, *priē* ‘at, near, by’, *priēš* ‘against’; Hittite *pa-ra-a* ‘forth’, *pí-ra-an* ‘before, forth’; Luwian *pár-ra-an* ‘before, in front’, *pa-ri-ya-an* ‘beyond; exceedingly, especially’; Lycian *przze/i-* ‘front, foremost’, *pri* ‘forth; in front’.

Northwest Caucasian: Common Abkhaz **pə-ra* ‘through’: South Abkhaz *a-par-ḥ^oa*, *a-pəra-ḥ^oa* ‘apron’ (< *a-pəra-ḥ^oa-ra* ‘to tie up through’); Abaza / Tapanta *pra-psá* ‘curtain; apron’ (< **pəra-psa* ‘to throw through’).

19. Proto-Indo-European **phos-* ‘behind, after; afterwards, subsequently, at a later time’: Latin *post* (adv.) ‘behind, in the rear; after, afterwards, subsequently; shortly afterwards; (prep.) behind, after’; Sanskrit (adv.) *paścā* ‘being behind, posterior, later; afterwards; behind, at the back, after; at a later time, subsequently, at last’; Greek (dial.) *πός* ‘at, to’; Lithuanian *pàs* ‘near, at, by, to, with’; Old Church Slavic *pozdě* ‘late’; Russian *pózdij* [поздний] ‘late, tardy’; Tocharian B *päst* (unstressed, and later, byform of *pest*) ‘away, back’, *postām* ‘finally, afterwards; later’, *postanu* ‘later, latter; last’.

Northwest Caucasian:

- A. Proto-Circassian **p^hasa* ‘early, long ago’: Bžedux *p^hāsa* ‘early, long ago’; Kabardian *pāsa* ‘early, long ago’.
B. Common Abkhaz **pāsa*: South Abkhaz *a-pāsa* ‘early, earlier’; Abaza / Tapanta *pāsa* ‘early, earlier’.

20. Proto-Indo-European **sem-/som-* ‘together, together with; one’ (originally ‘to gather together’): Sanskrit *sa* (< **sṃ-*) ‘with, together with, along with’, *sám*

‘with, together with, along with, together, altogether’, *sa-trá* ‘together, together with’, *sámana-h* ‘meeting, assembly, amorous union, embrace’, *samūbhá-h* ‘heap, collection’.

Northwest Caucasian: Proto-Circassian **sama* ‘heap’: Bžedux *sāma* ‘heap’; Kabardian *sāma* ‘heap’.

21. Proto-Indo-European ablative singular ending **-thos*, which has survived in relic forms in Sanskrit, Latin, Greek, and perhaps Armenian (cf. Sihler 1995: 246—247). Sihler gives the following examples: Sanskrit *-tas* in *agra-tás* ‘in front’ (*ágra-* ‘point, beginning’); Latin *-tus* in *in-tus* ‘within’, *fundi-tus* ‘from the ground’; Greek *-τος* in *év-tós* ‘within’, *ék-tós* ‘outside’. Another example is Sanskrit *mukhatás* ‘from the mouth’.

Northwest Caucasian: Common Abkhaz **ta* ‘from inside out; from below, upwards’: Abaza / Tapanta *t-* in, for example, *t-ga-ra* ‘to drag something out’ (cf. *ga-rá* ‘to carry, to bring, to take’).

22. Proto-Indo-European **t’oĥh-* (> **t’ō-*) (adv.) ‘also, too, in addition to’ (**ĥh* = **ǵ₂*): Old English *tō* (prep.) ‘to, into, too’; (adv.) ‘besides, also, too; thereto, towards, in the direction of; in addition to, to such an extent; moreover, however’; Old Frisian *tō* (prep./adv.) ‘to, until, for, against; in, at, on, according to’; (adv.) ‘too’; Old High German *zuo, zua, zō* (prep.) ‘to, towards, up to, unto; at, on, in’; (adv.) ‘too, too much’ (New High German *zu*); Latin *dō-* in *dōnec* (< **dō-ne-que*) ‘as long as, while; until, up to the time at which’; Lithuanian *da, do* (prep./prefix) ‘yet, still’; Old Church Slavonic *do* (prep. gen.) ‘up to, until’; Russian *do* [до] (prep. gen.) ‘to, so far, as far as, till, until’; Czech *do* (prep.) ‘into, up to’; Serbo-Croatian (prep.) *do* ‘to, until’.

Northwest Caucasian: Common Abkhaz **c’a-há* ‘more than’: Ashkharywa *c’aĥa* ‘more than’.

Note: Common Abkhaz **c’* = Proto-Indo-European **t’*.

II. Pronoun Stems, Deictic Stems

23. Proto-Indo-European demonstrative stem **ǵe-/ǵo-*, **ǵey-/ǵoy-/ǵi-* (< **ǵe-/ǵo-+y/i-*) ‘this, that’ (**ǵ* = **ǵ₁*): Hittite enclitic demonstrative particle (nom. sg.) *-aš*, (acc. sg.) *-an*, (n. sg.) *-at* ‘he, she, it’; (dat. sg.) *e-di, i-di, e-da-ni* ‘to or for him, her, it’; Sanskrit *ayám* ‘this’ (gen. sg. m./n. *a-syá, á-sya*; f. *a-syáh*), *idám* ‘this’, (f.) *iyám* ‘she, this’, *á-taḥ* ‘from this, hence’ (< **e-to-s*), (n.) *e-tát* ‘this, this here’, *ihá* ‘here’, *e-śá* (f. *e-śā*) ‘this’; Old Persian *a-* ‘this’, *aita-* ‘this’, *ima-* ‘this’, *iyam* ‘this’, *idā* ‘here’; Avestan *a-* ‘this’, *aētaṭ* ‘this’, *ima-* ‘this’, *iḍa* ‘here’; Latin *is, ea, id* ‘he, she, it; this or that person or thing’; Oscan *eiso-* ‘this’; Old Irish *é* ‘he, they’, *ed* ‘it’; Gothic anaphoric pronoun *is* ‘he’, *ita*

‘it’; Old Icelandic relative particle *es* (later *er*) ‘who, which, what’; Old Saxon *et, it* ‘it’; Old High German *er, ir* ‘he’, *ez, iz* ‘it’; Lithuanian *jis* (< **is*) ‘he’.

Northwest Caucasian:

- A. Common Abkhaz **a* demonstrative pronoun: ‘this’ (only in compounds) (this is but a sampling): (1) Common Abkhaz **a-bá* ‘this’; (2) Common Abkhaz **a-bá-tə* ‘these’; (3) Common Abkhaz **a-ba-ná* ‘there’; (4) Common Abkhaz **a-ba-rá* ‘here’; (5) Common Abkhaz **a-bá-ra-t(ə)* ‘these’; (6) Common Abkhaz **a-ba-rə-jə* ‘this’; (7) Common Abkhaz **á-tə* ‘these’; (8) Common Abkhaz **a-də-na* ‘something, this, that’; (9) Common Abkhaz **á-fia* ‘here (it is)’; (10) Common Abkhaz **a-ma-ná* ‘there’; (11) Common Abkhaz **a-ma-nə-jə* ‘that’; (12) Common Abkhaz **a-ná* ‘there’; (13) Common Abkhaz **a-rá* ‘here’; (14) Common Abkhaz **a-wa* ‘that’; etc.
- B. Ubykh *a-* definite article: ‘the’, also pronominal prefix of the 3rd person singular and plural.

24. Proto-Indo-European demonstrative pronoun **ǵobʰo-* (< **ǵo-+bʰo-*) ‘this, that’ (**ǵ* = **ǵ₁*) (Anatolian only): Hittite (nom. sg.) *a-pa-(a-)aš* ‘that one; he, she, it’, *a-pí-ya* ‘then, there’; Palaic (acc. sg.) *(-)ap-a-an* ‘that one’; Luwian (nom. sg.) *a-pa-a-aš* ‘this (one); he, she, it; they’; Hieroglyphic Luwian (nom. sg.) *á-pa-sa* ‘that (one)’; Lycian (nom. sg.) *ebe* ‘this (one)’; Lydian (nom. sg.) *bis* ‘he’.

Northwest Caucasian: (1) Common Abkhaz **a-bá-* (< **a+ba*) ‘this’ (only in compounds); (2) Common Abkhaz **a-bá-tə* ‘these’; (3) Common Abkhaz **a-bá-n-tə*, **a-ba-ná-tə* ‘those’; (4) Common Abkhaz **a-bá-ša* ‘thus’; (5) Common Abkhaz **a-bá-n(a)*, **a-ba-ná* ‘there’; (6) Common Abkhaz **a-ba-nə-jə* ‘this’; (7) Common Abkhaz **a-bá-ra-t(ə)*, **a-ba-rá-t(ə)* ‘these’; (8) Common Abkhaz **a-bá-r(a)*, **a-ba-rá* ‘here’; (9) Common Abkhaz **a-ba-rá-fia*, **a-bá-fia-r(a)* ‘here’; (10) Common Abkhaz **a-ba-rá-ša* ‘thus, this way’; (11) Common Abkhaz **a-ba-rə-jə* ‘this’; (12) Common Abkhaz **a-ba-wa-ša* ‘thus’; (13) Common Abkhaz **a-ba-wə-jə* ‘this’; (14) Common Abkhaz **a-ba-wá-t(ə)* ‘these’.

25. Proto-Indo-European demonstrative stem **ǵeno-/ǵono* (< **ǵe-+no-/ǵo-+no-*) **ne-/no-* ‘this, that’ (**ǵ* = **ǵ₁*): Sanskrit (instr. sg.) (m./n.) *anéna*, (f.) *anáyā* ‘this, that’; Avestan *ana-* demonstrative pronoun; Latin (conj.) *enim* ‘for; truly, certainly; but then’; Old Icelandic *enn, en, et* ‘the’, *inn, in, it* ‘the’, *hinn, hin, hit* (< **kʰe-+ǵeno-*) ‘the’ (also demonstrative pronoun ‘that; the former, farther, the other’); Armenian *na* ‘that; he, she, it; him, her’, *-n* definite article; Lithuanian *anàs* ‘that’; Old Church Slavic *onъ* ‘he, she, it’; Hittite (nom. sg.) *an-ni-iš* ‘that’.

Northwest Caucasian:

- A. Abkhaz: (1) Common Abkhaz **a-ná* ‘there’; (2) Common Abkhaz **a-ná-y(ə)* ‘that’; (3) Common Abkhaz *á-na-tə, a-ná-tə* ‘those, they’; (4) Common Abkhaz *á-na-ša, a-ná-ša* ‘thus, that way’; (5) Common Abkhaz **an-fia* ‘there, thither’; (6) Common Abkhaz **a-ma-ná-jə* ‘that’ (**a-ma-ná* plus deictic **jə*); (7) Common Abkhaz *a-də-na* ‘something, this, that’ (combination of deictics **a, *də, *na*); (8) Common Abkhaz **a-má-na-t(ə)* ‘those’ (**a-ma-ná* plus plural **-tə*); (9) Common Abkhaz **a-ma-ná* ‘there’ (combination of deictics **a, *ma, *na*).
- B. Ubykh *ana-* pronominal stem found in several isolated forms, such as *anán* ‘there’. Also, *na:-* pronominal prefix of the 3rd person plural: ‘they’.

26. Proto-Indo-European **ǵyo-* relative pronoun stem (**ǵ = *ǵ_l*): Greek ὅς, ἧ, ὅ ‘which’; Phrygian ιός ‘which; this’; Sanskrit *yá-h* ‘which’.

Northwest Caucasian:

- A. Common Abkhaz **ja-* demonstrative and relative/interrogative stem in: (1) Common Abkhaz **ja(-rá)* ‘he (male/human); it (non-human); this, the very same’: Abaza / Tapanta *ja-rá* ‘he; it; this, the very same’; South Abkhaz *ja-rá* ‘he (male/human); it (non-human); this, the very same’; Ashkharywa *ja-rá* ‘he; it; this, the very same’. (2) Common Abkhaz **ja-wá(-ja)* ‘why?’: Bzyp *jawá(j)* ‘why?’; Abaza / Tapanta *jawá* ‘why?’. (3) Common Abkhaz **j-an-b-ák’ə* ‘when?’: Bzyp *j-an-bə-k’ə* ‘when?’; Abaza / Tapanta *j-an-b-ák’ə-w* ‘when?’.
- B. Ubykh *-y* enclitic particle in interrogative sentences (cf. *š’ə-y?* ‘who?’, *waná sá:k’a-y?* ‘what is this?’, etc.). Also *ya-*, *ya:-* verbal prefix of the 3rd person, *yə-* proximate pronoun prefix, *yəná* proximate pronoun.

27. Proto-Indo-European **d^{he}-* deictic particle — only preserved as a deictic suffix in the daughter languages (identical to the following entry): Sanskrit *-dha-* in *ádha, ádhā* (< **ǵe-d^{he}-*) ‘now; then, therefore; moreover, so much the more; and, partly’; Gāthā Avestan *adā* ‘then, so’; Old Persian *ada-* ‘then’; Greek *-θε(v)* in, for example, *πρόσ-θεν* (poetic *πρόσ-θε*) (Doric and Aeolic *πρόσ-θα*) ‘before, in front’, *ὀπίσ-θεν* (also *ὀπίσ-θε*) (poetic *ὀπι-θεν*) ‘behind, at the back’ (for more information, cf. Lejeune 1939).

Northwest Caucasian:

- A. Proto-Circassian (reduplicated) **d(a)da* ‘very, just, exactly’: Bžedux *dada* ‘very, just, exactly’; Kabardian *dəda* ‘very, just, exactly’.
- B. Ubykh *dá* ‘now’.

28. Proto-Indo-European **d^{he}-* deictic particle — only preserved as a deictic suffix in the daughter languages (identical to the preceding entry): Sanskrit *ihá* (< **ǵi-d^{he}-*) ‘here’, *kúha* ‘where?’ (< **k^{whu}-d^{he}-*); Pāli *idha* ‘here’; Avestan *iḍa* ‘here’; Old Persian *idā* ‘here’; Greek *iθā-* in, for example, *iθā-γενής* (Epigraphic *iθα-*

γενής) ‘born from a lawful marriage; aboriginal, indigenous’ (that is, ‘born here’), -θα/-θεν in ἔν-θα ‘there, then; where, when’, ἔν-θεν ‘thence, thereupon, thereafter; whence’; (?) Latin *ibī* (< *ʔi-d^{hey}) ‘there’, *ubī* (< *k^{wh}u-d^{hey}) ‘where’; Old Church Slavic (adv.) *kъde* (< *k^{wh}u-d^{he}) ‘where’. Note: The Latin forms could also be from *ʔi-b^{hey} and *k^{wh}u-b^{hey}, respectively.

Northwest Caucasian: Common Abkhaz **da(-rá)* ‘they’: South Abkhaz *da(-rá)* ‘they’; Ashkharywa *da(-rá)* ‘they’; Abaza / Tapanta *da(-rá)* ‘they’; Sadz *da(-rá)* // *da-r* ‘they’. Note: According to Hewitt (2005:104, §3.3), “Only Abkh-Aba has a full set of personal pronouns, for the sister-languages employ one of their demonstratives (usually 3rd person deictic) in the 3rd person.”

29. Proto-Indo-European **mo-* demonstrative stem (only attested in relic forms in Brittonic Celtic): Welsh *yíma* (poetical *yíman*) ‘here’; Breton *ama*, *amañ*, *-ma*, *-mañ* ‘here’, (Vannetais) *ama*, *amann*, *amenn* ‘here’; Cornish *yma*, *omma*, *-ma*, *-man* ‘here’.

Northwest Caucasian: Proto-Circassian **mə* ‘this’: Kabardian *mə* ‘this’; Bžedux *mə* ‘this’.

30. Proto-Indo-European 2nd singular personal endings: (primary) *-*s-i*, (secondary) *-*s* ‘you’: Sanskrit (primary) *-si*, (secondary) *-s*; Avestan (primary) *-si*, (secondary) *-s*; Hittite (primary) *-ši*, (secondary) *-š*; Greek (primary) *-σι*, (secondary) *-ς*; Old Latin (primary/secondary) *-s*; Gothic (primary/secondary) *-s*; Old Church Slavic (primary) *-si/-ši*; Lithuanian (primary) *-si*. Note: The active primary endings in Proto-Indo-European were derived from the secondary endings through the addition of a particle *-*i* indicating ‘here and now’ to the 1st, 2nd, and 3rd persons singular and the 3rd person plural.

Common Northwest Caucasian **ś^oa* ‘you’ (pl.):

- A. Common Abkhaz **ś^oa(-rá)* ‘you’ (pl.): Bzyp *ś^oa(-rá)* ‘you’ (pl.); Ashkharywa *ś^oa(-rá)* ‘you’ (pl.); Abzhywa *ś^oa(-rá)* ‘you’ (pl.); Abaza / Tapanta *ś^oa(-rá)* ‘you’ (pl.); Sadz *ś^oa(-rá)*, *ś^oa(-r)* ‘you’ (pl.).
B. Proto-Circassian **ś^oa* ‘you’ (pl.); Kabardian *fə* ‘you’ (pl.). Note: Kuipers (1975:31) writes **ś^oa*.

Note: Common Northwest Caucasian **ś^o* is represented as **s* in Proto-Indo-European.

31. Proto-Indo-European **so-* demonstrative pronoun stem: ‘this, that’: Avestan *ha-* demonstrative pronoun stem; Sanskrit *sá-h*, (f.) *sā* (also *sī*) demonstrative pronoun; Greek *ὁ*, (f.) *ἡ* demonstrative pronoun and definite article; Old Latin (m. singular) *sum* ‘him’, (f. singular) *sam* ‘her’, (m. plural) *sōs*, (f. plural) *sās* ‘them’; Gothic *sa*, (f.) *sō* (also *sī*) ‘this, that; he, she’; Old Icelandic *sá*, *sú* ‘that’; Old English *sē* ‘that one, he’, (f.) *sēo* ‘she’; Dutch *zij* ‘she’; Old High

German (f.) *sī, siu* ‘she’ (New High German *sie*); Hittite *ša* connective particle, -še 3rd person singular enclitic pronoun; Tocharian A (m.) *sa-*, (f.) *sā-*, B (m.) *se(-)*, (f.) *sā(-)* demonstrative pronoun.

Northwest Caucasian:

- A. Abkhaz: Adyghe *səd(ā)* interrogative pronoun: ‘what?’.
- B. Ubykh *sá* interrogative pronoun: ‘what?’, *sá:k’a* interrogative pronoun: ‘what?’.
- C. Circassian: Kabardian *sət* interrogative pronoun: ‘what?’; Bžedux *śə-d* interrogative pronoun stem: ‘what?’. Note: The origin of initial *ś-* in Bžedux *śə-d* is unknown.

32. Proto-Indo-European **we-/wō-* ‘you’ (dual and pl.): Sanskrit *vas* ‘you’ (acc. pl.), *vām* (acc.-dat.-gen. dual); Avestan *vā* ‘you’ (nom. dual), *vaēm* (nom. pl.), *vā* (encl. acc. pl.); Latin *vōs* ‘you’ (nom.-acc. pl.), *vestrum* (gen. pl.); Old Church Slavic *vy* ‘you’ (nom. pl.), *vasъ* (acc.-gen.-loc. pl.).

Northwest Caucasian:

- A. Proto-Circassian **wa* ‘you’ (sg.); Bžedux *wa* ‘you’ (sg.); Kabardian *wa* ‘you’ (sg.).
- B. Common Abkhaz **wa(-rá)*: South Abkhaz *wa-rá* ‘you’ (male/human, non-human); Ashkharywa *wa-rá* ‘you’ (male/human, non-human); Abaza / Tapanta *wa-rá* ‘you’ (male/human, non-human).

33. Proto-Indo-European **wo-* in **ʔe-+-wo-/ʔo-+-wo-* demonstrative pronoun: ‘that’ (**ʔ = *ʔ₁*): Sanskrit (gen. dual) *avóh* ‘that’; Avestan *ava-* ‘that, yonder’; Old Persian *ava-* ‘that’; Old Church Slavic *ovъ* ‘someone, someone else, other’ (*ovъ...ovъ* ‘the one...the other’); Old Czech *ov* ‘that’; Polish *ów* ‘that’; Serbo-Croatian *òvāj* ‘that’; Bulgarian *óvi* ‘that’.

Notes:

1. Derksen (2008:384) reconstructs Proto-Indo-European **h₂eu-o-*, with initial **h₂-*. However, I prefer to see the first component as the same found in (1) the Proto-Indo-European demonstrative pronoun **ʔe-/ʔo-*, **ʔey-/ʔoy-/ʔi-* ‘this, that’, (2) the Proto-Indo-European demonstrative pronoun **ʔeno-/ʔono* (< **ʔe-+-no-/ʔo-+-no-*) ‘this, that’, and (3) the Proto-Indo-European demonstrative pronoun **ʔobho-* (< **ʔo-+-bho-*) ‘this, that’.
2. The Proto-Indo-European deictic stem **we-/wo-* may be preserved as a relic form in Tocharian B *wa* ‘therefore, nevertheless’ (unstressed). The underlying Tocharian B form is */wā/*, with long vowel (cf. Adams 2013:624). For the semantics, note Common Abkhaz **wa-śa* ‘thus, this way’ (no. 3 below) and **a-wá-śa* ‘thus, this way’ (no. 4 below).
3. Proto-Indo-European **ʔe-+-wo-/ʔo-+-wo-* ‘that’ and Common Abkhaz **a-wa* ‘that’ (no. 2 below) are formed in exactly the same way.

Northwest Caucasian:

- A. (1) Common Abkhaz **wa* ‘there’: South Abkhaz *wa* ‘there’; Ashkharywa *wa* ‘there’. (2) Common Abkhaz **a-wa* ‘that’ (deictics **a*, **wa*): Abaza / Tapanta *awa* ‘that’. (3) Common Abkhaz **wa-śa* ‘thus, this way’ (deictic **wa*, instrumental suffix **-śa*): Bzyp *wəs* ‘thus, this way’; Abzhywa *wəs* ‘thus, this way’; Ashkharywa *wəsa // was // wəs // wasa* ‘thus, this way’. (4) Common Abkhaz **a-wá-śa* ‘thus, this way’: Ashkharywa *awas // awəs(a)* ‘thus, this way’; Abaza / Tapanta *awás(a)* ‘thus, this way’; (5) Common Abkhaz **wa-q’a* ‘thither, there’ (**wa* ‘this’, **-q’a* directional postposition): South Abkhaz *wáq’a* ‘thither, there’; Ashkharywa *wáq’a* ‘thither, there’. (6) Common Abkhaz **a-wá-q’a* ‘there’: Ashkharywa *awaq’a* ‘there’; Abaza / Tapanta *awá?a* ‘there’. (7) Common Abkhaz **wə-ba-rá* (**wa*, **ba*, **ra*): South Abkhaz *wəbrá* ‘here’. (8) Common Abkhaz **wa-ñia* ‘there’ (**wa*, **ñia*): South Abkhaz *wáñ* ‘there’; Ashkharywa *wañ* ‘there’.
- B. Ubykh *wa-* distant pronoun (always compounded with the following noun): ‘that yonder’, *waná* (**wa*, **na*) independent distant pronoun: ‘that younder’.

III. Family Relationship, Kinship Terms

34. Proto-Indo-European **ǵabh-* ‘father, forefather, man’ (**ǵ* = **ǵ₁*): Gothic *aba* ‘man, husband’; Old Icelandic *aði* ‘grand-father, man’; Faroese *abbi* ‘grand-father’; Old English personal names *Aba*, *Abba*, *Afa*.

Northwest Caucasian: Common Abkhaz **abá* ‘father’: South Abkhaz *ab* ‘father’; Ashkharywa *ába* ‘father’; Abaza / Tapanta *ába/abá* ‘father’. Note also (1) **aba* ‘father’ in Common Abkhaz **aba-psá* ‘stepfather’: Bzyb *áb-psá*, *áabə-psa* ‘stepfather’; Abzhywa *ab-psa* ‘stepfather’; Ashkharywa *aba-psa* ‘stepfather’; Abaza / Tapanta *aba-psá* ‘stepfather’; (2) **ab(a)* ‘father’ in Common Abkhaz **áb-q°ǵ-nda* ‘brother-in-law’: Abzhywa *ábǵ°nda* ‘brother-in-law’; Bzyb *ábǵ°nda* (indef. sg. *bǵ°ǵ-nda-k*) ‘brother-in-law’; Ashkharywa *ábq°nda* ‘brother-in-law’; Abaza / Tapanta *abq°nd* ‘brother-in-law’; (3) **ab(a)* ‘father’ in Common Abkhaz **áb-q°a* ‘father-in-law’: Bzyb *ábǵ°a* ‘father-in-law’; Abzhywa *ábǵ°a* ‘father-in-law’; Ashkharywa *ábq°a* ‘father-in-law’; Abaza / Tapanta *ábq°a* ‘father-in-law’; (4) **abá* ‘father’ in Common Abkhaz **ab-ja-ś’á* ‘uncle (father’s brother)’ (< **abá* ‘father’, **ajaś’á* ‘brother’): South Abkhaz *áb-jaś’a* ‘uncle (father’s brother)’; Ashkharywa *ab-jaś’a* ‘uncle (father’s brother)’; Abaza / Tapanta *ab-aś’a* ‘uncle (father’s brother)’; (5) **abá* in Common Abkhaz **ab-ja-ñ°-ś’á* ‘aunt (father’s sister)’: South Abkhaz *áb-jañ°ś’a* ‘aunt (father’s sister)’; Ashkharywa *ab-añ°ś’a* ‘aunt (father’s sister)’; Abaza / Tapanta *ab-añ°ś’a* ‘aunt (father’s sister)’.

35. Proto-Indo-European **ǵan(n)o-s*, **ǵan(n)i-s*, **ǵan(n)a* ‘mother’ (**ǵ* = **ǵ₁*) (also **na-na-* ‘mother’): Luwian (nom. sg.) *an-ni-iš*, *a-an-ni-iš* ‘mother’; Hittite

(nom. sg.) *an-na-aš* ‘mother’; Palaic (nom. sg.) *an-na-aš* ‘mother’; Lycian (nom. sg.) *ēni* ‘mother’; Lydian (nom. sg.) *ēnaś* ‘mother’; Latin *anna* ‘foster-mother’; Greek (Hesychius) ἀννίς ‘grand-mother’, νάννα, νάννας ‘aunt’; Sanskrit *nanā* familiar expression for ‘mother’.

Northwest Caucasian:

- A. Proto-Circassian **n(a)* ‘mother’: Bžedux *nə*, *yāna* ‘mother’, *nāna* ‘mamma, granny’; Kabardian *hana* ‘mother’, *nāna* ‘mamma, granny’.
- B. Common Abkhaz **anə*: South Abkhaz *an* ‘mother’; Ashkharywa *an* ‘mother’, (indef. sg.) *anə-k*; Abaza / Tapanta *anə* ‘mother’. Note also: (1) **anə* ‘mother’ in Common Abkhaz **an-psa* ‘stepmother’: Bžyp *án-psa* ‘stepmother’; Sameba *ána-psa* ‘stepmother’; Ashkharywa *an-psa* ‘step-mother’; Abzhywa *án-psa* ‘stepmother’. (2) **anə* ‘mother’ in Common Abkhaz **án-q^oa* ‘mother-in-law’: Bžyp *án-ǰ^oa* ‘mother-in-law’; Abaza / Tapanta *án-q^oa* ‘mother-in-law’; Ashkharywa *án-q^oa* ‘mother-in-law’; Abzhywa *án-ǰ^oa* ‘mother-in-law’. (3) **anə* ‘mother’ in Common Abkhaz **án-q^oə-pħa* ‘sister-in-law’: Bžyp *án-ǰ^o-pħa* ‘sister-in-law’; Ashkharywa *án-q^oə-pħa* ‘sister-in-law’; Abzhywa *án-ǰ^o-pħa* ‘sister-in-law’. (4) **anə* ‘mother’ in Common Abkhaz **an-š’á* ‘uncle’ (‘mother’s brother’): South Abkhaz *án-š’a* ‘uncle’ (‘mother’s brother’); Abaza / Tapanta (Gumlo[w]kt) *an-š’á* ‘uncle’ (‘mother’s brother’); Ashkharywa *an-š’a* ‘uncle’ (‘mother’s brother’). (5) **anə* ‘mother’ in Common Abkhaz **an-ħ’š’á* ‘aunt’ (‘mother’s sister’): Ashkharywa *an-ǰš’a* ‘aunt’ (‘mother’s sister’); Abaza / Tapanta *án-ǰš’a* ‘aunt’ (‘mother’s sister’).
- C. Ubykh *ná* (def. *ána*) ‘mother’.

- 36. Proto-Indo-European (reduplicated) **bhā-bhā-* (no laryngeals!) used to indicate various family relationships: ‘mommy, daddy, etc.’ (nursery word): Old Church Slavic *baba* ‘nurse’; Russian *bába* [баба] ‘mother, country woman, married peasant woman’; Czech *bába* ‘grandmother, midwife, old woman’; Serbo-Croatian *bāba* ‘grandmother, midwife, nurse, mother-in-law’; Lithuanian *bóba* ‘old woman’; Latvian *bāba* ‘old woman’; Middle High German *babe*, *bōbe* ‘old woman’ (Slavic loanwords), *buobe* ‘boy’. Note also Italian *babbo* ‘dad, daddy’.

Northwest Caucasian: Common Abkhaz **bába* used to indicate various family relationships: ‘mommy, daddy, etc.’ (nursery word): South Abkhaz *bába* ‘daddy’; Ahchypsy *bába* ‘daddy’; Ashkharywa *bāba* ‘mommy’.

- 37. Proto-Indo-European (reduplicated) **dhē-dhē-* (no laryngeals!) ‘older relative (male or female): grandfather, grandmother; uncle, aunt’ (nursery word): Greek τῆθη ‘grandmother’, τῆθίς ‘aunt’; Lithuanian *dēdė*, *dėdis* ‘uncle’; Old Church Slavic *dědъ* ‘grand-father’; Russian *ded* [дед] ‘grandfather’.

Northwest Caucasian:

- A. Common Abkhaz **dada*: South Abkhaz *dad* ‘grandfather’, more rarely, ‘father’; Ashkharywa *dada* ‘father’; Abaza / Tapanta *dada* ‘grandfather, father’.
- B. Ubykh *dád* ‘father’.

38. Proto-Indo-European **k'en-/k'on-/k'η-* ‘to beget, to produce, to create, to bring forth’: Sanskrit *jánati* ‘to beget, to produce, to create; to assign, to procure’, *jánas-* ‘race’; Avestan *zan-* ‘to beget, to bear; to be born’, *zana-* ‘people’; Greek γίγνομαι ‘to be born’, γεννάω ‘to beget, to bring forth, to bear’, γένος ‘race, stock, kin’, γέννα ‘descent, birth’; Armenian *cnanim* ‘to beget’, *cin* ‘birth’; Latin *genō, gignō* ‘to beget, to bear, to bring forth’, *genus* ‘class, kind; birth, descent, origin’, *gēns, -tis* ‘clan; offspring, descendant; people, tribe, nation’; Old Irish *gainethar* ‘to be born’, *gein* ‘birth’; Welsh *geni* ‘to give birth’; Gothic *kuni* ‘race, generation’; Old Icelandic *kyn* ‘kin, kindred; kind, sort, species; gender’, *kind* ‘race, kind’; Old English *cynn* ‘kind, species, variety; race, progeny; sex, (grammatical) gender’, *ge-cynd, cynd* ‘kind, species; nature, quality, manner; gender; origin, generation; offspring; genitals’, *cennan* ‘to bear (child), to produce’; Old Frisian *kinn, kenn* ‘race, generation; class, kind’; Old Saxon *kunni* ‘race, generation; class, kind’; Dutch *kunne* ‘race, generation’; Old High German *chunni* ‘race, generation’, *kind* ‘child; (pl.) children, offspring’ (New High German *Kind*).

Northwest Caucasian: Proto-Circassian **k'(a)* ‘to come out, to bud, to grow’: Bžedux č’ə ‘to come out, to bud, to grow’; Kabardian *k’ə* ‘to come out, to bud, to grow’. Perhaps also: Proto-Circassian **k'a* ‘seeds’: Bžedux č’a ‘seeds’; Kabardian *k'a* ‘seeds’.

Note: Proto-Indo-European **η* is reflected as **a* in Northwest Caucasian.

39. Proto-Indo-European **naneA* (> **nanā*) ‘mother’ (nursery word): Sanskrit *nanā* familiar expression for ‘mother’; Greek *vávvn* ‘maternal aunt’, *vávva*, *vávvas* ‘maternal or paternal uncle or aunt’; Welsh *nain* ‘grandmother’.

Northwest Caucasian:

- A. Common Abkhaz **nana* ‘mother’ (nursery word): South Abkhaz *nan* ‘mama’, *nán(a)* form of address of the older woman to the younger person (inverted self-nomination); Abaza / Tapanta *nána, nāna* ‘grandmother’.
- B. Ubykh (vocative) *nán(a)* ‘mother’ (nursery word).
- C. Proto-Circassian **nana* ‘mother; grandmother’ (nursery word): Bžedux *nāna* ‘mama’; Kabardian *nāna* ‘grandmother, granny’.

40. Proto-Indo-European **(s)nuso-s* ‘daughter-in-law’: Sanskrit *snuṣā* ‘son’s wife, daughter-in-law’; Armenian *nu* ‘daughter-in-law’; Greek *νύος* ‘daughter-in-law; any female connected by marriage; wife, bride’; Albanian *nuse* ‘bride,

(rarely) daughter-in-law'; Latin *nurus* 'daughter-in-law; a young married woman'; Crimean Gothic *schuos* (misprint for **schnos*) 'betrothed'; Old Icelandic *snor*, *snor* 'daughter-in-law'; Old English *snoru* 'daughter-in-law'; Old Frisian *snore* 'daughter-in-law'; Middle Dutch *snoer*, *snorre* 'daughter-in-law'; Old High German *snur*, *snor*, *snura*, *snuora* 'daughter-in-law'; Serbian Church Slavic *snъxa* 'daughter-in-law'; Russian *snoxá* [CHOXA] 'daughter-in-law'; Serbo-Croatian *snàha* 'daughter-in-law'.

Northwest Caucasian:

- A. Proto-Circassian **nəsa* '(father's) brother's wife, daughter-in-law': Adyghe *nəsa* '(father's) brother's wife, daughter-in-law'; Bžedux *nəsa* '(father's) brother's wife, daughter-in-law'; Kabardian *nəsa* '(father's) brother's wife, daughter-in-law'.
- B. Ubykh *nəsáy* (def. *ánsay*) '(father's) brother's wife, daughter-in-law'.

Notes:

1. Proto-Indo-European **u* is reflected as **ə* in Northwest Caucasian.
 2. Also found in Northeast Caucasian and Kartvelian:
 - A. Northeast Caucasian: Avar, Batsbi, Chechen, Ingush *nus* 'daughter-in-law'; Andi *nusa* 'daughter-in-law'; Tindi *nus(a)* 'daughter-in-law'; Ghodberi *nuse-j* 'daughter-in-law'; Karta *nusa* 'daughter-in-law'; etc.
 - B. Kartvelian: Mingrelian *nisa*, *nosa* 'daughter-in-law'; Laz *nusa*, *nisa* 'daughter-in-law'.
 - C. According to Tuite—Schulze (1998), the Caucasian forms are loan-words from Indo-European.
41. Proto-Indo-European **p^{he}hs-o-s* [**p^hahs-o-s*] (> **p^hās-o-s*) 'relative by marriage' (**h* = **₂₄*) (only in Greek [cf. Beekes 2010.II:1187]): Greek *πῆός* (Doric *πᾶός*) 'relative by marriage'.

Northwest Caucasian:

- A. (?) Proto-Circassian **Pśaśa* 'girl, maiden': Bžedux *pśāśa* 'girl, maiden'; Kabardian *pśāśa* 'girl, maiden'. Note: Kuipers (1976:28) writes **Pşaşa*.
- B. Common Abkhaz **pśa* 'step-, relative by marriage': Bzyp *án-pśa* 'stepmother', *áb-pśa* 'stepfather', *a-pa-pśá* 'stepson', *a-pħa-pśá* 'stepdaughter'; Abaza / Tapanta *an-psá* 'stepmother', *pħa-psá* 'stepdaughter', *ab-psá* 'stepfather', *pa-psá* 'stepson'; Ashkharywa *a-pħa-psa* 'stepdaughter', *a-pa-psa* 'stepson'; Abzhywa *a-pa-psa* 'stepson'.

Note: Proto-Indo-European **p^hVhs-* = Northwest Caucasian **pśV-*.

42. Proto-Indo-European **p^heh-u/w-* [**p^hah-u/w-*]/**p^hoh-u/w-* 'little, small; little one, child' (**h* = **₂₄*): Greek *παῖς* (gen. *παιδός* [*< *παῖ-ι-δ-*]) 'child', (Attic) (Epigraphic) *παῖς* 'child', *παῖρος* (*< *p^heh-u-ro-* [**p^hah-u-ro-*]) 'little, small'; Latin *paucus* (*< *p^heh-u-k^ho-* [**p^hah-u-k^ho-*]) 'few', *pauper* 'poor', *paul(l)us*

‘little, small (in size or quantity)’; Gothic *fawai* ‘few’; Old Icelandic *fár* ‘few’; Old English *fēa* (pl. *fēawe*) ‘(adj.) few, not many; (adv.) (not) even a little’.

Northwest Caucasian: (1) Common Abkhaz **pa* ‘son’: South Abkhaz *a-pá* ‘son’; Abaza / Tapanta *pa* ‘son’. (2) Common Abkhaz **pa* in **pa-psá*: Bzyp *a-pa-psá* ‘stepson’; Abzhywa *a-pa-psa* ‘stepson’; Ashkharywa *a-pa-psa* ‘stepson’; Abaza / Tapanta *pa-psá* ‘stepson’. (3) Common Abkhaz **pa* in **pa-j-phá* (**pa* ‘son’ + **jə-* ‘his’ + **pha* ‘daughter’): Ashkharywa *a-pə-j-pha* ‘granddaughter’; Bzyp *a-pa-j-pá* ‘granddaughter’. (4) Common Abkhaz **pa* in **pa-j-pá*: Ashkharywa *a-pə-j-pa* ‘grandson’; Bzyp *a-pa-j-pá* ‘grandson’.

43. Proto-Indo-European **ph^hiHs-t’-* (> **ph^hts-t’-*) ‘female genitals, vulva’: Lithuanian *pyzdà* ‘female genitals, vulva’ (also used as an abusive swear-word against women); Latvian *pīzda* ‘female genitals, vulva’ (also used as an abusive swear-word against women); Old Prussian *peisda* ‘arse, backside’ (*ei* < *i*); Russian *pizdá* [пизда] ‘female genitals, vulva’; Bulgarian *pizda* ‘female genitals, vulva’; Albanian *pidh* ‘female genitals, vulva’ (< Proto-Albanian **p(e)izda* [cf. Orël 1998:325; Huld 1984:149]).

Northwest Caucasian: Common Northwest Caucasian **psasa* ‘girl’ (cf. Chirikba 1996a:258):

A. Proto-Circassian **Pśaśa* ‘girl’: Bžedux *pśāśa* ‘girl’; Kabardian *pśāśa* ‘maiden’. Note: Kuipers (1975:28) writes **Pśaśa*.

B. Ubykh *śasá* ‘bride, daughter-in-law’, *śasás’* ‘bridal attire’.

Note: Here, Proto-Indo-European **ph^hiHs-* = Proto-Circassian **Pś-*, Ubykh *ś-*.

44. Proto-Indo-European **sew(H)-/*sow(H)-/*su(H)-* ‘to give birth’: Sanskrit *sūte*, *sūyate* ‘to beget, to procreate, to bring forth, to bear, to produce, to yield’, *suta-h* ‘son, child’, *sūtí-h* ‘birth, production’, *sūnú-h* ‘son, child, offspring’; Avestan *hunu-š* ‘son’; Greek *υῖός*, *υἱός* ‘son’; Old Irish *suth* ‘offspring’; Gothic *sunus* ‘son’; Old Icelandic *sunr*, *sonr* ‘son’; Old English *sunu* ‘son’; Old Saxon *sunu* ‘son’; Old High German *sunu* ‘son’; Lithuanian *sūnùs* ‘son’; Old Church Slavic *synъ* ‘son’; Russian *сын* [сын] ‘son’; Tocharian A *se*, B *soy* ‘son’.

Northwest Caucasian: Proto-Circassian **śawa* ‘youth’: Bžedux *śāwa* ‘youth, especially bridegroom’; Kabardian *śāwa* ‘youth, especially bridegroom’; Temirgoy also ‘son’. Note: Kuipers (1975:32) writes **śawa*.

45. Proto-Indo-European (reduplicated) **th^hā-tha-* ‘father’ (nursery word): Sanskrit *tatá-h* ‘father’, *tāta-h* ‘father’ (a term of affection or endearment addressed to any person); Latin *tata* ‘father, daddy; grandfather, grandpa’; Greek *τατᾶ* ‘daddy’, *τέττα* ‘father’ (a term of respect addressed by youths to their elders); Cornish *tat* ‘father’; Albanian *tatë* ‘father, daddy’; Russian *t’át’a* [тятя] ‘dad, daddy’.

Northwest Caucasian: Proto-Circassian **t:(a)* ‘father, daddy’: Bžedux *t:ə, yāt:a* ‘father’, *t:āt:a* ‘daddy; grandpa’ (term of address); Kabardian *hada* ‘father’, *dada* ‘daddy; grandpa’ (term of address).

46. Proto-Indo-European **thekh-* ‘(vb.) to beget; (n.) offspring’: Sanskrit *tákman-* ‘offspring’; Greek τέκνον ‘child’, τίκτω (< Pre-Greek **ti-tk-é-*) ‘to beget, to bring forth’, τόκος ‘childbirth; offspring’.

Northwest Caucasian: Common Abkhaz **taqə* ‘close relative’: Bzyp *a-tačə* ‘close relative’; Abzhywa *a-tačə* ‘close relative’.

47. Proto-Indo-European **yenH-ther-/ *yēH-ther-* ‘female in-law by marriage: sister-in-law, husband’s brother’s wife’: Sanskrit *yātar-* ‘husband’s brother’s wife’; Greek (f.) ἐνάτηρ ‘husband’s brother’s wife’, (Homeric) (pl.) εἰνατέρες ‘wives of brothers or of husband’s brothers, sisters-in-law’; Latin (pl.) *ianitricēs* ‘wives of brothers’; Old Lithuanian *jéntė* ‘husband’s brother’s wife’; Old Church Slavic *jetry* ‘husband’s brother’s wife’.

Northwest Caucasian: Common Abkhaz **jəna* ‘female (of animals)’: Abzhywa *a-jən* ‘female (of animals)’.

IV. Mankind

48. Proto-Indo-European **ǵer-s-/ *ǵr-s-* ‘male, man’ (**ǵ = *ǵ₁*): Greek (Homeric) ἄρσιν, (Attic) ἄρρην, (Ionic, Aeolian, Lesbian, Cretan, etc.) ἔρσιν, Laconian ἄρσης ‘male; masculine, strong’; Sanskrit *ṛṣa-bhá-ḥ* ‘bull’; Avestan *aršan-* ‘man; manly’; Old Persian *aršan-*, *arša-* ‘male, hero, bull’; Armenian *aṛn* ‘male sheep’.

Northwest Caucasian: Common Abkhaz **arpə* ‘youth, young man’: Bzyp *árpə-s̱ // árpə-s̱* ‘youth, young man’ (indef. sg. *arpə-s-ḵ; rpə-s̱a-ḵ*) (pl. *árpə-r(a)*). (*-s̱ə* = diminutive suffix.) Also in the meaning ‘time of youth’: *jəpəc̱ə* <...> *arpara nazanə ajvagəlan* ‘his sons, having reached the age of youth, stood by each other’.

49. Proto-Indo-European **ǵoy-* ‘single, alone, solitary; one’ (with non-apophonic *-o-*) (extended forms: (1) **ǵoy-no-*, (2) *ǵoy-wo-*, (3) **ǵoy-kʰo-*) (**ǵ = *ǵ₁*):

1. **ǵoy-no-*: Latin *ūnus* ‘one’ [Old Latin *oinos*]; Old Irish *óen, óin* ‘one’; Gothic *ains* ‘one’; Old Icelandic *einn* ‘one’; Old English *ān* ‘one; alone, sole, lonely; singular, unique’; Old Saxon *ēn* ‘one’; Old High German *ein* ‘one’; Lithuanian *vienas* (with unexplained initial *v-*) ‘one; alone’; Old Prussian *ains* ‘one’; Old Church Slavic *inъ* ‘some(one), other’; Russian Church Slavic *inokŭj* ‘only, sole, solitary’; Russian *inój* [ино́й] ‘different, other’ — it is also found in Greek οἴνη, οἶνός ‘roll of one (in dice)’.

2. **ṛoy-wo-*: Avestan *aēva-* ‘one’; Old Persian *aiva-* ‘one’ — it is also found in Greek οἶος ‘alone, lone, lonely’ (Cyprian οἶφος).
3. **ṛoy-k^ho-*: Sanskrit *éka-* ‘one’; Mitanni (“Proto-Indic”) *aika-* ‘one’.

Northwest Caucasian:

- A. Common Abkhaz **ajába* ‘orphan’: Abzhywa *ájba* ‘orphan’; Bzyp *ájba* (indef. sg. *ajbá-k*), *ajbá* ‘orphan’; Abaza / Tapanta *jába* (indef. sg. *jába-k*) ‘orphan’. In South Abkhaz, also ‘widow’.
- B. Ubykh *ay-* in *áyda*, *aydák* ‘that one, the other one’.

50. Proto-Indo-European **men-/mon-/m^hṇ-* ‘alone, only; few, scanty’: Greek μόνος (Ionic μοῦνος; Doric μῶνος) (< *μόνφος) ‘alone, only’, μᾶνός (Attic μᾶνός) (< *μᾶνφος) ‘thin, loose, slack; few, scanty’; Armenian *manr* ‘small, thin’; Sanskrit *manák* ‘a little, slightly’. Perhaps also: Lithuanian *meñkas* ‘small, slight, insignificant, poor, weak’; Old High German *mengen*, *mangolōn* ‘to be without, to lack, to miss’ (New High German *mangeln*); Middle High German *manc* ‘lack’; Tocharian B *mānk-* ‘to be deprived of, to suffer the loss of, to lack’, *meñki* ‘lack, deficit, shortage; fault, error’.

Northwest Caucasian:

- A. (1) Common Abkhaz **macá* ‘only, just, single’: South Abkhaz *á-maca-ra* ‘only, just single’; Ashkharywa *maca(-ra)* ‘only, just, single’; Abaza / Tapanta *mc(ə)ra* ‘empty’. (2) Common Abkhaz **malá* ‘uselessly; alone, by oneself’: South Abkhaz *a-malá* ‘for free, uselessly’, *á-mala* ‘uselessly; alone, by oneself’; Fera (Sameba) *á-mala-ša* ‘for free, uselessly’.
- B. Ubykh *macáq’a:la* ‘in vain, uselessly’.

Note: Proto-Indo-European **ṇ* is reflected as **a* in Northwest Caucasian.

51. Proto-Indo-European **hep^h-elo-* [**hap^h-elo-*] ‘strength, power’ (**h* = **ǵ*₄): Greek (Hesych.) (*ἄπελος ‘strength’ >) ἀν-απελάσας· ἀναρρωσθεῖς ‘weakness’; Old Icelandic *afl* ‘strength, power, might’, *efla* ‘to strengthen’, *efling* ‘growth, increase in strength and wealth’; Faroese *alv*, *alvi* ‘strength, power’; Norwegian (dial.) *avl* ‘physical strength’; Swedish *avel* ‘strength’; Old English *afof* ‘power, might’; Old Saxon *abal* ‘power’.

Northwest Caucasian: Common Abkhaz **ápš’ə* ‘big, strong, powerful’: South Abkhaz *abaš’ə-apš’* ‘the strong rock’, *azaar(*a)-apš’* ‘terrible anger’, *a-k’aamet-apš’* ‘horror, doomsday’, *agaz(*a)-apš’* ‘bally idiot’, *adaw(*ə)-apš’* ‘monstrous giant’, *á-mat-apš’* ‘a very venomous snake’; Abaza / Tapanta *q’abard-ápš’/q’abárd-apš’* ‘the Great Kabarda’.

52. Proto-Indo-European **men-/mon-/m^hṇ-* (vb.) ‘to desire passionately, to yearn for; (n.) ardent desire, passion, lust’: Tocharian B *mañu* ‘desire’, A *mnu* ‘spirit, appreciation, desire’; Sanskrit *man-* (RV) ‘to hope or wish for’ (also ‘to think’),

mánas- ‘spirit, passion’ (also ‘mind, intellect, perception, sense’), *manasyú-* (RV) ‘wishing, desiring’, *manā́* (RV) ‘devotion, attachment, zeal, eagerness’, *manīṣita-* (MBh) ‘desired, wished (for); desire, wish’, *manyú-* (RV) ‘high spirit or temper, ardor, zeal, passion’; Greek μενεαίνω ‘to desire earnestly or eagerly’, μένος ‘spirit, passion’, μέμονα (perfect used as present) ‘to desire or wish eagerly, to yearn for, to strive for’, μενοινή ‘eager desire’, μενοινάω ‘to desire eagerly’; Old Irish *menn-* ‘to desire’, *menme* ‘feeling, desire’ (also ‘mind, intelligence’); Old Icelandic *muna* ‘to like, to long for’, *munaðr* ‘delight’, *munr* ‘love’, *munuð* or *munúð* ‘pleasure, lust’; Old English *myne* ‘desire, love, affection’ (also ‘memory’), *mynle* ‘desire’, *mynelic* ‘desirable’; Old Frisian *minne* ‘love’; Old Saxon *minnea*, *minnia* ‘love’; Old High German *minna* ‘love’, *minnōn*, *minneōn* ‘to love’. Proto-Indo-European **manu-s* ‘man, begetter, progenitor’: Avestan *manuš-* ‘man, person’ in *Manuš-čīθra-*; Sanskrit *mánu-h* ‘man, mankind, father of men’; Gothic *manna* ‘man, person’; Old Icelandic *mannr* ‘man, human being’; Old English *mann* ‘man, human being’; Old Frisian *mann*, *monn* ‘man’; Old Saxon *mann* ‘man’; Old High German *man(n)* ‘man’; Old Church Slavic *možb* ‘man’.

Northwest Caucasian: Proto-Circassian **mana* ‘penis’: Bžedux *māna* ‘penis’; Kabardian *māna* ‘penis’.

53. Proto-Indo-European **phē(y/i)-* ‘to hurt, to harm, to attack’: Gothic *fijands* ‘enemy’; Old Icelandic *ffándi* ‘enemy, foe’; Old English *fēonds* ‘enemy’.

Northwest Caucasian: Proto-Circassian **p:əyə* ‘enemy’ (/p:/ = unaspirated /p/): Bžedux *p:əyə* ‘enemy’; Kabardian *bəy* ‘enemy’.

54. Proto-Indo-European **p^hoth-i-* ‘one who is strong, powerful, able, capable, master of’: Sanskrit *pāti-h* ‘master, owner, possessor, lord, ruler, governor, sovereign; husband’; Greek πόσις ‘husband’; Latin *potis* ‘able, capable’, *potior* ‘to get, to obtain, to gain possession of; to possess, to have, to be master of’; Gothic *-faps* in *brup-faps* ‘bridegroom’; Old Lithuanian *patis* ‘oneself, himself, itself’; Tocharian A *pats*, B *pets* ‘husband’.

Northwest Caucasian: Proto-Circassian **p:ət:a* ‘strong, solid’: Bžedux *p:ət:a* ‘strong, solid’; Kabardian *bəda* ‘strong, solid; stingy’.

55. Proto-Indo-European **wen-/won-/w^hn-* ‘to hold dear, to care about; to like, to love, to cherish; to have strong feelings for, to want, to desire’, **weni-s* ‘friend, beloved’: Proto-Germanic **weni-z* ‘friend, beloved’ > Old Icelandic *vinr* ‘friend’; Old English *wine* ‘friend’, *winescipe* ‘friendship’; Old Frisian *wine* ‘friend’; Old High German *wini* ‘friend, beloved’. Old Irish *fine* ‘stock, nation, tribe, family’; Tocharian A *wañi*, B *wīna* ‘pleasure’; Latin *venus* ‘love, charm, grace’; Sanskrit *vānate* ‘to like, to love; to wish for, to desire; to strive for, to

obtain', *vānas-* 'desire, longing, attractiveness, loveliness'; Hittite (3rd sg. pres. act.) *ú-en-zi* 'to copulate'.

Northwest Caucasian: Common Abkhaz **wa* 'relative, friend, comrade': South Abkhaz *á-wa* (indef. sg. *wa-k*) 'relative, friend, comrade', *á-wa-ra* 'relation'; Ashkharywa *a-wa* 'kind, sort of'; Abaza / Tapanta *á-wa* 'belonging to a group, close friend' (also ethnic suffix *-wa*).

Note: Proto-Indo-European **ŋ* is reflected as **a* in Northwest Caucasian.

V. Parts of the Body; Bodily Functions

56. Proto-Indo-European (nom.-acc. sg.) **ǵés-hh-ǵ* 'blood', (gen. sg.) **ǵs-hh-én-s*, **ǵs-hh-n-és* (**ǵ* = **ǵ₁*; **hh* = **ǵ₂*): Hittite (nom.-acc. sg.) *e-eš-har*, *e-eš-ha-ar*, *iš-har* 'blood', (gen. sg.) *iš-ha-na-a-aš*, *iš-ha-a-na-aš*, *iš-ha-na-aš*, *e-eš-ha-na-aš*, etc.; Cuneiform Luwian (nom.-acc. sg.) *a-aš-har-ša*, [*a*]-*aš-ha-ar* 'blood', (nom. sg.) *a-aš-ha-nu-wa-an-ti-iš* 'bloody'; Hieroglyphic Luwian (nom.-acc. sg.) *á-sa-ha-na-ti-sa-za* 'blood-offering'; Sanskrit (nom.-acc. sg.) *ásrk* 'blood', (gen. sg.) *asnás*; Greek *ἐᾶρ*, *εἶαρ* (Hesychius *ἦαρ*) 'blood'; Armenian *arium* 'blood'; Old Latin *as(s)er* 'blood'; Latvian *asins* 'blood'; Tocharian A *ysār*, B *yasar* 'blood'. Note: The Proto-Indo-European root is obviously **ǵes-/ǵs-*, which has been extended by a suffix **-hh-* (cf. the *-χ-* in the Ubykh forms cited below), yielding the stem **ǵes-hh-*. The nom.-acc. sg. ends in **-ǵ*, while the oblique cases contain an oblique marker in **-n-*, thus: Proto-Indo-European (nom.-acc. sg.) **ǵés-hh-ǵ* 'blood', (gen. sg.) **ǵs-hh-én-s*, **ǵs-hh-n-és*.

Northwest Caucasian:

- A. Common Abkhaz **š'a* 'blood': South Abkhaz *a-š'á* 'blood', *a-š'a-rá* 'bleeding, bloody flux', *a-š'a-ba-rá* 'to bleed heavily'; Ashkharywa *š'a* 'blood'; Abaza / Tapanta *š'a* 'blood'. No doubt related to: Common Abkhaz **š'ə* 'to kill': South Abkhaz *a-š'-rá* 'to kill'; Abaza / Tapanta *š'-ra* 'to kill (imper. *d-š'ə* 'kill him/her!' [human]).
- B. Ubykh *š'χa-* 'to wound' (*asš'χán* 'I wound him'), *š'χaq'á* (def. *á-*) 'wound; wounded'.

Note: The *š'* found in the Abkhaz and Ubykh forms cited above is represented as **s* in Proto-Indo-European.

57. Proto-Indo-European **b^{hr}-uH-* (> **b^{hr}rū-*) 'eyelash, eyebrow': Sanskrit *bhrú-h* 'an eyebrow, the brow'; Greek *ὀφρῦς* 'the brow, eyebrow'; Middle Irish (gen. dual) *brúad* 'eyebrow'; Old Icelandic *brún* (< **b^{hr}ruwōn-*) (pl. *brynn*) 'eyebrow'; Old English *brū* 'eyebrow; eyelid, eyelash'; Lithuanian *bruvīs* 'eyebrow'; Old Church Slavonic *brъvъ* 'eyebrow'; Russian *brov'* [бровь] 'eyebrow'; Tocharian A *pärwān-*, B (dual) *pärwāne* 'eyebrows'.

Northwest Caucasian: Common Abkhaz **bra* ‘mane; hair’: Bzyp *á-bra* ‘mane (of a horse)’, *a-brá-š* ‘tow-haired’; Abaza / Tapanta *bra* ‘plait, braid; hair (arch.)’, *qa-brá* ‘hair’ (*qa* ‘head’).

58. Proto-Indo-European (reduplicated) **dʰudʰdʰ-o-* ‘nipple’ (> ‘anything having the size or shape of a nipple: lump, knot, dot, etc.’): Late Latin *dudda* ‘nurse, nanny’ (loan from unknown source); Old High German *tutto*, *tutta* ‘nipple’ (New High German [dial.] *Tütte*); Middle High German (dim.) *tüttel* ‘nipple’ (New High German *Tüttel* ‘point, dot, jot’); Dutch *dot* ‘lump, small knot’; Old English *dott* ‘speck, head (of a boil)’; East Frisian *dotte*, *dot* ‘lump, clump’. Possibly also the following Greek forms: *τυτθός* ‘(of children) little, small, young’, (pl.) *τυτθά* (in Homeric only: *τυτθα διατμήξας* ‘cut small’), (adv.) *τυτθόν* ‘a little, a bit’, (Doric) *τυννός* ‘small, little’. Note: Elsewhere (volume 2, pp. 360–361, no. 302), I have proposed derivation of Proto-Indo-European **dʰudʰdʰ-o-* ‘nipple’ from Proto-Nostratic (reduplicated) **ʒuʒ-a* (< **ʒu-ʒu-*) ‘tip, point’ (> ‘nipple, breast’).

Northwest Caucasian:

- A. Common Abkhaz **ʒəʒa* ‘woman’s/mother’s breast’: Abzhywa *a-ʒəʒ*, *a-ʒəʒ* (*-kʰa*) (*-kʰa* = plural suffix) ‘woman’s/mother’s breast’; Ahchypsy *a-ʒəʒ-kʰa* ‘woman’s/mother’s breast’; Gumlo(w)kt (2) *ʒəʒa* ‘woman’s/mother’s breast’. Perhaps influenced by or borrowed from Kartvelian: cf. Georgian *ʒuʒu-* ‘breast (female)’.
- B. Proto-Circassian **bəʒə* ‘woman’s breast’: Bžedux *bəʒə* ‘woman’s breast’; Kabardian *bəʒ* ‘woman’s breast’. Perhaps dissimilated from **ʒəʒa*.
- C. Ubykh *bəʒ* ‘breast, nipple’.

Notes:

1. Proto-Indo-European **u* is reflected as **ə* in Northwest Caucasian.
2. Northwest Caucasian **ʒ* = Proto-Indo-European **dʰ*.

59. Proto-Indo-European (reduplicated) **kʰa-kʰa-* ‘to laugh’ (onomatopoeic): Greek *καχάζω* ‘to laugh aloud; to jerr, to mock’; Armenian *xaxank* ‘laughter’; Sanskrit *kákhati*, *khákkhati* ‘to laugh, to laugh at or deride’; Latin *cachinnō* ‘to laugh, especially loudly or boisterously’; Old English *ceahhetan* ‘to laugh loudly’; Old High German *kachazzen*, *kichazzen* ‘to laugh loudly’; Old Church Slavonic *xoxotati* ‘to laugh loudly’.

Northwest Caucasian: Proto-Circassian **kʰakʰa* ‘to laugh’: Temirgoy *č’ač’a-n* ‘to chirr, to laugh derisively; to bleat, to howl, to shout’; Kabardian *kāka* ‘to chirr, to laugh derisively; to bleat, to howl, to shout’.

60. (1) Proto-Indo-European (**kʰen-/kʰon-/kʰn-*) **kʰn-* ‘knuckle-bone’: Old Icelandic *knúta* ‘knuckle-bone, joint-bone, head of a bone’, *knúi* ‘a knuckle’; Middle English *cnokil* ‘knuckle’; Middle Low German *knoke* ‘bone’. (2) Proto-Indo-

European **k'en-u-*, **k'n-ew-* 'knee, joint, angle': Hittite *ge-e-nu* 'knee'; Sanskrit *jānu* 'knee'; Latin *genū* 'knee, knot, joint'; Greek γόνυ 'knee, joint'; Gothic *kniu* 'knee'; Old Icelandic *kné* 'knee'; Old English *cnēow* 'knee'; Old Saxon *knio* 'knee'; Old High German *kneo* 'knee'.

Northwest Caucasian: Proto-Circassian **k'anə* 'knuckle-bone (used in bone game)'; Bžedux *č'anə* 'knuckle-bone (used in bone game)'; Kabardian *k'an* 'knuckle-bone (used in bone game)'.

61. Proto-Indo-European **men-/mon-/mṇ-* 'hand': Latin *manus* 'hand'; Hittite (3rd sg. pres. act.) *ma-ni-ya-aḥ-ḥi* 'to distribute, to entrust (with dat.); to hand over; to show; to govern'; Old Icelandic *mund* 'hand'; Old English *mund* 'hand, palm'; Old High German *munt* 'hand; protection'.

Northwest Caucasian: Common Abkhaz **ma* 'hand' in (this is but a sampling): (1) Common Abkhaz **ma-p'ə́*: South Abkhaz *a-nap'ə́* 'hand'; Ashkharywa *mp'ə́* 'hand'; Abaza / Tapanta *nap'ə́* 'hand'. (2) Common Abkhaz **ma-tá*: South Abkhaz *á-mta* 'handle', (indef. sg.) *matá-k'* 'handle'. (3) Common Abkhaz **ma-č'á*: Bžyp *a-máč'á* 'palm, span'; Abzhywa *á-máč'a* 'palm, span'. (4) Common Abkhaz **ma-č'á*: South Abkhaz *a-ma-č'á-r* 'arm'; Ashkharywa *mač'á* 'arm'. (5) Common Abkhaz **ma-há*: South Abkhaz *á-maa* 'handle'; Abaza / Tapanta *mha* 'handle'.

Note: Proto-Indo-European **ṇ* is reflected as **a* in Northwest Caucasian.

62. Proto-Indo-European (**nebh-/*)**nobh-* 'navel': Sanskrit *nābhi-h* 'navel'; Old High German *naba* 'nave, hub (of a wheel)'; Old Prussian *nabis* 'navel'.

Northwest Caucasian: Proto-Circassian **nəba* 'belly': Bžedux *nəba* 'belly'; Kabardian *nəba* 'belly'. Note also: Temirgoy *nəbəž'ə* 'navel'; Kabardian *bənža* 'navel'; Abaza / Tapanta *bənž'a* 'navel'; Ubykh *nəbəž'* 'navel'.

63. Proto-Indo-European (extended form) **p^heh-s-* [**p^hah-s-*] (> **p^hās-*) 'to puff, to blow; to reek (of), to smell (of)' (only in Slavic) (**h* = **₂*): Russian *paxnúť* 'to puff, to blow', *páxnút'* [пахнуть] 'to smell (of), to reek (of)'; Czech *páchnouti* 'to be fragrant'; Polish *pachnąć* 'to smell (of)'. Perhaps also: Proto-Indo-European (extended form) **p^heh-k-* [**p^hah-k-*] (> **p^hāk-*) 'face, surface' (only in Indo-Iranian) (**h* = **₂*): Sanskrit *pāja-h* 'face, surface'; Khotan Saka *pāysa-* (< **pāza-*) 'surface'; Ossetic (Digor) *faz* 'back surface'.

Northwest Caucasian:

- A. (1) Proto-Circassian **p^ha* 'nose, front': Bžedux *p^ha* 'nose, front, beginning, etc.'; Kabardian *pa* 'nose, front, beginning, etc.' (2) Proto-Circassian **p^haP_{la}* 'red-nosed'; (3) Proto-Circassian **p^haxə* 'white-nosed'; (4) Proto-Circassian **p^haq:a* 'snub-nosed'; (5) Proto-Circassian

**p^haPġə* ‘bridge of nose’; (6) Proto-Circassian **p^ham(ə)* ‘to smell (something)’; etc.

- B. Common Abkhaz **pə* ‘nose’, in: (1) Common Abkhaz **pə-n-é’a* (< **pə* ‘nose’, -*n-* locative, *é’a* ‘sharp’): Abzhywa *a-pənc’a* ‘nose’; Ashkharywa *a-pənc’a* ‘nose’; Bzyp *a-pənc’a* ‘nose’; Abaza / Tapanta *pənc’a* ‘nose’. (2) Common Abkhaz **a+p-á+ǰ’a* ‘earlier, previously, before’; (3) Common Abkhaz **a+pə* ‘before, at the front’; (4) Common Abkhaz **a+pǰ-ǰ’a* ‘earlier, previously, before’; (5) Common Abkhaz **á+pə-ǰ’a* ‘at the front, earlier’; (6) Common Abkhaz **a+p+qá* ‘ahead, before, earlier’; (7) Common Abkhaz **p-á-ga* (< **p-a* ‘the first’, **ga* ‘to carry, to bring’) ‘to pass ahead, to be behind, to forestall’; (8) Common Abkhaz **pə-bá* ‘smell, odor’; (9) Common Abkhaz **pǰ-za* ‘to lead’; etc.
- C. Ubykh *fa-* in *fac’a* ‘nose, tip’.

64. Proto-Indo-European **p^hes-/p^hos-*, **p^hs-u-* ‘(vb.) to breathe, to blow; to live; (n.) breath, life, soul’: Sanskrit *psu-* in *ápsu-h* ‘breathless’; Greek *ψυχή* ‘breath, spirit, life; the soul or spirit of man’, *ψύχω* ‘to breathe, to blow’, *ψύχωσις* ‘giving life to, animating’, *ψυχήτιος* ‘alive, living; having a *ψυχή*’. Perhaps also Sanskrit (Vedic) *pastyà-m* ‘(neut.) habitation, abode, stall, stable; (masc. pl.) house, dwelling, residence; household, family’.

Northwest Caucasian:

- A. (1) Proto-Circassian **Psa* ‘life, soul’: Bžedux *psa* ‘life, soul’; Kabardian *psa* ‘life, soul’. (2) Proto-Circassian **Psawə* ‘to live’: Kabardian *psaw* ‘to live; healthy, whole, all’; Bžedux *psawə* ‘to live’, *psāwə* ‘healthy’, *pst:awə* ‘whole, all’. Circassian loanwords in Abkhaz: South Abkhaz *psawátla* ‘living’; Bzyp *psawátla* ‘living’; Abaza / Tapanta *psawatla* ‘household; additional buildings on a farm’; Abzhywa *pswatla* ‘living’ (< Circassian **psa-wa-ła* ‘living, household’).
- B. Common Abkhaz **psə*: South Abkhaz *a-psə* ‘soul’, *a-psəp* ‘respiration’, *a-psatá* ‘place where souls rest after death’, *a-ps-š’a-ra* ‘(to) rest’, *a-psəč* ‘weak’; Bzyp *a-psə-n-é-rə* ‘life-time’; Abaza / Tapanta *psə* ‘soul’, *psəp* ‘respiration’, *psatá* ‘place where souls rest after death’, *č-ps-š’a-ra* ‘(to) rest’; Abzhywa *a-psə-n-c-rə* ‘life-time’.
- C. Ubykh *psá* ‘breath, soul, life’.

Note: Proto-Indo-European **p^hVs-* = Northwest Caucasian **psV-*.

65. Proto-Indo-European **ses-* ‘to sleep’: Hittite (3rd sg. pres. act.) *še-eš-zi* ‘to rest, to sleep, to spend the night, to stay (overnight); to go to sleep, to lie down’, (gen. sg.) *še-šu-wa-aš* ‘bedroom’, (acc. sg.) *ša-aš-ta-an* ‘sleep, bed’; Sanskrit *sásti* ‘to sleep, to be still’; Avestan *hah-* ‘to sleep’. Note: The original meaning may have been something like ‘(to be) drowsy, woozy, sleepy; to nod’.

Northwest Caucasian:

- A. Common Abkhaz **səsə* ‘to sway, to shake, to tremble, to be sleepy’ (used with preverbs) (cf. Chirikba 1999:161, note 17; not in Chirikba 1996b).
- B. (?) Ubykh *sa-* ‘to doze, to slumber’ (*səsán* ‘I doze, I slumber’).
- C. Proto-Circassian **səsə* ‘to sway, to shake, to tremble’: Bžedux *səsə* ‘to sway, to shake, to tremble’; Kabardian *səs* ‘to sway, to shake, to tremble’.

66. Proto-Indo-European (nom.-acc. sg.) **yék^{wh}-r* ‘liver’, (gen. sg.) **yek^{wh}-n-és*, **yok^{wh}-én-s*, **yék^{wh}-ŋ-s*, etc. (cf. Wodtko—Irslinger—Schneider 2008:393) (< *‘entrails’, as in Russian Church Slavic *jatro* ‘liver; (pl.) entrails’ ~ Greek ἔντερα ‘entrails’ [cf. Buck 1949:§4.45 liver; Derksen 2008:158; Vasmer 1953—1958.III:499]): Sanskrit (nom.-acc. sg.) *yákṛt* ‘liver’, (gen. sg.) *yaknás*; Avestan (nom.-acc. sg.) *yākarə* ‘liver’; Greek (nom.-acc. sg.) ἥπαρ ‘liver’, (gen. sg.) ἥπατος; Latin (nom.-acc. sg.) *iecur* ‘liver’, (gen. sg.) *iecuris*, *iecinoris*; Lithuanian (dial.) (pl.) *jėknos* ‘liver’.

Northwest Caucasian: Proto-Circassian **yaq^{hə}* ‘cud, entrails’: Bžedux *yaq^{hə}* ‘cud, entrails’; Kabardian *yaq^o* ‘cud, entrails’.

VI. Medical Terms

67. Proto-Indo-European **g^{wh}el(H)-uH* ‘tumor, swelling’ (only in Balto-Slavic): Proto-Slavic **žely* ‘tumor, fistula’ > Russian *želvák* [желвак] ‘tumor, swelling, lump’; Czech *žluva* ‘soft tumor (in horses)’; Polish (dial.) *žólwi* ‘abscess on the ear’; Slovenian *žělva* ‘fistula’; Serbo-Croatian (Čakavian) *žělva* ‘tumor’, *žólva* ‘scrofula’. Latvian *dzelva* ‘(slight) swelling on the skin’. Note: Derksen (2015: 533) reconstructs Proto-Indo-European **g^hel(H)-uH-*.

Northwest Caucasian; Common Abkhaz **g^oálə* ‘goiter, wen; clod’: South Abkhaz *a-g^oál* ‘clod’; Abaza / Tapanta *g^oal* ‘goiter, wen’ (medical term).

68. Proto-Indo-European (extended form) **k'en-k'-/*k'on-k'-/*k'ŋ-k'-* ‘growth, excrescence’: Greek γογγρόνη ‘an excrescence on the neck’, γόγγρος ‘an excrescence on trees’, γογγύλος ‘round’; Lithuanian *gùnga* ‘hunch, lump’.

Northwest Caucasian: Common Abkhaz **k'an-(é'ə)ć'əra* ‘wart’: Ashkharywa *k''anc'əra* ‘wart’; Abaza / Tapanta *c'ənk''ra* ‘wart’; Bzyp *a-k'anć'əć'ər* ‘wart’; Abzhywa *a-k'anc'əc'əra*, *a-k'anc'ac'əra* ‘wart’.

69. Proto-Indo-European **theph-/*thoph-* ‘to be or become swollen, fat, large, great, high, thick’ (Tocharian only): Tocharian A *tāp-* ‘to be or become high’, *tpār* ‘high’, (?) *tsopats* ‘great, large’; B *tapre* ‘high, fat’, *tāprauñe* ‘height’.

Notes:

1. Derivation from Proto-Indo-European **d^hub-ró-* ‘deep’ (cf. Adams 2013: 296—297; van Windekens 1976—1982.I:509) is not convincing (cf. Buck 1949:§12.31 high), though Tocharian A *top* ‘mine’, B *taupe* ‘mine’ do, indeed, go back to Proto-Indo-European **d^houb-* ‘deep’ (the Proto-Indo-European reconstructions given by Adams and van Windekens have been retained here). Clearly, the underlying meanings implied by the Tocharian forms cited above are ‘swelling, growing, increasing, rising, etc.’, while ‘deep’ typically comes from notions such as ‘bottom, hollow, bent (downwards), etc.’ (cf. Buck 1949:§12.67 deep).
2. A better comparison for the Tocharian forms may be with Old Icelandic *þeffja* (*þafða*, *þafðr*) (< Proto-Germanic **þaffjanan*) ‘to stir, to thicken’ (preserved only in the past participle: *hann hafði þá eigi þafðan sinn graut* ‘he had not cooked his porridge thick’) (for the semantics, cf. Buck 1949:§12.63 thick [in dimension] and §12.64 thick [in density]).

Northwest Caucasian: Common Abkhaz **tapre* ‘fatty tumor, lipoma’: South Abkhaz *a-tápta* ‘fatty tumor, lipoma’.

VII. Animals

70. Proto-Indo-European **ǵeb^h-r-* (?) ‘male of small hoofed animals’ (**ǵ* = **ǵ₁*): Thracian ἔβρος ‘buck, he-goat’ (ἔβρος· τράγος, βάτης· καὶ ποταμὸς Θράκης). Proto-Germanic **ēburaz* ‘wild boar’ > Old Icelandic *jöfurr* ‘wild boar; (metaphorically) king, warrior’; Old English *eofor*, *eofur* ‘boar, wild boar’; Middle Dutch *ever* ‘boar’; Old High German *ebur* ‘wild boar’.

Notes:

1. The above forms are usually compared with somewhat similar forms in Italic and Balto-Slavic: (A) Italic: Latin *aper* ‘wild boar’; Umbrian (acc. sg.) **abrunu** ‘boar’ (the Umbrian form refers specifically to domestic boars offered as a sacrifice). The Proto-Italic form was probably **apro-* or **aprōn-*. (B) Balto-Slavic: Latvian *vepris* ‘castrated boar’; Old Church Slavic *veprь* ‘boar’; Russian *vepr’* [вепрь] ‘wild boar’; Czech *vepř* ‘pig’.
2. The attested forms have been remodeled in each of the daughter languages, making it difficult to reconstruct the Proto-Indo-European form.
3. For the semantic correlation between the Indo-European (Germanic) and Abkhaz forms, cf. Greek κάπρος ‘boar, wild boar’ ~ Latin *caper* ‘he-goat, buck’; Old Icelandic *hafir* ‘buck, he-goat’; Old English *hæfer* ‘he-goat’.

Northwest Caucasian: Common Abkhaz **abá* ‘(castrated) he-goat’: South Abkhaz *ab* (indef. sg. *abá-k*) ‘(castrated) he-goat’; Ashkharywa *ab* ‘(castrated) he-goat’; Abaza / Tapanta *ab* ‘(castrated) he-goat’. Note also (1) **abá* ‘he-goat’ in Common Abkhaz **abá-z+ná-ž^o* (< **abá* ‘he-goat’, **za-ná* ‘one’, **až^o* ‘old’) ‘male goat half a year old’: South Abkhaz *abázná-ž^o* ‘male goat half a year old’;

(2) **abə* ‘he-goat’ in Common Abkhaz **ab-tʰá* ‘sheep wool clipped in spring’: South Abkhaz *á-btʰa* ‘sheep wool clipped in spring’; Abaza / Tapanta *bčʰa* ‘sheep wool clipped in spring’; Gumlo(w)kt *bčʰa* ‘sheep wool clipped in spring’.

71. Proto-Indo-European (f.) **ǵegʰ-iH* ‘cow’: Sanskrit (f.) *ahī* ‘cow’; Avestan (adj. f.) *azī* ‘cow who has had a calf, a milch cow’; Armenian *ezn* ‘bullock, ox’.

Notes:

1. The masculine form is unattested, but it would probably have been something like Proto-Indo-European **ǵegʰ-o-* ‘bull’.
2. Sanskrit (m.) *ághnya-h*, *aghnyá-h* ‘bull’ is not related to the above forms (cf. Mayrhofer 1956—1980.I:19).

Northwest Caucasian: Common Abkhaz **áyʰa* ‘the male parent of an animal’: South Abkhaz *áyʰa* ‘sire, house male animal or bird left for reproduction’; Bzyp (indef. sg.) *yʰa-kʰ*, *áyʰa-kʰ*, *ayʰá-kʰ* ‘sire, house male animal or bird left for reproduction’, *ayʰá-s* ‘as a sire’.

Note: Common Abkhaz **yʰ* = Proto-Indo-European **gʰ*.

72. Proto-Indo-European **ǵey-/ǵoy-* ‘multicolored, of variegated color’ (**ǵ* = **ǵ_l*): Sanskrit *éta-h* (adj.) ‘shining, of variegated color’; (n. m.) a kind of antelope’, (m.) *eṇa-h*, (f.) *eṇī* ‘black antelope’, *éni* (f.) ‘a deer or antelope’, *étagva-h* ‘of a variegated or dark color’, *étaśa-h* (adj.) ‘of variegated color, shining’; (n. m.) a horse of variegated color’; Old Prussian *aytegenis* ‘lesser spotted woodpecker’.

Northwest Caucasian: (1) Common Abkhaz **aja* ‘dark-colored, pallid’: South Abkhaz *aja* ‘pallid, dim, wan (color)’ (arch.). (2) Common Caucasian **ajkʰá* ‘dark-colored, black’: South Abkhaz *ájkʰa* ‘dark(-colored)’, *ájkʰa-čʰa* ‘black’. *d-ḥiʰ-ajkʰa-p* ‘(s)he is dark-skinned’; Ashkharywa *kʰaj-čʰa* ‘black’; Abaza / Tapanta *kʰaj-čʰa* ‘black’.

73. Proto-Indo-European **gʷher-/gʷhor-/gʷh₂r-* ‘(vb.) to gather together, to amass; (n.) handful, bundle’: Czech *hrnouti* ‘to rake together’, *hrst* ‘cupped hand, handful’, *sou-hrn* ‘collection, set’; Slovak *hrst* ‘cupped hand, handful, bundle’; Macedonian *grne* ‘to gather, to amass, to clasp’; Slovenian *gřniti* ‘to rake together, to gather’; Serbo-Croatian *gřtati* ‘to rake together, to heap up’, *gřnuti* ‘to rake together, to swarm, to rush’, *gřst* ‘cupped hand, handful’; Russian (dial.) *gortátʹ* [гортатъ] ‘to rake together’, *gorstʹ* [горсть] ‘cupped hand, handful’; Latvian *gřstie* ‘bundle of flax’. Note: Trubačev (1974— .7: 212—213) derives the Slavic forms listed above from Proto-Indo-European **g(e)r-* ‘to gather together’ (cf. Greek *ἀγείρω* ‘to gather together, to bring together; to come together, to assemble, to get together; to collect, to gather’), while Derksen (2008:199—200) does not list any cognates from other branches

of Indo-European (except for Latvian *gūste* ‘bundle of flax’) and does not suggest a Proto-Indo-European ancestor.

Northwest Caucasian: Common Abkhaz **g^oarta* ‘herd, flock; large quantity of something’; South Abkhaz *a-g^oarta* ‘herd, flock; large quantity of something’; Ashkharywa *g^oarta* ‘herd, flock, pack’; Abaza / Tapanta *g^oarta* ‘herd, flock, pack’.

74. Proto-Indo-European **henH-th-* [**hanH-th-*]/**h₂enH-th-* ‘an aquatic bird’ (**h* = **₂*): Sanskrit *āti-h* ‘an aquatic bird’; Greek (Ionic) νῆσσα, (Attic) νῆττα, (Boeotian) νᾶσσα ‘duck’; Latin *anas*, *-tis* ‘duck’; Old Icelandic *önd* ‘duck’; Old English *ened* ‘duck’; Old High German *anut* ‘duck’ (New High German *Ente*); Lithuanian *antis* ‘duck’; Old Church Slavic *oty* ‘duck’.

Northwest Caucasian: Common Abkhaz **ač’á* ‘quail’; South Abkhaz *ač’á* ‘quail’; Bzyp (indef. sg.) *ač’á-k* ‘quail’; Abaza / Tapanta *ač’a*, *č’a* ‘quail’.

Note: Proto-Indo-European **₂* is reflected as **a* in Northwest Caucasian.

75. Proto-Indo-European **k^{hem}-* ‘lacking horns, hornless’: Sanskrit *śama-h* ‘hornless’; Greek κεύς ‘a young deer’; Lithuanian (Žem.) *šmūlas* ‘hornless’; Old Icelandic *hind* ‘a hind, a female deer’; Old English *hind* ‘a hind, a female deer’; Old High German *hinta* ‘a hind, a female deer’.

Northwest Caucasian: Proto-Circassian **k^{ham}ə* ‘to be insufficient, to lack’; Kabardian *kam* ‘to be insufficient, to lack’, *mə-kamə-w* ‘uninterruptedly’ (*mə* = negative element’, *-w* = modal case).

76. Proto-Indo-European **k^{hot}-*, (reduplicated) **k^{hot}-k^{hot}-* ‘a male chicken, a cock’: Sanskrit *kukkuṭá-h* (< **kuṭ-kuṭ-á-*) ‘a cock, a wild cock’, (f.) *kukkuṭī* ‘hen’, *kakkaṭá-h* (< **kaṭ-kaṭ-á-*) ‘a particular kind of bird’; Old Church Slavic *kokotъ* ‘cock’; Old Czech *kokot* ‘cock, penis’; Latin *coco*, *coco coco* the sound made by a hen clucking; Medieval Latin *coccus* ‘cock’ (only attested in the Salic Law [Lex Salica]); Old Icelandic *kokkr* ‘a cock’; Old English *cocc* ‘cock, male bird’. Note: Modified in various ways in the daughter languages in imitation of a cock crowing.

Northwest Caucasian: Proto-Circassian **k:at:ə* ‘chicken’: Bžedux *č’:at:ə* ‘chicken’; Kabardian *gad* ‘chicken’.

77. Proto-Indo-European **leh-* [**lah-*] (> **lā-*) ‘to bark’ (**h* = **₂*): Albanian *leh* ‘to bark’; Lithuanian *lóju*, *lóti* ‘to bark’; Old Church Slavic *lajō*, *lajati* ‘to bark’; Russian *lájat’* [лаять] ‘to bark’.

Northwest Caucasian: Common Abkhaz **la* ‘to bark; dog’: South Abkhaz, *á-la* ‘dog’, *á-la-š-ra* ‘to bark’; Abaza / Tapanta *la* ‘dog’; Ashkharywa *la* ‘dog’.

78. Proto-Indo-European **mel-/m̥l-* ‘sheep, ram’: Armenian *mal* ‘ram’; Greek *μαλλός* ‘a lock of wool, the wool of sheep’ (< **m̥l-nó-s* ?), *μαλλωτόριον* ‘sheepskin’.

Northwest Caucasian: Proto-Circassian **malə* ‘sheep’: Bžedux *malə* ‘sheep’; Kabardian *mal* ‘sheep’.

79. Proto-Indo-European **mer-kʷ-/mor-kʷ-/m̥r-kʷ-* ‘to evade, to elude, to avoid (hunters) (of animals); to flee from, to escape from, to get away from (hunters) (of animals)’, **m̥r-kʷ-o-* ‘any wild animal that is pursued or hunted for food or sport, game’ (Indo-Aryan/Indic only): Sanskrit *mṛgá-h* ‘game, deer, wild animal; stag, antelope, gazelle’, *mārgáti*, *mṛgyáti* ‘to hunt, to chase, to pursue; to seek, to search for’; Pāli (m.) *maga-*, *miga-* ‘animal for hunting; deer antelope, gazelle’, (f.) *migī-* ‘doe’, *migavā* ‘hunt, hunting, stalking’; etc.

Notes:

1. Sanskrit *mārgáti*, *mṛgyáti* is a denominative form derived from *mṛgá-h* (cf. Mayrhofer 1956—1980.II:669—670 and 1986—2001.II:370—371; Buck 1949:§3.79 hunt [vb.]).
2. Mayrhofer (1956—1980.II:669—670) also mentions a secondary stem (“Nebenwurzel”) *mṛjáti* ‘to roam about, to prowl; to run about, to rove, to roam’.
3. On the comparison of Sanskrit *mṛgá-h* ‘game, deer, wild animal; stag, antelope, gazelle’ with Avestan *mərəṇga-* ‘bird’, cf. Mayrhofer 1956—1980.II:669—670.

Northwest Caucasian: Common Abkhaz **mara-ḥə* (**ḥə* ‘to turn’) ‘to shirk, to elude; to escape (of animals)’; South Abkhaz *á-maraḥə-ra* ‘to shirk, to elude; to escape (of animals)’.

80. Proto-Indo-European **meth-/moth-* ‘to twist, to turn, to wind’ (Slavic only): Russian *motát’* [мотать] ‘to wind, to reel’; Czech *motati* ‘to wind’; Polish *motać* ‘to wind, to reel’; Serbo-Croatian *mòtati* ‘to revolve, to wind, to move, to throw’. Note also: Gothic *mapa* ‘worm’; Old Icelandic *maðkr* ‘maggot, grub, worm’; Old English *maða* ‘maggot, worm, grub’; Dutch *made* ‘maggot, grub’; Old High German *mado* ‘maggot, worm’ (New High German *Made*).

Northwest Caucasian: Common Abkhaz **matə* ‘snake’: South Abkhaz *á-mat* ‘snake’ (indef. sg. *matə-k*); Ashkharywa *matə* ‘snake’. For the semantics, cf. Buck 1949:§3.85 snake. Note: Same semantic development/range as in Bzyp *-šaq’-wá* ‘winding, bending, circling (for example, of a snake, but also of restless movements)’.

81. Proto-Indo-European **mu(H)-* ‘fly, midge, gnat, mosquito’ (with numerous variant forms in the daughter languages): (1) Proto-Indo-European **mu-s-* ‘fly, mosquito’: Greek *μῦα* (< **μυσ-ια*) ‘fly’; Middle Dutch *meusie* ‘fly, mosquito’; Lithuanian *mùsė*, *musė*, *musià*, *musis* ‘mosquito’; Latvian *mūsa*, *muša* ‘fly’; Old Prussian *muso* ‘fly’; Old Church Slavonic *мѣсѣца* ‘mosquito’; Russian (dial.) *mšica* [мшица] ‘midge, gnats, small insects’, (dial.) *móxa* [моха] ‘midge’. (2) Proto-Indo-European **mu-s-no-* ‘fly, midge’: Armenian *mun* ‘fly, midge’. (3) Proto-Indo-European **mu-s-kh-* ‘fly’: Latin *musca* ‘fly’. (4) Secondary full-grade in Proto-Slavic **mùxa* (< **mows-*) ‘fly’: Old Church Slavonic *muxa* ‘fly’; Russian *múxa* [муха] ‘fly’; Czech *moucha* ‘fly’; Polish *much* ‘fly’; Serbo-Croatian *mùha* ‘fly’; Bulgarian *muxá* ‘fly’. (5) Proto-Indo-European **muH-i-A* (> **muwī*), (gen. sg.) **muH-yeA-s* (> **mū-yā-s*) ‘gnat, midge’: Old Icelandic *mý* ‘midge’; Old English *mycge* ‘midge’; Dutch *mug* ‘gnat’; Old High German *mucka* ‘gnat, midge’ (New High German *Mücke*).

Northwest Caucasian: Common Abkhaz **méc’ə* ‘fly’: Bzyp *a-méc’*, *a-méc’* ‘fly’; Abzhywa *a-méc’* ‘fly’.

Note: Proto-Indo-European **u* is reflected as **ə* in Northwest Caucasian.

82. Proto-Indo-European **p^hiskh-* ‘fish’: Latin *piscis* ‘fish’; Old Irish *íasc* ‘fish’ (< **p^heyskh-*, with secondary full-grade); Gothic *fisks* ‘fish’; Old Icelandic *fiskr* ‘fish’; Old English *fisc* ‘fish’; Old High German *fisc* ‘fish’.

Northwest Caucasian:

- A. Common Abkhaz **pśə-ʒə* ‘fish’: Bzyp *a-pśəʒ* ‘fish’; Abzhywa *a-psəʒ* ‘fish’; Ashkharywa *psəz* ‘fish’.
 B. Ubykh *psá* ‘fish’.
 C. Proto-Circassian **Pc:a* ‘fish’: Bžedux *pc:a* ‘fish’; Kabardian *bʒa* ‘large fish’. Note: Irregular correspondence (cf. Chirikba 1996a:337, §1.5.6).

Note: Proto-Indo-European **p^his(kh)-* = Common Abkhaz **pśV*, Ubykh *psV-*.

83. Proto-Indo-European **p^hos-lo-* ‘brood, offspring, progeny’ (Germanic only): Proto-Germanic **fas(u)laz* ‘brood, offspring, progeny’ (cf. Orel 2003:94) > Old Icelandic *fösull* ‘brood’; Old English *fæsl* ‘offspring, progeny’; Middle Low German *vasel* ‘mature bull’; Old High German *fasal* ‘offspring, progeny, kin’ (New High German *Fasel* ‘brood, young of animals’). Note: Proto-Indo-European **p^hos-lo-* is usually considered to be related to **p^hes-/p^hos-* ‘penis’: Sanskrit *pásas-* ‘penis’; Greek *πέος* ‘penis’, *πόσθη* ‘penis’; Latin *pēnis* (< Pre-Latin **pes-ni-s*) ‘penis’. Cf., for example, Pokorny 1959:824.

Northwest Caucasian:

- A. Common Abkhaz **psa* ‘cattle’ in **psá-śa* ‘small cattle’ (**-śa* ‘small’): Bzyp *a-psá-śa* ‘small cattle’; Abzhywa *a-psá-sa* ‘small cattle’.

- B. Proto-Circassian **Psaśʔ* ‘pregnant (of animals)’: Bžedux *psaśʔ* ‘pregnant (of animals)”; Kabardian *psaf* ‘pregnant (of animals)’. Note: Kuipers (1975:24) writes **Psaśʔ*.

Note: Proto-Indo-European **p^hVs-* = Common Abkhaz **psV-*, Proto-Circassian **PsV-*.

84. Proto-Indo-European **wes-* ‘to graze in a pasture; to herd animals into a pasture to graze’, **wes-i-* ‘pasture’; **wes-th(o)r-*, **wes-th-ro-* ‘herd’: Hittite (nom. sg.) *ú-e-ši-iš* ‘pasture’, (nom. sg.) *ú-e-eš-ta-ra-aš* ‘herd’, (3rd sg. pres. mid.) *ú-e-ši-ya-at-ta* ‘to graze in a pasture; to herd animals into a pasture to graze’ (denominal formation); Avestan *vāstar-* ‘herd’, *vāstra-* ‘pasture’; Old Irish *fess* ‘food’; Latin *vescor* ‘to feed on, to devour’; Gothic *wisan* ‘to eat a good meal, to dine, to feast’, *bi-wisan* ‘to dine together’, *fra-wisan* ‘to consume, to feast, to devour’; Old English *wist* ‘sustenance, food, feast’, *ge-wistian* ‘to feast’; Old Icelandic *vist* ‘food, provisions’; Old Saxon *wist* ‘food’; Old High German *wist* ‘sustenance’; Tocharian A *wāsri* ‘pasture, grassy field’.

Northwest Caucasian: Common Abkhaz **wasá* ‘sheep’: South Abkhaz *a-wasá* ‘sheep’; Ashkharywa *wasá* ‘sheep’; Abaza / Tapanta *wasá* ‘sheep’. Note: Chirikba (1996a:312) compares Common Abkhaz **wasá* ‘sheep’ with Common Circassian **wasa* ‘price’.

85. Proto-Indo-European **wisu-* ‘weasel’ (Germanic only): West Germanic **wisulōn* ‘weasel’ > Old English *wesle*, *weosule*, *wesule* ‘weasel’; Middle Low German *wesel*, *wezel* ‘weasel’; Dutch *wezel* ‘weasel’; Old High German *wisula*, *wisala*, *wisel* ‘weasel’ (New High German *Wiesel*). Note: According to Onions (1966:996), the following Scandinavian forms are loans from West Germanic: Old Icelandic *-visla* in *hreyvisla* ‘weasel’; Norwegian *væsel* ‘weasel’; Danish *væsel* ‘weasel’; Swedish *vessla* ‘weasel’. Kluge—Seebold (2011:988), on the other hand, suggest that the Scandinavian forms may be cognates rather than loanwords. See also de Vries 1977:255.

Northwest Caucasian: Proto-Circassian **wəž'(a)* ‘weasel’: Bžedux *wəžʔ* ‘weasel’; Kabardian *wəža* ‘weasel’.

Notes:

1. Proto-Indo-European **i* is represented as **ə* in Northwest Caucasian.
2. Proto-Circassian **ž'* is represented as **s* in Proto-Indo-European.

VIII. Plants, Vegetation, Agriculture

86. Proto-Indo-European **ǵey-/ǵoy-* used in various tree names (**ǵ = ǵ₁*): Greek *οἴη*, *οῖη*, *οἶα* ‘the service-tree’; Old Irish *éo* ‘yew-tree’; Old English *īw* ‘yew-tree’; Old Saxon (pl.) *īchas* ‘yew-tree’; Old High German *īgo* ‘yew-tree’;

Lithuanian *ievà, jievà* ‘bird-cherry tree’; Russian Church Slavic *iva* ‘willow-tree’.

Northwest Caucasian: South Abkhaz *ajə-ra* ‘plant, vegetation’; Abaza / Tapanta *ħa-jə-ra* ‘plant, vegetation’. Perhaps also Common Abkhaz **aja/ə-ć’oá*: South Abkhaz *ája-ć’oá* ‘green, blue’; Ashkharywa *aj-ć’oá* ‘green’.

87. Proto-Indo-European (extended form) **d^hergh-*, **d^hreg^h-* ‘thorny plant’: Old Irish *draigen* ‘sloe tree, blackthorn’; Middle Welsh *draen, drain* ‘thornbush, brambles, briars’; Old High German *dirn-baum, tirn-pauma* ‘cornel’; Greek *τρέχνος, τρέχνος* ‘twig, branch’; Russian (dial.) *déren, derén* [дерен] ‘cornel’.

Northwest Caucasian: Common Abkhaz **dárə* ‘to sting (of nettle)’; Bžedux *a-dar-ra* ‘to sting (of nettle)’.

88. Proto-Indo-European **hel-* [**hal-*] ‘alder’ (**h* = **₂₄*): Latin *alnus* (< Proto-Italic **alsno-*) ‘alder’; Old Icelandic *öl* ‘alder-tree’; Old English *alor* ‘alder’; Old High German *elira* ‘alder’; Russian *ол’ха* [ольха] ‘alder(-tree)’; Lithuanian *alksnis, eļksnis*, (dial.) *aliksniš* ‘alder’.

Northwest Caucasian: Common Abkhaz **alə* ‘alder(-tree)’; Bžyp (indef. sg.) *l-k’ə // lə-k’* ‘alder(-tree)’; South Abkhaz *ál(-c’la)* ‘alder(-tree)’; Ashkharywa *al-t’a* ‘alder(-tree)’; Abaza / Tapanta *al-č’ə, al-č’ə*, (indef. sg.) *al-č’ə-k’* ‘alder(-tree)’.

89. Proto-Indo-European **hhemH-* [**hhamH-*] ‘to cut, to mow’ (**h* = **₂₂*): Hittite *ḫamešḫa-* ‘spring (season)’; Greek *ἀμάω* ‘to cut, to mow, to reap’, *ἄμνητος* ‘reaping, harvesting; harvest, harvest-time’; Old English *māwan* ‘to mow’, *mæp* ‘the act of mowing; hay-harvest’; Old Frisian *mēa* ‘to mow’; Old High German *māen* ‘to mow, to cut, to reap’.

Northwest Caucasian: Proto-Circassian **ham(a)* ‘threshing-floor’; Bžedux *hāma* ‘threshing-floor’; Kabardian *ham* ‘threshing-floor’.

90. Proto-Indo-European **k^hamero-* (> Greek **kamaro-*; Balto-Slavic **kemero-*; Germanic **χamirō*) ‘name of a (poisonous) plant’: Greek *κάμαρος* ‘larkspur (*Delphinium*)’, *κάμ(μ)αρων* ‘aconite’; Old High German *hemera* ‘hellebore’; Lithuanian *kēmeras* ‘hemp agrimony, burr marigold’; Russian Church Slavic *čemerь* ‘hellebore’; Russian *čemerica* [чемерица] ‘hellebore’.

Northwest Caucasian: Common Abkhaz **kámp’ərə* ‘a kind of umbellate plant with white floscule’; South Abkhaz *a-kámp’ər* ‘a kind of umbellate plant with white floscule’.

Note: Probably borrowed by both Proto-Indo-European and Northwest Caucasian from an unknown source.

91. Proto-Indo-European **k^heAk^hA-* [**k^haAk^hA-*] (> **k^hāk^hA-*) ‘branch, twig’: Sanskrit *śākhā* ‘branch’; Armenian *c^hax* ‘twig’; Albanian *thekë* ‘fringe’; Gothic *hōha* ‘plow’; Lithuanian *šakà* ‘branch, bough, twig’; Russian *soxá* [coxa] ‘(wooden) plow’; Polish *socha* ‘two-pronged fork’; Serbo-Croatian *sōha* ‘forked stick’.

Notes:

1. This is probably a reduplicated stem: **k^heA-k^heA-*.
2. The Slavic forms may be borrowings.

Northwest Caucasian:

- A. Proto-Circassian **k^hə* ‘brushwood, twig’: Bžedux *č^hə* ‘brushwood, twig’; Kabardian *kə* ‘brushwood, twig’.
- B. Common Abkhaz **káka* ‘grown thick, bushed out (of plants)’: South Abkhaz *a-káka* ‘grown thick, bushed out (of plants)’, *-káka-za* ‘thickly, simultaneously going up (of plants, hair)’. Note: There are numerous derivatives in both Circassian and Abkhaz-Abaza. Only the forms closest to what is found in Indo-European are given above.

92. Proto-Indo-European **lek’-/*lok’-* ‘to twist, to turn, to bend, to wind’, **lok’-eA* (> **lok’-ā*) ‘vine’: Manichaean Middle Persian *rz /raz/* ‘vineyard’; Pahlavi *raz* ‘vine, vineyard’; Old Church Slavic *loza* ‘vine’; Russian *lozá* [лoзa] ‘branch, twig, rod; vine’; Slovak *loza* ‘vine, sapling’; Polish *loza* ‘willow, osier, vine’; Bulgarian *lozá* ‘vine’; Serbo-Croatian *lōza* ‘vine, umbilical cord’.

Notes:

1. Mann (1984—1987:659) reconstructs Proto-Indo-European **laǵ-* ‘(vb.) to wind, to creep, to twist; (n.) winding object, creeper’.
2. Hittite (3rd sg. pres. act.) *la-a-ki* ‘to knock out (a tooth); to turn (one’s ear or eyes toward); to train (a grapevine branch)’, (2nd sg. pres. act.) *la-ak-nu-si* ‘to knock over; to overturn (stelas, thrones, tables); to fell (a tree); (a wrestling maneuver:) to throw, to make (an opponent) fall; to train, to bend (a vine); to make (someone) fall out of favor; to bend (someone) to one’s own viewpoint, to persuade; to pass (the day or night) sleepless’, (3rd sg. pres. mid.) *la-ga-a-ri* ‘to fall down, to fall over, to be toppled’, (gen. sg.) *la-ga-na-aš* ‘bent, inclination, disposition (?)’ (all forms and meanings are cited from *The Hittite Dictionary of the Oriental Institute of the University of Chicago*, fasc. L-N [1989], pp. 17—18 and 19—20) are traditionally derived from Proto-Indo-European **leg^h-/*log^h-* ‘to put, place, lay, or set down; to lie down’ (cf. Kloekhorst 2008:514—515; Puhvel 1984— .5: 33—37). However, a better derivation semantically would be from Proto-Indo-European **lek’-/*lok’-* ‘to twist, to turn, to bend, to wind’. For

example, ‘to toss and turn’ is a more colloquial way of saying ‘to pass (the day or night) sleepless’.

Northwest Caucasian: Common Abkhaz **lak''ə* ‘to curve, to bend, to wind’:
South Abkhaz *á-lak''* ‘curved, bent’, *a-lak''-rá* ‘to curve, to bend, to wind’.

93. Proto-Indo-European **meh-lo-m* [**mah-lo-m*] (> **mā-lo-m*) ‘apple’ (**h* = **₂*): Greek (Ionic) *μῆλον* (Doric *μᾶλον*) ‘apple’; Latin *mālum* ‘apple’, *mālus* ‘apple-tree’; Albanian *mollë* ‘apple(-tree)’ (if not borrowed from Latin). Note: Not related to Hittite (nom. sg.) *ma-a-ah-la-aš* ‘branch of a grapevine’ (cf. Kloekhorst 2008b:539—540; Beekes 2010.II:943—944).

Northwest Caucasian: (1) Proto-Circassian **mə* ‘wild apple’: Bžedux *mə* ‘wild apple’; Kabardian *mə* ‘wild apple’. (2) Proto-Circassian **məya* ‘wild apple-tree’: Bžedux *məya* ‘wild apple-tree’; Kabardian *may* ‘wild apple-tree’.

94. Proto-Indo-European **meth-* ‘to measure’ (> ‘to reap, to mow’): Latin *metō* ‘to reap, to mow; to gather, to harvest’; Welsh *medi* ‘to mow, to harvest’, *medel* ‘a group (of reapers)’; Lithuanian *metù*, *mèsti* ‘to throw, to hurl, to fling’, *mėtas* ‘time’, *mātas* ‘measure’; Old Church Slavic *metq*, *mesti* ‘to throw, to sweep’.

Northwest Caucasian: Common Abkhaz **matá* ‘piece, strip of field to be hoed or plowed’: South Abkhaz *á-mata* ‘piece, strip of field to be hoed or plowed’.

95. Proto-Indo-European **mor-* ‘mulberry, blackberry’: Greek *μόρον*, (Hesychius) *μῶρα*: *συκάμινα* ‘mulberry, blackberry’, *μορέα* ‘mulberry-tree’; Armenian *mor* ‘blackberry’; Latin *mōrum* ‘mulberry, blackberry’, *mōrus* ‘mulberry-tree’; Middle Irish *merenn* ‘mulberry’; Old English *mōrbēam*, *mūrbēam* ‘mulberry-tree’, *mōrberie*, *mūrberie* ‘mulberry’; Old High German *mūrberi*, *mōrberi* ‘mulberry’; Lithuanian *mōras* ‘mulberry’.

Northwest Caucasian: Proto-Circassian **mark''a* ‘mulberry, blackberry’: Temirgoy *mārk''a* ‘mulberry, blackberry’; Kabardian *marāk''a* ‘mulberry, blackberry’.

Note: This may be a “Wanderwort”, borrowed by both Proto-Indo-European and Northwest Caucasian.

96. Proto-Indo-European **mes-t'o-/*mos-t'o-* ‘mast; the fruit of the oak, beech, and other forest trees; acorns or nuts collectively’: Old English *mæst* ‘mast’; Old High German *mast* ‘mast’; Old Irish *mess* ‘acorns, tree-fruit’; Welsh (pl.) *mes* ‘acorns, tree-fruit’.

Northwest Caucasian: (1) Proto-Circassian **mǝšk'ǝ* ‘acorn’: Bžedux *mǝšk'ǝ* ‘acorn’; Kabardian *mǝšk'ǝ* ‘acorn’. (2) Proto-Circassian **mǝšxǝ* ‘acorn’: Bžedux *mǝfǝ* ‘acorn’; Kabardian *mǝšxǝ(m)p'a* ‘acorn’.

97. Proto-Indo-European **phes-/phos-* ‘(vb.) to throw, to cast, to winnow (grain); (n.) chaff, husk’: Tocharian A *psāl*, B *pīsāl* ‘chaff (of grain), husk’ (< Proto-Tocharian **piäsāl*); Middle Dutch *vese* ‘fiber, husk; fringe’; Old High German *fesa* ‘chaff’.

Northwest Caucasian: (1) Common Abkhaz **psa* ‘to pour, to strew’: Abaza / Tapanta *á-k°psa-ra* ‘to pour something on, to sow’; South Abkhaz *á-k°psa-ra* ‘to pour something on, to sow’. (2) Common Abkhaz **psa-q'ǝ* ‘to winnow (grain)’: South Abkhaz *á-psa-q'a-ra* ‘to winnow (grain)’.

Note: Proto-Indo-European **phVs-* = Northwest Caucasian **psV-*.

98. Proto-Indo-European **phis-* ‘to grind, to crush, to pound’: Sanskrit (with *n*-infix) *pināṣṭi* ‘to grind, to crush, to pound’, *piṣṭá-h* ‘(past participle) ground, pounded, crushed; (n.) anything ground, any finely ground substance, flour, meal’; Greek *πίσσω* ‘to winnow grain’, *πίσμα* ‘peeled or winnowed grain’; Latin (with *n*-infix) *pīnsō* ‘to stamp, to pound, to crush (grain)’, *pistillus*, *pistillum* ‘a pestle’, *pistrīnum* ‘a mill, a bakery’, *pistor* ‘grinder, miller’; Russian *pšenó* [пшено] (< **pǝšeno*) ‘millet, millet-meal’, *pšenica* [пшеница] ‘wheat’; Czech (dial.) *pšeno* ‘millet’; Slovenian *pšeno* ‘peeled grain, millet’.

Northwest Caucasian: Common Northwest Caucasian **pšǝ* ‘millet’ (cf. Chirikba 1996a:263), **pš(a)* ‘to knead’:

- A. Common Abkhaz **pšǝ* ‘maize, millet’: Abzhywa *á-pš* ‘maize, millet’, *á-pšǝ-c* ‘a maize grain’, *á-pšǝr+ta* ‘maize field’.
- B. (1) Proto-Circassian **(P)ǝǝ-(P)š:ǝ* (**(b)ǝǝ-(p)š:ǝ* [cf. Chirikba 1996a:263]) ‘millet-straw’: Bžedux *bǝǝš:ǝ* ‘millet-straw’; Kabardian *ǝǝpš* ‘millet-straw’. Note: Kuipers (1975:80) writes Proto-Circassian **(P)ǝǝ-(P)š:ǝ*, Bžedux *bǝǝš:ǝ*, and Kabardian *ǝǝpš*. (2) Proto-Circassian **Pš:(a)* ‘to knead’: Bžedux *pš:a* ‘to knead’; Kabardian *pšǝ* ‘to knead’. Note: Kuipers (1975:42) writes Kabardian *pšǝ*.

Note: Proto-Indo-European **phVs-* = Common Northwest Caucasian **pšV-*.

99. Proto-Indo-European **phis-no-s* ‘pine-tree’: Latin *pīnus* ‘pine-tree, pine-wood’; Albanian *pishë* ‘pine-tree’.

Northwest Caucasian: Common Northwest Caucasian **psa* ‘spruce, fir-tree’ (cf. Chirikba 1996a:251):

- A. Common Abkhaz **psa* ‘fir-tree, silver fir’: South Abkhaz *a-psá* ‘fir-tree, silver fir’.

- B. Proto-Circassian **Psayə* ‘black maple; spruce, fir’: Bžedux *psayə* ‘black maple; spruce, fir’; Kabardian *psay* ‘black maple; spruce, fir’.
 C. Ubykh **psə-* in compounds: *psə-s* ‘fir-wood’, *psə-γʷənə* ‘fir-tree’.

Note: Proto-Indo-European **p^hVs-* = Common Abkhaz **psV-*, Ubykh *psV-*.

100. Proto-Indo-European **seǵ(-y/i-)* (> **sē(-y/i-)*) ‘to sow’ *ǵ (= *ǵ₁): Latin *sēmen* ‘seed’, *serō* (< **si-sǵ-e/o-*) ‘to plant, to sow seeds’; Old Irish *síl* ‘seed’; Gothic *saian* ‘to sow, to plant’; Old Icelandic *sá* ‘to sow’, *sáð* ‘seed’; Old English *sāwan* ‘to sow’, *sæd* ‘seed’; Old Saxon *sāian* ‘to sow’; Old High German *sāen* ‘sow’ (New High German *säen*); Old Church Slavonic *sějō*, *sějati* ‘to sow’, *sémę* ‘seed’; Russian *séjat’* [сеять] ‘to sow’, *sémja* [семя] ‘seed, grain’; Lithuanian *sėjū*, *sėjau*, *sėti* ‘to sow’, *sėmenys* ‘linseed, flaxseed’, *sėkla* ‘seed, sperm’.

Northwest Caucasian: Proto-Circassian **sa* ‘to sow’: Bžedux *xā-sa* ‘to sow’ (*xa-* ‘in a mass’); Kabardian *sa* ‘to sow’; Temirgoy (in compounds) *-sa-* ‘to sow; to put, to stick’.

IX. Possession, Property, Commerce

101. Proto-Indo-European **b^hegh-* (lengthened-grade form **b^hēgh-*) ‘open space, outside’: Sanskrit *bahih* ‘out, without; outside; on the outside, outwards, out-of-doors’, (adj.) *bāhya-h* ‘being outside, situated outside’; Pāli *bahi* ‘outside’, *bāhira-* ‘external; outside’; Farsi *bāz* ‘open’. Perhaps also: (1) Tocharian B *pākre* ‘±visible, exposed, in the open; public’, *pākrešše* ‘±open, public’. (2) Old Church Slavonic *bez*, *bezъ* ‘without’; Russian *bez* [без] ‘without, but, but for, had it not been’ (Old Russian *bezъ* [безъ]); Czech *bez* ‘without’; Polish *bez* ‘without’; Serbo-Croatian *bēz* ‘without’; Lithuanian *bè* ‘without’; Latvian *bez* ‘without’; Old Prussian *bhe* ‘without’. Note: Derksen (2008:38 and 2015:84) reconstructs Proto-Indo-European **bhe-gh* but does not cite Sanskrit *bahih* as a possible cognate. Mayrhofer (1956—1980.II:424), on the other hand, lists the Balto-Slavic forms as possible cognates of Sanskrit *bahih*. For a comprehensive discussion of the Slavic forms, cf. Trubačev 1974— .2:7—13.

Notes:

1. This etymology was suggested by Mann 1984—1987:70.
2. For the semantics, cf. Tamil *veli* ‘(vb.) to be open or public, to be vacant, to be empty; (n.) outside, open space, plain, space, intervening space, gap, room, openness, plainness, publicity’, *velippu* ‘outside, open space, enclosed space’; Telugu *veli* ‘the outside, exterior, excommunication; outside, external’, *veliparacu*, *velipuccu* ‘to make public or known’, *velupala* ‘outside, exterior; outside, external’; etc.
3. Assuming derivation from a Proto-Indo-European root **b^hegh-*/**b^hogh-* ‘to open, to be open’, not further attested in the Indo-European daughter languages.

4. Farsi *bāz* ‘open’ is to be distinguished from *bāz* ‘shoulder, arm’, which is related instead to Avestan *bāzu-* ‘arm’; Sanskrit *bāhú-h* ‘arm, fore-arm’; Greek *πῆχυς* (Aeolian *πᾶχυς*) ‘fore-arm, arm’; Old Icelandic *bógr* ‘shoulder’; Old English *bōg* ‘shoulder, arm; bough, twig, branch’; Tocharian A *poke*, B *pokai-* ‘arm, (any) limb’; etc.

Northwest Caucasian: Common Northwest Caucasian **bay’ə* ‘to open’ (cf. Chirikba 1996a:283 — Chirikba writes **bay’ə*).

- A. Common Abkhaz **bəy’ə* ‘leaf’: Abaza / Tapanta *by’ə* (def. *a-by’ə*) ‘leaf’; Sadz *a-bay’ə* ‘leaf’; South Abkhaz *a-by’ə* ‘leaf’.
 B. Ubykh *by’-* ‘to open (out, up) (as leaf, hand), to bloom, to blossom (as leaf)’.

102. Proto-Indo-European **bʰol-(gʰ-)* ‘beam, cross-beam’: Old Icelandic *bjálki* ‘balk, beam’; Old English *balca* ‘balk, beam; bank, ridge’; Old High German *balcho*, *balko* ‘beam’ (New High German *Balken*); Lithuanian *balžienas* ‘crossbar (of harrow)’; Latvian *bālziēns* ‘cross-beam’; Russian *bólozno* [болозно] (dial.) ‘thick plank’; Serbo-Croatian *blázina* ‘pillow, bolster’; Slovene *blazína* ‘roof-beam, cross-beam; pillow, mattress, bolster’. Note: According to Beekes (2010.II:1548—1549), Greek *φάλαγξ* ‘round and longish piece of wood; log, roller, beam’ is not related to these forms.

Northwest Caucasian: Common Northwest Caucasian **bla* ‘cross-beam, beam; stretcher’ (cf. Chirikba 1996a:306):

- A. Common Abkhaz **qʰə-bla/ə* ‘cross-beam’: Bzyp *a-ǰʰbla-rə*, *a-ǰʰbəl-rə* ‘cross-beam of the house’; Abzhywa *a-ǰʰəblə* ‘cross-beam of the house’; Ashkharywa *qʰəblə* ‘cross-beam of the house’; Abaza / Tapanta *qʰəmblə* ‘cross-beam of the house’.
 B. Proto-Circassian **qʰa-Pla* ‘stretcher, litter for carrying the dead to the cemetery’ (**qʰa* ‘grave’): Kabardian *qābla* ‘stretcher, litter for carrying the dead to the cemetery’.

103. Proto-Indo-European **dʰew-r-yo-s* ‘of great value, cost, prestige, etc.’ (only in Germanic): Proto-Germanic **deurjaz* ‘costly, expensive, valuable’ > Old Icelandic *dýrr* ‘high-priced, costly, expensive, precious’; Old English *dēore*, *dīere* ‘precious, costly, valuable; noble, excellent’; Old Frisian *dioere*, *diure* ‘costly, expensive’; Old Saxon *diuri* ‘valuable, expensive’; Old High German *tiuri* ‘valuable, expensive’. Proto-Germanic **deurja-līkaz* ‘glorious, excellent’ > Old Icelandic *dýr-ligr* ‘glorious’; Old Saxon *diur-līk* ‘valuable, excellent’; Old High German *tiur-līh* ‘valuable, excellent’. Proto-Germanic **deuriþō* ‘glory, fame’ > Old Icelandic *dýrð* ‘glory’; Old Saxon *diuritha* ‘glory, fame’; Old High German *tiurida* ‘glory, fame’.

Northwest Caucasian: Common Abkhaz **dəwə* ‘big, great’: South Abkhaz *dəw* ‘big, great’; Ashkharywa *dəw* ‘big, great’; Abaza / Tapanta *dəw* ‘big, great’.

104. Proto-Indo-European **g^{wh}or-o-* ‘open area set aside as a public space’ (only in Italic): Latin *forum* ‘an open square, marketplace, public space’; Umbrian (acc. sg.) *furo*, **furu** ‘forum’. Note: Latin *forum* is usually (though not always) derived from Proto-Indo-European **d^hwōr-* ‘door’ (cf. Latin *foris* ‘door’). However, the semantic development required to get from ‘door’ to *forum* seems rather contrived.

Northwest Caucasian: (1) Common Abkhaz **g^oára* ‘yard’: Bzyp *a-g^oár(a)* ‘yard’; Abzhywa *a-g^oára* ‘yard; cattle-yard; fence’; Abaza / Tapanta *g^oára* ‘fence’; Ashkharywa (Apsua) *a-g^oára* ‘wattled fence’. (2) Common Abkhaz **g^oár-pə* (< **g^oára* ‘court, yard’, **pə* ‘nose’ > ‘front; before’): South Abkhaz *a-g^oárp* ‘part of big yard around the house’.

105. Proto-Indo-European **k^hath-* ‘rag, tatter’ (only in Germanic): Old High German *hadara* ‘patch, rag’; Middle High German *hader*, also *hadel*, ‘rag, tatter’; Old Saxon *hadilīn* ‘rag, tatter’.

Northwest Caucasian: Proto-Circassian **k^oaTṣa* ‘to tear to shreds (tr.)’: Temirgoy *č’atṣa-n* ‘to tear to shreds (tr.)’; Kabardian *kāṭṣa* ‘to tear to shreds (tr.)’.

106. Proto-Indo-European **len-d^h-*/**lon-d^h-*/**l^hn-d^h-* ‘low-lying ground, lowland; any piece of land’: Old Irish *land* ‘open place’; Middle Welsh *llan* ‘enclosure, yard’; Breton *lann* ‘heath’; Cornish *lan* ‘piece of land’; Gothic *land* ‘land, country’; Old Icelandic *land* ‘land (as opposed to sea), country’; Old English *land* ‘earth, land, soil’; Old Frisian *lond*, *land* ‘land’; Old Saxon *land* ‘land’; Old High German *lant* ‘land’ (New High German *Land*); Old Prussian (acc. sg.) *lindan* ‘valley’; Russian *ljadá* [ляда] ‘overgrown field’; Czech *lada* ‘fallow land’.

Notes:

1. Proto-Indo-European **len-d^h-*/**lon-d^h-*/**l^hn-d^h-* ‘low-lying ground, lowland; any piece of land’ is most likely assimilated from earlier **lem-d^h-*/**lom-d^h-*/**l^hm-d^h-*, extended form of **lem-*/**lom-*/**l^hm-* ‘(vb.) to be low; (n.) that which is low; low-lying ground, lowland’. The unextended stem may be preserved in Balto-Slavic: Lithuanian *lomà* ‘hollow, valley, plot, lump’; Latvian *lāma* ‘hollow, pool’; Russian (dial.) *lam* [лам] ‘(Pskov) meadow covered with small trees and bushes that is occasionally flooded; (Novgorod) wasteland’; Polish (obsolete) *lam* ‘quarry, bend’; Slovenian *lam* ‘pit; (dial.) quarry’; Serbo-Croatian *lām* (dial.) ‘knee-joint, underground passage’.
2. According to Rosenkranz (1988), Tocharian A/B *lām-* ‘to sit (down); to remain, to be present, to reside; to subside’, A *lame* ‘place’ and multifarious other forms from the Indo-European daughter languages are to be derived from a Proto-Indo-European root **lem-* ‘to be low’. Puhvel

(1984— .5:50), on the other hand, has rejected the suggestion that various Hittite and Luwian forms included by Rosenkranz may be derivatives of this root.

Northwest Caucasian: Common Abkhaz **la-dá* ‘downwards, southwards, below’: Bzyp *á-lda* ‘downwards, southwards, below’; Abzhywa *á-lada* ‘downwards, southwards, below’; Ashkharywa *lada* ‘downwards, southwards, below’. Note: Chirikba (1996a:184—185) considers Common Abkhaz **la-dá* to be composed of **la* ‘down, beneath’ and the deictic particle **da*.

Note: Proto-Indo-European **ŋ* is reflected as **a* in Northwest Caucasian.

107. Proto-Indo-European **mis-* ‘to fill, to fulfill’, **mis-ri-* ‘full, fulfilled, complete’ (Hittite only): Hittite (nom. sg.) *mi-iš-ri-ya-an-za*, (acc. sg.) *mi-iš-ri-wa-an-ta-an* meaning uncertain, either ‘perfect, complete, full’ or ‘bright, splendid, glorious, luminous, glowing, beautiful’. Depending upon context, both meanings appear to fit the available textual sources (for more information, cf. *The Hittite Dictionary of the Oriental Institute of the University of Chicago*, fasc. L-N [1989], pp. 297—299).

Notes:

1. Proto-Indo-European **mis-dʰ-o-* ‘prize, reward; pay, wages, salary, recompense’ (cf. Sanskrit *mīdhá-m* [< **mizdhá-*] ‘contest, prize, reward’; Avestan *mīžda-* ‘wages’; Greek *μισθός* ‘recompense, reward; wages, pay, allowance’; Gothic *mizdō* ‘pay, wages, reward, recompense’; Old English *mēd* ‘reward, pay, price, compensation, bribe’, *meord* ‘pay, reward’; Old High German *mēta*, *mieta* ‘wages, reward’ [New High German *Miete* ‘rent’]; Old Church Slavic *mъzda* ‘payment, salary, fee, gift’; Serbo-Croatian *māzda* ‘recompense, payment, pay; revenge, punishment’; etc.) may belong here as well, if we assume that it is derived from a Proto-Indo-European root **mis-* ‘to fill, to fulfill’, as in Greek *πληρώ* ‘to fill, to fulfill; to fill full (of food), to gorge, to satiate; to be filled full of, to be satisfied; (rarely) to fill with; to make full or complete’ also ‘to render, to pay in full’. Such a root would easily account for the Hittite meanings ‘perfect, complete, full’. According to Benveniste (1973:131—137), the original meaning of Proto-Indo-European **mis-dʰ-o-* was something like ‘a prize or reward won as a result of competition or a contest’, first extended to designate the competition or contest itself and then later further extended to include ‘pay, wages, salary, recompense’. That is to say, one has successfully fulfilled or completed the requirements of a competition or contest and is, accordingly, given appropriate recognition thereof in the form of a prize or reward. As a final point, it may be noted that Wodtko—Irslinger—Schneider (2008:492—493) reconstruct Proto-Indo-European **mis-dʰh₁-ó-* ‘payment, remuneration, pay, salary, wages; reward, recompense, compensation’, that is, **mis-* (< **mejos*) ‘exchange, barter’

plus **d^{he}h₁-* ‘to put, to place, to set’. This proposal is not convincing, especially in light of Benveniste’s study.

2. The meanings ‘bright, splendid, glorious, luminous, glowing, beautiful’ assigned to Hittite (nom. sg.) *mi-iš-ri-ya-an-za*, (acc. sg.) *mi-iš-ri-wa-an-ta-an* remain enigmatic. Perhaps two separate stems have merged in Hittite, or perhaps these meanings are derived from the meanings ‘perfect, complete, full’. I suspect the latter explanation to be the case.

Northwest Caucasian: (1) Common Abkhaz **māšə* ‘day; happy, lucky’: South Abkhaz *a-mš* ‘day; happy, lucky’, (indef. sg. *māš-k’ə*); Abaza / Tapanta *mšə* ‘day; happy, lucky’ (indef. sg. *māš-k’ə*). Assuming semantic development from ‘fulfilled, content, satisfied’ > ‘happy’. (2) Common Abkhaz **māž-dá* ‘unhappy’ (**māšə* ‘happy’, **da* ‘without’): Abaza / Tapanta *māžda* ‘unhappy, poor, miserable’; South Abkhaz *á-māžda* ‘unhappy, poor, miserable’.

Notes:

1. Proto-Indo-European **i* is reflected as **ə* in Northwest Caucasian.
2. Northwest Caucasian **š* = Proto-Indo-European **s*.
3. The semantic range exhibited by Common Abkhaz **māšə*, ‘day’, on the one hand, and ‘happy, lucky’, on the other hand, mirrors the semantic range exhibited by Hittite: either ‘bright, splendid, glorious, luminous, glowing, beautiful’ or ‘perfect, complete, full’.

108. Proto-Indo-European **weh-s-* [**wah-s-*] (> **wā-s-*) ‘empty, uninhabited, barren, or desolate land; desert, wasteland’ (extended forms: **weh-s-t^{hu}-*, **weh-s-t^{ho}-*) (**h* = **₂₄*): Latin *vāstus* ‘empty, waste, deserted, desolate’; Old Irish *fás* ‘empty’; Old English *wēste* ‘waste, barren, desolate, deserted, uninhabited, empty; wasteland, desert’, *wēsten* ‘waste, wilderness, desert’, *wēstan* ‘to lay waste, to ravage’; Old Frisian *wēstene* ‘desert’; Old Saxon *wōsti* ‘desolate, waste’; Dutch *woest* ‘waste, desolate’, *woestenij* ‘waste(land), wilderness’, *woestijn* ‘desert’; Old High German (adj.) *wuosti* ‘desert, waste, desolate’ (New High German *wüst*), (n.) *wuostinna* ‘desert’.

Northwest Caucasian: Common Abkhaz **wāžə* ‘virgin land, long fallow’; South Abkhaz *a-wāžə-ra* ‘virgin land, long fallow’.

Note: Common Abkhaz **žə* is represented in as **s* Proto-Indo-European.

109. Proto-Indo-European **wes-no-m* ‘price’, **wes-* ‘to buy, to sell’: Latin *vēnum* (< **wes-no-m*) ‘sale’; Sanskrit *vasná-m* ‘price, value’; Hittite *uš-ša-ni-ya-zi* ‘to put up for sale’; Greek *ᾠνοϋς* (< **wós-no-s*) ‘price’.

Northwest Caucasian: Proto-Circassian **wasa* ‘price’: Bžedux *wāsa* ‘price’; Kabardian *wāsa* ‘price’.

X. Death, Burial

110. Proto-Indo-European **d^her-b^h-*/**d^hor-b^h-* ‘to exert oneself; to perish, to vanish’ (Germanic only): Old English *deorfan* ‘to perish, to be in peril, to be wrecked’; (also) ‘to exert oneself, to labor’, *deorf* ‘labor, effort; difficulty, hardship; trouble, danger’; Old Frisian *derve* ‘fierce, severe’; Old Saxon *derbi* ‘powerful; hostile, bad’; Middle Low German *derven* ‘to shrink, to wither, to spoil’, *vorderven* ‘to perish’; Middle Dutch *bederven* ‘to be damaged, to perish’; Old High German *verderben* ‘to perish, to be killed, to die’ (New High German *verderben*). Note: The unextended Proto-Indo-European root was **d^her-*/**d^hor-*/**d^hy-* ‘to exert oneself, to toil, to wear oneself out; to become tired, weary, debilitated’. This root is preserved in Hittite in: (3rd pl. pres. act.) *t[a-]ri-ya-an-zi*, (1st sg. pret. act.) *ta-re-eh-ḫu-un* ‘to exert oneself, to become tired’, (3rd sg. pres. act.) *da-ri-ya-nu-zi*, (3rd sg. pret. act.) *ta-ri-ya-nu-ut* ‘to tire, to make tired’, (nom. sg.) *ta-ri-ya-aš-ḫa-aš*, *da-ri-ya-aš-ḫa-aš*, *tar-ri-ya-aš-ḫa-aš* ‘tiredness, fatigue’.

Northwest Caucasian: Common Abkhaz **darśmá* ‘to wither’: Bzyp *a-dərśma-ǰə* ‘to wither’; Abzhywa *a-darsmá* ‘to wither’.

111. Proto-Indo-European **d^hew-*/**d^how-*/**d^hu-* ‘(vb.) to pass away, to die; (n.) end, death’: Gothic *daups* ‘dead’, *daupus* ‘death’; Old Icelandic *deyja* ‘to die’, *dauði* ‘death’, *dauðr* ‘dead’; Old English *dēap* ‘death’; Old Saxon *dōian* ‘to die’, *dōth* ‘death’; Old High German *touwan* ‘to die’, *tōten*, *tōden* ‘to kill’ (New High German *töten*), *tōd* ‘death’ (New High German *Tod*); Latin *fūnus* ‘funeral, burial, corpse, death’; Old Irish *díth* ‘end, death’.

Northwest Caucasian: Ubykh *dəwá* ‘death’, *dəwála* ‘the manner of dying’, *dəwáy’a* ‘the time of death’.

112. Proto-Indo-European **d^hmb^h-* ‘burial mound, kurgan’: Armenian *damban*, *dambaran* ‘grave, tomb’; Greek τάφος (< **d^hmb^ho-s*) ‘funeral, burial, the act of burying; burial mound, tomb’, ταφή ‘burial, burial-place’, θάπτω (< **d^hmb^hyō*) ‘to honor with funeral rites, to bury’.

Northwest Caucasian: Common Abkhaz **damrá* ‘grave’: Bzyp *a-dəmrá* ‘grave’; South Abkhaz *a-damrá* ‘grave’; Abaza / Tapanta *damrá* ‘grave’ (only in a proverb).

113. Proto-Indo-European **p^hes-*/**p^hos-* ‘to die’: Latin *pestis* ‘physical destruction or death; plague, pestilence’, *pestilentus* ‘unhealthy’; Late Avestan *-pastay* in *kapastay-* ‘name of an illness’.

Northwest Caucasian: Common Abkhaz **psə* ‘to die’: Abaza / Tapanta *ps-ra* ‘to die’, *r-ps-ra* ‘to kill; to exhaust, to starve’, *psə* ‘dead (man), corpse’, *ps-qa*

‘the dead, corpse’, *ps-qa-ps-ra* ‘to die (of animals)’, *ps-q^o* ‘funeral repast’; Abzhywa *a-ps-ǰ^o* ‘funeral repast’; Bzyp *a-ps-ǰ^o* ‘funeral repast’, *a-psǰ* ‘dead (man), corpse’, *a-ps-rá* ‘to die’, *a-r-ps-rá* ‘to put/blow out (fire, light); to kill’.

Note: Proto-Indo-European **p^hVs-* = Northwest Caucasian **psV-*.

XI. Travel, Passage, Journey

114. Proto-Indo-European **p^her-/p^hor-/p^hǵ-* ‘to go or pass; to go or pass over or across; to go forth or out’: Sanskrit *píparti* ‘to bring over or to, to bring out of, to deliver from, to rescue, to save, to protect, to escort, to further, to promote; to surpass, to excel’, (causative) *pāráyati* ‘to bring over or out’, *pārā-h* ‘bringing across’; Greek *περάω* ‘to pass across or through, to pass over, to pass, to cross’, *πορίζω* ‘to carry, to bring about, to provide, to furnish, to supply, to procure, to cause’, *πόρος* ‘a means of crossing a river, ford, ferry’; Latin *portō* ‘to bear or carry along, to convey’, *porta* ‘gate, door’; Gothic **faran* ‘to wander, to travel’, **farjan* ‘to travel’, **at-farjan* ‘to put into port, to land’, **us-farþō* ‘shipwreck’; Old Icelandic *ferja* ‘to ferry over a river or strait’, *far* ‘a means of passage, ship’, *fara* ‘to move, to pass along, to go’, *farmr* ‘freight, cargo, load’, *færa* ‘to bring, to convey’, *för* ‘journey’; Old English *faran* ‘to go, to march, to travel’, *fær* ‘going, passage, journey’, *ferian* ‘to carry, to convey, to lead’, *för* ‘movement, motion, course’, *ford* ‘ford’; Old High German *faran* ‘to travel’, *ferien*, *ferren* ‘to lead, to ferry across’, *fuoren* ‘to lead, to convey’, *fuora* ‘journey, way’, *furt* ‘ford’.

Northwest Caucasian: Proto-Circassian **p^hərǰ^oa* ‘passageway, porch’: Kabardian *pərǰ^oa* ‘passageway, porch’.

115. Proto-Indo-European **moǵ^hw-* (> **mōw-*) ‘to move’ (**ǵ^hw* = **H₃w*): Sanskrit *mīvati* ‘to move, to push’; Khotan Saka *mvar-* (< **mūr-*), *mvīr-* (< **mūry-*) ‘to move’, *mvara* ‘movement’, *mvarye* (< **mūriyā-*) ‘movement, behavior, course (of action), way of acting’; Latin *moveō* ‘to move, to set in motion, to stir’, *mōtus* (< Pre-Latin **mowe-to-*) ‘motion, movement’, *mōmentum* ‘movement, motion’. Note: Not related to Hittite (3rd sg. pres.) *ma-(a-)uš-zi* ‘to fall’; Lithuanian *máudyti* ‘to bathe’.

Northwest Caucasian: Common Abkhaz **məh^oá* ‘road, way, path’: South Abkhaz *ámj^oa* ‘road, way, path’; Ashkharywa *á-mh^oa/məh^oa* ‘road, way, path’; Abaza / Tapanta *mh^oa* ‘road, way, path’.

XII. Dwellings, Buildings

116. Proto-Indo-European **ǵab^h-ro-* ‘strong, powerful, mighty’ (**ǵ* = **ǵ₁*): Gothic *abrs* ‘strong, violent, great, mighty’; Old Icelandic *aǵar-* ‘very, exceedingly’, *aǵr* ‘strong’; Old Irish *abar-* ‘very’ (Middle Irish *abor-*); Welsh *afr-* ‘very’.

Northwest Caucasian: Common Abkhaz **abhá* ‘fortress’ (< ‘stronghold’): South Abkhaz *abaá* ‘fortress, stone palace, stone fence’, (indef. sg. *baá-k*); Abzhywa also *abaá-k*. For the semantics, cf. Buck (1949:§20.35 fortress): “Most of the modern words [for fortress] are derived from those for ‘strong’ or ‘firm’...”

117. Proto-Indo-European **b^hew(H)-/*b^how(H)-/*b^hu(H)-* ‘to spend (time), to abide, to dwell’: Sanskrit *bhávati* ‘to become, to be, to exist, to live, to stay, to abide’; Albanian *buj* ‘to spend the night’; Gothic *bauan* ‘to dwell, to inhabit’; Old Icelandic *búa* ‘to prepare, to make ready; to dress, to attire, to adorn; to fix one’s abode in a place; to deal with, to treat; to live, to dwell; to have a household; to be; to behave, to conduct oneself’, *bú* ‘household, farming’, *ból* ‘lair’; Old English *būan* ‘to dwell, to inhabit, to occupy (house)’, *bū* ‘dwelling’, *būnes* ‘dwelling’, *būr* ‘bower, apartment, chamber; storehouse, cottage, dwelling’, *bōgian* ‘to dwell, to take up one’s abode’; Old Frisian *bowa*, *būwa* ‘to dwell’, *bōgia* ‘to dwell’; Old Saxon *būan* ‘to dwell’; Old High German *būan*, *būwan*, *būen*, *būwen* ‘to dwell’ (New High German *bauen*).

Northwest Caucasian:

- A. Common Abkhaz **báwra* ‘cattle-shed, cow-house’: Sadz *a-bōra* ‘cattle-shed, cow-house’; Abaza / Tapanta *báwra* ‘cattle-shed, cow-house, barn’; South Abkhaz *a-báwra* ‘cattle-shed, cow-house’.
- B. Proto-Circassian **bə* ‘den (of an animal)’: Bžedux *bə* ‘den (of an animal)’; Kabardian *la-m-b* ‘footprint’. Semantic development as in Old Icelandic *ból* ‘lair’ cited above.

Note: Proto-Indo-European **u* is reflected as **ə* in Northwest Caucasian.

118. Proto-Indo-European **k^helH-/*k^holH-/*k^hlH-* ‘hut’: Sanskrit *śālā* ‘building, house, room’; Greek *καλιά* (Ionic *καλύη*) ‘a wooden dwelling, a hut’, *καλιός* ‘a cabin, cot’, *καλιάς* ‘a hut’. Note: Some scholars have suggested that the Greek forms cited above are to be derived from the same root found in *καλύπτω* ‘to cover with (a thing); to cover or conceal; to cover over’, while others (the majority) reject this view.

Northwest Caucasian:

- A. Common Abkhaz **k’ála*: Bzyp *a-k’al* ‘hut’; Ashkharywa *k’ála* ‘hut’; Abzhywa *a-k’ála* ‘hut’; Abaza / Tapanta *k’ála* ‘hut’.
- B. Proto-Circassian **k^h(a)lə* ‘hut’: Temirgoy *č’(a)lə* ‘hut’; Kabardian *kəl* ‘hut’.

119. Proto-Indo-European **k^het^h-/*k^hot^h-* ‘enclosed area, covered area’: Old English *headōr* ‘restraint, confinement’, *headōrian* ‘to shut in, to restrain, to confine’; Old Church Slavic *kotьcb* ‘cage’; Old Czech *kot* ‘booth, stall (market)’; Serbo-Croatian (dial.) *kôti* ‘sty for domestic animals, young animals’,

kōtac ‘cattle-shed, weir’; Slovenian *kōtāc* ‘compartment of a stable, pig-sty, bird-cage’. Perhaps also Avestan *kata-* ‘room, house’; Late Avestan *kata-* ‘storage room, cellar’; Khotan Saka *kata-* ‘covered place, house’; Farsi *kad* ‘house’; Sogdian *kt’ky* ‘house’; Pashto *kəlai* ‘village’ (*-l- < -t-*), *čat* ‘roof’.

Northwest Caucasian:

- A. Proto-Circassian **kh’athə* ‘sheep-shed’: Bžedux *čh’athə* ‘sheep-shed’; Kabardian *kat* ‘sheep-shed’.
- B. Common Abkhaz **kōta* ‘village’: Ashkharywa *a-kōt* ‘village’; South Abkhaz *a-kōta* ‘village’; Abaza / Tapanta *kōt* ‘village’.

120. Proto-Indo-European (reduced-grade) **h₂s-t^ho-* ‘home’ (Indo-Iranian only): Sanskrit *āstam* ‘home’; Avestan *astəm* ‘home, dwelling’. The full-grade form (Proto-Indo-European **nes-/nos-* ‘to return safely home, to be with’) is preserved in the following: Sanskrit *nāsate* ‘to approach, to resort to, to join’; Greek *véomai* ‘to go or come (mostly with future sense); to return, to go back’, *voσtéō* ‘to go or come home, to return home’, *vóσtoς* ‘return (home)’; Gothic *ga-nisan* ‘to rescue, to be saved’; Old English *nest* ‘food, provisions, rations’. Perhaps also Tocharian A *nas-* ‘to be’, B *nes-* ‘to be, to exist, to become’ (rejected by Adams 2013:367).

Northwest Caucasian: Common Abkhaz **aš-tá* ‘court, yard’ (**-ta* locative suffix); South Abkhaz *ášta* ‘court, yard’; Bzyp (indef. sg.) *šta-k*, *aštá-k* ‘court, yard’, (poss.) *s-ášta* ‘my court, my field’; Abaza / Tapanta *ášta*, (indef. sg.) *aštá-k* ‘the place of/for settlement’.

Note: Proto-Indo-European **h₂* is reflected as **a* in Northwest Caucasian.

121. Proto-Indo-European **wen-/won-/w^hē-* ‘to dwell, to abide, to remain’: Proto-Germanic **wunan* ‘to dwell, to abide, to remain’ > Old Icelandic *una* ‘to be content in a place; to dwell, to abide’; Old English *wunian* ‘to dwell, to remain, to continue (in time and space); to inhabit, to remain in’, *wunung* ‘dwelling (act and place)’; Old High German *wonēn*, *wonan*, *wanēn* ‘to dwell, to remain’.

Northwest Caucasian: Proto-Circassian **wəna* ‘house’: Bžedux *wəna* ‘house’; Kabardian *wəna* ‘house’. Note: Abkhaz also has *ʕəna* ‘house’, which points to Proto-Northwest Caucasian **gūna* (personal communication from John Colarusso).

XIII. Physical Environment, Weather

122. Proto-Indo-European **h₂h₂ro-* (> **ōro-*) ‘ore; a mineral or rock from which a metal can be extracted or mined’ (Germanic only) (**h₂* = **h₂*; **h₂h₂* = **h₂*): Old English *ōra* ‘ore, unwrought metal’; Dutch *oer* ‘ore’. Note: According to Onions (1966:632), “of unknown origin”.

Northwest Caucasian: Common Abkhaz **aṣra* ‘rock’: South Abkhaz *á-ṣra* ‘rock’; Bzyp (poss.) *s-áṣ-ra*, *sá-ṣra* ‘my rock’, (indef. sg.) *ṣra-k* ‘rock’; Abaza / Tapanta *áṣra* ‘rock’.

123. Proto-Indo-European **dhogh-o-* ‘day’ (only in Germanic): Proto-Germanic **daǵaz* ‘day’ > Gothic *dags* ‘day’; Old Icelandic *dagr* ‘day’; Swedish *dag* ‘day’; Norwegian *dag* ‘day’; Danish *dag* ‘day’; Old English *dæg* ‘day’; Old Frisian *dei* ‘day’; Old Saxon *dag* ‘day’; Old High German *tag*, *tac* ‘day’ (New High German *Tag*). Note: Puhvel (1987:315—318) has convincingly argued that the Proto-Indo-European word for ‘yesterday’, which he reconstructs as **dhǵhyes-* (> Sanskrit *hyás* ‘yesterday’; Greek *χθές* ‘yesterday’; etc.), belongs here as well. Puhvel reconstructs Proto-Indo-European **dhoǵho-* as the source of the Germanic words for ‘day’.

Northwest Caucasian: Common Northwest Caucasian **dəya* ‘sun’ (cf. Chirikba 1996a:282 and 392 — Chirikba writes **dəya*).

- A. Proto-Circassian **t:əǵa* ‘sun’: Bžedux *t:əǵa* ‘sun’; Kabardian *dəǵa* ‘sun’.
B. Ubykh *ndyá* ‘sun’ (cf. Vogt 1963:153). Note: Chirikba (1996a:392, no. 130) cites Ubykh *(n)dəya* ‘sun’.

124. Proto-Indo-European **dhoH-ro-* (> **dhō-ro-*) or **dhoH-lo-* (> **dhō-lo-*) ‘a stream or current of water; a water-course; a torrent, a flood’ (Indo-Aryan/Indic only): Sanskrit *dhārā* ‘a stream or current of water; a water-course; a torrent, a flood’; Pāli *dhārā* ‘torrent, stream, flow, shower’; Hindi *dhār* ‘heavy shower (of rain); flow, current; channel (of a river); spring’.

Northwest Caucasian:

- A. Common Abkhaz **zə* ‘water, river’: Abzhywa *a-zə* ‘water, river’; Abaza / Tapanta *zə* ‘water, river’, *zə-hi* ‘river’; South Abkhaz *a-zə* ‘water, river’.
B. Ubykh *z-* in *azən* ‘it is raining’.

Note: Northwest Caucasian **z* = Proto-Indo-European **dh*.

125. Proto-Indo-European **gher-* ‘hail’ (unattested); (extended form) **ghr-eH-t-* ‘hail’: Old Church Slavic *gradъ* ‘hail’; Czech (nom. pl.) *hrady* ‘thundercloud’; Polish *grad* ‘hail’; Russian *grad* [град] ‘hail’; Serbo-Croatian *grād* ‘hail’; Bulgarian *grad* ‘hail’; (?) Sanskrit *hrādūni-ḥ* ‘hail(-stone)’.

Northwest Caucasian: Common Abkhaz **yər-zə* ‘drizzle, drizzling rain’: South Abkhaz *á-yər-z* ‘drizzle, drizzling rain’ (**zə* ‘water’), *á-la-zər-z* ‘tear’ (**la* ‘eye’); Abaza / Tapanta *yər-zə* ‘drizzle, drizzling rain’, *yər-z-ra* ‘to drizzle’.

126. Proto-Indo-European **gheṽ-* ‘snow, ice, frost, winter’: Albanian (Gheg) *dimën*, (Tosk) *dimër* ‘winter’; Hittite (nom. sg.) *gi-im-ma-an-za* ‘winter’; Armenian *jmeṛn* ‘winter’; Greek *χιών* ‘snow; snow-water, ice-cold water’, *χειμα* ‘winter-

weather, cold, frost', χειμών 'winter; wintry weather, a winter storm'; Sanskrit *himá-h* 'snow, frost, hoar-frost, winter', *hemantá-h* 'winter, the cold season'.

Northwest Caucasian: Proto-Circassian **gəya* 'smooth (of ice)': Kabardian *məl-gay* 'smooth (of ice)' (*məl* 'ice').

127. Proto-Indo-European **H₂ḡh^h-t^h-w/u-* 'the last part of the night, the time just before daybreak': Sanskrit *aktú-h* (according to Mayrhofer 1956—1980.I:15, < **ḡktú-*) 'the last part of the night, the darkness just before dawn'; Gothic **ūhtwō* 'dawn, early morning'; Old Icelandic *ótta* 'the last part of the night'; Old English *ūht* 'the time just before daybreak, early morning, dawn'; Old High German *uohta* 'daybreak, early morning'. Perhaps Vedic *aktá* 'night', *aktós*, *aktúbhis* 'at night'. Perhaps also, with full-grade vowel: Lithuanian *ankstī*, *ankstīē*, *añkstas*, *ankstūs* 'early' (Žemaitian adverbs: *ankstáinai*, *ankstáiniai*, *ankstéinai(s)* 'very early'); Old Prussian *angstainai*, *angsteina* 'in the morning'.

Notes:

1. Relationship to **nek^{wh}-t^h-*/**nok^{wh}-t^h-* 'night' unclear.
2. Opinions differ greatly in the literature concerning whether or not all of the forms cited above belong together.

Northwest Caucasian: (1) Common Abkhaz **aqá* 'night': Bzyp (combined with numerals) *ǰ-áǰa* 'three nights'; Ashkharywa (combined with numerals) *jə-ǰ-aqa-ǰə-wə-z-g'ə* 'the third night'. (2) Common Abkhaz **w-aqá* 'night': Bzyp *waǰá* 'night'; Abzhywa *waǰá* 'night'; Abaza / Tapanta *waqá* 'tonight'. (3) Common Abkhaz **w-aqə* 'at night': Bzyp *waǰə-n-la* 'at night'; Abzhywa *waǰə-n-la* 'at night'; Abaza / Tapanta *waqə-n-la* 'at night', *waqə* 'night'. (4) Common Abkhaz **j-aqá* 'last night': Bzyp *jaǰá* 'last night'; Abzhywa *jaǰá* 'last night'; Abaza / Tapanta *jaqá* 'last night'; (5) Common Abkhaz **a-wá-qa* 'at night' (deictic **a-wá*, **aqá* 'night'): Bzyp *awǰǰa* 'at night'; Ashkharywa *áwaq* 'at night'; Abzhywa *awǰǰa* 'at night'; Abaza / Tapanta *áwaq* 'at night'.

Note: Proto-Indo-European **ḡ* is reflected as **a* in Northwest Caucasian.

128. Proto-Indo-European **ḡh₂weǵ-y-*/**ḡh₂woǵ-y-* '(vb.) to blow; (n.) wind' (**ḡh* = **ǵ₂*; **ǵ* = **ǵ₁*): Sanskrit *váti* 'to blow (of wind)', *váta-h* 'wind, wind-god', *vāyúṣ-* 'wind, wind-god'; Gothic **waian* 'to blow (of wind)', *winds* 'wind'; Old English *wāwan* 'to blow (of wind)'; Old High German *wāen* 'to blow (of wind)'; Lithuanian *vėjas* 'wind', *vėtra* 'storm, stormy weather'; Old Church Slavonic *vějō*, *vėjati* 'to blow', *větrъ* 'storm'; Russian *véjat'* [вѣять] 'to winnow, to blow', *véter* [ветер] 'wind'; Hittite *ḫuwant-* 'wind'; Greek ἄ(F)ησι 'to blow (of wind)'; Latin *ventus* 'wind'; Welsh *gwynt* 'wind'; Tocharian A *want* ~ *wānt*, B *yente* 'wind'.

Northwest Caucasian: Proto-Circassian **waya* ‘bad weather’: Bžedux *wāya* ‘bad weather (snow, rain, storm, cold)’; Kabardian *wāya* ‘bad weather (snow, rain, storm, cold)’. Circassian loans in: Abzhywa *a-wāja* ‘bad weather, storm’; Abaza / Tapanta *wāja* ‘bad weather, storm’. Note: This appears to be a later borrowing.

129. Proto-Indo-European **kʰay-wṛ-th*, **kʰay-wṛ-th* ‘cave, hollow’: Greek *καιάδᾱς* ‘pit or underground cavern’, *καιετός* ‘fissure produced by an earthquake’; Sanskrit *kévaṭa-h* ‘cave, hollow’.

Northwest Caucasian: Proto-Circassian **kʰəya* or **kʰayə* ‘tub’: Bžedux *čʰəya* ‘tub’; Kabardian *kay* ‘tub’.

130. Proto-Indo-European **leṛ-u-s* (gen. sg. **leṛ-wo-s*) ‘stone’ (**ṛ = *ṛ₁*): Greek *λᾱας*, *λᾱς* (< **λῆϜας*) (gen. sg. *λᾱος*) ‘a stone, especially a stone thrown by warriors’, *λεύω* ‘to stone’, (Mycenaean) *ra-e-ja* ‘stone’; Old Irish *lie* (< **līwank-*) ‘stone’; Albanian *lerë* ‘heap of stones’. Note: This is a contested etymology. This makes it difficult to reconstruct the Proto-Indo-European form with absolute certainty. Cf. Matasović 2009:242; Pokorny 1959:683.

Northwest Caucasian: Common Abkhaz **ləwə* ‘millstone’: Fera *á-law* ‘millstone’; South Abkhaz *á-ləw* ‘millstone’ (indef. sg. *ləwə-k*); Ashkharywa *a-ʒə-ləw* ‘watermill’; Abaza / Tapanta *ləw* ‘handmill’.

131. Proto-Indo-European **meṛ-s-* ‘moon, month’ (variant: **meṛ-n-*) (**ṛ = *ṛ₁*): Sanskrit *mās-* ‘moon, month’; Avestan *māh-* ‘moon, month’; Greek (Ionic) *μείς*, (Doric) *μής*, (Attic) *μήν* ‘moon, month’; Latin *mēnsis* ‘month’; Old Irish *mí* ‘month’; Welsh *mis* ‘month’; Gothic *mēna* ‘moon’, *mēnōþs* ‘month’; Old Icelandic *máni* ‘moon’, *mánaðr* ‘month’; Old English *mōna* ‘moon’, *mōnaþ* ‘month’; Old Church Slavic *měsęcь* ‘moon, month’; Russian *mésjac* [месяц] ‘moon, month’; Czech *měsíc* ‘moon, month’; Lithuanian *mėnuo* ‘moon, month’; Tocharian *mañ*, B *meñe* (< Proto-Tocharian **mēñē* < Proto-Indo-European **meṛ-nē(n)*) ‘moon, month’. Note: Proto-Indo-European **meṛ-s/n-* ‘moon, month’ is traditionally assumed to be a derivative of **meṛ-* (also written **meṛ₁-*, **meh₁-*, **meṛ₁-*; **mey-*; **mē-*; etc. in the literature) ‘to measure’ (cf., for example, Mallory—Adams 1997:385).

Northwest Caucasian:

- A. Common Abkhaz **məz/ʒə* ‘moon’: Bžyp *á-mza* ‘moon’ (indef. sg. *məz-kʰə*); Abzhywa *á-mza* ‘moon’ (indef. sg. *məz-kʰə*); Fera *á-məʒ/z* ‘moon’; Ashkharywa *á-məʒ* ‘moon’; Ahchypsy *á-məʒ* ‘moon’; Abaza / Tapanta *mza* ‘moon’ (def. *a-məʒ*).
- B. Ubykh *məʒá* ‘moon, month’.
- C. Proto-Circassian **maza* ‘moon, month’: Bžedux *māza* ‘moon, month’; Kabardian *māza* ‘moon, month’.

Note: Northwest Caucasian *z = Proto-Indo-European *s.

132. Proto-Indo-European **mel-t'* / **mol-t'* / **m̥l-t'* 'to melt, to liquefy, to soften': Greek μέλδω 'to soften by boiling', βλαδύς 'soft'; Sanskrit *mṛdú-h* 'soft, tender, mild'; Gothic **ga-maltjan* 'to make melt away, to liquefy, to make dissolve', *ga-malteins* 'a melting away, dissolution'; Old Icelandic *moltinn* 'soft, tender', *melta* 'to malt for brewing'; Old English *meltan* 'to melt, to liquefy; to digest, to dissolve; to burn up'. Note: Ultimately derived from Proto-Indo-European **mel-* / **mol-* / **m̥l-* 'to crush, to grind'.

Northwest Caucasian: Proto-Circassian **mələ* 'ice': Bžedux *mələ* 'ice'; Kabardian *məl* 'ice'.

133. Proto-Indo-European **merH-* / **morH-* / **m̥rH-* 'to sparkle, to glisten, to gleam': Hittite *marra-* or *marri-* '(sun)light'; Sanskrit *mārīci-h*, *marīcī* 'ray of light (of the sun or moon); light; a particle of light', *marīcin-* 'possessing rays, radiant; the sun'; Greek μαρμαίρω, μαρμαρίζω 'to flash, to sparkle, to glisten, to gleam'; Gothic *maurgins* 'morning'; Old Icelandic *morginn* 'morning'; Old English *morgen*, *myrgen* 'morning'; Old High German *morgan* 'morning, tomorrow'; Belorussian *mrity* 'to dawn, to grow light'.

Northwest Caucasian: Common Abkhaz **mará* 'sun': Bžyp *á-mra* // *á-mər(a)* // *á-mara* 'sun'; Ahchypsy *á-mara* 'sun'; Ashkharywa *á-mara* 'sun'; Abaza / Tapanta *mará* 'sun'.

134. Proto-Indo-European **phas-* 'to strew, to sprinkle' (only in Greek): Greek πάσσω (< *πάσ-τι-ω) (Attic πᾶττω) 'to strew, to sprinkle', πάσμα 'sprinkling; (medic.) powder', παστέος 'to be besprinkled', παστός 'sprinkled with salt, salted'. Note: Not related to Latin *quatiō* 'to move vigorously to and fro, to shake, to rock, to agitate' (cf. Chantraine 1968—1980.II:860—861).

Northwest Caucasian: Common Abkhaz **psa-t'á* 'to drizzle; dew': South Abkhaz *a-(k'a-)psat'á* 'to drizzle'; Abaza / Tapanta *pst'a* 'dew'.

Note: Proto-Indo-European **p^hVs-* = Common Abkhaz **psV-*.

135. Proto-Indo-European **p^héh^hh-ur-* [**p^háh^hh-ur-*], **p^hə^hh^h-wór-* 'fire' (**éh^h* = **ǵ₂*): Hittite (nom.-acc. sg.) *pa-aḥ-hu-ur*, *pa-aḥ-hu-wa-ar*, *pa-aḥ-hur* 'fire', (gen. sg.) *pa-aḥ-hu-e-na-aš*; Luwian (nom. sg.) *pa-a-hu-u-ur* 'fire'; Greek πῦρ 'fire'; Umbrian *pir* 'fire'; Gothic *fōn* 'fire', (gen. sg.) *funins*; Old Icelandic *fúrr* 'fire', *funi* 'flame'; Old English *fȳr* 'fire'; Old Saxon *fiur* 'fire'; Old High German *fiur*, *fuir* 'fire'; Tocharian A *por*, B *puwar* 'fire'; Old Czech *púr* 'glowing ashes, embers'; Armenian *hur* 'fire'.

Northwest Caucasian:

- A. Proto-Circassian **Pǣqːʷa* ‘torch’: Kabardian *pǣqʷa* ‘torch’.
 B. (1) Common Abkhaz **pǣa* ‘warm’: Abaza / Tapanta *pǣa-rá* ‘to warm up, to become warm’; South Abkhaz *a-pǣá* ‘warm’, *a-pǣa-ra* ‘to warm up, to become warm; to shine (of sun, moon)’. (2) Common Abkhaz **pǣ-ǰá* (< **pǣa* ‘warm’, **ǰá* ‘water’): South Abkhaz *a-pǣ-ǰá* ‘sweat’; Abaza / Tapanta *pǣ-ǰá* ‘sweat’. (3) Common Abkhaz **pǣǰ-ná* (< **pǣa* ‘warm’, **-ná* ‘season, time of’): South Abkhaz *a-pǣǰ-n* ‘summer’; Ashkharywa *a-pǣǰ-n-ra* ‘summer’; Abaza / Tapanta *pǣ-ná* ‘summer’, *pǣǰ-n-č’ál’a* ‘July; middle of summer’.

Note: Proto-Indo-European **p^hVǵh-* = Common Abkhaz **pǣV-*.

136. Proto-Indo-European **p^hek’-/p^hok’* ‘space, interval’ (only in Germanic): Old English *fæc* ‘space of time, division, interval’; Old Frisian *fek*, *fak* ‘niche’; Middle Dutch *vac* ‘compartment, section’; Old High German *fah* ‘wall, compartment’.

Northwest Caucasian: Proto-Circassian **p^hak’a* ‘stretch, interval, zone’: Temirgoy *pāč’a* ‘stretch, interval, zone’; Kabardian *pāka* ‘stretch, interval, zone’.

137. Proto-Indo-European **p^hěs-/p^hōs-* (with nasal infix **p^hěns-/p^hōns-*) ‘dust, sand’ (derivative of **p^hěs-/p^hōs-* ‘to crush, to grind, to pulverize’, preserved in Hittite [3rd sg. pres. act.] *pa-ši-ḫa-iz-zi* ‘to rub, to squeeze, to crush’ [< Luwian], [3 sg. pres. act.] *pé-eš-zi* ‘to rub, to scrub [with soap]’: Luwian *pa/ušūriya-* ‘dust [?]’); Hittite [nom. sg.] *pa-aš-ši-la-aš* ‘stone, pebble; gem, precious stone (?)’, *paššilant-* ‘stone, pebble’, *paššuela-* ‘a stone object’; Sanskrit *pāmsú-h*, *pāmsuká-h* ‘dust, sand, crumbling soil’; Old Church Slavic *pěsьkъ* ‘sand’; Russian *pesók* [песок] ‘sand’.

Northwest Caucasian:

- A. Common Abkhaz **pǣ/čahʷqʷá* ‘sand; (sandy) seashore’: South Abkhaz *a-pǣahʷá* ‘both sides of river shore; seashore’; Abaza / Tapanta *pǣarčáqʷa* ‘sand’; Ashkharywa *pǣaqʷa* ‘sand’. Chirikba (1996b:25) notes: “the actual etymology, the original form and even the genuine character of these forms are not clear”.
 B. Ubykh *pǣaxʷa* ‘sand’.

Note: Proto-Indo-European **p^hVs-* = Northwest Caucasian **pǣV-*.

138. Proto-Indo-European **p^hǵ-kh-* ‘glowing embers, ashes’: Lithuanian *pirkšnìs* ‘glowing cinders’, *piřkšnys* ‘glowing ashes’; Old Irish (nom.-acc. pl.) *richsea* ‘live coals’; Breton *régez* ‘glowing embers’.

Northwest Caucasian: Common Abkhaz **pəryá* ‘embers’: Abaza / Tapanta *pəryá* ‘embers’; South Abkhaz *a-pəryá* ‘embers’.

139. Proto-Indo-European **p'alh_h-t^ho-* ‘swamp, mud’ (**h_h* = **₂*): (?) Illyrian **balta* ‘swamp’ (> Albanian *baltë* ‘mud, clay, earth; swamp, marsh’, *balti* ‘mud’, *baltomë* ‘mud, filth’; Romanian *baltă* ‘swamp’; Modern Greek βάλτος ‘swamp’); Old Church Slavic *blato* (< **bolto-*) ‘quagmire, swamp’; Russian *boloto* [болото] ‘marsh, bog, swamp’; Serbo-Croatian *blāto* ‘mud, swampy terrain’; Czech *blāto* ‘mud’; Bulgarian *blāto* ‘mud, swamp’; Lithuanian *balà* ‘swamp’.

Notes:

1. Derksen (2008:53—54) reconstructs Proto-Balto-Slavic **bol[?]to*. However, in light of the Northwest Caucasian parallel below, I would be more inclined to reconstruct **h_h* (= **₂*) as the laryngeal involved rather than **[?]* (= **₂*).
2. The above forms are not derived from or related to Proto-Indo-European **b^helH-* ‘bright, white, shining’.

Northwest Caucasian: Common Abkhaz **p'alhatə* ‘swamp, mud’: South Abkhaz *a-p'alhāt* ‘abyss, quagmire, mud’.

140. (1) Proto-Indo-European **sehh^w-* [**sahh^w-*] (unattested) ‘to be or become hot, warm; to heat up, to make hot, to warm, to burn’; only found with the suffixes **(e)l-*, **(e)n-*: **sehh^w-(e)l-* (> **sāwel-*), **sehh^w-ōl-* (> **swōl-*), (**sehh^w-l-* >) **suhh^w-l-* (> **sūl-*); **sehh^w-en-* (> **swen-*), **sehh^w-n-* > **suhh^w-n-* (> **sūn-*), etc. ‘the sun’ (**h_h* = **₂*): Greek ἥλιος (Doric ἄλιος, ἄέλιος; Epic Greek ἡέλιος; Aeolian and Arcadian ἄέλιος; Cretan ἀβέλιος [that is, ἄβέλιος]) (< **sāwēlios*) ‘the sun’; Latin *sōl* (< **swōl-* < **sehh^w-ōl-*) ‘the sun’; Old Irish *súil* ‘eye’; Welsh *haul* ‘the sun’; Gothic *sauil* (< Proto-Germanic **sōwilō*) ‘the sun’, *sugil* ‘the sun’, *sunno* ‘the sun’ (< Proto-Germanic **sun-ōn*, with *-nn-* from the gen. sg. **sunnez* < **s(w)ŋ-* < **sehh^w-ŋ-*); Old Icelandic *sól* ‘the sun’, *sunna* ‘the sun’; Old English *sōl* ‘the sun’, *sigel*, *segl*, *sægl*, *sygil* ‘the sun’, *sunne* ‘the sun’; Old Saxon *sunna* ‘the sun’; Old High German *sunna* ‘the sun’; Lithuanian *saulė* ‘the sun’; Latvian *saule* ‘the sun’; Avestan *hvarə* ‘the sun’, (gen. sg.) *x^wəng* (< **swen-s*); Sanskrit *svār-* (*súvar-*) ‘the sun’, (gen. sg. *sūrah*), *sūrya-h* ‘the sun’. (2) Proto-Indo-European **sehh^w-elH-*/**sehh^w-olH-*/**sehh^w-lH-* (> **swelH-*/**swolH-*/**swlH-*) ‘to burn’: Greek εὔλη, ἔλη ‘warmth, heat of the sun’, ἀλέα (Ionic ἀλέη) ‘warmth (of the sun), heat (of fire)’; Old English *swelan* ‘to burn, to burn up; to inflame (of a wound)’, *swol* ‘heat, burning, flame, glow’; Old High German *swilizōn* ‘to burn slowly’; Lithuanian (caus.) *svilinti* ‘to singe, to parch, to burn’, *svilù*, *svilaũ*, *svilti* ‘to scorch, to parch’.

Northwest Caucasian: Proto-Circassian **sax^oa* ‘ashes’: Kabardian *sāx^oa* ‘ashes’.

141. Proto-Indo-European **t'eh-* [**t'ah-*] (> **t'ā-*) 'to flow', **t'eh-nu-* [**t'ah-nu-*] (> **t'ā-nu-*) 'flowing water; river, stream' (only in Indo-Iranian) (**h* = **₂*): Sanskrit *dā-na-m* 'the fluid flowing from an elephant's temples when in rut', *dā-nu* 'a fluid, a drop, dew'; Avestan *dānuš* 'river, stream'; Ossetic *don* 'water, river'. Also used in various river names: Don (Russian Дон), Dniepr (Russian Днепр), Dniestr (Russian Днестр), Danube, etc.

Northwest Caucasian:

- A. Common Abkhaz **t'a* 'diarrhea': Abzhywa *a-t'-rá* 'diarrhea'; Bzyp *a-t'a-rá* 'diarrhea'.
 B. Ubykh *t'ə* 'liquid, juicy'.

142. Proto-Indo-European **wel-/wol-/wł-* 'to moisten, to wet, to flow': (extended forms) **wel-kh-/wol-kh-/wł-kh-*; **wel-gh-/wol-gh-/wł-gh-*; **wel-k-/wol-k-/wł-k-* 'to wet, to moisten': Old English *weolcen*, *wolcen* 'cloud'; German *Wolke* 'cloud'; Old Church Slavic *vlaga* 'moisture'.

Northwest Caucasian: Proto-Circassian **wala* 'cloud': Kabardian *wāla* 'cloud'.

143. Proto-Indo-European **wer-/wor-/wr-* 'to be turbulent, agitated, stirred up, raging' (> 'to strike or dash against') (only in Greek: extended form: **wrāgh-* < **wr-eA-gh-* [*wr-aA-gh-*]): Greek (Ionic) ῥάσσω, (Attic) ῥάττω (< **ῥάχ-ιω*) 'to strike, to dash, to push'; (Ionic) ῥηχίη, (Attic) ῥάχια 'the sea breaking on the shore, especially the flood-tide; the roar of waves breaking on the shore'.

Northwest Caucasian: Proto-Circassian **warə* 'wave; turbulent': Temirgoy *warə* 'wave; turbulent'; Kabardian *war* 'wave; turbulent'.

XIV. Implements, Materials; Weapons, Warfare

144. Indo-European: Greek ἄξιν 'axe'; Latin *ascia* 'axe'; Gothic *aqizi* 'axe'; Old Icelandic *øx* 'axe'; Old English *eax*, *æx*, *æsc* 'axe'; Old Frisian *axa* 'axe'; Old High German *acus*, *achus*, *accus*, *acchus*, *akis*, *ackes*, *acches* 'axe' (New High German *Axt*). Note: According to Liberman (2008:1—3), Old English *adesa*, *adese* 'adze' may belong here as well. Liberman derives *adesa*, *adese* from **acusa* (> **adusa* > **adosa* > *adesa*, with *d* substituted for *c*).

Notes:

1. Due to the contradictory nature of the evidence found in the various daughter languages, it is difficult to reconstruct the Proto-Indo-European form. This suggests a loanword.
2. The above Indo-European forms have also been compared with several somewhat similar Semitic forms (cf., for example, Beekes 2010.I:111; Kroonen 2013:19). This view has nothing to recommend it.

Northwest Caucasian: Common Abkhaz **aj-k'óya* 'small axe': Bzyp *ajk'óy(a)* 'small, axe'; Abzhywa *ajk'óya* 'small axe'; Abaza / Tapanta *k'óya* 'small axe'; Ashkharywa (Apsua) *k'óya* 'small axe'.

Notes:

1. The above forms may have been influenced by Common Abkhaz **ajǰá* 'iron, axe' (> South Abkhaz *ajǰá* 'iron; axe; bit (of a horse)'; Abaza / Tapanta *ajǰá* 'iron; metal'; Ashkharywa *ajǰá* 'iron').
2. To complicate matters, the following forms are also found: Common Abkhaz **aj-g'óš'ó* 'small axe': South Abkhaz *ajg'óš'ó* 'small axe'; Abaza / Tapanta *g'óš'ó* 'small axe'.

145. Proto-Indo-European **ǵs-i-* 'sword' (**ǵ* = **ǵ₁*): Sanskrit *así-h* 'sword'; Avestan *anhū-* 'sword'; Latin *ēnsis* 'sword' (almost exclusively poetical). Perhaps also Greek *ἄορ* 'sword' if from **ǵs-r* (cf. Beekes 2010.I:112).

Northwest Caucasian: Common Abkhaz **ása* 'sword': Bzyp *ása* 'sword, card (text.), feathers of a cock's tail', (poss.) *s-ása* 'my sword'; Abaza / Tapanta *sa* 'beater (of weaver's loom)'.

Notes:

1. Proto-Indo-European **ǵ* is reflected as **a* in Northwest Caucasian.
2. Common Abkhaz **ś* = Proto-Indo-European **s*.

146. Proto-Indo-European (extended form) **hep^h-s-* [**hap^h-s-*]/**hop^h-s-* (vb.) 'to cut, to split'; (n.) 'that which cuts, splits' (> 'sword' in Tocharian B); 'cut, split' (> 'harm, injury; damage' in Avestan) (**h* = **ǵ₄*): Tocharian B *apsāl* 'sword'; Avestan *afša-*, *afšman-* 'harm, injury; damage'.

Notes:

1. The following forms have also been compared with the above: Lithuanian *opà* 'wound, sore', *opūs*, *opus* 'sensitive, susceptible to pain'; Sanskrit *apvā* 'name of a disease'.
2. According to Eric P. Hamp (1965a), the laryngeal **ǵ₄* is preserved initially in Albanian. If this is indeed the case, as Hamp claims, then Albanian *hap* 'to open' may be a derivative of the unextended Proto-Indo-European verb **hep^h-* [**hap^h-*]/**hop^h-* (vb.) 'to cut, to split', though this is not the etymology suggested by Hamp (1965a:125).

Northwest Caucasian: Common Abkhaz **ápśa* 'bayonet, spear, lance': Bzyp *ápśa* 'bayonet, spear, lance', (possessive) *s-ápśa* 'my bayonet'; Abzhywa *ápśa* 'bayonet, spear, lance'; Abaza / Tapanta *h'aps* 'bayonet'. Note: The following alternative forms are also recorded: Bzyp *abś*; Abzhywa *absá*.

147. Proto-Indo-European **heyos-* [**hayos-*] ‘metal’ (**h* = **₂*): Sanskrit *áyas-* ‘metal, iron’; Latin *aes* ‘crude, base metal, especially copper’, *aēneus* ‘made of brass, copper, or bronze’; Gothic *aiz* ‘brass, money, metal coin’; Old Icelandic *eir* ‘brass, copper’; Old English *ār*, *æ̅r* ‘brass, copper’; Old Saxon *ēr* ‘ore’; Dutch *oer* ‘bog-ore’, *erts* ‘ore’; Old High German *ēr* ‘ore, copper’.

Northwest Caucasian: Common Abkhaz **ajǰá* ‘iron; axe’: South Abkhaz *ajǰá* ‘iron; axe; bit (of a horse)’; Abaza / Tapanta *ajǰá* ‘iron; metal’; Ashkharywa *ajǰá* ‘iron’. Note also: South Abkhaz *ajgʰǰšʰ* ‘small axe’; Abaza / Tapanta *gʰašʰ* ‘small axe’, *kʰaya* ‘small axe’; Bzyp *ajkʰaγ(a)* ‘small axe’; Abzhywa *ajkʰaγa* ‘small axe’.

148. Proto-Indo-European **kʰatʰ-* ‘fight, battle, war’: Sanskrit *śátru-ḥ* ‘enemy, foe, rival’; Old Irish *cath* ‘battle’; Welsh *cad* ‘war’; Old Icelandic (in compounds) *höð-* ‘war, slaughter’; Old English (in compounds) *headu-* ‘war, battle’; Old High German (in compounds) *hadu-* ‘fight, battle’; Old Church Slavic *kotora* ‘battle’; Hittite *kattu-* ‘enmity, strife’.

Northwest Caucasian: Proto-Circassian **k:atʰa* ‘sword’: Šapsegh *k:ātʰa* ‘sword’; Kabardian *gāta* ‘sword’.

149. Proto-Indo-European **kʰebʰ-* ‘bough, branch, stick’: Lithuanian *žābas* ‘(long) switch, dry branch’, *žabà* ‘rod, switch, wand’; Old Icelandic *kafli* ‘a piece cut off’, *kefli* ‘a cylinder, stick, piece of wood’; Middle Dutch *cavele* ‘stick, piece of wood used to throw lots’; Middle High German *kabel* ‘lot’.

Northwest Caucasian: Common Abkhaz **qʰaba* ‘plowshare’: Abaza / Tapanta *qʰaba* ‘plowshare’.

150. Proto-Indo-European **kʰel-/kʰol-/kʰl-* ‘hole, hollow’ (unattested): (extended forms) **kʰlebʰ-/kʰlobʰ-/kʰlʰbʰ-*; **kʰlombʰ-* (in Slavic) ‘hole, hollow’ (> ‘deep’ in Slavic): Greek *γλάφω* ‘to scrape up, to dig up, to hollow’, *γλάφω* ‘a hollow, hole, cavern’, *γλαφυρός* ‘hollow, hollowed’; Old Church Slavic *glǫbokъ* ‘deep’; Slovenian *globòk* ‘deep’, *globíti* ‘to excavate’, *glóbsti* ‘to excavate, to carve’; Bulgarian *glob* ‘eye socket’; Russian *glubókij* [глубокий] ‘deep’.

Northwest Caucasian: (1) Common Abkhaz **kʰǰla-ǰʰə* (< **kʰǰla* ‘hole’, **ǰʰə* ‘sharpened twig’) ‘wooden hook’: Bzyp *a-kʰǰlaǰʰə* ‘wooden hook for hanging clothes; plug, spigot in the middle of the yoke’; Abzhywa *a-kʰǰlaǰʰə* ‘wooden hook for hanging clothes; plug, spigot in the middle of the yoke’. (2) Common Abkhaz **kʰǰla-ḥa-ra* ‘chink, little hole’: South Abkhaz *a-kʰǰlha-ra//a-kʰǰlaa-ra* ‘chink, little hole’.

151. Proto-Indo-European **k^weru-* ‘spear, spit’ (< ‘round object’): Latin *veru* ‘spit (for roasting)’; Umbrian (acc. pl.) *berva* ‘(roasting-)spit’; Avestan *grava-* ‘staff’; Old Irish *bir*, *biur* ‘spear, spit’; Welsh *ber* ‘spear, lance, shaft, spit’.

Northwest Caucasian: Common Abkhaz **k^oar^o* ‘round object’: Bzyp (indef. sg.) *k^oar^o-k^o* ‘wheel’, *a-k^oar^o-č^o* ‘*čž*’, *a-k^oar^o-č^o-č^o* ‘small cart, wagon; small wheel’, *a-k^oar^o* ‘roundish’; South Abkhaz *á-k^oar-ra* ‘to roll (of something small), to slide’; Abaza / Tapanta *r-k^oar-ra* ‘to pull, to drag’, *qa-č^o-k^ora* ‘bald-headed’ (< *qa-č^oa* ‘skin of the head’ + **k^ora* ‘round’).

152. Proto-Indo-European **lek^o-/*lok^o-* ‘to leak; to run, drip, or trickle out; to wet, to moisten’: Old Irish *legaid* ‘to melt, to melt away, to perish’; Welsh *llaith* ‘moist, damp’; Old Icelandic *leka* ‘to drip, to dribble, to leak’, *leki* ‘leakage, leak’; Norwegian *lekk* ‘leak, leakage’; Middle Dutch *leken* ‘to leak’; Old English *leccan* ‘to water, to irrigate, to wet, to moisten’; Middle High German *lëchen* ‘to leak’, *lecken* ‘to leak; to run, drip, or trickle out’ (New High German *lecken*). Lengthened-grade in: Proto-Germanic **lēkjōn-* ‘rivulet’ (?) > Faroese *lækja* ‘well, waterhole, waterspout’; Norwegian *lækje* ‘rivulet, wooden water-pipe’.

Northwest Caucasian: Common Abkhaz **lak^oara* ‘wooden trough for spring water’: Bzyp *a-lak^oar*, *a-lak^oara* ‘wooden trough for spring water’. Semantic development as in Norwegian *lækje* ‘rivulet, wooden water-pipe’ cited above.

153. Proto-Indo-European **menk^h-/*monk^h-/*mñk^h-* ‘to pound, to grind, to press’: Sanskrit *mácate* ‘to pound, to grind’; Greek μάσσειν ‘to knead, to press into a mold’; Lithuanian *minkyti* ‘to knead, to mold’; Old Church Slavic *meknoti* ‘to soften’; Russian *mjáknut’* [мякнуть] ‘to soften; to become soft, tender’.

Northwest Caucasian: Common Abkhaz **mák’a* ‘whetstone’: Bzyp *a^omák^o(a)* ‘whetstone’; Abzhywa *a-mák’a* ‘whetstone’; Abaza / Tapanta *mak’a* ‘whetstone’.

Note: Proto-Indo-European **ñ* is reflected as **a* in Northwest Caucasian.

154. Proto-Indo-European **meth^o-/*moth^o-* ‘(vb.) to twist, to turn; to weave together, to plait; (n.) **meth^o-o-s*, **moth^o-o-s* ‘that which twists, turns; that which is turned, twisted’: Avestan *maθō* (adj.) ‘turning’; Armenian *matman* ‘spindle’; Lithuanian (pl.) *mėtmens* ‘warp, groundwork’, (pl.) *mėtmenys* ‘warp; thread-winder’, *matāras* ‘spindle’; Latvian, *mātaras* ‘strap, belt, rope, thong; pole, lever’ (m. pl.) *meti* ‘warp, threads on a loom’.

Northwest Caucasian:

- A. Common Abkhaz **máta* ‘a term referring to the processing of wool’: Abzhywa *a-máta-ra* ‘a term referring to the processing of wool’.

- B. Proto-Circassian **matha* ‘basket, beehive’: Bžedux *māthā* ‘basket, beehive’; Kabardian *māta* ‘basket, beehive’.

155. Proto-Indo-European **moth-* ‘hoe’: Sanskrit *matyā-m* ‘harrow’; Latin *mateola* ‘a kind of mallet’ (diminutive of an unattested noun **matea* ‘hoe’); Old Church Slavic *motyka* ‘hoe’; Russian *motýka* [мотыка] ‘shovel, mattock; pick, picker; sickle’; Polish *motyka* ‘hoe’; Old English *matto* ‘mattock, pickaxe’. Note also: Proto-Indo-European **meth-/moth-* ‘to reap’: Latin *metō* ‘to reap, to harvest’; Welsh *medi* ‘to reap’.

Northwest Caucasian: Common Abkhaz **matá* ‘piece, strip of field to be plowed or hoed’: South Abkhaz *á-mata* ‘piece, strip of field to be plowed or hoed’.

156. Pre-Proto-Indo-European **phekwh-/phokwh-* ‘to strike, to hit, to beat, to pound’ (> ‘to fight’ in Germanic): Hittite *pakkušš-* ‘to pound, to crack, to crush, to grind’, (adj.) *pak(kuš)šuwant-* ‘cracked (?)’. Proto-Germanic **fehtanan* ‘to fight’ > Old English *feohtan* ‘to fight, to combat, to strive; to attack, to fight against’, *feoht* ‘fight, battle; strife’; Old Frisian *fiuchta, fiochta* ‘to fight’; Old Saxon *fehthan* ‘to fight’; Old High German *fehthan* ‘to fight, to battle, to combat’, *gifeht, fehta* ‘fight, battle, combat’. Note: Proto-Indo-European **-kwh-* > **-χ-* before **-t-* in Proto-Germanic (cf. Proto-Germanic **nahtz* ‘night’ [< **nokwhthz*] > Gothic *nahts* ‘night’; Old Icelandic *nátt, nótt* ‘night’; Old English *niht, næht, neaht* ‘night’; Old Frisian *nacht* ‘night’; Old Saxon *naht* ‘night’; Old Dutch *naht* ‘night’; Old High German *naht* ‘night’).

Northwest Caucasian: Proto-Circassian **phak:°a* ‘blunt’: Bžedux *phāk:°a* ‘blunt’; Kabardian *pāg°a* ‘blunt’. Apparent Kabardian loan (if not from **pə* ‘nose’, **ag°a* ‘short’) in: South Abkhaz *a-pāg°a* ‘dock-tailed, short; blunt, obtuse’; Abaza / Tapanta *pag°a* ‘snub-nosed’.

157. Proto-Indo-European **phes-tho-/phos-tho-* ‘fast, firm’ (< **phes-/phos-* ‘to tie or bind firmly together, to fasten’): Armenian *hast* ‘firm, steady, standing still, tough’, *hastoj* ‘firmness, standing still, strength’; Gothic *fastan* ‘to keep firm, to hold fast’; Old Icelandic *fastr* ‘fast, firm’, *festr* ‘rope, cord’; Old English *fæstnian* ‘to fasten, to fix, to secure, to bind’, *fæst* ‘fast, fixed, firm, secure’; Old Saxon *fast* ‘fast, firm’; Old High German *fasto, faste* ‘fast, firm’, *festī, festīn* ‘firmness, strength; shelter, stronghold, fortress’. Also Hittite (3rd sg. pres. act.) *pa-aš-ki* ‘to stick in, to fasten, to plant; to set up; to impale, to stick’.

Northwest Caucasian:

- A. Proto-Circassian **psə* ‘string, cord, lace, strap, handle’: Bžedux *-psə* ‘string, cord, lace, strap, handle’, *č'āpsa* ‘string, rope’; Kabardian *psə* ‘string, cord, lace, strap, handle’, *k'āpsa* ‘string, rope’; Temirgoy *lapsə* ‘leather strap for tying up shoes, shoelace’.

- B. Common Abkhaz **psa* ‘to tie up’: South Abkhaz *a-č-áj-də-psa-la-ra* ‘to press, to lean against something’, *a-gʷ-ə-c’a-psa-ra* ‘to press itself against somebody, to cross the hands at the bosom’, *a-c’a-psa-ra* ‘to bend, to kneel’, *a-č-áj-k’ə-psa-ra* ‘to curl up, to fold up (wings)’; Abaza / Tapanta *pra-psá* ‘curtain, apron’, *pəra-psa-ra* ‘to tie up through’, *j-a-l-pəra-l-psa-d* ‘she put on the apron’ (literally ‘she tied up the apron’).
- C. (?) Ubykh **psášx* ‘glue’.

Note: Proto-Indo-European **phVs-* = Northwest Caucasian **psV-*.

158. Proto-Indo-European **phis-* (secondary full-grade forms in Baltic and Slavic) ‘to crush, to grind’ (with nasal infix **phi-n-s-*): Greek *πίσσω* ‘to pound or grind corn in a mortar’, *πίσμα* ‘peeled or winnowed grain’; Sanskrit *pináṣṭi*, *pimśanti* ‘to crush’, *piṣṭá-h* ‘crushed’; Latin *pīnsō* ‘to pound, to crush (grain or other materials)’, *pistillus*, *pistillum* ‘pestle’; Lithuanian *piēstas* ‘pestle’; Russian *pest* [пест] ‘pestle’, *pšenó* [пшено] (< Proto-Slavic **pъšenō*) ‘millet’; Slovenian *pšano* ‘millet’.

Northwest Caucasian: (1) Common Abkhaz **pš-qʷə-č’ə* ‘corn-cob’: Bzyp *á-pš-čʷə-č’ə* ‘corn-cob’; Abzhywa *á-pš-čʷə-č’ə* ‘corn-cob’. (2) Common Abkhaz **pšə* ‘maize, millet’: Abzhywa *á-pšə-r+ta* ‘maize field’, *a-pšə-c* ‘maize grain’, *á-pš* ‘maize, millet’.

Note: Proto-Indo-European **phis-* = Common Abkhaz **pšV-*.

159. Proto-Indo-European **phoʔ-th-lo-m* (> **phō-th-lo-m*) ‘drinking-vessel’ (*ʔ = **ʔ₁*): Sanskrit *pátra-m* ‘drinking-vessel, goblet, bowl, cup’; Latin *pōculum* ‘a drinking-cup, goblet’. Note also: Hittite *pa-aš-zi* ‘to swallow, to gulp down’; Sanskrit *pátar-*, *pátár-* ‘one who drinks, a drinker’, *píbatī* ‘to drink’; Latin *pōtō* ‘to drink’, *pōtus* ‘drunk’; Lithuanian *puotà* ‘feast, banquet, drinking-bout’.

Northwest Caucasian: Common Abkhaz **pátč’a* ‘horn used for drinking wine’; South Abkhaz *a-pátč’* ‘horn used for drinking wine’.

160. Proto-Indo-European **seʔ(y/i)-* (> **sē(y/i)-*) ‘(vb.) to sift; (n.) sieve’ (*ʔ = **ʔ₁*): Greek *ῥέω*, *ῥέω* ‘to sift, to strain’, *ῥέμος* ‘a strainer’; Welsh *hidl* ‘sieve’; Old Icelandic *sáld* ‘sieve’, *sælda* ‘to sift’; Norwegian *saald* ‘sieve’, *sælda* ‘to sift’; Swedish *sáll* ‘sieve’, (dial.) *sálda*, *sälla* ‘to sift’; Danish *saald*, *sold* ‘sieve’, (dial.) *sælde* ‘to sift’; Lithuanian *sietas* ‘sieve’, *sijóju*, *sijóti* ‘to sift’; Old Church Slavic **sějō*, **sěti* (**sějati*) in *pro-sějati* ‘to sift, to winnow’, *sito* ‘sieve’; Russian *síto* [сито] ‘sieve, sifter, bolt, bolter, strainer’; Serbian *sijati* ‘to sift’, *sīto* ‘sieve’. Note: The original meaning of Proto-Indo-European **seʔ(y/i)-* may have been ‘to divide, to separate’.

Northwest Caucasian:

- A. Common Abkhaz **sa* ‘to cut out (material)’; South Abkhaz *a-sa-rá* ‘to cut out (material)’; Abaza / Tapanta *sa-rá* ‘to cut out (material)’. Perhaps also: (1) Common Abkhaz **sa* ‘piece (of food)’; South Abkhaz *a-sá* ‘piece (of food)’. (2) Common Abkhaz **ssa* ‘to cut in thin slices’: Bzyp *a-ssa-rá* ‘to cut in thin slices’; Abzhywa *a-r-ssa-ra* ‘to cut in thin slices’.
- B. Proto-Circassian **sa* ‘knife’: Bžedux *sa* ‘knife’; Kabardian *sa* ‘knife’.

161. Proto-Indo-European **thekʰ(s)-/*thokʰ(s)-* ‘to form, to fashion, to make, to create, either by using a sharp tool or by bending, weaving, joining, braiding, or plaiting together’: Sanskrit *tákṣati* ‘to form by cutting, to plane, to chisel, to chop, to fashion, to make, to create’, *tákṣan-* ‘a wood-cutter, carpenter’; Pāli *tacchati* ‘to build’, *tacchēti* ‘to do woodwork, to chip’, *tacchanī-* ‘hatchet’, *tacchaka-* ‘carpenter’; Prakrit *takkhaī*, *tacchāī* ‘to cut, to scrape, to peel’; Avestan *tašaiti* ‘to produce, (carpenter) to make’, *taša-* ‘axe’; Latin *texō* ‘to weave, to build’; Greek τέκτων (< *τέκστων) ‘carpenter’, τέχνη (< *τέκσνῶ) ‘art, craft’; Armenian *thekʰem* ‘to bend, to shape’; Old Irish *tál* (< *tōks-lo-) ‘axe’; Old Icelandic *þexla* ‘adze’; Old High German *dehsa*, *dehsala* ‘axe, poleaxe’ (New High German *Dechsel*); Lithuanian *tašaiñ*, *tašýti* ‘to hew’; Old Church Slavonic *tešq*, *tesati* ‘to hew’; Russian Church Slavonic *tesla* ‘carpenter’s tool, adze’; Hittite (3rd sg. pres. act.) *ták-ki-(e)-eš-zi* ‘to join, to build’.

Northwest Caucasian: Proto-Circassian **t:aq:a* ‘stump/handle, thick end of a pole’: Bžedux *t:āq:a* ‘stump/handle, thick end of a pole’; Kabardian *dāq’a* ‘stump/handle, thick end of a pole’.

162. Proto-Indo-European **therkʷh-/*thorkʷh-/*thḡkʷh-* ‘to twist, to turn, to bend’: Latin *torqueō* ‘to twist, to bend, to wind’, *torquis* ‘twisted collar or necklace; collar of draft oxen; ring, wreath’; Sanskrit *tarkú-ḥ* ‘spindle’ (< *tark- ‘to twist, to turn’); Old Church Slavonic *trakъ* ‘band, girdle’; Tocharian B *tärk-* ‘to twist around; to work (for example, wood)’, A *tark* ‘earring’; Hittite (3rd sg. pres. act.) *tar-uk-zi* ‘to dance’, (3rd pl. pres. act.) *tar-ku-an-zi*. Perhaps also Greek (Mycenaean) *to-ro-qe-jo-me-no* (*trokʷeyómenos) (meaning unknown).

Northwest Caucasian: Common Abkhaz **cárqʷə* ‘carpenter’s cord used to mark the line of cutting’: Bzyp *a-cárqʷə* ‘carpenter’s cord used to mark the line of cutting’. For the semantics, cf. Buck 1949:§9.19 rope, cord.

Note: Common Abkhaz **c* = Proto-Indo-European **th*.

163. Proto-Indo-European **wedh-/*wodh-* ‘to strike’: Sanskrit *vadh-* ‘to strike, to slay, to kill, to put to death, to destroy, to murder’, *vadhar-* ‘a destructive weapon, the weapon or thunderbolt of Indra’; Avestan *vadar-* ‘weapon (for striking)’; Lithuanian *vedegà* ‘adz’; Tocharian B *wāt-* ‘to fight’.

Northwest Caucasian: Common Abkhaz **wadǎšǰǰǎ* ‘(to break) into pieces’: South Abkhaz *a-wadǎšǰǰǎ-ra* ‘(to break) into pieces’.

164. Proto-Indo-European **yoǵ-s-* (> **yōs-*) ‘to tie, to bind, to wrap, to gird’ (**ǵ* = **ǵ₁*): Avestan *yāsta-* ‘girt, girded’, (3rd sg. pres.) *yāñhayeiti* ‘to gird’; Greek ζώννυμι ‘to gird, to gird around the loins’, ζωστός ‘girded’, ζωστήρ ‘a warrior’s belt’, ζῶμα (< **ζωσ-μα*) ‘that which is girded, a girded frock or doublet’, ζώνη (< **ζωσ-νᾱ*) ‘belt, girdle’, ζώστρο ‘encircling band or ribbon’; Albanian *n-gjesh* ‘to gird, to put on (belt)’, *gjeshë* ‘ribbon, binder; tape’; Lithuanian *júosiu, júosti* ‘to gird’, *júostas* ‘girded, girt’, *júosta* ‘belt, waistband’, *juosmuõ* ‘waist, loins’, *juosėti* ‘to wear a belt or girdle’; Old Church Slavic *po-jašq, po-jasati* ‘to gird’, *po-jasъ* ‘belt’; Russian *pójas* [пояс] ‘belt’.

Northwest Caucasian: Common Abkhaz **ja* ‘burden, pack’: South Abkhaz *a-já* ‘burden, pack’ (= ‘a collection of items tied up or wrapped; a bundle’).

XV. Sense Perception

165. Proto-Indo-European **b^heh-/b^hoh-* (> **b^hā-/b^hō-*) ‘to be bright, shining; to bring to light, to cause to appear; to make clear’ (**h* = **ǵ₄*): Greek φαίνω ‘to bring to light, to cause to appear; to make known, to reveal, to disclose; to make clear; to show forth, to display; to set forth, to expound; to inform against one, to denounce; to give light, to shine; to come to light, to become visible, to appear; to come into being; to come about; to appear to be’, φάω ‘to give light, to shine’, φάος, φῶς ‘light, daylight; light of the eyes’ (pl. φάεα ‘eyes’), φᾶνός ‘light, bright, joyous’; Sanskrit *bhāti* ‘to shine, to be bright, to be luminous; to be splendid or beautiful; to be conspicuous or eminent; to appear, to seem; to show one’s self, to manifest any feeling; to be, to exist’; Avestan *bānu-* ‘spendor’; Old Irish *bán* ‘white’; Old English *bōnian* ‘to polish’.

Northwest Caucasian: Common Abkhaz **ba* ‘to see’: South Abkhaz *a-ba-rá* ‘to see’; Abaza / Tapanta *ba-rá* ‘to see’.

166. Proto-Indo-European **b^hel-/b^hol-/b^hl-* ‘to glitter, to gleam, to shine’ > ‘to see, to look, to glance’: Old Icelandic *blik* ‘gleam, sheen’, *blika, blikja* ‘to gleam, to twinkle’, *bligja* ‘to gaze’, *bligr* ‘staring, gazing’; Swedish *bliga* ‘to gaze (at, on, upon), to stare (at)’, *blink* ‘twinkle, twinkling, gleam, blink’; Middle English *blinken* ‘to shine; to look at; to blink’; Old Frisian *blika* ‘to appear, to be visible’; Dutch *blikken* ‘to glitter, to twinkle; to look at, to look into, to glance at’, *blik* ‘regard, look, glance, view, glimpse’, *blinken* ‘to shine, to glitter’; New High German *blicken* ‘to look’, *Blick* ‘glance’, *blinken* ‘to glitter, to gleam, to shine; to flash, to blink, to twinkle, to sparkle’. Non-Germanic cognates include: Tocharian B *pilko* ‘insight, view; look, glance’, A/B *pālk-* ‘to see, to look at; to take heed of’ also ‘to shine, to be highlighted; to burn’; etc. Note: There are numerous derivatives of Proto-Indo-European

**b^hel-/b^hol-/b^hl-* ‘to glitter, to gleam, to shine’ in the Indo-European daughter languages — only a small sampling has been given here, specifically, those derivatives that deal with ‘seeing, looking, glancing, etc.’ For more information, the etymological dictionaries listed in the references should be consulted. See also the following entry.

Northwest Caucasian:

- A. Common Abkhaz **bla* ‘eye’: South Abkhaz *á-bla* ‘eye’; Ashkharywa *bla* ‘eye’; Abzhywa *a-bá-bla* ‘eye’. Note: Chirikba (1996b:19) suggests that the following may belong here as well: Common Abkhaz **bla-q''a* ‘to stagger, to shake; to fall; to be bewildered’ (**bla* ‘eye’ [?], **q''a* ‘to beat, to strike’): South Abkhaz *á-blaq''a-ra* ‘to stagger, to shake; to fall; to be bewildered’. However, semantically, the following are far better comparisons: (1) Common Abkhaz **balá-* in **balá-bata* ‘to move with uncertainty’: South Abkhaz *a-balábata-ra* ‘to move with uncertainty’; and (2) *-bla-* // *-bəl-* in South Abkhaz *a-bla-xá-c'* // *a-bəl-xá-c'* ‘giddiness, dizziness’.
- B. Ubykh *blá* ‘eye’, *bladāq''o* ‘blink’, *blawá* ‘(someone) who has the evil eye’, **blax'ambá* ‘nearsighted’, *blamsá* ‘eyebrow’.

167. Proto-Indo-European **b^hlendh-/b^hlondh-/b^hlndh-* ‘to be or become blind’: Gothic *blinds* ‘blind’, **gabblindjan* ‘to make blind’, **afblindnan* ‘to become blind’; Old Icelandic *blinda* ‘to blind’, *blindr* ‘blind’, *blunda* ‘to shut the eyes’, *blundr* ‘dozing, slumber’; Old English *blendan* ‘to blind, to deceive’, *blind* ‘blind’; Old High German *blint* ‘blind’; Lithuanian *blendžiù*, *blēsti* ‘to become dark’, *blandūs* ‘dark, dusky, obscure, gloomy, dismal’, *blañdas* ‘cloudiness, obscuration of mind or eyesight, drowsiness’; Old Church Slavic *blędq*, *blęsti* ‘to go blindly’.

Northwest Caucasian:

- A. (1) Common Abkhaz **bla-q''a* ‘to stagger, to shake; to fall; to be bewildered’: South Abkhaz *á-blaq''a-ra* ‘to stagger, to shake; to fall; to be bewildered’. (2) Common Abkhaz **balá-bata* ‘to move with uncertainty’: South Abkhaz *a-balábata-ra* ‘to move with uncertainty’. (3) South Abkhaz *a-bla-xá-c'* // *a-bəl-xá-c'* ‘giddiness, dizziness’. Note also: Common Abkhaz **bla* ‘eye’: South Abkhaz *á-bla* ‘eye’; Abzhywa *a-bá-bla* ‘eye’; Ashkharywa *bla* ‘eye’.
- B. Ubykh *blaŷ''á* ‘blind’.

168. Proto-Indo-European **d^hes-/d^hos-* ‘to become numb’ (?) (only in Germanic): Old Icelandic *dasast* ‘to become weary and exhausted’, *dasaðr* ‘exhausted, weary’, *dæstr* ‘exhausted, worn out’; Danish *dase* ‘to lie idle’; Swedish *dasa* ‘to lie idle’; Middle English *dasen* ‘to benumb, to stun; to be stupefied, confused, bewildered’; Dutch *daas* ‘dizzy, confused, excited’.

Northwest Caucasian: Common Abkhaz **dásə* ‘to become numb’: Bzyp *a-dás-ra* ‘to become numb’; Abzhywa *a-dás* ‘paralysis’.

169. Proto-Indo-European **hey-thro-* [**hay-thro-*] ‘bitter’ (**-thro-* is a suffix) (**h* = **₂*) (only in Lithuanian): Lithuanian *aitrūs* ‘bitter, sharp’, *aitrà* ‘tartness’.

Northwest Caucasian: Common Abkhaz **ajšá* ‘bitter’: Abaza / Tapanta *ajšá* ‘bitter’; Ashkharywa *ajšá* ‘bitter’; South Abkhaz *áša* ‘bitter’; Bzyp (indef. sg.) *(a)šá-k* ‘bitter’.

170. Proto-Indo-European **met’-/*mot’-* ‘to be mindful of’: Greek μέδομαι ‘to provide for, to care for, to be mindful of’; Latin *meditor* ‘to think about constantly, to contemplate, to ponder; to devise, to plan; to rehearse, to practice, to go over, to say to oneself’; Old Irish *midithir* ‘to measure, to judge’, *mess* ‘judgment’; Welsh *meddwl* ‘(vb.) to think, to mean; (n.) thought, meaning, opinion’, *meddylfryd* ‘mind, affection, bent’, *meddylgar* ‘thoughtful’; Cornish *medhes* ‘to say’; Gothic *mitōn* ‘to weigh in the mind, to consider, to meditate (upon), to reason about, to think over, to ponder, to cogitate’. Note: These forms are ultimately derived from Indo-European **met’-* ‘to measure’: Gothic *ga-mitan* ‘to measure out, to mete out, to apportion’, *mitaps* ‘measure, measurement, standard of measure’; Old Icelandic *meta* ‘to estimate, to value’; Old English *metan* ‘to measure, to mete out, to mark off; to compare, to estimate’, *met* ‘measure, share, quantity; boundary, limit’; etc.

Northwest Caucasian: Common Abkhaz **mat’anájə* ‘to bow, to ask, to pray’: South Abkhaz *á-mat’anaj-ra* ‘to bow, to ask, to pray’; Bzyp *a-mat’anaj-ra* ‘to bow, to ask, to pray’, also ‘to mumble, to mutter’. Note: Assuming semantic development as in Latin *meditor* in the meanings ‘to rehearse, to practice, to go over, to say to oneself’ and Cornish *medhes* ‘to say’ cited above

171. Proto-Indo-European **mey-n-/*moy-n-/*mi-n-* ‘to think, to mean, to be of the opinion’, **mey-no-* ‘opinion, intention, view’: Old English *mānian* ‘to mean, to signify, to intend; to mention, to relate, to declare, to communicate, to say’; Old Saxon *mēnian* ‘to mean, to mention’; Dutch *menen* ‘to say’; Old High German *meinen* ‘to be of the opinion, to believe, to think, to suppose; to reckon, to assert, to say, to suggest; to mean, to intend’ (New High German *meinen*), *meina* ‘meaning, intention, opinion, view’ (New High German *Meinung*); Old Church Slavic *měnjō, mēniti* ‘to suppose, to think, to reckon, to mention’; Old Russian *mēniti* ‘to think, to suppose, to mention, to mean, to symbolize’. Note: The original meaning of the Proto-Indo-European unextended verb stem **mey-/*moy-/*mi-* may have been ‘to perceive, to notice, to be aware of’, preserved, for example, in Sanskrit *miśāti* (< **mi-s-é-*) ‘to open the eyes, to have the eyes open; to look at’, *nī-meśá-* (< **mey-s-*) ‘twinkling of the eyes’ (cf. Rix 2001:429 **mejs-* ‘to open the eyes’; Mayrhofer 1956—1980.II:641—642).

Northwest Caucasian: Common Abkhaz **majda* ‘with content, awareness of somebody’: South Abkhaz *á-majda* ‘with content, awareness of somebody’.

XVI. Food and Drink

172. Proto-Indo-European **b^hes-* ‘to crush, to grind (with the teeth)’: Sanskrit (redup.) *bábhasti* ‘to chew, to masticate, to devour’; Greek ψάω ‘to rub, to grate, to scratch; to stroke, to wipe’. Note: Beekes (2010.II:1665—1666) considers the Greek forms he cites to be Pre-Greek in origin.

Northwest Caucasian: Common Abkhaz **(b)žah^oá* ‘to ruminate’: Abzhywa *á-žah^oa-ra* ‘to ruminate’, *a-žah^oá* ‘cud, chewing’; Abaza / Tapanta *žah^oa-rá* ‘to ruminate’, *žah^oa* ‘cud, chewing’; Bzyp *a-bžah^oa-rá* ‘to ruminate’.

Note: Proto-Indo-European **b^hVs-* = Common Abkhaz **bžV-*.

173. Proto-Indo-European **k^weth⁻u-* ‘glutinous secretion, viscous discharge: gum, resin, sap’ (< **k^weth⁻/*k^woth⁻* ‘to ooze [out], to seep [out]’): Sanskrit *játu-* ‘lac, gum’; Latin *bitūmen* ‘pitch, asphalt’ (borrowed from either Sabellian or Celtic); Middle Irish *beithe* ‘birch-tree’ (borrowed from Brittonic Celtic); Old Icelandic *kváða* ‘resin’; Faroese *kváða* ‘viscous fluid from a cow’s teat’; Old Danish *kvade* ‘birch sap’; Norwegian *kvaade*, *kvae* ‘resin; watery fluid from a pregnant cow’s udder’, (dial.) *kvæde* ‘birch sap’; Old English *cwidu*, *cweodo*, *cwudu* ‘resin, gum; cud, mastic’; Old High German *quiti*, *kuti* ‘glue’. Note: In view of Faroese *kváða* ‘viscous fluid from a cow’s teat’ and Norwegian *kvaade*, *kvae* ‘resin; watery fluid from a pregnant cow’s udder’, Armenian *kathⁿ* ‘milk’ (dialectal variants include: Sučhava *gath^ə*; Tbilisi *káth^ə*; Łabarał, Goris, Šamaxi *káth^{nə}*; Lori *kath^ə*; Agulis *kaxch^h*; Havarik *kaxs*; Areš *kaxs*; Mehri *kaxch^h*; Karčewan *kaxch^h*) may belong here as well. If so, then the traditional comparison of the Armenian form with Greek γάλα ‘milk’, Latin *lac* ‘milk’, etc. (cf. Martirosyan 2008:294—296) is to be abandoned.

Northwest Caucasian: Proto-Circassian **k^oəth(a)* ‘to pour out, to pour into’: Bžedux *yə-k^oəth(a)* ‘to pour out, to pour into’; Kabardian *yə-k^oət(a)* ‘to pour out, to pour into’ (*yə* = ‘hollow space’).

174. Proto-Indo-European **met⁻/*mot⁻* ‘(vb.) to eat; (n.) food, meal’ (Germanic only): Gothic *mats* ‘food’, *matjan* ‘to eat, to feed’; Old Icelandic *matr* ‘meat, food’, *mata* ‘to feed another’; Old English *mete* ‘food’, *metsian* ‘to feed, to furnish with provisions’, *mettian* ‘to supply with food’; Old Saxon *meti* ‘food’; Middle Low German *met* ‘pork’; Old High German *maz* ‘food, nourishment’. Note: According to Kroonen (2013:358), Greek μεστός ‘full, filled, satiated’ belongs here as well. Kroonen derives μεστός from **med-to-s*.

Northwest Caucasian:

- A. Common Abkhaz **mác'a* 'locust; insatiable, gluttonous': Abaza / Tapanta *mac'a* 'locust; insatiable, gluttonous'; South Abkhaz *a-mác'a* 'insatiable, gluttonous; locust'.
- B. Ubykh *ma:c'á* 'grasshopper'.
- C. Proto-Circassian **mac'a* 'locust': Bžedux *māc'a* 'locust'; Kabardian *māc'a* 'locust'.

Note: Northwest Caucasian **c'* = Proto-Indo-European **t'*.

XVII. Clothing

175. Proto-Indo-European **b^{hl}-ekh-/*b^{hl}-ok^h-* 'covering, cloth' (only in Germanic): Old Icelandic *blæja* (also *blægja*) 'a fine, colored cloth; the cover of a bed; cover of an altar table; a shield; a veil'; Swedish *blår*, *blånor* 'oakum, tow', *blöja* 'swaddling cloth'; Danish *ble* 'diaper', *blaar* 'oakum' (Old Danish *blaa*); Norwegian *bleie*, *blæje* 'diaper'; Old High German *blaha* 'coarse linen cloth' (New High German *Blache*, *Blahe*; *Plahe*, *Plane*) (cf. Kluge—Seebold 2011:709; De Vries 1977:46).

Notes:

1. Kroonen (2013:66), Torp (1919:31), and de Vries (1977:46) reconstruct Proto-Germanic **blahjōn-* 'cloth', while Orël (2003:47) reconstructs Proto-Germanic **blaxōn*.
2. Assuming derivation from a Proto-Indo-European root **b^{hel}-/*b^{hol}-/*b^{hl}-* 'to cover', not further attested in the various Indo-European daughter languages.

Northwest Caucasian: Proto-Circassian **bəλə* 'to hide': Temirgoy *ğə-bəλə-n* 'to hide (tr.)'. Note: For the semantics, cf. Old English *wrēon* 'to cover, to clothe, to envelope; to conceal, to hide'. Cf. Buck 1949:§12.27 hide, conceal.

Note: Proto-Circassian **λ* is represented as **l* in Proto-Indo-European.

176. Proto-Indo-European **k^{hem}-/*k^{hom}-/*k^hṃ-* '(vb.) to cover, to conceal; (n.) covering; shirt': Sanskrit *śāmulyā-h* (Vedic *śāmūla-h*) 'thick woolen shirt'; Latin *camīsia* 'linen shirt or night-gown' (Gaulish loan ?); Gothic *-hamōn* in: *ana-hamōn*, *ga-hamōn* 'to get dressed', *af-hamōn* 'to get undressed', *ufar-hamōn* 'to put on'; Old Icelandic *hamr* 'skin, slough; shape, form', *hams* 'snake's slough, husk'; Old English *hemeþ* 'shirt', *ham* 'undergarment', *-hama* 'covering' (only in compounds), *hemming* 'shoe of undressed leather'; Old High German *hemidi* 'shirt', *-hamo* 'covering' (in compounds); Old Frisian *hemethe* 'shirt'; Dutch *hemd* 'shirt'.

Northwest Caucasian: Common Abkhaz **qamə* ‘fur coat’: Bzyp *a-ḡamə* ‘fur coat’; Abzhywa *a-ḡamə* ‘fur coat’; Abaza / Tapanta *qamə* ‘fur coat’.

XVIII. Qualities

177. Proto-Indo-European **b^hengh-* ‘to swell, to increase’, **b^hng^h-u-* ‘swollen, fat, thick, dense; much, many; numerous, abundant’: Sanskrit *bahú-h* ‘much, abundant; many, numerous; abounding in; frequent; large, great, mighty’, *bamhate* ‘to grow, to increase’, (causative) *bamhayati* ‘to cause to grow, to increase, to strengthen, to fix, to make firm’; Hittite (adj.; nom. sg.) *pa-an-ku-uš* ‘all (of), entire, complete; every’, (nom. sg.) *pa-an-ku-uš* ‘multitude, the people, the masses’; Greek *παχός* ‘thick, stout, massive; fat, great’; Latvian *biezs* ‘thick’.

Northwest Caucasian:

- A. Common Abkhaz **bay’á* ‘thick, dense, solid, strong’: South Abkhaz *a-bay’á* ‘thick, dense, solid, strong’; Abaza / Tapanta *bay’á* ‘hard, solid, strong; stingy (of men)’.
- B. Ubykh *by’ə* ‘wide, broad’, *by’əš* ‘width, breadth’.
- C. Proto-Circassian **bayə* ‘to swell’: Bžedux *bayə* ‘to swell’; Kabardian *bay* ‘to swell’.

Notes:

1. Chirikba (1996b:14) writes Common Abkhaz **bay’á*.
2. Kuipers (1975:12) writes Proto-Circassian **baġə*.
3. Proto-Indo-European **b₁* is reflected as **a* in Northwest Caucasian.

178. Proto-Indo-European **b^hoso-* ‘bare, uncovered, naked’: Old Icelandic *berr* ‘bare, naked; (metaph.) uncovered, open, clear, manifest’; Old English *bær* ‘bare, uncovered; naked, unclothed’; Old High German *bar* ‘naked, bare’ (New High German *bar*); Old Church Slavonic *boŝ* ‘barefoot, unshod’; Russian *bosój* [bocoj] ‘barefooted, barelegged’; Lithuanian *bāsas* ‘barefooted’.

Northwest Caucasian: Common Abkhaz **báša* ‘simple, usual; in vain, for nothing’: South Abkhaz *a-báša* ‘simple, usual’, *báša*, (redup.) *baša-máša* ‘in vain, for nothing’; Ashkharywa *báša* ‘in vain, for nothing’; Abaza / Tapanta (redup.) *baša-máša* ‘simply, for nothing’.

Note: Common Abkhaz **š* = Proto-Indo-European **s*.

179. Proto-Indo-European **d^hes-/*d^hos-* ‘to be or become weary, exhausted, worn out’ (Germanic only): Old Icelandic *dasask* ‘to become weary, exhausted’, *dasaðr* ‘weary, exhausted’, *dasi* ‘a lazy person’, *dæstr* ‘exhausted, worn out’; Middle English *darin* ‘to stay in one place, to remain quiet; to lurk; to be motionless, inactive; to hesitate’, *dasin* ‘to become dizzy; to stupefy, to

bewilder'; Middle Dutch *dasen* 'to rave, to be foolish', *daes* 'foolish'. Note: Kroonen (2013:91—92) reconstructs Proto-Germanic **dazēn-* 'to be numbed (?)'.

Northwest Caucasian: Common Abkhaz **dāsə* 'to become numb': Abzhywa *a-dās* 'paralysis'; Bzyp *a-dās-ra* 'to become numb'.

180. Proto-Indo-European **hegh-* [**hagh-*] '(to be) bad, evil; to (cause) harm' (**h* = **ǵ₁*): Sanskrit *aghá-h* 'going wrong; mishap, evil; misdeed, a fault (sin, passion, impurity, pain, suffering); evil, bad, sinful, subject to passion, miserable, unclean', *aghāván* 'sinful'; Vedic *aghāyati* 'to be malicious, to sin, to threaten'; Avestan *ayō* 'bad, evil'. Perhaps also: Gothic **agls* 'disgraceful', **agljan* 'to harm'; Old English *egle* 'troublesome; horrible, repulsive, hideous, loathsome; grievous, painful', *eglan* 'to trouble, to plague, to molest, to afflict'; Norwegian *egla* 'to bait, to goad, to heckle, to molest, to offend' *eglet(e)* 'cantankerous, quarrelsome'.

Northwest Caucasian:

- A. (1) Common Abkhaz **ága* 'fool': South Abkhaz *ága* 'fool'; (2) Common Abkhaz **ga-ǵá* 'silly, fool': Bzyp *a-ga-ǵá* 'silly, fool'; Abzhywa *a-ga-ǵá* 'silly, fool'. Note: Assuming semantic development as in Russian *duráckij* [дурацкий] 'foolish, silly', *durák* [дурак] 'fool, dupe, silly person; ass; simpleton, buffoon, clown; blockhead, dunce', *durít'* [дурить] 'to play the fool, to be foolish', *durét'* [дуреть] 'to grow stupid', *dur'* [дурь] 'obstinacy, folly, caprice, whim, extravagance' from the same stem found in *durnój* [дурной] 'ugly; bad; ill; unsightly, ill-favored; vile, base, wretched; evil, depraved'; etc.
- B. Ubykh *ag'a* 'bad, evil'.

181. Proto-Indo-European (**k'en-/k'on-/k'n-*) **k'n-* 'knot, knob': Old Icelandic *knappr* 'knob', *knútr* 'knot'; Old English *cnop* 'knob', *cnotta* 'knot'; Middle Low German *knotte* 'knot, knob'.

Northwest Caucasian:

- A. Proto-Circassian **k'ana*: Kabardian *k'āna* 'piece, lump'.
- B. Common Abkhaz **k'ak'ánə* 'nut': Abaza / Tapanta *k'ak'an* 'nut'; South Abkhaz *a-k'ak'án* 'walnut'; Ashkharywa *k'ak'án* 'walnut'.

182. Proto-Indo-European **k'er-/k'or-/k'ǵ-* in **k'or-skho-* 'lively, quick, bold, brisk, very much' (Germanic only): Proto-Germanic **karskaz* 'lively, quick, bold, brisk, very much' > Old Icelandic *karskr* 'brisk, bold; hale, hearty' (*era karskr maðr sá er ...* 'he suffers much who ...'); Danish *karsk* 'quick'; Swedish *karsk* 'bold'; Middle Low German *karsch* 'lively, fresh'; Dutch *kers-vers* 'new, fresh'; Middle High German *karsch* 'lively, fresh'.

Northwest Caucasian: Common Abkhaz **k'ara* ‘much, extremely’ in **k'ara-ḡa* ‘to be extremely tired’ (**ḡa* ‘to work’): South Abkhaz *a-k'ara-ḡa-ra* ‘to be extremely tired’.

183. Proto-Indo-European (extended form) **k'r-um-bʰ-*, **k'r-u-bʰ-* ‘coarse, thick, big’: Lithuanian *grubùs* ‘uneven, rough’; Russian *grúbyj* [грубый] ‘rough, coarse’; Czech *hrubý* ‘big, coarse, rough’; Slovak *hrubý* ‘thick, big, coarse’; Polish *gruby* ‘thick, big, coarse’. Note also: Sanskrit *grathnāmi*, *grantháyati* ‘to fasten, to tie or string together’, *grathna-h* ‘bunch, tuft’, *granthí-h* ‘a knot, tie, knot of a cord; bunch or protuberance’; Latin *grūmus* ‘a little heap, hillock (of earth)’; Old Irish *grinne* ‘bundle’; Old Icelandic *kring* ‘round’; etc. Note: According to Pokorny (1959:385—390), all of the above forms are ultimately derived from Proto-Indo-European **k'er-/*k'or-/*k'ṛ-* (traditional **ger-/*gor-/*gr-*) ‘to twist, to turn’.

Northwest Caucasian: Proto-Circassian **k'ʔarə* ‘thick, dense (of wool, beard, etc.), long (of hair), high (of grass)’; Bžedux *č'ʔarə* ‘thick, dense (of wool, beard, etc.), long (of hair), high (of grass)’; Kabardian *k'ər* ‘thick, dense (of wool, beard, etc.), long (of hair), high (of grass)’.

184. Proto-Indo-European **k'wṛH-u-* ‘heavy, weighty; great, large, extended, long; grievous, serious; important, elevated’: Sanskrit *gurú-h* ‘heavy, weighty; great, large, extended, long; high in degree, vehement, violent, excessive, deep, much; difficult, hard; grievous; important, serious, momentous; valuable, highly prized; dear, beloved; haughty, proud; venerable, respectable; best, excellent’; Latin *gravis* ‘heavy, weighty, burdensome; important, elevated, dignified; grievous, painful, hard, harsh, severe, unpleasant’; Greek βαρύς ‘heavy, weighty; impressive; difficult, wearisome, troublesome, oppressive’; Tocharian A *krāmārts*, B *kramartse* ‘heavy’, B *krāmār* ‘weight, heaviness’.

Northwest Caucasian: Common Abkhaz **k'ʔarác'ə* ‘grown (up), upright, erect’: South Abkhaz *-k'ʔarác'ə-ʒa* (adv.) ‘notably grown (up), having become taller; upright, erect’; Bzyp (Akhutsa) *a-pānc'a k'ʔác'ə* // (Zwandrypsh) *k'ʔ(ə)rác'ə* ‘turned-up nose’.

185. Proto-Indo-European **mak'-* ‘great, strong, mighty, powerful’: Latin *magnus* (< **mak'(i)no-*) ‘large, great, tall; outstanding, powerful, mighty’, (adv.) *magis* ‘more, to a greater extent, rather’; Albanian *madh* (< **mak'(H)-yo-*) ‘big, large, tall’; Old Irish *maige* (< Proto-Celtic **mag-yo-*) ‘great’, (poetic) *mál* (< Proto-Celtic **mag-lo-*) ‘noble, prince’.

Northwest Caucasian: Common Abkhaz **maq'á* ‘strong, powerful, big, great’: Abaza / Tapanta *maq'ə* ‘strong, powerful, big, great’; South Abkhaz *a-maq'á*, *á-maq'-a* ‘strong, powerful, big, great’, *maq'ə* ‘old (of animals)’.

186. Proto-Indo-European **meʔ-/*moʔ-* (> **mē-/*mō-*); extended forms: **meʔ-is-/*moʔ-is-* (> **meis-/*mois-*); **meʔ-r-/*moʔ-r-* (> **mēr-/*mōr-*) ‘great(er), large(r); more’ (*ʔ = *ʔ₁): Gothic *maiza* ‘greater, larger’; Old Icelandic *meiri* ‘more’; Old English *māra* ‘greater, more’; Old High German *mēro* ‘more’; Old Irish *már, mór* ‘great’.

Northwest Caucasian: Common Abkhaz **ma-za* (**ma* ‘to have’ ?) ‘wealth, big amount of (valuable) possessions’; South Abkhaz *a-máza-ra* ‘wealth, big amount of (valuable) possessions’; Ashkharywa (Apsua) *maza-rá* ‘wealth, big amount of (valuable) possessions’.

187. Proto-Indo-European **melH-/*molH-/*m̥lH-* ‘to wither, to fade, to weaken, to grow weary, to waste away’: Sanskrit *mlāyati* ‘to wither, to fade, to decay; to be faint or languid, to grow weary, to languish; to become weak or feeble; to become thin or emaciated’, *mlāna-h* ‘withered, faded, wearied, weary, wan; languid, languishing; enfeebled, emaciated, faint, feeble, weak’; Greek ἀμαλός ‘soft, weak’, μαλακός ‘soft, gentle, mild; weak, feeble’; New High German *mulsch* ‘weak’. Perhaps also: Hittite (nom. sg.) *mi-li-iš-ku-uš* ‘weak; light, unimportant’. Note: Ultimately derived from Proto-Indo-European **mel-/*mol-/*m̥l-* ‘to crush, to grind’.

Northwest Caucasian: Common Abkhaz **malá* ‘hunger’: South Abkhaz *á-mla* ‘hunger’; Ashkharywa *á-mala* ‘hunger’; Abaza / Tapanta *mla* ‘hunger’. Note: Semantic development from ‘thin, emaciated, wasted away (from hunger)’ (cf. Buck 1949:§5.14 hunger [sb.]).

188. Proto-Indo-European **men-t'-o-/*mon-t'-o-/*m̥t'-o-* ‘slow, tardy, moving slowly or softly, loitering, inert, inactive, idle, lazy, laggardly’ (Sanskrit only): Sanskrit *manda-h* ‘slow, tardy, moving slowly or softly, loitering, inert, inactive, idle, lazy, laggardly’.

Northwest Caucasian: Common Abkhaz **má-ra* ‘slowness; inefficiency, unproductiveness’ (**ma* ‘hand’, *-ra* abstract suffix): South Abkhaz *a-mára-ra* ‘slowness’, *a-mára* ‘inefficiency, unproductiveness’; Bzyp *a-mára* ‘efficiency, productiveness’, *á-mara-ra* ‘ability, capacity’.

Note: Proto-Indo-European **ṇ* is reflected as **a* in Northwest Caucasian.

189. Proto-Indo-European **nekʷ-/*nokʷ-* ‘naked, bare, nude; exposed, without covering; open to view, not concealed; manifest, plain, evident’: Sanskrit *nagná-h* ‘naked, nude, bare; uncultivated, uninhabited, desolate’; Latin *nūdus* ‘naked, nude, bare, unclothed; exposed, open to attack, lacking protection; having nothing added, plain, simple’; Old Irish *nocht* ‘naked, bare’; Gothic *naqaps* ‘naked’; Old English *nacod* ‘nude, bare, not fully clothed; empty’; Lithuanian *núogas* ‘naked, bare, nude’; Hittite (nom. sg. c.) *ne-ku-ma-an-za*

‘naked (of humans and deities); uncovered (of horses)’, (3rd sg. pres. act.) *[n]eʔ-ku-ma-an-ta-iz-zi*, (3rd pl. pres. act.) *ni-ku-ma-an-da-ri-an-zi* ‘to undress oneself, to disrobe’.

Northwest Caucasian: Proto-Circassian **naqʷa* ‘well-known, distinguished; clear-cut, distinct’: Bžedux *nāʷa* ‘well-known, distinguished’; Kabardian *nāʷa* ‘well-known, distinguished; clear-cut, distinct’. Temirgoy also ‘to give oneself airs’. Semantic development from ‘exposed, without covering; open to view, not concealed; manifest, plain, evident’.

190. Proto-Indo-European **pʰoʷ(i/y)-* ‘to swell, to fatten’ (**ʷ = *ʷ₂*): Sanskrit *páyate* ‘to swell, to fatten, to overflow, to abound’, *pīvan-* ‘swelling, full, fat’; Greek *πίων* ‘fat, rich’, *πίᾱρ* ‘fat; any fatty substance, cream’; Old Icelandic *feit*r (< Proto-Germanic **faitaz*) ‘fat’, *feita* ‘to fatten’, *feiti* ‘fatness’; Old English *fætt* ‘fat’; Old Frisian *fatt*, *fett* ‘fat’; Old Saxon *feit* ‘fat’.

Northwest Caucasian: Abaza / Tapanta *pa-rá* ‘to rise (of dough)’.

191. Proto-Indo-European **pʰelo-* ‘strong, powerful; big, large, great’: Sanskrit *bála-m* ‘power, strength, might, vigor; force, violence, rigor, severity’, *balín-* ‘powerful, strong, mighty, vigorous, stout, robust’; Greek *βελτίων*, *βέλτερος*, comparative of *ἀγαθός*, ‘better, more excellent’; Latin *dē-bilis* ‘feeble, weak’ (= *dē-* ‘without’ + **bilis* ‘strength’ [not otherwise attested in Latin]); Old Church Slavic *bolъjъ* ‘bigger, better’; Russian *ból’sij* [большій] ‘greater’, *bol’sój* [большой] ‘big, large’.

Northwest Caucasian: Common Abkhaz (reduplicated) **pʰələpʰələ* ‘to swarm, to teem with something’: South Abkhaz *a-pʰələpʰəl-ra* ‘to swarm, to teem with something’.

192. Proto-Indo-European (prefix) **su-* ‘well, good’: Sanskrit *sú* (also *sū* in the Rigveda) ‘good, excellent, right, virtuous, beautiful, easy, well, rightly, much, greatly, very, any, easily, quickly, willingly’ in *su-kṛt-á-h* ‘a good or righteous deed, a meritorious act, virtue, moral merit; a benefit, bounty, friendly assistance, favor; good fortune, auspiciousness; reward, recompense’, *su-kṛt-* ‘doing good, benevolent, virtuous, pious; fortunate, well-fated, wise; making good sacrifices or offerings; skillful’, *su-kára-h* ‘easy to be done, easy to be managed, easily achieving’, benevolence’, *su-kára-m* ‘doing good, charity, *su-divá-h* ‘a bright or fine day’, *su-mánas-* ‘well disposed’, etc.; Greek *ὤ-* in *ὤ-γυής* ‘sound, healthy’, *ὤ-γεία* ‘soundness, health’, etc.; Old Irish *su-*, *so-* ‘good’ in *so-chor* ‘good contract’, *su-aitribhíde* ‘habitable’, *so-lus* ‘bright’, etc.; Welsh *hy-* in *hy-gar* ‘well-beloved, lovable’, *hy-dyn* ‘tractable’, *hy-fryd* ‘pleasant’, etc.; Old Icelandic *sú-* in *sú-svort* ‘nightingale’ (this word is obsolete in Icelandic); Lithuanian *sū-* in *sū-drūs* ‘luxuriant’, etc.; Old Church Slavic *sz-* in *sz-dravъ* ‘healthy’, *sz-mrětb* (< **su-mṛtʰi-*) ‘death’, etc.

Northwest Caucasian: Proto-Circassian **s'o(a)* 'good', **s'oś'a* 'beneficent; benefit, good deed', **s'oč'a* 'gratitude': Kabardian *f'ə* 'good', *f'əs'a* 'beneficent; benefit, good deed', *f'əs'a* 'gratitude'; Bžedux *s'oə* 'good', *s'oś'a* 'beneficent; benefit, good deed', *s'oč'a* 'gratitude'. Note: Kuipers (1975:32) writes **s'o(a)*.

193. Proto-Indo-European **t'es-/t'os-* 'to become weak, exhausted' (only in Sanskrit): Sanskrit *dáśyati* 'to suffer want, to waste away, to perish; to become exhausted; to be ruined', *dasana-m* 'wasting, perishing, destroying'.

Northwest Caucasian: Proto-Circassian **t'aSxa* 'to become weak/shaky': Temirgoy *t'āsxa* 'to become weak/shaky, unstable; vulnerable spot'; Kabardian *t'āsxa* 'to become weak/shaky, unstable; vulnerable spot'; Bžedux *t'aśsā* (< **t'aSxa*) 'weak, exhausted'. Circassian (Bžedux) loan in Abkhaz: South Abkhaz *a-t'áysa* 'weak, languid, exhausted (often of an ill person)'; Abaza / Tapanta *t'aśsa* 'not strong, weak, poor'.

194. Proto-Indo-European (adj.) **wordh-o-s* 'grown, full-grown, tall, upright', (adj.) **wrdh-o-s* 'raised, upright, tall', (verb stem) **werdh-/wordh-/wrdh-* 'to raise, to elevate; to grow, to increase': Sanskrit *várdha-h* 'increasing, growing, thriving', *vṛddhá-h* 'grown, become larger or longer or stronger, increased, augmented, great, large; experienced, wise, learned; eminent in, distinguished by', *vṛddhi-h* 'growth, increase, augmentation, rise, advancement'.

Northwest Caucasian: Proto-Circassian **warq:ə* 'nobleman': Temirgoy *warqə* 'nobleman'; Kabardian *warq* 'nobleman'. Note: These may be late loans from Indo-Aryan (personal communication from John Colarusso).

XIX. Speech, Language

195. Proto-Indo-European **bheǵh-/bhoǵh-* (> **bhēǵh-/bhōǵh-*) 'to contend, to quarrel, to argue; conflict, strife, quarrel, argument' (**ǵ = *ǵ_l*): Old Icelandic *bágr* 'contest, strife, conflict', *bægja* 'to push back, to hinder; to treat harshly, to oppress; to quarrel'; Old High German *bāgan* (also *pāgan*) 'to contend, to quarrel, to argue, to squabble', *bāga* (also *pāga*) 'quarrel, *argblument*'; Old Irish *bágim* 'to fight, to contend, to quarrel', *bág* 'contest, contention, fight; boasting, vowing; vow, pledge, obligation, bond, alliance'; Latvian *buōztiēs* 'to become angry'; Tocharian B *pakwäre* 'evil, bad; evil one'.

Northwest Caucasian: Common Abkhaz **bya* (< **bga*) 'prayer; to damn, to curse': Bžyp *a-bya-ra* 'prayer; to damn, to curse'. Note: Chirikba (1996b:17) writes Common Abkhaz **bya*.

Note: Common Abkhaz **y* = Proto-Indo-European **g^h*.

196. Proto-Indo-European **b^hel-/*b^hl-* ‘(vb.) to babble, to chatter; (n.) idle talk, idle chatter’: Tocharian A *plāc*, B *plāce* ‘word, (idle) talk, speech; reply’. Perhaps also Greek φλεδών ‘idle talk’, φλέδων ‘idle talker’, φλεδονεύομαι ‘to babble’, φλέω (Hesychius) ‘to babble’, φληναφάω ‘to chatter, to babble’, φλῆναφος, φλῆνος ‘idle talk, nonsense; babbler’. Note: Beekes (2010.II:1577) considers these and several other Greek forms to be of Pre-Greek origin.

Northwest Caucasian: Common Abkhaz (reduplicated) **bəl-bəl* ‘to chatter’: Abaza / Tapanta *bəl-bəl-ra* ‘to chatter’.

197. Proto-Indo-European **b^her-/*b^hor-/*b^hr-* ‘to make a sound, to hum, to buzz, to mutter’: Sanskrit *bambhara-h* ‘bee’, *bambharālī-* ‘fly’; Armenian *bor* ‘bumblebee, hornet’; Greek πεμφορηδών ‘a kind of wasp’; Lithuanian *barbėti* ‘to jingle, to clink’, *birbiù, birbiaũ, biĩti* ‘to play a reed(-pipe)/flute’, *burbiù, burbėti* ‘to mutter, to mumble, to grumble’.

Northwest Caucasian:

- A. (1) Common Abkhaz (reduplicated) **bar-bár* ‘(to) chatter, jabber, babble’: South Abkhaz *a-barbár-ra* ‘(to) chatter, jabber; babble’. (2) Common Abkhaz (reduplicated) **bər-bər* (a variant of **bar-bár*) ‘to grumble, to growl’: Abaza / Tapanta (adv.) *bər-bər-ħ’a* (adv.) ‘growling, grumbling’; Abzhywa *d-bər-bər-wa* ‘be grumbling’.
- B. Ubykh *bərsər* ‘noise, murmur, rumble (of a crowd)’.

198. Proto-Indo-European **b^hes-* ‘to speak, to utter’ (Tocharian only): Tocharian B *päs-* ‘to speak, to utter’, *klautsaine päs-* ‘to whisper’. Note: According to Adams (2013:408), not derived from either Proto-Indo-European **pes-* ‘to blow’ or **b^hes-* ‘to blow’.

Northwest Caucasian:

- A. (1) Common Abkhaz **bəzə* ‘tongue’: South Abkhaz *a-bz* ‘tongue’, (indef. sg. *bzə-k’, bzə-k’ə*), *a-r-bza-ra* ‘to lick’; Ashkharywa *á-bəz* ‘tongue’; Abaza / Tapanta *bzə* ‘tongue’, (def. *á-bəz*; indef. sg. *bzə-k’*), *r-bza-rá* ‘to lick’; (2) Common Abkhaz **bəz-š’á* ‘language’: Abaza / Tapanta *bəzš’á* ‘language’; Ashkharywa *a-bəzš’á* ‘language’; South Abkhaz *a-bəzš’á* ‘language’; (3) Common Abkhaz **bəz-a(r)-žə* ‘news, rumor; praise’: Bzyp *a-bzáž* ‘news, rumor; praise’; Abzhywa *a-bza(r)žə* ‘news, rumor; praise’; (4) Common Abkhaz **bəzə-r-ga* ‘to be put off (by too much praise)’ (**bəzə* ‘tongue’, *r-* causative, **ga* ‘to carry’): Bzyp *a-bzərga-ra* ‘to be put off (by too much praise); to perform an exorcism’. Circassian loan in: Bzyp *a-bzaməq’o* ‘fool’; Abzhywa *á-bzaməq’o* ‘fool; deaf’; Abaza / Tapanta *bzaməq’o* ‘having poor knowledge of a foreign language; dumb; unable to speak’; Akhutsa *á-bzaməq’o* ‘fool’. Note also: Ubykh *bza:məq’o* ‘dumb, mute’.
- B. Ubykh *bza* ‘speech, language’, *š’əbzá* ‘our language’, that is, ‘Ubykh’.

- C. (1) Proto-Circassian **Pza* ‘language’: Bžedux *bza* ‘language’; Kabardian *bza* ‘language’; (2) Proto-Circassian **Pzag^o* ‘tongue’: Bžedux *bzag^o* ‘tongue’; Kabardian *bzag^o* ‘tongue’; (3) Proto-Circassian **Pzak^o* ‘dumb (without speech)’: Bžedux *bzāk^o* ‘dumb (without speech)’; Kabardian *bzāg^o* ‘dumb (without speech)’; (4) Proto-Circassian **Pzay(a)* ‘to lick’: Bžedux *bzāya*, *bzayə* ‘to lick’; Kabardian *bzay* ‘to lick’.

Note: Proto-Indo-European **b^hVs-* = Proto-Circassian **PzV-*; Ubykh *bzV-*; Common Abkhaz **bVz-*, **bzV-*.

199. Proto-Indo-European **g^her-/ *g^hor-/ *g^hr-* ‘to growl, to wail, to weep, to cry (out)’ (onomatopoeic): Latin *hirriō* ‘to growl’; Armenian *ger* ‘to wail’; Gothic *grētan* ‘to weep, to lament’, *grēts* ‘weeping’; Old Icelandic *gráta* ‘to weep, to bewail’, *grátr* ‘weeping’; Swedish *gråta* ‘to weep’, *gråt* ‘weeping’; Old English *grætan* ‘to weep’, *grædan* ‘to cry out, to call out’; Old Saxon *grātan* ‘to weep’; Middle High German *grazen* ‘to cry out, to rage, to storm’.

Northwest Caucasian: Common Abkhaz (reduplicated) **γ^harə-γ^harə* (onomatopoeic) ‘to rattle, to jingle; sound of beating or striking (against something); rattle, clapper’: South Abkhaz *a-γ^har-γ^har-ra* ‘to rattle, to jingle; sound of beating or striking (against something)’, *a-γ^har-γ^har* ‘rattle, clapper’; Abaza / Tapanta *γ^har-γ^har* ‘rattle, clapper; description of the sound produced by moving transport’.

Note: Common Abkhaz **γ* = Proto-Indo-European **g^h*.

200. Proto-Indo-European **g^{wh}rem-/ *g^{wh}rom-/ *g^{wh}rṃ-* ‘to roar, to growl, to howl, to rage’: Latin *fremō* ‘to roar, to murmur, to growl, to rage, to snort, to howl’; Old English *grimman* ‘to rage, to fret, to roar, to cry out, to grunt’; Old Saxon *grimman* ‘to rage’; Old High German *grimmen* ‘to rage, to yell’. Note: The Latin form could be from Proto-Indo-European **b^hrem-/ *b^hrom-/ *b^hrṃ-* ‘to roar, to growl, to howl’ instead (derivative of **b^her-/ *b^hor-/ *b^hr-* ‘to make a sound, to hum, to buzz, to mutter’ listed above).

Northwest Caucasian:

- A. Common Abkhaz **g^o(ə)rəmə* ‘to groan, to grumble’: South Abkhaz *a-g^orəm-ra* ‘to grumble, to mumble’; Abaza / Tapanta *g^orəm* ‘moan, groan’, *g^orəm-ra* ‘to moan, to groan; to moo, to bellow (of animals)’.
- B. Ubykh (reduplicated) **g^oərg^oərg^o* ‘the sound made by the rustling of water or the rumble of wheels’.

201. Proto-Indo-European **k^heh-y-* [**k^hah-y-*] (> **k^hāy-*) ‘to caw, to croak’ (**h* = **ǵ₄*): Sanskrit *gāyati* ‘to sing’, *gāya-h* ‘song’, *gāthā* ‘song, verse’; Lithuanian *giedóti* ‘to sing’; Old Russian *gajati* ‘to caw, to croak’.

Northwest Caucasian: Common Northwest Caucasian **k'əjə* 'to shriek, to howl, to mew, to caw' (cf. Chirikba 1996a:203):

- A. Common Abkhaz **k'əjə* 'to mew; to caw (of some birds, for example, of raven)': South Abkhaz *a-k'əj-ra* 'to mew; to caw (of some birds, for example, of raven)'
- B. Proto-Circassian **k'əyə* 'to shriek, to howl': Kabardian *k'əy* 'to shriek, to howl'; Bžedux *č'əyə* 'to shriek, to howl'.

202. Proto-Indo-European **k'ər-/k'or-/k'ŕ-* 'to cry out, to call, to screech': Sanskrit *járate* 'to call out to, to address, to invoke; to crackle (fire)'; Crimean Gothic *criten* 'to cry'; Old Icelandic *krutr* 'murmur', *krytja* 'to murmur, to grumble', *krytr* 'noise, murmur'; Old English *ceorran* 'to creak', *ceorian* 'to murmur, to grumble', *ceorcian* 'to complain', *cracian* 'to resound', *crācettan* 'to croak', *crāwian* 'to crow'; Old Saxon **krāian* 'to crow'; Old High German *crāen*, *krāhen*, *chrāen*, *chrāen* 'to crow'; Old Church Slavonic *grajō*, *grajati* 'to crow, to caw'.

Northwest Caucasian:

- A. Proto-Circassian **k'ə(r)ǵə* 'to squeak, to creak': Bžedux *č'ərgə* 'to squeak, to creak'; Kabardian *k'əǵ* 'to squeak, to creak'.
- B. Common Abkhaz (reduplicated) **k'ar-k'arə* 'to crackle': South Abkhaz *á-k'ark'ar-ra* 'to cackle'. Note: The Indo-European forms may also be compared with Common Abkhaz **q'ərə* 'to croak, to caw' (see below).

Northwest Caucasian: Common Abkhaz **q'ərə* 'to croak, to crawl': South Abkhaz *a-q'ər-ra* 'to croak, to caw', (reduplicated) *á-q'ər-q'ər-ha* description of loud laughter; Bžyp *a-q'rə* 'a kind of bird'. Note: The Indo-European forms may also be compared with Proto-Circassian **k'ə(r)ǵə* 'to squeak, to creak' and Common Abkhaz (reduplicated) **k'ar-k'arə* 'to cackle' (see above).

203. Proto-Indo-European **k'weth-/k'woth-* 'to say, to speak, to call: Armenian *kočem* (< **k'woth-y-*) 'to call, to invite, to invoke, to name', *koč* 'call, invitation'; Gothic *qīpan* 'to say'; Old Icelandic *kveða* 'to say'; Old English *cweþan* 'to say, to speak'; Old Frisian *quetha* 'to speak'; Old Saxon *quedan* 'to speak'; Old High German *quedan* 'to speak'.

Northwest Caucasian: Proto-Circassian **q'ətha* 'to tell, to report; to announce, to make known': Bžedux *ʔətha* 'to tell, to report'; Kabardian *ʔəta* 'to announce, to make known'.

204. Proto-Indo-European (reduplicated) (onomatopoeic) **p'ar-p'ar-* '(vb.) to babble, to prattle, to chatter, to jabber; (n.) unclear speech, gibberish': Sanskrit *barbara-h* 'a blockhead, fool, barbarian, anyone not a Sanskrit speaker, not an Aryan'; Greek *βάρβαρος* 'barbarous, that is, not Greek, foreign', *βαρβαρίζω* 'to behave like a barbarian, to speak like one; to speak broken Greek, to speak

gibberish', βαρβαρικός 'barbaric, foreign; like a foreigner'; Latin *barbarus* (Greek loan) 'of or belonging to a foreign country or region, foreign (from a Greek point of view)'.

Northwest Caucasian: Common Abkhaz (reduplicated) **p'ar-p'arə* 'to chatter, to jabber' (onomatopoeic); South Abkhaz *a-p'ar-p'ar-rá* 'to chatter, to jabber', *a-p'ar-p'ar-jə* 'chatterer'; Abaza / Tapanta *p'ar-p'ar* 'endless chatter'.

205. Proto-Indo-European **wel̥h-* [**wal̥h-*]/**wol̥h-* (> **wā-*/**wō-*) 'to call, to cry out' (**ℓ̥h* = **ℓ̥₃*): Greek ἤχη (< **ḥāχā*) 'sound, noise'; Latin *vāgiō* 'to cry, to whimper'; Gothic *wōpjan* 'to call, to cry out'; Old Icelandic *æpa* 'to cry, to shout; to call, to cry out (to someone)', *óp* 'shout, shouting; crying, weeping'; Old English *wēpan* 'to weep' (past participle *wōpen*), *wōp* 'weeping'; Old Frisian *wēpa* 'to cry aloud'; Old Saxon *wōpian* 'to bewail'; Old High German *wuoffen*, *wuofan* 'to bewail', *wuof* 'weeping, sobbing'; Old Church Slavic *vabljǫ*, *vabiti* 'to call, to entice'.

Northwest Caucasian:

- A. (1) Common Abkhaz (reduplicated) **wəwə* 'to howl': South Abkhaz *a-wwə-ra* 'to howl'; Abaza / Tapanta *wəw-ra* 'to howl', *wəw* 'howl'. (2) Common Abkhaz **wəwə*: Abaza / Tapanta *waw* 'cry'; South Abkhaz *a-wəw* 'weeping, crying (at funerals)'.
B. Ubykh *wəw-* 'to howl', as in *áwa wəwən* 'the dog is howling'.

Note also:

Northwest Caucasian: Ubykh *wax-* 'to shout, to cry out' (*səwaxən* 'I cry out'), *waxə* 'shout, cry' in *waxəq'ak'a* 'the sound of crying, shouting'.

Notes:

1. This entry is an alternative proposal to that given above. It requires that a different laryngeal be reconstructed for the Proto-Indo-European root.
2. Ubykh *x* corresponds to **h̥h* in Proto-Indo-European.

206. Proto-Indo-European **wer-/wor-* 'to say, to speak, to tell': Greek εἶπω (< **ḥepiō*) 'to say, to speak, to tell'; Hittite (3rd sg. pres.) *ú-e-ri-ya-zi* 'to invite, to summon, to name'; Palaic (3rd sg. pres.) *ú-e-er-ti* 'to say, to call'; Latin *verbum* 'word'; Gothic *waurd* 'word'; Old Icelandic *orð* 'word', *orðigr* 'wordy', *yrða* 'to speak'; Old English *word* 'word', *ge-wyrd(e)* 'conversation', *wordig* 'talkative'; Old Saxon *word* 'word'; Dutch *woord* 'word'; Old High German *wort* 'word'; Old Prussian (nom. sg. m.) *wīrds*, *wirds* 'word' (acc. sg. m. *wirdan*); Lithuanian *vardas* 'name'.

Northwest Caucasian:

- A. Common Abkhaz **war-š/sár* ‘to speak noisily, loudly’: Bzyp *a-war-š/ár* ‘to speak noisily, loudly’; Abaza / Tapanta *war-sár* ‘to speak noisily, loudly’.
- B. Ubykh *wárada* ‘song, tune’, *wárada sq’án* ‘I sing’.

XXI. Numerals

207. Proto-Indo-European **ṛoy-no-* ‘single, alone, solitary; one’ (with non-apophonic *-o-*) (**ṛ* = **ṛ₁*): Latin *ūnus* ‘one’ [Old Latin *oinos*]; Umbrian *unu* ‘one’; Old Irish *óen*, *óin* ‘one’; Welsh *un* ‘one’; Gothic *ains* ‘one’; Old Icelandic *einn* ‘one’; Faroese *ein* ‘one’; Danish *en* ‘one’; Norwegian *ein* ‘one’; Old Swedish *en* ‘one’; Old English *ān* ‘one; alone, sole, lonely; singular, unique’; Old Frisian *ān*, *ēn* ‘one’; Old Saxon *ēn* ‘one’; Dutch *een* ‘one’; Old High German *ein* ‘one’ (New High German *ein*); Albanian *një* ‘one’; Lithuanian *vienas* (with unexplained initial *v-*) ‘one; alone’; Latvian *viēns* ‘one’; Old Prussian *ains* ‘one’; Old Church Slavic *inъ* ‘some(one), other’; Russian Church Slavic *inokyj* ‘only, sole, solitary’; Russian *inój* [ино́й] ‘different, other’. It is also found in Greek οἷνη, οἷνός ‘roll of one (in dice)’.

Northwest Caucasian:

- A. Common Abkhaz **ja-nə-* ‘all, whole’: Abaza / Tapanta *ján-la* ‘whole (of time term)’; Bzyp *jan-g’* ‘always, all the time’.
- B. Proto-Circassian **yanə* ‘whole’: Kabardian *yan* ‘whole (for example, day)’.

Note: No doubt, the original semantic range was as follows in Northwest Caucasian: (sg.) ‘one, every one’ ~ (pl.) ‘all’ ~ (coll.) ‘whole’. Eventually, the connotations ‘one, every one’ were lost. For a discussion of the semantic developments among forms with the meanings ‘whole’ ~ ‘one, every one’ ~ ‘all’ in the Indo-European daughter languages, cf. Buck 1949:§13.13 whole and §13.14 every; all (pl.).

Discussion: In Proto-Indo-European, there were three extended forms of the basic stem **ṛoy-* ‘single, alone, solitary; one’:

1. **ṛoy-no-*: see above for examples.
2. **ṛoy-wo-*: Avestan *aēva-* ‘one’; Old Persian *aiva-* ‘one’; Greek οἷος ‘alone, lone, lonely’ (Cyprian οἷος).
3. **ṛoy-kʰo-*: Sanskrit *éka-h* ‘one’; Mitanni (“Proto-Indic”) *aika-* ‘one’.

Now, as it happens, the basic stem **ṛoy-* ‘single, alone, solitary; one’ extracted from the three extended forms given above has a solid Nostratic etymology (cf. Bomhard 2018.3:800—801, no. 681, for details). Related forms are found in Afroasiatic (specifically, Semitic [Arabic] and Berber), Uralic (specifically,

Samoyed), and Altaic/Transeurasian (specifically, Tungus [Oroch]). This indicates that the stem was ancient in Proto-Indo-European and that, therefore, Proto-Indo-European must have been the source language from which the term was borrowed by Northwest Caucasian.

As an aside, it may be noted that there must have been a certain amount of fluidity in early Proto-Indo-European in the expression of the number ‘one’. This is based upon the fact that there are competing terms attested in the various Indo-European daughter languages. First, there are the derivatives of the stem **ṛoy-*, discussed above. Then, there was the stem **sem-*, which served as the basis for the following Greek and Armenian forms: Attic (nom. sg. m.) εἷς ‘one’, Doric ἦς ‘one’, Cretan ἔνς (< *ἔνς < *ἔμς < **sems*) ‘one’; Attic (f.) μία (< *σμ-ια) ‘one’; Armenian *mi* ‘one’. Next, there was the stem **pher-*, which served as the basis for the ordinal number in the daughter languages, thus: **pher-/p^hr-* ‘first’ (extended forms: **p^hrH-wo-*, **p^hrH-mo-*, **p^hrey-mo-*, **p^hrey-wo-*, **p^hroH-tho-*, **p^hroH-mo-*, etc.). Finally, there was the stem **si-H*, **sy-o-*, which served as the basis for: Hittite **šia-* ‘one’ (nom. sg. c. 1-*iš*, 1-*aš*; acc. sg. 1-*an*; etc.); Greek (Homeric) (f.) ἴα ‘one’ (cf. Kloekhorst 2008:750–751) (see below).

208. Proto-Indo-European **si-H*, **sy-o-* ‘one’: Hittite **šia-* ‘one’ (nom. sg. c. 1-*iš*, 1-*aš*; acc. sg. 1-*an*; etc.); Greek (Homeric) (f.) ἴα ‘one’.

Northwest Caucasian: Proto-Circassian **š^hə-* in **š^həp^ha* ‘first, for the first time’: Bžedux *š^həp^ha* ‘first, for the first time’; Kabardian *šəpa* ‘first, for the first time’.

Note: Proto-Circassian *š^h* is represented as **s* in Proto-Indo-European.

209. Proto-Indo-European (**t^uṛ^w-o-*, **t^uṛ^w-i-* >) **t^u(u)wo-*, **t^u(u)wi-* ‘two’ (**ṛ^w = *ṛ^{1w}*): Sanskrit (m.) *dváu*, *dvā* (Vedic also *duváu*, *duvā*), (f./n.) *dvé* (Vedic also *duvé*), *dvi-* (in composition) ‘two’, *dviká-h* ‘consisting of two’, *dviḥ* ‘twice’; Avestan (m.) *dva*, (f./n.) *baē* ‘two’, *biš* ‘twice’; Greek δύω ‘two’ (uninflected δύο), δίς ‘twice, doubly’; Latin *duo*, (f.) *duae* ‘two’, *bīnī* ‘twofold, twice’, *bis* ‘twice’; Old Irish *dáu*, *dóu*, *dó* ‘two’, *dé-* (in composition) ‘two-, double’; Old Welsh *dou* ‘two’; Albanian (Gheg) (m.) *dy*, (f.) *dý* ‘two’; Gothic (m.) *twai*, (f.) *twōs*, (n.) *twā* ‘two’; Old Icelandic (m.) *tveir*, (f.) *tvær*, (n.) *tvau* ‘two’, *tvennr*, *tvinnr* ‘consisting of two different things or kinds, twofold, in pairs’, *tví-* (in compounds) ‘twice, double’, *tvísvar*, *týsvar* ‘twice’; Old English (m.) *twēgen*, (f./n.) *twā*, (n.) *tū* ‘two’, *twi-* (prefix) ‘two’, *twinn* ‘double’, *twiwa* ‘twice’; Old Frisian (m.) *twēne*, *tvēne*, (f./n.) *tva* ‘two’, *twi-* (prefix) ‘twice, double’, *twia* (adv.) ‘twice, double’; Old High German (m.) *zwēne*, (f.) *zwā*, *zwō*, (n.) *zwei* ‘two’, *zwi-* (prefix) ‘twice, double’; Lithuanian (m.) *dù*, (f.) *dvi* ‘two’; Latvian (m./f.) *divi* ‘two’; Old Prussian (m./f.) *dwai* ‘two’; Old Church Slavonic (m.) *dъva*, (f./n.) *dъvě* ‘two’; Hieroglyphic Luwian *tuwa-* ‘two’; Lycian *kbi-* (Milyan) *tbi-* ‘two’.

Northwest Caucasian:

- A. Proto-Circassian **Tq'°(a)* ‘two’: Kabardian *t'ʔ°ə* ‘two (twice)’, Bžedux *t'°(a)* ‘two (twice)’, Temirgoy *t'°ə* ‘two’; Ubykh *t'q'°a* ‘two’. Note: In his 2007 review of Chirikba’s monograph *Common West Caucasian*, Sergej Starostin reconstructs Proto-Circassian **tʔ°wə* ‘two’.
- B. Abkhaz *ʃ°ə* (< **tʃ°ə* < **t'q'°ə*) ‘two’ (personal communication from John Colarusso).
- C. Ubykh *t'q'°á* ‘two’.

XXI. Measurement

210. Proto-Indo-European **kʰan-dʰ- (/ *kʰŋ-dʰ-)* ‘corner, edge, border’: Albanian *kënd, kand* (m. pl. *kënde, kande*) ‘corner, angle; seam, edge, border’; Greek *κavθός* ‘corner of the eye’.

Notes:

1. According to Orël (1998:178), Albanian *kënd, kand* ‘corner, angle; seam, edge, border’ is an early borrowing from Proto-Slavic **kǫtъ* ‘corner’ (cf. Russian *kut* [кyт] ‘corner, blind alley’; Serbo-Croatian *kût* ‘corner, angle’; Slovenian *kǫt* ‘corner’; Bulgarian *kât* ‘corner, angle’; Czech *kout* ‘corner’; Polish *kąt* ‘corner’), while Meyer (1891:174) derives it from Italian *canto* ‘corner, angle’. However, Derksen (2008:244) derives Proto-Slavic **kǫtъ* from Balto-Slavic **komp-* and compares Lithuanian *kaĩpas* ‘corner, angle; nook’, thus invalidating the comparison with Proto-Slavic **kǫtъ*.
2. The comparison of Albanian *kënd, kand* with Greek *κavθός* was suggested by Mann (1984—1987:470), who reconstructs Proto-Indo-European **kanthos, -us; *kant-* ‘side, edge, corner’. Mann reconstructs **-th-* to accommodate the Celtic and Balto-Slavic forms he includes in his etymology.
3. According to Beekes (2010.I:635—636) and Frisk (1970—1973.I:776—777), there is no Indo-European etymology for Greek *κavθός* ‘corner of the eye’. Beekes assumes that it is Pre-Greek in origin. Boisacq (1950:406) reconstructs Proto-Indo-European **qanth-* and also compares Proto-Slavic **kǫtъ*, in addition to Welsh *cant* ‘circle; rim, border, edge, boundary; tire, belt, girdle, girth’ and Breton *kant* ‘circle, disk’, but this is questioned by Chantraine (1968—1980.I:492). Chantraine also mentions the possibility that Greek *κavθός* may be Pre-Greek in origin.
4. The comparison of Greek *κavθός* with the Celtic forms mentioned above has been rightly rejected. Thus, we are left with the Albanian and Greek forms as the only two possible candidates for inclusion here. Substrate origin cannot be ruled out for Greek *κavθός*, while Albanian *kënd, kand* may ultimately be a loanword after all, though none of the theories advanced so far are convincing.
5. Relationship to the following (no. 209) (Proto-Indo-European **kʰan-tʰ- [/ *kʰŋ-tʰ-]*) unknown.

Northwest Caucasian: Common Abkhaz **káda* ‘side(s)’: South Abkhaz *a-káda* ‘side(s)’.

Note: Proto-Indo-European **ŋ* is reflected as **a* in Northwest Caucasian.

211. Proto-Indo-European **k^han-t^h-* (*/*k^hŋ-t^h-*) ‘rim, border, edge, boundary’ (Celtic only): Welsh *cant* ‘circle; rim, border, edge, boundary; tire, belt, girdle, girth’ and Breton *kant* ‘circle, disk’.

Notes:

1. Relationship to the preceding (no. 208) (Proto-Indo-European **k^han-d^h-* [*/*k^hŋ-d^h-*]) unknown.
2. Not in Falileyev 2000 or Matasović 2009.

Northwest Caucasian: Common Abkhaz **qata* ‘side, edge’: Abaza / Tapanta *qata* ‘side, edge’.

Note: Proto-Indo-European **ŋ* is reflected as **a* in Northwest Caucasian.

212. Proto-Indo-European **meth-*/**moth-* ‘(vb.) to measure; (n.) measure, quantity’ (Baltic only): Lithuanian *mātas* ‘measure, index; (dial.) size, quantity’, *mėtas* ‘time, period; (pl.) year’, *matúoju*, *matúoti* ‘to measure’; Latvian *mēts* ‘time, period’; Old Prussian *mattei* ‘measure’, *mettan*, *metthe*, *mette* ‘year’.

Notes:

1. Greek μέτρον (< **meth-ro-*) ‘measure, goal, length, size, limit; meter’ (Greek loanword in Latin *metrum* ‘poetic rhythm, meter’) may belong here as well, assuming that it is derived from a different Proto-Indo-European root than that preserved in μήτρα ‘areal measure’ (cf. Sanskrit *mā-tra-m* ‘measure, quantity, sum, size, duration, etc.’) (< Proto-Indo-European **meE-* ‘to measure’).
2. It appears that there were several different roots for ‘to measure’ in Proto-Indo-European: (1) **met-* (traditional **med-*); (2) **meʔ-* (traditional **mē-*; **meʔ₁-*; **meh₁-*; **mey-*; etc.); (3) **meth-* (traditional **met-*). Cf. Derksen 2015:307.

Northwest Caucasian: Proto-Circassian **ma(r)t:a* ‘quantity, measure’: Temirgoy *māta* ‘quantity, measure’; Kabardian *mārda* ‘quantity, measure’. Note: Possible metathesis in Kabardian, in which case the Proto-Circassian form would have been **mat:(r)a*. This would be more compatible with the Indo-European forms cited above, especially Greek μέτρον.

XXII. Verb Stems

213. Proto-Indo-European **ǵem-* ‘to grab, to grip, to take; to get, to obtain’ (**ǵ* = **ǵ₁*): Latin *emō* ‘to buy, to purchase; to take’; Lithuanian *im̃ti* ‘to take’; Old Church Slavic *jěti* ‘to take’, *imati* ‘to take, to gather’, *iměti* ‘to have’; Russian *imát’* [имать] (dial.) ‘to have, to possess’, *imét’* [иметь] ‘to have, to possess, to own; to get, to obtain’; Czech *jímati* ‘to take, to seize’; Serbo-Croatian *jěti* ‘to take’, *imati*, *imjeti* ‘to have’.

Northwest Caucasian: Common Abkhaz **ámħa* ‘handle, grip’: South Abkhaz *ámaa* ‘handle, grip’; Abaza / Tapanta *ámħa* ‘handle, grip’ (indef. sg. *ámħa-k*).

Note: According to Chirikba (1996b:9), Common Abkhaz **ámħa* is a derivative of **ma* ‘hand’ and is to be analyzed as **a-ma-ħa*.

214. Proto-Indo-European **ǵep^h-/*ǵop^h-* ‘to take, to grab’ (**ǵ* = **ǵ₁*): Latin *apīscor* ‘to seize, to grasp; to get, to obtain’, *apīō* ‘to tie, to fasten’; Hittite (3rd sg. pres. act.) *e-ep-zi* ‘to take, to seize, to grab, to pick, to capture’; Sanskrit *āpnōti* ‘to reach, to overtake’.

Northwest Caucasian: Common Abkhaz **apə-š’ə* ‘to connect, to bind’: Bzyp *apə-š’-ra* ‘to connect, to bind’; Abaza / Tapanta *ap-š’ə-l-ra* ‘to connect, to bind’ (*j-apə-l-š’ə-l-d* ‘she connected it’).

215. Proto-Indo-European **ǵes-/ǵs-* ‘to be’ (**ǵ* = **ǵ₁*): Hittite (3rd sg. pres. act.) *e-eš-zi* ‘he/she/it is’; Sanskrit (sg.) *ásmi* ‘I am’, *ási* ‘you are’, *ásti* ‘he/she/it is’, (pl.) *smás* ‘we are’, *sthá* ‘you are’, *sánti* ‘they are’; Avestan *asti* ‘he/she/it is’; Greek (Homeric) *εἰμί* ‘I am’; Latin *est* ‘he/she/it is’; Umbrian *est* ‘he/she/it is’; Venetic *est* ‘he/she/it is’; Old Irish *is* ‘he/she/it is’; Gothic *ist* ‘he/she/it is’; Old Icelandic *es* ‘he/she/it is’; Old Lithuanian *ėsti* ‘he/she/it is’; Old Church Slavic *jestb* ‘he/she/it is’.

Northwest Caucasian: Common Northwest Caucasian **š’ə-* ‘to be, to become’ (cf. Chirikba 1996a:264): Ubykh *š’-* ‘to be, to become’ (*səš’ən* ‘I am’, etc.). Perhaps also found in the following Ubykh forms: (1) *ɣə-š’-* ‘to do, to make’ (*áyss’ən* ‘I do it’, *áynš’ən* ‘he does it’, *áyš’š’ən* ‘we do it’, etc.); (2) *məš’ə* ‘that which is not ripe’, *š’ayən* ‘ripening, ripe’.

Notes:

1. Starostin—Nikolayev (1994: 663) compare Ubykh *š’ə-* ‘to be, to become’ with the following: Abkhaz *-ħa-* ‘to be, to become’, Abaza / Tapanta *-ħa-* ‘to be, to become’, used in compounds. However, this proposal seems unlikely in view of the sound correspondences established by Chirikba (1996a: 174—178), according to which Common Northwest Caucasian **š’*

becomes Common Abkhaz *š', Common Circassian *šʰ/*š:ʰ, Ubykh š'. It is Chirikba's views that are followed in this chapter.

2. Chirikba (1996a:264) also compares Common Circassian *šʰə-šʰə 'to be from, to belong to, to be part of' (*šʰə- locative prefix). Not in Kuipers 1975.

Note: Ubykh š' is represented as *s in Proto-Indo-European.

216. Proto-Indo-European *ǵey-/ǵoy-/ǵi- 'to go' (*ǵ = *ǵ₁): Greek (1st sg. pres.) εἶμι 'I go', (1st pl. pres.) ἴμεν 'we go'; Sanskrit (1st sg. pres.) émi 'I go', (3rd sg. pres.) éti 'goes', (1st pl. pres.) imáḥ 'we go', (3rd pl. pres.) yánti 'they go', (3rd sg. pres.) yáti 'goes, moves, rides'; Latin (1st sg. pres.) eō 'I go'; Old Lithuanian (3rd sg. pres.) eīti 'goes'; Old Prussian (3rd sg. pres.) ēit 'goes', per-ēit 'comes'; Old Church Slavic idǫ, iti 'to go'; Luwian (3rd sg. pres.) i-ti 'goes'; Hittite (imptv.) i-it 'go!'; Tocharian A (1st pl.) ymäs 'we go', B (1st sg.) yam, yam 'I go'.

Northwest Caucasian: Common Abkhaz *jə 'to come, to go': Abaza / Tapanta hía-j-ra 'to come', na-j-ra 'to go' (na- 'thither'); South Abkhaz aá-j-ra 'to come', a-ná-j-ra 'to go'.

217. Proto-Indo-European *bʰeǵ-/bʰoǵ- (> *bʰē-/bʰō-) 'to warm, to roast, to toast, to parch' (*ǵ = *ǵ₁): Greek φάγω (< *bʰō-k'- < *bʰoǵ-k'-) 'to roast, to toast, to parch'; Old High German bāen, bājan 'to warm by poultices, to foment, to toast (bread)'.

Northwest Caucasian: Common Abkhaz *ba 'dry': South Abkhaz a-ba-rá 'to dry up'; Abaza / Tapanta a-ba-rá // bá-š-ra 'to dry up', ba-š, ba-p 'dry'.

218. Proto-Indo-European *bʰek'-/*bʰok'- 'to cut or split apart, to break apart', (with nasal infix) *bʰenk'-/*bʰonk'-: Sanskrit bhanákti 'to break, to shatter', bhagna-ḥ 'broken, broken down, broken to pieces, shattered; etc.'; Armenian bekanem 'to break'; Old Irish bongid 'to break, to reap'. Note: A slightly different root with a similar semantic range can be reconstructed as well: Proto-Indo-European *bʰak'- 'to divide into parts, to apportion, to distribute': Sanskrit bhájati 'to divide, to distribute; to receive; to enjoy'; Avestan bag- (bažat) 'to distribute'; Greek φαγεῖν 'to eat, to devour'; Tocharian A pāk, B pāke 'part, portion'. For details, cf. Rix 2001:65 and 66—67.

Northwest Caucasian: Common Northwest Caucasian *bək'ə 'to press, to squeeze, to pinch' (cf. Chirikba 1996a:202 and 353):

- A. Common Abkhaz *bək'ə 'to pinch; to pinch the edge of patties, cookies while preparing them'.
- B. Proto-Circassian *Pk'a 'to trample down, to beat (a road); to stamp leather; to sharpen (a sickle)'; Temirgoy pč'ə 'to trample down, to beat (a

road)', *pč'a* 'to jump'; Šapsegh *pšk'a* 'to jump'; Kabardian *pk'a* 'to stamp leather; to sharpen (a sickle); to jump, to fly off', *pk'a* 'to jump; to trample'. Note: Chirikba (1996a:202) writes Common Circassian **p'k''ə* 'to cut dough; to trample down, to beat (a road); to stamp leather'.

- C. Ubykh *bak''*- 'to press, to squeeze, to pinch' (*azbak''ən* 'I press, squeeze, or pinch it').

Note: For the semantics, cf. Old Icelandic *þrúga* 'to press', probably from the same stem found in Welsh *trychu* 'to cut, to hew, to pierce, to lop'; Lithuanian *trúkstū*, *trúkti* 'to rend, to break, to burst', *trūkis* 'crack, cleft, gap' (cf. Orël 2003:427 Proto-Germanic **þrūžanan*). Cf. also Buck 1949:§9.342 press (vb.).

219. Proto-Indo-European **b^hel-/b^hol-/b^hl-* 'to burn, to blaze': (1) Proto-Indo-European (extended form) **b^hlek'-/b^hlok'-/b^hlk'-*, **b^helk'-/b^holk'-/b^hlk'-* 'to burn, to blaze, to glow': Sanskrit *bhārgas-* 'splendor, radiance'; Greek *φλέγω* 'to burn, to blaze'; Latin *fulgor* 'lightning', *flagrō* 'to blaze, to burn, to glow'; Old Icelandic *blakkr* 'dusky, black, dun'; Old English *blæc* 'black', *blæcern*, *blācern* 'lantern'; Old High German *blah-*, *blach-* 'black' (in compounds); Old Church Slavic *blagъ* 'good'. (2) Proto-Indo-European (extended form) **b^hlu-*, **b^hlu-H-* (> **b^hlū-*) 'to burn, to blaze, to light up': Old Icelandic *blys* 'torch'; Old High German *bluhhen* 'to burn, to light up'; Old English *blysa* 'torch, fire'; Middle Irish *blosc* 'clear, evident', *bloscad* 'radiance'; Czech *blčeti* 'to flash, to blaze', *blýskati* 'to lighten, to flash'; Polish *blysk* 'lightning'.

Northwest Caucasian:

- A. Proto-Circassian **Pla* 'to burn, to shine (intr.)': Bžedux *bla* 'to burn, to shine (intr.)'; Kabardian *bla* 'to burn, to shine (intr.)'.
- B. Common Abkhaz **bəlā* 'to burn': Abaza / Tapanta *bəl-rá* 'to burn, to put into fire', *blābəl* 'very hot', (reduplicated) *blābəl-ra* 'to be (very) hot; to burn (of a burn)', *a-blā-ra* 'the place of burn, fire'; Bzyp *a-blā-ra* 'the place of burn, fire'; South Abkhaz *a-bəl-t'ə* 'firewood', *a-bəl-rá* 'to burn, to put into fire'; Ashkharywa *a-bəl-t'á* 'firewood'.

220. Proto-Indo-European **b^hel-/b^hol-/b^hl-* 'to glitter, to gleam, to shine': Greek *φλέγω* '(trans.) to burn, to scorch; (pass.) to become hot, to blaze up; (metaph.) to kindle, to inflame; to make to blaze up, to rouse up, to excite; (intr.) to flame, to blaze, to flash; to burst or break forth; to shine forth'; Latin *fulgeō* 'to lighten; to shine, to gleam, to glitter', *fulgur* 'lightning, thunderbolt'; Lithuanian *bālas* 'white', *bālnas* 'white', *bāltas* 'white', (dial.) *blizgas* 'shine, glimmer', *blizgėti* 'to shine, to sparkle', *blyškėti* 'to shine'; Old Church Slavic *bělъ* 'white'; Russian *belyj* [белый] 'white, clean', *belít'* [белить] 'to whiten; to bleach, to blanch; to whitewash'. Note: For additional derivatives of Proto-Indo-European **b^hel-/b^hol-/b^hl-* 'to glitter, to gleam, to shine', see the preceding entries.

Northwest Caucasian: Kabardian *blan* [блэн] ‘to shine’ (cf. Djahukyan 1967:103). Note: For additional Northwest Caucasian cognates, see the preceding entries.

221. Proto-Indo-European **b^hen-* ‘to slay, to wound’: Gothic *banja* ‘strike, blow, wound’; Old Icelandic (f.) *ben* ‘mortal wound; small bleeding wound’; Old English *bana* ‘killer, slayer, murderer’, *benn* ‘wound, mortal injury’; Old High German *bano* ‘death, destruction’; Avestan *bən-* ‘to make ill, to afflict’.

Northwest Caucasian: Proto-Circassian **ban(a)* ‘to fight’: Bžedux *ya-ban* ‘to fight’; Kabardian *bāna*, *ya-ban* ‘to fight’.

222. Proto-Indo-European **b^her-/b^hor-/b^hṛ-* ‘to fall, to fall down’ (extended form **b^hrek^h-/b^hrok^h-/b^hṛk^h-*) (only in Sanskrit): Sanskrit *bhr̥śyati* ‘to fall, to fall down’, *bhraśyate*, *bhrámśate* ‘to fall, to tumble, to drop or fall down, to fall out’.

Northwest Caucasian:

- A. Common Abkhaz **bər(tə)* ‘to reel, to stagger; to be confused, bewildered’;
South Abkhaz *á-bər-ra* ‘to stagger, to reel; to be confused, bewildered’;
Abaza / Tapanta *bərt-rá* ‘to reel, to stagger’.
B. Ubykh *bar-* ‘to stumble, to slip’.

223. Proto-Indo-European **b^hes-/b^hos-* ‘to breathe, to blow’: Sanskrit *bhas-* ‘to breathe, to blow’ in: *bhásma-h*, *bhásman-* ‘ashes’, *bhāsmāna-h* ‘made of or consisting of ashes, ashy’, *bhasita-h* ‘reduced to ashes’, *bhastrā* ‘leather bag, bellows’.

Northwest Caucasian: Common Abkhaz **bza* ‘alive, life’: South Abkhaz *a-bzá* ‘alive’, *a-bzá-za-ra* ‘life’; Abaza / Tapanta *bza* ‘alive’, *bzá-za-ra* ‘life’.

Note: Proto-Indo-European **b^hVs-* = Common Abkhaz **bzV-*.

224. Proto-Indo-European **b^hewH-/b^howH-/b^huH-* (> **b^hū-*) ‘to come into being, to become, to arise’: Sanskrit *bhávati* ‘to become, to be, to arise, to come into being, to exist’, *bhūti-h*, *bhūti-h* ‘well-being, prosperity, wealth, fortune’; Greek *φύω* ‘to bring forth, to produce, to put forth; to grow, to increase, to spring up, to arise’; Latin (perfect) *fuī* ‘to be, to exist’; Old English *bēon* ‘to be, to exist, to become, to happen’; Old Frisian (1st sg. pres.) *bim* ‘(I) am’; Old Saxon (1st sg. pres.) *bium*, *biom* ‘(I) am’; Old High German (1st sg. pres.) *bim* ‘(I) am’; Lithuanian *būti* ‘to be, to exist’, *būvis* ‘existence’; Russian *byt’* [быть] ‘to be’; Old Church Slavonic *byti* ‘to be’; Serbo-Croatian *bīti* ‘to be’.

Northwest Caucasian: Proto-Circassian **baw(a)* ‘to kiss, to breathe’: Bžedux *ya-bawə/bāwa*, *ya-baw* ‘to kiss, to breathe’; Temirgoy *bawa-n* ‘to kiss, to breathe’.

225. Proto-Indo-European **bhit-* ‘to split, to cleave’ (also, with *n*-infix, **bhint-*): Sanskrit (1st sg.) *bhinádmī* ‘to split, to cleave, to pierce’ (3rd pl. *bhindánti*); Latin *findō* ‘to split, to cleave, to separate, to divide’. Full-grade (**bhey-*) in: Gothic **beitan* ‘to bite’; Old English *bītan* ‘to bite; to cut, to wound’.

Northwest Caucasian: Common Abkhaz **bč’a* ‘to reap, to crop’: Abzhywa *a-bc’a-rá* ‘to reap, to crop’; Bzyp *a-bč’a-rá* ‘to reap, to crop’. Perhaps also: Common Abkhaz **bəc’ə* ‘to crumble, to crumple, to rumple’: Abaza / Tapanta *r-bc’-rá* ‘to crumble, to crumple, to rumple’; Bzyp *a-r-bč’-rá* ‘to crumble, to crumple, to rumple’; Abzhywa *a-r-bəc’-rá* ‘to crumble, to crumple, to rumple’.

Note: Common Abkhaz **č’* = Proto-Indo-European **t’*.

226. Proto-Indo-European **bhugh-* ‘curve, bend, corner, angle’ (only in Germanic): Old Icelandic *bugr* ‘a bowing, winding’; Norwegian *bug* ‘lengthy curve’; Old English *byge* ‘curve, bend, corner, angle’. Verb: Proto-Indo-European **bheugh-* / **bhowgh-* / **bhugh-* ‘to bend, to curve’: Gothic *biugan* ‘to bend, to bow’; Old English *bīegan* ‘to bend, to turn, to turn back, to incline’; Dutch *buigen* ‘to bend, to bow; to submit’; Old High German *biogan* ‘to bend, to curve’ (New High German *biegen*).

Northwest Caucasian: Common Northwest Caucasian **by’a* ‘curved shape’ (?) (cf. Chirikba 1996a:283 — Chirikba writes **by’a*).

- A. (?) Common Abkhaz **by’a-* in **by’a-t’a* ‘to shovel (of hen, or like a hen), to scratch’ (**t’a* ‘to ladle out, to scoop out’): South Abkhaz *a-by’át-ra*, *a-by’áta-ra* ‘to shovel (of hen, or like a hen), to scratch’; Abaza / Tapanta *by’at’a-rá* ‘to shovel (of hen, or like a hen), to scratch’.
- B. Proto-Circassian **bya* ‘breast’ (also used as preverb): Bžedux *bya* ‘breast’; Kabardian *bya* ‘breast’. Note: Kuipers (1975:70) writes **bġa* ‘breast’.
- C. Ubykh *by’á* ‘upper part; cap, top; cover’ (also used as preverb), *ác’əya by’á* ‘roof’.

Note: For the semantics of the Northwest Caucasian forms, cf. Buck 1949: §4.40 breast (front of chest); §4.41 breast (of woman); §12.33 top.

227. Proto-Indo-European **dhe₂-/dho₂-* (> **dhē-/dhō-*) ‘to put, to place’ (*₂ = **₂₁*): Sanskrit (reduplicated) *dadhāti* ‘to put, to place, to set, to lay’; Greek (reduplicated) *τίθημι* ‘to set, to put, to place’; Latin *faciō* ‘to make, to build, to construct (from parts, raw materials, etc.)’; Old English *dōn* ‘to make, to act, to perform; to cause’; Old High German *tuon* ‘to do, to make’; Lithuanian *dedù*,

děti ‘to put, to place, to lay’; Hittite (3rd sg. pres. act.) *da-a-i* ‘to lay, to put, to place’; Tocharian A *tā-*, B *tās-/tāttā-* ‘to put, to place, to set’.

Northwest Caucasian: Common Abkhaz **də* ‘to join or attach together’: South Abkhaz *á-d-ra* ‘to instruct, to commission someone to do something; to attach something/someone to’, (preverb) *d(ə)-* ‘to attach; doing or being before something’, *aj-d-ra* ‘to be together’; Abaza / Tapanta (preverb) *d(ə)-* ‘to attach; doing or being before something’.

228. Proto-Indo-European **dher-/dhor-/dhr-* ‘to hold firmly, to support’, **dher-mo-s* ‘firm, strong’: Sanskrit *dhāráyati* ‘to hold, to bear, to carry; to hold up, to support, to sustain, to maintain; to carry on; to hold in, to hold back, to keep back, to restrain, to stop, to detain, to curb, to resist; to keep, to possess, to have; to hold fast, to preserve’, *dhárma-h* ‘that which is held fast or kept: ordinance, statute, law, usage, practice, custom, customary observances; religion, piety; prescribed course of conduct, duty’; Avestan *dar-* ‘to hold’; Old Persian (1st sg.) *dārayāmiy* ‘to hold’; Latin *firmus* ‘strong, steadfast, stable, enduring, powerful’, *firmō* ‘to make firm, to strengthen, to fortify, to sustain; to confirm, to establish, to show, to prove, to declare, to make certain’ (derivative of *firmus*); Lithuanian *daraũ*, *dariaũ*, *daryti* ‘to do’; Latvian *darīt* ‘to do’.

Northwest Caucasian: Common Abkhaz **dára* ‘to strengthen; very (much)’: Bzyp *dáara*, *daára*, *dára* ‘very (much)’; Ashkharywa *adára* ‘very (much)’; Sadz *adára* ‘very (much)’; Abaza / Tapanta *dára* ‘stingy (man)’, *r-dára-ra* ‘to strengthen’, *dára* ‘very much’.

229. Proto-Indo-European **dher-* ‘to twist, to turn (round)’ (unattested): (extended forms) **dher-gh-/dhor-gh-/dhr-gh-*, **dhr-egh-/dhr-ogh-/dhr-gh-* ‘to twist, to turn (round)’: Greek *τρέχω* ‘to run, to move quickly’, *τροχός* ‘wheel’, *τρόχος* ‘a running course’, *τροχίος* ‘round’; Armenian *dar̄nam* (< **darjnam*) ‘to turn, to return’, *durgn* ‘a potter’s wheel’; Albanian *dredh* ‘to twist, to turn’; Old Irish *droch* ‘wheel’, *dreas* ‘turn, course’. Note: For the semantic development of Greek *τρέχω*, cf. Old Irish *rethid* ‘to run’, *riuth* ‘running’, *roth* ‘wheel’, *rothán* ‘the hair twisted and plaited’ < **rethH-/rothH-* ‘to roll, to revolve, to turn’.

Northwest Caucasian: (1) Common Abkhaz **darə* ‘to spin’: South Abkhaz *á-dar-ra* ‘to spin with a double thread’. (2) Common Abkhaz (reduplicated) **da(r)dərə* ‘spindle’: Abaza / Tapanta *dadər-γə* ‘spindle’; South Abkhaz *a-dardə/a-dərdə* ‘spindle’.

230. Proto-Indo-European **dhuH-* (> **dhū-*) ‘to shake, to shake off, to agitate’ (reduplicated **dhu-dhuH-*): Sanskrit *dhūnóti*, *dhūnuté*, *dhuvāti* ‘to shake, to shake off, to remove; to agitate, to cause to tremble’ (perfect *dudhuve*; intensive *dodhūyate*, *dodhoti*, *dodhavīti*), *dhūtá-h* ‘shaken’; Greek *θύω*, *θύνω* ‘(of any

crucifixion), or gallows' > Gothic *galga* 'stake, cross (for crucifixion), gallows'; Old Icelandic *galgi* 'gallows', *gelgja* 'pole, stake'; Old English *gealga* 'gallows, cross (for crucifixion)'; Old Frisian *galga* 'gallows'; Dutch *galg* 'gallows'; Old High German *galgo* 'gallows, cross (for crucifixion)' (New High German *Galgen*). Lithuanian *žalgà* 'long, thin stake; rod'.

Northwest Caucasian: Common Abkhaz **góla* 'to stand': South Abkhaz *a-góla-ra* 'to stand'; Ashkharywa *góla-ra* 'to stand'; Abaza / Tapanta *gól-ra* 'to stand'.

233. Proto-Indo-European **gher-/ghor-/ghy-* 'to scatter, to strew': Lithuanian *žyrù, žirstu, žirti* 'to scatter, to strew', *išžirti* 'to disperse, to scatter, to spread about'. Note: Confused with words meaning 'to glow, to sparkle, to glitter, etc.'

Northwest Caucasian: Common Abkhaz **yra* 'speckled, spotted': South Abkhaz *á-yra* 'speckled, spotted'; Abaza / Tapanta *yra* 'speckled, spotted'.

Note: Common Abkhaz **y* (< **g*) = Proto-Indo-European **g^h*.

234. Proto-Indo-European **gher-/ghor-/ghy-* 'to take, to seize; to grasp, to grip, to take hold of' (unextended stem, only in Sanskrit): Sanskrit *hárati* 'to bring, to convey, to carry, to fetch; to carry away, to carry off, to seize, to take hold of, to extricate; to rob, to plunder, to steal'. Extended forms in: Gothic *greipan* 'to grasp, to seize, to apprehend'; Old Icelandic *grípa* 'to grasp, to seize', *grip* 'a grip, grasp'; Old English *grīpan* 'to seize, to take, to apprehend', *gripe* 'grasp, grip, seizure', *grāp* 'grasp, grip'; Old Saxon *grīpan* 'to grasp, to seize'; Old High German *grīfan* 'to grasp, to seize, to catch (hold of)' (New High German *greifen*); Middle High German *grif* 'grip, grasp, hold; catch, clutch, snatch; handful; handle, knob, lever' (New High German *Griff*). Middle English *graspēn* 'to seize with the hand'. Sanskrit *grbhñāti* 'to grasp, to seize, to hold'. Lithuanian *griebiù, griēbti* 'to seize'.

Northwest Caucasian: Common Northwest Caucasian **yarə* 'prisoner' (cf. Chirikba 1996a: 282 — Chirikba writes **yarə*). Note: For the semantics, cf. Buck 1949:§20.47 captive, prisoner: "Most of the words for 'captive, prisoner' (of war) are either from verbs 'take, seize' ... or are deriv[at]ives of nouns for 'prison' ..."; §21.39 prison; jail: "Several of the words for 'prison' are derived from verbs for 'seize' or 'guard' ...".

- A. Common Abkhaz **yārə* 'prisoner; poor (man)': Abaza / Tapanta *yar* 'prisoner'; South Abkhaz *a-yār* 'poor (man)'.
 B. Proto-Circassian **yarə* 'prisoner' (Kuipers 1975:69 writes **garə*; Chirikba 1996a:282 writes **yarə*): Bžedux *yarə* 'prisoner'; Kabardian *yar* 'prisoner'.
 C. Ubykh *yər-* 'prisoner, slave', *yər-px'ádək'*^o 'slave girl'.

Note: Common Northwest Caucasian **y* = Proto-Indo-European **g^h*.

235. Proto-Indo-European **g^herH-/*g^horH-/*g^hrH-* ‘to shake, to move to and fro’, **g^hrH-no-s* ‘shaking, moving to and fro’: Sanskrit *ghūrṇá-h* ‘shaking, moving to and fro’, *ghūrṇáti*, *ghūrṇate* ‘to move to and fro, to shake, to be agitated, to tremble, to roll about, to cause to whirl, to whirl, to turn around’.

Northwest Caucasian: (1) Common Abkhaz **gára* ‘to shake, to waddle; cradle’: Bzyp *a-gár* ‘cradle’, *á-gar-čar-ra* ‘to shake’; Abzhywa *a-gára* ‘cradle’; South Abkhaz *a-garə-gača-ra* ‘to waddle’; Abaza / Tapanta *gára* ‘cradle’. (2) Common Abkhaz **gərə*: South Abkhaz *á-gər-t’^o*, *á-gər-k’^o(ə)t’a* ‘epilepsy’, *a-gər-zá-t’^o* ‘sacrifice offered during prayer against migraine’ (*zá-t’^o* ‘sacrifice’), *a-gər-ʒ-nəḥ’a* ‘prayer against headache, nose bleeding, etc.’ (3) Common Abkhaz (reduplicated) **gərə-gərə* ‘to waddle’: South Abkhaz *a-gərgər-ra* ‘to waddle’.

236. Proto-Indo-European (extended form) **g^hl-ew-/*g^hl-ow-/*g^hl-u-* ‘(vb.) to joke, to jest, to be playful, etc.; (n.) a joke, jest, play’: Greek *χλεύη* ‘a joke, jest’; Old Icelandic *glý* ‘glee, gladness’, *glýja* ‘to be gleeful’, *gladr* ‘glad, cheerful’; Old English *glīw*, *glēo*, *glēow* ‘glee, pleasure, mirth, play, sport’, *glēam* ‘revelry, joy’, *glæd* ‘cheerful, glad, joyous; pleasant, kind, gracious’, *glædnes* ‘gladness, joy’; Old Lithuanian *glaudas* ‘amusement, fun’; Russian Church Slavic *glumъ* ‘noise, amusement’; Slovenian *glúma* ‘joke, foolishness’.

Northwest Caucasian:

- A. Proto-Circassian **gəla* ‘(to feel) ticklish’; Bžedux *ləʒ’a* (< **ʒ’əla*) ‘(to feel) ticklish’; Kabardian *gəl*, *gəl-k’əl* ‘(to feel) ticklish’.
B. Ubykh *g’ə-l-* ‘to be delighted’ (caus. *asə-g’əlan*).

237. Proto-Indo-European (extended form) **g^hl-ey-/*g^hl-oy-/*g^hl-i-* ‘to glide, to slip, to slide; to be unstable, to totter’: Swedish *glinta* ‘to glide, to slip’; Old English *glīdan* ‘to glide, to slip; to glide away, to vanish’, *glidder* ‘slippery’, *gliddrian* ‘to slip, to be unstable’, *glīd* ‘slippery, ready to slide; tottering’; Old Frisian *glīda* ‘to glide’; Old Saxon *glīdan* ‘to glide’; Dutch *glijden* ‘to glide’; Old High German *glītan* ‘to glide, to slip’; Lithuanian *glītūs* ‘smooth, slippery; sticky, slimy’; Latvian *glīts* ‘slippery, soggy’.

Northwest Caucasian:

- A. Proto-Circassian **gal(a)* ‘to slip, to (slip and) fall’: Bžedux *ʒ’āla* ‘to slip, to (slip and) fall’; Kabardian *gāla* ‘to slip, to (slip and) fall’, *xa-gal* ‘to fall out of’.
B. (1) Common Abkhaz **g’alá* ‘to swing, to reel, to stagger; to gad about’: South Abkhaz *á-g’ala-ra* ‘to swing, to reel, to stagger; to gad about’; Ashkharywa *g’ala-ra* ‘to idle, to loaf’. (2) Common Abkhaz **g’al-dəžə* ‘idle, lounge; awkward, clumsy’: Bzyp *a-g’aldəž* ‘idle, lounge; awkward, clumsy’; South Abkhaz *á-g’aldəz-ra* ‘to idle, to loaf; to droop, to dangle’.

(of something heavy)’. (3) Common Abkhaz (reduplicated) **g’alá-g’alá* ‘to dangle’: South Abkhaz *a-g’alg’ala-rá* ‘to dangle’.

238. Proto-Indo-European **g^{wh}el-/g^{wh}ol-/g^{wh}l-* ‘to wrong, to offend, to deceive’ (only in Latin): Latin *fallō* ‘to deceive, to trick, to mislead; to be in error, to be wrong, to be mistaken’, *fallax* ‘deceitful, treacherous; misleading, deceptive; not real, false, spurious, counterfeit’, *falla* ‘a trick’, *fallācia* ‘deceit, trick, deceptive behavior’, *falsus* ‘erroneous, untrue, false, incorrect, wrong’.

Northwest Caucasian: Common Abkhaz **g^o-á-la* ‘offense, injury, discontent, resentment, anxiety’: South Abkhaz *a-g^oála* ‘offense, injury, discontent, resentment, anxiety’; Ashkharywa *g^oala-c’a-ra* ‘anxiety’; Abaza / Tapanta *g^oala* ‘dream, hope’, *g^oal-ž-ha-ra* ‘anxiety’.

239. Proto-Indo-European **g^{wh}en-/g^{wh}on-/g^{wh}η-* ‘(vb.) to hit, to strike, to slay, to kill, to wound, to harm, to injure; (n.) strike, blow, wound’: Hittite (3rd sg. pres.) *ku-en-zi* ‘to strike, to kill’; Sanskrit *hánti* ‘to smite, to slay, to hurt, to kill, to wound’; Avestan *ǰainti* ‘to beat, to kill’; Greek *θείνω* ‘to strike, to wound’, *φόνος* ‘murder, homicide, slaughter’; Armenian *ganem* ‘to strike’; Latin *dēfendō* ‘to repel, to repulse, to ward off, to drive away; to defend, to protect’, *offendō* ‘to strike, to knock, to dash against’, *offensō* ‘to strike, to dash against’; Old Irish *gonim* ‘to wound, to slay’, *guin* ‘a wound’; Old Icelandic *gunnr* ‘war, battle’; Old English *gūþ* ‘war, battle’; Old Saxon *gūdea* ‘battle, war’; Old High German *gund-* ‘battle, war’; Old Church Slavic *gonjǫ*, *goniti* ‘to chase, to persecute’; Russian (dial.) *gonít’* [гонить] ‘to persecute’; Lithuanian *genù*, *giñti* ‘to drive’, *geniù*, *genėti* ‘to lop, to prune, to trim’.

Northwest Caucasian:

- A. Common Abkhaz **g^oa* ‘to push, to shove’: South Abkhaz *á-g^oa-ra* ‘to push, to shove’; Abaza / Tapanta *á-g^oa-ra* ‘to push, to shove’.
- B. Proto-Circassian **g^o(a)* ‘to pound, to husk (maize, millet, etc.)’: Bžedux *g^o(a)* ‘to pound, to husk (maize, millet, etc.)’; Kabardian *g^oə* ‘to pound, to husk (maize, millet, etc.)’.

Note: Proto-Indo-European **η* is reflected as **a* in Northwest Caucasian.

240. Proto-Indo-European **g^{wh}en-/g^{wh}on-/g^{wh}η-* ‘to swell, to abound; to fill, to stuff, to cram’: Sanskrit *ā-hanā-h* ‘swelling, distended’, *ghanā-h* ‘compact, solid, hard, firm, dense; full of (in compounds), densely filled with (in compounds)’; Greek *εὐθηνέω* (Attic *εὐθενέω*) ‘to thrive, to prosper, to flourish, to abound’; Armenian *yogn* (< **i-* + **o-g^{wh}on-* or **o-g^{wh}no-*) ‘much’; Old Church Slavic *gonějǫ*, *goněti* ‘to suffice, to have enough’; Lithuanian *ganà* ‘enough’. Perhaps also in Germanic: Proto-Germanic **gunðaz* (< **g^{wh}η-to-*) ‘abscess’ (< ‘that which is filled with pus’) (medical term) > Gothic *gund*

‘gangrene’; Norwegian (dial.) *gund* ‘scurf’; Old English *gund* ‘matter, pus’; Old High German *gunt* ‘pus’.

Northwest Caucasian:

- A. Proto-Circassian **g^oa* ‘to fill, to stuff, to cram’: Temirgoy *g^oa* ‘to fill, to stuff, to cram’. Semantic development as in Sanskrit cited above.
- B. Perhaps also preserved in Common Abkhaz **g^oálə* ‘clod; goiter, wen’ (< ‘that which is swollen’): South Abkhaz *a-g^oál* ‘clod’; Abaza / Tapanta *g^oal* ‘goiter, wen’ (medical term). Semantic development as in the Germanic forms cited above.

Note: Proto-Indo-European **ŋ* is reflected as **a* in Northwest Caucasian.

241. Proto-Indo-European **g^{wh}erH-*/**g^{wh}orH-*/**g^{wh}rH-* ‘to turn around, to revolve, to roll; to move to and fro’ (only in Indo-Aryan): Sanskrit *ghūrṇāti*, *ghūrṇate* ‘to move to and fro, to shake, to be agitated, to tremble; to roll about, to cause to whirl, to turn around’, *ghūrṇita-h* ‘rolling, turning, tossing’, *ghūrṇamāna-h* ‘being agitated, shaking, trembling; revolving, turning around’; Prakrit *ghulāi* ‘to turn’, *ghaṁghōra-* ‘constantly turning’, *ghummaī* ‘to turn around’.

Northwest Caucasian: Common Abkhaz (reduplicated) **g^oər-g^oər/lə* ‘round object’ (> ‘wheel, hoop; ring; etc.’): Abaza / Tapanta *g^oərg^oər* ‘ring (of chain, chain armor, etc.); small metal wheel’; South Abkhaz *a-g^oərg^oəl* ‘wheel, hoop’, *a-g^oərg^oəl mac^oəz* ‘wedding ring’.

242. Proto-Indo-European **heph^h-* [**hap^h-*]/**hop^h-* ‘to embark upon, to undertake, to start doing something’ (**h* = **₂₄*): Old Icelandic *efna* (< Proto-Germanic **abnjanan*) ‘to perform, to fulfill’, *efni* ‘material, stuff’; Old English *efnan*, *æfnan* ‘to carry out, to perform, to fulfill’, *efne* ‘material’; Old High German *uoben* ‘to start to work, to practice, to worship’; Sanskrit *āpas-* ‘work, action; sacred act, sacrificial act’, *āpas-* ‘religious ceremony’, *āpnas-* ‘work, sacrificial act’; Latin *opus* ‘work’, *opera* ‘effort, activity’.

Notes:

1. The material from the daughter languages pointing to a Proto-Indo-European root meaning ‘wealth, riches’, though often compared with the above forms, appears to belong to a different root: **H^op^h-* (**H* = a laryngeal preserved in Hittite, most likely **₂₃*, here [cf. Hittite (adj.) *happina-* ‘rich’; Latin *ops* ‘wealth, power’, *opulentus* ‘rich, wealthy; powerful, mighty’; Sanskrit *āpnas-* ‘possession, property’ (same form as given above, but with a different meaning); Avestan *afnah-vant-* ‘rich in property’]) (cf. Kloekhorst 2008b:296—297; Mayrhofer 1986—2001.I:88; De Vaan 2008:431).
2. Greek ἄφροος ‘riches, wealth, plenty’ is best explained as a borrowing.

Northwest Caucasian: Common Abkhaz **ápš'ə/a-* 'to venture, to undertake, to start doing something; to decide, to resolve': Abzhywa *ápš'-ga-ra* 'to venture, to undertake, to start doing something'; Bzyp *ápš'a-ga-ra* 'to venture, to undertake, to start doing something; to decide, to resolve' (~ **ga* 'to bring, to carry').

243. Proto-Indo-European **hew-* [**haw-*] 'to grow, to increase (in quantity or size)' (only in extended stems: I **hew-k'(s)-* [**haw-k'(s)-*] and II **hw-ek'(s)-*) (**h* = **ǵ*₁): Sanskrit *vakṣáyati* 'to grow, to increase, to become tall; to accumulate, to be great or strong, to be powerful', *ójas-* 'bodily strength, vigor, energy, ability', *ojmán-* 'strength', *ukṣá-h* 'large'; Greek αὔξω (= αὐξάνω) 'to make to grow, to increase', (poetic) ἄ(F)έξω 'to make to grow, to increase, to foster, to strengthen; to heighten, to multiply', αὔξησις 'growth, increase'; Latin *augeō* 'to increase in quantity or size, to make greater, to enlarge, to extend, to swell', *auctus* 'an increasing, augmenting; increase, growth, abundance', *augmentum* 'the process of increasing'; Gothic *aukan* 'to increase', *wahsjan* 'to grow'; Lithuanian *áugu*, *áugti* 'to grow, to increase', *áukštas* 'high, tall, lofty'; Tocharian A *ok-* 'to grow, to increase', B *auk-* 'to grow, to increase', *auki* 'increase', *auks-* 'to sprout, to grow up'.

Northwest Caucasian: (1) Common Abkhaz **awə́* 'to get, to obtain': South Abkhaz *aw-rá* 'to get, to obtain, to manage, to agree; to ripen (of fruit)'; Bzyp *aj-əw-ra* 'to get, to obtain, to manage, to agree; to ripen (of fruit)'; Abaza / Tapanta *aw-rá* 'to get, to obtain, to manage, to agree', *j-aw-ra* 'to ripen'. (2) Common Abkhaz **awə́*: South Abkhaz *aw* (indef. sg. *awə́-k'*) 'long'; Abaza / Tapanta *awə́* (indef. sg. *awə́-k'*) 'long'.

244. (1) Proto-Indo-European **hey-* [**hay-*] 'to give, to divide, to distribute' (**h* = **ǵ*₁): Hittite (3rd pres. sg.) *pa-a-i* 'to give' (< **pe-+ai-*); Tocharian A (inf.) *essi*, B (inf.) *aitsi* 'to give'; Greek (poet.) αἶνυμαι 'to take'. (2) Proto-Indo-European **hey-tho-* [**hay-tho-*], **hey-thi-* [**hay-thi-*] 'part, portion, share' (**h* = **ǵ*₁): Avestan *aēta-* 'the appropriate part'; Greek αἶσα (< **aitia*) 'a share in a thing; one's lot, destiny; the decree, dispensation of a god'; Oscan (gen. sg.) *aeteis* 'part'.

Northwest Caucasian: Common Abkhaz **aj-g'()-zə́* 'to share, to be stingy': Bzyp *áj-g-za-ra* 'to share, to be stingy'; Abaza / Tapanta *aj-g'-za-ra* 'to share, to be stingy'.

245. Proto-Indo-European **Hyeǵ-* (> **yē-*) 'to throw, to hurl, to send forth' (**ǵ* = **ǵ*₁): Greek ἵημι (< **Hi-Hyeǵ-mi*) 'to send forth, to throw, to hurl; to release, to let go'; Latin *iaceō* 'to lie down, to recline', *iaciō*, *iēcī* 'to propel through the air, to throw, to cast; to toss, to fling, to hurl; to throw down or onto the ground; to throw off; to throw away'; Hittite **yezzi* 'to send' in: (3rd sg. pres. act.)

pé-i-e-ez-zi ‘to send there’, (3rd sg. pres. act.) *u-i-e-ez-zi* ‘to send here’. Note: The Hittite forms contain preverbs: *pe-* ‘thither, there’, *u-* ‘hither, here’.

Northwest Caucasian: Common Abkhaz **ja* ‘to lie (down)’: South Abkhaz *a-ja-rá* ‘to lie (down)’. Note: Assuming semantic development as in Latin *iaceō* ‘to lie down, to recline’ cited above (cf. Buck 1949:§12.14 lie).

246. Proto-Indo-European **k^heh-m-* [**k^hah-m-*] > **k^hām-* ‘to wish, to desire, to long for’ (**h* = **₂*): Sanskrit *kam-* (causative *kāmáyati*, *-te*) ‘to wish, to desire, to long for; to love, to be in love with; to have sexual intercourse with’, *kamála-h* ‘desirous, lustful’, *kāma-h* ‘wish, desire, longing; affection, love; having a desire for, desiring’; Avestan *kāma-* ‘wish, desire’; Old Persian *kāma-* ‘wish, desire’; Latvian *kāmēt* ‘to hunger, to be hungry’.

Northwest Caucasian: Common Abkhaz (reduplicated) **kəmə-kəmə* ‘to be greedy’; South Abkhaz *a-kəmkəm-ra* ‘to be greedy’.

247. Proto-Indo-European **k^her-/k^hor-/k^hṛ-* ‘to make a rasping sound, to be hoarse; to creak, to croak’: Greek κρώζω ‘to cry like a crow, to caw; (of a wagon) to creak, to groan’; Latin *crōciō* ‘to caw like a crow’; Old English *hrace*, *hracu* ‘throat’, *hræcan* ‘to clear the throat, to spit’; Middle Low German *rake* ‘throat’; Old High German *rahho* (**hrahho*) ‘jaws, mouth (of beast); throat, cavity of mouth’, *rāhhisōn* ‘to clear one’s throat’; Lithuanian *krokiù*, *krōkti* ‘to grunt’.

Northwest Caucasian: Common Abkhaz (reduplicated) **qər-qər* ‘snore, snoring’: Bzyp *á-ǰərǰər-ha* ‘snore, snoring’.

248. Proto-Indo-European **k^hṛH-* ‘to work, to toil, to labor’: Sanskrit *śámyati* ‘to toil at, to exert oneself; to grow calm, to pacify’ (originally ‘to be tired’), (participle) *śān-tá-h* ‘calmed, pacified, stilled’; Greek κάμνω ‘to work, to labor, to toil, to be weary’.

Northwest Caucasian: Common Abkhaz **kamsá* ‘to work as a (farm-)laborer; to dance (awkwardly, clumsily)’: South Abkhaz *a-kamsa-rá* ‘to work as a (farm-)laborer; to dance (awkwardly, clumsily)’.

249. Proto-Indo-European **k^hel-/k^hol-/k^hl-* ‘to cleave, to split’ (extended form: **k^hl-ew-bh-/k^hl-ow-bh-/k^hl-u-bh-* ‘to cleave, to split’): Proto-Germanic **kleubanan* ‘to cleave, to split’ > Old Icelandic *kliúfa* ‘to cleave, to split’; Old English *clēofan* ‘to cleave, to split’; Old High German *klioban* ‘to cleave, to split’. Proto-Germanic **klubōn* ‘cleft, rift’ > Old Icelandic *klofi* ‘cleft, rift’; Old Frisian *klova* ‘chasm’; Old High German *klobo* ‘snare, trap’. Greek γλόφω ‘to carve, to cut out with a knife; to engrave’; Latin *glübō* ‘to remove bark from a tree, to peel away bark’.

Northwest Caucasian: Common Abkhaz **k'alə* 'to cleave, to split': Abzhywa *a-k'al-ra* 'to cleave, to split squared timber for making shingle'.

250. Proto-Indo-European **k'el-/k'ol-/k'l-* 'to soften, to weaken; to be or become soft, weak': Old Icelandic *klökk* 'bending, pliable, soft', *klökkva* 'to soften'; Low German *klinker* 'weak'; Lithuanian *glėžnas* 'delicate, flabby, sickly, puny, frail, weak, feeble', *glėžtù, glėžiaũ, glėžti* 'to become weak, flabby'.

Northwest Caucasian: Common Abkhaz **k'alá* 'slender, elegant, graceful': South Abkhaz *a-k'alá* 'slender, elegant, graceful'.

251. Proto-Indo-European (extended form) **k'em-bh-/k'om-bh-/k'm-bh-* 'to chew (up), to bite, to crush', **k'om-bh-o-s* 'tooth, spike, nail': Greek γόμφος 'bolt, pin', γομφίος 'a grinder-tooth'; Sanskrit *jámbhate, jábhate* 'to chew up, to crush, to destroy', *jámbha-h* 'tooth', *jámbhya-h* 'incisor, grinder'; Albanian *dhëmb* 'tooth'; Old Icelandic *kambr* 'comb'; Old English *camb* 'comb', *cemban* 'to comb'; Old Saxon *kamb* 'comb'; Old High German *kamb, champ* 'comb'; Lithuanian *žam̃bas* 'pointed object'; Old Church Slavic *zobъ* 'tooth'; Russian *zub* [зуб] 'tooth'; Tocharian A *kam*, B *keme* 'tooth'.

Northwest Caucasian: Common Abkhaz (reduplicated) **q'am-q'amə* '(to eat) greedily, being very hungry': Bzyp *q'am-q'am-wa* '(to eat) greedily, being very hungry'.

252. Proto-Indo-European (**k'en-/k'on-/k'n-*) 'to bend, twist, turn, or tie together': Greek γνάμπτω 'to bend', γναμπτός 'bent, curved'; Old Icelandic *kneikja* 'to bend backwards with force', *knytja* 'to knit or tie together', *knýta* 'to knit, to fasten by a knot, to bind, to tie'; Swedish *kneka* 'to be bent'; Old English *cnyttan* 'to tie with a knot', *cnyttels* 'string, sinew'; Middle Low German *knutten* 'to tie'; New High German *knicken* 'to crease, to bend, to fold, to crack, to break, to split, to snap, to burst', *knütten* (dial.) 'to knit'.

Northwest Caucasian: Common Abkhaz **k'ant/dá* 'to swing, to rock, to bend': South Abkhaz *a-k'ant'a-rá/á-k'anda-ra* 'to swing, to rock, to bend'; Abaza / Tapanta *k'ant'a* 'elastic, resilient', *k'ant'a-ra* 'to bend'.

253. Proto-Indo-European **k'er(H)-/k'or(H)-/k'r(H)-* 'to decay, to wear out, to wither, to waste away, to become old': Sanskrit *járatī* 'to grow old, to become decrepit, to decay, to wear out, to wither, to be consumed, to break up, to perish', *jára-h* 'becoming old, wearing out, wasting', *jaraṇá-h* 'old, decayed', *jīrṇá-h* 'old, worn out, withered, wasted, decayed', *jūrṇá-h* 'decayed, old', *járat-* 'old, ancient, infirm, decayed, dry (as herbs), no longer frequented (as temples) or in use', *jarā* 'old age'; Armenian *cer* 'old'; Greek γεραιός 'old', γέρων '(n.) an old man; (adj.) old', γῆρας 'old age'; Old Icelandic *karl* 'man, old man'; Old English *carl* 'man' (Norse loan), *ceorl* 'free man of the lowest

class; free man; common man; husband; man, hero'; Old High German *karl* 'man, husband'; Old Church Slavonic *zrěti* 'to ripen, to mature', *zrělb* 'ripe'.

Northwest Caucasian: Common Abkhaz **q'arh'ážə/*q'ərĥ'ážə* 'very old, decrepit': South Abkhaz *a-q'arj'áž/a-q'ərj'áž* 'very old, decrepit'.

254. Proto-Indo-European **k^{wh}ath-* 'to move vigorously to and fro, to shake, to rock, to agitate' (Latin only): Latin *quatiō* 'to move vigorously to and fro, to shake, to rock, to agitate', *quassus* 'shaking'. Note: Not related to Greek πάσσω (< *πάσ-τῑ-ω) (Attic πάττω) 'to strew, to sprinkle', πάσμα 'sprinkling; (medic.) powder', παστέος 'to be besprinkled', παστός 'sprinkled with salt, salted'.

Northwest Caucasian: Common Abkhaz **k^oacá* 'to stir, to move (aside)': Bzyp *a-k^oaca-ra* 'to stir, to move (aside)'; Abzhywa *a-k^oaca-rá* 'to stir, to move (aside)'.

Note: Common Abkhaz **č* = Proto-Indo-European **th*.

255. Proto-Indo-European **k^weh-* [**k^wah-*] (> **k^wā-*) 'to walk, to go' (**h* = **₂*): Sanskrit (redup.) *jí-gā-ti*, (aor.) *á-gā-t* 'to go'; Avestan (aor.) *gāṭ* 'to walk, to go'; Armenian *kam* (< **k^weh-mi* [**k^wah-mi*] > **k^wā-mi*) 'to stay, to stand, to halt; to stop, to rest; to wait; to appear; to dwell'; Greek (redup. 3rd sg. pres.) **βί-βᾶ-τι* 'to go', (Attic) (1st sg.) *βίβημι* 'to go', (Homeric) (ptc.) *βίβᾶς* 'walking', (Laconian) (3rd pl.) *βίβαντι* 'to go'; Lithuanian (dial.) *góti* 'to rush, to hurry'; Latvian (1st sg. pret.) *gāju* 'to go'.

Northwest Caucasian (cf. Chirikba 1996a:207 and 403: Common Northwest Caucasian **k^oa-* 'to walk, to go'):

- A. Common Abkhaz **k^oa-* in **k^oa-ša* 'to dance' (**ša* = 'to wind, to twine'): South Abkhaz *á-k^oaša-ra* '(to) dance'; Abaza / Tapanta *k^oaša-rá* '(to) dance'.
- B. Common Circassian **k^oa/ə* 'to go, to cover a distance (tr./intr.)': Bžedux *k^o(a)* 'to go, to cover a distance (tr./intr.)'; Kabardian *k^o(a)* 'to go, to cover a distance (tr./intr.)'. Note: Kuipers (1975:60, §85) reconstructs Proto-Circassian **k^o(a)* 'to go, to cover a distance (tr./intr.)'.
- C. Ubykh *k^oa-* 'to go, to leave' (*š'əyak''án* 'let's go').

256. Proto-Indo-European **k^wedh-/k^wodh-* 'to strike, to beat, to smash': Middle High German *quetzen*, *quetschen* 'to bruise, to mash, to crush'; Middle Low German *quetsen*, *quessen*, *quetten* 'to crush, to squeeze'; Dutch *kwetsen* 'to injure, to wound'; Swedish *kvadda* 'to smash to pieces'.

Northwest Caucasian: Proto-Circassian **k^oad(a)* 'to disappear, to get lost, to perish': Bžedux *k^oadə* 'to disappear, to get lost, to perish'; Kabardian *k^oad* 'to disappear, to get lost, to perish'.

257. Proto-Indo-European **k'weh^hb^h-* [**k'wahb^h-*]/**k'woh^hb^h-* (> **k'wāb^h-*/**k'wōb^h-*) 'to dip (in water), to submerge' (**h* = **₂₄*): Greek βάπτω 'to dip in water; to dye', βάρη 'dipping of red-hot iron into water; to dip in dye'; Old Icelandic *kefja* 'to dip, to put under water', *kvefja* 'to submerge, to swamp', *kvæfa*, *kæfa* 'to quench, to choke, to drown', *kvafna* 'to be suffocated, choked (in water, stream)'; Middle High German *er-queben* 'to suffocate'.

Northwest Caucasian:

- A. Common Abkhaz **k'ʷabá* 'to wash, to bathe': South Abkhaz *á-k'ʷaba-ra* 'to wash, to bathe'; Abaza / Tapanta *k'ʷaba-rá* 'to wash, to bathe'.
 B. Ubykh *k'ʷaba-* 'to wash, to bathe'.

258. Proto-Indo-European (extended form) **k'weh^hh-d^h-* [**k'wah^hh-d^h-*]/**k'woh^hh-d^h-* (> **k'wādh^h-*/**k'wōdh^h-*) 'to push or press in, to tread (under foot)' (**h^h* = **₂₂*): Sanskrit *gāhate* 'to dive into, to bathe in, to plunge into; to penetrate, to enter deeply into', *gāḍha-h* 'pressed together, close, fast, strong, thick, firm'; Prakrit *gāhadi* 'to dive into, to seek'; Sindhi *gāhaṇu* 'to tread out grain'; Punjabi *gāhnā* 'to tread out, to tread under foot, to travel about'; Hindi *gāhnā* 'to tread out, to caulk'; Serbo-Croatian *gāziti* 'to wade, to tread', *gaz* 'ford'.

Northwest Caucasian: Common Abkhaz **k'ʷaḥa* 'to knead (dough, clay, mud, etc.); to trample, to stamp': South Abkhaz *á-k'ʷaḥa-ra*, *a-k'ʷaḥa-rá* 'to knead (dough, clay, mud, etc.); to trample, to stamp'; Abaza / Tapanta *k'ʷaḥa-ra* 'to knead (dough, clay, mud, etc.); to trample, to stamp'.

259. Proto-Indo-European **k'wes-* 'to extinguish': Lithuanian *gestù*, *gèsti* 'to go out, to die out, to become dim'; Old Church Slavic *u-gasiti* 'to put out'.

Northwest Caucasian:

- A. Proto-Circassian **k'ʷasa* 'to go out (as fire, light); to escape, to run away, to desert, to elope': Bžedux *k'ʷasa* 'to go out (as fire, light)'; Kabardian *k'ʷasa* 'to escape, to run away, to desert, to elope'.
 B. Common Abkhaz **k'ʷášə* 'to harden, to be petrified (of wood); to be reduced to ashes; to be annihilated': South Abkhaz *a-k'ʷáš mca* 'fire (*mca*) made of hardened wood', *a-k'ʷáš-ḥa-ra* 'to harden, to be petrified (of wood); to be reduced to ashes; to be annihilated'.

260. Proto-Indo-European **leh^hh-* [**lah^hh-*] (extended form **leh^hh-w/u-* [**lah^hh-w/u-*]) 'to pour, to pour out (liquids)' (**h^h* = **₂₂*): Hittite *lah-* in: (nom. sg.) *la-aḥ-ni-iš* 'flask, flagon, frequently of metal (silver, gold, copper)' (acc. pl. *la-ḥa-an-ni-uš*), (1st sg. pret.) *la-a-ḥu-un* 'to pour, to pour out (liquids)', (2nd sg. impvtv.) *la-a-aḥ* 'pour!'; *lah(h)u-* in: (3rd sg. pres.) *la(-a)-ḥu(-u)-wa(-a)i*, *la-ḥu-uz-zi*, *la-a-ḥu-u-wa-a-iz[-zi]* 'to pour (liquids, fluids; containers of these); to cast (objects from metal); to flow fast, to stream, to flood (intr.)', (reduplicated ptc.) *la-al-ḥu-u-wa-an-ti-it* 'poured', (reduplicated 3rd sg. pres.) *li-la-ḥu-i*, *le-el-ḥu-*

wa-i, *li-il-ḥu-wa-i* ‘to pour’, (reduplicated acc. sg.) *le-el-ḥu-u-un-da-in* ‘a vessel’; Luwian (1st sg. pret.) *la-ḥu-ni-i-ḥa* ‘to pour’ (?); Greek ληνός (Doric λᾶνός) ‘anything shaped like a tub or a trough: a wine-vat, a trough (for watering cattle), a watering place’ (< **lā-no-s* < **leḥh-no-s* [**laḥh-no-s*]).

Northwest Caucasian: Proto-Circassian **laḥa* ‘rivulet’: Šapsegh *laḥa* ‘rivulet’.

261. Proto-Indo-European **leḥh*^w- [**laḥh*^w-] (> **lāw*-), (**lāḥh*^w- >) **luḥh*^w- (> **lū*-) ‘to hit, to strike, to beat’ (**ḥh*^w = **ḡ*₂^w): Sanskrit *lū-* (3rd sg. pres. act. *lunāti*, [Vedic] *lunoti*) ‘to cut, to sever, to divide, to pluck, to reap, to gather; to cut off, to destroy, to annihilate’, *lāva-h* ‘act of cutting, reaping (of grain), mowing, plucking, or gathering’, *lāva-h* ‘cutting, cutting off, plucking, reaping, gathering; cutting to pieces, destroying, killing’, *lavī-h* ‘cutting, sharp, edge (as a tool or instrument); an iron instrument for cutting or clearing’, *lūna-h* ‘cut, cut off, severed, lopped, clipped, reaped, plucked; nibbled off, knocked out; stung; pierced, wounded; destroyed, annihilated’, *lūnaka-h* ‘a cut, wound, anything cut or broken; sort, species, difference’, *lavitra-m* ‘sickle’; Old Icelandic *ljósta* (< **lew-s*-) ‘to strike, to smite; to strike, to hit (with a spear or arrow)’, *ljóstr* ‘salmon spear’, *lost* ‘blow, stroke’, *lýja* ‘to beat, to hammer; to forge iron; to wear out, to exhaust; (reflexive) to be worn, exhausted’, *lúi* ‘weariness’, *lúinn* ‘worn, bruised; worn out, exhausted’; Norwegian (dial.) *lua* ‘to unwind’; Old Irish *loss* ‘the point or end of anything, tail’; Welsh *llost* ‘spear, lance, javelin, tail’ (< **lustā*).

Northwest Caucasian: Common Abkhaz **laḥ*^o ‘to pound, to thresh; mortar’: Abaza / Tapanta *laḥ*^o*a-rá* ‘to pound, to husk (grains)’, *č’-laḥ*^o*a-ra* ‘mortar for threshing grains’ (**č’a* ‘wheat’); South Abkhaz *a-laḥ*^o*a-rá* ‘to thresh (grains)’; Bzyp *a-laḥ*^o(*a*)*rā* ‘mortar for threshing grains’; Abzhywa *a-laḥ*^o*a-rá* ‘mortar for threshing grains’.

262. Proto-Indo-European **mas*- ‘to entice, to lure, to instigate; to allure, tempt, or induce someone to do something wrong, bad, or evil’; Lithuanian *māsinti* ‘to incite; to instigate, to stir up; to lure, to seduce, to attract, to entice’, *masėnis* ‘enticement, temptation; tempter, seducer’; Norwegian *mas* ‘bother, trouble, difficulty, fuss; fretting, importunity’, *mase* ‘to struggle, to toil, to slave away; to fret, to fuss, to nag, to harp’, *maset(e)* ‘fussy; harping, nagging; taxing, toilsome’.

Northwest Caucasian: Proto-Circassian **mās(a)* ‘guilty, dishonest; culprit’: Bžedux *māsa* ‘guilty, culprit’; Kabardian *māsa* ‘guilty, culprit; dishonest, uneducable’; Temirgoy *māsa* ‘guilty, culprit; foreign’, *wə-māsa*, *wə-mās* ‘to unmask, to catch in a lie, to prove wrong’ (tr.).

263. Proto-Indo-European **mat*- ‘to be wet, moist’: Greek μαδάω ‘to be moist’; Latin *madeō* ‘to be wet’; Sanskrit *māda-h* ‘any exhilarating or intoxicating

drink; hilarity, rapture, excitement, inspiration, intoxication; ardent passion for, sexual desire or enjoyment, wantonness, lust, ruttishness, rut (especially of an elephant); pride, arrogance, presumption, conceit of or about; semen', *mádati* 'to be glad, to rejoice, to get drunk', *mádyā-h* '(adj.) intoxicating, exhilarating, gladdening, lovely; (n.) any intoxicating drink, vinous or spiritous liquor, wine, Soma'; Avestan *mada-* 'intoxicating drink'.

Northwest Caucasian: Common Abkhaz **mat'əjə* 'drizzle': Bzyp *á-mat'əj* 'drizzle; nectar', *mat'əjk'a* 'melted wax' (metaphorically, 'state of a man under the influence of the evil eye').

264. Proto-Indo-European (?) **mus-* 'to murmur, to mutter, to whisper to oneself' (only in Latin): Latin *mussō* 'to murmur, to mutter, to whisper to oneself; to keep quiet about' (usually considered to be onomatopoeic), (derivative) *mussitō* 'to grumble inaudibly, to mutter to oneself'. Note: According to Ernout—Meillet (1979:425), Latin *mussō* was influenced by Greek *μύζω* 'to make the sound μὲ μῦ, to mutter, to moan; to murmur, to growl'.

Northwest Caucasian: Common Northwest Caucasian **məsa/ə* 'to call (out), to swear' (cf. Chirikba 1996a:258):

- A. Common Abkhaz **mśə* 'to swear' (cf. Chirikba 1996b:115): Bzyp *a-mś-rá* 'to swear'; Abzhywa *a-ms-rá* 'to swear'. Note: Chirikba (1996a:258) writes **mśə*.
- B. Ubykh *məsa-* 'to call (out); to read' (*səməśan* 'I call'), *məśāk'a* 'student at school who is learning how to read'.

Notes:

1. Proto-Indo-European **u* is represented as **ə* in Northwest Caucasian.
2. Common Northwest Caucasian **ś* is represented as **s* in Proto-Indo-European.

265. Proto-Indo-European **negh-/nogh-* 'to strike, to split, to pierce': Old Irish *ness* 'wound'; Old Church Slavic *nožь* 'knife', *pro-nožiti* 'to pierce through'.

Northwest Caucasian: Proto-Circassian **nag(a)* 'misshapen; to disfigure': Kabardian *naga-ʔəga* 'misshapen', *bzaga-nāga* 'bad, nasty, evil', *wə-nag* 'to disfigure'; Temirgoy *naž'a-ʔəž'a* 'misshapen'.

266. Proto-Indo-European **p^hath-* 'to beat, to knock; to strike, to smite' (only in Greek): Greek *πατάσσω* 'to beat, to knock; to strike, to smite', *παταγμός* 'a beating', etc.

Northwest Caucasian: Proto-Circassian **p^hath-a* 'to damage, to wear out (a surface)': Bžedux *ğa-p^hath-a-n* 'to damage, to wear out (a surface)'.

267. Proto-Indo-European **p^he^hh-* [**p^ha^hh-*]/**p^ho^hh-* > **p^hā-/***p^hō-* ‘to protect, to guard, to defend’ (**^hh* = **₂*): Hittite (1st pres. sg. act.) *pa-aḫ-ḫa-aš-ḫi*, *pa-aḫ-ḫa-aš-mi* ‘to protect, to guard, to defend; to observe (agreements), to keep (oaths), to obey (commands), to keep (a secret)’; Tocharian B *pāsk-* ‘to guard, to protect; to practice (moral behavior)’.

Northwest Caucasian: Common Abkhaz **p̃xa* ‘authority’: Abaza / Tapanta *p̃xa* ‘authority, respect, honor’. Common Abkhaz **p̃x̌ə-ǩə* (< **p̃xa* ‘authority’, **ǩə* ‘vow’) ‘duty, obligation; fate’: South Abkhaz *a-p̃x̌ə-ǩə* ‘duty, obligation; fate’.

Note: Proto-Indo-European **p^hV^hh-* = Common Abkhaz **p̃x̌V*.

268. Proto-Indo-European **p^her-/***p^hor-/***p^hr-* ‘(vb.) to fly, to flee; (n.) feather, wing’: Hittite (3rd sg.) *pār-aš-zi* ‘to flee’; Sanskrit *parṇá-m* ‘wing, feather’; Latin *-perus* in *properus* ‘quick, rapid, hasty’, *properō* ‘to hasten’; Russian Church Slavic *perŏ*, *p̃rati* ‘to fly’, *pero* ‘feather’.

Northwest Caucasian:

- A. Common Abkhaz **p̃əṛə* ‘to fly’: South Abkhaz *a-p̃əṛ-rá* ‘to fly’, *á-p̃əṛ-p̃əṛ-ra* ‘to flit, to flutter, to flap’; Ashkharywa: (Kuv) *p̃əṛ-rá*, (Apsua) *b̃əṛ-rá* ‘to fly’; Bzyp *j̃ə-p̃əṛp̃əṛ-wá* ‘doing something quickly’, *á-p̃əṛ-ḥa* ‘quickly, swiftly’.
- B. Ubykh *p̃əṛ-* ‘to fly’.

269. Proto-Indo-European **p^het^h-/***p^hot^h-* ‘to fly, to rush, to pursue; to fall, to fall down’: Hittite *pát-tar* ‘wing’, (3rd pl. pres.) *pít-ti-(ya-)an-zi* ‘to flee, to fly, to hasten’; Sanskrit *pátati* ‘to fly, to soar, to rush on; to fall down or off; to set in motion, to set out on foot; to rush on, to hasten’, (causative) *patáyati* ‘to fly or move rapidly along, to speed’, *pátram* ‘wing, feather’, *pátvan-* ‘flying, flight’; Greek πέτομαι ‘to fly; (also of any quick motion) to fly along, to dart, to rush; to be on the wing, to flutter’, πίπτω ‘to fall, to fall down’, πτερόν ‘feather, bird’s wing’; Latin *petō* ‘to make for, to go to, to seek’; Old Irish *én* (< **ethn-* < **pet-no-s*) ‘bird’; Welsh *edn* ‘bird’; Old Breton *etn-* ‘bird’; Old Icelandic *ffjōðr* ‘feather, quill’; Old English *fēper* ‘feather’, (pl.) *fēpra* ‘wings’; Old Frisian *fethere* ‘feather’; Old Saxon *fethara* ‘feather’; Old High German *fedara* ‘feather’, *fettāh* ‘wing’.

Northwest Caucasian: Common Abkhaz (reduplicated) **pat-pátə* ‘to flutter, to quiver (of bird); to flounder, to wallow’: South Abkhaz *a-pat-pát-ra* ‘to flutter, to quiver (of bird); to flounder, to wallow’; Bzyp *a-pat-mát-ra* ‘to flutter, to quiver (of bird); to flounder, to wallow’.

270. Proto-Indo-European **p^het^h-/***p^hot^h-* ‘to twist together, to weave together’: Hittite (nom.-acc. sg.) *pa-at-tar*, *pát-tar* ‘basket (made of wicker or reed)’. Perhaps also: Proto-Germanic **fapō* (‘wickerwork’ >) ‘hedge, fence’ > Gothic

faba ‘hedge, fence, dividing wall’; Middle High German *vade*, *vate* ‘hedge, fence’. And, in the meaning ‘thread’: Old High German *fadam*, *fadum* ‘thread, yarn’ (New High German *Faden* ‘thread’), *fadamōn* ‘to spin, to sew’; Old Welsh *etem* ‘thread, yarn’. Note: The Germanic and Celtic forms are usually derived from Proto-Indo-European **p^heth-/p^hoth-* ‘to be wide, open, spacious, spread out; to stretch, to extend, to spread out’.

Northwest Caucasian: Common Abkhaz **patá* ‘to get tangled, to become enmeshed (of thread)’; South Abkhaz *áj-la-pata-ra* ‘to get tangled, to become enmeshed (of thread)’.

271. Proto-Indo-European **p^heth-/p^hoth-* ‘to be wide, open, spacious, spread out; to stretch, to extend, to spread out’: Avestan *paθana-* ‘wide, broad’; Greek *πετάννυμι* ‘to spread out’, *πέταλος* ‘broad, flat’, *πέτασμα* ‘anything spread out’, *πέτηλος* ‘outspread, stretched’, *ἀναπετής* ‘expanded, spread out, wide open’; Latin *pateō* ‘to be open’, *patulus* ‘extending over a wide space, wide-open, broad’; Old Welsh *etem* ‘fathom’; Old Icelandic *faðmr* ‘outstretched arms, embrace; fathom’, *faðma* ‘to embrace’; Old English *fæþm* ‘outstretched arms, embrace; cubit, fathom’; Old Saxon (pl.) *fathmos* ‘outstretched arms, embrace’; Old High German *fadam*, *fadum* ‘cubit’ (New High German *Faden*).

Northwest Caucasian **pátə* ‘a bit, a small portion, a little’: South Abkhaz *pət-k*, *a-pát* ‘a bit, a small portion, a little’, *pət-r-áamta* ‘for some time’, *pət-j^oə-k* ‘several, some people’. For the semantics, cf. Latin *tenuis* in the sense ‘present in a very small quantity, scanty, meager (of material and non-material things)’ (*Oxford Latin Dictionary* [1968], p. 1922) < Proto-Indo-European **t^hen-/t^hon-/t^hη-* ‘to extend, to spread, to stretch’.

272. Proto-Indo-European **p^hol-* ‘to fall, to fall down’: Armenian *p^hlanim* ‘to fall in’; Old Icelandic *falla* ‘to fall’, *fall* ‘fall, death, ruin, decay, destruction’, *fella* ‘to fell, to make to fall, to kill, to slay’; Old English *feallan* ‘to fall, to fall down, to fail, to decay, to die; to prostrate oneself’, *feall*, *fiell* ‘fall, ruin, destruction, death’, *fiellan* ‘to make to fall, to fell, to pull down, to destroy, to kill; to humble’; Old Saxon *fallan* ‘to fall’, *fellian* ‘to fell’; Old High German *fallan* ‘to fall’ (New High German *fallen*), *fellan* ‘to fell’ (New High German *fällen*); Lithuanian *púolu*, *pùlti* ‘to fall (up)on, to attack, to assault, to fall’.

Northwest Caucasian: Common Abkhaz **palá* ‘snowflake’: South Abkhaz *a-pál* ‘snowflake’, (reduplicated) *palá-palá* (adv.) ‘falling by flakes (of snow)’.

273. Proto-Indo-European (reduplicated) **p^hor-p^hor-* ‘to move, wave, or sway in a flapping manner’ (only in Slavic): Old Church Slavic *porporъ* ‘flag’; Czech *praper* ‘flag’; Polish *proporzec* ‘streamer, small flag’. Derivative of Proto-Indo-European **p^her-/p^hor-/p^hγ-* (vb.) to fly, to flee; (n.) feather, wing’.

Northwest Caucasian: Common Abkhaz (reduplicated) **par-párə* ‘to flap (wings); to twitch (for example, of eyes)’; South Abkhaz *a-par-par-rá* ‘to flap (wings); to twitch (for example, of eyes)’.

274. Proto-Indo-European **(s)thēh-* [**(s)thah-*] (> **(s)thā-*) ‘to stand’ (**h* = **₂*): Sanskrit (reduplicated) *tīṣṭhati* ‘to stand’; Greek (reduplicated) ἵστημι (Doric ἵστᾱμι) ‘to stand’; Latin (reduplicated) *sistō* ‘to cause to stand, to put, to place’, *status* ‘standing, standing position’; Luwian *tā-* ‘to step, to arrive’. Note also: Hittite *ištantāye/a-* ‘to stay put, to linger, to be late’; Gothic *standan* ‘to stand’; Old Icelandic *standa* ‘to stand’; Old English *standan* ‘to stand’; Old Saxon *standan* ‘to stand’; Old High German *stantan* ‘to stand’.

Northwest Caucasian:

- A. Proto-Circassian **thə* ‘to stand’: Bžedux *thə* ‘to stand’; Kabardian *tə* ‘to stand’ (only with local prefixes).
 B. Common Abkhaz **ta* ‘stand, place of, home’: South Abkhaz *a-tá-zaa-ra*, *a-ta-rá* ‘to be inside’, *a-t-rá* ‘place of something’, *ta-* (preverb) ‘inside’; Abaza / Tapanta *tá-z-la-ra* ‘to be inside’, *ta-rá* ‘place of something’, *ta-* (preverb) ‘inside’, *ta* ‘stand, place of, home’.

275. Proto-Indo-European **thēkh-/thokh-* ‘to seek, to ask for’ (only in Germanic): Old Icelandic *þiggja* ‘to receive, to accept’; Danish *tigge* ‘to beg’; Swedish *tigga* ‘to beg, to beg for’; Norwegian *tigge* ‘to beg (*om* for), to beseech, to implore; to solicit’; Old English *þicgan* ‘to take, to receive, to accept’; Old Saxon *thiggian* ‘to ask, to request; to endure’; Old High German *dicken, digen* ‘to beg for, to request’. Note: Old Irish and Lithuanian cognates have been proposed, but these are questionable and, therefore, are not included here.

Northwest Caucasian: Common Abkhaz **taqə* ‘to wish, to desire’: Abzhywa *a-tax-rá* ‘(to) wish, (to) desire’; Abaza / Tapanta *taqə-ra* ‘(to) wish, (to) desire’; Bzyp *a-tax-rá* ‘(to) wish, (to) desire’.

276. Proto-Indo-European **thēkh-/thokh-* ‘to thrive, to flourish, to succeed, to prosper’, (with nasal infix) **thenkh-/thonkh-*: Proto-Germanic **þenḡhan-* or **þinḡhan-* ‘to thrive, to prosper’ > Gothic *þeihan* ‘to prosper, to succeed, to thrive’; Old English *þēon* ‘to thrive, to prosper, to flourish, to grow, to increase, to ripen’; Old Saxon *thīhan* ‘to thrive, to prosper, to flourish’; Dutch *gedijen* ‘to thrive, to prosper, to flourish’; Old High German *dīhan* ‘to thrive, to prosper, to increase, to develop, to grow, to succeed’ (New High German *gedeihen*). These forms have been compared with the following, though there is substantial disagreement among different scholars here: Lithuanian *tenkù, tèkti* ‘to fall to, to fall on, to suffice, to happen, to have to’; *tinkù, tikti* ‘to suit, to match, to please’; (dial.) ‘to agree, to meet, to find, to reach, to happen, to suffice’; Latvian *tikt* ‘to become, to attain, to arrive (at), to reach’; Ukrainian *t’aknuty* ‘to be helpful’; Old Irish *tocad* ‘fortune, chance, good luck’; Middle Welsh *tynghet*

‘destiny, fate’. Cf. Orël 2003:421; Kroonen 2013:542; Fraenkel 1962—1965.II:1077 and II:1092—1093; Derksen 2015:462 and 465; Smoczyński 2007.I:668 and I:676—677; Hock (ed.) 2019:1257 and 1275—1277; etc.

Northwest Caucasian: Common Northwest Caucasian **tqa* ‘to prosper, to live in abundance; to eat much and tasty’ (cf. Chirikba 1996a:212).

- A. Proto-Circassian **Tṣa* ‘to prosper, to live in abundance’: Bžedux *tṣa* ‘to prosper, to live in abundance’; Kabardian *tṣa* ‘to prosper, to live in abundance’.
- B. Common Abkhaz **qa-ḥá* ‘sweet, tasty’ (**-ḥa* suffix): Abzhywa *á-ṣaa* ‘sweet, tasty’; Bzyp *á-ṣaa* ‘sweet, tasty’; Ashkharywa *á-q(a)ḥa* ‘sweet, tasty’; Abaza / Tapanta *q(a)ḥá* ‘sweet, tasty’.

Note: Common Northwest Caucasian **q* is represented as **k^h* in Proto-Indo-European.

277. Proto-Indo-European **the^{kwh}-* (with nasal infix: **the-n-k^{wh}-*) ‘to stretch out, to reach out’ > ‘to reach, to arrive at, to come up to, etc.’ (Baltic only): Lithuanian *tenkù, tekaũ, tèkti* ‘to come up to, to approach, to reach; to fall to one’s lot; to be allotted, apportioned; to come into one’s possession; to have enough; to extend out, to stretch out, to reach out’; Latvian *tikt* ‘to become, to attain, to arrive (at), to reach’. For the semantics, cf. Buck 1949:§9.55 arrive (intr.) and arrive at, reach (trans.).

Notes:

1. Probably not related to the following Germanic forms: Old Icelandic *þiggja* ‘to receive, to accept’; Danish *tigge* ‘to beg’; Swedish *tigga* ‘to beg, to beg for’; Norwegian *tigge* ‘to beg (*om* for), to beseech, to implore; to solicit’; Old English *þicgan* ‘to take, to receive, to accept’; Old Saxon *thiggian* ‘to ask, to request; to endure’; Old High German *dicken, digen* ‘to beg for, to request’.
2. Also probably not related to Old Irish *ad-teich* ‘to find refuge with someone, to entreat, to pray to’, which Matasović (2009:26) convincingly derives from Proto-Celtic **ad-tek^w-o-* ‘to run to, to approach’, itself a derivative of Proto-Celtic **tek^w-o-* ‘to run, to flee’ (cf. Matasović 2009:377). Strong support for Matasović’s position is provided by the Middle Welsh cognate (1st sg.) *athechaf* ‘to flee from, to avoid’, which Matasović (2009:26) derives from Proto-Celtic **ab-tek^w-o-* instead of the Proto-Celtic **ad-tek^w-o-* needed to explain the Old Irish form.
3. Hittite (3rd sg. pres. act.) *te-ek-ku-uš-ši-[ez-zi]* ‘to show, to present (oneself)’, (2nd sg. pres. act.) *te-ek-ku-uš-ša-nu-ši* ‘to (make) show, to reveal, to (make) present someone’, (3rd sg. pres. act.) *te-ek-ku-uš-še-eš-ta* ‘to become visible’, etc. are usually compared with Avestan *daxš-* ‘to teach’, *daxšta-* ‘sign’ (cf. Kloekhorst 2008:864—865). However, it seems more likely that the Hittite forms are derivatives of Proto-Indo-European

**thek^{wh}*- ‘to stretch out, to reach out’ (> **thek^{wh}-s-ye/o-* ‘to point out, to show, to reveal; to be revealed, to become visible, etc.’) and that they are to be compared with the Baltic forms cited above rather than with Avestan *daxš-* ‘to teach’, *daxšta-* ‘sign’.

Northwest Caucasian: Proto-Circassian **taq^o(a)* ‘to strew, to pour out’: Temirgoy *tāq^o(a)* ‘to strew, to pour dry substances’, *ǵa-taq^oa-n* ‘to pour out of (a container)’; Kabardian *tāq^oa* ‘to strew, to pour dry substances’ (with local prefixes, *yə-*, *xa-* ‘into’). For the semantics, cf. Buck 1949:§9.34 spread out; strew.

278. Proto-Indo-European **thel-kh-/thol-kh-/thl-kh-* ‘to push, to thrust, to knock, to strike’: Welsh *talch* ‘fragment, flake’; Old Irish *tolc*, *tulc* ‘blow, strike’; Old Church Slavic *tlъkъ*, *tlěšti* ‘to knock’; Russian *tolkat’* [толкать] ‘to push, to shove’, *tolkač* [толкач] ‘stamp; pusher’; Czech *tlak* ‘pressure’.

Northwest Caucasian: Proto-Circassian **t:ala* ‘to splash, to threaten; to shake (fist), to wave threateningly; to rattle (the saber)’; Temirgoy *tāla* ‘to splash, to threaten’, *ǵa-tala-n* ‘to shake (fist), to wave threateningly; to rattle (the saber)’; Kabardian *dāla* ‘to splash, to threaten’, *ǵa-dāla* ‘to shake (fist), to wave threateningly; to rattle (the saber)’.

279. Proto-Indo-European **ther-s-*, **thr-es-* ‘to tremble, to shake’: Sanskrit *trāsati* ‘to tremble, to quiver’; Avestan *tarəs-* ‘to be afraid’; Greek *τρέω* ‘to tremble, to quiver’; Latin *terreō* ‘to frighten, to terrify’, *terror* ‘fright, fear, terror, alarm, dread’. Note also Proto-Indo-European **thr-em-/thr-om-/thr-m-* ‘to tremble, to shake’: Greek *τρέμω* ‘to tremble, to quiver’, *τρόμος* ‘a trembling, quaking, quivering (especially with fear)’; Latin *tremō* ‘to tremble, to quake’; Old Church Slavic *tręsq*, *tręsti* ‘to shake’; Tocharian A *träm-* ‘to be furious’, B *tremi* ‘anger’.

Northwest Caucasian: Common Abkhaz **trásə* ‘to startle’: Bzyp *á-trás-ra* ‘to startle’, Abzhywa *a-trás-ra* ‘to startle’; Abaza / Tapanta *trás-ra* ‘to rush, to throw oneself towards something; to attack’.

280. Proto-Indo-European **t’eA^w-* [**t’aA^w-*] (> **t’āw-*) ‘to burn, to blaze’: Sanskrit *dāvá-h* ‘forest fire’, *dāváyati* ‘to burn, to consume by fire’; Greek *δαίω* (< **δαῖ-ω*) ‘to light up, to make to burn, to kindle; to blaze, to burn fiercely’, *δαίς* ‘firebrand, pine-torch’, (Homeric) *δαός* ‘torch’.

Northwest Caucasian: Common Abkhaz **t’ǵh^oa* ‘monster swallowing sun or moon (during eclipse)’; South Abkhaz *a-t’ǵj^o* ‘monster swallowing sun or moon (during eclipse)’, *a-t’ǵj^o-k’-ra* ‘solar/lunar eclipse’; Bzyp *a-t’ǵj^o*, *a-t’ǵja* ‘monster swallowing sun or moon (during eclipse)’; Ahchypsy *a-t’ǵj^o* ‘monster

swallowing sun or moon (during eclipse)’. Note: Labialization in Bzyp and Ahchypsy may be secondary.

281. Proto-Indo-European **t'em-/*t'om-/*t'ṃ-* ‘to grow, to increase’: Tocharian B *tsamo* ‘growing’, *tsmotstse* ‘growing, increasing’, *tsmoññe* ‘growth, increase’, *tsām-* ‘to grow (in size or number)’. Perhaps also in Iranian (if from Proto-Indo-European **t'ṃH-s-* or **t'ṃH-kh-* ‘to grow, to increase; to heap up, to accumulate, to collect’ > Proto-Iranian **dās-* >): Ossetic *dasun*, *dast* ‘to collect, to heap up’; Khotan Saka *dāsa-* ‘collection, heap’. Note: Adams (2013:804) derives the Tocharian forms from Proto-Indo-European **t'em(H)-/*t'om(H)-/*t'ṃ(H)-* ‘to build’.

Northwest Caucasian: Common Abkhaz (reduplicated) **t'am-t'ámə* ‘plump, soft’: South Abkhaz *á-t'amt'am* ‘plump, soft’, *jə-t'amt'am-wa* ‘soft (of dough, ripe fruit)”; Abaza / Tapanta *t'am-t'am* ‘stout, corpulent, plump; ripe (of soft, juicy fruit)’.

282. Proto-Indo-European (extended form) **t'er-bh-/*t'or-bh-/*t'ṛ-bh-* ‘to bend, to twist (together)’: Sanskrit *dṛbhāti* ‘to string together, to arrange, to tie, to fasten’; Old English *tearflian* ‘to turn, to roll, to wallow’; Old High German *zerben* ‘to be twisted’.

Northwest Caucasian: (1) Common Abkhaz **t'arə* ‘to be flexible, viscous, bending’: South Abkhaz *á-t'ar-ra* ‘to be flexible, viscous, bending’. (2) Common Abkhaz (reduplicated) **t'arə-t'arə* ‘tall and lithe, elegant (of man)’: Abzhywa (reduplicated) *á-t'ar-t'ar-ra* ‘tall and lithe, elegant (of man)”; Bzyp *á-t'ar-t'ar-ra* ‘tall and lithe, elegant (of man)’.

283. Proto-Indo-European **t'ew-/*t'ow-/*t'u-* ‘to hit, to strike’: Old Irish *dorn* ‘fist’, *durni* ‘to strike with fists’; Welsh *dwrn* ‘fist’; Breton *dourn* ‘hand’; Old Icelandic *tjón* ‘damage, loss’, *týna* ‘to lose, to destroy, to put to death’, (reflexive) *týnast* ‘to perish’, *týning* ‘destruction’; Old English *tēona* ‘injury, suffering, injustice, wrong, insult, contumely, quarrel’, *tēonian* ‘to irritate’, *tīenan* ‘to annoy, to irritate’; Old Saxon *tiono* ‘evil, harm, injury, wrong, hostility, enmity’, *gitiunian* ‘to do wrong’; Latvian *dūre*, *dūris* ‘fist’, *duŗu*, *duŗt* ‘to sting, to thrust’.

Northwest Caucasian: Proto-Circassian **t'awə* ‘to bump (one’s head)’: Temirgoy *ya-t'awə* ‘to bump (one’s head)’.

284. Proto-Indo-European (**t'er-/*t'or-/*t'r-* ‘to run, to flow’ (unattested); (extended forms) (1) **t'r-eA-/*t'r-aA-* > **t'rā-*; (2) **t'r-em-/*t'r-om-/*t'r-ṃ-*; (3) **t'r-ew-/*t'r-ow-/*t'r-u-* ‘to run, to flow’: Sanskrit *drāti* ‘to run, to hasten’, *drāmati* ‘to run about, to roam, to wander’, *drāvati* ‘to run, to hasten’, *dravá-h* ‘running, flowing’, *dravantī* ‘river’, *druta-h* ‘speedy, swift’; Greek *δρησμός*

‘flight, running away’, (aor.) ἔδραμον ‘to run, to move quickly’, δρόμος ‘course, running, race’; Gothic *trudan* ‘to tread, to step’; Old Icelandic *troða* ‘to tread’; Old English *tredan*, ‘to tread, to step on, to trample’, *treddian* ‘to tread, to walk’, *trod* (f. *trodu*) ‘track, trace’; Old Frisian *treda* ‘to tread’; Old Saxon *tredan* ‘to tread’; Old High German *tretan* ‘to tread’, *trottōn* ‘to run’.

Northwest Caucasian: (1) Proto-Circassian **t’ərza* ‘to sport, to gambol (of a horse)’; Temirgoy *t’ərza* ‘to sport, to gambol (of a horse)’. (2) Proto-Circassian **t’ara* ‘to sport, to gambol (of a horse)’; Temirgoy *t’ara-n* ‘to sport, to gambol (of a horse)’.

285. Proto-Indo-European **wel-/wol-/wǵ-* ‘to turn, to roll, to revolve’: Sanskrit *válati*, *válate* ‘to turn, to turn around, to turn to’; Armenian *gelum* ‘to twist, to press’, *glem* ‘to roll’, *glor* ‘round’; Greek εἰλέω (< *Fελ-v-έω) ‘to roll up, to pack close, to wind, to turn around, to revolve’, εἰλύω ‘to enfold, to enwrap’; Latin *volvō* ‘to roll, to wind, to turn around, to twist around’; Old Irish *fillid* ‘to fold, to bend’; Gothic *agwalwjan* ‘to roll away’, *at-walwjan* ‘to roll to’; Old Icelandic *valr* ‘round’, *velta* ‘to roll’, *válka* ‘to toss to and fro, to drag with oneself’, *válk* ‘tossing to and fro (especially at sea)’; Old English *wielwan* ‘to roll’, *wealwian* ‘to roll’, *wealte* ‘a ring’, *wealcan* ‘to roll, to fluctuate (intr.)’; to roll, to whirl, to turn, to twist (tr.), *wealcian* ‘to roll (intr.)’, *gewealc* ‘rolling’, *welung* ‘revolution (of a wheel)’; Middle English *walken* ‘to walk, to roll, to toss’, *walkien* ‘to walk’; Middle Dutch *welteren* ‘to roll’, *walken* ‘to knead, to press’; Old High German *walzan* ‘to roll, to rotate, to turn about’, *walken*, *walchen* ‘to knead, to roll paste’; Tocharian B *wäl-* ‘to curl’.

Northwest Caucasian: Proto-Circassian **wāla* ‘to totter, to reel’: Bžedux *wāla* ‘to totter, to reel’; Temirgoy *wāla* ‘wave; to undulate’.

286. (1) Proto-Indo-European **wer-/wor-/wǵ-* in: **wer-th-/wor-th-/wǵ-th-* ‘to twist, to turn’: Sanskrit *vártate* ‘to turn, to to turn one’s self, to turn round, to roll, to revolve; to move, to go’, *vartana-h* ‘spindle, distaff; the act of turning or moving, revolving; rolling on, moving forward, moving about’; Latin *vertō* ‘to turn, to turn round; to turn oneself’, *versus* ‘row, line, furrow’; Gothic *wairþan* ‘to become’; Old Icelandic *verða* ‘to become, to happen, to come to pass’; Old English *weorþan* ‘to become, to come into being, to arise; to happen’, (suffix) *-weard* indicating direction to or from a point: ‘towards, to’; Old Saxon *werðan* ‘to become’; Dutch *worden* ‘to be, to become’; Old High German *werdan* ‘to become’ (New High German *werden*); Lithuanian *vēřsti* ‘to turn over’, *varřtas* ‘the turn of a plow’, *vartýti* ‘to turn, to turn over’; Old Church Slavic *vrěti* ‘to turn around’; Czech *vrátiti* ‘to return, to send back’, *vřeteno* ‘spindle’; Russian *vertét’* [вертеть] ‘to twirl, to turn round and round’, *veretenó* [веретено] ‘spindle, pivot, axle’; Tocharian A/B *wärt-* ‘to turn’, B **wrete* ‘circle, turning’.
- (2) Proto-Indo-European **wer-/wor-/wǵ-* in: **wer-k’-/wor-k’-/wǵ-k’-* ‘to bend, to twist, to turn’: Sanskrit *vrñákti* ‘to bend, to turn; to turn away, to

avert'. (3) Proto-Indo-European **wer-/ *wor-/ *wǵ-* in: **wr-ey-kʰ-/ *wr-oy-kʰ-/ *wr-i-kʰ-* 'to bend, to twist, to turn; to make crooked', **wr-oy-kʰo-* 'turn, curvature': Greek *ῥοικός* 'crooked; curvature', *ῥικνός* 'withered, shriveled, crooked'; Old English *wrēon* (< Proto-Germanic **wriχan*) 'to cover, to clothe, to envelope; to conceal, to hide'. (4) Proto-Indo-European **wer-/ *wor-/ *wǵ-* in: **wr-ey-kʷ-/ *wr-oy-kʷ-/ *wr-i-kʷ-* 'to bend, to twist, to turn, to make crooked': Gothic **wraigs* 'curved, winding, twisting (of roads)'; Old Frisian *wrāk* 'crooked'; (?) Greek *ῥαίβος* 'crooked, bent'.

Northwest Caucasian: (?) Common Abkhaz (reduplicated) **vər-vər-* 'the sound of swiftly turning round': South Abkhaz (reduplicated) *á-vər-vər-ḥʷa* 'the sound of swiftly turning round'; Abaza / Tapanta (reduplicated) *vər-vər-ḥʷa* 'the sound of swiftly turning round'. Cf. Chirikba 1996a:63 and 68.

287. Proto-Indo-European **yeǵ-/ *yoǵ-* (> **yē-/ *yō-*) 'to do, to make' (**ǵ = *ǵ₂*): Hittite (3rd sg. pres. act.) *i-e-z-zī* 'to do, to make'; Luwian (2nd sg. pres. act.) *a-a-ya-ši* 'to do, to make', (3rd sg. pres. act.) *a-ti*; Hieroglyphic Luwian (3rd sg. pres. act.) *á-ia-ti-i* 'to do, to make'; Lycian (3rd sg. pres. act.) *adi, edi* 'to do, to make'. Perhaps also: Tocharian B *yām-* 'to do, to make, to commit, to effect, to handle, to act; to treat as' (cf. Puhvel 1984— .1/2:335—347; not in Kloekhorst 2008).

Northwest Caucasian:

- A. Common Abkhaz **jə* 'to be born; birth': Bzyp *a-j-rá* // *a-jə-ra* 'to be born; birth'; Abzhywa *a-j-rá* 'to be born; birth'; Abaza / Tapanta (archaic) *j-ra* 'to be born; birth; to heal, to close (of wound)', *ḥa-r-jə-ra* 'to give birth to'; Ashkharywa *ā-r-jə-ra* 'to give birth to'; South Abkhaz *a-r-jə-ra* 'to give birth to (of animals)'. Note: Assuming semantic development from 'to make, to produce, to create' (cf. Buck 1949:§4.71 *beget* [of father] and §4.72 *bear* [of mother]).
- B. Ubykh verb stem *yə-da-* 'to do, to make'; *yə-š'-* 'to do, to make' (*áyss'ən* 'I do it', *áyns'ən* 'he does it', *áyš's'ən* 'we do it', etc.), *yəš'la* 'the manner or way in which something is made or done'.

288. Proto-Indo-European **yeth-/ *yoth-* 'to exert oneself, to endeavor, to strive': Sanskrit *yātati, yātate* 'to exert oneself, to endeavor; to make, to produce', *yāti-h* 'a sage of subdued passions', *yatná-h* 'effort, endeavor, exertion, energy, diligence, perseverance'; Avestan *yateiti, yatayeiti* 'to strive after; to place in order'; Tocharian B *yāt-* 'to be capable of; to have power over, to tame'.

Northwest Caucasian: Proto-Circassian **yatha* 'to rage (of storm), to swell (of wound); to let oneself go, to become insolent': Temirgoy *yāta* 'to rage (of storm), to swell (of wound); to let oneself go, to become insolent'; Kabardian *yāta* 'to rage (of storm), to swell (of wound); to let oneself go, to become insolent'.

XXIII. Northwest Caucasian Lexical Parallels to Proto-Indo-European
Roots Subject to Root Structure Constraint Laws

Now, as noted in Chapter 4, Proto-Indo-European had constraints on permissible root structure sequences. In terms of the Glottalic Model of Proto-Indo-European consonantism, these root structure constraint rules may be stated as follows:

1. Each root had to contain at least one non-glottalic consonant.
2. When both obstruents were non-glottalic, they had to agree in voicing.

The Proto-Indo-European root structure constraint laws thus become merely a voicing agreement rule with the corollary that two glottalics cannot cooccur in a root. Comparison with the other Nostratic languages indicates, however, that the forbidden root types must have once existed. Two rules may be formulated to account for the elimination of the forbidden types:

1. A rule of progressive voicing assimilation may be set up to account for the elimination of roots whose consonantal elements originally did not agree in voicing: $*T \sim *B > *T \sim *P$, $*B \sim *T > *B \sim *D$, etc.
2. A rule of regressive deglottalization may be set up to account for the elimination of roots containing two glottalics: $*C'VC' > *CVC$, etc.

The question then naturally arises as to precisely when these constraints first appeared in Proto-Indo-European. The contact between Proto-Indo-European with Northwest Caucasian that we have been exploring in this chapter may provide an answer to this question. Northwest Caucasian has the forbidden sequences, though, it should be noted that there are sporadic examples of regressive deglottalization in Northwest Caucasian as well, such as, for instance, Ashkharywa $k^h t' \partial w$ 'hen' and Abaza / Tapanta $k^h t' \partial w$ 'hen', with regressive deglottalization, as opposed to South Abkhaz $a-k^h t' \partial$ 'hen' and Sadz $a-k^h \partial t' t' \acute{e}$ 'hen', without deglottalization. If lexical comparisons exist between Proto-Indo-European and Northwest Caucasian in which the forbidden root types are found, it would indicate that the root structure constraints must have developed in Proto-Indo-European after the period of contact between Proto-Indo-European and Northwest Caucasian but before the individual Indo-European daughter languages began to develop. Specifically, this would be the Phonemic Pitch Stage of Proto-Indo-European (see the Appendix to Chapter 4 as well as Chapter 20 for details about the different stages of development in Proto-Indo-European). The following are possible lexical comparisons indicating that this is indeed the case:

A. Examples of regressive deglottalization ($*C'VC' > *CVC$):

289. Proto-Indo-European $*k^h at-$ > (with regressive deglottalization) $*k^h at-$ 'to totter, to fall': Sanskrit *śad-* 'to fall, to perish; to wither, to decay'; Latin *cadō* 'to fall; to fall down, to drop; to perish (especially in death)'. For the semantics,

cf. Buck 1949:§10.23 fall (vb.). Note: Distinct from Proto-Indo-European **k'et'/*k'ot'-* > (with regressive deglottalization) **k^{het}et'/*k^{hot}ot'-* 'to strive, to make strenuous effort; to succeed, to triumph': Sanskrit *śad-* (perfect *śāśadūḥ*, participle *śāśadāna-h*) 'to cause to go, to impel, to drive on; to excel, to distinguish oneself, to triumph'. Perhaps also Old Icelandic *hetja* 'a hero, champion, gallant man' (cf. Bomhard 2019a:103, no. 185).

Northwest Caucasian: Common Northwest Caucasian **k''at'/da* 'to tremble, to rock, to shake, to swing' (cf. Chirikba 1996a:204):

A. Common Abkhaz (reduplicated) **k''at'a-k''ata* 'to rock, to swing (of a thin top of some-thing, for example, of tree)': South Abkhaz *á-k''at'k''at'a-ra* 'to rock, to swing (of a thin top of something, for example, of tree)'; Bzyp *á-k'ó' a-k''at'k''at'-ra* 'top of tree'. Cf. also Common Abkhaz **k''ant'/da* 'to swing, to rock, to bend': Abaza / Tapanta *k''ant'a* 'elastic, resilient', *k''ant'a-ra* 'to bend'; South Abkhaz *a-k''ant'a-rá*, *a-k''anda-rá* 'to swing, to rock, to bend'.

B. Ubykh *k''āda-* 'to tremble, to rock, to shake, to swing'.

290. Proto-Indo-European **k'et'/*k'ot'-* > (with regressive deglottalization) **k^{het}et'/*k^{hot}ot'-* 'to strive, to make strenuous effort; to succeed, to triumph': Sanskrit *śad-* (perfect *śāśadūḥ*, participle *śāśadāna-h*) 'to cause to go, to impel, to drive on; to excel, to distinguish oneself, to triumph'. Perhaps also Old Icelandic *hetja* 'a hero, champion, gallant man'. Notes: (1) Distinct from *śad-* 'to fall, to fall off, to fall out' (cf. Mayrhofer 1956—1980.II:204—205). (2) Not related to Greek *κέκασμαι* (< **-καδ-*) 'to surpass, to excel, to overcome' (cf. Kümmel 2000:512—514; Rix 2001:325 ? **kēnd-*, but **kēd-* is also possible).

Northwest Caucasian: Common Abkhaz **k'at'á* 'incessantly, without stop': South Abkhaz *a-k'at'á-h'a* 'incessantly, without stop'.

291. Proto-Indo-European **k'wat'-* > (with regressive deglottalization) **k^{wh}at'-* 'to cackle, to cluck': Lithuanian *kadù, kadėti* 'to cackle, to cluck'; Irish *cadhan* 'a wild goose, a barnacle-goose'. Note: Mann (1984—1987:1017) reconstructs Proto-Indo-European **quad-* 'to cackle, to cluck'.

Northwest Caucasian: Common Abkhaz **k'at'á(w)* 'hen': Ashkharywa *k'at'aw* 'hen'; South Abkhaz *a-k'at'á* 'hen'; Sadz *a-k'at't'á* 'hen'; Abaza / Tapanta *k'at'aw* 'hen'. Note: Regressive deglottalization in Ashkharywa and Abaza / Tapanta.

292. Proto-Indo-European **k'wek'/*k'wok'-* > (with regressive deglottalization) **k^{wek}ek'/*k^{whok}ok'-* 'to disappear, to vanish, to wither': Common Slavic **čěznōti* 'to disappear, to vanish' > Russian (dial.) *čěznut'* [чезнуть] 'to disappear, to vanish, to perish'; Polish *częznąć* (obs.) 'to wither, to disappear, to vanish'; Bulgarian *čézna* 'to disappear, to vanish'. Perhaps also Old Icelandic *hvika* 'to

quail, to shrink, to waver', *hvikan* 'a quaking, vavering', *hvikr* 'quaking', *hvikull* 'shifty, changeable'.

Northwest Caucasian: Proto-Circassian **k'ak'ə* 'to change, to get spoiled': Bžedux *za-k'ač'ə* 'to change, to get spoiled'; Kabardian *za-k'ak'* 'to change, to get spoiled'. (*za-* 'to oneself'.)

293. Proto-Indo-European **p'ek'-/p'ok'-* > (with regressive deglottalization) **p^hek'-/p^hok'-* 'to be sleepy, tired' (only in Germanic): Proto-West Germanic **fakan-* 'to be sleepy, tired', **fak(k)a-* 'sleepy, tired' > Middle Dutch *vaken* 'to sleep', *vake*, *vaec* 'sleepiness'; Old Low Franconian *facon* 'to sleep'; Middle Low German *vāk* 'sleepiness'; Low German *fakk* 'tired, weak'. Note: Kroonen (2013:124—125) reconstructs Proto-Germanic **fakk/gōn-* 'to become sleepy' and includes Modern English (*to*) *fag* 'to tire, to become weary', (obsolete) 'to hang loose, to flap' and Scottish English (*to*) *faik* 'to fail from weariness; to cease moving'. However, English (*to*) *fag* is usually taken to be "of unknown origin. Weekley (1921:543), on the other hand, takes *fag* 'drudge, weariness' to be a "schoolboy perversion of *fatigue*". However, this is rejected outright by Lieberman (2008:67—70) as "a product of etymological despair". Lieberman further notes that the meanings 'drudge' and 'weary' are "late senses". Thus, it appears that the English forms cited by Kroonen really do not belong here.

Northwest Caucasian: Proto-Circassian **Pq'a* 'bed, bedding': Bžedux *p'a* 'bed, bedding'; Šapsegh *pq'a*, *p'a* 'bed, bedding'.

294. Proto-Indo-European **p'ek'-/p'ok'-* > (with regressive deglottalization) **p^hek'-/p^hok'-* 'interval, section, compartment, partition. division' (only in Germanic): Proto-West Germanic **faka-* > Old English *fæc* 'space of time, division, interval'; Old Frisian *fek*, *fak* 'part of house, niche'; Middle Dutch *vac* 'compartment, section'; Old High German *fah* 'wall, compartment'. Note: Assuming derivation from an unattested verb **p^hek'-/p^hok'-* 'to strike, to split (apart), to break (apart), to divide'.

Northwest Caucasian: Common Abkhaz **p'q'a* 'to beat, to strike': Abzhywa *á-p'q'a-ra* 'to beat, to strike'; Abaza / Tapanta *p'q'a-rá*, *bq'a-rá* 'to beat, to strike, to slap; to thresh', *bq'á-ga*, *p'q'á-ga* 'thresher'; Bzyp *á-pq'a-ra* 'to beat, to strike'.

295. Proto-Indo-European **p'et'-/p'ot'-* > (with regressive deglottalization) **p^het'-/p^hot'-* 'to twist, to turn, to bend': Old Icelandic *fattr* '(easily) bent backwards', *fetta* 'to bend back'; Greek *πέδησις* 'a bending'. Perhaps also Tocharian B *peti* 'flattery' (if not an Iranian loanword [cf. Adams 2013:423—424]), assuming semantic development as in South Abkhaz cited below.

Northwest Caucasian: Common Abkhaz **p'at'á* 'to entangle, to mat (of thread); to make confused (in the room); to intermix things': Abaza / Tapanta *la-r-p'at'a-rá* 'to entangle, to mat (of thread); to make confused (in the room); to intermix things'; South Abkhaz *a-p'at'a-rá* 'to be delirious, to talk nonsense, to mix truth with lies, to lie'.

296. Proto-Indo-European **p'et'/*p'ot'-* > (with regressive deglottalization) **p^{het}'/*p^{hot}'-* '(vb.) to constrain, to restrain; to bind tight; to fetter, to shackle; (n.) fetter, shackle': Greek (f.) πέδη 'fetter, shackle', (denominative) πεδάω 'to bind with fetters; to shackle, to trammel, to constrain', πεδόομαι 'to be impeded'; Latin *pedica* 'fetter, shackle; snare', *impediō* 'to hinder, to impede, to obstruct; to restrict the movement of (by hobbling, binding, entangling, etc.)'; Old Icelandic *ffōtra* 'to fetter', *ffōttur* 'fetter, shackle'; Old English *feter*, *fetor* 'fetter, shackle', *feterian* 'to fetter, to bind'; Old High German *fezzara* 'fetter'; Hittite *patali(ya)-* 'fetter (?)', *tether (?)*; Luwian *patalḫa(i)-* 'to fetter'. Note: Thus, not derived from or related to Proto-Indo-European **p^{het}'/*p^{hot}'-* 'foot' as has sometimes been suggested.

Northwest Caucasian: Proto-Circassian **p'ət'a* 'to jam, to press, to pinch': Bžedux *p'ət'a* 'to crush, to press', *da-p'ət'a* 'to jam, to pinch'; Kabardian *p'ət'* 'to crush, to press', *da-p'ət'a* 'to jam, to pinch'.

For the semantics, cf. Modern Greek σφίγγω 'to bind tight' also sometimes 'to press, to squeeze (especially the hand)' (cf. Buck 1949:9.342 press [vb.]).

297. Proto-Indo-European **p'et'/*p'ot'-* > (with regressive deglottalization) **p^{het}'/*p^{hot}'-* 'to go, to move; to fall': Sanskrit *pádyati*, *-te* 'to fall down or drop with fatigue; to perish; to go, to go to; to attain, to obtain'; Old Icelandic *feta* 'to step'; Old English *fetan* 'to fall'; Old High German *fezzan*, *gi-fezzan* 'to fall'; Old Church Slavic *padō*, *pasti* / *padajō*, *padati* 'to fall'; Russian *pádat'* [падать], *past'* [пасть] 'to fall; to fall down, into, on, from; to drop, to drop down; to be degraded, ruined'. Note: Thus, not derived from or related to Proto-Indo-European **p^{het}'/*p^{hot}'-* 'foot' as is sometimes suggested.

Northwest Caucasian:

- A. Circassian: Kabardian *p'ăt'ăwă* 'to stir, to move'. Kabardian loanwords in: Ashkharywa *p'at'ăw(a)-ra* 'to stir, to move'; Abaza / Tapanta *p'at'ăw-ra* 'to stir, to move'; Abzhywa *a-p'at'ăw-ra* 'to stir, to move'.
- B. Ubykh *p'at'awa-* 'to wriggle (about), to fidget'.

298. Proto-Indo-European (**t'ek'-*)/(**t'ok'-*) > (with regressive deglottalization) **t^{hek}'/*t^{hok}'-* 'to knock, to beat, to strike': Proto-Germanic **pek-/p^{ak}-* 'to knock, to beat, to strike' > Old Icelandic *þjaka* 'to thwack, to thump, to smite', *þjakaðr* 'worn, fainting, exhausted', *þjökka* 'to thwack, to thump, to beat, to chastise', *þykkr* (< **þjökk-* < **pekk-*) 'a thwack, thump, blow, a hurt'; Old

English *paccian* ‘to clap, to pat, to stroke, to touch gently, to smack, to beat’; Middle English *pakken* ‘to pat, to stroke’. Perhaps also: Sanskrit *tāják*, *tāját* ‘suddenly, abruptly’; Tocharian B (adv.) *tetekā* ~ *tetekāk* ~ *tetkāk* ‘suddenly, immediately’; assuming semantic development as in Bzyp *á-t’əq’-h’a* ‘quickly, instantly’ cited below.

Northwest Caucasian:

- A. Common Abkhaz **t’əq’ə* ‘to knock, to beat’: South Abkhaz *a t’əq’-ra* ‘to beat unmercifully’; Bzyp *á-t’əq’-h’a* ‘quickly, instantly’; Abaza / Tapanta *t’əq’-t’əq’* ‘descriptive of a hollow knock, a tap’.
- B. Ubykh *t’q’ada-* ‘to strike, to hit’.

B. Examples of progressive voicing assimilation

(**T ~ *B > *T ~ *P*, **B ~ *T > *B ~ *D*, etc.):

299. Proto-Indo-European **b^het^h-/*b^hot^h-* > (with progressive voicing assimilation) **b^hed^h-/*b^hod^h-* ‘to strike, to pierce; to fight’, **b^hod^h-wo-* ‘battle, fight(ing), strife, war’: Old Icelandic (poet.) *böð* ‘battle’, *böðull* ‘executioner’; Norwegian *bøddel* ‘executioner, hangman’; Old English *beadu*, *beado* ‘battle, fighting, strife, war’; Old Saxon *badu-* ‘battle’; Old High German *batu* ‘battle’; Middle Irish *bodb*, *badb* ‘crow; goddess of war’.

Northwest Caucasian: Proto-Circassian **wəbat^ha* ‘to break’: Bžedux *wəbat^ha-n* ‘to break (for example, a plate) (tr.)’.

300. Proto-Indo-European **b^het^h-/*b^hot^h-* > (with progressive voicing assimilation) **b^hed^h-/*b^hod^h-* ‘hip, haunch, thigh’: Old Church Slavic *bedra* ‘thigh’; Russian *bedró* [бедро] ‘hip, haunch; (medical) femur, thigh-bone’; Czech *bedra* (pl.) ‘loins, hips’; Serbo-Croatian *bědro* ‘thigh’. Perhaps also Sanskrit (Vedic) *bādh-* in *jñu-bādh-* ‘bending the knees’. Note: The original meaning of Proto-Indo-European **b^hed^h-/*b^hod^h-* may have been ‘to be or become bent, crooked, twisted; to bend, to twist’.

Northwest Caucasian: Proto-Circassian **bat:ə* ‘hunchbacked’: Bžedux *bat:ə* ‘hunchbacked’.

301. Proto-Indo-European **k^heb^h-/*k^hob^h-* > (with progressive voicing assimilation) **k^hep^h-/*k^hop^h-* ‘stem, stalk, halm; grass, hay, straw’ (only in Lithuanian): Lithuanian *šāpas* ‘stem, stalk, halm, blade (of grass), straw; mote’, *šāpauti* ‘to gather straw’. Derksen (2015:440) compares Sanskrit *śāpa-h* ‘driftwood, drift, floating’ here but prudently notes that this is “[a]n old, but highly uncertain etymology” (see also Mayrhofer 1956—1980.II:324 and 1986—2001.II:629 Proto-Indo-European **kóp-o-*).

Northwest Caucasian: Common Abkhaz **qə-bə* ‘roof, thatch’: Bžedux *a-ḡəb* ‘roof, roofing’, *a-ḡəb-ra* ‘to roof, to thatch’; Abzhywa *a-ḡəb-ra* ‘to roof, to thatch’; Abaza / Tapanta *qəb* ‘roofing (material); hay roof’, *qəb-ra* ‘to roof, to thatch’.

302. Proto-Indo-European **p^hegh-/p^hogh-* > (with progressive voicing assimilation) **p^hekh-/p^hokh-* ‘to hit, to beat, to strike’: Old English *feohtan* ‘to fight’, *feoht* ‘fighting, battle’; Old Frisian *fiuchta* ‘to fight’; Old High German *fehthan* ‘to fight’ (New High German *fechten*); Tocharian B *pyāk-* ‘to strike (downwards), to batter; to beat (a drum); to penetrate (as a result of a downward blow)’; Albanian *-pjek* in *përpyjek* ‘to hit, to knock, to strike’.

Northwest Caucasian: Proto-Circassian **p^həg(a)* ‘to butt, to gore’: Bžedux *p^həḡa*, *ya-p^həḡa* ‘to butt, to gore’; Kabardian *pəga*, *ya-pəg* ‘to butt, to gore’.

303. Proto-Indo-European **p^hegh-/p^hogh-* > (with progressive voicing assimilation) **p^hekh-/p^hokh-*, (adj.) **p^hokh-ró-s* ‘fair, beautiful’ (only in Germanic): Proto-Germanic **fagraz* ‘fair, beautiful’ > Gothic **fagrs* ‘fitting, proper, suitable’; Old Icelandic *fagr* ‘fair, fine, beautiful’, *fegrð* ‘beauty’, *fegra* ‘to embellish, to beautify’; Modern Icelandic *fagur* ‘proud’; Norwegian (poet.) *fager* ‘beautiful, fair, handsome’, *fagna* ‘excellent, worthy’; Swedish *fager* ‘fair, pretty, fine, beautiful’; Old English *fæger* ‘fair, lovely, beautiful; pleasant, agreeable; attractive’; Old High German *fagar* ‘fair, beautiful’.

Northwest Caucasian:

- A. Proto-Circassian **p^haya* ‘proud, arrogant, haughty’: Bžedux *p^hāya* ‘proud, arrogant, haughty’; Kabardian *pāya* ‘proud, arrogant, haughty’. Circassian loanwords in Abkhaz: South Abkhaz *a-pág’a* ‘proud, arrogant, haughty’; Abaza / Tapanta *pág’a* ‘proud, arrogant, haughty’. Note: Kuipers (1975:10) writes Proto-Circassian **p^haḡa*.
- B. Ubykh *paḡá* or *pa:ḡá* ‘proud’.

Note: Proto-Circassian **y* = Proto-Indo-European **g^h* (> **k^h* in the above example, due to progressive voicing assimilation).

304. Proto-Indo-European **p^hegh-/p^hogh-* > (with progressive voicing assimilation) **p^hekh-/p^hokh-* ‘to satisfy, to please; to be joyful, happy, pleased, satisfied; to rejoice’ (only in Germanic): Gothic *faginōn* ‘to rejoice’, *fulla-fahjan* ‘to satisfy, to serve’, *fahēpa* ‘gladness, joy’, *ga-fēhaba* ‘satisfactorily, properly’ (?); Old Icelandic *fagna* ‘to rejoice’, *fagnaðr* ‘joy’, *feginn* ‘glad, joyful’; Old English *fægen* ‘glad, joyful, rejoicing’, *ge-fēon*, *ge-feohan* ‘to be glad, to rejoice, to exult’; Old High German *gi-fehan* ‘to rejoice’, *gi-feho* ‘joy’.

Northwest Caucasian: Common Abkhaz **pə-gá-la* ‘to bring something for somebody who is going to be met’: South Abkhaz *a-p-gá-la-ra* ‘to bring

something for somebody who is going to be met’, *a-p-gá-la* ‘luck, success’; Abaza / Tapanta *p-ga-l-ra* ‘to bring something for somebody who is going to be met’.

305. Proto-Indo-European **theg^{wh}-* > (with progressive voicing assimilation) **thek^{wh}-* in **thek^{wh}-mén-* ‘a kind of disease’ (Sanskrit only): Sanskrit *takmán-* (-*ā*) ‘a kind of disease, or probably, a whole class of diseases, accompanied by eruptions of the skin’. Note: Tocharian B *teki* ‘disease, illness’, *tekiññe* ‘sick, diseased’, *tekīta* ‘a sufferer, patient, sick person (?)’ may belong here as well, assuming development from Proto-Indo-European **thok^{wh}-*.

Northwest Caucasian: Common Abkhaz **tág^o* ‘swelling of neck’s glandule’: Bzyp *a-tág^o* ‘swelling of neck’s glandule’.

Note: The Abkhaz forms cited above are taken from Chirikba 1996b, and the Circassian forms are from Kuipers 1975. Several other works have also been consulted (such as Tuite—Schulze 1998). The Indo-European material is taken from the standard etymological dictionaries listed in the references (volume 4), with heavy reliance on the etymological work currently being done by a group of scholars in Leiden, The Netherlands (Beekes 2010; Boutkan—Siebinga 2005; Cheung 2007; De Vaan 2008; Derksen 2008 and 2015; Kloekhorst 2008b; Kroonen 2013; Martirosyan 2008; and Matisović 2009; also Bomhard 2008e as part of the same series).

21.6. THE ORIGIN OF THE HETEROCLITIC NOMINAL DECLENSION IN PROTO-INDO-EUROPEAN

In Proto-Indo-European, there was a special, and rather unusual, type of declension in which the nom.-acc. sg. was characterized by **-r-*, while the remaining cases were characterized by an **-n-*, which replaced the **-r-* and which was found between the stem and the case endings. Nouns exhibiting this patterning are known as “heteroclitic stems”. Though common in Hittite, this declensional type was in decline in the other daughter languages (cf. Fortson 2010:123 and 181—182; Kloekhorst 2008b:108—109). For details on heteroclitic nominal stems, cf. Burrow 1973:226—229; Szemerényi 1996:173. The following table illustrates the general patterning of these stems, citing just the nominative and genitive cases (here, the traditional transcription of Proto-Indo-European has been retained as opposed to the Glottalic Model of Proto-Indo-European consonantism used throughout this book):

	Nominative Singular	Genitive Singular
Hittite	<i>wa-a-tar</i> ‘water’ <i>pa-aḥ-hur, pa-aḥ-hu-wa-ar</i> ‘fire’ <i>e-eš-ḥar, e-eš-ḥa-ar, iš-ḥar</i> ‘blood’	<i>ú-i-te-na-aš</i> <i>pa-aḥ-hu-e-na-aš</i> <i>iš-ḥa-na-aš</i>

	<i>ut-tar</i> ‘word, affair’ <i>me-ḥur</i> ‘time’	<i>ud-da-na-aš</i> <i>me-(e-)ḥu-na-aš</i>
Sanskrit	<i>yákr̥t</i> ‘liver’ <i>áhar</i> ‘day’ <i>údhar</i> ‘udder’ <i>ásrk</i> ‘blood’ <i>śákr̥t</i> ‘dung’	<i>yaknás</i> <i>ahnás</i> <i>údhnas</i> <i>asnás</i> <i>śaknás</i>
Greek	ὕδωρ ‘water’ οὐθαρ ‘udder, breast’	ὕδατος (< * <i>ud-ḡ-to-s</i>) οὔθατος (< * <i>ūdḡh-ḡ-to-s</i>)
Latin	<i>femur</i> ‘thigh’ <i>iecur</i> ‘liver’	<i>feminis</i> (also <i>femoris</i>) <i>iocineris</i> (also <i>iecoris</i>)

Notes:

1. The *-t* and *-k* that have been added to the nom. sg. in Sanskrit are innovations.
2. In Greek, *-το-* has been added to the “oblique-*n*”, which is in the reduced-grade (**-ḡ-* > *-α-*).
3. Heteroclititic stems are neuter in gender (cf. Schindler 1975).

That this is an ancient declensional type has long been recognized (cf. Kapović 2017c:77–78), though its origin has heretofore not found an acceptable explanation, some previous attempts notwithstanding. Perhaps, the prehistoric language contact between Northwest Caucasian and Proto-Indo-European that we have been exploring in this chapter may provide clues concerning the origin of the heteroclititic nominal declension in Proto-Indo-European. Let us take a look.

Compared to the complex declension system found in Proto-Indo-European, nominal declension was relatively simple in Northwest Caucasian.

According to Arkadiev—Lander (to appear, pp. 17–25), gender is found only in Abkhaz and Abaza, with the main distinguishing feature being between human as opposed to non-human. Moreover, there is no gender agreement of noun modifiers in these languages.

Two numbers are differentiated in Northwest Caucasian, an unmarked singular and a marked plural. There is no dual. Abkhaz and Abaza also have collective suffixes. In Kabardian, the plural is consistently marked with the suffix *-xe* (see the table of grammatical case markers, as well as note 4, on the following page).

Another feature common to all of the Northwest Caucasian languages is the use of personal prefixes on nouns to express adnominal possession. The possessive prefixes found in Abaza, Ubykh, and West Circassian are listed in a table (4.2) in Arkadiev—Lander (to appear, p. 18).

Grammatical cases are missing in Abkhaz and Abaza, while only two cases are distinguished in Ubykh and Circassian, namely, (1) the absolutive and (2) the oblique. The absolutive case is often called “ergative”, though Arkadiev—Lander (to appear, p. 22) point out that this term is misleading. In Ubykh, the absolutive case is unmarked in both singular and plural. However, both West Circassian and

Kabardian mark the absolutive singular by the suffix *-r*, while, in the plural, the *-r* is appended after the suffix *-xe*, yielding *-xe-r*. Ubykh marks the oblique case by *-n* in the singular and *-ne* in the plural. Finally, West Circassian and Kabardian mark the oblique case by *-m* in the singular, while, in the plural, the *-m* is appended after the suffix *-xe*, yielding *-xe-m* (West Circassian also has *-me* and *-xe-me*, which are clearly innovations).

The following table summarizes the Ubykh, West Circassian, and Kabardian grammatical case markers (this table is adapted from table 4.3 in Arkadiev—Lander to appear, p. 22; see also Hewitt 2005b:103):

		Ubykh	West Circassian	Kabardian
Singular	Absolutive	Ø	<i>-r</i>	<i>-r</i>
	Oblique	<i>-n</i>	<i>-m</i>	<i>-m</i>
Plural	Absolutive	Ø	<i>-xe-r</i>	<i>-xe-r</i>
	Oblique	<i>-ne</i>	<i>-xe-m, -me, -xe-me</i>	<i>-xe-m</i>

Notes:

1. According to Chirikba (1996a:368), the Ubykh oblique marker *-n* is related to the Common Abkhaz locative suffix **-nə*. Chirikba (2016:19) further compares the Proto-Northwest Caucasian locative suffix **-na/ə* with the Proto-Northeast Caucasian genitive suffix **-n*.
2. Chirikba (2016:19) compares the oblique marker *-m* found in West Circassian and Kabardian with the Proto-Northeast Caucasian oblique marker **-m*.
3. For more information about noun morphology in Northwest Caucasian, cf. Hewitt 2005b:102—103. On ergativity in Northwest Caucasian, cf. Matasović 2012b:15—17.
4. The /x/ found in the Kabardian plural forms in the above table is actually /h/ (personal communication from John Colarusso).

As mentioned above, in the Proto-Indo-European heteroclitic declension, the nom.-acc. sg. was characterized by **-r-*, while the oblique cases in the singular were characterized by **-n-*, which replaced the **-r-* and which was found between the stem and the case endings. Quite interestingly, the oblique marker **-n-* found in the Proto-Indo-European heteroclitic declension matches the oblique marker **-n* found in Ubykh in both form and (partially) function, while the **-r-* found in the nom.-acc. sg. in the Proto-Indo-European heteroclitic declension matches the absolutive marker *-r* found in West Circassian and Kabardian in both form and (partially) function. Concerning the functions of the absolutive and oblique cases in Northwest Caucasian, Arkadiev—Lander (to appear, p. 22) state:

On the functional side, there is considerable asymmetry in the distribution of the grammatical cases. The absolutive is restricted to marking the S of intransitive verbs (4.17a) and P of transitive verbs (4.17b). The oblique, by contrast, covers a very wide range of grammatical roles, including the ergative

A of transitive verbs (4.18a), indirect objects introduced by specialized applicative prefixes (4.18d), adnominal possessors (4.18e) and objects of postpositions (4.18f), and certain locative and temporal adjuncts (4.18g).

Thus, considering that there is already strong evidence for prehistoric language contact between Proto-Indo-European and Northwest Caucasian in the form of the 275 lexical parallels listed in this chapter, we can speculate that the underlying pattern of **-r-* in the nom.-acc. sg. and **-n-* in the singular oblique cases in the Proto-Indo-European heteroclititic declension was borrowed by Proto-Indo-European from Northwest Caucasian. The regular oblique case endings found in Proto-Indo-European (cf. Chapter 19, §19.4, for details) were eventually appended after the oblique marker **-n-*, thus yielding the heteroclititic declension of traditional Proto-Indo-European grammar.

Here, it is worth quoting Matasović's (2012b:19–20) remarks regarding the heteroclititic declensions in Proto-Indo-European and *Northeast* Caucasian:

One of the most salient features of NE Caucasian inflection, attested in all branches of that family, is the two-stem inflection of nouns. One stem is used for the nominative (absolutive) case, whereas the other is used for the ergative and other oblique cases (Kibrik 1991). This is strongly reminiscent of the 'heteroclititic' inflection of the PIE neuters, which form the nominative and accusative singular with the stem ending in **-r*, and the oblique cases with the stem ending in **-n*, cf., e.g., PIE **yēk^wr* (NOM and ACC SG) vs. **yek^wns* (GEN SG) 'liver', cf. Gr. *hēpar*, *hēpatos*, Lat. *iecur*, *iecinis*, IEW 504. Although heteroclititic stems are an archaism in most IE languages, in Anatolian they are quite productive, which testifies that, at least in Early PIE, they were quite common.

This type of inflection is otherwise rare in the languages of North and Northeastern Eurasia, so its occurrence in PIE and NE Caucasian appears even more important. Note that it is at present impossible to reconstruct complete nominal paradigms in Proto-NE Caucasian, and that formal means of expression of the two-stem opposition differ in various languages (Alekseev 2003), but several different suffixes used to form the oblique stem can be posited; in Chechen, for example, the oblique stem can be formed with the nasal suffix. Thus, we have Chechen *buhʃa* 'owl' (Absolutive SG) vs. *buhʃ-an-uo* (Ergative), *buhʃ-an-ash* (Absolutive Plural), or Dargi *neš* 'mother', oblique *neš-li* (dative *neš-li-s*), plural *neš-ani*, oblique plural *neš-an-a-* (dative *neš-an-a-s*). After discussing the evidence, Alekseev (2003: 34) concludes that the heteroclititic inflection of this type is original in the NE Caucasian family.

The fact that two-stem inflection is a trait shared exclusively by PIE and NE Caucasian is areally highly significant. However, one has to bear in mind that in PIE only neuters showed this feature, while in NE Caucasian it is attested across the lexicon.

But there is more. As opposed to Ubykh, the West Circassian and Kabardian oblique marker is *-m*. In Proto-Indo-European, the accusative singular case ending is **-m* (**-o-m* in thematic stems, **-m/-m* in athematic stems). Here, we can speculate

that the borrowing was in the opposite direction, namely, from Proto-Indo-European into Northwest Caucasian. From there, it passed into Northeast Caucasian as well.

One additional point needs to be made: Syntactic alignment is not considered in this section. Later Proto-Indo-European unquestionably had nominative-accusative alignment, while modern Northwest Caucasian languages have ergative alignment. According to some scholars, Proto-Indo-European may also have had ergative alignment at an earlier stage of development, while, according to other scholars, Proto-Indo-European may have had active alignment instead at an earlier stage of development. Regarding ergativity in Northwest Caucasian, Matasović (2012:17) notes: “The ergative case marking on nouns in Ubykh and Circassian is a clear innovation”.

A particularly noteworthy example here of borrowing by Proto-Indo-European from Northwest Caucasian involving a heteroclititic nominal stem in Proto-Indo-European is the word for ‘blood’:

Proto-Indo-European (nom.-acc. sg.) **ǵés-hh-*r**; (gen. sg.) **ǵs-hh-én-s*, **ǵs-hh-n-és* (**ǵ* = **ǵ₁*; **hh* = **ǵ₂*): Hittite (nom.-acc. sg.) *e-eš-har*, *e-eš-ha-ar*, *iš-har* ‘blood’, (gen. sg.) *iš-ha-na-a-aš*, *iš-ha-a-na-aš*, *iš-ha-na-aš*, *e-eš-ha-na-aš*, etc.; Cuneiform Luwian (nom.-acc. sg.) *a-aš-har-ša*, [*a*]-*aš-ha-ar* ‘blood’, (nom. sg.) *a-aš-ha-nu-wa-an-ti-iš* ‘bloody’; Hieroglyphic Luwian (nom.-acc. sg.) *á-sa-ha-na-ti-sa-za* ‘blood-offering’; Sanskrit (nom.-acc. sg.) *ásṛk* ‘blood’, (gen. sg.) *asnás*; Greek *ἔαρ*, *εἶαρ* (Hesychius *ἦαρ*) ‘blood’; Armenian *ariun* ‘blood’; Old Latin *as(s)er* ‘blood’; Latvian *asins* ‘blood’; Tocharian A *ysār*, B *yasar* ‘blood’. The Proto-Indo-European root is obviously **ǵes-/ǵs-*, which has been extended by a suffix **-hh-* (cf. the *-χ-* in the Ubykh forms cited below), yielding the stem **ǵes-hh-*. The nom.-acc. sg. ends in **-r*, while the oblique cases contain an oblique marker in **-n-*, thus: Proto-Indo-European (nom.-acc. sg.) **ǵés-hh-*r**; (gen. sg.) **ǵs-hh-én-s*, **ǵs-hh-n-és*. This is exactly what we would expect had this word been borrowed by Proto-Indo-European from Northwest Caucasian.

Northwest Caucasian:

- A. Common Abkhaz **š’a* ‘blood’: South Abkhaz *a-š’a* ‘blood’, *a-š’a-rá* ‘bleeding, bloody flux’, *a-š’a-ba-rá* ‘to bleed heavily’; Ashkharywa *š’a* ‘blood’; Abaza / Tapanta *š’a* ‘blood’. No doubt related to: Common Abkhaz **š’ə* ‘to kill’: South Abkhaz *a-š’-rá* ‘to kill’; Abaza / Tapanta *š’-ra* ‘to kill (imper. *d-š’ə* ‘kill him/her!’ [human])
- B. Ubykh *š’χa-* ‘to wound’ (*asš’χán* ‘I wound him’), *š’χaq’á* (def. *á-*) ‘wound; wounded’.

Note: The *š’* found in the Abkhaz and Ubykh forms cited above is represented as **s* in Proto-Indo-European.

Other examples of Proto-Indo-European heteroclititic noun stems with possible lexical parallels in Northwest Caucasian include the following:

1. Proto-Indo-European (nom.-acc. sg.) **yék^{wh}-r* ‘liver’, (gen. sg.) **yek^{wh}-n-és*, **yok^{wh}-én-s*, **yék^{wh}-n-s*, etc. (cf. Wodtko—Irslinger—Schneider 2008:393) (< *‘entrails’, as in Old Church Slavic *jětro* ‘liver’ ~ Greek *ἐντέρα* ‘entrails’ [cf. Buck 1949:§4.45 liver]): Sanskrit (nom.-acc. sg.) *yákr̥t* ‘liver’, (gen. sg.) *yaknás*; Avestan (nom.-acc. sg.) *yākarə* ‘liver’; Greek (nom.-acc. sg.) *ἥπαρ* ‘liver’, (gen. sg.) *ἥπατος*; Latin (nom.-acc. sg.) *iecur* ‘liver’, (gen. sg.) *iecuris*, *iecinoris*; Lithuanian (dial.) (pl.) *jėknos* ‘liver’.

Northwest Caucasian: Proto-Circassian **yaq^hə* ‘cud, entrails’: Bžedux *yaq^hə* ‘cud, entrails’; Kabardian *yaq^o* ‘cud, entrails’.

2. Proto-Indo-European (nom.-acc. sg.) **p^hét^h-r* ‘wing, feather’, (gen. sg.) **p^het^h-n-és* (only in Hittite as a productive heteroclitic stem): Hittite (nom.-acc. sg.) *pát-tar* ‘wing’, (dat.-loc. pl.) *pad-da-na-aš* (OH/NS), *pat-ta-na-aš* (NH). For more information, cf. Kloekhorst 2008b:658—659. Related noun forms include: Sanskrit *pátram* ‘wing, feather’; Greek *πτερόν* ‘feather, bird’s wing’; Old Icelandic *fjöðr* ‘feather, quill’; Old English *feþer* ‘feather’, (pl.) *feþra* ‘wings’; Old Frisian *fethere* ‘feather’; Old Saxon *fethara* ‘feather’; Old High German *fedara* ‘feather’, *fettāh* ‘wing’. Verb forms include: Hittite (3rd pl. pres.) *pít-ti-(ya-)an-zi* ‘to flee, to fly, to hasten’; Sanskrit *pátati* ‘to fly, to soar, to rush on; to fall down or off; to set in motion, to set out on foot; to rush on, to hasten’, (causative) *patáyati* ‘to fly or move rapidly along, to speed’; etc.

Northwest Caucasian: Common Abkhaz (reduplicated) **pat-pátə*: South Abkhaz *a-pat-pát-ra* ‘to flutter, to quiver (of bird); to flounder, to wallow’; Bzyp *a-pat-mát-ra* ‘to flutter, to quiver (of bird); to flounder, to wallow’.

3. Proto-Indo-European (nom.-acc. sg.) **ǵyéǵ-r* ‘year’, (gen. sg.) **ǵyeǵ-én-s* (*ǵ = *ǵ₁): Gothic *jēr* ‘year’; Old Icelandic *ár* ‘year’; Old English *ǵēar* ‘year’; Old Frisian *jēr* ‘year’; Old High German *jār* ‘year’; Avestan (nom.-acc. sg.) *yārə* ‘year’, (gen. sg.) *yā* (< **ǵyeǵ-én-s*). Note: Heteroclitic declension is only attested in Avestan. Related verb forms include: Greek (1st sg. pres.) *εἶμι* ‘I go’, (1st pl. pres.) *ἴμεν* ‘we go’; Sanskrit (1st sg. pres.) *émi* ‘I go’, (3rd sg. pres.) *éti* ‘goes’, (1st pl. pres.) *imáḥ* ‘we go’, (3rd pl. pres.) *yánti* ‘they go’, (3rd sg. pres.) *yáti* ‘goes, moves, rides’; Latin (1st sg. pres.) *eō* ‘I go’; Old Lithuanian (3rd sg. pres.) *eĩti* ‘goes’; Old Prussian (3rd sg. pres.) *ēit* ‘goes’, *per-ēit* ‘comes’; Old Church Slavic *idq, iti* ‘to go’; Luwian (3rd sg. pres.) *i-ti* ‘goes’; Hittite (imptv.) *i-it* ‘go!’; Tocharian A (1st pl.) *ymäs* ‘we go’, B (1st sg.) *yam, yaṃ* ‘I go’.

Northwest Caucasian: Common Abkhaz **jə*: South Abkhaz *aá-j-ra* ‘to come’, *a-ná-j-ra* ‘to go’; Abaza / Tapanta *há-j-ra* ‘to come’, *na-j-ra* ‘to go’ (*na* ‘thither’).

4. Proto-Indo-European (nom.-acc. sg.) **p^hé^hh-ur-* [**p^há^hh-ur-*], **p^he^hh-wór-* [**p^ha^hh-wór-*] ‘fire’, (gen. sg.) **p^he^hh-w-én-s* [**p^ha^hh-w-en-s*], etc. (**h^h* = **₂*) (cf. Wodtko—Irslinger—Schneider 2008:540—545): Hittite (nom.-acc. sg.) *pa-aḥ-ḫu-ur*, *pa-aḥ-ḫu-wa-ar*, *pa-aḥ-ḫur* ‘fire’, (gen. sg.) *pa-aḥ-ḫu-e-na-aš*; Luwian (nom. sg.) *pa-a-ḫu-u-ur* ‘fire’; Greek πῦρ ‘fire’; Umbrian *pir* ‘fire’; Gothic *fōn* ‘fire’, (gen. sg.) *funins*; Old Icelandic *fúrr* ‘fire’, *funi* ‘flame’; Old English *fȳr* ‘fire’; Old Saxon *fiur* ‘fire’; Old High German *fiur*, *fuir* ‘fire’; Tocharian A *por*, B *puwar* ‘fire’; Old Czech *púř* ‘glowing ashes, embers’; Armenian *hur* ‘fire’.

Northwest Caucasian:

- A. Proto-Circassian **P̣x̣aq:ʷa* ‘torch’: Kabardian *p̣x̣āqʷa* ‘torch’.
 B. (1) Common Abkhaz **p̣x̣a*: Abaza / Tapanta *p̣x̣a-rá* ‘to warm up, to become warm’; South Abkhaz *a-p̣x̣á* ‘warm’, *a-p̣x̣a-ra* ‘to warm up, to become warm; to shine (of sun, moon)’. (2) Common Abkhaz **p̣x̣-ʒə* (< **p̣x̣a* ‘warm’, **ʒə* ‘water’): South Abkhaz *a-p̣x̣-ʒə* ‘sweat’; Abaza / Tapanta *p̣x̣-ʒə* ‘sweat’. (3) Common Abkhaz **p̣x̣ə-nə* (< **p̣x̣a* ‘warm’, **-nə* ‘season, time of’): Ashkharywa *a-p̣x̣ə-n-ra* ‘summer’; Abaza / Tapanta *p̣x̣-nə* ‘summer’, *p̣x̣ən-č’əl’a* ‘July; middle of summer’; South Abkhaz *a-p̣x̣ə-n* ‘summer’.

Note: Proto-Indo-European **p^hV^hh-* = Common Abkhaz **p̣x̣V-*.

One of the tests of the validity of any theory is its ability to explain, in a straightforward and convincing manner, problems that have previously resisted all attempts at explanation. Here, we have just such a case — the possible explanation of the origin of the Proto-Indo-European heteroclitic nominal declension on the basis of prehistoric language contact between Proto-Indo-European and Northwest Caucasian.

21.7. CONCLUDING REMARKS

I believe that Colarusso’s work has great merit, though, as pointed out above, not all of his proposals are convincing. However, rather than view these similarities as evidence of genetic relationship, I prefer to see them as evidence that there was prolonged and substantial contact between Proto-Indo-European and Northwest Caucasian. As a result of the socio-cultural interaction with and resultant borrowing from Caucasian languages, especially primordial Northwest Caucasian languages, Proto-Indo-European developed unique characteristics that set it apart from the other Eurasiatic languages. Though Proto-Indo-European remained a Eurasiatic language at its core (cf. Collinder 1934, 1954, 1967, and 1970; Čop 1970a and 1975; Greenberg 2000—2002; Hyllested 2009; J. C. Kerns 1967; Kloekhorst 2008a; Kortlandt 2010a [various papers]; Pisani 1967; Ringe 1998a; Rosenkranz 1966; Uesson 1970; etc.), the interaction with Northwest Caucasian had a profound impact

on the phonology, morphology, and lexicon of Proto-Indo-European (technically, this is known as “contact-induced language change”) and gave it a distinctive, Caucasian-like appearance (Kortlandt 2010f expresses a similar view).

But, there is more. One of the most significant byproducts of the comparison of Proto-Indo-European with Northwest Caucasian is that it provides empirical support for the Glottalic Model of Proto-Indo-European consonantism as well as the interpretation of the traditional plain voiceless stops as voiceless aspirates. Though we cannot say for certain on the basis of this comparison whether voiced aspirates existed in Proto-Indo-European at the time of contact with primordial Northwest Caucasian languages, there is nothing to indicate that they did. Indeed, the most straightforward explanation is that voiced aspirates arose at a later date in the Disintegrating Indo-European dialects that gave rise to Indo-Iranian, Armenian, Greek, and Italic.

Another important insight that can be gleaned from this comparison is that the Pre-Proto-Indo-European morphological system changed dramatically as a result of contact with Northwest Caucasian languages — in certain respects, it became more complicated. At the same time, some of the earlier morphology must have been lost. In his 2002 book entitled *Pre-Indo-European*, Winfred P. Lehmann suggested that three endings represented the most ancient layer of the Proto-Indo-European case system — these endings were: **-s*, **-m*, and **-H*. According to Lehmann, **-s* indicated an individual and, when used in clauses, identified the agent; **-m* used in clauses indicated the target; and **-H* (= **₂*) [see Chapter 19, §19.6] supplied a collective meaning. Lehmann further maintains that the remaining case endings were based upon earlier adverbial particles that came to be incorporated into the case system over time. That this has indeed taken place is especially clear in the case of the dual and plural endings in **-bʰi-* and **-mo-*, which were incorporated into the Proto-Indo-European case system after Hittite and the other Anatolian daughter languages had split from the main speech community. The comparison with Northwest Caucasian indirectly corroborates Lehmann’s views, though details of how and when the individual case endings traditionally reconstructed for Proto-Indo-European arose still need to be fully worked out — it may be noted that a good start has recently been made in this direction by the Czech scholar Václav Blažek (2014) and, before him, by Balles (2004), Beekes (1985), Haudry (1982), Ronald Kim (2012), Kulikov (2011), Kuryłowicz (1964a), Shields (1982), and Specht (1944), among others. See also Pooth 2018b for a radical reinterpretation of the case-marking system of Proto-Indo-European.

For corroborating evidence from archeology and genetics for language contact on the steppes, cf. Shishlina 2013 and Wang et al. 2019.

No doubt, as pointed out by Polomé (1990b), the Indo-Europeans must have come into contact with and replaced other non-Indo-European languages as they moved into and conquered central, southern, and western Europe. Basque is the sole non-Indo-European language to have survived from before the arrival of the Indo-Europeans to the present day (cf. Tovar 1970). On contacts between Proto-Indo-European and Proto-Uralic/Proto-Finno-Ugrian, cf. Kronasser 1948; Carpelan—Pärpola—Koskikallio 2002; Jacobsohn 1980; Joki 1973; Kudzinowski 1983; Rédei

1983 and 1988c; Szemerényi 1988. For Kartvelian contacts, cf. Fähnrich 1988; Klimov 1985, 1991, and 1994a; Djahukyan 1967. Mention should also be made here of the theories advanced by Theo Vennemann (2003), according to which Indo-European speakers came into contact with and either substantially reduced or outright replaced Vasconic (that is, Pre-Basque) and Semitic languages in Western Europe. For remarks on substrate influence on the vocabulary of Northwest Indo-European, cf. Salmons 1992a. For an excellent overview of language contact in general, cf. Henning Andersen (ed.) 2003, the first section of which is devoted to Indo-European. Andersen's own contribution to the volume (pp. 45–76) deals with early contacts between Slavic and other Indo-European dialects, while that of Mees (pp. 11–44) deals with the substrata that underlie the Western branches of Indo-European. Farther afield, Forest (1965:136) even lists several possible Indo-European loanwords in Chinese.

Next, it should be mentioned that Arnaud Fournet has brought to my attention a large number of non-Indo-Iranian Indo-European elements in Hurro-Urartian.

Finally, as made clear by Vajda in his review (2003) of Angela Marcantonio's book *The Uralic Language Family: Facts, Myths and Statistics* (2002), language contact ("extensive areal contact mutually as well as with non-Uralic languages") also appears to have played a significant role in the development of both Proto-Uralic itself as well as the various Uralic branches and sub-branches. However, unlike Marcantonio, Vajda considers Uralic to be a valid genetic grouping. To a large extent, it is the contact-induced language change that both Proto-Uralic and Proto-Indo-European have undergone that has made it so difficult to establish a convincing genetic relationship between these two language families.

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A Comprehensive

Introduction to Nostratic

Comparative Linguistics

*With Special Reference
To Indo-European*

VOLUME 2

Allan R. Bomhard



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By Allan R. Bomhard

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PART THREE
COMPARATIVE VOCABULARY
(FIRST HALF)

CHAPTER TWENTY-TWO

COMPARATIVE VOCABULARY OF THE NOSTRATIC LANGUAGES

22.1. INTRODUCTION

In comparing the lexical material from the various Nostratic daughter languages, I have tried to be very careful about the issue of semantic plausibility. Where there is either a one-to-one or an extremely close semantic correspondence, there is, of course, no problem. Unfortunately, things are not always this straightforward. Quite often, there is not a one-to-one semantic correspondence — in such cases, we must be able to derive the proposed cognates from the postulated ancestor form by widely-attested semantic shifts and not by mere speculation. Therefore, in attempting to determine whether or not particular lexical items from the various language families under consideration might be related, I have made extensive use of Carl Darling Buck's *A Dictionary of Selected Synonyms in the Principal Indo-European Languages* as a control for the semantic development of the proposed lexical parallels, and references to the appropriate sections of this work are given at the end of each proposed Nostratic etymology. It may be noted that, in examining the lexicons of Kartvelian, Afrasian, Uralic-Yukaghir, Elamo-Dravidian, Altaic, and Eskimo-Aleut, semantic shifts similar to those described by Buck for the Indo-European languages are found over and over again in these other language families as well (on the regularity of semantic change, cf. Geeraerts 1985 and 1992; Traugott—Dasher 2001). I cannot emphasize strongly enough that, in order to gain a complete understanding of how I arrived at my proposals, Buck's dictionary must be consulted. However, in a number of instances, where I felt it was warranted due to the wide semantic differences found among the forms cited from the daughter languages, I have given brief explanations within the etymologies themselves.

As valuable as Buck's dictionary is, however, it is not without its shortcomings. In the first place, as noted by Buck himself (1949:xii), the dictionary is not complete — due to the nature of the material involved, Buck and his assistants had to be selective in choosing what to include. Next, the research upon which the dictionary is based is now three-quarters of a century old. Therefore, Buck's dictionary must be supplemented by more recent scholarship. Unfortunately, however, this work is spread throughout so many journal articles, dissertations, and books that it is virtually impossible to consult all of it, especially when one is dealing with multiple language families.

It is not enough, moreover, simply to compare dictionary forms. Rather, when working with the lexical data from the various Nostratic daughter languages, one must strive to ascertain the underlying semantics, that is to say, the fundamental meaning or meanings from which the full set of semantic nuances are derived, based

upon actual usage, wherever this is possible, and one must be cognizant of the interrelationship between social, cultural, and conceptual factors on the one hand and semantic structures on the other (cf. Birnbaum 1977:41—51). It goes without saying that this is neither a simple nor an easy undertaking.

The approach that I have followed thus leads to the establishment of what may be called “families of words” in the tradition of the great Indo-European comparative dictionaries such as Pokorny (1959) and Walde (1927—1932). The starting point is always the reconstructed Nostratic forms. The material cited from the individual Nostratic daughter languages is then to be judged primarily by whether or not it can be convincingly derived from the antecedent Nostratic forms either directly or through widely-attested semantic shifts.

The difficulties involved in dealing with semantic change in unattested languages have been clearly articulated by Winter (2003:206—207) (also important is the study done by Dubossarsky—Weinshall—Grossman 2016):

The difficulties encountered by the etymologist reaching out toward unattested and hence textless languages are deep-rooted and virtually insurmountable. When one reads an intelligently written, richly documented book such as Blank 1997, one cannot help being impressed with the fact that it is relatively easy to describe and classify semantic changes such as metonymy and metaphor that occurred in the course of the history of an individual language or a group of closely related languages, but that there is a near total absence of what one might call determinacy and hence predictability as to the kind and direction of the changes that can be shown to have taken place and therefore can be expected to occur again under comparable circumstances. The applicability of a form may remain unchanged, it may be extended to cover additional meaning configurations, it may be narrowed, it may be eliminated altogether; new denotations added may concern closely related items, as in the case of metonymy, or seemingly very different ones, as when metaphors are used. As long as one limits oneself to a retrospective analysis of data from historically well-attested languages, the lack of regularity will not affect the descriptive adequacy of one’s findings; if, however, one turns to the study of prehistoric stages of a language or a group of languages, one is left with hardly any well-defined criteria by which to evaluate one’s hypotheses (and those of others). The only criterion that seems to be operationally usable derives from the assumption made above: if both phonetic and semantic change occurred in relatively small steps, feature by feature, component by component, then the likelihood that a hypothesis might be correct can be said to be supported in a more than subjective way. This does not eliminate the difficulty that observable change can occur in all possible directions and that to complicate matters even further, in the course of a historical development, the direction may change at any time. If that is the case, it follows that in the absence of observable data — that is, under conditions normal for reconstructional linguists — no objectifiable criteria can be called upon by the etymologist, and his proposals will always reflect his personal preferences.

Another important point that needs to be reiterated concerns how I segment the reconstructed forms I am dealing with. Comparison of the various Nostratic daughter languages indicates that the rules governing the structural patterning of roots and stems in Proto-Nostratic were most likely as follows (this is repeated from Chapter 12, §12.3):

1. There were no initial vowels in Proto-Nostratic. Therefore, every root began with a consonant.
2. There were no initial consonant clusters either. Consequently, every root began with one and only one consonant. Medial clusters were permitted, however.
3. Two basic root types existed: (A) **CV* and (B) **CVC*, where *C* = any non-syllabic, and *V* = any vowel. Permissible root forms coincided exactly with these two syllable types.
4. A stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: **CVC+C-*. Any consonant could serve as a suffix. Note: In nominal stems, this derivational suffix was added directly to the root: **CVC+C-*. In verbal stems, it was added after the formative vowel: **CVC+V_{FV}+C-*. (*FV* = formative vowel.)
5. A stem could thus assume any one of the following shapes: (A) **CV-*, (B) **CVC-*, (C) **CVC+C-*, or (D) (reduplicated) **CVC-CVC-*. As in Proto-Altaic, the undifferentiated stems were real forms in themselves and could be used without additional suffixes or grammatical endings. However, when so used, a vowel had to be added to the stem: (A) **CV-* > **CV* (no change), (B) **CVC-* > **CVC+V*, (C) **CVC+C-* > **CVC+C+V*, or (D) (reduplicated) **CVC-CVC-* > **CVC-CVC+V*. Following Afrasian terminology, this vowel may be called a “terminal vowel” (TV). Not only did terminal vowels exist in Proto-Afrasian, they are also found in Dravidian, where they are called “enunciative vowels”, and in Elamite, where they are called “thematic vowels”. In Proto-Dravidian, the enunciative vowel was only required in stems ending in obstruents, which could not occur in final position.

The original root structure patterning was maintained longer in Afrasian, Dravidian, and Altaic than in the other branches, while the patterning found in Proto-Indo-European and Proto-Kartvelian has been modified by developments specific to each of these branches. The root structure constraints found in Proto-Indo-European were an innovation. In Proto-Uralic, the rule requiring that all words end in a vowel was an innovation and arose from the incorporation of the so-called “terminal vowel” into the stem. It should be mentioned here that reduplication was a widespread phenomenon.

On the basis of the evidence of Proto-Indo-European, Proto-Kartvelian, Proto-Afrasian, Proto-Dravidian, and Proto-Altaic, it may be assumed that there were three fundamental stem types: (A) verbal stems, (B) nominal (and adjectival) stems, and (C) pronominal and indeclinable stems. Some stems were exclusively nominal. In the majority of cases, however, both verbal stems and nominal stems could be built from the same root. In Proto-Nostratic, only pronominal and indeclinable

stems could end in a vowel. Verbal and nominal stems, on the other hand, had to end in a consonant, though, as noted above, when the undifferentiated stems were used as real words in themselves, a “terminal vowel” had to be added to the stem. As explained in Chapter 17, the terminal vowels were morphologically significant (as were the “formative vowels”).

For Indo-European, the main etymological dictionaries consulted include: Buck 1949; Delamarre 1984; Mallory—Adams (eds.) 1997 and 2006; Mann 1984—1987; Pokorny 1959; Rix 1998a and 2001; Walde 1927—1932; Watkins 1985, 1992, 2000, and 2011; Wodtko—Irslinger—Schneider 2008. The Proto-Indo-European reconstructions are made in accordance with the glottalic model of Proto-Indo-European consonantism proposed by Gamkrelidze—Ivanov (especially 1984 and 1995) and Hopper (1973) (except where noted otherwise).

For Kartvelian, the principal sources are: Klimov 1964 and 1998; Fähnrich 1994 and 2007; Fähnrich—Sardshveladse 1995; Gamkrelidze—Mačavariani 1962; K. H. Schmidt 1962.

The two main Afrasian comparative dictionaries are: Ehret 1995 and Orël—Stolbova 1995, both of which must be used with caution. Another Afrasian comparative dictionary was published in parts between 1994 and 1997 in Russia under the title “Historical-Comparative Vocabulary of Afrasian” by Anna Belova, Igor Diakonoff, Alexander Militarëv, Viktor Porxomovsky, and Olga Stolbova. Unfortunately, I have not been able to consult this work. Also of value are the following: Appleyard 2006; Blažek 2020; Černý 1976; D. Cohen 1970—; Ehret 1980 and 1985; Heine 1978; Hudson 1989; Jungraithmayr—Ibrizimow 1994; Klein 1987; Leslau 1963, 1979, and 1987; Militarëv 2010, 2011, and 2012; Militarëv—Kogan 2000—2005; Militarëv—Nikolaev 2020 and 2021; Murtonen 1989; Newman 1977; Sasse 1979 and 1982; Takács 2011a; Tomback 1978; Vycichl 1983. It should be noted that Gábor Takács is currently preparing a comprehensive etymological dictionary of Ancient Egyptian (1999—). For Berber, cf. Haddadou 2006—2007; Militarëv 2022.

There are two etymological dictionaries of Uralic: Collinder 1955 (2nd edition 1977) and Rédei (ed.) 1986—1988. Ante Aikio is currently preparing a new Uralic etymological dictionary, the first fascicle of which (A—Ć) he made available online in January 2020. Aikio’s dictionary reflects current scholarship and is a marked improvement over Collinder and Rédei, especially in its treatment of the vowels. Also of value are: Joki 1973; Janhunen 1977b; Décsy 1990; and Sammallahti 1988. For Yukaghir, cf. Nikolaeva 2006.

For Dravidian, the standard (and only) etymological dictionary is Burrow—Emeneau 1984 (does not contain reconstructions). See also Krishnamurti 2003.

For Altaic, the major works are: Ramstedt 1952—1957; Robbeets 2005; Poppe 1960; Street 1974; Miller 1971; and Starostin—Dybo—Mudrak 2003. The works of Ramstedt and Poppe are now seriously out of date, while that of Starostin—Dybo—Mudrak must be used with caution (cf. the rather critical reviews by Georg 2004, Kempf 2008, Norman 2009, and Vovin 2005; more positive is the review by Roy Andrew Miller 2003—2004). Even taking into consideration the problem areas identified in these reviews, the Altaic dictionary of Starostin—Dybo—Mudrak is

clearly an improvement over previous endeavors (as noted by Václav Blažek in his review [2005], not to mention Sergej Starostin's rebuttal [2005] of Georg's review and the lengthy rebuttal [2008] of Vovin's review by Anna Dybo and George Starostin). Consequently, I have mostly accepted their proposals, at least for those items that have been included in this book. However, there are a handful of cases in which I prefer etymologies proposed by other scholars over those proposed by Starostin—Dybo—Mudrak or when I reject parts of their etymologies. These differences of opinion are noted in the individual etymologies.

Tsintsius (Cincius [Цинциус]) 1975—1977 is the standard (Manchu-)Tungus comparative dictionary (does not contain reconstructions). For Turkic, cf. Clauson 1972 and Tenishev—Dybo 2001—2006, volume I. For Mongolian, cf. Poppe 1955.

The principal Eskimo etymological dictionary is Fortescue—Jacobson—Kaplan 1994, and the primary Chukchi-Kamchatkan etymological dictionaries are Fortescue 2005 and Mudrak 2000.

For Gilyak / Nivkh, the only etymological dictionary is Fortescue 2016.

Sumerian forms are cited from Hübner—Reizammer 1985—1986. Delitzsch's *Sumerisches Glossar [Sumerian Glossary]* (1914) is seriously out-of-date. On the other hand, Simo Parpola's *Etymological Dictionary of the Sumerian Language* (2016) is useful for the English meanings, though I do not accept the premise that Sumerian is a Uralic language.

Etymological (where they exist) and non-etymological dictionaries for individual languages have also been heavily consulted, as have journal articles and papers beyond count — a complete list can be found in the references. The volumes in the Leiden Indo-European Etymological Dictionary Series under the editorship of Alexander Lubotsky and published by E. J. Brill have been particularly helpful, though, in some cases, I prefer older or alternative etymologies.

The reconstructed forms for each proto-language conform to a uniform method of transcription — deviations from traditional transcriptions are explained in the chapters on phonology (volume 1 of this book). The works cited at the end of each entry always give the traditional reconstructions, as written by the individual authors. In the case of Proto-Uralic and Proto-Finno-Ugrian, I have kept the symbol /3/, which is traditionally used in Uralic studies as a cover symbol to indicate a vowel of unknown quality.

In the case of both Uralic and Altaic, a certain amount of standardization has been done in the transcription of the forms cited from the individual daughter languages. For Altaic, the system of transcription is close to that used in Starostin—Dybo—Mudrak 2003, though, occasionally, Poppe's transcription is used instead. In both cases, I have allowed a certain degree of latitude due to the wide variations found in the literature.

Inasmuch as the Proto-Indo-European reconstructions included in this book are in accordance with the glottalic model of Indo-European consonantism proposed by Thomas V. Gamkrelidze, Vjačeslav V. Ivanov, and Paul J. Hopper (see Chapter 3 of this book for details), traditional reconstructions are also given for comparison at the end of each Indo-European etymology as part of the references.

It must also be noted that I have been selective in the forms cited from the various Nostratic daughter languages. My goal has been to give a representative sampling, in part to illustrate the semantics involved, and not to cite all known cognates — nonetheless, the documentation is quite extensive. For additional information, the works cited at the end of each etymology should be consulted, as should other works listed in the references but not necessarily cited after individual etymologies.

Even though I have made extensive use of the works of other scholars (especially V. M. Illič-Svityč, A. Dolgopolsky, and V. Blažek) doing research on the comparative vocabulary of the Nostratic languages, I have sometimes purposely excluded material that they have cited. This does not necessarily mean that I reject their suggestions (though in many cases it does). Rather, I have endeavored to verify all of the data cited by other scholars on the basis of works available to me. In those cases where I have been unable to verify the data cited, I have usually not included their proposals. In those cases where I have included data that I was not able to verify, I have added comments to that effect. The major exception to this rule involves the Chadic data cited by Orël—Stolbova in their joint Afrasian etymological dictionary (1995), most of which I have not been able to verify independently. Finally, in those instances where I have intentionally rejected, either fully or in part, the proposals made by others, I have not given references to their work nor have I discussed the reasons for rejection (almost always because the semantics are not plausible and/or because there are problems with the phonology).

Proto-Nostratic verbs are cited in their root/stem form, nouns in the “*status indeterminatus*” form (that is, **-a*) (see Chapter 17 for details).

As noted in Chapter 17, adjectives did not exist as an independent grammatical category in Proto-Nostratic. Intransitive verbs could function as “adjectives”. Also, “adjectives” were differentiated from nouns mainly by syntactical means — a noun placed before another noun functioned as an attribute to the latter. To illustrate the different semantic functions of nominal words, Proto-Nostratic **bar-a* could mean: (n) ‘goodness, kindness’; (adj.) ‘good, kind’; (adv.) ‘goodly, kindly, well’.

Some final points:

- All language names have been fully spelled out rather than abbreviated. Moreover, since different spellings are sometimes found in the literature, the language names have been mostly standardized to agree with what is found in Ruhlen 1987. In those cases where a particular language is referred to by two different names, both are given, separated by a slash. Where languages are referred to in the literature by more than two names, I have tried to choose only the two most common names.
- In the case of many modern Afrasian languages, the names found in the literature, especially when dialects and subdialects are taken into consideration, are varied and confusing. Here, I mostly left unchanged what was used in the sources I consulted.
- Since the break-up of the former Yugoslavia, the language formerly called “Serbo-Croatian” has been treated as four separate languages, primarily on

political grounds: Croatian, Serbian, Montenegrin, and Bosnian. The older term is retained in this book.

TO SUMMARIZE: It should now be clear that I have tried to eliminate the arbitrary nature of much of the previous work, as well as some current work, in distant lexical comparison by relying heavily on proven, widely-attested semantic shifts as found in the daughter languages, especially Indo-European, Semitic, and Dravidian, which, due to having written records of sufficient time depth to be able to follow how words have changed meaning over time, as well as due to having voluminous data with which to work, are particularly valuable. My approach is thus positivistic, that is, data-oriented, rather than impressionistic. To further ensure that my views are firmly grounded in the attested data and not derived from purely theoretical assumptions, I supply a large amount of cited forms from the daughter languages to illustrate the types of changes that have occurred, I give explanations where needed, I supply voluminous references to the standard etymological dictionaries and other relevant literature, I set rather narrow limits on the meanings of the terms selected for comparison, and I stay well within the bounds of established scholarship within each language family.

22.2. PROTO-NOSTRATIC *b

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
b-	b-	p-	b-	b ^h -	p-	b-	p-
-b-	-b-	-pp-/-vv-	-b-	-b ^h -	-w-	-b-	-v-

1. Proto-Nostratic root **baʃ-* (~ **bəʃ-*):
 - (vb.) **baʃ-* ‘to pour’;
 - (n.) **baʃ-a* ‘torrent, outpour’
 - A. Proto-Afrasian **baʃ-* ‘to pour’: Semitic: Arabic *baʿʿa* ‘to pour out in abundance’, *baʿʿ* ‘abundant outpour’, *buʿāḳ*, *baʿāḳ*, *biʿāḳ* ‘raining cloud, waterspout, first shower, noise of torrent’, *baʿbaʿ* ‘gurgling of water’. D. Cohen 1970— :74. Egyptian *bʿhy* ‘to be inundated; to flood, to inundate; to pour’, *bʿ* ‘to drink (blood)’, *bʿbʿ* ‘to drink’, *bʿbʿt* ‘stream’, *bʿh* ‘basin (for irrigation)’, *bʿh* ‘inundated land’, *bʿhw* ‘inundation, flood’. Hannig 1995:249; Erman—Grapow 1921:47 and 1926—1963.1:446, 1:447, 1:448—449; Faulkner 1962:81; Gardiner 1957:564. West Chadic **baʃ-* ‘to pour’ > Tsagu *va-*, *vo-* ‘to pour’; Mburku *vay*, *vaw* ‘to pour’. East Chadic **bwa(y)-* ‘to pour’ > Somray *bo* ‘to pour’; Kabalay *bəyi* ‘to pour’; Mokilko (perf.) *buiye* ‘to pour’; Lele *boy-* ‘to pour’. Orël—Stolbova 1995:45, no. 180, **baʃ-* ‘to pour’; Ehret 1995:91, no. 39, **baaʃ-* ‘to flow heavily, to defecate’.
 - B. Proto-Kartvelian **b-* ‘to pour’: Mingrelian *b-* ‘to pour’; Laz *b-* ‘to pour’; Svan *b-* ‘to pour out (of liquid)’. Fähnrich—Sardshweladse 1995:40—41 **b-*; Fähnrich 2007:43 **b-*; Klimov 1964:47 **b-* and 1998:6 **b-* ‘to pour’.
 - C. (?) Yukaghir (Northern / Tundra) *papaa-* (< **pa:(pa:-)*) ‘to urinate’, *papaa* ‘urine’. Nikolaeva 2006:343.

Sumerian *ba* ‘to pour out’.

Buck 1949:4.65 urinate; urine; 9.35 pour.

2. Proto-Nostratic root **baʃ-* (~ **bəʃ-*):
 - (vb.) **baʃ-* ‘to tie, to bind; to attach, to fasten’;
 - (n.) **baʃ-a* ‘tie, bond, bandage, fastening’
 - A. Proto-Afrasian **baʃ-* ‘to tie, to bind; to attach, to fasten’: Egyptian *bʿn* ‘to set (a precious stone in gold)’, *bʿn* ‘setting (a piece of jewelry)’. Hannig 1995:249; Erman—Grapow 1926—1963.1:447. West Chadic: Sura *ḅāl* ‘to

join or bind together'; Mupun *bāal* 'to join'; Goemai *bal* 'to fasten'. Takács 2011a:54—55 **b*-*l*.

- B. Proto-Kartvelian **b*- 'to tie, to bind': Old Georgian *b*- 'to tie, to bind' (Georgian *b*- 'to tie, to bind; to hang'); Mingrelian *b*- 'to tie, to bind'; Laz *b*- 'to tie, to bind; to hang'; Svan *b*- 'to tie, to bind', *lə-b-e* 'tied'. Klimov 1964:47 **b*- and 1998:6 **b*- 'to tie, to bind'; Fähnrich—Sardshweladse 1995:39—40 **b*-; Fähnrich 1994:230 and 2007:42—43 **b*-; Schmidt 1962:95 **b*-. Proto-Kartvelian **b-am*-/**b-m*- 'to tie, to bind': Georgian *bam*-/*bm*- 'to tie, to bind; to be attached', *b-m-ul-i* 'bound'; Mingrelian *bum*- 'to tie, to bind'; Laz *bum*- 'to tie, to bind'; Svan *bem*- 'to tie up, to tie together'. Klimov 1964:48 **bam*-/**bm*- and 1998:7 **b-am* : **b-m*- 'to tie, to bind'.
- C. Proto-Altaic **bā* 'to bind': Proto-Tungus **ba*- 'to join (in marriage)' > Evenki *ba*- 'to propose for marriage'; Manchu *ba-čixi* 'married while still a child', *ba-čixila*- 'to be married as a child'. Proto-Turkic **b(i)ā*- 'to tie, to bind, to fasten', **b(i)ā-g*- 'bundle; bond, rope' > Old Turkic (Old Uighur) *ba*- 'to bind, to fasten', *baγ* 'bundle; bond, rope; confederation'; Karakhanide Turkic *ba*- 'to bind, to fasten', *baγ* 'bundle; bond, rope'; Turkish *bağla*- 'to tie, to bind, to fasten, to attach' (*başını bağla*- 'to give in betrothal or marriage'), (passive) *bağlan*- 'to be tied; to be obliged, to be engaged (to do something)', *bağ* 'bond, tie; bandage; impediment; restraint; bundle', *bağlı* 'bound, tied' (*başı bağlı* 'married; settled; connected [with some office, etc.]'), *bağlılık* 'attachment; affection'; Gagauz *bā-la*- (< **bag-la*-) 'to bind'; Azerbaijani *baγ* 'bundle; bond, rope'; Turkmenian *bāg* 'bond, rope'; Uzbek *bɔγ* 'bundle; bond, rope'; Uighur *baγ* 'bundle; bond, rope'; Karaim *baγ* 'bundle; bond, rope'; Tatar *baw* 'bundle; bond, rope', *bey* 'bond, rope'; Bashkir *baw* 'bundle; bond, rope', *bāy* 'bond, rope'; Kirghiz *bō* 'bundle; bond, rope'; Kazakh *baw* 'bundle; bond, rope'; Noghay *baw* 'bundle; bond, rope'; Sary-Uighur *paγ* 'bond, rope'; Oyrot (Mountain Altai) *bū* 'bond, rope'; Tuva *baγ-la*- 'to bind, to fasten'; Chuvash *pɣav* 'bond, rope'; Yakut *bāy*- 'to bind, to fasten', *bīa* 'bond, rope'; Dolgan *bāy*- 'to bind, to fasten', *bīa* 'bond, rope'. Starostin—Dybo—Mudrak 2003:319 **bā* 'to bind'; Poppe 1960:58 and 97; Street 1974:8 **bāg* 'bunch, group'.

Buck 1949:2.33 marry; 2.34 marriage, wedding; 9.16 bind (vb. tr.). Illič-Svityč 1971—1984.I:172, no. 2, **baHa* 'to tie to'; Dolgopolsky 2008, no. 180, **baH₂V*- 'to tie, to bind'.

3. Proto-Nostratic (n.) **baba* 'father' (nursery word):

- A. Proto-Afrasian **baba* 'father': Proto-Semitic **bābā* 'father' > Syriac *bābā* 'father'; Arabic *bābā* 'papa, father, daddy'; Soqotri *bāba* 'father'; Geez / Ethiopic *bābā* [ገገ] 'grandfather, ancestor'; Argobba *baba* 'grandfather';

Harari *bāb* (in address: *bābā*) ‘grandfather’. D. Cohen 1970— :40; Leslau 1963:39 and 1987:85; Hudson 2013:127. Berber: Nefusa *baba* ‘father’; Ghadames *baba* ‘father’ (term of respect preceding a masculine name); Tashelhiyt / Shilha *baba* ‘father’; Wargla *baba* ‘father’; Riff *baba* ‘father’; Tamazight *baba* ‘father’; Kabyle *baba* ‘father, grandfather’; Chaouia *baba* ‘father’; Zenaga *baba* ‘father’. Note: Some of the Berber forms may be borrowed from Semitic. Proto-East Cushitic **baabb-* ‘father’ > Dasenech *baaba* ‘father’; Gawwada *papp-o* ‘father’. Sasse 1979:44. Southern Cushitic: Proto-Rift **baba* ‘father’ > Iraqw *baba* ‘father’. Proto-Chadic **baba* ‘father’ > Hausa *bàaba* ‘father’; Angas *baba* ‘father’; Karekare *babo* ‘father’; Ngizim *bàabá* ‘father’ (term by which a person refers to or addresses his own father or an older man with whom he feels a father-like attachment); Tera *baba* ‘father’; Gabin *babu* ‘father’; Gisiga *baba* ‘father’; Buduma *baabei* ‘father’; Mubi *baaba* ‘father’. Proto-Omoti **baba* ‘father’ > Bench / Gimira *baba* ‘ancestors’. Orël—Stolbova 1995:42, no. 165, **bab-* ‘father’.

- B. Proto-Kartvelian **baba* ‘father’: Georgian *babua-* ‘grandfather’; Laz *baba-* ‘father, dad’; Mingrelian *baba-* ‘father, dad’; Svan *baba-* ‘dad’. Klimov 1964:47 **baba-*; Schmidt 1962:94.
- C. (?) Indo-European: Palaic (nom. sg.) *pa-a-pa-aš* ‘father’ (the phonetics are uncertain — Melchert [1994a:191] reconstructs Proto-Anatolian **bāba-*).
- D. (?) Etruscan *papa* ‘grandfather’, *papals*, *papacs* ‘of the grandfather: grandson’ (the phonetics are uncertain).

Sumerian *ba-ba-a* ‘old man’.

Buck 1949:2.31ff. words for family relationship, p. 94 **papa*, **appa*, **baba* ‘father’ or ‘old man’; 2.35 father. Note: Nursery words cannot be used to establish genetic relationship. Nevertheless, they are part of the vocabulary of every language and should be reconstructed wherever possible.

4. Proto-Nostratic (n.) **baaba* ‘child, babe’ (nursery word):

- A. Proto-Afrasian **ba(a)b-* ‘child’: Proto-Semitic **bāb-* ‘child, babe’ > Akkadian *bābu* ‘child, baby’; Arabic *bābūs* ‘child, young of an animal, foal’. D. Cohen 1970— :40. Lowland East Cushitic: Galla / Oromo *baabuu* ‘child’. East Chadic: Mubi *bobu* ‘child’. Orël—Stolbova 1995:42, no. 166, **bab-* ‘child’.
- B. Dravidian: Kannaḍa *pāpa* ‘small child’; Telugu *pāpa* ‘infant, babe, child’, *pāpāḍu* ‘boy’; Parji *pāp* ‘child, babe, young of animals’; Gadba (Ollari) *pāp* ‘child, young one, small one (of articles)’. Burrow—Emeneau 1984: 364, no. 4095.
- C. Proto-Indo-European **bʰābʰo-* ‘babe, child’: Old Irish *báb* ‘baby, girl’, *bábán* ‘baby’; Middle English *baban*, *babe*, *babi* ‘babe, baby’; Middle

High German *buobe* ‘boy’; Old Czech *bábě* ‘little girl, doll’; Czech *bábenec* ‘youngster’. Pokorny 1959:91 **ba^hb-*, **bha^hbh-*, **pa^hp-*, 91 **baba-*; Walde 1927—1932.II:105—106 **baba*, 107 **ba^hb-*, **bha^hbh-*, **pa^hp-*; Mann 1984—1987:59 **bhābhos*, *-ā*, *-ōn*, *-ios* ‘child, baby’; Watkins 1985:4 **baba-*; Onions 1966:67; Klein 1971:66.

5. Proto-Nostratic root **bad-* (~ **bəd-*):

(vb.) **bad-* ‘to split, to cleave, to separate, to divide’;

(n.) **bad-a* ‘split, crack, breach, opening’

- A. Proto-Afrasian **bad-* ‘to split, to cleave, to separate’: Proto-Semitic **bad-ak-* ‘to split, to cleave’ > Hebrew *beḏek* [בִּדֵּק] ‘breach, fissure’; Aramaic *bəḏak* ‘to penetrate, to break through’, *biḏkā* ‘breach (of a dike, etc.)’; Akkadian *badāku* ‘to cleave, to split’; Ugaritic *bdk-t* ‘openings, sluices’ (?); Geez / Ethiopic *bedek* [ቤደቅ], *bedak* [ቤደቅ] ‘cracks in a wall, wall about to collapse’ (Hebrew loan [cf. Leslau 1987:87]). Klein 1987:64; Murtonen 1989:106; D. Cohen 1970— :46. Proto-Semitic **bad-ad-* ‘to split, to divide, to separate’ > Hebrew *bāḏaḏ* [בָּדַד] ‘to be separated, isolated, alone’, *baḏ* [בָּד] ‘part, piece, portion’; Phoenician *bdd* ‘to be separate’; Arabic *badda* ‘to divide, to separate, to spread’; Sabaean *bdd* ‘to distribute, to share out’; Ḥarsūsi *abdōd* ‘to separate, to sever’; Mehri *abdēd* ‘to separate’; Šheri / Jibbāli *bedd* ‘to separate’; Geez / Ethiopic *badada* [ቤደደ], *badda* [ቤደ] ‘to detach, to separate, to make single’. D. Cohen 1970— :44—45; Klein 1987:63; Murtonen 1989:105; Leslau 1987:86; Tomback 1978:44. Cushitic: Bilin *bid-* ‘to open’; Beja / Beḏawye *bādo* ‘furrow’; Sidamo *bad-* ‘to differentiate, to separate’, *bad-am-* ‘to be different’. Hudson 1989:351; Leslau 1987:86. Proto-Omoti **bad-* ‘to split, to cut (wood)’ > Kefa *bad* ‘to split, to cut (wood)’; Mocha *badda-* ‘to split, to cut (wood)’ (Leslau 1987:86 gives the Mocha form as *bādda(ye)* ‘to split wood’). Orël—Stolbova 1995:43, no. 171, **bad-* ‘to separate’.
- B. Dravidian: Gondi *para han-* ‘to break (intr.)’; Konda *paḍ-* ‘to burst out, to be broken with a crackling sound’, *paṭ-* ‘to break’; Pengo *paḍ-* (*paṭṭ-*) ‘to break (intr.)’, *paṭ-* ‘to break (tr.)’; Maṇḍa *paḍ-* ‘to break (intr.)’; Kuwi *paḍ-* ‘to break, to split, to crack (intr.)’, *paṭ-* ‘to smash’. Burrow—Emeneau 1984:345, no. 3854.
- C. Proto-Indo-European **b^hed^h-*/**b^hod^h-* ‘to prick, to pierce, to dig’: Hittite (3rd sg.) *pīd-da-i*, *pād-da-i* ‘to dig’; Latin *fodiō* ‘to dig’; Gaulish *bedo-* ‘canal, ditch’; Welsh *bedd* ‘grave’; Lithuanian *bedù*, *bèsti* ‘to dig, to bury’, *badaũ*, *badýti* ‘to pierce, to gore’; Old Church Slav *bodq*, *bosti* ‘to stick, to prick’. Rix 1998a:51—52 **b^hed^h-* ‘to stab, to dig’; Pokorny 1959:113—114 **bhedh-* ‘to stab, to dig’; Walde 1927—1932.II:188 **bhodh-*; Mann 1984—1987:67 **bhedō*, *-iō* ‘to stab, to dig, to bury’, 88 **bhod-* ‘to stab; point, probe’; Gamkrelidze—Ivanov 1984.I:154 **b^[h]ed^[h]-*/**b^[h]od^[h]-* and 1995.I:133 **b^hed^h-*/**b^hod^h-* ‘to dig’; Watkins 1985:6 **bhedh-* (o-grade

form **bhodh-*) and 2000:8 **bhedh-* ‘to dig’ (*o*-grade form **bhodh-*); De Vaan 2008:229; Mallory—Adams 1997:159 **bhedh-* ‘to dig, to burrow’; Ernout—Meillet 1979:243; Walde—Hofmann 1965—1972.I:521—522; Fraenkel 1962—1965.I:41; Smoczyński 2007.1:57 **b^hed^hh₂-e-*; Puhvel 1984—.9:66—69 **bhedh-*; Kloekhorst 2008b:624—626.

- D. Proto-Eskimo **paðə* ‘opening or entrance’: Alutiiq Alaskan Yupik *pai* ‘opening, mouth (of thing)’; Central Alaskan Yupik *pai* ‘opening, mouth (of thing)’; Naukan Siberian Yupik *payə* ‘opening, mouth (of thing)’; Central Siberian Yupik *paya* (pl. *payət*) ‘opening, mouth (of thing)’; Sirenik *paca* ‘opening, mouth (of thing)’; Seward Peninsula Inuit *paa* ‘entrance, opening, mouth’; North Alaskan Inuit *paa* ‘entrance, opening, mouth’; Western Canadian Inuit *paa* ‘entrance, opening, mouth’; Eastern Canadian Inuit *paa* ‘entrance, opening, mouth’; Greenlandic Inuit *paaq* ‘opening, entrance, mouth, manhole of kayak’. Cf. Aleut *haðy-iX* ‘channel, narrow entrance to bay’, *haðya* ‘its channel’. Fortescue—Jacobson—Kaplan 1994:245.
- E. Chukchi-Kamchatkan: Proto-Chukotian **pətkə(ŋtæt)-* ‘to burst’ > Chukchi *pətkəntet-* ‘to burst, to explode’, *rə-pətk-ew-* ‘to hit the target, to plunge in (something sharp)’, *pətk-ew-* ‘to burst, to be pierced by something sharp’; Kerek *pəttəntaat-* ‘to burst, to explode’; Koryak *pətkəntat-* ‘to burst, to explode’; Alyutor *pətk-at-* ‘to shoot’. Fortescue 2005:225. (?) Proto-Chukchi-Kamchatkan **pətqə-* ‘to hit or bang’: Chukchi *pətqat-* ‘to slap (with hand or water)’; Koryak *pətqet-* ‘to crash, to bang, to hurt oneself’, *pətqəcij-* ‘to beat, to do something many times’; Alyutor *pətqat-* ‘to tumble’, *pətqəsir-* ‘to bang, to knock’, *nə-pətqə-qin* ‘unstable’, *pətqav-* ‘to hurt oneself’, *mal-pətqat-* ‘to tumble’; Kamchadal / Itelmen *əm-ptka-kas* ‘to hit with all one’s might’. Fortescue 2005:225—226.

Sumerian *bad* ‘to open up, to spread wide, to be wide apart, to separate; to untie, to unravel, to reveal’, *bad*, *bad-rá*, *bad-da* ‘open(ed), spread wide; remote’.

Buck 1949:8.22 dig; 9.26 break (vb. tr.); 9.27 split (vb. tr.); 12.23 separate (vb.); 12.232 divide; 12.24 open (vb.). Bomhard—Kerns 1994:214, no. 18; Dolgopolsky 2008, no. 171, **bed[ê]* ‘to pierce, to prick’ also, no. 174b, **bad[V]XV* ‘to be open’.

6. Proto-Nostratic root **bad-* (~ **bəd-*):
 (vb.) **bad-* ‘to waste, to dissipate, to squander’;
 (n.) **bad-a* ‘dissipation, waste, wasteland, desolated area’
- A. Afrasian: Proto-Semitic **bad-aw/y-* ‘(vb.) to be desolate, to lay waste; (n.) desert, wasteland’ > Arabic *badw* ‘desert’; Epigraphic South Arabian **bdw*, *bdt* ‘open country’; Geez / Ethiopic *badwa* [በደወ], *badawa* [በደወ]

‘to be a desert, to be a wasteland, to be desolate’, *badaya* [𐤁𐤓𐤕] ‘to be a desert’, *ʿabdawa* [𐤁𐤓𐤕𐤁], *ʿabdaya* [𐤁𐤓𐤕𐤕] ‘to lay waste, to devastate’, *badā* [𐤁𐤓] ‘desert, wasteland’, *bədəw* [𐤁𐤓𐤕𐤁] ‘desolate, deserted, laid waste’, *badw* [𐤁𐤓𐤕𐤁] ‘desert, wasteland, wilderness, uncultivated area, desolated place, desolation’; Tigrinya *bādāwä*, *bādäyä* ‘to become a desert’, *bāda*, *bādu* ‘desert’; Tigre *bāda* ‘to perish’, *ʿabda* ‘to destroy’, *bādu* ‘fallow ground’, *bādāb* ‘desert’; Amharic *bāda*, *bādəw* ‘uncultivated land, desert’; Gurage *bāda* ‘uncultivated field, plain, meadow’. D. Cohen 1970— :45; Leslau 1987:87—88; Zammit 2002:90—91. Proto-Semitic **bad-ad-* ‘to waste, to squander’ > Akkadian *badādu*, *buddudu* ‘to waste, to squander’. D. Cohen 1970— :44.

- B. Dravidian: Gondi *paṭe* ‘small field for cultivation’; Pengo *baṭa* ‘a field on the hills’; Maṇḍa *baṭa* ‘field’; Kuwi *baṭa* ‘pasture’. Burrow—Emeneau 1984:346, no. 3874.
- C. Altaic: Manchu *bada* ‘dissipation, waste’, *badala-* ‘to squander, to dissipate, to waste’.

7. Proto-Nostratic root **bad-* (~ **bəd-*):

(vb.) **bad-* ‘to occur, to happen, to experience, to endure; to cause to endure, to make to suffer, to oppress’;

(n.) **bad-a* ‘experience, happening, trouble, distress, suffering, oppression’

Derivative:

(n.) **bad-a* ‘need, want, lack, deprivation’

- A. Afrasian: Proto-Semitic **bad-al-* ‘to be afflicted with pain, to suffer; to inflict pain, to cause harm’ > Arabic *badhala* ‘damage’ (that is, *bdl* with augmented *h*), *badila* ‘to suffer from pain in the hands or joints’; Sabaeen *bdl* ‘injury, disease’; Geez / Ethiopic *badala* [𐩧𐩢𐩨] ‘to do wrong, to commit an injustice, to inflict (pain)’; Tigrinya *bāddälä* ‘to mistreat, to offend’; Amharic *bāddälä* ‘to mistreat, to offend’; Argobba *beddäla* ‘to mistreat, to offend’; Gafat *biddälä* ‘to mistreat, to offend’; Gurage *bāddälä* ‘to mistreat, to offend’. D. Cohen 1970— :45; Leslau 1979:132 and 1987:86.

- B. Dravidian: Tamil *paṭu* (*paṭuv-*, *paṭṭ-*) ‘to occur, to happen, to come into being, to rise (as a heavenly body), to occur to mind, to hit or strike against, to touch, to be caught (as fishes, birds, or other game), to suffer, to endure, to dash against’, *pāṭu* ‘coming into being, happening, experience, condition, nature, industry, business, concern or affair, affliction, suffering, place, situation’; Malayalam *paṭu* ‘what happens, is common’, *pāṭu* ‘suffering or damage, possibility, place, situation, nature’, *peṭuka* (*peṭṭ-*) ‘to happen, to be in, to belong to’; Kota *por-* (*poṭ-*) ‘to experience (emotion), to be caught, to seem good’; Toda *por-* (*poṭ-*) ‘to suffer, to experience’; Kannada *paḍu* (*paṭṭ-*) ‘to get, to obtain, to catch, to undergo, to experience, to feel, to suffer’, *paḍuvike* ‘getting, experiencing’, *paḍal* ‘incurring or

suffering’, *paḍe* ‘(vb.) to get, to undergo, to experience, to acquire, to obtain; to procreate, to bear; (n.) getting, etc.’, *pāḍu*, *pāṭu* ‘getting, obtaining, suffering, trouble, state, manner, fitness, likeness’; Tulu *paḍeyuni*, *paḍevuni* ‘to suffer, to feel, to experience, to enjoy’; Kōḍagu *paḍ-*, (*paḍuv-*, *paṭṭ-*) ‘to suffer, (something) hits, (thorn) runs in’; Telugu *paḍu* ‘to feel, to enjoy, to suffer; to be possible’; Kolami *paḍ-* (*paṭṭ-*) ‘(wound) is gotten, (eye) is filled with dust, (turn in game) is won, become (loose, dusk, bald)’. Burrow—Emeneau 1984:345, no. 3853.

- C. Proto-Indo-European **b^hed^h-*/**b^hod^h-* (lengthened-grade **b^hēd^h-*/**b^hōd^h-*) ‘(vb.) to press, to force, to drive away, to repel, to remove; to force asunder; to harass, to pain, to trouble, to grieve, to vex; to suffer annoyance or oppression; (n.) trouble, distress, suffering, oppression’: Sanskrit *bādhate* ‘to press, to force, to drive away, to repel, to remove; to force asunder; to harass, to pain, to trouble, to grieve, to vex; to suffer annoyance or oppression’, *bādhate* ‘to be pressed; to be acted upon, to suffer’, (causative) *bādhayate* ‘to oppress, to harass, to attack, to trouble, to vex’, *bādhā-ḥ* ‘annoyance, molestation, affliction, obstacle, distress, pain, trouble; injury, detriment, hurt, damage’, *bādhanā* (f.) ‘uneasiness, trouble, pain’; Pāli *bādhati* ‘to oppress, to hinder’, *bādhita-* ‘oppressed’; Prakrit *bāhai* ‘to prevent, to hurt’; Oriya *bājibā* ‘to hurt, to pain (tr.)’; Lithuanian *bėdà* ‘trouble, misfortune’; Latvian *bēda* ‘sorrow, grief, distress’; Old Church Slavic *běda* ‘distress, need, necessity’; Czech *bida* ‘poverty, misery’; Polish *bieda* ‘poverty, misery’; Serbo-Croatian *bijeda* ‘grief, misfortune’; Slovenian *béda* ‘misery’; Bulgarian *bedá* ‘misfortune, misery’; Russian *bedá* [беда] ‘misfortune, calamity; trouble’. Note: The Baltic and Slavic forms are phonologically and semantically ambiguous — they are usually derived from Proto-Indo-European **b^heyd^h-* ‘to persuade, to compel, to confide’ (cf. Pokorny 1959:117 **bheidh-*), but they could just as well be from Proto-Indo-European **b^hēd^h-* (cf. Derksen 2008:38—39). Rix 1998a:53—54 **b^heh₁d^h-* ‘to press hard’; Walde 1927—1932.II:140 (**bhēdh-*); Mann 1984—1987:59 **bhādh-* ‘to hurt, to sicken, to repel, to nauseate’; Fraenkel 1962—1965.I:38; Smoczyński 2007.1:52 **b^heh₁d^h-*; Turner 1966.I:520; Mayrhofer 1956—1980.II:425—427 and II:434—435.

Buck 1949:16.12 emotion, feeling; 16.31 pain, suffering.

8. Proto-Nostratic (n.) **bad-a* ‘need, want, lack, deprivation’ (> ‘hunger’):
Derivative of:
(vb.) **bad-* ‘to occur, to happen, to experience, to endure; to cause to endure, to make to suffer, to oppress’;
(n.) **bad-a* ‘experience, happening, trouble, distress, suffering, oppression’

- A. Dravidian: Tamil *paṭṭini* ‘fasting, abstinence, starvation’; Malayalam *paṭṭini*, *paṭṭini* ‘privation of food, starvation’; Kota *paṭu-ny* ‘hunger’; Kodagu *paṭṭani* ‘starvation’. Burrow—Emeneau 1984:346, no. 3872.
- B. Indo-European: Lithuanian *bādas* ‘hunger, starvation’, *badù*, *badėti* ‘to die of starvation’; Latvian *bads* ‘dearth, hunger’. Smoczyński 2007.1:39—40; Mann 1984—1987:88 **bhōdh-* ‘pang, pain’; Derksen 2015:75; Fraenkel 1962—1965.I:29. Note: The alleged Greek cognates cited by Mann cannot possibly be related to the Baltic forms.

Buck 1949:5.14 hunger (sb.). Bomhard 1996a:225, no. 638.

9. Proto-Nostratic root **bad-* (~ **bəd-*):
 - (vb.) **bad-* ‘to fall down, to lie down; to decay, to weaken; to perish’;
 - (n.) **bad-a* ‘lying down, fall, sleep, ruin’
- A. Proto-Afrasian **bad-* ‘(vb.) to fall down, to lie down; to decay, to weaken; to perish; (n.) lying down, fall, sleep, ruin’: Semitic: Arabic *bāda* (*byd*) ‘to perish, to die, to pass away, to become extinct’; Tāmūdīc *byd* ‘to pass away’, *bd* ‘(vb.) to perish; (n.) loss, ruin’. Syriac *bāḏ* (*bwd*) ‘to perish’. Geez / Ethiopic (reduplicated) *badbada* [በፈበፈ] ‘to perish, to disappear, to decay, to weaken, to get sick, to die, to get rusty’. D. Cohen 1970— :44, 50, and 61; Leslau 1987:86. Egyptian *bdš* ‘to become faint, weak, exhausted’, *bdšt* ‘weakness’. Hannig 1995:266; Erman—Grapow 1921:51 and 1926—1963.1:487; Faulkner 1962:86; Gardiner 1957:564. Berber: Tuareg *əbdəh* ‘to be out of wind, to be no longer able’, *zəbbədh* ‘to run out of breath’; Ghadames *əbdəz* ‘to be faint, weak, tired’, *abəddəz* ‘weakness, faintness, tiredness’, *amabduz* ‘faint, weak, tired’. Highland East Cushitic: Sidamo *badar-* ‘to tire, to become tired’. Hudson 1989:351.
- B. Dravidian: Tamil *paṭu* (*paṭuv-*, *paṭṭ-*) ‘to perish, to die, to set (as a heavenly body), to rain’, *paṭu* (*-pp-*, *-tt-*) ‘to lay horizontally, to pave, to spread out (as bedding), to kill, to cast down, to fell, to lie down to sleep’, *paṭu* ‘base, low’, *paṭai* ‘bed, layer, stratum’, *pāṭu* ‘lying prostrate, fall, sleep, death, ruin, loss, disaster’; Malayalam *paṭuka* ‘to fall, to sink’, *paṭukka* ‘(vb.) to lay stones, to build (chiefly a wall, tank), to urinate, to lie down; (n.) bed’, *paṭuppu*, *paṭappu* ‘bed, mat’; Kota *paṭ-* (*paṭ-*) ‘to lie down, to sleep’; Toda *poṛ-* (*poṛ-*) ‘to lie down, to lose (teeth, of children)’, *poṛy* ‘sleeping-place (in song)’; Kannaḍa *paḍu* (*paṭṭ-*) ‘to lie down, to set (as the sun), to be spent (as the day), to have sexual intercourse, to die’, *paṭi* ‘downfall, ruin’; Kodagu *paḍ-* (*paḍuv-*, *paṭṭ-*) ‘to lie fallow’; Telugu *paḍu* ‘to fall, to lie, to recline, to sleep’, *paḍuka* ‘bed, bedding’; Naikṛi *paṭ-* (*paṭṭ-*) ‘to fall’, *paṭp-* ‘to make to fall’, *paṭ-* ‘to fell (a tree)’; Parji *paḍ-* (*paṭṭ-*) ‘to fall, to sink down, to set (sun)’. Burrow—Emeneau 1984:344—345, no. 3852.
- C. Indo-European: Proto-Germanic **baðjaz* ‘sleeping place’ > Gothic *badi* ‘bed’; Old Icelandic *beðr* ‘bolster, featherbed’; Norwegian *bed* ‘bed’;

Swedish *bädd* ‘bed’; Old English *bedd* ‘bed, couch, resting place’; Old Frisian *bed* ‘bed’; Old Saxon *bed*, *beddi* ‘bed’; Old High German *beti* ‘bed’ (New High German *Bett*); Dutch *bed* ‘bed’. Orël 2003:32 Proto-Germanic **bādjan*; Kroonen 2013:46 Proto-Germanic **badja-* ‘bed, bedding’; Feist 1939:73; Lehmann 1986:55; De Vries 1977:29; Falk—Torp 1903—1906.I:49—50; Torp 1919:19; Onions 1966:84; Klein 1971:75; Kluge—Mitzka 1967:71; Kluge—Seebold 1989:80; Boutkan—Siebinga 2005:33—34. See also Mallory—Adams 1997:57.

Buck 1949:4.82 weak; 7.42 bed; 10.23 fall (vb.). Bomhard 1996a:225, no. 637.

10. Proto-Nostratic root **bad-* (~ **bəd-*):

(vb.) **bad-* ‘to bring into being, to bring forth; to bring into action, to initiate, to instigate, to activate, to originate’;

(n.) **bad-a* ‘creation, initiation, origination’

- A. Proto-Afrasian **bad-* ‘to bring into being, to bring forth; to initiate, to instigate, to activate, to originate’: Proto-Semitic **bad-aʃ-* ‘to bring into being, to bring forth; to initiate, to produce, to create’ > Arabic *badaʿa* ‘to introduce, to originate, to start, to do (something) for the first time; to create; to achieve unique, excellent results; to invent, to contrive, to devise, to think up’, *badʿ* ‘innovation, novelty; creation’, *bidʿa* ‘innovation, novelty; heretical doctrine, heresy; (pl.) creations (of fashion, art)’, *mubdiʿ* ‘producing, creating’; Tigre *bədʿ* ‘sudden action’. D. Cohen 1970— :46; Zammit 2002:90. Proto-Semitic **bad-aʔ-* ‘to begin, to start’ > Hebrew *bāḏāʾ* [בָּדָא] ‘to devise, to invent, to fabricate, to concoct’; Aramaic *bāḏā* ‘to invent, to fabricate’; Arabic *badaʿa* ‘to begin, to start; to arise, to spring up, to crop up’, *badʿ*, *badʿa* ‘beginning, start’, *mabdaʿ* ‘beginning, start, starting point; basis, foundation; principle’, *mabdaʿī* ‘original, initial; fundamental, basic’; Sabaeen *bdʿ* ‘beginning, first occasion’; Ḥarsūsi *bedō* ‘to begin’, *abed* ‘to start, to start up’; Mehri *əbtōdi* ‘to begin’; Šheri / Jibbāli *bédéʿ* ‘to begin’; Soqotri *bédəʿ* ‘to begin’. D. Cohen 1970— :44; Klein 1987:63; Zammit 2002:90. Berber: Kabyle *əbdu* ‘to begin’ (this may be an Arabic loan). Chadic: Ngizim *bādiitú* ‘to begin, to begin doing’; Mubi *badaa* ‘to begin’ (these may be Arabic loans). Orël—Stolbova 1995:43—44, no. 172, **badaʔ-* ‘to begin’.
- B. Dravidian: Malto *paṛge* ‘to stir up, to incite’; Brahui *paṛēfing* ‘to instigate, to provoke’. Burrow—Emeneau 1964:345, no. 3861.
- C. Kartvelian: Georgian *da-bad-eb-a* ‘to produce, to create; to bear, to bring forth, to be born’. Fähnrich 2007:45 **bad-*. Fähnrich also compares Svan *li-bd-e* ‘to pour something (in or out)’.

Buck 1949:4.72 bear (of mother); 14.25 begin; beginning.

11. Proto-Nostratic (n.) **bag-a* ‘goat, sheep’:

- A. Proto-Afrasian **bag-* ‘goat, sheep’: Proto-Berber **bag-*, **bagag-* ‘calf, lamb, ram’ > Nefusa *bɣu* ‘calf’; Ayr *a-bagag* ‘ram’; Ahaggar *a-bayaɣ* ‘lamb’; Tawlemmet *a-bagag* ‘ram’. Central Cushitic: Bilin *bäggá* ‘sheep’; Xamir *bega* ‘sheep’; Xamta *biga* ‘sheep’; Kemant *bäga* ‘sheep’; Quara *bagā* ‘sheep’. Appleyard 2006:121 Proto-Northern Agaw **bäg-a*; Reinisch 1887:71. Cushitic loans in: Geez / Ethiopic *baggə* [በገዕ] ‘sheep, ram’; Tigre *bäggü* ‘sheep’; Tigrinya *bägg’i* ‘sheep’; Amharic *bäg* ‘sheep’; Gafat *bäg* ‘sheep’; Argobba *bägi* ‘sheep’. Leslau 1987:88. Omotic: Kefa *bagee* ‘sheep’; Bworo *baggoo* ‘sheep’. Central Chadic **bag-* ‘sheep’ > Gude *baga* ‘sheep’; Fali Jilvu *bäga* ‘sheep’; Fali Bwagira *bägə-n* ‘sheep’; Bachama *m-baga-te* ‘sheep’; Fali Mubi *bägə* ‘sheep’. East Chadic **bag-* (pl.) ‘goats’ > Sibine *bage* ‘goats’. Orël—Stolbova 1995:44, no. 173, **bag-* ‘goat, sheep’.
- B. Proto-Kartvelian **bag-* ‘stall, pen’: Georgian *baga-* ‘crib, manger’; Mingrelian *boga-* ‘the ground of a stall or a pen’; Laz *boga* ‘sheep and goat pen’; Svan *bag* ‘cattle-shed’. Klimov 1964:48 **baga-* and 1998:6 **baga-* ‘sheep-pen, goat-pen; floor of pen; crib’; Fähnrich 1994:224 and 2007:44 **bag-*; Fähnrich—Sardshweladse 1995:41—42 **bag-*.
- C. (?) Indo-European: Norwegian *bagg* ‘year-old calf’; Swedish *bagge* ‘ram’. Torp 1919:14.

Buck 1949:3.25 sheep; 3.26 ram; 3.27 wether; 3.28 ewe; 3.29 lamb; 3.36 goat.

12. Proto-Nostratic root **bag-* (~ **bäg-*):

(vb.) **bag-* ‘to tie or bind together’;

(n.) **bag-a* ‘collection of things bound together: bunch, bundle, pack’

- A. Afroasiatic: Semitic: Arabic *bağd* ‘troop of people, of horses (100 and more)’. D. Cohen 1970—:42.
- B. Dravidian: Tamil *pakku* ‘bag’; Malayalam *pākku* ‘bag’; Koḍagu *pa-kki* ‘bag (in songs)’. Burrow—Emeneau 1984:361, no. 4049.
- C. Indo-European: Old Icelandic *baggi* ‘pack, bundle’; Norwegian (dial.) *bagge* ‘pack, bundle’; Middle English *bagge* ‘bag’ (Scandinavian loan). De Vries 1977:22; Torp 1919:14; Hoad 1986:31; Klein 1971:67; Onions 1966:68. Note: Origin uncertain, though Celtic origin has been proposed — similar forms are found in Romance (cf. Old French *bague* ‘bundle’, *baguer* ‘to tie up’; Spanish *baga* ‘rope used to tie packs onto animals’).
- D. (?) Proto-Eskimo **payuy-* ‘to fasten down with pegs’: Alutiiq Alaskan Eskimo *pauk-* ‘frame supporting roof of deadfall’; Central Alaskan Yupik *pauy-* ‘to put a post in the ground’, *pauk*, *pauyun* ‘post, pole’; Central Siberian Yupik *payutə-* ‘to pound a stake into the ground’; Sirenik *payutə-* ‘to pound a stake into the ground’; Seward Peninsula Inuit *pauyaq* ‘peg,

tent stake'; North Alaskan Inuit *pauk-* 'to stake to the ground', *pauyaq* 'big stake'; Western Canadian Inuit *pauk-* 'to fasten with a peg, to ram in a stake', *pauyaq* 'peg for tent'; Eastern Canadian Inuit *pauyuaq* 'peg'; Greenlandic Inuit *paay-* 'to fasten with a peg', *paayuaq* 'guard holding sealing bladder in place on kayak', *paayut* 'peg'. Fortescue—Jacobson—Kaplan 1994:246.

Buck 1949:13.19 multitude, crowd; 13.192 Note on words for collective body (of persons, animals, or things).

13. Proto-Nostratic root **bah-* (~ **bəh-*):

(vb.) **bah-* 'to shine';

(n.) **bah-a* 'brilliance, brightness, splendor, beauty; light'; (adj.) 'shining, bright, radiant'

- A. Proto-Afrasian **bah-* 'to shine': Proto-Semitic **bah-ar-* 'to shine' > Hebrew *bāhīr* [בָּהִיר] 'bright, brilliant (of light)'; Arabic *bahara* 'to glitter, to shine'; Aramaic *bəhar* 'to shine'. Proto-Semitic **bah-aw-* 'to be beautiful, shining, brilliant' > Arabic *bahā* 'to be beautiful, to shine with beauty', *bahīy* 'beautiful, splendid, brilliant, radiant, shining'. Proto-Semitic **bah-ag-* 'to be shining, beautiful, bright, brilliant; to rejoice' > Arabic *bahīḡa* 'to be glad, happy', *bahuḡa* 'to be beautiful', *bahḡa* 'splendor, magnificence, beauty'; Tigre *bāhagā* 'to rejoice'. Zammit 2002: 102. Proto-Semitic **bah-ak-* 'to shine, to be white' > Hebrew *bōhaq* [בֹּהַק] 'a harmless eruption on the skin, vitiligo'; Aramaic *bəhaq* 'to shine'; Arabic *bahaq* 'herpetic eruption, a mild form of leprosy'; Harsūsi *behōk* 'having uncolored (white) blotches on the skin'; Šheri / Jibbāli *bhəḵ* 'white patches on the skin'. D. Cohen 1970— :47 and 49; Klein 1987:65; Murtonen 1989:107. Central Chadic: Dghwede *biya* 'light'; Lampe *buwo* 'lightning'. Orël—Stolbova 1995:88, no. 364, **bVhVw-* 'to shine'.
- B. Proto-Indo-European **b^heh-* [**b^hah-*]/**b^hoh-* > **b^hā-*/**b^hō-* 'to be bright, shining; to bring to light, to cause to appear; to make clear': Sanskrit *bhāti* 'to shine, to be bright, to be luminous; to be splendid or beautiful; to be conspicuous or eminent; to appear, to seem; to show one's self, to manifest any feeling; to be, to exist'; Avestan *bānu-* 'splendor'; Greek *φάω* 'to give light, to shine', *φᾶνός* 'light, bright, joyous', *φαίνω* 'to bring to light, to cause to appear; to make known, to reveal, to disclose; to make clear; to show forth, to display; to set forth, to expound; to inform against one, to denounce; to give light, to shine; to come to light, to be visible, to appear; to come into being; to come about; to appear to be', *φάος*, *φῶς* 'light, daylight; light of the eyes' (pl. *φάεα* 'eyes'); Old Irish *bán* 'white'; Old English *bōnian* 'to polish'. Rix 1998a:54—55 **b^heh₂-* 'to glisten, to shine'; Pokorny 1959:104—105 **bhā-*, **bhō-*, **bhə-* 'to glisten'; Walde 1927—1932.II:122—123 **bhā-*; Watkins 1985:5 **bhā-* (contracted from **bhaq₂-*)

and 2000:7 **bhā-* ‘to shine’ (oldest form **bhe*₂-, colored to *bha*₂-, contracted to **bhā-*); Mallory—Adams 1997:513 **bheh*₂- ‘to shine’; Wodtko—Irslinger—Schneider 2008:7—11 **b^heh*₂-; Chantraine 1968—1980.II:1168—1170 **bhā-* (= **bhe*₂-) and II:1170—1172; Frisk 1970—1973.II:992—994 and II:989—991; Boisacq 1950:1010—1011 **bhā-* and 1014—1015; Beekes 2010.II:1545—1546 **bheh*₂- ‘to light, to shine’; Hofmann 1966:389—390 **bhā-*; Mayrhofer 1956—1980.II:493—494.

Buck 1949:15.56 shine; 16.22 joy; 16.81 beautiful. Bomhard—Kerns 1994:216, no. 20; Dolgopolsky 2008, no. 179, **beha* (or **bāha*) ‘to shine, to be bright’.

14. Proto-Nostratic root **baḥ-* (~ **bəḥ-*):

(vb.) **baḥ-* ‘to make noise’;

(n.) **baḥ-a* ‘noise, sound; voice’

- A. Proto-Afrasian **baaḥ-* ‘voice’: Egyptian *bḥn* ‘to bark, to bay, to bellow’. Hannig 1995:258; Erman—Grapow 1926—1963.1:469. Proto-Southern Cushitic **baaḥ-* ‘to shout, to cry, to yell’ > Alagwa *baḥus-* ‘to shout’; Ma’a *-boha* ‘to bark’. Ehret 1980:136. Proto-Chadic **ba* ‘mouth’ > Hausa *baa-kii* ‘mouth’; Bole *bo* ‘mouth’; Zaar *vi* ‘mouth’; Daba *ma* ‘mouth’; Lamang *ewe* ‘mouth’; Musgu *ma* ‘mouth’; Dangla *bii* ‘mouth’; Sokoro *bo-* ‘mouth’. Newman 1977:29, no. 88. Ehret 1995:81, no. 7, **baaḥ-* ‘voice’.
- B. Dravidian: Tamil *pātu* (*pāti-*) ‘to sing, to chant, to warble, to hum’, *pāṭal* ‘versifying, song’, *pāṭi* ‘singer, tune’, *pāṭṭu* ‘singing, song, music’, *pā* ‘verse, stanza, poem’, *pāvalar* ‘poets’; Malayalam *pātuka* ‘to sing’, *pāṭi* ‘tune’, *pāṭṭu* ‘singing, song, poem’; Kota *pa-ṛv-* (*pa-ṛd-*) ‘to make noise (crow, bees, gun)’, *pa-ṭ* ‘song’; Toda *po-ṛ-* (*po-ṛy-*) ‘to sing (the song called *po-ṭ*)’, *po-ṭ-* (*po-ṭy-*) ‘to shout’; Kannada *pāḍu* ‘to sing’; Telugu *pāḍu* ‘to sing, to chant, to warble’, *pāṭa* ‘singing, song’; Kolami *pa-ḍ-* (*pa-ḍt-*) ‘to sing’; Naikri *pār-* ‘to sing’; Parji *pāḍ-* ‘to sing’, *pāṭa* ‘song, story, word, language’; Gadba (Ollari) *pār-* ‘to sing’, *pāṭe* ‘word, speech, pronunciation’; Kurux *pārṇā* ‘to sing’; Malto *pāre* ‘to sing, to bewail’. Burrow—Emeneau 1984:361, no. 4065; Krishnamurti 2003:147 **pā-t-*, **pā-t-* ‘to sing’.
- C. Proto-Indo-European **b^heh₂h-* [**b^haḥ₂h-*]/[**b^hoḥ₂h-*] > **b^hā-*/**b^hō-* ‘to say, to speak’: Greek (Doric) φᾶμί ‘to declare, to make known; to say, to affirm, to assert’, φήμη (Doric φάμα) ‘a voice from heaven, a prophetic voice; an oracle’; Latin *fārī* ‘to say, to speak’; Old English *bōian* ‘to boast’; Russian Church Slavic *bajati* ‘to tell, to heal’. Rix 1998a:55 **b^heh₂-* ‘to speak’; Pokorny 1959:105—106 **bhā-* ‘to speak’; Walde 1927—1932.II:123—124 **bhā-*; Mann 1984—1987:61—62 **bhāiō*, **bhāmi* ‘to utter, to declare, to make known’; Watkins 1985:5 **bhā-* (contracted from **bha*₂-) and 2000:7 **bhā-* ‘to speak’ (oldest form **bhe*₂-, colored to *bha*₂-, contracted to **bhā-*); Mallory—Adams 1997:535 **bheh_a-* ‘to speak’; Chantraine

1968—1980.II:1194—1196 **bh(e)₂-*; Boisacq 1950:1024—1025; Hofmann 1966:396—397 **bhā-*; Frisk 1970—1973.II:1009—1010 **bhā-*; Beekes 2010.II:1566—1567 **b^heh₂-*; Walde—Hofmann 1965—1972.I:525—526; Ernout—Meillet 1979:245—246; De Vaan 2008:231; Orël 2003:52 Proto-Germanic **bōniz*; Kroonen 2013:72 Proto-Germanic **bōni-* ‘request, prayer’.

- D. Yukaghir (Northern / Tundra) *paajuu-* ‘to foretell’, *paajuujiice* ‘prophet’. Nikolaeva 2006:341.

Buck 1949:18.21 speak, talk; 18.22 say.

15. Proto-Nostratic root **baḥ-* (~ **bəḥ-*):

(vb.) **baḥ-* ‘to cut, to cut off, to strike’;

(n.) **baḥ-a* ‘cut, strike, blow’

- A. Proto-Afrasian **baḥ-* ‘to cut, to cut off, to strike’: Semitic: Arabic *baḥara* ‘to cut (camel’s ear)’. D. Cohen 1970— :56—57. Arabic *baḥaza* ‘to strike’. D. Cohen 1970— :56. Egyptian *bḥn* ‘to cut off, to wound; to drive off’. Erman—Grapow 1921:49 and 1926—1963.1:468; Faulkner 1962:83; Hannig 1995:258. Proto-Southern Cushitic **baḥ-* ‘to kill (animal)’ > Asa *bahat* ‘trap’; Dahalo *baḥ-* ‘to kill’. Ehret 1980:136. West Chadic **baHar-* ‘to cut’ > Tangale *ber* ‘to cut’; Galambu *bar* ‘to cut’. Ehret 1995:81, no. 6, **baḥ-* ‘to strike with a blade or point’; Orël—Stolbova 1995:47, no. 188, **baḥar-/baḥir-* ‘to cut, to tear’.
- B. Dravidian: Kannada *pāy* ‘to butt, to gore, to knock against’; Tuḷu *hākuni* ‘to beat, to strike’; Naiki (of Chanda) *pāk-/pāg-* ‘to beat, to shoot’; Gondi *pāy-*, *pāyānā*, *pānā*, *painā* ‘to beat, to strike’, *pā-/pāy-* ‘to beat, to strike, to shoot’, *pēhc-* ‘to strike, to play on a drum, to clap (hands)’; Pengo *pāg-* (*pākt-*) ‘to strike, to kill’; Maṇḍa *pāg-* ‘to kill’; Kui *pāga* (*pāgi-*) ‘to attack, to fight’; Kuwi *pāy-*, *pañnai* ‘to strike, to kill’, *paivali* ‘to hit, to kill’, *pay-* ‘to beat, to kill’. Burrow—Emeneau 1984:360, no. 4044.
- C. Proto-Indo-European **b^heh₂h-w/u-* [**b^haḥh-w/u-*] > **b^hāw/u-* ‘to beat, to strike’: Latin *battuō* ‘to beat, to knock’ (Gaulish loan), *fūstis* ‘stick, staff, cudgel, club’; Old Icelandic *bauta* ‘to beat’, *beysta* ‘to beat, to thresh’; Old English *bēatan* ‘to beat, to clash together; to tramp, to tread on’, *bīetel*, *bȳtel* ‘mallet, hammer’; Old High German *bōz(z)an* ‘to beat’. Rix 1998a:66 **b^heyd-* ‘to strike’; Pokorny 1959:111—112 **bhāt-*, **bhāt-* ‘to strike’ and 112 **bhāu-*, **bhū-* ‘to beat, to strike’; Walde 1927—1932.II:125—127 **bhaut-* (?), **bhūt-* and II:127 **bhaud-*, **bhūd-*; Mann 1984—1987:67 **bhatus*, **bhatyos* ‘fight’, 67 **bhatyos* ‘stupid’, 68 **bhaudō*, *-iō* ‘to beat, to chastise’; Watkins 1985:6 **bhau-* and 2000:8 **bhau-* ‘to strike’ (oldest form **bhe₂₂u-*, colored to *bha₂₂u-*, contracted to **bhau-*); Mallory—Adams 1997:549 **bheud-* ‘to strike, to beat’; Ernout—Meillet 1979:68;

Walde—Hofmann 1965—1972.I:99 **bhāt-*; De Vries 1977:29 and 34; Onions 1966:83; Klein 1971:75 **bhat-*.

Buck 1949:9.21 strike (hit, beat).

16. Proto-Nostratic root **bak^h-* (~ **bək^h-*):

(vb.) **bak^h-* ‘to declare, to utter, to announce, to assert, to proclaim’;

(n.) **bak^h-a* ‘declaration, utterance, announcement, assertion, proclamation’

A. Dravidian: Tamil *pakar* ‘to tell, to utter, to declare, to say, to announce, to pronounce, to publish’, *pakarcci* ‘speech, utterance, word’; Telugu *pagaṭu* ‘to announce’. Burrow—Emeneau 1964:340, no. 3804.

B. Proto-Kartvelian **bak-* ‘to boast, to brag, to show off’: Georgian *bak-i* ‘boasting, bragging’, *bak-ia* ‘boaster, braggart’, *bak-ia-ob-a* ‘to boast, to brag, to show off’; Mingrelian *buk-ul-a* ‘boaster, braggart, show-off’, *buk-ul-ob-a* ‘boasting, bragging’, *a-buk-ar-i* ‘boaster, braggart’; Svan *li-bāk-e* ‘to waste one’s time, to amount to nothing’, *bak*, *bāk* ‘lie, fib’. Fähnrich 2007:53 **bak-*.

Buck 1949:18.43 announce; 18.45 boast (vb.).

17. Proto-Nostratic root **bak’-* (~ **bək’-*):

(vb.) **bak’-* ‘to cleave, to split, to break open’;

(n.) **bak’-a* ‘crack, split, break’

A. Proto-Afrasian **bak’-* ‘to cleave, to split, to break open’: Proto-Semitic **bak’-af-* ‘to cleave’ > Hebrew *bākaʿ* [בָּכַע] ‘to cleave, to break open or through’; Aramaic *bākaʿ* ‘to cleave’; Ugaritic *bḳʿ* ‘to split’; Geez / Ethiopic *baḳʷa* [ባቅዎ] ‘to scratch, to tear, to scrape, to rake’; Tigre *bākʿa* ‘to be sharp (knife)’, (?) *bḳəʿa* ‘to sharpen’. D. Cohen 1970— :78; Klein 1987:81; Leslau 1987:100; Murtonen 1989:118. Proto-Semitic **bak’-ar-* ‘to split open’ > Arabic *baḳara* ‘to split open, to rip open, to cut open’; Hebrew *bākar* [בָּקַר] ‘to inquire, to seek’; Sabaeen *bḳr* ‘to bore, to excavate’. D. Cohen 1970— :79; Murtonen 1989:118; Klein 1987:81. Proto-Semitic **bak’-ak’-* ‘to split, to break open’ > Hebrew *bākaḳ* [בָּכַק] ‘to lay waste’; Geez / Ethiopic *baḳḳa* [ባቅታ] ‘to split, to break up (clods of earth)’; Amharic *bāḳḳākā* ‘to open’; Gurage *bʷākākā* ‘crack in the ground after the rainy season’. D. Cohen 1970— :79; Klein 1987:81; Murtonen 1989:118. Geez / Ethiopic (reduplicated) *baḳbaḳa* [ባቅባቅ] ‘to cultivate the soil’; Amharic *bāḳābbākā* ‘to break the soil’. D. Cohen 1970— :79; Leslau 1987:100 and 101. Proto-Semitic **bak’-aw-* ‘to separate, to split, to open, to break, to cut’ > Geez / Ethiopic *baḳawa* [ባቅወ] ‘to separate, to split, to open, to break, to cut, to be wide open’. D. Cohen 1970— :79; Leslau 1987:101. Egyptian *bqy* ‘to open’, (?) *bq* ‘to be hostile, rebellious’.

- (?) *bqbaq* ‘rebelliousness’. Hannig 1995:262—263 and 263; Faulkner 1962:85; Erman—Grapow 1926—1963.1:479. Proto-East Cushitic **bak*- ‘to crush’ > Afar *bak*- ‘to crush’; Somali *baq*- ‘to curdle’; Galla / Oromo *bak*- ‘to melt’, *bak’ak*- ‘to crack’; Burji *bak*- ‘to split’. Sasse 1979:48 and 1982:32. Orël—Stolbova 1995:50, no. 200, **baḵ*- ‘to cut, to split’.
- B. Dravidian: Tamil *paku* (*pakuv*-, *pakk*-) ‘to be split, divided; to be at variance; to be separated; to divide; to distribute; to apportion’, *pakir* ‘to divide into shares, to distribute, to break, to split, to separate’, (with nasal infix) *paṅku* ‘share, portion, part, half’; Telugu *pagulu* ‘to break, to crack, to go to pieces, to burst’; Tuḷu *pagiyuni* ‘to split, to rend, to fall in pieces, to give way’; Manda *pak*- ‘to split (firewood)’. Burrow—Emeneau 1984:340—341, no. 3808.
- C. Proto-Kartvelian **bek*- ‘to trample down’: Georgian *bek*-*n*- ‘to trample down’; Mingrelian *bak*- ‘to trample down’; (?) Svan *li-bek* ‘to press close’. Klimov 1998:11 **beḵ*- ‘to trample down’; Fähnrich 2007:57 **beḵ*-. Assuming semantic development from ‘to break, to smash, to crush (under foot)’.
- D. Proto-Indo-European **b^hek*-/**b^hok*- ‘to cut or split apart, to break apart’, (with nasal infix) **b^henk*-/**b^honk*-: Sanskrit *bhanákti* ‘to break, to shatter’; Armenian *bekanem* ‘to break’; Old Irish *bongid* ‘to break, to reap’. Rix 1998a:52 **b^heg*- ‘to break’; Pokorny 1959:114—115 **bheg*-, **bheng*- ‘to break, to smash’; Walde 1927—1932.II:149—151 **bheng*-, **bheg*-; Mann 1984—1987:69 **bheg*- ‘to break, to pierce’; Mallory—Adams 1997:81 **bheg*- ‘to break’; Watkins 1985:6 **bheg*- and 2000:8 **bheg*- ‘to break’; Gamkrelidze—Ivanov 1984.I:141 **b^h[^h]ek*-; Mayrhofer 1956—1980.II:469 **bheg*-, **bheng*-; Wodtko—Irslinger—Schneider 2008:6 **b^heg*-. Proto-Indo-European **b^hak*- ‘to divide, to distribute’: Sanskrit *bhájati* ‘to divide, to distribute, to receive, to enjoy’; Avestan *bag*- (*bažaṭ*) ‘to distribute’; Greek *φαγεῖν* ‘to eat, to devour’; Tocharian A *pāk*, B *pāke* ‘part, portion’. Rix 1998a:51 **b^hag*- ‘to share out, to apportion’; Pokorny 1959:107 **bhag*- ‘to apportion’; Walde 1927—1932.II:127—128 **bhag*-; Mann 1984—1987:60 **bhag*-, **bhāg*- ‘to enjoy; enjoyment’, 61 **bhāgos* ‘part, share’; Watkins 1985:5 **bhag*- and 2000:7 **bhag*- ‘to share out, to apportion, to get a share’; Gamkrelidze—Ivanov 1984.I:141 (fn. 1) **b^h[^h]ak*- and 1995.I:121 (fn. 62), I:132 (fn. 2), **b^hak*- ‘share, portion’; Mallory—Adams 1997:161 **bhag*- ‘to divide, to distribute’; Wodtko—Irslinger—Schneider 2008:1—2 **b^hag*-; Mayrhofer 1956—1980.II:462—463; Chantraine 1968—1980.II:1167—1168; Frisk 1970—1973.II:979—980; Beekes 2010.II:1543 **b^h(e)h₂g*-; Hofmann 1966:388 **bhag*-; Boisacq 1950:1010 **bhag*-; Adams 1999:363—364 and 2013:388—389 (possibly a borrowing from Iranian) **b^heh₂ago*- ~ **b^hago*-; Van Windekens 1976—1982.I:636 (Indo-Iranian loans).
- E. Uralic: Proto-Finno-Ugrian **pakka*- ‘to burst, to rend, to split’ > Finnish *pakku*- ‘to burst, to rend, to split’, *pakahtu*- ‘to burst, to break (intr.), to

rend, to split (intr.)'; Vogul / Mansi *pokat-* 'to open, to come out, to blossom'; Hungarian *fakad-* 'to spring, to ooze, to blossom'. Collinder 1955:105 and 1977:120; Rédei 1986—1988:349—350 **pakka-*.

- F. Proto-Altaic **baka-* 'to divide': Proto-Tungus **baK-* 'to separate, to break, to divide bread' > Evenki *bakla* 'to separate'; Lamut / Even *bēkəl* 'to separate'; Nanay / Gold (dial.) *baqta-* 'to break, to divide bread'. Starostin—Dybo—Mudrak 2003:323 **baka* 'to divide'.
- G. Eskimo: Proto-Inuit **pakak-* 'to knock into' > Western Canadian Inuit (Siglit) *pakaq-* 'to knock against and break'; Greenlandic Inuit *pakaq-*, *pakamiy-*, *pakammiy-* 'to happen to jostle'; Northwest Greenlandic *pakki-* 'to parry a thrust, to jostle so as to make miss aim, to tackle'; East Greenlandic *pakki-* 'to slap'. Fortescue—Jacobson—Kaplan 1994:247.
- H. Chukchi-Kamchatkan: Proto-Chukotian **pako-* 'to strike, to knock' > Chukchi *pako-* 'to flick, to give a filip (on the forehead) to someone'; Koryak *pako-* 'to touch or knock against, to cut into'. Fortescue 2005:207 **pako-* 'to flick' (?).

Buck 1949:9.26 break (vb. tr.); 19.52 enemy. Bomhard—Kerns 1994:217—218, no. 22; Hakola 2000:130, no. 565.

18. Proto-Nostratic root **bak'*- (~ **bək'*-):

- (vb.) **bak'*- 'to look at, to look over, to observe, to examine; to look for';
(n.) **bak'-a* 'looking at or over, observation, examination'

- A. Proto-Afrasian **bak'*- 'to look at, to look over, to observe, to examine; to look for': Proto-Semitic **bak'-aw-* 'to look at, to look over; to look upon, to regard, to observe, to examine' > Arabic *baḳā* 'to look upon, to regard; to expect'; Aramaic *bəḳā* 'to inquire into, to search for, to examine'; Mandaic *bḳa* 'to search for, to look for'. D. Cohen 1970— .2:78. Proto-Semitic **bak'-ay-* 'to look at, to look over, to observe' > Arabic (inf.) *baḳy* 'to look at or upon, to regard, to observe'. Proto-Semitic **bak'-al-* 'to search for, to look for' > Ugaritic *bḳl* 'to search for, to look for; to investigate, to find out'. Proto-Semitic **bak'-ar-* 'to look over, to examine; to search for' > Jewish Palestinian Aramaic *baḳḳar* 'to search for'; Syriac *bəḳar* 'to inquire, to seek'; Ugaritic *bḳr* 'to examine, to scrutinize'; Hebrew *bāḳar* [בָּקַר] 'to inquire, to seek; to look for'. D. Cohen 1970— .2:79; Klein 1987:81; Murtonen 1989:118. Egyptian *b3ḳ* 'to look at, to look over; to catch sight of someone, to see someone'. Erman—Grapow 1926—1963. 1:426; Hannig 1995:242 and 2006:789. Note: /β/ is a "triconsonantizer" (cf. Militarev 2005). Orël—Stolbova 1995:50—51, no. 201, Proto-Afrasian **baḳ-* 'to see, to look'. Notes: (1) The Chadic, Cushitic, and Omotic forms cited by Orël—Stolbova are problematic in various ways — the Cushitic forms, in particular, are almost certainly loanwords (as suggested, for example, by Dolgopolsky 2008:257—258, no. 187, who derives them from

Arabic [inf.] *baḳy* ‘to look at or upon, to regard, to observe’). Hence, they are not included here. (2) This root is not related to Proto-Afrasian **bak*- ‘to cut, to split’ (cf. Orël—Stolbova 1995:50, no. 200).

- B. Proto-Altaic **bāka* ‘to look at, to watch’: Proto-Tungus **baKa* ‘to find, to obtain’ > Evenki *baka-* ‘to find, to obtain’; Lamut / Even *baq-* ‘to find, to obtain’; Negidal *baxa-* ‘to find, to obtain’; Manchu *baḡa-* ‘to get, to obtain’, *baḡana-* ‘to go to get’; Spoken Manchu (Sibo) *bahə-* ‘to find, to obtain’; Jurchen *baxa-biar* ‘to obtain’; Oroch *bā-* ‘to find, to obtain’; Ulch *bā-* ‘to find, to obtain’; Oroch *bā-* ‘to find, to obtain’; Nanay / Gold *bā-* ‘to find, to obtain’; Udihe *baʕ-* ‘to find, to obtain’; Solon *baxa-* ‘to find, to obtain’. Tsintsius 1975—1977.I:66—67. Proto-Turkic **baq-* ‘to look, to watch’ > Karakhanide Turkic *baq-* ‘to look, to watch’; Turkish *bak-* ‘to look, to seem, to appear; to watch’, *bakma* ‘face, gaze, appearance, aspect, air, countenance, expression, glance, guise, view’; Gagauz *baq-* ‘to look, to watch’; Azerbaijani *bax-* ‘to look, to watch’; Turkmenian *baq-* ‘to look, to watch’; Uzbek *bəq-* ‘to look, to watch’; Uighur *baq-* ‘to look, to watch’; Karaim *baq-* ‘to look, to watch’; Tatar *baq-* ‘to look, to watch’; Bashkir *baq-* ‘to look, to watch’; Oyrot (Mountain Altai) *baq-* ‘to look, to watch’; Kirghiz *baq-* ‘to look after’; Kazakh *baq-* ‘to watch, to spy, to follow’; Noghay *baq-* ‘to gaze’; Khakas *bax-* ‘to look, to watch’; Tuva *baq-qi-la-* ‘to peek, to arise’; Chuvash *pəʷx-* ‘to look, to watch’; Yakut *bik-* ‘to appear, to arise’; Dolgan *bik-* ‘to look out’. Stachowski 2019:75. Starostin—Dybo—Mudrak 2003:323 Proto-Altaic **bāka* ‘to look at, to watch’. Note: Not related to Proto-Altaic **bāká* (~ -o) ‘to divide’ (cf. Starostin—Dybo—Mudrak 2003:323).

Buck 1949:11.31 to seek; 11.32 to find; 15.52 to look (vb.), to look at. Illič-Svityč 1971—1984.I:172—173, no. 3, **baKa* ‘to look’; Dolgopolsky 2008: 257—258, no. 187, **baKV* ‘to look’.

19. Proto-Nostratic (n.) **bak*’-a ‘cattle, herd of cattle’:

- A. Proto-Afrasian **bak*’- ‘cattle, herd of cattle’: Proto-Semitic **bak*’-ar- ‘cattle, herd of cattle’ > Phoenician *bkr* ‘cattle’; Hebrew *bāḳār* [בָּקָר] ‘cattle, herd, oxen’; Aramaic *baḳrā* ‘herd’; Syriac *baḳrā* ‘herd’; Mandaic *baḳra* ‘herd, flock’; Arabic *baḳar* (coll.) ‘bovines, cattle’, *baḳara* (pl. -āt), *bāḳir*, *bāḳūr* ‘herd of cattle’, *bāḳūra-t* ‘cow’, *baḳarī* ‘bovine, cattle-, cow- (in compounds)’; Ḥarsūsi *beḳerēt/beḳār* ‘cow’; Mehri *bəḳərēt/abḳār* ‘cow’; Sabaeen *bkr* ‘bovines, large cattle; head of cattle’. D. Cohen 1970— .2:80; Murtonen 1989:118; Klein 1987:81; Militarëv—Kogan 2005.II:83—85, no. 59, **baḳar-* ‘large cattle’ — potential cognates from other Afrasian daughter languages discussed by Militarëv—Kogan are, as they themselves note, not reliable. Orël—Stolbova 1995:76, no. 310, **boḳar-* ‘cattle’ —

according to Militarëv—Kogan (2005.II:85), the etymology proposed by Orël—Stolbova is “phonologically and semantically questionable”.

- B. Proto-Altaic **bāku* (~ *-k^h-*) ‘(small) cattle’: Proto-Mongolian **bog* ‘small cattle, sheep and goats’ > Written Mongolian *boy* ‘small cattle’; Khalkha *bog* ‘small livestock (sheep and goats)’; Kalmyk *bogə* ‘small cattle, sheep and goats’. Proto-Turkic **bākana* ‘sheep skin; lamb; kid’ > Turkish *bağan* ‘sheep skin’; Azerbaijani *bayana* ‘sheep skin’; Turkmenian *bayana* ‘sheep skin’; Uzbek *bayana* ‘sheep skin’; Kazakh *bayana* ‘lamb’; Kirghiz *baylan*, *bayılan* ‘lamb that has stopped suckling’, *bayıldır* ‘wild lamb, one-year-old mountain goat’. Starostin—Dybo—Mudrak 2003:324 **bāku* (~ *-k^c-*) ‘small cattle’.

Buck 1949:3.15 livestock (cattle in wide sense); 3.20 cattle; 3.22 ox; 3.23 cow. Different (erroneous) etymology in Dolgopolsky 2008, no. 188, **buḲa* ‘bovines’.

20. Proto-Nostratic root **bal-* (~ **bəl-*):

(vb.) **bal-* ‘to be or become dark, obscure, blind’;

(n.) **bal-a* ‘darkness, obscurity, blindness’; (adj.) ‘dark, obscure, blind’

- A. Proto-Afrasian **bal-* ‘(vb.) to be blind; (adj.) blind’: Coptic *blle* [βλλε] ‘blind’. Vycichl 1983:27; Černý 1976:23. Proto-East Cushitic **balf-* / **ballaṣ-* ‘blind, one-eyed’ > Burji *balʔ-aa* ‘blind’; Sidamo *balʔ-icca* ~ *ball-icca* ‘blind’; Gedeo / Darasa *ball-eʔ-* ‘to be blind’; Harso *pallaʔ-akko* ‘blind’; Galla / Oromo *balla-a* ‘blind’. Sasse 1982:33; Hudson 1989:28. Proto-Southern Cushitic **balaṣ-* ‘blind’ > Kʼwadza *balangayo* ‘blind person’. Ehret 1980:320. Orël—Stolbova 1995:51—52, no. 204, **bal-* ‘eye, eyelid; blind’.
- B. Proto-Indo-European **b^hlendh-* / **b^hlondh-* / **b^hlṇdh-* ‘to make blind, to be blind’: Gothic *blinds* ‘blind’, **gabblindjan* ‘to make blind’, **afblindnan* ‘to become blind’; Old Icelandic *blinda* ‘to blind’, *blindr* ‘blind’, *blunda* ‘to shut the eyes’, *blundr* ‘dozing, slumber’; Old English *blendan* ‘to blind, to deceive’, *blind* ‘blind’; Old Frisian *blind* ‘blind’; Old Saxon *blind* ‘blind’; Old High German *blint* ‘blind’ (New High German *blind*); Lithuanian *blendžiù*, *blęsti* ‘to become dark’; Old Church Slavonic *blędō*, *blęsti* ‘to go blindly’. Pokorny 1959:157—158 **bhrendh-* ‘dim, reddish’; Walde 1927—1932.II:216 **bhrendh-*; Rix 1998a:73—74 **b^hlendh-* ‘to become blurred, murky, confused’; Mann 1984—1987:82 **bhrendhō* ‘to mix, to confuse, to dazzle’, 84 **bhlṇdh-* ‘to confuse, to deceive, to err; confusion, error’, 84 **bhlongdh-* ‘to confuse, to stir, to mix, to blur, to deceive’; Watkins 2000:9 **bhel-* ‘to shine, to flash, to burn; shining white and various bright colors’; Mallory—Adams 1997:147 **bhrendh-* ‘to be/make cloudy’; Orël 2003:48 Proto-Germanic **blendaz*; Kroonen 2013:69 Proto-Germanic **blinda-* ‘blind’; Lehmann 1986:75—76 **bhrendh-* ‘to be or make cloudy’; Feist

1939:100; De Vries 1977:44 and 45; Boutkan—Siebinga 2005:53—54; Onions 1966:100 **bhlendhos*; Klein 1971:85 **bhlendh-*; Kluge—Mitzka 1967:84; Kluge—Seebold 1989:92; Derksen 2008:44; Fraenkel 1962—1965.I:47—48; Smoczyński 2007.1:63—64.

- C. Altaic: Mongolian *balai* ‘dark, obscure, ignorant; intellectually or morally blind, stupid’, *balaira-* ‘to become blind; to become dark or obscure; to grow dim’, *balar* ‘dark, obscure, blind, unclear, ignorant; primitive, primeval; thick, dense, impenetrable’, *balara-* ‘to become obscure or dark, to blur, to become effaced; to become illegible; to become embroiled, confused’, *balaraŋyui* ‘dark, ignorant; darkness, obscurity, obscuration, stupidity’, *balarqai* ‘obscured, dark, blurred, indistinct, illegible’; Manchu *balu* ‘blind’. Note: Starostin—Dybo—Mudrak (2003:339) include the Mongolian forms under Proto-Altaic **belo* ‘pale’.
- D. Chukchi-Kamchatkan: Proto-Chukotian **pəlmə-* ‘(to be) dark from snow or rain’ > Chukchi *pəlməpəlm* ‘darkness from falling snow or rain’, *pəlm-at-* ‘to be dark from falling snow or fog’, *ləla-pəlmə-lʔən* ‘blind, with poor vision’; Kerek *ijaa-pəlmən* ‘snowstorm’, *pəlməlla-lran* ‘short-sighted’. Fortescue 2005:222.
- E. (?) Proto-Gilyak / Nivkh **bolm-* ‘blind’: Amur *polm-dʷ* ‘blind’; East Sakhalin *polm-d* ‘blind’. Fortescue 2015:24.

Buck 1949:4.97 blind. Illič-Svityč 1971—1984.I:175, no. 6, **bala* ‘blind’; Bomhard—Kerns 1994:208—209, no. 13; Dolgopolsky 2008, no. 200, **baLʃV* ‘blind’.

21. Proto-Nostratic root **bal-* (~ **bəl-*):

(vb.) **bal-* ‘to well up, to surge, to overflow, to pour over’;

(n.) **bal-a* ‘outpour, downpour, surge, flow’

- A. Proto-Afrasian **bal-* ‘to flow, to overflow, to pour over’: Proto-Semitic **bal-al-* ‘to overflow, to pour over’ > Hebrew *bālāl* [בָּלַל] ‘to anoint, to moisten (with oil), to pour (oil on someone)’; Phoenician *bll* ‘a type of offering’; Arabic *balla* ‘to moisten, to wet, to make wet’, *billa*, *balal* ‘moisture, humidity’, *ball* ‘moistening, wetting; moisture’; Old Akkadian *balālum* ‘to pour out’; Sabaeen *bll* ‘wet, moist’; Šheri / Jibbāli *eblēl* ‘to give (animals) their fill’; Geez / Ethiopic *balla* [በለ] ‘to moisten, to wet, to immerse in liquid’; Tigre *bālāl* ‘to be full, to overflow, to flow, to rain’. Murtonen 1989:112; D. Cohen 1970— :67—68; Klein 1987:75; Leslau 1987:96. Proto-Semitic **ba/wa/-* ‘to make water, to urinate’ > Arabic *bāla* ‘to make water, to urinate’, *bawl* ‘urine’. D. Cohen 1970— :51. Proto-Semitic **wa-bal-* ‘to flow, to rain’ > Arabic *wabala* ‘to shed heavy rain’, *wabl* ‘downpour’, *wābil* ‘heavy downpour; hail, shower’; Hebrew *yāḇāl* [יָבַל] ‘watercourse, stream’, *ʔūḇāl* [אֲוָבַל] ‘stream, river’, *yūḇal* [יְוָבַל] ‘stream’; Amharic *wābālo* ‘heavy rain’; Gurage (Eža) *wābār* ‘strong rain’.

- with wind'. Murtonen 1989:210; D. Cohen 1970— :485—486; Klein 1987:253; Leslau 1979:641. Berber: Tuareg *bəlulu* 'to be very runny', *ssəbəlulu* 'to make very runny'. Proto-Highland East Cushitic **bal-* 'to be wet', **bale* 'well' > Sidamo *bale* 'well', (pl.) *balla* 'springs, wells'; Gedeo / Darasa *bale(essa)* 'well', *ba'lessa* 'fall, season of small rains'. Hudson 1989:60 and 165—166. Ehret 1995:84, no. 13, **bal-* 'to wet'.
- B. (?) Kartvelian: Svan *li-bēl-e* 'to cause something to swell up, to swell up'. This is usually derived from Proto-Kartvelian **ber-* 'to blow, to inflate' (cf. Klimov 1964:50 and 1998:11; Fähnrich 2007:57—58). To account for the Svan form, Vogt (1939:133) proposed an alternative reconstruction, **bāl-*. However, Klimov (1998:11) rejects this.
- C. Proto-Indo-European **b^{hl}-ew-/b^{hl}-ow-/b^{hl}-u-* 'to overflow, to pour over, to flow': Greek φλέω 'to abound, to team with abundance', φλύω, φλύζω 'to boil over, to bubble up'; Latin *fluō* 'to flow', *flūmen* 'running water, stream, river'; Old Church Slavic *bljujō* 'to vomit'. Rix 1998a:74—75 **b^{hleu}H-* 'to overflow'; Pokorny 1959:158—159 **bhleu-* 'to blow up'; Walde 1927—1932.II:212—214 **bhleu-*; Mann 1984—1987:85 **bhleuō* 'to blow, to bellow, to belch, to gush', 86 **bhluō*, -*iō* 'to well up, to surge, to gush'; Watkins 1985:9 **bhleu-* and 2000:12 **bhleu-* 'to swell, to well up, to overflow'; Mallory—Adams 1997:561 **bhleu-* 'to swell, to overflow'; De Vaan 2008:228; Ernout—Meillet 1979:241—243 **bhleu-*; Walde—Hofmann 1965—1972.I:519—521 **bhleug^u-*; Chantraine 1968—1980.II:1212 and II:1216 **bhl-eu-*; Frisk 1970—1971.II:1025—1026; Boisacq 1950:1030; Hofmann 1966:400 **bhleu-*; Beekes 2010.II:1568 **b^{hleu}-*. Proto-Indo-European **b^{hl}-ey-t'-/b^{hl}-oy-t'-/b^{hl}-i-t'-* 'to swell up, to overflow': Greek φλιδάω 'to overflow with moisture, to be ready to burst', (Hesychius) φλοιδέω, φλοιδιάω 'to seethe'; English *bloat* 'to swell'. Rix 1998a:72 **b^{hleid}-* 'to swell up, to overflow'; Pokorny 1959:156 **bhleid-* 'to blow up'; Walde 1927—1932.II:211 **bhleid-*; Mann 1984—1987:85 **bhlold-* 'to seethe, to swell'; Mallory—Adams 1997:71 **bhle-i-* 'to become inflated'; Watkins 1985:9 **bhle-i-* and 2000:12 **bhle-i-* 'to blow, to swell'; Frisk 1970—1971.II:1027—1028; Boisacq 1950:1031; Chantraine 1968—1980.II:1213—1214 **bhl-ei-*; Hofmann 1966:401 **bhle-i-d-*; Beekes 2010.II:1579—1580 **b^{hlid}-*; Orël 2003:47 Proto-Germanic **blaitōjanan*; Onions 1966:100—101; Klein 1971:86 **bhle-i-d-*. Some of these words may belong with Proto-Nostratic **bul-* (~ **bol-*) 'to swell, to expand, to spread out, to overflow; to puff up, to inflate' instead.
- D. Altaic: Mongolian *balbai-* 'to swell, to bulge'.
- E. Chukchi-Kamchatkan: Proto-Chukotian **pəlrə(lræt)-* 'to flow' > Chukchi *pəl'əl'et-* 'to flow', *pəl'ə-l'en* 'current, stream'; Kerek *pəlrəlyaat-* 'to flow'; Koryak *pəlrəlrət-* 'to flow (water)', *pəlrə-lrən* 'current'. Fortescue 2005:223.

Sumerian *bal* 'to pour out; to scoop out (water); to overflow, to spill'.

Buck 1949:10.32 flow (vb.). Illič-Svityč 1971—1984.I:193—194, no. 29, **b₁lH₁* ‘to blow, to inflate’; Bomhard—Kerns 1994:205—206, no. 10.

22. Proto-Nostratic root **bal-* (~ **bəl-*):

(vb.) **bal-* ‘to bite, to eat’;

(n.) **bal-a* ‘bite, morsel’

- A. Proto-Afrasian **bal-* ‘(vb.) to bite, to eat; (n.) bite’: Proto-Semitic **bal-aš-* ‘to eat, to swallow, to gulp down’ > Arabic *balaʿa* ‘to swallow, to gulp down’, *balʿa* ‘large bite, big gulp’, *balʿama* ‘to swallow greedily’; Hebrew *bālaʿ* [בָּלַע] ‘to swallow, to gulp down’; Aramaic *bālaʿ* ‘to swallow’; Mehri *bōla* ‘to swallow’; Ḥarsūsi *bōla* ‘to swallow’; Šheri / Jibbāli *bēlaʿ* ‘to swallow’; Geez / Ethiopic *balʿa* [በለዐ] ‘to eat, to consume, to devour’; Tigre *bālʿa* ‘to eat’; Tigrinya *bālʿe* ‘to eat’; Amharic *bälla* ‘to eat’; Gafat *bällä* ‘to eat’; Harari *bālaʿa* ‘to eat’; Gurage (Selti) *bāla*, (Soddo) *bälla* ‘to eat’, (Selti) *bīli* ‘food’. D. Cohen 1970—:68—69; Leslau 1979:138 and 1987:94—95; Zammit 2002:100—101; Murtonen 1989:113. Cushitic: Bilin *bālʿ-* ‘to eat’, *belāʿ* ‘food, nourishment’; Saho *balaʿ* ‘to eat’ (according to Leslau 1987:95, the preceding Cushitic forms are loans from Ethiopian Semitic). Reinisch 1887:78. Beja / Beḍawye *bāla* ‘throat’. Orël—Stolbova 1995:52, no. 208, **bal-aš-* ‘to eat, to swallow’.
- B. Dravidian: Tamil *pal* ‘tooth’, *pallaṇ* ‘man with long or large teeth’, *palli* ‘woman with large or long teeth; a kind of harrow’; Malayalam *pal*, *pallu* ‘tooth’; Kota *pal* ‘tooth’; Kannaḍa *pal* ‘tooth’; Koḍagu *palli* ‘tooth’; Tuḷu *paru* ‘animal’s tooth’; Telugu *palu*, *pallu* ‘tooth’; Kolami *pal* ‘tooth (especially front tooth)’; Naikri *pal* ‘tooth’; Naiki (of Chanda) *pal* ‘tooth’; Gadba (Salur) *pallū* ‘tooth’; Gondi *pal* ‘tooth’; Konda *pal* ‘tooth’; Maṇḍa *pal* ‘tooth’; Kuwi *pallū*, *pallu*, *palu* ‘tooth’; Kuṛux *pall* ‘tooth’; Malto *palu* ‘the teeth’. Burrow—Emeneau 1984:355, no. 3986; Krishnamurti 2003:46, 108, and 196 **pal* ‘tooth’.
- C. Proto-Uralic **pala-* ‘(vb.) to bite, to eat; (n.) bite, bit, morsel’: Finnish *pala* ‘fragment, bit, crumb’; Estonian *pala* ‘fragment, bit, crumb’; Lapp / Saami *buola* ‘small piece, bit’; Mordvin *pal* ‘small piece, bit’; (?) Cheremis / Mari *pultāš* ‘morsel, bit’; Hungarian *fal-* ‘to eat, to devour’, *falat* ‘morsel’; Vogul / Mansi *puul* ‘piece, bit, morsel’; Ostyak / Xanty *pul*, (Southern) *pul* ‘piece; mouthful (of food), morsel, crumb (of bread or other food)’, *pulem-* ‘to devour’; Yurak Samoyed / Nenets *paale-* ‘to devour’; Selkup Samoyed *poly-* ‘to devour’. Collinder 1955:46—46 and 1977:64; Janhunen 1977b: 116; Rédei 1986—1988:350 **pala*; Décsy 1990:105 **pala* ‘a bit, a bite; to eat’; Zhivlov 2023:159 **pala-* ‘to swallow, to devour’, 159 **pala* ‘bit’.
- D. Altaic: Mongolian *balγu-* ‘to swallow, to gulp’, *balγu* ‘mouthful, gulp, swallow’; Manchu *biḷḷa* ‘throat’. Starostin—Dybo—Mudrak 2003:344.
- E. (?) Proto-Chukchi-Kamchatkan **ləpəlo-* ‘to gnaw or bite’: Chukchi *nalpəlo-* ‘to gnaw’; Koryak *pəlo-* ‘to gnaw, to lick around’; Kamchadal /

Itelmen *pəl-kas* ‘to bite (for example, dog)’. Fortescue 2005:165—166; Mudrak 1989b:101 **lpəlo-* ‘to bite’. Note also: Proto-Chukotian **pəl-* (or **ləpəl-*) ‘to drink (up)’ > Chukchi *pəl-* ‘to drink (up)’, *ye-lpə-lin* ‘drunk’; Kerek *pəl-* ‘to drink’; Koryak *pəl-* ‘to drink (up)’; Alyutor *pəl-*, *-lp-* ‘to drink’, *ina-lp-at-* ‘to get drunk, to be a drinker’. Fortescue 2005:221. According to Fortescue (2005:165), the relationship, if any, between these two stems is obscure.

Buck 1949:4.27 tooth; 4.58 bite (vb.); 5.11 eat. Illič-Svityč 1971—1984.I:173, no. 4, **balʃ/u/* ‘to swallow’; Dolgopolsky 2008, no. 201, **baʃ[i]ʃa* (or **baʃ[i]ʃ[U]* ?) ‘(vb.) to swallow; (n.) throat’.

23. Proto-Nostratic root **bal-* (~ **bəl-*):

(vb.) **bal-* ‘to shine, to be bright’;

(n.) **bal-a* ‘glitter, gleam, brightness’

- A. Proto-Afrasian **bal-* ‘to shine, to be bright’: Proto-Semitic **bal-ag-* ‘to gleam, to shine’ > Hebrew *bālay* [בָּלַי] ‘to gleam, to smile’; Arabic *balaḡa* ‘to shine, to dawn’, *baḡa* ‘to be happy, glad’, *ʔablaḡ* ‘bright, clear, gay, serene, fair, beautiful, nice’. D. Cohen 1970—:65; Murtonen 1989:113. Proto-Semitic **bal-ac-* ‘to sparkle, to glitter’ > Syriac *baḡšūšītā* ‘spark’; Geez / Ethiopic *balaša* [በለሰ] ‘to sparkle, to glitter’; Tigrinya *bəlləččə bälä*, *bəlləččə bälä* ‘to sparkle, to glitter’; Tigre *bäläččə bēla*, *bäläččə bēla* ‘to sparkle, to glitter’; Amharic *bəlləččə alä*, *täbäläččə* ‘to shine, to twinkle, to glitter, to sparkle, to dazzle, to flash’; Argobba *bəlləččə alä* ‘to sparkle, to glitter’; Harari *bilič bilič bāya* ‘to scintillate’; Gurage (Wolane) *bəlləč alä* ‘to flash (lightning), to scintillate, to lighten’, (Wolane) *bəlləččə* ‘lightning’. D. Cohen 1970—:69; Leslau 1963:41, 1979:140, and 1987:97. Proto-Semitic (reduplicated) **bal-bal-* ‘to blaze’ > Geez / Ethiopic *balbala* [በለበለ], *ʔanbalbala* [አንበለበለ] ‘to blaze, to emit flames, to kindle into a blaze, to let glitter, to flash’, *nabalbāl* ‘flame’; Tigrinya *bälbälä*, *bälbäl*, *bälä*, *tänbälbälä* ‘to flame, to blaze, to flicker’, *näbälbal* ‘flame’; Amharic *tänbäläbbälä*, *tänboläbbolä* ‘to blaze, to emit flames’, *näbälbal* ‘flame’; Gurage (Wolane) *bolbol bälä* ‘to flicker, to blaze’. Leslau 1979:139 and 1987:95. Proto-Semitic **bal-bic-* ‘to gleam, to glitter’ > Neo-Syriac *balbiš* ‘to gleam, to glitter’. D. Cohen 1970—:65. Highland East Cushitic: Gedeo / Darasa *balak’a* ‘lightning’; Sidamo *belek’ó* ‘lightning’; Kambata *belell-ees-* ‘to reflect (of lightning), to shine’; Hadiyya *belel-* ‘to reflect, to shine’. Hudson 1989:92 and 122. Proto-Sam **bil-ig-* ‘to flash (lightning)’ > Somali *bilig* ‘sparkling’; Boni *bilikso* ‘lightning’. Heine 1978:54. Perhaps also: Beja / Beḡawye *balöl-* ‘to burn, to flame’, *balöl* ‘flame’. Reinisch 1895:48. Orël—Stolbova 1995:52, no. 207, **balag-/ *balug-* ‘to shine’ (deverbative in Somali *bilig* ‘sparkling’).

- B. Dravidian: Tamil (reduplicated) *paḷapaḷa* ‘to glitter, to shine’; Malayalam (reduplicated) *paḷapaḷa* ‘gleaming’, *paḷaṇṇuka* ‘to glitter’; Kannaḍa *paḷakane*, *paḷañce*, *paḷacane*, *paḷaccane* ‘with a glitter, with pure brightness, with a flash; brightness, pureness’; Tuḷu *paḷḷena* ‘to light, to shine’; Telugu (reduplicated) *paḷapaḷa* ‘glitteringly’. Burrow—Emeneau 1984:357, no. 4012.
- C. Proto-Indo-European **b^hel-/b^hol-* ‘shining, white’: Sanskrit *bhāla-m* ‘splendor’; Greek φαλός ‘shining, white’; Old Church Slavic *bělb* ‘white’; Lithuanian *bālas*, *báltas* ‘white’. Pokorny 1959:118—120 **bhel-*, **bhela-* ‘glittering, white’; Walde 1927—1932.II:175—176 **bhel-*; Mann 1984—1987:63 **bhal-* ‘white, pale, white-spotted, pallor’, 63 **bhāl-*; Watkins 1985:6 **bhel-* and 2000:9 **bhel-* ‘to shine, to flash, to burn; shining white and various colors’; Mayrhofer 1956—1980.II:496—497; Hofmann 1966:391; Frisk 1970—1973.II:988—989; Beekes 2010.II:1550—1551 **b^hēlH-o-*; Chantraine 1968—1980.II:1176 **b^hol-*, **bhel-*; Boisacq 1950:1013—1014. Proto-Indo-European **b^hles-/b^hlos-* ‘to shine’: Old English *blæse*, *blase* ‘torch, fire’; Old Saxon *blas* ‘white, whitish’; Middle High German *blas* ‘bald’ (originally ‘white, shining’) (New High German *bläß*); Old High German *blassa* ‘white spot’ (New High German *Blesse*). Pokorny 1959:158 **bhles-* ‘to glitter’; Walde 1927—1932.II:217 **bhles-*; Onions 1966:99; Klein 1971:85; Kluge—Mitzka 1967:81—82 and 84 **bhles-*; Kluge—Seebold 1989:89—90 and 92. Proto-Indo-European **b^hliyc-/b^hleyC-* > **b^hlīC-/b^hlēC-* (**b^hliyV-/b^hleyV-*) ‘to shine’: Old English *blēo* ‘color, appearance, form’, *blīcan* ‘to shine, to glitter’, *blāc* ‘bright, white’; Old Saxon *blī* ‘color’; Old Church Slavic *blědъ* ‘light green, yellow’. Rix 1998a:73 **b^hleig-* ‘to shine’; Pokorny 1959:155—156 **bhlēi-*, **bhlai-*, **bhlī-* ‘to glitter’; Walde 1927—1932.II:210 **bhlei-*; Mann 1984—1987:83 **bhlīgsō*, *-iō* (**bhlīks-*, radical **bhlīg-*) ‘to shine, to flash’, 82 **bhlēdh-* ‘pale’. Proto-Indo-European **b^hlu-*, **b^hluH-* > **b^hlū-* ‘to shine’: Old Icelandic *blys* ‘torch’; Old High German *bluhhen* ‘to burn, to light up’; Old English *blysa* ‘torch, fire’; Middle Irish *blosc* ‘clear, evident’, *bloscad* ‘radiance’; Czech *blčeti* ‘to flash, to blaze’, *blýskati* ‘to lighten, to flash’; Polish *blysk* ‘lightning’. Pokorny 1959:159 **bhlēu-* : **bhlau-* : **bhlū-* ‘to glitter’; Walde 1927—1932.II:214 **bhleu-s-*; Mann 1984—1987:85—86 **bhluk-* ‘to flash, to shine, to turn white’, 86 **bhlus-*, 86 **bhluskos* ‘light, bright, pale’; De Vries 1977:46 **bhleu-s-*. Proto-Indo-European **b^hlek’-/b^hlok’-/b^hlk’-*, **b^helk’-/b^holk’-/b^hlk’-* ‘to shine’: Sanskrit *bhārgas-* ‘splendor, radiance’; Old Church Slavic *blagъ* ‘good’; Greek φλέγω ‘to burn, to blaze’; Latin *fulgor* ‘lightning’, *flagrō* ‘to blaze, to burn, to glow’; Old Icelandic *blakkr* ‘dusky, black, dun’; Old English *blāccern*, *blācern* ‘lantern’, *blæc* ‘black’; Old Saxon *blac* ‘ink’; Dutch *blaken* ‘to burn’; Old High German *blah-*, *blach-* ‘black’ (in compounds). Rix 1998a:70—71 **b^hleg-* ‘to shine, to glitter, to glisten’; Pokorny 1959:124—125 **bheleg-* ‘to glisten’; Walde 1927—1932.II:214—215

**bhleg-*, **bhelg-*; Mann 1984—1987:80 **bhlāg-*, -*ājō* ‘to burn, to flame’, 82 **bhleḡ-* ‘(adj.) bare, blank; (vb.) to look, to shine’; Mallory—Adams 1997:513 **bhleg-* ‘to burn, to shine’; Mayrhofer 1956—1980.II:479—480 **bhel-*; Frisk 1970—1973.II:1022—1024; Hofmann 1966:399 **bhleg-*; Boisacq 1950:1029 *bheleg-*, **bhleḡ-*, **bhelg-*; Beekes 2010.II:1575—1577 **b^hleg-*; Chantraine 1968—1980.II:1208—1210 **bhel-*; Walde—Hofmann 1965—1972.I:510—511 **bheleg-*; Ernout—Meillet 1979:238 and 259 **bhleḡ-*; De Vaan 2008:247 **b^hlg-e/o-*; De Vries 1977:42; Klein 1971:84 **bhleg-*; Onions 1966:97—98.

D. Altaic: Turkish *balkı-* ‘to shimmer, to glitter’.

E. Proto-Gilyak / Nivkh **bləŋr* ‘ashes’: East Sakhalin *pləŋr* ‘ashes’; South Sakhalin *pləŋk* ‘ashes’. Fortescue 2016:23—24.

Buck 1949:1.55 lightning; 1.84 ashes; 15.57 bright; 15.64 white; 16.25 laugh (vb.), smile (vb.). Illič-Svityč 1971—1984.I:174, no. 5, **balqa* ‘to flash, to sparkle’; Möller 1911:25—26 and 29—30.

24. Proto-Nostratic root **ban-* (~ **bən-*):

(vb.) **ban-* ‘to pour, to sprinkle, to drip’;

(n.) **ban-a* ‘a drop (of water, rain, dew, etc.)’

A. Dravidian: Tamil *paṇi* ‘to be bedewed, to flow out, to be shed, to rain incessantly, to become cool, to shiver with cold, to tremble, to fear, to spring forth (as tears)’, *paṇi* ‘dew, chill, cold, tears, rain, mist, fog, haze, trembling, fear’, *paṇittal* ‘incessant rain’, *paṇukku* (*paṇukki-*) ‘to sprinkle, to moisten by sprinkling’; Malayalam *pani* ‘dew, fever’; *panekka* ‘to ooze’; Toda *pony* ‘dew’; Kannaḍa *pani*, *hani* ‘(vb.) to drop; (n.) a drop (of water, dew, etc.)’, *haniku* ‘to fall in drops’, *hanisu*, *haṇisu* ‘to pour (as water)’; Koḍagu *pann-* (*panni-*) ‘to drizzle’; Tuḷu *pani* ‘drizzling rain’, *paṇi* ‘dew, fog, mist, snow’, *paṇipuni*, *paṇipuni* ‘to drizzle, to shower’. Burrow—Emeneau 1984:360, no. 4035; Krishnamurti 2003:13 **pan-i-(kil)* ‘dew, cold, chill’.

B. Proto-Kartvelian **ban-* ‘to wash, to wash oneself’: Georgian *a-ban-o* ‘bath’, *ban-* ‘to wash, to wash oneself; to bathe’; Mingrelian *bon-* ‘to wash’; Laz (*m*)*bon-* ‘to wash’. Fähnrich 1994:230 and 2007:46—47 **ban-*; Fähnrich—Sardshweladse 1995:43 **ban-*; Klimov 1964:48 **ban-* and 1998:7 **ban-* ‘to wash, to wash oneself’; Schmidt 1962:95. Proto-Kartvelian (past participle) **ban-il-* ‘washed’: Georgian *banil-* ‘washed’; Laz *boner-* ‘washed’; Mingrelian *bonil-*, *bonir-* ‘washed’. Klimov 1998:8 **ban-il-* ‘washed’.

C. Indo-European: Middle Cornish *banne*, *banna* ‘a drop’; Breton *banne* (Tréguier *bannec’h*) ‘a drop’. Not related to Sanskrit *bindú-ḥ* (*vindú-ḥ*) ‘a drop, globule, spot’ (cf. Mayrhofer 1956—1980.II:430—431).

Buck 1949:9.36 wash. Bomhard 1996a:222, no. 631.

25. Proto-Nostratic root **ban-* (~ **bən-*):

(vb.) **ban-* ‘to separate, to open, to spread’;

(n.) **ban-a* ‘separation, opening, stretch, spread, scattering’

- A. Proto-Afrasian **ban-* ‘to separate, to open, to spread’: Proto-Semitic **ban-an-* ‘to spread, to scatter’ > Geez / Ethiopic *banana* [ጸጸ] ‘to rise (dust), to ascend (smoke from a fire)’; Harari *bānānā* ‘to be sprinkled’, *biñbiñ āša* ‘to scatter’; Amharic *bānnānā* ‘to fly here and there (dust, smoke)’; Tigrinya *bānānā* ‘to evaporate’; Gurage (Soddo) *abānnānā* ‘to spread, to scatter’. D. Cohen 1970—:72; Leslau 1963:43, 1979:144, and 1987:99. Egyptian *bnbn* ‘to extend, to stretch out’. Erman—Grapow 1926—1963.1:459; Hannig 1995:253. Proto-East Cushitic **ban-* ‘to separate, to open’ > Somali *ban*, *ban-n-aan* ‘plain, plateau’, (causative) *ban-n-ay-* ‘to make room’; Bayso *ban-* ‘to open’; Galla / Oromo *ban-* ‘to open’; Konso *pan-* ‘to open’; Gidole *pan-* ‘to spread the legs’; Gedeo / Darasa *ban-* ‘to open’, *ban-em-* ‘to be open’, *ban-ema* ‘(adj.) open’; perhaps Hadiyya *ban-* ‘to separate, to distinguish’; Burji *ban-* ‘to chase away’, *ban-d-* ~ *ban-ʔ-* ‘to put to flight, to be defeated’, *ban-ʔ-a* ‘defeat’, *band-am-* ‘to lose, to be defeated’. Sasse 1982:33; Hudson 1989:49—50 and 108. Perhaps also: Proto-Agaw **bān-* ‘to divide’ > Bilin *bān-* ‘to divide’, *bānā* ‘half; part, division; gift; payment’; Xamir *bin-* ‘to divide’; Quara *bān-* ‘to divide’; Awngi / Awiya *ben-* ‘to divide’. Reinisch 1887:80; Appleyard 2006:54. West Chadic **ban-* ‘to open, to uncover’ > Hausa *bányèè* ‘to open, to uncover’. Central Chadic **ban-H-/*byan-H-* ‘to open’ > Mofu *baŋ*, *beŋ* ‘to open’. Jungraithmayr—Ibriszimow 1994.II:264—265. Orël—Stolbova 1995:53, no. 210, **ban-* ‘field’, no. 212, **ban-* ‘to open’.
- B. Kartvelian: Georgian *ben-/bn-*, *bnev-/bni(v)-* ‘to spread, to scatter, to disperse’.
- C. Proto-Uralic **panča-* ‘to open’: Cheremis / Mari (Kozmodemyansk) *pača-* ‘to open’, (Birsk) *poča-* ‘to open’, (Uržum) *poča-* ‘to open’; Mordvin (Erza) *panžo-* ‘to open’, (Moksha) *pañže-* ‘to open’; Ostyak / Xanty *punč-* ‘to open’; Vogul / Mansi (Tavda) *poons-* ‘to open’, (Lower Konda) *puunš-* ‘to open’, (Pelymka) *punš-* ‘to open’, (Sosva) *puuns-* ‘to open’; (?) Proto-Lapp / Saami **puoncō* ‘naked’ > Lapp / Saami (Lule) (pred.) *buo3ʔot*, (attr.) *buo33os* ‘naked’. Rédei 1986—1988:352 **panče-* ~ **pače-* ‘to open’; Collinder 1955:106, 1960:413 **pančō-*, and 1977:120; Sammallahti 1988:548 Proto-Finno-Ugrian **pāncā* ‘naked, open’; Zhivlov 2023:159 **panča-* ‘to open’.

Buck 1949:12.23 separate (vb.); 12.24 open (vb.). Bomhard 1996a:224—225, no. 635.

26. Proto-Nostratic root (Eurasian only) **ban-* (~ **bən-*):(vb.) **ban-* ‘to cut, to strike’;(n.) **ban-a* ‘cut, wound’

- A. Indo-European: Proto-Germanic **banjō* ‘wound’ > Gothic *banja* ‘blow, wound’; Old Icelandic *bani* ‘death’, *ben* ‘mortal wound’, *benja* ‘to wound mortally’, *bana* ‘to kill’, *bend* ‘wound’; Swedish *bane* ‘death, murder’; Old English *benn* ‘wound’, *bana* ‘slayer, murderer’, *bennian* ‘to wound’, *bangār* ‘deadly spear’, *banweorc* ‘homicide, manslaughter’; Old Frisian *bona* ‘murderer’; Old Saxon *beni(-wunda)* ‘wound’, *bano* ‘murderer’; Old High German *bano* ‘murderer’, *bana* ‘murder’. Orël 2003:35—36 Proto-Germanic **banjō*; Kroonen 2013:51 Proto-Germanic **banjō-* ‘wound’; De Vries 1977:32; Feist 1939:80; Lehmann 1986:61; Onions 1966:72; Klein 1971:69. Mann 1984—1987:65 **bhanō* ‘to slay’ — Mann also compares Old Irish *banaim* ‘to cut, to strike, to dig, to kill’. However, this comparison is rejected by Lehmann (1986:61). Note also Avestan (caus.) *ban-* ‘to make ill, to afflict’ (rejected by Cheung 2007:4 but accepted by Kroonen 2013:51 and Feist 1939:80).
- B. Uralic: Proto-Finno-Ugrian **pānz-* ‘to whet, to sharpen’ > Votyak / Udmurt *penon* ‘grindstone’; Vogul / Mansi *pōōnl-* ‘to grind, to cut, to sharpen’; Hungarian *fen-* ‘to whet, to sharpen; (dial.) whetstone’. Rédei 1986—1988:365 **pānz* (vb.) ‘to whet, to sharpen’; (n.) ‘whetstone’; Sammallahti 1988:548 Proto-Finno-Ugrian **pānV-* ‘to grind’.
- C. Proto-Chukchi-Kamchatkan **pənæ-* ‘to sharpen’: Chukchi *pəne-* ‘to sharpen’, *pəna-kwən* ‘whetstone’; Kerek *pna-* ‘to sharpen’, *pna-kkun* ‘whetstone’; Koryak *pəne-* ‘to sharpen’, *pəna-wwən* ‘whetstone’; Alyutor *pna-* ‘to sharpen’; Kamchadal / Itelmen *pnav-zo-s* ‘to sharpen’, *pnavōm* ‘whetstone’. Fortescue 2005:223; Mudrak 1989b:104 **pəna-* ‘to sharpen’.
- D. Proto-Eskimo **pana* ‘lance’: Alutiiq Alaskan Yupik (Kodiak) *panaq* ‘fish spear’, (Kenai Peninsula) *panak* ‘spear’; Naukan Siberian Yupik *pana* ‘spear’; Sirenik *pana* ‘spear’; Seward Peninsula Inuit *pana* ‘long-handled spear’; North Alaskan Inuit *pana* ‘spear, double-edged blade, porcupine quill’; West Canadian Inuit *pana* ‘lance for killing enemies in war’; East Canadian Inuit *pana* ‘snow knife’; Greenlandic Inuit *pana* ‘large knife, sword’, *pana-*, *panar-* ‘to hack with sword’. Fortescue—Jacobson—Kaplan 1994:249.

Buck 1949:4.85 wound (sb.); 15.78 sharp; 20.26 spear; 20.27 sword.

27. Proto-Nostratic root **ban-* (~ **bən-*):

Extended form:

(vb.) **ban-V-d-* ‘to tie, bind, fasten, or twist (together)’;(n.) **ban-d-a* ‘tie, bond’

Note: Only the extended form is attested in the daughter languages.

- A. Afrasian: Egyptian *bn̄d* ‘to wrap, to put on clothing’. Erman—Grapow 1926—1963.1:465; Hannig 1995:255. Illič-Svityč 1971—1984.I:194, no. 30, also cites Hebrew *ʔaḇnēṭ* [אַבְנֵט] ‘girdle’. However, according to Murtonen (1989:80), Hebrew *ʔaḇnēṭ* [אַבְנֵט] is a loan from Egyptian (see also Klein 1987:3).
- B. Proto-Kartvelian **band-* ‘to interweave, to plait’: Georgian *band-* ‘to interweave, to plait’, *band-ul-i* ‘a type of mountaineering shoe with a braided sole’; Mingrelian *bond-i* ‘interwoven, plaited, braided; braided suspension bridge’; Svan *li-bānd-e* ‘to patch up (some cloth)’. Fähnrich—Sardshweladse 1995:43—44 **band-*; Fähnrich 2007:47 **band-*; Klimov 1998:7 **band-* ‘to interweave, to plait’. Proto-Kartvelian **bandy-* ‘to twist, to tie together’: Georgian *bandy-* ‘to interlace’, (Imeruli) *bandy-i* ‘spider’s web, cobweb’; Mingrelian *bondy-* ‘to spin a web’, *bondy-i* ‘spider’s web’. Klimov 1998:8 **bandy-* ‘to twist, to tie together’; Fähnrich 2007:47 **bandy-*; Fähnrich—Sardshweladse 1995:44 **bandy-*.
- C. Proto-Indo-European **bʰendʰ-/bʰondʰ-/bʰndʰ-* ‘to tie, to bind, to join, to unite’: Sanskrit *badhnāti*, *bandhati* ‘to tie, to bind, to fix, to fasten; to bind round, to put on; to catch, to take or hold captive; to arrest, to hold back, to restrain, to suppress, to stop, to shut, to close; to join, to unite; to fold (the hands), to clench (the fist), to knit or bend (the eyebrows), to arrange, to assume (a posture), to set up (a limit), to construct (a dam or a bridge); to form or produce in any way; to cause, to effect, to do, to make, to bear (fruit), to take up (one’s abode)’, (causative) *bandhayati* ‘to cause to bind or catch or capture, to imprison; to cause to be built or constructed; to cause to be embanked or dammed up’, *bandhā-h* ‘binding, tying; a bond, tie, chain, fetter’, *bāndhu-h* ‘connection, relation, association’, *baddhā-h* ‘bound, tied, fixed, fastened, chained, fettered; captured, imprisoned, caught, confined; joined, united, tied up, combined, formed, produced; conceived, formed, entertained, manifested, shown, betrayed, visible, apparent; clenched (as a fist), folded (as the hands); built, constructed (as a bridge); embanked (as a river)’, *bandhura-h* ‘bent, inclined; curved, rounded, pleasant, beautiful, charming’; Gothic *bindan* ‘to bind’, *bandi* ‘band, bond’; Old Icelandic *band* ‘band, cord’, *binda* ‘to bind, to tie, to fasten, to tie up’, *benda* ‘to bend’, *benda* ‘band, tie’, *bendi* ‘cord’, *bundin* ‘sheaf (of corn), bundle’, *-byndi* in *handbyndi* ‘encumbrance’; Old English *bend* ‘band, ribbon, chaplet, crown; bond, chain’, *bendan* ‘to bind; to stretch, to bend’, *bindan* ‘to bind, to fetter’, *bund* ‘bundle’, *bynde*, *byndelle*, *bindele*, *bindelle* ‘binding, bandage’; Old Frisian *binda* ‘to bind’, *bend*, *band* ‘bond, band, fetter’; Old Saxon *bindan* ‘to bind’, *band* ‘bond, band’; Old High German *bintan* ‘to bind’ (New High German *binden*), *binda* ‘bond’ (New High German *Binde*), *bant* ‘ribbon, band, bond’ (New High German *Band*); Middle High German *bunt* ‘band, neckband, collar,

waistband' (New High German *Bund*); Old Irish *bann* 'bond, belt, hinge, chain, law'; Thracian βενδ- 'to bind'. Rix 1998a:60—61 **b^hend^h*- 'to bind'; Pokorny 1959:127 **bhendh*- 'to bind'; Walde 1927—1932.II:152 **bhendh*-; Mann 1984—1987:72 **bhendh*- 'to bind', 87 **bh^hndh*- 'bound, binding', 92 **bhondhos*, -ā, -ios 'band, thong, company'; Watkins 1985:7 **bhendh*- and 2000:10 **bhendh*- 'to bind'; Mallory—Adams 1997:64 **bhendh*- 'to bind'; Gamkrelidze—Ivanov 1984.I:174 **b^h[^h]end^h[^h]*-, **b^h[^h]nd^h[^h]*- and 1995.I:150 **b^hend^h*-, **b^hnd^h*- 'to tie, to bind'; Mayrhofer 1956—1980.II:406 and II:407; Feist 1939:79 and 93; Lehmann 1986:60—61 and 71; Orël 2003:35 Proto-Germanic **bandan*, 35 **bandilaz*, 35 **bandjan*, 35 **bandjō*, 41 **bandanan*; Kroonen 2013:51 Proto-Germanic **bandi*- 'bond, fetter' and 64 **bindan*- 'to bind'; De Vries 1977:25, 32, 65, and 67; Klein 1971:69, 82—83 **bhendh*-, and 88; Onions 1966:72, 95, 106, and 126; Boutkan—Siebinga 2005:49; Kluge—Mitzka 1967:48, 78 **bhendh*-, and 111; Kluge—Seebold 1989:86 **bhendh*- and 114.

- D. Proto-Chukchi-Kamchatkan *(*lə*)*pənit*- 'to tie': Chukchi *pənit*- (medial -*lpənit*-) 'to tie laces', *pənit* 'lace'; Kerek *pcii-twa*- 'to untie laces'; Koryak (Kamen) *pənit*- (medial -*lpənit*-) 'to tie laces'; Kamchadal / Itelmen *pons-nom* 'binding, tying (of footwear)', *nypint* 'bundle'. Fortescue 2005:223.

Buck 1949:9.16 bind; 9.75 plait (vb.). Illič-Svityč 1971—1984.I:194, no. 30, **banṭa* 'to bind'; Dolgopolsky 2008, no. 214, **bæñiV* (~ **bæñdV* ?) 'to tie'; Bomhard 1981b:398, §3.14, G.

28. Proto-Nostratic root **bar*- (~ **bər*-):

(vb.) **bar*- 'to swell, to puff up, to expand';

(n.) **bar-a* 'swelling, bulge, increase'

Derivatives:

(vb.) **bar*- 'to bristle (up), to stand on end';

(n.) **bar-a* 'bristle, point, spike'

(vb.) *bar*- 'to blow';

(n.) **bar-a* 'wind'

(vb.) **bar*- 'to be thick, bushy, shaggy; to be coarse, rough, harsh'

(n.) **bar-a* 'roughness, coarseness, harshness; thickness, shagginess'; (adj.) 'rough, harsh, coarse; thick, shaggy, bushy'

- A. Proto-Afrasian **bar*- 'to swell, to puff up, to expand': Semitic: (?) Hebrew *bārāʾ* [בָּרָא] 'to be fat', *bārīʾ* [בָּרִיʾ] 'fat'. D. Cohen 1970—:80; Klein 1987:82. Arabic *barḥ* 'increase, abundance'. D. Cohen 1970—:83. Proto-Semitic **na-bar*- '(vb.) to raise, to elevate; to swell, to become swollen; (n.) raised or elevated place' > Arabic *nabara* 'to raise, to elevate; to go up with the voice, to sing in a high-pitched voice; to stress, to emphasize, to accentuate; to shout, to yell, to scream, to cry out; to swell, to become swollen', *nabra* 'swelling, protuberance', *mimbar* 'pulpit, chair (of a

teacher); platform'; Geez / Ethiopic *manbar* [መንበር] 'seat, chair, base, socle, residence, dwelling, high place, pulpit, throne, see (of bishop), altar on which the ark rests, session, office, function, state, position'. Leslau 1987:383—384. Egyptian *brbr* 'to boil'; Coptic *brbr* [ⲃⲣⲃⲣ] 'to boil over'. Hannig 1995:256; Erman—Grapow 1926—1963.1:466; Vycichl 1983:30; Černý 1976:26. Berber: Ghat *abər* 'to boil', *sibər* 'to make to boil'; Nefusa *awər* 'to boil'; Ghadames *abər* 'to boil', *ubbər* 'boiling water'; Mzab *abər* 'to boil', *ssibər* 'to make to boil'; Kabyle *bbərbər* 'to be boiled, to be boiling (for example, boiling with anger)', *sbbərbər* 'to boil'. East Cushitic: Proto-Sam **bar-ar-* 'to swell' > Somali *barar* 'to swell'; Boni *barer/bareera* 'to swell'. Heine 1978:53. Highland East Cushitic: Hadiyya *barkat-* 'to be abundant'; Kambata *baraat-* 'to multiply', *barg-* 'to add (to), to repeat'. Hudson 1989:271 and 309.

- B. Dravidian: Tamil *paru* 'to become large, bulky, plump; to swell', *paruppu* 'thickness, largeness', *pariya* 'thick, large, big'; Malayalam *paru* 'gross, big', *parukka* 'to grow bulky, stout', *paruma* 'grossness'; Kannada *hari*, *hariba* 'a mass, multitude', *bardu* 'increase, greatness'; Tulu *pariya* 'plenty, exceeding, much'; Telugu *prabbu* 'to increase, to extend, to flourish, to thrive'; Kuṛux *pardnā* 'to grow in number, to increase in quantity, to grow in size or age, to prosper, to succeed, to thrive'; Malto *pathre* 'to grow'. Burrow—Emeneau 1984:354, no. 3972. Tamil *paru* 'pimple, pustule, blister', *parukken-* 'to blister'; Malayalam *paru* 'boil, ulcer'; Kui *parngoli* 'sore on the tongue'; Kuwi *bāresi* 'pimple'. Burrow—Emeneau 1984:354, no. 3974.
- C. Proto-Indo-European **b^her-/b^hor-/b^hṛ-* (also **b^har-*) 'to swell, to puff up, to expand, to bristle', **b^hṛst^hi-s* 'bristle, point' (see below): Old Irish *bairen* 'bread', *barr* 'top, tip, point, peak'; Welsh *bar* 'top, tip, point'; Gaelic *barr* 'point, top, tip, end, extremity'; Old Breton *barr* 'top, tip, point, peak'; Latin *fermentum* 'leaven, yeast'. Pokorny 1959:108—110 **bhar-*, **bhor-*, **bḥṛ-* 'something jutting out', 132—133 **bher-* 'to well up'; Walde 1927—1932.II:131—133 **bhares-* (?), **bhores-*, II:157—159 **bher-*; Watkins 1985:5 **bhar-* (**bhor-*) and 2000:7—8 **bhars-* (**bhors-*) 'projection, bristle, point'; Mann 1984—1987:115 **bḥṛstis*, -os (**bhurst-*, **bhrust-*) 'spike, shoot, twig, bristle'; Gamkrelidze—Ivanov 1995.I:61 (fn. 79) **b^har-* 'bristle'; De Vaan 2008:247. Proto-Indo-European **b^hrews-/b^hrows-/b^hrus-* '(vb.) to swell; (n.) swelling': Gothic *brusts* 'breast'; Old Icelandic *brjóst* 'the front of the chest, breast'; Swedish *bröst* 'breast'; Norwegian *brjost* 'breast'; Danish *bryst* 'breast'; Old English *brēost* 'breast'; Old Frisian *brust-* 'breast'; Old Saxon *briost* 'breast'; Dutch *borst* 'breast'; Old High German *brust* 'breast' (New High German *Brust*); Middle High German *briustern* 'to swell'; Old Irish *brú* 'belly'; Russian *brjúxo* [брюхо] 'belly, paunch'. Pokorny 1959:170—171 **bhreu-s-* 'to swell'; Walde 1927—1932.II:197—198 **bhreus-*; Falk—Torp 1903—1906.I:80; Mann 1984—1987:102—103 **bhreus-* 'chest, front, paunch';

Watkins 1985:9 *bhreus- and 2000:13 *bhreus- ‘to swell’; Mallory—Adams 1997:561 *bhreus- ‘to swell’; Lehmann 1986:82; Torp 1919:42; De Vries 1977:57—58; Onions 1966:117; Klein 1971:93—94; Boutkan—Siebinga 2005:64—65; Kluge—Mitzka 1967:105 *bhreus-; Kluge—Seebold 1989:109—110. Proto-Indo-European *b^hard^heA (> *b^hard^hā) ‘beard’: Latin *barba* ‘beard’; Old Icelandic *barð* ‘beard’; Old English *beard* ‘beard’; Old Frisian *berd* ‘beard’; Old Saxon *barda* ‘beard’; Dutch *baard* ‘beard’; Old High German *bart* ‘beard’ (New High German *Bart*); Old Church Slavic *brada* ‘beard’; Lithuanian *barzdà* ‘beard’. Pokorny 1959:110 *bhardhā ‘beard’; Walde 1927—1932.II:35 *bhardhā ‘beard’; Mann 1984—1987:65—66 *bhardhā (*bharsdhā), -os ‘beard’; Watkins 1985:5 *bhardhā and 2000:7 *bhardh-ā ‘beard’; Gamkrelidze—Ivanov 1995.I:61 (fn. 79) *b^hard^hā ‘beard’; Mallory—Adams 1997:251 *bhardh-eh_a- ‘beard’; Wodtko—Irslinger—Schneider 2008:4—6 *b^har(s)d^h-o/ah₂-; De Vaan 2008:69; Walde—Hofmann 1965—1972.I:96; Ernout—Meillet 1979:66; De Vries 1977:26; Onions 1966:83; Klein 1971:75; Boutkan—Siebinga 2005:39—40; Kluge—Mitzka 1967:54; Kluge—Seebold 1989:62. Proto-Indo-European *b^herw-/*b^horw-/*b^hrw-, *b^hrew-/*b^hrow-/*b^hru- ‘to boil, to bubble up’: Latin *fervō*, *ferveō* ‘to boil, to seethe’; Middle Irish *berbaim* ‘to boil’; Old Icelandic *brauð* ‘bread’, *brugga* ‘to brew’; Swedish *bröd* ‘bread’; Norwegian *braud*, *brød* ‘bread’; Danish *brød* ‘bread’; Old Saxon *breuwan* ‘to brew’; Old English *brēowan* ‘to brew’, *brēad* ‘bread’; Old High German *briuwan* ‘to brew’; New High German *brauen* ‘to brew’, *Bräu* ‘brew’, *Brot* ‘bread’. Rix 1998a:65—66 *b^herū- ‘to boil, to seethe’, 80—81 *b^herūH- ‘to boil, to bubble’; Pokorny 1959:143—145 *bh(e)reu-, *bh(e)rū- ‘to boil, to bubble’; Walde 1927—1932.II:167—169 *bhereu-, *bheru-, *bhreu-, *bhrū-; Mann 1984—1987:75 *bherūō (*bhreūō) ‘to seethe, to ferment’, 75 *bherūos ‘brewing, brew’; Watkins 1985:9 *bhreu- and 2000:13 *bhreuā- (also *bhreu-) ‘to boil, to bubble, to effervesce, to burn’; Gamkrelidze—Ivanov 1984.II:643 *b^h[r]reū- and 1995.I:553 *b^hreu- ‘to ferment (of beverages), to brew’; Mallory—Adams 1997:76 *bhereu- ‘to seethe’ and 199 *bhreu- ‘to brew’; Ernout—Meillet 1979:230; Walde—Hofmann 1965—1972.I:487 *bheru-; Torp 1919:37; De Vries 1977:54 and 60; Onions 1966:115 and 117 *bhreu-, *bhru-; Klein 1971:93 and 94; Kluge—Mitzka 1967:96—97 *bh(e)reu-, *bh(e)rū- and 103 *bh(e)reu-; Kluge—Seebold 1989:103 and 107—108. Proto-Indo-European *b^hrend^h-/*b^hrond^h-/*b^hrd^h- ‘to swell up’: Old Irish *bruinnid* ‘to spring forth, to flow’; Lithuanian *brėstu*, *brėndau*, *brėsti* ‘to ripen, to mature’. Pokorny 1959:167—168 *bhrendh- ‘to swell up’; Rix 1998a:79 *b^hrend- ‘to swell, to swell up’; Walde 1927—1932.II:205 *bhrend(h ?)-; Mann 1984—1987:102 *bhrendh- ‘to be full, to be ripe’. Proto-Indo-European *b^hrew-/*b^hru- ‘to sprout, to swell’: Latin *frutex* ‘shrub, bush’; Old High German *briezen* ‘to bud, to sprout, to swell’; Old Irish *broth* ‘whiskers’. Pokorny 1959:169 *bhreu-, *bhreu-d- ‘to sprout, to swell’;

Mann 1984—1987:106 **bhrud-* ‘excrecent, bulging; excrescence, bulge’, 110 **bhrutos, -ios* ‘excrescence’; Walde—Hofmann 1965—1972.I:554 **bhrutós*; Walde 1927—1932.II:195 **bhreu-*; Ernout—Meillet 1979:257.

- D. Proto-Uralic **par3, *por3* (**parwa, *porwa*) ‘pile, heap; swarm, flock, group’: (?) Finnish *parvi* ‘swarm, flock, shoal, troop’, *parveilla* ‘swarm, flock’; Estonian *parv* ‘ferry-boat; flock, flight; covey, bevy; swarm, shoal; crowd’; (?) Votyak / Udmurt *pur* ‘raft’; (?) Zyrian / Komi *pur* ‘raft, ferry’; Vogul / Mansi *påra* ‘raft, ferry’; Ostyak / Xanty *pår* ‘raft; swarm, flock, crowd’. Collinder 1955:46 and 1977:65; Rédei 1984—1988:356—357 **par3, *por3* (**parwa, *porwa*); Sammallahti 1988:547 Proto-Finno-Ugrian (?) **poråwå* ‘loft, raft’; Décsy 1990:105 **parva* ‘pile, group’.

Sumerian *bār* ‘to spread or stretch out, to lay out’, *bāra* ‘to spread or stretch out’, *bara₄* ‘to spread or stretch out, to open wide’.

Buck 1949:4.142 beard; 4.40 breast (front of chest); 4.46 belly, stomach; 10.31 boil (vb. intr.); 12.53 grow (= increase in size). Bomhard—Kerns 1994:198—200, no. 4; Illič-Svityč 1971—1984.I:190—191, no. 24, **bur’a* ‘to boil, to bubble up’; Möller 1911:34; Dolgopolsky 2008, no. 254, **barʔV* ‘big, much, thick’.

29. Proto-Nostratic root **bar-* (~ **bār-*):

(vb.) **bar-* ‘to bristle (up), to stand on end’;

(n.) **bar-a* ‘bristle, point, spike’

Derivative of:

(vb.) **bar-* ‘to swell, to puff up, to expand’;

(n.) **bar-a* ‘swelling, bulge, increase’

- A. Proto-Kartvelian **bar3g-*, **bur3g-* ‘thorn, prickle, bristle’: Georgian *bar3g-i*, *ba3g-i* ‘thorny plant’, (Gurian) *ba3g-i* ‘thorny plant’, *ba3gar-i* ‘tall tree with thorns’, *bur3g-i* ‘thorn’, *bur3g-al-a-i* ‘the prickly shell of a chestnut’; Mingrelian (**bor3g- >*) **bur3g-*, **bu3g-*: *bu3g-a* ‘prickles on the shell of a chestnut’. Note also Georgian *bu3g-* ‘little hedgehog’. Klimov 1998:21 **bur3g-* ‘to bristle (up); to ruffle’, **bur3ga-* ‘bristle’; Fähnrich—Sardshweladse 1995:46 **bar3g-*; Fähnrich 2007:51—52 **bar3g-*. Proto-Kartvelian **bur3g-* ‘to bristle’: Georgian *bur3g-*: *a-bur3g-n-a* ‘to bristle (up), to stand on end (hair, fur, etc.)’; Laz *bu3g-*: *o-bu3g-u*, *o-bu3g-in-u* ‘to bristle (up)’; Mingrelian *bu3g-*, *bizg-*: *bu3g-u-a*, *bizg-u-a* ‘to bristle (up)’. Fähnrich 2007:86 **bur3g-*; Fähnrich—Sardshweladse 1995:69 **bur3g-*. As noted by Fähnrich—Sardshweladse, the question of the relationship between **bar3g-* and **bur3g-* is unclear.

- B. Proto-Indo-European **b^her-/b^hor-/b^hṛ-* (also **b^har-*) ‘to bristle (up)’, **b^hṛst^hi-s* ‘bristle, point’: Sanskrit *bhṛṣṭi-h* ‘point, spike’; Latin **fa(r)sti-* in *fastīgium* ‘the gable end, pediment (of a roof)’; Old Icelandic *burst*

‘bristle(s)’, *bursti* ‘bristly hair’, *burst-ígull* ‘hedgehog’, *byrsta* ‘to furnish with bristles; to cover as with bristles; to bristle up, to show anger’; Norwegian *bust* ‘bristle’; Swedish *borst* ‘bristle’; Danish *børst* ‘bristle’; Old English *byrst* ‘bristle’, *brord* ‘point; first blade of grass, young plant’; Old Saxon *bursta* ‘bristle’; Middle Dutch *borstel* ‘bristle’; Old High German *burst* ‘bristle’ (New High German *Borste*); Russian *boršč* [борщ] ‘hogweed’. Perhaps also Hittite (nom. sg.) *pár-ša-du-uš* ‘leaf’. Pokorny 1959:108—110 **bhar-*, **bhor-*, **bh̥r-* ‘something jutting out’, 132—133 **bher-* ‘to well up’; Walde 1927—1932.II:131—133 **bhares-* (?), **bhores-*, II:157—159 **bher-*; Gamkrelidze—Ivanov 1995.I:61 (fn. 79) **b'ar-* ‘bristle’; Mann 1984—1987:115 **bh̥stis*, *-os* (**bhurst-*, **bhrust-*) ‘spike, shoot, twig, bristle’; Watkins 1985:5 **bhar-* (**bhor-*) and 2000:7—8 **bhars-* (**bhors-*) ‘projection, bristle, point’; Mallory—Adams 1997:439 **bh̥stis* ‘point’ and 2006:298 **bh̥stis* ‘point’; Mayrhofer 1956—1980.II:523—524 *bh̥s-ti-*; Ernout—Meillet 1979:218; Walde—Hofmann 1965—1972.I:461—462 **bh̥rsti-*; De Vaan 2008:203—204; Orël 2003:64 Proto-Germanic **burstiz*; Falk—Torp 1903—1906.I:93; De Vries 1977:65 and 68; Torp 1919:50; Onions 1966:119; Klein 1971:95; Kluge—Mitzka 1967:93 **bhers-*; Kluge—Seebold 1989:99 **bh̥s/*bhares-*; Kloekhorst 2008b:645—646; Puhvel 1984—.8:168—170 **bh̥stu-*.

Buck 1949:8.56 leaf. Dolgopolsky 2008, no. 249, **baRžV* ‘to be uneven, rough; to bristle’.

30. Proto-Nostratic root **bar-* (~ **b̥ar-*):

(vb.) *bar-* ‘to blow’;

(n.) **bar-a* ‘wind’

Derivative of:

(vb.) **bar-* ‘to swell, to puff up, to expand’;

(n.) **bar-a* ‘swelling, bulge, increase’

A. Proto-Afrasian **bar-* ‘to blow’: Southern Cushitic: Proto-Rift **baraʃ-* or **baraʔ-* ‘to blow’ > Iraqw *barʹas-* ‘to blow away’; Kʷadza *balatuko* ‘bellows’. Ehret 1980:338. Central Chadic **baraw-* ‘wind’ > Mbara *baraw-ay* ‘wind’. East Chadic **(ka-)bar-* ‘wind’ > Kera *ka-bar* ‘wind’ (**ka-* prefix). Orël—Stolbova 1995:55, no. 220, **bar-* ‘wind’.

B. Proto-Kartvelian **ber-* ‘to blow, to inflate, to puff out’: Georgian *ber-va* ‘to blow, to inflate, to puff out’; Laz *bar-* ‘to blow, to inflate, to puff out’; Mingrelian *bar-*, *mbar-*, *nbar-* ‘to blow, to inflate, to puff out’; [Svan *li-bēl-e* ‘to cause something to swell up, to swell up’]. Klimov 1964:50 **ber-* and 1998:11 **ber-* ‘to blow; to inflate, to distend’; Fähnrich 2007:57—58 **ber-*; Fähnrich—Sardshweladse 1995:49—50 **ber-*; Schmidt 1962:97; Gamkrelidze—Ivanov 1984.II:878 **ber-* and 1995.I:775 **ber-* ‘to blow, to inflate’.

Sumerian *bar* ‘to blow, to stretch or spread out, to ferment, to blow away’, *bar*₇ ‘to blow at or upon’.

Buck 1949:10.38 blow (vb. intr.). Bomhard—Kerns 1994:198—200, no. 4.

31. Proto-Nostratic **bar-* (~ **bər-*):

(vb.) **bar-* ‘to be thick, bushy, shaggy; to be coarse, rough, harsh’;

(n.) **bar-a* ‘roughness, coarseness, harshness; thickness, shagginess’; (adj.) ‘rough, harsh, coarse; thick, shaggy, bushy’

Derivative of:

(vb.) **bar-* ‘to swell, to puff up, to expand’;

(n.) **bar-a* ‘swelling, bulge, increase’

A. Dravidian: Tamil *paraṭṭai* ‘tangled locks; shaggy, bushy hair’, *paraṭṭai-ttalai* ‘head with shaggy, untidy hair’, *paraṭṭaiyan* ‘person with shaggy hair’, *paraṭṭai-kkīrai* ‘wild colewort’; Malayalam *paru* ‘rough, harsh’, *paru-tala*, *paraṇ-tala* ‘curly hair’, *paraṭṭa-ccīra* ‘wild cole’; Kannada *paraṭe* ‘state of being rough, harsh, bristled, bushy, or curly’. Burrow—Emeneau 1984:358, no. 4022. Perhaps also: Tamil *paru* ‘coarse, rough’, *parukkan*, *parumai* ‘roughness, coarseness, grossness’; Malayalam *parukku* ‘rough surface’, *parukkuva* ‘to make rough’, *paruparukka* ‘to be rough, harsh’, *paruparuppu* ‘roughness, harshness’, *parupara* ‘roughly, harshly’; Kannada *parige*, *parparike*, *papparike* ‘roughness (of surface), harshness, rough manners’; Telugu *baraka* ‘rough’, *barusu* ‘rough, coarse, rude, brutal; roughness, rudeness’, *parusamu*, *parusana* ‘harshness, cruelty’, *parusapu* ‘hard, harsh’, *berasu* ‘cruel, rough, not fine’; Kolami *baragaṭe* ‘rough’; Konda *baRka* ‘roughness, rough’. Burrow—Emeneau 1984:354, no. 3973. The Dravidian terms either were influenced by or exerted an influence on Sanskrit *paruṣá-ḥ*, originally ‘(adj.) knotty (as a reed); (n.) a reed’, later (*Atharva-Veda*) ‘uneven, hard’, (*Mahābhārata*) ‘harsh, cruel’ as well (cf. Mayrhofer 1956—1980.II:220; Mayrhofer rejects outright borrowing of the Sanskrit term, in its later meanings, from Dravidian).

B. Proto-Kartvelian **bard-* ‘shrubs, bushes, shrubbery, thicket; blackthorn, sloe’: Georgian *bard-i* ‘shrubs, bushes, shrubbery, thicket; undergrowth’; Mingrelian *burd-i* ‘sloe, blackthorn’; Svan *bārd* ‘ivy’. Klimov 1998:8—9 **bard-* ‘blackthorn, sloe’; Fähnrich 2007:50 **bard-*.

C. Proto-Indo-European **bh̥rs-* ‘shaggy, coarse, rough, prickly’: Latin *burra* ‘shaggy garment’, *burrae* ‘trash, refuse, garbage’, *reburris* ‘bristly’ (loanwords); Greek βύρσα ‘the skin stripped off, a hide’ (loanword); Danish *borre* ‘burr, burdock’; Norwegian *borre* ‘burr, burdock’; Swedish *borre* ‘burr; sea-urchin’, *kardborre* ‘burdock’; Middle English *burre* ‘burr; roughness or harshness in the throat’ (Scandinavian loan); East Frisian *bure*, *burre* ‘gnarl, knot’. Mann 1984—1987:115 **bh̥rsos*, *-ios*, *-ā*, *-is*

‘shag, tuft, bristles, fur’; Walde—Hofmann 1965—1972.I:124; Ernout—1979:78; Falk—Torp 1903—1906.I:70 **bhr̥s̥os*; Torp 1919:35; Onions 1966:127 **bhr̥s̥-*; Klein 1971:100; Skeat 1898:84; Boisacq 1950:137; Chantraine 1968—1980.I:202; Frisk 1970—1973.I.277—278 (without etymology); Hofmann 1966:41 (perhaps loanword); Beekes 2010.I:249 (without etymology — perhaps pre-Greek).

- D. Altaic: Mongolian *barbai-* ‘to be coarse (of textiles); to be broad and thick (of a beard)’, *barbayar* ‘coarse (of textiles); broad and thick (of a beard); hairy, shaggy’, *bartaira-* ‘to swell, to distend (as eyes, face, etc.)’. Proto-Tungus **bara-* ‘(vb.) to increase; (n.) great number’ > Evenki *bara-ma* ‘great number’, *bara-l-* ‘to increase’; Lamut / Even *baran* ‘capacious’; Manchu *baran* ‘great number, large quantity’; Oroch *bara* ‘great number, large quantity’; Solon *barā* ‘great number, large quantity’. Turkish *barak* ‘long-haired (animal), thick-piled (stuff), plush’. Note: Starostin—Dybo—Mudrak (2003:328) place the Tungus forms under Proto-Altaic **bara-* ‘to possess goods, to earn’.

Buck 1949:15.76 rough. Dolgopolsky 2008, no. 249, **baR̥z̥V* ‘to be uneven, rough; to bristle’.

32. Proto-Nostratic root **bar-* (~ **bār-*):

- (vb.) **bar-* ‘to bear children, to give birth’;
(n.) **bar-a* ‘child’

- A. Proto-Afrasian **bar-* ‘child’: Proto-Semitic **bar-aw-* ‘child, son’ > Aramaic *bar* ‘son’; Sabaeen *brw* ‘child, son’; Ḥarsūsi *berō* ‘to bear children’, *ber* ‘son’; Soqotri *bíroh* ‘to bear children’, *ber* ‘son’; Šheri / Jibbāli *bíri* ‘to give birth’, *ber* ‘son’. Proto-Berber **barar-* ‘son’ > Ayr *a-barar* ‘son’; Ahaggar *a-burir* ‘son’; Tawlemmet *barar-* ‘son’. Proto-Chadic **bərd-* ‘to give birth’ > Warji *vurd-* ‘to give birth’; Tsagu *vərdə* ‘to give birth’; Jimbin *vurd-* ‘to give birth’; Zime-Batna *frà?à/vàrà?à* ‘to give birth’. Jungraithmayr—Ibriszimow 1994.I:77 and II:160—161. West Chadic **bar-/byar-* ‘young girl, child’ > Hausa *beera* ‘young girl’; Angas *par* ‘child’; Galambu *baryawa* ‘young girl’. Orël—Stolbova 1995:53, no. 213, **bar-* ‘child’.
- B. Proto-Elamo-Dravidian **par* ‘child, young one’: Middle Elamite *pa-ar*, Royal Achaemenid Elamite *ba-ir* ‘descendants; sperm, semen; seed’. Dravidian: Malayalam *pārppu* ‘shoal of young fish, small fry’; Tamil *pārppu* ‘fledgling, young of birds, young of tortoise, frog, toad, lizard, etc.’, *pārval* ‘fledgling, young of deer or other animals’; Kannaḍa *pāra* ‘boy’. Burrow—Emeneau 1984:364, no. 4095; McAlpin 1981:104.
- C. Proto-Indo-European **b^her-/b^hor-/b^hr-* ‘to bear, to carry; to bring forth, to bear children’, **b^her-no-s/b^hor-no-s* ‘son, child’: Sanskrit *bhārati* ‘to bear, to carry, to convey, to hold; to support, to maintain, to cherish, to

foster; to endure, to experience, to suffer, to undergo; to conceive, to become pregnant', *bhṛtá-h* 'borne, carried, brought', (passive) *bhriyáte* 'to be borne', *bhariman-*, *bhārīman-* 'supporting, nourishing; household, family'; Armenian *berem* 'to bear'; Greek φέρω 'to bear, to carry; to endure, to suffer; to bring, to offer, to present; to bring forth, to produce, to bear fruit, to be fruitful', φορέω 'to bear, to carry', φορτίον 'load, burden, child in the womb'; Albanian *bir* 'son', *burrë* 'man'; Latin *ferō* 'to bear, to carry, to bring forth'; Old Irish *biru* 'to bear, to carry'; Gothic *bairan* 'to bear, to carry, to bring forth', *barn* 'son', *baur* 'son, child'; Old Icelandic *bera* 'to bear, to carry, to give birth to', *barn* 'child, baby', *burðr* 'birth; extraction'; Old Frisian *bera* 'to bear, to give birth; to be born', *bern* 'child'; Old English *beran* 'to carry, to bring, to produce, to bring forth, to bear; to endure, to suffer, to tolerate', *beorn* 'child', *beorþor* 'childbirth'; Lithuanian *bėrnas* 'son'. Rix 1998a:61—62 **b^her-* 'to carry, to bring'; Pokorny 1959:128—132 **bher-* 'to carry, to bring'; Walde 1927—1932.II:153—157 **bher-*; Mann 1984—1987:72 **bhēr-* 'carry; conveyor, conveyance', 73 **bheratrom* (**bheradhlo-*) 'bearer, carrier', 74 **bhermn-*, **bherm-* 'load', 74 **bherō* 'to bear, to carry, to bring, to take', 74 **bhernos* 'son, fellow', 74—75 **bheront-* (**bhernt-*) 'bearing, bearer', 75 **bheros* 'bearing', 75 **bhertos* 'born, carried; burden', 94 **bhorm-* (**bhormos*, *-ā*, *-is*, *-jə*) 'burden; bearer, holder, container', 94 **bhorn-* 'holder, container', 94 **bhorn-* 'son, fellow', 94 **bhoros*, *-ā*, *-om* 'bearing; burden, produce, offspring', 95 **bhortos* 'carried; load, burden', 114 **bhṛjios* (**bhṛjō[n]*) 'bearer, holder', 114 **bhṛjios* 'son, young man', 115—116 **bhṛt-* 'bearing, load, product', 116 **bhṛtós*, *-ā* 'borne, carried', 125 **bhūr-*, **bhrūn-* 'son, fellow'; Watkins 1985:7 **bher-* and 2000:10 **bher-* 'to carry, to bear children'; Gamkrelidze—Ivanov 1984.I:340 **b^her-oH* and 1995.I:32 **b^her-* 'to bear'; Mallory—Adams 1997:56 **bhére/o-* 'to bear (a child)'; Mayrhofer 1956—1980.II:473—476; Frisk 1970—1973.II:1003—1005; Boisacq 1950:1021—1022 **bher(e)-*; Chantraine 1968—1980.II:1189—1191; Hofmann 1966:395 **bher-*; Beekes 2010.II:1562—1564 **b^her-*; De Vaan 2008:213—214; Walde—Hofmann 1965—1972.I:483—485 **bher-*; Ernout—Meillet 1979:227—229; Kroonen 2013:59 Proto-Germanic **beran-* 'to bear, to carry, to give birth'; Orël 1998:26, 43 (Albanian *burrë* borrowed) and 2003:37 Proto-Germanic **barnan*, 41—42 **beranan*, 43 **berþran*; De Vries 1977:27, 33, and 65; Feist 1939:75 **bher-*; Lehmann 1986:57 **bher-*; Boutkan—Siebinga 2005:38—39 and 40—41; Onions 1966:83 and 96; Klein 1971:75 and 83; Wodtko—Irslinger—Schneider 2008:15—30 **b^her-*.

- D. Yukaghir (Northern / Tundra) *para*, *-bare*, *-bara* 'basis, essence, origin; bottom, end', *paral* 'ancestor', *parañe* 'to originate from'. Nikolaeva 2006:343.
- E. (?) Proto-Altaic **biōr[e]-* ('to bring, to offer, to present' >) 'to give; to take, to collect': Proto-Tungus **bū-* 'to give' > Manchu *bu-* 'to give';

Evenki *bū-* ‘to give’; Lamut / Even *bō-* ‘to give’; Negidal *bū-* ‘to give’; Ulch *būwu* ‘to give’; Oroch *bū-* ‘to give’; Nanay / Gold *bū-* ‘to give’; Oroch *bū-* ‘to give’; Udihe *bū-* ‘to give’; Solon *bū-* ‘to give’. Proto-Turkic **bēr-* ‘to give’ > Old Turkic *ber-* ‘to give’; Karakhanide Turkic *ber-* ‘to give’; Turkish *ver-* ‘to give, to deliver, to pay, to offer, to sell’; Gagauz *ver-* ‘to give’; Azerbaijani *ver-* ‘to give’; Turkmenian *ber-* ‘to give’; Uzbek *ber-* ‘to give’; Uighur *bār-* ‘to give’; Karaim *ver-* ‘to give’; Tatar *bir-* ‘to give’; Bashkir *bir-* ‘to give’; Kirghiz *ber-* ‘to give’; Kazakh *ber-* ‘to give’; Noghay *ber-* ‘to give’; Sary-Uighur *per-* ‘to give’; Tuva *ber-* ‘to give’; Chuvash *par-* ‘to give’; Yakut *bier-* ‘to give’; Dolgan *bier-* ‘to give’. Starostin—Dybo—Mudrak 2003:353 **bīōr[e]* ‘to give; to take, to collect’. Assuming semantic development as in Greek *φέρω* ‘to bear, to carry; to endure, to suffer; to bring, to offer, to present; to bring forth, to produce, to bear fruit, to be fruitful’.

Sumerian *bar* ‘origin, descent, ancestry; family; descendants, offspring’.

Buck 1949:4.72 bear (of mother). Illič-Svityč 1971—1984.I:194—195, no. 32, **b_{ALA}* ‘child’; Möller 1911:34—35; Brunner 1969:27; Dolgopolsky 2008, no. 230, **berE?a* ‘to give birth to; child’; Bomhard—Kerns 1994:200—202, no. 6, **bar-/bār-* ‘to bear, to carry, to bring forth’.

33. Proto-Nostratic root **bar-* (~ **bār-*):

(vb.) **bar-* ‘to take or seize hold of, to grasp’;

(n.) **bar-a* ‘hold, grasp, seizure’

- A. Proto-Afrasian **bar-* ‘to take’: Berber: Kabyle *bbār* ‘to take, to take a small quantity of’; Tuareg *a-bār* ‘to take’. East Cushitic: Saho *bar-* ‘to grasp, to hold’. Beja / Beḍawye *bari-* ‘to get, to collect, to have’. Reinisch 1895:49. Proto-Southern Cushitic **ber-* ‘to touch’ > K’wadza *belet-* ‘to grasp’; Ma’a *ber-* ‘to touch’. Ehret 1980:137. Central Chadic **mV-bwar-* ‘to seize, to grasp’ > Sukur *mbwǝr* ‘to seize, to grasp’. Ehret 1995:86, no. 21, **ber-* ‘to hold’; Orël—Stolbova 1995:54, no. 215, **bar-* ‘to take’.
- B. Dravidian: Tamil *parru* (*parri-*) ‘(vb.) to grasp, to seize, to catch, to hold, to adhere to, to touch, to comprehend; to hold (as color), to be kindled, to have effect (as drugs), to stick, to become joined to or welded to (as metals soldered), to be fitting, to be sufficient; (n.) grasp, seizure, acceptance, adherence, affection, friendship, affinity, solder, paste’, *parram* ‘grasping’; Malayalam *parru* ‘adhesion, close relation, friendship’, *parruka* ‘to stick to, to adhere, to catch, to suit, to fit, to take effect (as fire), to get, to seize’; Kota *paṭ-* (*pac-*) ‘to catch, to seize, to hold, to hold out, to be obstinate, to resolve, to catch (fire), to suit, to please’; Kannada *paṭṭu* ‘(vb.) to seize, to catch, to hold, to take hold of; to be held or contained, to stick to; (n.) hold, seizure, firm grasp, persistence, resolution, obstinacy, habit, coherence’;

Tuḷu *pattuni* ‘to hold, to catch; to adhere, to stick, to be joined’; Telugu *paṭṭu* ‘(vb.) to hold, to catch, to seize, to take hold of, to restrain, to receive; to be required (days, money), to be contained; (n.) hold, grasp, seizure, a wrestler’s hold, perseverance, obstinacy, diligence’; Parji *patt-* ‘to take hold of, to buy’; Gadba (Ollari) *pat-* ‘to take hold of, to catch, to buy, (Salur) *patt-* ‘to take hold of, to catch’. Burrow—Emeneau 1984:359—360, no. 4034.

- C. Proto-Altaic **bari-* ‘to take, to hold’: Proto-Mongolian **bari-* ‘to take, to hold’ > Written Mongolian *bari-* ‘to take, to hold’; Monguor *bari-* ‘to take, to hold’; Dagur *bari-* ‘to take, to hold’; Khalkha *bari-* ‘to take, to hold’; Buriat *bari-* ‘to take, to hold’; Kalmyk *bār-, bār-* ‘to take, to hold’. Poppe 1955:26 and 99; Starostin 1991:287, no. 268, **bārV*; Starostin—Dybo—Mudrak 2003:328 **bāra* ‘goods; to possess, to earn’.

Buck 1949:11.13 take; 11.14 seize, grasp, take hold of. Dolgopolsky 2008, no. 224, **ba[ʔ]eri* ‘to hold, to take’; Illič-Svityč 1971—1984.I:176—177, no. 8, **bari* ‘to take’.

34. Proto-Nostratic (n.) **bar-a* ‘seed, grain’:

- A. Proto-Afrasian **bar-/bur-* ‘grain, cereal’: Proto-Semitic **barr-/burr-* ‘grain, cereal’ > Hebrew *bar* [בָּר] ‘grain’; Arabic *burr* ‘wheat’; Akkadian *burru* ‘a cereal’; Sabaean *brr* ‘wheat’; Ḥarsūsi *berr* ‘corn, maize, wheat’; Mehri *ber* ‘corn, maize, wheat’; Šheri / Jibbāli *bohr* ‘maize’; Soqotri *bor* ‘wheat’. D. Cohen 1970—:87; Klein 1987:82. Berber: Ayr *a-bora* ‘sorghum’; Ghadames *a-βar-ən* ‘flour’; Ahaggar *a-bōra* ‘sorghum’. East Cushitic: Somali *bur* ‘wheat’. Proto-Southern Cushitic **bar-/bal-* ‘grain (generic)’ > Iraqw *balay* ‘grain’; Burunge *baru* ‘grain’; Alagwa *balu* ‘grain’; K’wadza *balayiko* ‘grain’. Ehret 1980:338. West Chadic **bar-/bur-* ‘a kind of flour, gruel’ > Hausa *buri, biri* ‘a kind of flour’; Ngizim *bār̄bār̄i* ‘gruel flavored with the desert date *ākdā*’. Orël—Stolbova 1995:56, no. 224, **bar-/bur-* ‘grain, cereal’ and 84, no. 344, **b[u]ray-* ‘grain, corn’ (derived from no. 224, **bar-/bur-* ‘grain, cereal’).
- B. Dravidian: Tamil *paral* ‘pebble, seed, stone of fruit’; Malayalam *paral* ‘grit, coarse grain, gravel, cowry shell’; Kota *parl* ‘pebble, one grain (of any grain)’; Kannaḍa *paral, paraḷ* ‘pebble, stone’; Koḍagu *para* ‘pebble’; Tuḷu *pareḷu* ‘grain of sand, grit, gravel; grain of corn, etc.; castor seed’; Kolami *parca* ‘gravel’. Burrow—Emeneau 1984:353, no. 3959.
- C. Proto-Indo-European **bhar(s)-* ‘grain’: Ossetic (Digor) *bor* ‘millet’; Latin *far* ‘spelt, grain’; Umbrian *far* ‘spelt’; Oscan *far* ‘spelt’; Gothic **barizeins* ‘(prepared of) barley’; Old Icelandic *barr* ‘barley’; Old English *bere* ‘barley’; Old Frisian *ber* ‘barley’; Old Church Slavonic *brašbno* ‘food’; Russian (dial.) *bórošno* [борошно] ‘rye-flour’; Serbo-Croatian *brášno* ‘food, flour’; Albanian *bar* ‘grass’. Pokorny 1959:111 **bhare-* ‘barley’;

Walde 1927—1932.II:134 *bhāres-; Mann 1984—1987:66 *bhars- ‘wheat, barley’; Gamkrelidze—Ivanov 1984.II:872—873 *b^[h]ar(s)- and 1995.I:770 *b^har(s)- ‘grain, groats’, I:836 *b^har- ‘grain’; Watkins 1985: 5—6 *bhāres- (*bhars-) and 2000:8 *bhars- ‘barley’; Mallory—Adams 1997:51 *bhārs ‘barley’; De Vaan 2008:201—202; Walde—Hofmann 1965—1972.I:455—456 *bhar-es-; Ernout—Meillet 1979:216; Orël 1998:16—17 and 2003:36 Proto-Germanic *b̥araz ~ *b̥ariz; Kroonen 2013:52 Proto-Germanic *bariz- ~ *barza- ‘barley’ (< *b^har-s-); Feist 1939:81 *bhāres-; Lehmann 1986:62; De Vries 1977:27; Onions 1966:75; Klein 1977:71; Derksen 2008:57. Note: This term may be a borrowing.

Sumerian *bar* ‘seed’.

Buck 1949:8.31 sow, seed; 8.42 grain; 8.44 barley. Bomhard—Kerns 1994: 219, no. 24; Brunner 1969:27, no. 79. For the semantics, cf. the following meanings of the English word *grain*: (1) ‘a small, hard seed or seedlike fruit (as of wheat, rye, oats, barley, maize, or millet)’; (2) ‘cereal seeds in general’; (3) ‘a tiny, solid particle, as of salt or sand’; (4) ‘a tiny bit, smallest amount’; etc.

35. Proto-Nostratic root *bar- (~ *b̥ar-):

(vb.) *bar- ‘to shine, to be bright, to sparkle, to flash’;

(n.) *bar-a ‘light, brightness; lightning’

- A. Proto-Afrasian *bar-/ *bir- ‘to shine, to be bright, to sparkle, to flash’, *bar-ak’-, *bar-ik’-, *bir-ik’- ‘(vb.) to flash; (n.) lightning’: Proto-Semitic *barak’- ‘to shine, to glitter, to sparkle, to flash’, *bark’-/ *birk’- ‘lightning’ > Hebrew *bārāk* [בָּרַךְ] ‘to flash’, *bārāk* [בָּרַךְ] ‘lightning’; Aramaic *barkā* ‘lightning’; Ugaritic *brk* ‘lightning’; Arabic *baraqa* ‘to shine, to glitter, to sparkle’, *barḳ* ‘lightning’; Akkadian *birku* ‘lightning’, *barāku* ‘to flash’; Amorite *brk* ‘to shine, to lighten’; Sabaeen *brk* ‘lightning’; Šheri / Jibbāli *bórōkót* ‘to flash’, *berḳ* ‘lightning’; Harsūsi *hebērēk* ‘lightning’, *berḳōt* ‘to flash, to lighten’; Mehri *berḳáwt* ‘to lighten, to flash’, *bōrāk* ‘lightning’; Geez / Ethiopic *baraqa* [በረቆ] ‘to flash, to lighten, to scintillate, to shine, to become shining, to sparkle’, *mabarḳ* [መበርቆ], *mabrāk* ‘lightning, thunderbolt, bright light’; Tigre *bārka* ‘to flash, to lighten, to scintillate’; Tigrinya *bārākā* ‘to flash, to lighten, to scintillate’; Amharic *bārrākā* ‘to lighten, to shine, to scintillate’, *bəraḳ* ‘thunderbolt’; Harari *bəraḳ* ‘lightning’; Gurage *bəraḳ* ‘lightning’. D. Cohen 1970— :86; Klein 1987:85; Leslau 1987:106; Murtonen 1989:122; Zammit 2002:93. Proto-Semitic *bar-ac’- ‘to sparkle, to shine’ > Akkadian *barāšu* ‘to sparkle, to shine brightly’; Arabic *barīš* ‘shining, glistening’; Geez / Ethiopic *tabāraša* [ተባረሰ] ‘to scintillate, to flash, to redden’; Tigrinya *bāršāšā* ‘to shine, to flash’; Gurage (a) *braṭa* ‘to be smooth and shiny’ (from either *brš? or *brʔ?); Amharic *boräboč*,

- borboč* ‘multicolored smooth pebbles’. D. Cohen 1970— :86; Leslau 1987:107—108. Proto-Semitic **bar-ar-* ‘to be or become clear or bright, to purify, to clean’ > Hebrew *bārar* [בָּרַר] ‘to purify’, *bar* [בָּר] ‘bright, clean, pure’; Aramaic *bārar* ‘to purify’; Akkadian *barīru* ‘(sun’s) rays’; Ugaritic *brr* ‘pure, clean’; Geez / Ethiopic *barra* [በረ] ‘to purify, to make white’, *bārur* [ብሩር] ‘silver’; Tigrinya *bārur* ‘silver’; Amharic *bərr* ‘silver, thaler’; Gurage *bər* ‘silver, thaler’, (reduplicated) *bərbər* ‘to shimmer, to flicker (flame), to burn in a wavy way’. D. Cohen 1970— :87; Klein 1987:86; Leslau 1979:149 and 1987:106—107; Murtonen 1989:119. Proto-Semitic **bar-ah-* ‘to light up’ > Geez / Ethiopic *barha* [በርሀ] ‘to shine, to be bright, to be light, to light up, to be clear’, *bərhān* [ብርሃን] ‘light, brightness, glitter, splendor, proof’; Tigre *bārha* ‘to be bright, to be clean, to shine’; Tigrinya *bārhe* ‘to shine’; Amharic *bārra* ‘to be lit’, *abārra* ‘to be aglow, to shine, to be bright’, *mābrat* ‘lamp, light’, *bərhan* ‘light, glow, flame’; Gurage *abārra* ‘to glitter, to shine, to illuminate’. D. Cohen 1970— :82; Leslau 1979:150 and 1987:103—104. Egyptian *brg* ‘to give light’; Coptic *ebrēce* [ⲉⲃⲣⲏⲉ] ‘lightning’ (Semitic loans [cf. Černý 1976:33; Vycichl 1983:39]). Proto-East Cushitic **bar-/ber-/bor-* ‘dawn, morning, tomorrow’ > Bayso *gee-bari* ‘tomorrow’, *bar-i* ‘morning’; Galla / Oromo *bor-u* ‘tomorrow’; Saho-Afar *beera* ‘tomorrow’; Somali *ber-iy-* ‘to dawn’, *ber-r-i(to)* ‘tomorrow’; Burji *buráy* ‘yesterday’, *bóru* ‘tomorrow’ (this may be a loan from Galla / Oromo); Kambata *bere* ‘yesterday’; Gedeo / Darasa *berek’e* ‘yesterday’; Sidamo *bero* ‘yesterday’. Sasse 1982:34 and 40; Hudson 1989:156 and 171. Proto-East Cushitic **bark’-/birk’-* ‘lightning’ > Dasenech *biddi* (< **birk’-ti*) ‘lightning’; Elmolo *i-birgā* ‘lightning’. Sasse 1979:49. Proto-Southern Cushitic **bur-* ‘morning’ > Dahalo *burra* ‘morning’. Ehret 1980:321. Proto-Southern Cushitic **birik’-* ‘lightning’ > Dahalo *birik’ina* ‘lightning’. Ehret 1980:321. Ehret 1995:86, no. 22, **bir-* ‘to burn brightly’, no. 23, **birk’-/bark’-* ‘to flash’ (**bir-* ‘to burn brightly’ plus **-k’-* intensive extension of effect); Orël—Stolbova 1995:56, no. 223, **bar-/bur-* ‘morning’, 57, no. 225, **baraḵ-* ‘lightning’, 58, no. 321, **bariḵ-* ‘to shine, to be bright’; Diakonoff 1992:82 **bar(-)aḵ-* ‘lightning’.
- B. Dravidian: Kota *par par in-* ‘to become a little light before dawn’; Kannada *pare* ‘to dawn’; Telugu *parāgu* ‘to shine’; Malto *parce* ‘to shine brightly, to be seen clearly’. Burrow—Emeneau 1984:354, no. 3980.
- C. Proto-Kartvelian **bar-* ‘to glow, to burn, to flame, to blaze’, (reduplicated) **bar-bar-*: Georgian *bar-bar-i/bal-bal-i* ‘to glow, to burn, to flame, to blaze’; Mingrelian *bor-bonž-ia* ‘glowing, burning, flaming, blazing’. Fähnrich 2007:49 **bar-*. Proto-Kartvelian **berc’q’-/brc’q’-* ‘to shine’: Georgian *brc’q’-in-v-a* ‘to shine; brightness’, *brc’k’iali* ‘to light, to illuminate’, *brc’q’invalē* ‘white’; Mingrelian *rc’k’-* (the initial labial has been lost) ‘to shine’; Laz *pinc’k’-/pic’k’-* ‘to shine’; Svan [*berc’q’-*] (Georgian loan). Fähnrich 1994:230 and 2007:60—61 **bercḳ’-/brcḳ’-*;

Fähnrich—Sardshweladse 1995:51—52 *berçq-/*brçq-; Klimov 1964:50 *berçq-/*brçq-; Schmidt 1962:99.

- D. Proto-Indo-European *b^herEk'-, *b^hreEk'- > *b^hrēk'- 'to shine, to gleam, to be bright': Sanskrit *bhrā́jate* 'to shine, to gleam, to glitter'; Avestan *brāzaiti* 'to beam', *brāza-* 'shimmering; radiance'; Welsh *berth* 'beautiful'; Gothic *bairhts* 'bright, manifest', *bairhteī* 'brightness'; Old Icelandic *bjartr* 'bright, shining', *birti* 'brightness'; Old English *beorht* 'bright'; Old Saxon *berht*, *beraht* 'bright'; Old High German *beraht* 'bright'; Lithuanian *brėkšti* 'to dawn'; Palaic (3rd sg. pres.) *pa-ar-ku-i-ti* 'to clean, to purify'; Hittite *pár-ku-iš* 'pure, clean'. Rix 1998a:76—77 *b^hreh₁ǵ- 'to glitter, to shine'; Pokorny 1959:139—140 *bherǵ-, *bhrēǵ- 'to glitter'; Walde 1927—1932.II:170—171 *bherēǵ-; Mann 1984—1987:73 *bherǵ- 'brightness, bright'; Watkins 1985:7 *bherǵ- and 2000:11 *bherǵ- 'to shine; bright, white'; Gamkrelidze—Ivanov 1984.II:620 *b^h[^h]erHk'- and 1995.I:532 *b^herHk'- 'to shine, to be bright'; Mallory—Adams 1997:513—514 *bherh₂ǵ- 'to shine, to gleam'; Mayrhofer 1956—1980.II:529—530; Lehmann 1986:58; Feist 1939:76—77 *bherēǵ-; De Vries 1977:39; Fraenkel 1962—1965.I:55—56; Smoczyński 2007.1:71; Puhvel 1984—.8:133—146 *bh₂ǵ^w-; Kloekhorst 2008b:637—639. Proto-Indo-European *b^hrek^h- 'to shine, to glitter': Sanskrit *bhráśate* 'to shine, to glitter' (in view of the Germanic forms, the long vowel is probably secondary); Old Icelandic *brjá* (< Proto-Germanic *breḡan) 'to sparkle, to flicker, to gleam'; Middle High German *brehen* 'to twinkle, to sparkle'. Pokorny 1959:141—142 *bherǵk-, *bhrēk'- 'to glitter'; Walde 1927—1932.II:169 *bherēk-; Mann 1984—1987:102 *bhrēk'- 'to shine'; Watkins 1985:8 *bherǵk- and 2000:11 *bherǵk- 'to shine, to glitter'; Mallory—Adams 1997:514 (?) *bherk'- 'to shine'; Mayrhofer 1956—1980.II:532; Orël 2003:55 Proto-Germanic *brexanan ~ *brexōjanan; De Vries 1977:57.
- E. Proto-Gilyak / Nivkh (reduplicated) *barbaru- 'lightning': South Sakhalin *bařbar-* 'lightning'; East Sakhalin *varparu-d* 'lightning'; Amur *varparu-d* 'lightning'. Fortescue 2016:20,

Sumerian *bar* '(vb.) to shine, to light, to illuminate, to sparkle, to glitter, to glisten; (adj.) bright, shining; (n.) light, brightness', *bar₆-bar₆* '(adj.) light, white; (vb.) to whiten, to make white'.

Buck 1949:1.55 lightning; 15.57 bright; 15.87 clean; 17.34 clear, plain. Dolgopolsky 2008, no. 247, *bVR[V]kæ 'to flash, to shine'; Bomhard—Kerns 1994:211—213, no. 16; Brunner 1969:27, no. 74.

36. Proto-Nostratic root *bar- (~ *bār-):
 (vb.) *bar- 'to be kind, charitable, beneficent; to do good';
 (n.) *bar-a 'goodness, kindness'; (adj.) 'good, kind, beneficent'

- A. Afrasian: Proto-Semitic **bar-ar-* ‘to be kind, charitable, beneficent; to do good’ > Arabic *barra* ‘to be reverent, dutiful, devoted; to be kind, charitable, beneficent; to do good’, *birr* ‘piety, good action’; Tāmūdīc *br* ‘to be righteous’, *hbr* ‘beneficence, charity, benevolence’; Sabaeen *brr* ‘to make upright’. D. Cohen 1970— :82; Zammit 2002:92. Perhaps also Harari *bārah* ‘good’ (used mainly by women), *bārah bāya* ‘to have pity’, if these are not loans (cf. Leslau 1963:45).
- B. Proto-Indo-European **b^her-/b^hor-/b^hṛ-* ‘to be kind, charitable, helpful, beneficent; to do good’: Avestan *bairišta-* ‘the most willing to help, the most helpful’; Armenian *bari* ‘good’; Greek φέριστος, φέρτατος ‘bravest, best’, φέρτερος ‘braver, better’; Old High German *bora-* ‘better’. Mann 1984—1987:74 **bheristhjos* ‘best, bravest’; Boisacq 1950:1021; Frisk 1970—1973.II:1002; Hofmann 1966:394—395; Beekes 2010.II:1562 **b^her-ist(H)o-*; Meillet 1936:155.
- C. Uralic: Proto-Finno-Ugrian **para* ‘good’ > Finnish (superlative) *paras* ‘best’, (comparative) *parempi* ‘better, superior’; Lapp / Saami *buorre/buorrē* ‘good, kind, pleasant’; Mordvin (Erza) *paro*, (Moksha) *para* ‘good’; Cheremis / Mari (Birk) *poro* ‘good’; Votyak / Udmurt *bur* ‘good, kind, benevolent’; Zyrian / Komi *bur* ‘good’. Rédei 1986—1988:724 **para*.

Buck 1949:16.71 good (adj.). Illič-Svityč 1971—1984.I:175—176, no. 7, **bara* ‘big, good’; Bomhard—Kerns 1994:213, no. 17.

37. Proto-Nostratic root **bar-* (~ **bār-*):

- (vb.) **bar-* ‘to split (with a tool or weapon); to cut into, to carve; to scrape’;
 (n.) **bar-a* ‘carving, engraving, cuttings, chip’

- A. Proto-Afrasian **bar-* ‘to cut, to cut off, to cut down; to carve, to scrape’: Proto-Semitic **bar-aʔ-* ‘to cut, to carve’ > Hebrew *bērēʔ* [בִּרְעַף] ‘to cut down (timber, woods), to cut out’; Punic *brʔ* ‘engraver’; Lihyānite *baraʔ* ‘to cut, to carve’. D. Cohen 1970— :80—81; Klein 1987:82. Proto-Semitic **bar-aʔ-* ‘to cut, to trim, to carve’ > Arabic *barā* ‘to trim, to shape, to sharpen, to scratch off, to scrape off’; Sabaeen *bry* ‘carved monument’. D. Cohen 1970— :82—83. Berber: Senglal *bri* ‘to cut’. Highland East Cushitic: Gedeo / Darasa *barc’umma* ‘stool of wood’; Sidamo *barc’im-* ‘to be circumcised’, *barc’in-šiiš-* ‘to circumcise’. Hudson 1989:40, 232, and 352.
- B. Proto-Kartvelian **berg-* ‘to hoe’: Mingrelian *barg-*, *berg-* ‘to hoe’, *berg-i* ‘hoe’; Laz *berg-* ‘to hoe’, *berg-i* ‘hoe’; Svan *li-bērg-e* ‘to hoe’, *bērg* ‘hoe’. Klimov 1998:11 **berg-* ‘to hoe’; Fähnrich 2007:59 **berg-*; Fähnrich—Sardshweladse 1995:50 **berg-*.
- C. Proto-Indo-European **b^her-/b^hor-/b^hṛ-* ‘to strike, to smite, to beat, to knock, to cut, to thrust, to hit; to kill by striking, to give a death blow, to

slay’: Sanskrit *bhāra-h* ‘war, battle, contest’; Latin *feriō* ‘to strike, to smite, to beat, to knock, to cut, to thrust, to hit; to kill by striking, to give a death blow, to slay; to kill or slaughter animals for sacrifice’; Old Icelandic *berja* ‘to beat, to strike, to smite’; Middle High German *berien* ‘to strike’; Old Church Slavonic *borjō, brati* ‘to fight’. Rix 1998a:64—65 **b^{her}H-* ‘to work with a sharp tool’; Pokorny 1959:133—135 **bher-* ‘to work with a sharp tool, to cut, to split’; Walde 1927—1932.II:159—161 **bher-*; Mann 1984—1987:74 **bheriō* (**bhor-*, **bhr-*) ‘to strike’, 74 **bhērā* ‘striker’, 94 **bhoros* ‘stroke, blow, fight’; Watkins 2000:10 **bher-* (also **bherə-*) ‘to cut, to pierce, to bore’; Mallory—Adams 1997:549 **bher-* ‘to strike (through), to split’; Mayrhofer 1956—1980.II:476—477; Ernout—Meillet 1979:227; De Vaan 2008:213; Walde—Hofmann 1965—1972.I:481—482 **bher-*; De Vries 1977:33 **bher-*. Proto-Indo-European **b^hord^h-*/**b^hrd^h-*, **b^hred^h-* ‘(piece) cut off’; Sanskrit *bardhaka-h* ‘cut off’; Old Icelandic *borð* ‘board, plank’; Old English *bred* ‘board’, *bord* ‘board, plank’; Old Frisian *bord* ‘board’; Old Saxon *bord* ‘board’, *bred* ‘board’; Dutch *boord* ‘board’; Old High German *bret* ‘board, plank’ (New High German *Brett*). Pokorny 1959:138 **bheredh-* ‘to cut’; Walde 1927—1932.II:174 **bherdh-* (also **bhrēdh-* ?); Mann 1984—1987:111 **bhr̥dhos, -om* ‘board, table’, 111 **bhr̥dhos* ‘cutting, separating; cut, division’; Watkins 1985:7 **bherdh-* and 2000:10—11 **bherdh-* ‘to cut’; De Vries 1977:50 **bherdh-*; Onions 1966:103; Klein 1971:87; Kluge—Mitzka 1967:99; Kluge—Seebold 1989:105. Proto-Indo-European **b^hreyH-*, **b^hriH-* > **b^hri-* ‘to cut, to clip, to scrape’: Sanskrit *bhrīṇāti* ‘to injure, to hurt’; Welsh *brîw* ‘wound’; Russian Church Slavonic *briju, briti* ‘to shear, to clip’; Lithuanian *brėžti* ‘to scratch, to sketch, to design’. Rix 1998a:77 **b^hreiH-* ‘to cut’; Pokorny 1959:166—167 **bhrēi-*, **bhr̥i-* ‘to cut’; Walde 1927—1932.II:194—195 **bhrēi-*; Mann 1984—1987:103 **bhr̥iō* ‘to wear down, to file, to erode’; Mallory—Adams 1997:158 **bhreh_si-* ‘to destroy, to cut to pieces’; Watkins 1985:9 **bhrēi-* (also **bhr̥i-*) and 2000:13 **bhreia-* ‘to cut, to break’; Mayrhofer 1956—1980.II:532—533 **bhr̥i-*. Proto-Indo-European **b^hr-ew-*/**b^hr-ow-*/**b^hr-u-* ‘to break into pieces, to cut or break off’: Old Icelandic *brjóta* ‘to break, to break open, to break off; to destroy, to demolish’, *brotna* ‘to break, to be broken’, *brytja* ‘to chop’, *braut* ‘road (cut through rocks, forests, etc.)’, *brot* ‘breaking; fragment, broken piece’; Swedish *bryta* ‘to break’; Old English *brēotan* ‘to break in pieces, to hew down, to demolish, to destroy, to kill’, *gebrȳtan* ‘to crush, to pound; to break up, to destroy’, *brēoðan* ‘to decay, to waste away’, *breodwian* ‘to strike down, to trample’, *brytnian* ‘to deal out, to distribute’, *gebryttan* ‘to break to pieces, to destroy’, *(ge)brytsen* ‘fragment’, *bryttian* ‘to tear to pieces, to divide; to dispense, to distribute, to share’; Old High German *brōdi* ‘breakable, brittle, fragile’, *bruzī, bruzzī* ‘fragility, frailty, feebleness, infirmity, decrepitude’; Latvian *braūna, braūņa* ‘shell, husk, pod (of fruit); scab, scale, scurf (of skin)’. Rix 1998a:81 **b^hreyH-* ‘to break into pieces,

to break off'; Pokorny 1959:169 **bhrēu-*, **bhrū-* 'to cut with a sharp instrument, to scrape off, etc.' (in Germanic, 'to break into pieces, to break off'); Walde 1927—1932.II:195—196 **bhreu-*; Mann 1984—1987:102 **bhreud-*, **bhroud-*, **bhrūd-* 'to crumble, to break'; Watkins 1985:9 **bhreu-* and 2000:13 **bhreu-* (also **bhreuā-*) 'to cut, to break up'; Mallory—Adams 1997:81 **bhreu-* 'to cut, to break up'; Orël 2003:56 Proto-Germanic **breutanan*; De Vries 1977:55, 58, 59, and 62. Proto-Indo-European **b^hr-ew-s-/*b^hr-ow-s-/*b^hr-u-s-* 'to cut or break into pieces; to smash, to crush, to crumble, to shatter': Latin *frustum* 'a bit, piece, morsel'; Old Irish *brúid* 'to break, to crush'; Welsh *briw* 'wound'; Old English *brīesan*, *brȳsan* 'to bruise', *brȳsian* 'to bruise, to crush, to pound', *brosnian* 'to crumble, to decay; to perish, to pass away'; Middle High German *brōsem* 'crumb'. Rix 1998a:82 **b^hreus-* 'to break in pieces, to smash, to shatter'; Pokorny 1959:171 **bhreu-s-* 'to smash, to break into pieces'; Walde 1927—1932.II:198—199 **bhreus-*; Mann 1984—1987:109 **bhrus-* '(vb.) to break, to crumble; (n.) fragment, crumb', 109 **bhrusdhō* (**bhrusd-*) 'to crumble, to break'; Watkins 1985:9 **bhreus-* 'to break' and 2000:13 **bhreu-* (also **bhreuā-*) 'to cut, to break up' (extended zero-grade form **bhrūs-* [*< *bhru₂s-*]); Mallory—Adams 1997:81 **bhreus-* 'to break, to smash to pieces'; Ernout—Meillet 1979:257; Walde—Hofmann 1965—1972.I:553—554 **bhreus-*; De Vaan 2008:245 **b^hrus-to-*; Onions 1966:121; Klein 1971:97 **bhreus-*, **bhres-* 'to break, to crush, to crumble'; Barnhart 1995:89; Hoad 1986:51. Proto-Indo-European **b^her-s-/*b^hor-s-/*b^hṛ-s-/*b^hr-es-/*b^hr-os-/*b^hṛ-s-* 'to split into parts; to break, to divide': Hittite (3rd sg.) *pār-ši-ya-az-zi* 'to break, to divide', (nom. sg.) *pār-ša-aš* 'morsel, fragment'; Greek *φάρσος* 'part, portion'; Old Irish *brissid* 'to break; to defeat'; Old Icelandic *brestr* 'crash; chink, crack; want, loss', *bresta* 'to burst, to be rent; to break, to snap; to burst forth'; Old English *berstan*, *burstan* 'to break, to burst; to break away from, to escape; to break to pieces, to crash, to resound', *byrst* 'loss, calamity, injury, damage, defect', *byrstig* 'broken, rugged'; Old Frisian *bresta* 'to break; to disappear'; Old Saxon *brestan* 'to burst, to break'; Dutch *barsten* 'to burst, to crack; to explode, to snap'; Old High German *brestan* 'to burst' (New High German *bersten*). Pokorny 1959:169 **bhres-* 'to burst, to break'; Walde 1927—1932.II:206 **bhres-*; Mann 1984—1987:114—115 **bhr̥s-* 'break, fragment', 115 **bhr̥stijō* 'to break out, to shoot, to burst'; Watkins 1985:9 **bhres-* and 2000:13 **bhres-* 'to burst'; Mallory—Adams 1997:81 (?) **bhres-* 'to burst'; Hoffmann 1966:392; Chantraine 1968—1980.II:1179—1180 **bhr̥s-*, **bher-s-*; Frisk 1970—1973.II:994—995 **bher-s-*, **bhr̥s-*; Boisacq 1951:1017 **bhr̥s-es-*; Beekes 2010.II:1555 **b^hrs-*; Kroonen 2013:75 **bhrest-*; Onions 1966:129 **bhrest-*; Klein 1971:101 **bhreus-*, **bhres-*; Vercoullie 1898:20; Kluge—Mitzka 1967:68 **bhres-*; Kluge—Seebold 1989:77; Walshe 1951:20; Sturtevant 1951:64,

§86; Puhvel 1984— .8:150—165 **bhér-s-*, **bhr-és-*, **bhr-s-*; Kloekhorst 2008b:642—643 **b^hrs-* (?).

- D. Proto-Uralic **par3-* ‘to scrape, to cut, to carve’: Hungarian *farag-* ‘to carve, to cut, to whittle (wood), to hew, to trim, to chip (stone)’, *forgacs* ‘shavings, scobs, chips, cuttings, filings’; Vogul / Mansi *pâr-* ‘to plane’; Tavgi Samoyed / Enets (Baiha) *bora-* ‘to plane, to scrape, to rub, to dress (hides), to tan’; Selkup Samoyed *poorgaana-* ‘cut leather, hides’; Kamassian *paargə-* ‘to scrape, to cut, to carve’. Collinder 1960:401 and 1977:32; Rédei 1986—1988:357 **par3-*; Décsy 1990:105 **para* ‘to cut’.
- E. Chukchi-Kamchatkan: Proto-Chukotian **pare-* ‘to shave’ > Chukchi (Southern) *pare-* ‘to shave (off), to plane, to remove hair from’; Kerek *pa(a)ja-* ‘to shave’; Koryak *paje-* ‘to shave’; Alyutor *pari-*, (Palana) *paret-* ‘to shave’. Fortescue 2005:209; Janhunen 1977b:117.
- F. Proto-Gilyak / Nivkh **barq* (or **baɣar(q)*) ‘half’: Amur *pasq* ‘half’ (also ‘one of a pair’); North Sakhalin *pasq* ‘half’; East Sakhalin *pasq* ‘half’; South Sakhalin *payañir* / *payasiř* ‘half’. Fortescue 2016:21.

Sumerian *bar* ‘to split (with a tool or weapon)’, *bar* ‘to cut into, to notch, to cut or slit open, to carve, to slice, to cut up’, *bar* ‘to dig, to excavate’.

Buck 1949:9.21 strike (hit, beat); 9.22 cut (vb.); 9.26 break (vb. tr.); 9.52 board; 9.81 carve; 13.24 half. Bomhard—Kerns 1994:226—227, no. 32.

38. Proto-Nostratic root **bar-* (~ **bər-*):

(vb.) **bar-* ‘to make a sound, to utter a noise’;

(n.) **bar-a* ‘sound, noise’

- A. Dravidian: Tamil *parai* ‘(vb.) ‘to speak, to say; (n.) word, saying, statement’, *paraiccal* ‘talk, speech’; Malayalam *parayuka* ‘to say, to speak, to tell’, *paraccal* ‘speech’; Kannaḍa *pare* ‘abuse, censure’, *parcu*, *paccu* ‘to whisper’, *parisu* ‘to speak, to chat’, *parañcu* ‘to mutter’; Koḍagu *pare-* (*parev-*, *parand-*) ‘to utter’; Tuḷu *pareñcuni* ‘to prate, to prattle, to find fault with’, *parañcena*, *parañcelu* ‘prattling, grumbling, murmuring’, *parañtele* ‘prattler, grumbler’, *parañcele* ‘prattler, babbler, grumbler’, *paraṇḍa* ‘murmuring, grumbling’; Gadba (Salur) *park-* ‘to say, to speak’; Kui *bargi* ‘order, command’. Burrow—Emeneau 1984:359, no. 4031. (?) Kurux *bar^axnā* ‘to snore’; Malto *barge* ‘to snore’. Burrow—Emeneau 1984:355, no. 3983.
- B. Proto-Kartvelian **br̥dgwen-* ‘to growl, to snarl, to grumble’: Georgian *br̥dyen-*, *br̥dyvin-* ‘to growl, to snarl, to be angry’; Mingrelian *burdyin-* ‘to growl, to snarl, to mutter, to mumble’; Laz *bundyin-* ‘to grumble, to hiss at (of cats)’. Klimov 1964:54 **br̥dywin-* and 1998:18—19 **br̥dyw-en-* ‘to growl, to grumble’; Fähnrich—Sardshweladse 1995:61—62 **br̥dywen-*; Fähnrich 1994:230 and 2007:76—77 **br̥dywen-*; Jahukyan 1967:59—60.

- C. Proto-Indo-European Proto-Indo-European **b^herk'-/*b^hork'-/*b^hrk'-* 'to drone, to bark': Latvian *brēkt* 'to cry'; Serbo-Croatian *brèktati* 'to puff'; Slovenian *bréhati* 'to pant'; Czech *břechati* 'to yelp'; Russian *brexát'* [брехать] 'to yelp, to bark, to tell lies', *brenjá* [брехня] 'lies'; Polish *brzechać* 'to bark'. Pokorny 1959:138—139 **bhereg-* (also **bhereq-*) 'to drone, to bark'; Walde 1927—1932.II:171—172 **bherg-*; Mann 1984—1987:112 **bh_gō-*, *-jō* 'to chirp, to crackle, to bark'; Watkins 1958:8 **bherg-* 'to buzz, to growl' and 2000:13 **bherg-* 'to make noise'; Mallory—Adams 1997:51 (?) **bhereg-* 'to bark, to growl'. Proto-Indo-European **b^herm-/*b^horm-/*b^hym-*, **b^hrem-/*b^hrom-/*b^hym-* 'to buzz, to hum, to make a sound': Latin *fremō* 'to roar, to murmur, to growl'; Greek φόρμιγξ 'a kind of lyre or harp'; Russian *brjacát'* [бряцать] 'to clang, to clank'; Old English *bremman* 'to resound, to roar'; Old High German *bremān* 'to growl, to mutter'; Middle High German *brummen* 'to growl, to grumble' (New High German *brummen*). Rix 1998a:78—79 **b^hrem-* 'to growl, to grumble'; Pokorny 1959:142—143 **bherem-* 'to buzz, to hum'; Walde 1927—1932.II:202—203 **bhrem-*; Mann 1984—1987:102 **bhremō* 'to roar, to hum, to rumble', 104 **bhromalos* 'buzz, hum, roar'; Watkins 1985:9 **bhrem-* and 2000:13 **bhrem-* 'to growl'; Mallory—Adams 1997:24 (?) **bhrem-* 'to make a noise (of animals)'; Mayrhofer 1956—1980.II:528—529; Boisacq 1950:1035; Beekes 2010.II:1587 (pre-Greek loanword); Frisk 1970—1973.II:1036—1037; Chantraine 1968—1980.II:1222; Hofmann 1966:403 **bhrem-*; De Vaan 2008:241 **b^hrem-e/o-* 'to hum, to rumble'; Ernout—Meillet 1979:252—253; Walde—Hofmann 1965—1972.I:544—545; Orël 2003:55 Proto-Germanic **brem(m)anan*; Kroonen 2013:75 **bremen-* ~ **brimman-* 'to drone, to hum'; Kluge—Mitzka 1967:104; Kluge—Seebold 1989:109.
- D. Yukaghir (Southern / Kolyma) *parčəγə-* 'to chatter, to splash', (Northern / Tundra) *porčəγə-* 'to chatter, to splash', *parčəhabod'e-kodek* 'chatterbox'. Nikolaeva 2006:344.

Buck 1949:3.82 bee; 18.12 sing; 18.14 (words denoting various cries, especially of animals); 18.21 speak, talk. Bomhard—Kerns 1994:227—228, no. 33.

39. Proto-Nostratic (n.) **bar-a* used as the base for several insect names:

- A. Proto-Afrasian **bar-* used as the base for several insect names: Berber: Tamazight *a-burri* 'crickets capable of flying'; Rif *a-barru* 'cricket'; Snous *a-bərru* 'grasshopper'. (?) Southern Cushitic: Iraqw, Burunge, Alagwa *ba'aramo* 'fly, bee' (perhaps < **baraʔ-* through metathesis). (?) Central Chadic: Hona *mbèra* 'locust'; Masa *bara* 'locust'; Banana *barrà* 'locust'. Militarëv—Kogan 2005.II:88—89, no. 62, **bur-* 'a kind of insect'.

- B. Dravidian: Kui *parri* ‘hornet’; Kuwi *prāri* ‘wasp’, *parri* ‘wild bee’. Burrow—Emeneau 1984:355, no. 3985.
- C. Proto-Indo-European **bher-/*bhor-/*bh̥r-* ‘a stinging or biting insect’: Greek *πεμψηδών* ‘a kind of wasp’; Sanskrit *bambhara-h* ‘bee’, *bambharālī-* ‘fly’; Armenian *boř* ‘bumble-bee, hornet’. Pokorny 1959:135—136 **bher-* ‘to hum, to buzz’; Walde 1927—1932.II:161—162 **bher-*; Mayrhofer 1956—1980.II:410; Boisacq 1950:765—766 **bh(e)rē-*; Frisk 1970—1973.II:504; Beekes 2010.II:1171; Chantraine 1968—1980.II:880; Hofmann 1966:261 **bher-*.
- D. Uralic: Proto-Finno-Volgaic **parma-* ‘gadfly, horsefly’ > Finnish *paarma*, (dial.) *parma* ‘horsefly’; Estonian *parm*, (dial.) *paarm* ‘gadfly, horsefly’; Lapp / Saami *boaro* ‘gadfly’; Mordvin (Erza) *promo*, *puromo* ‘gadfly’; Cheremis / Mari (Kozmodemjansk) *parmâ*, (Uržum) *porma* ‘horsefly, gadfly’. Rédei 1986—1988:724—725 **parma* ‘gadfly, horsefly’.

Buck 1949:3.82 bee. Dolgopolsky 2008, no. 248, **baRmV* ‘a stinging insect’.

40. Proto-Nostratic (n.) **bar-a* ‘bone of leg or arm’:

- A. Proto-Afrasian (n.) **bar-* ‘bone of leg or arm’: Proto-Semitic (n.) **barr-*, (reduplicated) **bar-bar-*, **ʔi-br-at-* ‘bone of leg or arm’ > Akkadian *ibrētu* ‘radius and ulna (the two bones of the human forearm)’; Hebrew *ʔēbrāʔ* [עַרְבָּא] ‘limb’; Mandaic *ʕbra* ‘arm, limb, member’; Arabic *ʔibrat-* ‘tibia, shinbone’; Soqotri (reduplicated) *berbéroh* ‘thigh’; Amharic *bərri* ‘bone above the hoof of a cow’; Gurage (Muher) *bärrä*, (Gogot, Soddo) *bərrä* ‘thigh’. Militarëv—Kogan (2000.I:5, no. 3) Proto-Semitic (n.) **ʔi(-)bVr-at-* ‘bone of leg/arm; limb’ — they note: “One wonders whether Eth. and Soq. forms have lost **ʔi-* or reflect an original root with no **ʔi-* prefix.” As further noted by Militarëv—Kogan, the forms listed here are to be distinguished from both Proto-Semitic **ʔa-br-/*ʔi-br-* ‘wing, pinion’ and Proto-Semitic **ʔi-br-(at-)* ‘penis’.
- B. Dravidian: Tamil *paraṭu*, *paraṇtai*, *peranṭe* ‘ankle’; Kannada *paraḍu* ‘ankle’, *haraḍi* ‘ankle, wrist’. Burrow—Emeneau 1984:352, no. 3952.
- C. Proto-Kartvelian **bark’-* ‘thigh, haunch’: Georgian *bark’-al-* ‘thigh (of animal, bird)’; Mingrelian *bork’-* ‘shin, shank’; Svan *bark’-* in *bark’-ä* ‘bow-legged’. Klimov 1964:49 **bark-(al-)*; 1998:9 **bark-* — Klimov notes: “Georg. *-al* is a word-formation affix”; Fähnrich 2007:50—51 **bark-*; Fähnrich—Sardshweladse 1995:45—45 **bark-*; Schmidt 1962:95.

Buck 1949:4.16 bone.

41. Proto-Nostratic **bar-* (~ **bər-*):

- (vb.) **bar-* ‘to walk, to go (away)’;
 (n.) **bar-a* ‘walking, going (away), leaving, departing’

- A. Proto-Afrasian **bar-* ‘to go (away), to leave, to depart’: Proto-Semitic **bar-aḥ-* ‘to go (away), to leave, to depart’ > Arabic *bariḥa* ‘to leave (a place), to depart’, *barāḥ* ‘departure; cessation, stop’, *mubāraḥa* ‘departure’; Ugaritic *brḥ* ‘to flee’ (?); Hebrew *bāraḥ* [בָּרַח] ‘to go or pass through, to flee’; Phoenician *brḥ* ‘to depart’; Jewish Palestinian Aramaic *bəraḥ* ‘to flee’; Geez / Ethiopic *barrəḥa* [በርሐ] ‘to enter the wilderness, to take to the woods, to flee, to escape, to run’. D. Cohen 1970—:83; Murtonen 1989:120—121; Klein 1987:84; Tomback 1974:55; Zammit 2002:91—92; Leslau 1987:104—105. Proto-Southern Cushitic **bariy-* ‘to travel’ > Ma’a *-bāri* ‘to travel’; Dahalo *barij-* ‘to go out, to depart’. Ehret 1980:135. West Chadic: Angas *bar-* ‘to escape’; Tangale *bar-* ‘to go out’; Warji *var-* ‘to go out’; Ngizim *vəru* ‘to leave, to go out and leave a place; to escape, to get out of a dangerous situation’. Jungraithmayr—Ibriszimow 1994.II:164. Orël—Stolbova 1995:58, no. 230, **bariḥ-* ‘to run, to go’.
- B. Proto-Kartvelian **berq-* ‘step’: Old Georgian *berq-*, *perq-* (< **berq-* through assimilation) ‘foot’ (Modern Georgian *pex-i* [< **perq-*, with loss of the *r* before *x*] ‘foot’); Mingrelian *bax-* (< **barx-* < **barq-*) in *la-bax-u* ‘passage in a wattle-fence’; Svan *bērq*, *bā(r)q*, *bāq* ‘step’, *na-barq-* ‘track, foot-print’, (Upper Bal) *li-bāq-i* ‘to step over something’. Klimov 1964:50 **berq-* ‘foot, step’ and 1998:12 **berq-* ‘leg, step’; Schmidt 1962:135; Fähnrich—Sardshweladse 1995:52—53 **berq-*; Fähnrich 1994:221 and 2007:61—62 **berq-*.
- C. Altaic: Proto-Turkic **bar-* ‘to walk, to go (away); to come, to reach’ > Old Turkic (Orkhon, Old Uighur) *bar-* ‘to walk, to go (away)’; Karakhanide Turkic *bar-* ‘to walk, to go (away)’; Turkish *var-* ‘to go towards; to arrive; to reach, to attain; to approach; to result, to end in’, *varış* ‘arrival’; Gagauz *var-* ‘to walk, to go (away); to come, to reach’; Azerbaijani *var-* ‘to walk, to go (away)’; Turkmenian *bar-* ‘to walk, to go (away)’; Uzbek *bər-* ‘to walk, to go (away); to come, to reach’; Uighur *ba(r)-* ‘to walk, to go (away)’; Karaim *bar-* ‘to walk, to go (away)’; Tatar *bar-* ‘to walk, to go (away)’; Bashkir *bar-* ‘to walk, to go (away)’; Kirghiz *bar-* ‘to walk, to go (away)’; Kazakh *bar-* ‘to walk, to go (away)’; Noghay *bar-* ‘to walk, to go (away)’; Sary-Uighur *par-* ‘to walk, to go (away)’; Oyrot (Mountain Altai) *bar-* ‘to walk, to go (away); to come, to reach’; Tuva *bar-* ‘to walk, to go (away)’; Chuvash *pīr-* ‘to walk, to go (away)’; Yakut *bar-* ‘to walk, to go (away)’; Dolgan *bar-* ‘to walk, to go (away)’. Note: Starostin—Dybo—Mudrak (2003:930) derive the above Turkic forms from Proto-Altaic **m̥jori* ‘road, track; to follow’. Here, I follow Dolgopolsky in deriving them from Proto-Nostratic **bar-* (~ **bər-*) ‘to walk, to go (away)’ instead.

Buck 1949:4.37 foot; 10.45 walk (vb.); 10.47 go; 10.49 go away, depart. Dolgopolsky 2008, no. 238, **barqV* (~ **barXV*) ‘to go, to go away, to step’. The Dravidian forms included by Dolgopolsky do not belong here.

42. Proto-Nostratic root **bar^y-* (~ **bər^y-*):(vb.) **bar^y-* ‘to be or become barren, desolate, useless, unfruitful’;(n.) **bar^y-a* ‘open, fallow, or barren land’; (adj.) ‘barren, desolate, useless, unfruitful’

- A. Proto-Afrasian **bar-* ‘open, fallow, barren, or uncultivated land’: Proto-Semitic **barr-* ‘open country, field’ > Akkadian *barru*, *bāru* ‘open country’; Hebrew *bar* [בַּר] ‘field, open country’ (a hapax legomenon in the Bible); Syriac *barrā* ‘open field’; Arabic *barr* ‘land, mainland, open country’, *barrīya* ‘open country, steppe, desert’; Sabaeen *barr* ‘open country’; Šheri / Jibbāli *ēbrór* ‘far away desert’. D. Cohen 1970— :87; Klein 1987:82; Murtonen 1989:119; Zammit 2002:92. Proto-Semitic **ba/wa/r-* ‘fallow, uncultivated; wasteland’ > Syriac *būrā* ‘uncultivated land’, *bayyirā* ‘barren, fallow, uncultivated’; Arabic *būr* ‘uncultivated, fallow’ (Syriac loan). D. Cohen 1970— :53. (Orël—Stolbova 1995:82—83 connect the preceding Semitic forms with words meaning ‘earth, sand’; however, the primary meaning in Semitic appears to be ‘open, fallow, barren, or uncultivated land’). Semitic: Arabic *barāḥ* ‘a wide, empty tract of land, vast expanse, vastness’; Geez / Ethiopic *baraḥā* [በጊዳ] ‘wilderness, uninhabited place’ (Amharic loan); Tigrinya *bārāka* ‘desert’; Tigre *bārāka* ‘desert’; Gurage *bārāha* ‘uncultivated land, uncultivated pastureland’; Amharic *bārāha* ‘wild region, wilderness’, *bārāhamma* ‘deserted’. D. Cohen 1970— :83; Leslau 1979:153 and 1987:104—105. East Chadic **bar-H-* ‘field’ > Kwan *koo-barāa* ‘field’.
- B. Dravidian: Tamil *pār* ‘(vb.) to go to ruin, to be laid waste, to become useless, to be accursed (as a place or house); (n.) desolation, ruin, damage, loss, corruption, baseness, evil, emptiness, barrenness, barren or waste land’, *pāri* ‘desolation’, *paṛutu* ‘unprofitableness, damage, ruin’; Malayalam *pār* ‘an empty place, void, desolation, waste; vain, useless’, *pārān* ‘one good for nothing, wicked, scamp; left uncultivated’; Kannada *pār* ‘ruin, desolation, a waste’, *pārtana* ‘a ruined state’; Tulu *pālḷu*, *hālḷu* ‘ruin, destruction, desolation; desolate, waste, ruined, destroyed’, (?) *paḍiḷu* ‘waste, barren, unfruitful; wasteland’; Telugu *pāḍu* ‘ruin, destruction, dilapidated condition; ruined, dilapidated, desolate, waste, dreary, bad, wicked, evil’; Gondi *pār* ‘desert’, *pār* ‘a deserted village site’; Konḍa *pār* ‘old, devastated’, *pāru* ‘neglected, spoiled’. Burrow—Emeneau 1984:365, no. 4110.
- C. Proto-Kartvelian **barč’-* ‘barren, infertile’: Old Georgian *berc’i* ‘barren, infertile (of a woman)’; Mingrelian *burč’i* ‘barren, infertile (of a cow)’. Klimov 1964:49 **barç₁-* and 1998:9 **barç₁-* ‘barren, dry’; Fähnrich—Sardshweladse 1995:46—47 **barç₁-*; Fähnrich 1994:229 and 2007:52 **barç₁-*.
- D. Chukchi-Kamchatkan: Proto-Chukotian **pəra-* ‘to dry out’ > Chukchi *p’a-* ‘to dry (out) (intr.)’, *rə-p’a-w-* ‘to dry out (tr.)’, *ta-p’a-ŋ-* ‘to dry out, to

hang out to dry'; Kerek *nə-pʔa-u-* 'to dry out (tr.)', *hətyə-pʔailən* 'dried out lake', *nuta-pʔa-* 'to dry out (earth)'; Koryak *pəra-* 'to dry (out) (intr.); to be thirsty', *jə-pra-v-* 'to dry out (tr.)'; Alyutor *pəra-* 'to dry (out) (intr.)', *tə-pəra-v-* 'to dry out (tr.)', *qasa-pəra-* 'to be thirsty'. Fortescue 2005:225.

Sumerian *bar* 'open land, steppe; wasteland, desert'.

Buck 1949:15.84 dry. Dolgopolsky 2008, no. 219, **bArV* 'earth, land, dust'.

43. Proto-Nostratic root **baw-* (~ **bəw-*):

(vb.) **baw-* 'to be or become aware of or acquainted with, to observe, to notice';

(n.) **baw-a* 'awareness, knowledge'

A. Afrasian: Proto-Semitic **baw-ah-* 'to become known, to be revealed' > Arabic *bāḥa* 'to become known, to be revealed; to reveal, to disclose'; Geez / Ethiopic *bōḥa* [ቦሐ] 'to be seen, revealed, clear'; Amharic *bāha* 'to be visible, seen' (loan from Geez), *buh* 'that which is seen'. D. Cohen 1970—:51; Leslau 1987:115. Proto-Semitic **baw-ah-* 'to be aware of, to be mindful of' > Arabic *bāha* 'to understand'; Maghrebi *bawwah* 'to stare'; Tāmūdīc **bwh* 'to remember'. D. Cohen 1970—:51.

B. Proto-Indo-European **b^hewd^h-* / **b^howd^h-* / **b^hud^h-* 'to be or become aware of': Sanskrit *bódhati* 'to wake, to wake up, to be awake; to perceive, to notice, to understand, to be or become aware of or acquainted with; to think of; to know to be, to recognize as; to deem, to consider, to regard as', *buddhá-ḥ* 'awakened, enlightened, learned, understood, known', *buddhi-ḥ* 'intelligence, reason, mind, discernment, judgment', *bodhi-ḥ* 'perfect knowledge or wisdom, the illumined or enlightened mind', *bodhá-ḥ* 'perception, thought, knowledge, understanding, intelligence'; Greek *πεύθομαι* 'to learn of'; Lithuanian *budėti* 'to be awake'; Old Church Slavic *bŭděti* 'to be awake', *buditi* 'to awaken', *bŭdrŭ* 'watchful'. The following Germanic forms probably belong here as well: Gothic **biudan* in: *ana-biudan* 'to order, to command', *faur-biudan* 'to forbid'; Old Icelandic *bjóða* 'to offer'; Old English *bēodan* 'to offer', *on-bēodan* 'to announce, to tell; to command', *for-bēodan* 'to forbid'; Old Frisian *biada* 'to order, to offer'; Old Saxon *biodan* 'to order, to offer'; Old High German *biotān* 'to order, to offer' (New High German *bieten*), *far-biotān* 'to forbid' (New High German *verbieten*). Rix 1998a:66—68 **b^heyd^h-* 'to awaken, to be aware'; Pokorny 1959:150—152 **bheudh-*, **bhu-n-dh-* 'to awaken'; Walde 1927—1932.II:147—148 **bheudh-*; Watkins 1985:8 **bheudh-* and 2000:11 **bheudh-* 'to be aware, to make aware'; Mann 1984—1987:75 **bheudhō* 'to prompt, to arouse, to exhort; to be awake'; Gamkrelidze—Ivanov 1984.I:174 **b^h[^h]eyd^h[^h]-*, **b^h[^h]ud^h[^h]-* 'to be awake, to notice' and 1995.I:193 **b^heyd^h-* / **b^hud^h-* 'to be awake, to notice'; Mallory—Adams

1997:516 **bhoudhēje/o-* ‘to waken, to point out’ and 636 **bheudh-* ‘to watch over, to be concerned about’; Mayrhofer 1956—1980.II:449—450; Hofmann 1966:266; Frisk 1970—1973.II:625—626 **bheudh-e(-ti, -tai)*; Chantraine 1968—1980.II:954—955 **bheudh-e-*; Boisacq 1950:776—777 **bheudh-*; Prellwitz 1905:365; Beekes 2010.II:1258 **b^heud^h-*; Smoczyński 2007.1:78—79 **b^hēud^h-e-*; Fraenkel 1962—1965.I:62; Kroonen 2013:61 Proto-Germanic **beudan-* ‘to command, to offer’ (< **b^hēud^h-e-*); Orël 2003:43 Proto-Germanic **beudanan*; Feist 1939:41 **bheudh-*; Lehmann 1986:30; De Vries 1977:40; Klein 1971:81 **bheudh-*; Onions 1966:93 **bheudh-*, **bhudh-* and 369; Boutkan—Siebinga 2005:45—46; Kluge—Seebold 1989:84 **bheudh-*; Kluge—Mitzka 1967:75—76 **bheudh-*; Wodtko—Irslinger—Schneider 2008:36—37 **b^heud^h-*.

Sumerian *bu-i* ‘knowledge, learning’.

Buck 1949:15.11 perceive by the senses, sense; 17.16 understand; 17.24 learn; 17.31 remember. Bomhard—Kerns 1994:195—196, no. 1.

44. Proto-Nostratic root **bay-* (~ **bəy-*):

(vb.) **bay-* ‘to apportion, to divide into shares, to distribute, to allot, to share’;

(n.) **bay-a* ‘portion, share’

A. Proto-Afrasian **bay-* ‘to apportion, to divide into shares; to trade, to buy and sell’: Proto-Semitic **bay-as-* ‘to trade, to buy and sell’ > Arabic *bāʿa* ‘to sell, to offer for sale; to buy, to purchase’, *bayʿ* ‘sale, exchange’, *mubtāʿ* ‘buyer, purchaser’, *bayʿa* ‘agreement, arrangements, business deal, commercial transaction, bargain; sale, purchase’; Tamūdic *byʿ* ‘to sell’; Punic *bʿt* ‘tariff’. D. Cohen 1970— :62—63; Zammit 2002:104. Proto-Semitic **bay-aḥ-* ‘to cut into pieces and distribute’ > Arabic *bayyaha* ‘to cut into pieces and distribute’; Soqotri *ʿebih* ‘to fall to one’s lot’, *šeʿebah* ‘to share’. D. Cohen 1970— :62. Berber: Tamazight *bbəy* ‘to cut, to divide, to pluck’, *ubuy* ‘cut, pluck’; Kabyle *əbbi* ‘to cut, to pluck’, *tibbit* ‘plucked’; Nefusa *əbbi* ‘to gather, to pick fruit’; Ghadames *əbbək* ‘to gather’; Mzab *əbbi* ‘to take, to take away, to remove, to gather’. Southern Cushitic: Proto-Rift **biʔ-* ‘to trade, to buy and sell’ > Iraqw *bu-* ‘to pay’; Alagwa *bu-* ‘to pay’; Kʿwadza *beʔ-* ‘to buy, to sell, to trade’. Ehret 1980:338. West Chadic **bay-* ‘to sell, to trade’ > Tangale *paya* ‘to trade’; Kirfi *bayi* ‘to sell’; Galambu *baya-* ‘to sell’; Hausa *bayaɗ* ‘to give’. Ongota *biʔe* ‘to give’. Fleming 2002b:48. Orël—Stolbova 1995:64, no. 254, **bayVʕ-* ‘to sell’.

B. Dravidian: Tamil *paya* (-*pp-*, -*nt-*) ‘to yield, to produce, to put forth fruit, to be productive’, *payappu* ‘profit, advantage’, *payam* ‘profit, advantage, fruit’, *payantōr* ‘parents’; Tuḷu *paya*, *payi* ‘an ear of rice’, *payakely*, *payac(c)ely* ‘the time of shooting of the ears of corn’, *payatāye* ‘thriving’.

- man', *payāvuni* 'to shoot (as an ear of corn)', *pāya* 'gain, profit; coming into existence, being delivered of a child'. Burrow—Emeneau 1984:351, no. 3937. Semantic development as in English *yield* '(n.) the amount produced, gain, profit' < Old English *gielð* '(n.) payment, tribute, tax, compensation', (vb.) *gielðan* 'to pay, to pay for, to give, to render'.
- C. Proto-Indo-European **b^hey-/b^hoy-/b^hi-* 'to give': Hittite (3rd sg. pres., *hi*-conjugation) *pa-a-i*, (3rd sg. pres., *mi*-conjugation) *pí-e-ya-zi*, *pi-iz-zi* 'to give'; Palaic *piša-* 'to give'; Hieroglyphic Luwian *pi-ya-* 'to give'; Luwian *piya-* 'to give'; Lycian *piye-* 'to give'; Lydian *bi-* 'to give'. Kloekhorst 2008b:614—616; Puhvel 1984— .8:39—57 **bheA₂-*, with suffixes **-y-* or **-n-*. Semantic development as in Kashmiri *bazun* 'to give away (prizes, etc.), to distribute' < Old Indic (Sanskrit) *bhájati* 'to divide, to distribute, to allot or apportion to, to share with; to grant, to bestow, to furnish, to supply'.
- D. Altaic: Proto-Turkic **bāy* 'rich' > Old Turkic *bay* 'rich'; Karakhanide Turkic *bay* 'rich'; Turkish *bay* (originally) 'a rich man', (now) 'gentleman, Mr.'; Gagauz *bay* 'rich'; Azerbaijani *bay* 'rich'; Turkmenian *bāy* 'rich'; Uzbek *bay* 'rich'; Uighur *bay* 'rich'; Karaim *bay* 'rich'; Tatar *bay* 'rich'; Bashkir *bay* 'rich'; Kirghiz *bay* 'rich'; Kazakh *bay* 'rich'; Noghay *bay* 'rich'; Tuva *bay* 'rich'; Chuvash *pojan* 'rich'; Yakut *bāy* 'rich'. Turkic loans in Classical Mongolian *bayan* 'rich' and related forms in other Mongolian languages. Poppe 1955:128 and 1960:66, 97; Street 1974:8 **bāya(n)* 'rich'. Semantic development as in Old Church Slavic *bogatъ* 'rich', *bogatiti* 'to be rich' < **bogъ* 'share, portion' < Proto-Indo-European **b^hak'-* 'to divide, to distribute' (cf. Sanskrit *bhájati* 'to divide, to distribute, to allot or apportion to, to share with; to grant, to bestow, to furnish, to supply'; Tocharian A *pāk*, B *pāke* 'part, portion'). Note: Starostin—Dybo—Mudrak (2003:340—341) include the above forms under Proto-Altaic **bēžu* 'numerous, great'.
- E. Proto-Eskimo **payuy-* 'to bring food or supplies to': Alutiiq Alaskan Yupik *payuxtə-* 'to take food to'; Central Alaskan Yupik *payuxtə-* 'to take food to'; Central Siberian Yupik *payuxtə-* 'to go check on'; Seward Peninsula Inuit *payuk-* 'to bring food or supplies to'; Western Canadian Inuit *payuk-* 'to give food, clothing to those remaining'; Eastern Canadian Inuit *payuk-* 'to bring a gift to'; Greenlandic Inuit *payuy* 'to bring a gift to'. Fortescue—Jacobson—Kaplan 1994:253.

Sumerian *ba* 'to give as a gift or ration'.

Buck 1949:11.21 give; 11.42 wealth, riches; 11.51 rich; 11.65 pay (vb.); 11.73 profit; 11.81 buy; 11.82 sell; 11.83 trade (vb.). Bomhard—Kerns 1994:219—220, no. 25; Arbeitman 1987:19—31.

45. Proto-Nostratic (n.) *bay-a ‘honey, bee’:

- A. Afrasian: Egyptian *bī-t*, *by-t* ‘bee, honey’, *bīty* ‘bee-keeper’; Demotic *ībī-t* ‘honey’; Coptic *ebiō* [ⲉⲃⲓⲱ] ‘honey’, *ebit* [ⲉⲃⲓⲧ, ⲉⲃⲉⲓⲧ] ‘honey dealer’. Gardiner 1957:564; Erman—Grapow 1921:46 and 1926—1963.1:434; Faulkner 1962:79; Vycichl 1983:38; Černý 1976:32; Hannig 1995:245 and 2006:796—797.
- B. Proto-Indo-European *b^hey-/ *b^hoy-/ *b^hi- ‘honey, bee’: Old Icelandic *bý* ‘bee’; Swedish *bi* ‘bee’; Old English *bēo* ‘bee’; Old Frisian *bē* ‘bee’; Old Saxon *bīa* ‘bee’; Old High German *bīa*, *bīna* ‘bee’ (New High German *Biene*); Old Irish *bech* (< *b^hi-k^ho-s) ‘bee’; Lithuanian *bitė*, *bitis* ‘bee’; Old Church Slavic *bčela* ‘bee’; Baluchi *bēnog* ‘honey’; Dameli *bin* ‘honey’, *binaká* ‘bee’; Pashai *bēn* ‘honey’; Shumashti *bāen* ‘honey’. Pokorny 1959:116 *b^hei- ‘bee’; Walde 1927—1932.II:184—185 *b^hī-; Mann 1984—1987:80 *b^hit- ‘bee’; Watkins 1985:6 *b^hei- and 2000:8 *b^hei- ‘bee’; Turner 1966:548, no. 9614, *b^hēna- ‘honey’; Gamkrelidze—Ivanov 1984.II:611 (fn. 1) *b^h[i-t][h]h- and 1995.I:516, I:523—524 *b^hei- ‘bee’; Mallory—Adams 1997:57 *b^hi-k^wó- ‘bee, stinging insect’; Kroonen 2013:64 *bīōn- ‘bee’; Orël 2003:46 Proto-Germanic *bīō(n); De Vries 1977:66; Onions 1966:84; Klein 1971:76; Kluge—Mitzka 1967:75 *b^hī-; Kluge—Seebold 1989:83 *b^hi-; Fraenkel 1962—1965.I:45; Smoczyński 2007.1:62; Derksen 2015:91—92 *b^hi-.

Buck 1949:3.82 bee; 5.84 honey. Bomhard—Kerns 1994:222—223, no. 27; Dolgopolsky 2008, no. 273, *bVɣV (or *bVɣʔV) ‘bee’.

46. Proto-Nostratic root *baṣ- (~ *bāṣ-):

- (vb.) *baṣ- ‘to be abundant, to be numerous, to be much, to be many’;
(n.) *baṣ-a ‘abundance’; (adj.) ‘abundant, much, many’

- A. Afrasian: Proto-Semitic *baṣ-ax- ‘(vb.) to be abundant, to be numerous, to be much, to be many; (adj.) abundant, much, many; (n.) abundance’ > Arabic *baṣḥ* ‘abundance of wealth’; Geez / Ethiopic *baṣḥa* [በህህ], *baṣḥa* [በህህ] ‘to be numerous, to be abundant, to be much, to be many, to increase’, *bāzuḥ* [ታህህ] ‘many, much, numerous, abundant’, *bāzḥ* [ታህህ] ‘multitude, large number, large amount’; Tigrinya *bāzāḥa* ‘to be abundant, to be numerous’; Tigre *bāzḥe* ‘to be abundant, to be numerous’; Harari *bāzāḥa* ‘to be abundant, to abound, to be numerous, to increase’; Argobba *bāzzaḥa* ‘to be abundant, to be numerous’; Amharic *bāzza* ‘to be abundant, to be numerous’; Gurage *bāzza* ‘to be abundant, to be too much, to become more, to be augmented’, *bāzā* ‘abundant, much’. D. Cohen 1970— :54; Leslau 1963:49, 1979:168, and 1987:117.
- B. Dravidian: Pengo *bajek* ‘much’, *bajon* (pl.) ‘many’; Maṇḍa *bejek* ‘much’. Burrow—Emeneau 1984:343, no. 3830.

- C. Proto-Altaic **bēžu* ‘numerous, great’: Proto-Tungus **bežun* ‘multitude’ > Evenki *bežen* ‘ten deer’; Manchu *baži* ‘a little bit (more), a while’, *bažikan* ‘just a tiny bit (more)’; Nanay / Gold *bežu* ‘thick (of a tree)’. Proto-Mongolian **buža-* ‘strong, durable; quite good’ > Mongolian *bužayai* ‘strong, sturdy, stalwart; hard, firm, durable, solid; quite good’, *bužamayai* ‘strong, solid, hard, durable; rigid, stiff’; Khalkha *buzgay* ‘strong, durable; quite good’; Buriat *bužagar* ‘strong, durable; quite good’; Kalmyk *buzgā* ‘strong, durable; quite good’. Starostin—Dybo—Mudrak 2003:340—341 **bēžu* ‘numerous, great’.
- D. Chukchi-Kamchatkan: Proto-Chukotian **pað-ol*, **pað-oc* ‘excess (what is left over)’ > Chukchi *parol*, *paroc* ‘excess, extra, additional’, *parol-at-* ‘to add’; Kerek *pajul* ‘excess, additional’; Koryak *pajoc* ‘excess, additional’, *pajoc-at-* ‘to remain, to be in excess’; Alyutor *pasus* ‘excess’, *pasus-at-* ‘to remain’, (Palana) *patol* ‘additional’. Fortescue 2005:207.

Buck 1949:12.15 much; many.

47. Proto-Nostratic (n.) **ber-a* ‘swamp’:

- A. Afrasian: Semitic: Akkadian (pl.) *berātu*, *birātu* ‘swamps’.
- B. Indo-European: Pre-Slavic **b^hōr-* ‘swamp’ > Czech *bara* ‘swamp’; Slovak *bára* ‘swamp’; Bulgarian *bara* [бара] ‘small river, stream; stagnant water; puddle’; Macedonian *bara* [бара] ‘puddle’; Serbo-Croatian *bāra* ‘puddle, meadow’.
- C. Uralic: Proto-Finno-Ugrian **perz* ‘mud; swamp’ > Votyak / Udmurt (Sarapul) *pera* ‘soft, black earth used to dye cloth’, *ber-gop* ‘swamp, quagmire’; Zyrian / Komi (Letka) *pereb* ‘moss-covered riverbank in a forest’; (?) Hungarian *berék* ‘grove, marshy pasture’. Rédei 1986—1988:374—375 **perz* ‘mud; swamp’.

Dolgopolsky 2008, no. 219a, **beRV* ‘mud, swamp’.

48. Proto-Nostratic (n.) **b[e]r-a* (or **b[i]r-a*) ‘knee’:

- A. Afrasian: Proto-Semitic **birak-* ‘knee’ > Akkadian *birku*, *burku* ‘knee’; Ugaritic *brk* ‘knee’; Hebrew *bereḫ* [בִּרְחַ] ‘knee’, *bāraḫ* [בָּרַחַ] ‘to kneel’ (denominative); Aramaic *birkā* ‘knee’; Syriac *burkā* ‘knee’; Mandaic *burka* ‘knee’; Arabic *baraka* ‘to kneel down’ (denominative), (metathesis in) *rukba* ‘knee’, *bārikat-* ‘knee’; Šheri / Jibbāli *berk* ‘knee’, *bérók* ‘(camels) to kneel’ (denominative); Mehri *bark* ‘knee’, *bərōk* ‘(camels) to kneel’ (denominative); Soqotri *bərək* ‘knee’; Ḥarsūsi *bark* ‘knee’, *berōk* ‘to kneel’ (denominative); Geez / Ethiopic *bərk* [ቡርክ] ‘knee’, (denominative) *baraka* [ቡረክ] ‘to kneel, to kneel down, to bend the knee, to genuflect’; Tigre *bərk* ‘knee’, (denominative) *bārāka* ‘to kneel, to lie down’; Tigrinya

bərki ‘knee’; Gurage *bər̥k* ‘knee, elbow, joint of finger’; Amharic *bər̥k* ‘knee’ (loan from Geez); Harari *bər̥xi*, *bəxri* ‘the unit between two joints (in a finger, sugar-cane, etc.)’, from the term for ‘knee’. Klein 1987:85; Murtonen 1989:121; D. Cohen 1970—:84; Leslau 1963:41, 45—46, 1979:153, and 1987:105; Militarëv 2011:79, no. 44, Proto-Semitic **bi/ark*, and 2015:110—111, no. 44, Proto-Afrasian **bar(bar)*- ‘knee; (bone of) leg, arm’.

Comment: Militarëv—Kogan (2000.I:36—37, no. 39) reconstruct Proto-Semitic (n.) **bi/ark*- ‘knee’. They do not list any non-Semitic cognates. According to Militarëv—Kogan, “-u- in Akk. (alongside with -i-) and Arm. (Syr. and Mnd.) is likely a secondary development under the influence of *b*-.” In my opinion, the *-i- is original.

- B. Kartvelian: Mingrelian (Zugdidian) *birgul*-, (Senakian) *burgul*- ‘knee’; Laz (Atinuri) *burgul*-, (Xopuri) *burgil*- ‘knee’.

Buck 1949:4.36 knee. Illič-Svityč 1971—1984.I:194, no. 31, **barKa* ‘knee’; Dolgopolsky 2008, no. 244, **b[E]RV[k]V* ‘knee’. If we are not dealing with loanwords here, then the Proto-Nostratic root is to be reconstructed as **b[e]r*- or **b[i]r*- (the root vowel is uncertain), to which different derivational suffixes have been added in Afrasian, on the one hand, and Kartvelian, on the other.

49. Proto-Nostratic (n.) **bey-a* ‘spirit, soul, self’:

- A. Afrasian: Egyptian *bʾ* ‘soul’ (Demotic *by*); Coptic *bai* [βαι] ‘soul’. Hannig 1995:237; Faulkner 1962:77; Erman—Grapow 1921:44 and 1926—1963.1:411—412; Gardiner 1957:563; Vycichl 1983:25; Černý 1976:20.
- B. Dravidian: Tamil *pēy* ‘devil, goblin, fiend; madness (as of a dog), frenzy; wildness (as of vegetation)’, *pēyan* ‘demoniac, madmen’, *pēytti*, *pēycci*, *pēcci* demoness, woman under possession of a demon; Malayalam *pē*, *pēyi* ‘demon; rage, madness, viciousness’, *pēna* ‘ghost, spirit’, *pē-nāyi* ‘mad dog’; Kota *pe-n*, *pe-nm* ‘possession of a woman by spirit of the dead’, *pe-y* ‘demon’; Toda *ō-n* ‘the god of the dead’; Kannada *pē*, *hē* ‘madness, rage, viciousness; growing wild (as plants); worthlessness’, *pētu*, *hētu* ‘demon’, *pēṅkuṇi*, *pēṅkuḷi*, *hēkuḷi* ‘demon; madness, fury’, *hēga* ‘a mad, foolish man’; Tuḷu *pēyi* ‘demon’; Gondi *pēn*, *pen*, *ven*, *pēnu* ‘god’, *peṇ* ‘idol, god’, *pēnvor* ‘priest’; Pengo *pen* ‘god’; Kui *pēnu*, *vēnu* ‘a god, a spirit’; Kuwi *pēnū*, *pēnu* ‘god’, *pēnu* ‘devil’, *pēneʼesi* ‘deceased person’; (?) Malto *peypeyre* ‘to feel fervent or animated’. Burrow—Emeneau 1984:393, no. 4438; Krishnamurti 2003:7 **pē(y)*/**pēṇ* ‘devil’, 11.
- C. Proto-Altaic **bēye* ‘person, self, body’: Proto-Tungus **beye* ‘person, man’ > Evenki *beye* ‘person, man’; Lamut / Even *bey* ‘person, man’; Negidal *beye* ‘person, man’; Nanay / Gold *beye* ‘person’; Solon *bei*, *beye* ‘person, man’. Proto-Mongolian **beye* ‘body, person, self’ > Written Mongolian

beye ‘body, physique, organism; health’; Khalkha *biye* ‘body, physique, stature’; Buriat *beye* ‘body, person; self’; Kalmyk *bī*, *bīyā* ‘body, person; self’; Ordos *biye*, *beye* ‘body, person; self’; Dagur *bey(e)* ‘body, person; self’; Dongxiang *beije* ‘body, person; self’; Shira-Yughur *bāi* ‘body, person; self’; Monguor *bīye*, *buye* ‘body, person; self’. Poppe 1955:47. Poppe 1960:66 and 126; Street 1974:9 **beye* ‘body, person’; Starostin—Dybo—Mudrak 2003:335 **běje* ‘man; self, body’.

Buck 1949:4.11 body; 16.11 soul, spirit; 22.34 devil; 22.35 demon (evil spirit); 22.45 ghost, specter, phantom. Dolgopolsky 2008, no. 274, **beʔyV* ‘body, self’ ([in descendant languages] → ‘soul’). The semantic development is more likely to have been from ‘spirit, soul, self’ (= ‘life force, vital energy; living being’ [same semantic range as Latin *anima*]) to ‘body, person’ rather than the other way around.

50. Proto-Nostratic relational marker **bi* ‘in addition to, with, together with’:

- A. Proto-Afrasian **bi* ‘in addition to, with, together with’: Proto-Semitic **ba* ~ **bi* ‘in, with, within, among’ > Hebrew *bā-* [בִּי] ‘in, at, on, with’; Arabic *bī* ‘in, within, among’; Ugaritic *b* ‘in, with, from’; Sabaeen *b* ‘from, of, in, on, at’; Šheri / Jibbāli *b-* ‘at, about, by, with, in’; Harsūsi *b(e)-* ‘in, with, by’; Geez / Ethiopic *ba* [በ] ‘in, at, into, on, by, through, with (by means of), after (kind and means), by reason of, because of, out of, on account of, according to, concerning, against (contiguity)’; Harari *-be* ‘with, from, by, of, in, on, at’; Gurage *bā* ‘with, in, at, by, out, out of, from’. D. Cohen 1970— :39—40; Klein 1987:62; Leslau 1987:82; Zammit 2002:87. Cushitic: Beja / Beḍawye (postposition) *-b* ‘by, in, of’. Reinisch 1895:38; Appleyard 2007a:456.
- B. Proto-Indo-European **(-)bʰi/y-*, **-bʰo-* ‘in, with, within, among’: Gothic *bi* ‘by, about, over; concerning, according to; at’, *bai* ‘both’; Old English *be*, *bi*; *bī* ‘(of place) near, in, on, upon, with, along, at, to; (of time) in, about, by, before, while, during; for, because of, in consideration of, by, by means of, through, in conformity with, in comparison with’, *-b(e)* in: *ymb(e)* ‘around’; Old Frisian *be-*, *bī-* ‘by, about, at, on’; Old Saxon *be-*, *bī-* ‘by, about, at, on’; Dutch *bij* ‘by, about, at, on’; Old High German *bi-*, *bī* ‘by, about, at, on’ (New High German *bei*); Greek (suffix) *-φ(ι)*, *ἀμ-φί* ‘on both sides, around’, *ἄμ-φω* ‘both’; Latin *ambō* ‘both’, (pl. case ending) *-bus*; Sanskrit *a-bhī* ‘to, towards’, *u-bhau* ‘both’, case endings: (instr. pl.) *-bhis*, (dat.-abl. pl.) *-bhyas*, (instr.-dat.-abl. dual) *-bhyām*. Pokorny 1959:34—35 **ambhi* ‘around’, **ambhō(u)* ‘both’, **mbhi*, **bhi*; Walde 1927—1932.I: 54—55 **ambhi*; **mbhi*, **bhi*; **ambhō(u)*; Mann 1984—1987:1 **abhāi* (**abhāi*) ‘both’, **abhi* (**abhī*) ‘round, about’, 1—2 **abhu* (**abhudu*, **abhūdya*) ‘both’, 18 **ambh-* (**ambh-*, **mbh-*) ‘round’, 18—19 **ambhi* (**ambhi*, **mbhi*) ‘on both sides, around’, 19 **ambhō* (**ambhō*, **mbhō*)

‘both’, 77 **bhī-* ‘by, at’, 862 **obhi-*, **obh-* ‘athwart, against, at’; Watkins 1985:2 **ambhi* (also **mbhi*) ‘around’, 2 **ambhō* ‘both’ and 2000:3 **ambhi* (also **mbhi*) ‘around’, 3 **ambhō* ‘both’; Brugmann 1904:386, 389, 467—468, and 468; Meillet 1964:298—299; Meier-Brügger 2003:197 **-bhi*; Fortson 2004:106—107; De Vaan 2008:37—38; Gamkrelidze—Ivanov 1984.I:288, I:380, I:381, I:394, I:396 **-b^[h]i/*-b^[h]i-s*, **-b^[h]os* and 1995.I:250, I:333, I:334, I:345, I:347 **-b^{hi}/*-b^{hi}-s*, **-b^hos*; Orël 2003:44—45 Proto-Germanic **bi*; Feist 1939:74 and 88 **bhi*; Lehmann 1986:56 and 67; Onions 1966:131; Klein 1971:102; Boutkan—Siebinga 2005:45; Kluge—Mitzka 1967:61; Kluge—Seebold 1989:70.

C. Etruscan *pi* (also *pul*) ‘at, in, through’.

Sumerian *bi* ‘with, together with, in addition to’; *-bi*, *bi-da*, *-bi-(da)* ‘and’.

Bomhard—Kerns 1994:218—219, no. 23; Dolgopolsky 2008, no. 272, **bayV* ‘(n.) place; (vb.) to be somewhere’.

51. Proto-Nostratic root **bin-* (~ **ben-*):

(vb.) **bin-* ‘to tie (together), to fasten, to twist together, to bind (together)’;

(n.) **bin-a* ‘tie, bond’

A. Proto-Afrasian **ben-* ‘to tie’: Berber: Ghadames *aβan* ‘to tie’; Ahaggar *ahən* ‘to tie’. Central Chadic **byan-* ‘to tie’ > Logone *βən*, *bən* ‘to tie’; Buduma *peenai*, *fanai* ‘to tie’. Orël—Stolbova 1995:66, no. 262, **ben-* ‘to tie’.

B. Dravidian: Tamil *piṇai* (-v-, -nt-) ‘to entwine (intr.), to unite, to copulate; to tie, to fasten, to clasp each other’s hands as in dancing’, *piṇai* (-pp-, -tt-) ‘(vb.) to link, to unite, to tie, to fasten, to clasp hands; (n.) being knit together, joint in planks, tie, flower garland, bail, security, pledge, consent’, *piṇaiyali* ‘joining together, flower garland, hinge, copulation’, *piṇi* ‘(vb.) to tie, to fetter, to link, to win over; (n.) fastening, bond, attachment, plait’, *piṇippu* ‘binding, tie, attachment’, *piṇaṅku* (*piṇaṅki-*) ‘to be linked together, to be intertwined, to be at variance’, *piṇakku* (*piṇakki-*) ‘to fasten, to intertwine’; Malayalam *piṇa* ‘tying, yoke, being involved, bail, surety, coupling’, *piṇekka* ‘to tie together, to yoke, to ensnare’; Toda *piṇ* ‘surety’; Kannada *peṇe* ‘(vb.) to unite or tie different things together, to intertwine, to twist, to plait, to braid; to be jointed, to unite, to be intertwined, to get entangled; (n.) an entwined state, union, company’; Telugu *peṇa* ‘a twist of ropes, tie, bond’, *peṇācu* ‘to twist, to twist together’, *peṇāgonu* ‘to be twisted, to be mingled, to join, to unite’, *penapu* ‘(vb.) to join, to unite, to twist; (n.) dispute’, *pēnu* ‘to twist, to entwine, to twist two or three single threads into a thick thread’; Naikṛi *pēṇḍ-* ‘to twist, to twine’; Parji *pinna* ‘bund of field’; Brahui *pinning* ‘to be twisted’. Burrow—Emeneau 1984:368, no. 4159. Tamil *pinnu* (*pinni-*) ‘to

plait, to braid, to lace, to knit, to weave, to entwine, to bind, to embrace; to become united', *pinnal* 'braiding, web, entanglement, matted hair', *pinnakam* 'braided hair', *pinnu* (*pinni*-) 'to weave'; Gadba (Salur) *pannap*- 'to weave'; Kuṛux *pandnā* 'to roll and twist together filaments into threads'; Malayalam *pinnuka* 'to plait, to twist', *pinnal* 'embroilment'; Toda *pīn*- (*pīny*-) 'to be matted (of hair); to weave (basket), to plait (hair)'. Burrow—Emeneau 1984:373, no. 4207.

Buck 1949:9.16 bind; 9.75 plait (vb.).

52. Proto-Nostratic (n.) **bin-a*, **ban-a* 'younger relative: (m.) younger brother, younger son; (f.) younger sister, younger daughter':

- A. Proto-Afrasian **bin-* (~ **ban-*) '(m.) younger brother, younger son; (f.) younger sister, younger daughter': Proto-Semitic (m.) **bin-* 'son', (f.) **bint-* 'daughter' > Akkadian *bīnu*, *binnu*, *būnu* 'son', *bintu*, *bunatu*, *buntu* 'daughter'; Amorite *binum*, *bunum* 'son', *bintum*, *bittum*, *bina* 'daughter'; Hebrew *bēn* [בֵּן] 'son' (construct *ben-* [בֶּן]), *baθ* [בַּת] 'daughter'; Phoenician *bn* 'son', *bt* 'daughter'; Moabite *bn* 'son'; Ugaritic *bn* /bun-/ 'son', *bnt*, *bt* 'daughter', *bnš* /bun(n)ōš-/ or /bunuš-/ 'man' (< *bn* /bun-/ 'son'); Arabic *ʾibn* 'son', *bint* 'daughter'; Liḥyānite *bin* 'son', *bint* 'daughter'; Sabaeen *bn* 'son', *bnt* 'daughter'; Mehri *ḥə-bōn* (construct *bóni*) 'children'. D. Cohen 1970—:70—71; Murtonen 1989:114; Zammit 2002:102; Klein 1987:76. West Chadic **mV-bVn-* 'person' (prefix **mV-*) > Buli *mbən*, *mban* 'person'. Central Chadic **bin-* 'brother' > Lama Pewe *bin* 'brother'. Ehret 1995:85, no. 18, **bin-/ban-* 'to beget'; Orël—Stolbova 1995:72, no. 288, **bin-* 'man, male relative'.
- B. Dravidian: Tamil *pin* 'younger brother', *pinnavan* 'younger brother, youngest son', *pinnaval*, *pinnan* 'younger brother', *pinni* 'younger sister, mother's younger sister', *pinnar* 'younger brother', *pinnai* 'younger brother, younger sister'; Toda *pīn* 'younger (son), second (wife)'; Tuḷu *piṇṇaṇṇu* 'small, little', *panne* 'small'; Telugu *pinnayya* 'father's younger brother, mother's younger sister's husband', *pina*, *pinna*, *punna* 'young, younger, small, tiny', *pinni*, *pinnamma* 'mother's younger sister, father's younger brother's wife'; Koṇḍa *pina* 'young, small'. Burrow—Emeneau 1984:373, no. 4205. Kuṛux *pinnī* 'aunt (wife of father's younger brother), niece (older brother's daughter)'; Malto *peni* 'mother's elder sister'. Burrow—Emeneau 1984:373, no. 4209.
- C. Proto-Eskimo **paniy* 'daughter': Alutiiq Alaskan Yupik *panik* 'daughter'; Central Alaskan Yupik *panik* 'daughter'; Naukan Siberian Yupik *panik* 'daughter'; Central Siberian Yupik *panik* 'daughter'; Sirenik *panəx*, *panix* 'daughter'; Seward Peninsula Inuit *panik* 'daughter'; North Alaskan Inuit *panik* 'daughter'; Western Canadian Inuit *panik* 'daughter'; Eastern

Canadian Inuit *panik* ‘daughter’; Greenlandic Inuit *panik* ‘daughter’.
Fortescue—Jacobson—Kaplan 1995:249.

Buck 1949:2.41 son; 2.42 daughter; 2.44 brother; 2.45 sister; 14.14 young.
Dolgopolsky 2008, no. 212, **beñ|ñV* ‘younger relative’.

53. Proto-Nostratic root **bir-* (~ **ber-*):

(vb.) **bir-* ‘to swell, to rise, to grow’;

(n.) **bir-a* ‘largeness, greatness, height, tallness’; (adj.) ‘big, large, great, tall’

Extended form:

(vb.) **bir-V-g-* ‘to be high’;

(n.) **bir-g-a* ‘height, high place’; (adj.) ‘high, tall, lofty’

Note: The unextended form is found in Dravidian.

- A. Proto-Afrasian **birVg-* ‘to be high’: Berber: Tuareg *burg-ət* ‘to rise’.
Cushitic: Beja / Beɣawye *birga* ‘high, tall’; Galla / Oromo *borgi* ‘height’.
Reinisch 1895:51. Orël—Stolbova 1995:73, no. 294, **birVg-* ‘to be high’.
- B. Dravidian: Tamil *per*, *perum*, *pēr* ‘great’, *peru* ‘to grow thick, large, stout; to become numerous’, *peruku* (*peruki-*) ‘to increase in numbers, to multiply; to become full, perfected; to rise, to overflow, to swell; to be increased, augmented, enlarged; to prosper, to grow’; Kannada *per*, *pēr* (before vowels) ‘largeness, tallness, greatness; large, tall, great’; Koḍagu *perī-*, *perīm-* ‘big’, *perī-* (*perip-*, *perīt-*) ‘to increase’; Tuḷu *peri*, *periya* ‘large, great, high, superior’, *percuni*, *pērcuni* ‘to rise, to increase’; Telugu *perūgu*, *per(u)gu*, *per(u)vu* ‘to grow, to grow up, to increase, to accumulate, to be augmented, to expand, to extend’; Malayalam *peru*, *pēr* ‘great, large, chief’, *periya* ‘large, great’, *perukuka* ‘to grow large, to be multiplied’; Kolami *perg-* (*perekt-*) ‘to grow’; Konḍa *pergi-* ‘to grow up’, *per*, *peri* ‘big, large, elder (of siblings)’, *pir-* ‘to grow’; Kuwi *bir-* ‘to grow, to multiply’; Brahui *piring* ‘to swell (of the body or limbs)’. Burrow—Emeneau 1984:389—390, no. 4411; Krishnamurti 2003:118 **per-V-* ‘to grow big’ and 393—394 **pēr/*per-V* ‘big’. Tamil *perram* ‘greatness; bull or cow; buffalo’, *perru* ‘greatness, bull’, *perri*, *perrimai* ‘greatness, esteem’, *pirāṅku* (*pirāṅki-*) ‘to be great, exalted, lofty, elevated; to grow full, complete, abundant; to overflow; to grow large in size; to be densely crowded’, *pirāṅkal* ‘greatness, abundance, fullness, height, mountain, heap, mass’, *pirakkam* ‘loftiness’; Malayalam *perran* ‘stout, robust’; Telugu *perugu*, *perūgu* ‘to swell, to rise’. Burrow—Emeneau 1984:392, no. 4425. (?) Kui *prihpa* (*priht-*) ‘to be tall, high, lofty; to grow tall’, *priṭpa* (*priṭ-*) ‘to be tall’, *priṣa* ‘tall, high, lofty’; Kuwi *pli-* ‘to be big’, *plīnai* ‘to grow’. Burrow—Emeneau 1984:371, no. 4192.
- C. Proto-Kartvelian **br̥g-* ‘strong, high, large’: Georgian *br̥ge* ‘high’; Svan *bəg-i* (< **big-* < **br̥g-*) ‘firm, bold’. Fähnrich—Sardshweladse 1995:60—

61 **brg-*; Fährnich 2007:76 **brg-*; Gamkrelidze—Ivanov 1984.II:879 and 1995.I:776 **brg-*. Proto-Kartvelian **breg-* ‘hill’: Georgian *breg-i* ‘hill, hillock’; Mingrelian *rag-a* (< **brag-*) ‘hill’ (toponym). Fährnich 2007:77 **breg-*.

- D. Proto-Indo-European **b^herg^h-*/**b^horg^h-*/**b^hrg^h-* ‘(adj.) high, tall; (n.) mountain, hill’: Hittite *pár-ku-uš* ‘high’; Sanskrit *brhánt-* ‘high, tall, great, strong’; Avestan *bərəzant-* ‘great, lofty’; Armenian *barjr* ‘high’; Welsh *bre* ‘hill’; Gothic **bairgs* ‘mountain’, *baurgs* ‘city, town’; Old Icelandic *bjarg*, *berg* ‘mountain, rock’, *borg* ‘stronghold, fortification, castle; fortified town, city’; Old English *beorh*, *beorg* ‘hill, mountain’, *burg*, *bur(u)h* ‘fortified place, (fortified) town, city’; Old Frisian *berch* ‘mountain’, *bur(i)ch* ‘fortified place, castle, city’; Old Saxon *berg* ‘mountain’, *burg* ‘fortified place, castle, city’; Old High German *berg* ‘mountain’ (New High German *Berg*), *burg* ‘fortified place, castle, city’ (New High German *Burg*); Tocharian A *pärk-*, *park-*, B *pärk-* ‘to rise (sun)’, B *pärkare* ‘long’; Greek *πύργος* ‘tower’ (pre-Greek loanword). Germanic loans in: Latin *burgus* ‘castle, fort, fortress’; Old Irish *brugh*, *brog*, *borg* ‘castle’. Rix 1998a:63—64 **b^herǵh-* ‘to be high, to rise, to raise’; Pokorny 1959:140—141 **bhereǵh-* ‘high, noble’; Walde 1927—1932.II:172—174 **bherǵh-*; Mann 1984—1987:74 **bherǵh-* ‘high; height’, 125 (**bhurgh-*, **bhrugh-*); Watkins 1985:8 **bhergh-* and 2000:11 **bhergh-* (reduced-grade form **bhrǵh-*) ‘high’; Gamkrelidze—Ivanov 1984.I:217 **b^h[ǵ]erǵ^h[-]*, II:744—745, II:781, II:879 **b^h[ǵ]erǵ^h[-]*/**b^h[ǵ]rǵ^h[-]* and 1995.I:150 **b^herǵh-* ‘high, large; strong; top’, I:576—577, I:648; Mallory—Adams 1997:269 **bhrǵhús*, **bhrǵhént-* ‘high’, 269 **bhrǵhntih_a-* ‘high one’, and 269 **bherǵh-*, **bhrǵh-* ‘high; hill, mountain’; Mayrhofer 1956—1980.II:445—447 **berǵh-*; Frisk 1970—1973.II:629—630; Beekes 2010.II:1262 (pre-Greek loanword); Chantraine 1968—1980.II:958; Boisacq 1950:829; Hofmann 1966:291; Ernout—Meillet 1979:78; Walde—Hofmann 1965—1972.I:124; Orël 2003:42 Proto-Germanic **berǵan* ~ **berǵaz* and 63—64 **burǵz*; Kroonen 2013:60 **berga-* ‘mountain’; Feist 1939:75—76 and 85—86; Lehmann 1986:57—58 and 64—65; De Vries 1977:39 and 50; Onions 1966:108; Klein 1971:89 **bherǵh-*; Boutkan—Siebinga 2005:39; Kluge—Mitzka 1967:66 and 111—112; Kluge—Seebold 1989:75 and 114—115; Van Windekens 1976—1982.I:362 **bherǵh-*; Adams 1999:372—373 and 2013:399—400 **b^herǵh-*; Wodtko—Irslinger—Schneider 2008:30—34 **b^herǵh-*; Puhvel 1984— .8:127—133 **bhrǵh-*; Kloekhorst 2008b:636—637; Georgiev 1981:99 and 100; Katičić 1976.I:71—72, 93, and 94. Probable Indo-European loans in Semitic (Arabic *burg* ‘tower, castle’; Aramaic *burgin*, *burgon* ‘tower’; Syriac *būrgā* ‘tower’).

Buck 1949:1.22 mountain, hill; 12.31 high. Bomhard—Kerns 1994:214—216, no. 19; Illič-Svityč 1971—1984.I:177, no. 9, **berg/i/* ‘high’; Dolgopolsky 2008, no. 243, **b[i]rVgE* ‘high, tall’.

54. Proto-Nostratic root **bir-* (~ **ber-*):

(vb.) **bir-* ‘to sing, to play (a musical instrument)’;

(n.) **bir-a* ‘singing, playing (a musical instrument), musical instrument’

A. Dravidian: Konḍa *piruṛi* ‘flute’; Kui *piroṛi* ‘flute’; Kuwi *pīrūri*, *pīruḍi*, *pīruṛi* ‘flute’; Kuṛux *pēḍē* ‘flute, pipe, whistle’. Burrow—Emeneau 1964:370, no. 4178.

B. Proto-Kartvelian **bir-* ‘to sing’: Mingrelian *bir-* ‘to sing, to play (a musical instrument)’; Laz *bir-* ‘to sing’; Svan *br-* ‘to sing’, *la-brjäl* ‘singing’. Klimov 1964:53 **br-* and 1998:17—18 **br-* ‘to sing’; Fähnrich 2007:68—69 **bir-*; Fähnrich—Sardshweladse 1995:56 **bir-*.

Buck 1949:18.12 sing.

55. Proto-Nostratic root **bir-* (~ **ber-*):

(vb.) **bir-* ‘to cut, rip, pull, break, or tear off; to pull’;

(n.) **bir-a* ‘the act of cutting, ripping, pulling, breaking, or tearing off’

A. Proto-Afrasian **ber-* ‘to cut off’: Proto-Southern Cushitic **biir-* ‘to cut off’ > K’wadza *bila’i-* ‘dull’, *bilat-* ‘to drill, to cut a hole’; Dahalo *biir-* ‘to cut grass, to mow’. Ehret 1980:138. Central Chadic **byar-* ‘to cut off’ > Tangale *ber* ‘to cut off’. Orël—Stolbova 1995:67, no. 266, **ber-* ‘to cut’.

B. Dravidian: Tamil *pīri* (-v-, -nt-) (also *pīri*) ‘to become disjoined or parted; to become unfastened; to be untwisted, ripped, or loosened (as a seam or texture); to disagree (as persons); to part (tr.), to sever’, *pīri* (-pp-, -tt-) ‘to separate (tr.), to disunite, to sever, to divide, to untwist, to disentangle, to untie, to solve (as a riddle), to dismantle (as the thatch of a roof), to distribute’, *pirical* ‘division, partition, threadbare or tattered condition’, *pirippu* ‘separation, division, estrangement’, *piripu*, *pirivu* ‘separation, severance, division, disunion, disagreement, loosening, secession, gap’; Malayalam *pirikka* ‘to sever, to dismiss, to divorce’, *piriccal* ‘separation, dismissal’, *piriyukka* ‘to become disjoined, to separate, to part with’; Kota *pīry-* (*pirc-*) ‘to separate part from part (intr., tr.); to demolish (building)’, *pirc-* (*pirc-*) ‘to separate (persons) (tr.)’, *pirnj-* (*pirnj-*) ‘to separate oneself from’, *pīryv* ‘a place separate from another’s place’; Toda *pīry-* (*pīrs-*) ‘to be demolished’, *pīry-* (*pīrc-*) ‘to demolish’; Kannaḍa *hiri* ‘to separate into portions, to break up, to pull to pieces, to demolish, to pull out of, to unsheathe, to take (pearl) from (a string); to be broken up or demolished, to fall from (a bundle, a string)’, *higgisu* ‘to separate, to disjoin’, *higgu* ‘to separate (intr.), to be disconnected’, *higgalisu* ‘to separate or disjoin (as the

legs), to open wide (as an eye with the fingers, as the mouth of a bag)'; Kodagu *piri-* (*pirip-*, *piric-*) 'to turn (cattle) in a different direction; to send away, to cause to disperse', *piri-* (*piriv-*, *piriñj-*) '(assembly) to disperse, (person) to return to one's own place', *piriv* 'dispersing'; Tuḷu *piripu*, *biripu* 'abatement, cessation'; Koraga *pirpi* 'to make the spirit leave a person'; Telugu *pridulu* 'to become loose, to fall off, to separate, to leave each other, to be dislocated'; Gadba (Salur) *pirg-* (*pirig-*) 'to open (like a flower)', *pirukp-* 'to open (like a book, packet) (tr.)'; Kui *prīva* (*prīt-*) 'to be cracked, cloven, opened out; to be hatched', *pring-* 'to be torn'; Kuwi *prik-* 'to break open (fruit)', *prik-* 'to split (bamboo)'; Malto *pirce* 'to be smashed'; Brahui *pirghing* 'to break, to rend, to transgress, to solve (a riddle)'. Burrow—Emeneau 1964:370, no.4176.

- C. Proto-Chukchi-Kamchatkan **pər-* 'to pull out': Chukchi *pər-* 'to pull out by the root, to rip out'; Koryak *pəj-* 'to pluck, to harvest, to peel, to take away'; Alyutor *pr-* 'pluck, to take off'. Forescue 2005:225.

Sumerian *bir* 'to tear, to rip, to rend; to pull, to snatch, to yank', *bir₆* 'to tear up, to tear to pieces, to shred; to rip apart, to sever, to break up'.

Buck 1949:9.28 tear (vb. tr.).

56. Proto-Nostratic (n.) **bir-a* 'gnat, mosquito, midge, fly':

- A. Proto-Afrasian **bir-* 'a kind of insect': East Chadic: Dangla *biribinò*, *birinò* 'dragonfly'. (?) North Cushitic: Beja / Beḍawye *biret*, (*e*)*mbiret* 'white ant, termite', *birat* 'termite'. Militarëv—Kogan 2005.II:88—89, no. 62, **bur-* 'a kind of insect'. Note: Blažek (2003b:241) compares the Beja / Beḍawye forms cited here with several East Cushitic (Somali, Boni) forms also meaning 'termite'. However, the vowels of the root (**bVr-*) do not match.
- B. Dravidian: Malayalam *pirukku* 'gnat, mosquito'; Kodagu *puriki* 'mosquito'; (?) Gondi *porki*, *pork*, *purki*, *por̥ki*, *paṛkī* 'louse'; Kurux *put^hṅgī*, *putuṅgī* 'midge'; Malto *putgi* 'sand-fly'. Burrow—Emeneau 1984:372, no. 4203.
- C. (?) Proto-Altaic **bḷure* 'flea': Proto-Mongolian **bürge* 'flea, louse' > Written Mongolian *bürge*, *büürge* 'louse'; Khalkha *büreg* 'louse'; Kalmyk *bürgə* 'flea'; Ordos *bürge* 'flea'; Monguor *bürge* 'louse'. Proto-Turkic **bürče* / **bürge* 'flea' > Turkish *pire* 'flea'; Azerbaijani *pirä* 'flea'; Turkmenian *büre* 'flea'; Uzbek *burga* 'flea'; Uighur *bürgä* 'flea'; Karaim *bürče* 'flea'; Tatar *börče* 'flea'; Bashkir *börsä* 'flea'; Kirghiz *bürgö* 'flea'; Kazakh *bürge*, *bürše* (dial.), *burša* (dial.) 'flea'; Noghay *bürše* 'flea'; Chuvash *p^wırša* 'flea'. Tenishev—Dybo 2001—2006.III:182—183 **bür̥ye* 'flea'; Räsänen 1969:92. Starostin—Dybo—Mudrak 2003:363 **bḷure* 'flea' — Starostin—Dybo—Mudrak note: "In Turkic one would rather

expect **bir*:- this variant is indeed reflected in most Oghuz languages; others have reintroduced -ü- under Mongolian influence.”

Sumerian *bir*₅ ‘fly’.

Buck 1949:3.81 insect.

57. Proto-Nostratic **bir*^y- (~ **ber*^y-):

(vb.) **bir*^y- ‘to enjoy, to savor’;

(n.) **bir*^y-*a* ‘fruit’

Extended form:

(n.) **bir*^y-*q*-*a* ‘plum’

- A. Afrasian: Semitic: Arabic (collective) *barkūk* ‘plum’, *birķūk*-, *burķūk*- ‘apricot, yellow plum’. Note: These may be loanwords from Latin.
- B. Dravidian: Konda *pirika*, *prika*, *pirka* ‘green mango’; Pengo *prila* ‘green mango’; Manda *prila* ‘green mango’; Kui *pria* ‘unripe mango’; Kuwi *prilā* ‘unripe mango’. Burrow—Emeneau 1984:371, no. 4184.
- C. Proto-Kartvelian **berq*^{en}- ‘wild pear, wild plum(-tree)’: Georgian *b(e)rq*^{ena}- ‘wild pear’; Svan *barq*^{wen(d)}, *bärq*^{en} ‘wild plum(-tree)’ (this may be a loan from Georgian). Klimov 1964:54 **brqen*- and 1998:12 **berqen*- ‘wild pear, wild plum(-tree)’; Fähnrich—Sardshweladse 1995:41 **berqen*-; Fähnrich 2007:60 **berqen*-.
- D. Proto-Indo-European **b^hr-uH-k*- (> **b^hrūk*-) (vb.) to enjoy, to use; (n.) fruit’: Latin *frūx* (gen. sg. *frūgis*), usually plural *frūgēs* ‘fruits of the earth’, *frūor* (< **frūuor* < **frūguor*) ‘to have the benefit of, to enjoy’, (dat. sg.; used as indecl. adj.) *frūgī* ‘useful, honest, discreet, moderate, temperate’, *fructuōsus* ‘fruit-bearing, fruitful, fertile’, *frūgifer* ‘fruit-bearing, fruitful, fertile’, *fructus* ‘enjoyment, enjoying; proceeds, profit, produce, fruit, income’; Umbrian (acc. pl.) *frif*, *fri* ‘fruits’; Gothic *brūks* ‘useful’, *brūkjan* ‘to use’; Old English *brȳce* ‘useful’, *brūcan* ‘to make use of, to enjoy’ (Middle English *brūken* ‘to enjoy, to use’, [pres.] *brouke*; *brūche* ‘useful’), *broc* ‘use, benefit’; Old Frisian *brūka* ‘to use’; Old Saxon *brūkan* ‘to use’; Dutch *gebruiken* ‘to use’; Old High German *prūhhi* ‘useful’, *brūhhan*, *brūhhen* ‘to use’ (New High German *brauchen* ‘to need, to want, to require’). Rix 1998a:81 **b^hreyHg*- ‘to use, to enjoy’; Pokorny 1959:173 **bhrūg*- ‘(n.) fruit; (vb.) to use, to enjoy’, perhaps originally from **bhreu*- ‘to cut off’, becoming ‘to remove fruit for one’s own use’, then ‘to enjoy, to use’; Walde 1927—1932.II:208 **bhrūg*-; Watkins 1985:9—10 **bhrūg*- and 2000:13 **bhrūg*- ‘agricultural produce; to enjoy (results, produce)’; Mann 1984—1987:106 **bhrūg*- ‘use, benefit, product, profit’; Ernout—Meillet 1979:256—257 and 257; De Vaan 2008:244—245; Walde—Hofmann 1965—1972.I:552—553 **bhrūg*-; Orël 2003:60 Proto-Germanic **brūkanan*; Kroonen 2013:79—80 **bruk(k)ōn*- ‘to break, to crumble’;

Feist 1939:107 possibly originally from **bhrey-* ‘to cut off’ (for the meaning, cf. Sanskrit *bhunákti* ‘to enjoy, to use, to possess’, especially, ‘to enjoy a meal, to eat, to eat and drink, to consume’); Lehmann 1986:81 possibly originally from **bhrew-* ‘to cut off’; Onions 1966:120 **bhrug-*; Klein 1971:96; Barnhart 1995:88; Kluge—Mitzka 1967:96 **bhrūg-*; Kluge—Seebold 1989:102—103; Boutkan—Siebinga 2005:64.

Buck 1949:5.71 fruit; 9.423 use (vb. = make use of). Dolgopolsky 2008, no. 257, **b[i]ṛ[üw]qa* (or **b[i]ṛ[uw]qa* ?) ‘edible fruit’.

58. Proto-Nostratic (n.) **bir^y-a* ‘penis’:

- A. Proto-Afrasian **bVr-* ‘penis’: Proto-Semitic **ʔi-br-(at-)* ‘penis’ > Hebrew *ʔēḇār* [אֶבֶר, אֵבֶר] ‘penis’; Aramaic *ʔēḇrā* ‘penis’; Arabic *ʔibrat-* ‘penis’; Arabic (Daḡina) *burrat*, *barbūr* ‘glans penis’; Arabic (Omani) *barbur* ‘penis’. Klein 1987:4; Militarëv 2005:92. (?) Egyptian *b33wt* ‘virility’, *b3ḥ* ‘foreskin, phallus’ (if from **brḥ*). Gardiner 1957:563; Erman—Grapow 1921:45 and 1926—1963.1:417, 1:419—420; Faulkner 1962:77 and 77—78; Hannig 1995:240 and 2006:785. Chadic: Hausa *buuraa* ‘penis’; Bura *bura* ‘penis’. Orël—Stolbova 1995:83, no. 339, **bur-* ‘penis’.

Comment: Militarëv—Kogan (2000.I:4—5, no. 2) reconstruct Proto-Semitic (n.) **ʔibr-(at-)* ‘penis’, Proto-Afrasian **bVr-* ‘penis’. Militarëv—Kogan point out that the Egyptian form is “[p]roblematic both phonetically and semantically”. Note: The Omotic (Basketo *búlli* ‘penis’) form cited by Militarëv—Kogan does not belong here. Rather, it belongs with Proto-Nostratic (n.) **bul-a* (~ **bol-a*) ‘penis, testicle(s)’.

- B. Dravidian: Kota *pi-r* ‘penis’; Manda *pīḍa* ‘penis’; Kuwi *pīrā*, *pīrā* ‘penis’. Burrow—Emeneau 1984:374, no. 4220.

Buck 1949:4.492 penis.

59. Proto-Nostratic root **bit^y-* (~ **bet^y-*):

(vb.) **bit^y-* ‘to press between the fingers, to squeeze, to crush’;

(n.) **bit^y-a* ‘squeeze, pinch, pressure’

- A. Dravidian: Tamil *picai* ‘to work with the thumb and fingers in mixing, to knead, to squeeze or mash between the palms, to crush and separate (as kernels of grain from the ear), to rub or apply on the skin, to strike against one another (as branches in the wind)’, *picakku* (*picakki-*) ‘to press between the fingers, to squeeze, to crush’, *picaru* (*picari-*) ‘to mingle, to mix with the hand’; Kota *pick-* (*picky-*) ‘to squeeze, to pinch’; Kannaḍa *pisuku* ‘to squeeze, to press (as a fruit), to knead, to shampoo’, *hisi* ‘to squeeze (a ripe fruit) so as nearly to separate it into two pieces’; Tuḷu

piskuni, *pīsuni* ‘to squeeze, to press’; Koraga *pijaŋki* ‘to crush’; Telugu *pisuku* ‘to squeeze, to press, to knead, to shampoo, to handle’; Naikri *pjg-* ‘to knead’; Parji *pīk-* ‘to crush’; Gadba (Ollari) *piskolp-* (*piskolt-*) ‘to squeeze’; Gondi *piskānā* ‘to knead flour’; Pengo *pīc-* (*pīcc-*) ‘to squeeze, to milk’; Kui *pīc-* ‘to press, to squeeze, to milk’; Kuṛux *picka’ānā* ‘to press and bruise, to flatten by crushing’. Burrow—Emeneau 1984:366, no. 4135; Krishnamurti 2003:149 **pic-V-* (~ **piṣ-V-*) ‘to squeeze’.

- B. Proto-Kartvelian **bič’k-* ‘to break, to crumble’: Old Georgian *bič’-* ‘to crumble’, participial derivatives *na-bič’-* // *na-bič’-ev-* ‘crumb’; Svan *li-beč’k’w* ‘to break (apart), to burst’, *li-bč’k’we* ‘to split something’. Klimov 1964:52 **bič-* and 1998:14 **beč-/bič-* ‘to crumble, to break’; Fähnrich 1994:230; Fähnrich—Sardshweladse 1995:54 **beč-/bič-*.

Sumerian *biz* ‘to press or squeeze out (oil)’.

Buck 1949:9.342 press (vb.). Illič-Svityč 1971—1984.I:179, no. 12, **bič-* ‘to break’; Bomhard 1996a:226.

60. Proto-Nostratic root **bitʃʰ-* (~ **betʃʰ-*):

(vb.) **bitʃʰ-* ‘to break, to split, to prick (tr.); to split apart, to break open, to burst forth (intr.)’;

(n.) **bitʃʰ-a* ‘break, slit, hole, piece broken off’

- A. Proto-Afrasian **bitʃʰ-* ‘to break, to split, to prick (tr.); to break open, to burst forth (intr.); (?) to split’: Proto-Semitic **batʃʰ-aṣ-* ‘to prick, to pierce, to break or tear off’ > Geez / Ethiopic *basʿa* [ḳāṣ] ‘to flay alive’; Tigrinya *bāsʿe* ‘to pierce’; Tigre *basʿä* ‘to tear off a very small piece’; Amharic *bässa* ‘to perforate, to puncture, to pierce, to drill a hole’. Amharic *bässäkä* ‘to tear, to rip’. D. Cohen 1970— :73 **bsṣ* (that is, **bsʃ*); Leslau 1987:109. Proto-Semitic **batʃʰ-at-* ‘to slit’ > Šheri / Jibbāli *básšət* ‘to slit’; Ḥarsūsi *bešōt* ‘to slit’; Mehri *bəsōt* ‘to slit’. (?) Egyptian *bšy*, *bšī* ‘to spit; to vomit’, *bšw* ‘vomit’ (semantic development as in German *sich (er)brechen* ‘to vomit’ < ‘to break open, to burst forth’). Hannig 1995:262; Faulkner 1962:85; Erman—Grapow 1921:50 and 1926—1963.1:477; Gardiner 1957:564. (?) West Chadic **bitʃʰ-* ‘to spit’ > Angas *bis*, *bes* ‘to spit’. (?) East Chadic **bVtʃʰ-* ‘to spit’ > Somray *bə:sə* ‘to spit’. Orël—Stolbova 1995:43, no. 170, **bačʰaṣ-* ‘to tear off, to break off’ (but, for Chadic, cf. Newman 1977:23, no. 15, Proto-Chadic **bahlə* ‘to break’), and 70, no. 280, **bič-* ‘to spit’.

- B. Dravidian: Malayalam *pikkuka* (*picc-*) ‘to break in pieces’; Telugu *pigulu*, *pikulu*, *pivulu* ‘to burst’; Kui *pinja* (*pinji-*) ‘to burst’; Kuwi *pinj-* ‘(fire) to explode, to spark out’. Burrow—Emeneau 1984:366, no. 4129.

- C. Uralic: Proto-Finno-Ugrian **peđä-* ‘to prick’ > Lapp / Saami *bæððä-/bæðä-* ‘to prick, to make a hole in’; Mordvin *pele-* ‘to bore, to drill’;

Vogul / Mansi *peel-* ‘to prick’; Ostyak / Xanty *pel-*, (Southern) *pet-* ‘to prick’. Collinder 1955:74, 1960:410 **peḍä-*, and 1977:90; Sammallahti 1988:547 Proto-Finno-Ugrian **peḍä-* ‘to prick’. But, cf. Rédei 1986—1988:371 under **pel3-*.

Buck 1949:4.56 spit; 4.57 vomit; 9.27 split (vb. tr.). Bomhard—Kerns 1994: 379, no. 214.

61. Proto-Nostratic **borʷ-a* ‘(n.) a dark color; (adj.) dark, dark-colored’:

- A. Proto-Afrasian **bor-* ‘dark-colored’: Egyptian *br* ‘pigment, color’. Hannig 1995:256. Berber: Mzab *bbərçən* ‘to be or become dark’, *abərçən* ‘black’; Tamazight *bərkin*, *bərçin* ‘to be black, swarthy; to blacken’, *abərkan* ‘black; Kabyle *ibrik* ‘to be black’, *abərkan* ‘black, dark, swarthy, of a dark complexion’. Proto-East Cushitic **boʔr-* (< **borʔ-*) ‘red, yellow, brown, dark-colored’ > Burji *bóor-ee* ‘(n.) yellow color’; Somali *bor-a* ‘gray, dirty’; Arbore *bur-iy-dā* ‘red’; Dasenech *bur* ‘red’; Konso *poor-* (pl. *puʔʔur-*) ‘black’; Dobase *poor-e* ‘burned or carbonized material’; Elmolo *burr-i-dā* ‘red’; Galla / Oromo *boor-uu* ‘ash-colored, dim, dull’; Hadiyya *bork-* (< **borʔ-*) ‘dark-colored’; Gidole *poor-* ‘black’. Sasse 1982:39. Orël—Stolbova 1995:76, no. 307, **boHar-* ‘to be yellow, to be gray’.
- B. Proto-Indo-European **bʰor-*, **bʰru-* (secondary *e*-grade form: **bʰer-*) ‘brown’ (< ‘dark-colored’), (reduplicated) **bʰe-bʰru-*: Sanskrit *babhrú-ḥ* ‘reddish brown, brown’; Latin *fiber* ‘beaver’; Old Icelandic *brúnn* ‘brown’, *björn* ‘bear’, *bjórr* ‘beaver’; Swedish *brun* ‘brown’; Old Norwegian *brúnn* ‘brown’; Old English *brūn* ‘brown’, *bera* ‘bear’, *beofor* ‘beaver’; Old Frisian *brūn* ‘brown’; Old Saxon *biḅar* ‘beaver’, *brūn* ‘brown’; Dutch *beer* ‘bear’, *bever* ‘beaver’, *bruin* ‘brown’; Old High German *brūn* ‘brown’ (New High German *braun*), *bero* ‘bear’ (New High German *Bär*), *bibar* ‘beaver’ (New High German *Biber*); Lithuanian *bėras* ‘brown’, *bebrūs* ‘beaver’; Old Church Slavic **bebrъ* ‘beaver’; Russian *bobr* [бобр] ‘beaver’; Polish *bóbr* ‘beaver’; Greek *φρῦνῆ*, *φρῦνος* ‘toad’. Pokorny 1959:136—137 **bher-* ‘glittering, bright brown’; Walde 1927—1932.II:166—167 **bhēro-s*, **bheru-s*; Mann 1984—1987:69 **bhebhros-*, *-us* ‘red-brown, beaver’, 108 **bhrūnos* ‘dun, brownish; brown or dun-colored creature’; Watkins 1985:7 **bher-* and 2000:10 **bher-* ‘bright, brown’; Gamkrelidze—Ivanov 1984.I:22 **b[h]er-*, II:530 **b[h]ib[h]er-*, **b[h]eb[h]er-* and 1995.I:23 **bʰer-* ‘brown’, I:448 **bʰibʰer-*, **bʰebʰer-* ‘beaver’; Mallory—Adams 1997:57 **bhébhrus* ‘beaver’ and 85 **bher-* ‘brown’; Chantraine 1968—1980.II:1230—1231; Hofmann 1966:405—406; Boisacq 1950:1040; Beekes 2010.II:1594; Frisk 1970—1973.II:1047; De Vaan 2008:217; Ernout—Meillet 1979:231—232; Walde—Hofmann 1965—1972.I:490—491 **bhe-bhru-s* (**bhe-bhro-s*); Mayrhofer 1956—1980.II:409—410 **bhe-bhr-u-* (also **bhebhro-*); Orël 2003:40—41 Proto-

Germanic **bēbruz*, 60 **brūnaz*; Kroonen 2013:56—57 Proto-Germanic **bebura-* ‘beaver’; De Vries 1977:40, 41, and 61; Torp 1919:44—45; Klein 1971:74—75 **bhero-* ‘brown’, 75 **bhe-bhru-s* ‘very brown’, and 97; Onions 1966:83 and 121; Boutkan—Siebinga 2005:64; Kluge—Mitzka 1967:50—51 **bhero-*, 73—74 **bhebhru-*, and 97; Kluge—Seebold 1989:59—60, 82—83, and 103; Fraenkel 1962—1965.I:39.

- C. Proto-Altaic **bor^yV* ‘dark-colored, gray’: Proto-Mongolian **boro* ‘dark-colored, gray’ > Written Mongolian *boro*, *boru* ‘gray, brown, dark, swarthy (face)’; Monguor *boro* ‘gray’; Ordos *boro* ‘gray’; Khalkha *bora* ‘gray’; Buriat *boro* ‘gray’; Moghol *borō* ‘gray’; Kalmyk *borə* ‘gray’. Mongolian loans in: Manchu *boro* ‘gray’; Evenki *boron* ‘gray’, *boronkōn* ‘brown stag, hart’. Proto-Turkic **bor^y-* ‘dark-colored, gray’ > Old Turkic *boz* ‘gray’; Azerbaijani *boz* ‘gray’; Turkmenian *boz* ‘gray’; Uzbek *buz* ‘gray’; Uighur *boz*, *bos* ‘gray’ Kirghiz *boz* ‘gray’; Kazakh *boz* ‘gray’; Noghay *boz* ‘gray’. Poppe 1955:54 and 1960:20 and 81; Street 1974:9 **bor²-* ‘gray’; Starostin—Dybo—Mudrak 2003:376 **bor¹V* ‘gray’.

Buck 1949:3.37 bear; 15.63 dark (in color). Bomhard—Kerns 1994:224, no. 29; Illič-Svityč 1971—1984.I:183—184, no. 18, **bor’a* ‘brown, gray-brown’; Dolgopolsky 2008, no. 255, **bor’[ʔ]û* ‘brown, yellow’.

62. Proto-Nostratic root **bud-* (~ **bud-*):

(vb.) **bud-* ‘to set fire to something, to kindle’;

(n.) **bud-a* ‘blaze, light, fire’

A. Dravidian: Pengo *puṭ-* ‘to set fire to, to kindle’; Kui *puṭpa* (*puṭṭ-*), *purpa* (*puṭ-*) ‘to roast’. Burrow—Emeneau 1984:377, no. 4260.

B. Proto-Kartvelian **bdw-* ‘to set fire, to catch fire’: Old Georgian *bdv-* ‘to set fire, to catch fire’, (participle) *m-bdvin-vare-* ‘kindled’; Laz *d(v)-* ‘to set fire, to catch fire’; Svan *bd-/bid-* (*li-bd-ine*) ‘to set fire to something’, *mə-bid* ‘combustible’. Fähnrich 1994:230 and 2007:67 **bidw-*; Fähnrich—Sardshweladse 1995:55 **bidw-*; Klimov 1998:10 **bdw-* ‘to set fire, to catch fire’, **bdw-in-* ‘to set fire’.

Buck 1949:1.86 light (vb.), kindle.

63. Proto-Nostratic (n.) **bud-a* ‘lowest part or region (of anything)’:

A. Afrasian: Proto-Southern Cushitic **budu* ‘buttocks’ > K’wadza *bulituko* ‘woman’s garment covering the hips’, *bulum-* ‘to bend over’; Ma’a *mbúru* ‘goat’s tail’; Dahalo *buḍuw-* ‘to run away’ (for the semantics, Ehret cites English ‘to turn tail’). Ehret 1980:140.

B. Dravidian: Tamil *puṭai*, *puṭam* ‘side, place’; Malayalam *puṭa* ‘side’; Kannada *hoḍe* ‘side’; Tulu *puḍè* ‘border, edge, brink, margin, brim, side,

interval, space', *poḍatarè* 'the side-bone of the skull'. Burrow—Emeneau 1984:377, no. 4255. Assuming semantic development from 'lowest part or region' to 'side' (cf. Buck 1949:12.36 side: "...in general, words for 'part' [besides those included in the list here] are often used in the sense of 'side'.").

- C. Proto-Kartvelian **bud-* 'lowest part or region (of anything)' (?): Georgian *bud-e* 'nest'; Svan *bud*, *bid* 'vulva'. Klimov 1964:54 **bude-* and 1998:20 **bude-* 'nest'; Fähnrich—Sardshweladse 1995:66 **bud-*; Fähnrich 2007:81 **bud-*. Note: Mingrelian *bude* 'nest' is borrowed from Georgian.
- D. Proto-Indo-European **b^hud^h-* with various extensions: **b^hud^h-no-*, **b^hud^h-mo-* **b^hud^h-men-*, **b^hu-n-d^h-* 'bottom, ground, base, depth, lowest part of anything': Sanskrit *budh-ná-ḥ* 'bottom, ground, base, depth, lowest part of anything'; Prakrit *bum̐dha-* 'foot of a tree, root'; Pāli *bunda-* 'root of a tree'; Gujarati *būdhū* 'bottom of a pot'; Marathi *būdh* 'bottom of a pot', *būd* 'bottom or base of anything'; Sindhi *bunḍaru* 'buttock, rump, hip'; Lahnda (f.) *bunḍrī* 'anus, buttock'; Greek *πυθμήν* 'the bottom or foundation (of a thing); the bottom or depth (of the sea); the bottom, stock, root (of a tree); the hollow bottom or stand of a cup', *πύνδαξ* 'the bottom (of a vessel)'; Latin *fundus* 'ground; the bottom or base of anything'; Old Irish *bond*, *bonn* 'sole of the foot'; Welsh *bon* (< **b^hud^h-no-*) 'stem, base, stock'; Old Icelandic *botn* 'bottom (of a vessel, of a haycock, of the sea); the head of a bay, firth, lake, valley'; Faroese *botnur* 'bottom'; Norwegian *botn* 'bottom'; Swedish *botten* 'bottom'; Danish *bund* 'bottom'; Old English *botm* (Middle English *bopem*), *bodan* 'bottom, ground, foundation; ship's keel', *bytme*, *byþme*, *byþne* 'bottom; ship's keel'; Old Saxon *bodom* 'bottom'; Dutch *bodem* 'bottom'; Old High German *bodam* 'bottom, ground' (New High German *Boden*). Pokorny 1959:174 **bhudh-m(e)n* 'bottom', also **bhudh-mo-*, **bhudh-no-* (> **bhundho-*); Walde 1927—1932.II:190 **bhudh-men-*; Mallory—Adams 1997:247 **bhudhnó-* 'bottom' > 'ground, depth, foot, root'; Watkins 1985:10 **bhudh-* and 2000:13 **bhudh-* (also **budh-*) 'bottom, base'; Gamkrelidze—Ivanov 1984.II:488—489 **b^h[^h]ud^h[^h]-*, **b^h[^h]ud^h[^h]-n-*, II:490 **b^h[^h]ud^h[^h]-n-*, II:528 **b^h[^h]ud^h[^h]-* and 1995.I:408 **b^hud^h-*, **b^hud^h-n-* 'bottom, soil', I:410 **b^hud^h-n-* 'Lower World', I:447 **b^hud^h-* 'Lower World'; Mann 1984—1987:118—119 **bhudhmn-* (**bhudno-*) 'base, bottom, stock, stump, root, stone'; Mayrhofer 1956—1980.II:438 **b^hud^h-nó-*; Turner 1966—1969.I: 525; Frisk 1970—1973.II:620—621 **bhudh-*; Boisacq 1950:825—826 **bheudh-*; Chantraine 1968—1980.II:952 **bhudh-*; Beekes 2010.II:1255 **b^hud^h-*; Hofmann 1966:289—290 **bhudh-no-*, **bhudh-mo-*, **bhundh-(n)o-*; Ernout—Meillet 1979:261—262 **bhudh-*; Walde—Hofmann 1965—1972.I:564—565 **bhundhos*; **bhudh-no-*, **bhudh-mo-*; De Vaan 2008:250 **b^hud^h-n-ó-*; Orël 2003:61 Proto-Germanic **būdmaz* ~ **butmaz*; Kroonen 2013:82 **budman-* ~ **buttman-* 'bottom'; Falk—Torp 1903—1906.I:85; Torp 1919:35; De Vries 1977:51; Barnhart 1995:80; Onions

- 1966:109 **bhudhm(e)n-*, **bhudh-* (also **bhundh-*); Skeat 1898:72; Klein 1971:90; Kluge—Mitzka 1967:88; Kluge—Seebold 1989:95 **bhudh-men-*.
- E. Uralic: Proto-Finno-Ugrian **putz* ‘rectum, large intestines’ > (?) Lapp / Saami (Southern) *puht’egē* ‘rectum’; (?) Ostyak / Xanty (Northern) *pūtā* ‘large intestines, rectum (of animals, possibly also of humans)’, (Kazym) *pūtī* ‘large intestines, rectum (of reindeer)’; (?) Vogul / Mansi (Northern) *puti* ‘large intestines’. Rédei 1986—1988:410 **putz*. Assuming semantic development from ‘lowest part or region (of the body)’ > ‘bottom, rear end, backside, rump, behind, buttock, anus’ (as in Sindhi and Lahnda, cited above) > ‘rectum, large intestines’.

Buck 1949:4.47 womb; 12.34 bottom; 12.36 side. Dolgopolsky 2008, no. 270, **bu[w]tV* ‘lower part of the body’. Note: The Afrasian material cited by Dolgopolsky does not belong here.

64. Proto-Nostratic (n.) **bud-a* ‘stick’:

- A. Proto-Afrasian **bud-* ‘stick’: Proto-Semitic **badd-* ‘pole, stick, beam’ > Hebrew **baḏ* [בַּד] ‘pole, bar, rod; branch (of a tree)’; Jewish Palestinian Aramaic *baddā* ‘pole, stick’; Arabic *badd-* ‘beam’. Klein 1987:63; D. Cohen 1970— :44—45. Berber **budid-* ‘pole of a hut’ > Kabyle *a-budid* ‘wooden post’. East Chadic **bVdVH-* ‘stick’ > Kera *bəd-uwa* ‘stick’. Orël—Stolbova 1995:80, no. 325, **bud-* ‘stick’.
- B. Dravidian: Tamil *uṭu* ‘oar, boatman’s pole’; Toda *puṭ* ‘stirring stick’; Kannaḍa *puṭṭu* ‘wooden ladle or spoon, paddle’, *huṭṭu*, *uṭṭu* ‘paddle’. Burrow—Emeneau 1984:377, no. 4265.

Buck 1949:10.85 oar.

65. Proto-Nostratic root **bug-* (~ **bog-*):

(vb.) **bug-* ‘to blister, to swell’;

(n.) **bug-a* ‘boil, blister, pustule’

- A. Dravidian: Tamil *pokuṭṭu* ‘bubble’, *pokku* (*pokki-*) ‘to be blistered’, *pokkuḷam* ‘boil, bubble, blister’, *pokkuḷi* ‘to rise in blisters’; Malayalam *pokkuḷa*, *pokkiḷa* ‘blister, vesicle, bubble’, *pokkuḷikka* ‘to bubble’; Kota *pogl* ‘blister’; Toda *pīg* ‘bubble’; Kannaḍa *puguḷ*, *bokke*, *bobbe* ‘blister’, *hokku* ‘boil’, *hoppaḷa* ‘blister occasioned by a burn’, *hoppaḷisu* ‘to blister’; Koḍagu *pokkaḷa* ‘a blister’; Tuḷu *pokkē* ‘a blister, pustule; a sore, ulcer’, *bokki*, *bokkē* ‘an itch, pustule, pimple’; Telugu *pokku* ‘(vb.) to blister; (n.) blister’, *bugga* ‘bubble’; Pengo *poka* ‘blister’; Maṇḍa *puka* ‘boil’; Kuwi *bugga*, *būga* ‘bubble’; Kuṛux *pokkhnā* (*pokkhyā*) ‘to get blistered, to swell’; Malto *poka* ‘blister, blain’. Burrow—Emeneau 1984:394, no. 4455.

- B. Proto-Kartvelian **bug-* ‘pimple, pustule’: Old Georgian *bug-r-i* ‘rash, pimple’; Svan *bugw-ir* ‘pockmarks, smallpox’. Fähnrich—Sardshweladse 1995:65—66 **bug-*; Fähnrich 1994:226 and 2007:80—81 **bug-*.

66. Proto-Nostratic root **bug-* (~ **bog-*):

Extended form:

(vb.) **bug-V-r-* ‘to make a sound, to make a noise’;

(n.) **bug-r-a* ‘sound, noise’

Note: Only the extended form is attested in the daughter languages.

- A. Afrasian: Egyptian *bgʷ* ‘moan, cry, weeping, lamentation, sighing, groaning’. Hannig 1995:264; Erman—Grapow 1926—1963.1:482.
 B. Dravidian: Iruḷa *bugari*, *bugiriya* ‘large bamboo flute’; Alu Kuṛumba *buguri* ‘bamboo flute’; Pālu Kuṛumba *bugiri* ‘bamboo flute’; Kota *bugi-r* ‘flute’; Toda *puxury* ‘Toda flute’; Kannaḍa (Badaga) *buguri* ‘Toda flute’. Burrow—Emeneau 1984:375, no. 4239.
 C. Proto-Kartvelian **bger-* ‘to make a sound’: Old Georgian *bger-* ‘to make a sound’, *bger-a* ‘loud sound, groan(ing), noise’; Mingrelian *ngar-*, *gar-* ‘to weep, to cry’; Laz *bgar-*, *mgar-* ‘to weep, to cry’. Klimov 1964:49 **bger-* and 1998:9 **bger-* ‘to utter; sound, ring’; Fähnrich 1994:230 and 2007:55 **bger-*; Fähnrich—Sardshweladse 1995:48 **bger-*.

Buck 1949:16.37 cry, weep. Bomhard 1996a:225.

67. Proto-Nostratic (n.) **buk'-a* (~ **bok'-a*) ‘he-goat, buck’:

- A. Proto-Afrasian **bok'-* ‘goat’: Central Chadic **ḡwak-* (< **bwak'-*) ‘goat’ > Mafa *bokw* ‘goat’. Cushitic: Beja / Beḡawye *bōk* ‘goat’. Reinisch 1895:46. Orël—Stolbova 1995:76, no. 309, **boḡ-* ‘goat’.
 B. Proto-Indo-European **bʰuk-* ‘buck, he-goat’: Avestan *būza-* ‘buck’; Farsi *buz* ‘goat’; Armenian *buc* ‘lamb’; Old Irish *bocc* ‘buck’; Welsh *bwch* ‘buck’; Cornish *boch* ‘buck’; Breton *bouc'h* ‘buck’; Old Icelandic *bokkr*, *bukkr* ‘buck, he-goat’, *bokki* ‘buck, fellow’; Old English *bucc* ‘buck, male deer’, *bucca* ‘he-goat’; Old Saxon *buck* ‘he-goat’; Middle High German *boc* ‘he-goat’ (New High German *Bock*); Latin *bucca* ‘he-goat’ (loan). Pokorny 1959:174 **bhūḡo-s* ‘buck’; Walde 1927—1932.II:189—190 **bhūḡo-*; Mann 1984—1987:120 **bhūḡos*, *-ios*, *-ō(n)* ‘small, animal’; Watkins 1985:10 **bhugo-* and 2000:13 **bhugo-* ‘male animal of various kinds: stag, ram, he-goat’; Gamkrelidze—Ivanov 1984.II:586 **bʰuk'o-* and 1995.I:501 **bʰuk'o-* ‘goat’; Mallory—Adams 1997:229 **bhūḡos* ‘buck, he-goat’; Orël 2003:61—62 Proto-Germanic **bukkaz*, 62 **bukkōn*; Kroonen 2013:82 **bukka(n)-* ‘billy-goat’; De Vries 1977:64; Onions

1966:122—123; Klein 1971:98; Kluge—Mitzka 1967:87; Kluge—Seebold 1989:94—95.

Buck 1949:3.36 goat; 3.37 he-goat; 3.38 kid; Dolgopolsky 2008, no. 185, **bukEṣV* ‘billy goat, ram’; Blažek 2013:45, no. 19.

68. Proto-Nostratic root **bul-* (~ **bol-*):

(vb.) **bul-* ‘to swell, to expand, to spread out, to overflow; to puff up, to inflate’;

(n.) **bul-a* ‘large quantity or amount; expansion, spread, inflation; puff, blow’

Derivatives:

(n.) **bul-a* (~ **bol-a*) ‘penis, testicle(s)’

(vb.) **bul-V-γ-* ‘to ripen, to blossom, to bloom, to sprout, to mature’;

(n.) **bul-γ-a* ‘increase, growth, ripening, maturity, prosperity, blossoming’

Reduplicated:

(vb.) **bul-bul-* ‘to swell, to bubble up’;

(n.) **bul-bul-a* ‘puff, bubble, swelling’

A. Proto-Afrasian **bul-* ‘to swell, to expand, to spread out, to overflow’:

Central Chadic **HV-bwal-* ‘rain’ > Bachama *bole* ‘rain’. Orël—Stolbova 1995:77, no. 312, **bol-* ‘to flow, to be wet’. Proto-Afrasian (reduplicated) **bul-bul-* ‘to swell, to expand, to spread out, to overflow’: Berber: Kabyle (reduplicated) *bbəlbəl* ‘to be fat, pudgy, chubby’, *abəlbəl* ‘fat, pudgy, chubby’. West Chadic (reduplicated) **bul-bul-* ‘to pour out’ > Hausa *bulbulaa* ‘to pour liquid in or out of a vessel with gurgling sound’. Orël—Stolbova 1995:81, no. 331, **bul-bul-* ‘to pour, to flow’. Proto-Afrasian **bul-ul-* ‘to flow, to be wet’: Berber: Ahaggar *bəllulu* ‘to be liquid’; Tuareg *bəlləl* ‘to have everything in abundance’, *səbbəlləl* ‘to give abundantly, to lack nothing’, *ənəbbəlləl* ‘a person who has everything in abundance’. Lowland East Cushitic **bulul-* ‘to flow’ > Galla / Oromo *bulula* ‘to flow’. Orël—Stolbova 1995:82, no. 334, **bulul-* ‘to flow, to be wet’.

B. Elamo-Dravidian: Middle Elamite *pu-li-[in-ri]* ‘one who sprinkles with water, one who washes’ (?).

C. Kartvelian: Georgian **blom-* ‘multitude’ in (adv.) *blomad* ‘in a crowd, mass, mob, multitude’.

D. Proto-Indo-European **b^hl-eE-/b^hl-oE-* > **b^hlē-/b^hlō-* ‘to puff up, to inflate, to blow up’: Latin *flō* ‘to blow’; Old Icelandic *blása* ‘to blow’; Old English *blāwan* ‘to blow’, *blæd* ‘blowing, breath’; Old Frisian **blā* ‘to blow’; Old High German *blāsen* ‘to blow’ (New High German *blasen*), *blājan* ‘to inflate, to swell out, to bulge’ (New High German *blähen*). Pokorny 1959:120—122 **bhel-*, **bhlē-* ‘to blow up’; Walde 1927—1932.II:177—180 **bhel-*; Mann 1984—1987:81 **bhlājō* ‘to blow, to blossom’, 82 **bhlējō* ‘to blow, to inflate’; Watkins 1985:9 **bhlē-* (also **bhlā-*) and 2000:12 **bhlē-* (contracted from earlier **bhle₂-*, or possibly

lengthened-grade **bhlēz-* ‘to blow’; Mallory—Adams 1997:71 **bhel-* ‘to blow, to blow up, to swell’; Ernout—Meillet 1979:240—241; De Vaan 2008:226—227; Walde—Hofmann 1965—1972.I:517; Orël 2003:48—49 Proto-Germanic **blēanan*, 49 **blēsanān*; De Vries 1977:42—43; Onions 1966:101—102; Klein 1971:86; Kluge—Mitzka 1967:81; Kluge—Seebold 1989:88—89 and 89. Proto-Indo-European **b^hel-g^h-*/**b^hol-g^h-*/**b^hl-g^h-* ‘to swell’: Irish *bolg* ‘belly, bag’; Gothic *balgs* ‘skin’; Old Icelandic *belgr* ‘the skin; skin bag, skin case; bellows’, *blástrbelgr* ‘bellows’; Swedish *bälg*, *blåsbälg* ‘bellows’; Old English *bielg*, *bylig* ‘leather bag’; Old Saxon *balg* ‘leather bag’; Old High German *balg* ‘(sg.) skin, leather bag; (pl.) bellows’ (New High German *Balg*). Rix 1998a:59 **b^helg^h-* ‘to swell’; Pokorny 1959:125—126 **bhelg^h-* ‘to swell’; Walde 1927—1932.II:182 **bhelg^h-*; Watkins 1985:7 **bhelgh-* and 2000:10 **bhelgh-* ‘to swell’; Feist 1939:78 **bhelg^h-*; Lehmann 1986:59—60; Orël 2003:33—34 Proto-Germanic **balziz*, 34 **balzjanan*; Kroonen 2013:49 **balgi-* ‘skin bag’, 49 **balgian-* ‘to make swell, to make angry’, and 58 **belgan-* ‘to swell’; De Fries 1977:32; Onions 1966:87—88; Klein 1971:77 **bhelg^h-*; Kluge—Mitzka 1967:46 **bhelgh-*; Kluge—Seebold 1989:56 Proto-Germanic (v.) **belg-a-* ‘to swell’, (n.) **balgi-m*. Proto-Indo-European **b^hl-ek^w-*/**b^hl-k^w-* ‘to swell, to expand’: Greek φλέψ ‘vein’; Old High German *bolca*, *bulchunna* ‘a round swelling’. Pokorny 1959:155 **bhleg^u-* ‘to become bloated’; Walde 1927—1932.II:215 **bhleg^u-*; Boisacq 1950:1030 **bhleg^u-*; Frisk 1970—1973.II:1025; Chantraine 1968—1980.II:1211—1212 **bhleg^w-*; Hofmann 1966:400 **bhleg^u-*; Beekes 2010.II:1578 (pre-Greek loanword). Some of these words may belong with Proto-Nostratic **bal-* (~ **bāl-*) ‘to well up, to surge, to overflow, to pour over’ instead.

- E. Uralic: Proto-Ugric **p[u]l3-* ‘to flow forth, to overflow’ > Ostyak / Xanty (Obdorsk) *pāli-* ‘to gush forth (water)’; Vogul / Mansi *pol’ciit-*, *pol’siit-*, *pol’st-*, *pol’sāt-* ‘to splash’; Hungarian *foly-* ‘to flow’, *folyam*, *folyó* ‘river, stream’. Rédei 1986—1988:881 **pɜl3-*. Yukaghir (Southern / Kolyma) *pulgulāt-* ‘to pour into’. Nikolaeva 2006:369.
- F. Proto-Altaic **biũlo-* ‘to soak, to gush forth’: Proto-Tungus **b[ü]lkü-* ‘to soak, to wet, to splash, to swash’ > Manchu *bulχū-* ‘to bubble up, to swell up’; Evenki *bilki-* ‘to soak, to wet’, *bulkiw-* ‘to splash, to swash’; Nanay / Gold *bilχo-* ‘to soak, to wet’, *bolqo-*, *bolχo-* ‘to splash, to swash’; Udihe *beäku-* ‘to soak, to wet’. Proto-Mongolian **bul(ka)-*, **bilka-* ‘to soak, to wet; to flow forth from the ground (water); to overflow’ > Written Mongolian *bulqa-* ‘to dip in water, to rinse’, *bulara-* ‘to flow forth from the ground (water)’, *bilqa-* ‘to overflow, to pour over the edge or brim’; Khalkha *bulχa-* ‘to soak, to wet’, *b’alχa-* ‘to overflow’; Buriat *bulχa-* ‘to gargle’, *bilχa-* ‘to overflow’; Kalmyk *bulχə-* ‘to soak, to wet’, *bilχə-* ‘to overflow’. Proto-Turkic **bulak* ‘spring, well’ > Old Turkic *bulaq* ‘spring, well’; Karakhanide Turkic *bulaq* ‘spring, well’; Turkish *bulak* ‘spring, well’; Azerbaijani *bulag* ‘spring, well’; Turkmenian *bulaq* ‘spring, well’;

Uzbek *bulɔq* ‘spring, well’; Uighur (dial.) *bulaq* ‘spring, well’; Tatar *bolaq* ‘spring, well’; Kazakh *bulaq* ‘spring, well’; Noghay *bulaq* ‘spring, well’; Tuva *bilaq* ‘spring, well’. Note also Kazakh *bula-* ‘to flow, to gush forth’. Starostin—Dybo—Mudrak 2003:362 **bũlo* ‘to soak, to gush forth’.

Sumerian *bul* ‘to blow, to breathe, to puff’.

Buck 1949:4.46 belly, stomach; 10.32 flow (vb.); 10.38 blow (vb. intr.). Bomhard—Kerns 1994:205—206, no. 10; Illič-Svityč 1971—1984.I:193—194, no. 29, **bAHa* ‘to blow, to inflate’; Dolgopolsky 2008, no. 199, **bVLVʔa* ‘to blow, to inflate’.

69. Proto-Nostratic (n.) **bul-a* (~ **bol-a*) ‘penis, testicle(s)’:

Derivative of:

(vb.) **bul-* ‘to swell, to expand, to spread out, to overflow; to puff up, to inflate’;

(n.) **bul-a* ‘large quantity or amount; expansion, spread, inflation; puff, blow’

A. Afrasian: Proto-Highland East Cushitic **bolokke* (?) ‘testicles’ (assimilation from **bulokke* ?) > Burji *bolókk-o*, *bulúkk-o* ‘testicle’; Gedeo / Darasa *omborakke* ‘testicles’. Hudson 1989:150; Sasse 1982:38. Omotic: Basketo *bulli* ‘penis’.

B. Dravidian: Kannāḍa *bullā*, *bulli* ‘penis’; Telugu *bullā*, *bulli* ‘penis (used with reference to a child)’. Burrow—Emeneau 1984:380, no. 4309.

C. Proto-Indo-European **bʰl̥-* (secondary full-grade forms: **bʰel-/bʰol-*) ‘penis, testicle’: Latin *foliis* ‘a leather bag; a pair of bellows; puffed out cheeks; scrotum’, *folliculus* ‘a little sack or bag; an inflated ball; scrotum’; Greek φαλλός ‘penis’; Phrygian βαλλίον ‘penis’; Old Icelandic *böllr* ‘ball, testicle’; Old English (pl.) *beallucas* ‘testicles’. Pokorny 1959:120—122 **bhel-*, **bhlē-* ‘to blow up’; Walde 1927—1932.II:177—180 **bhel-*; Mallory—Adams 1997:71 **bhel-* ‘to blow, to blow up, to swell’; Watkins 1985:6—7 **bhel-* and 2000:9 **bhel-* ‘to blow, to swell’; Boisacq 1950:1013 **bhel(e)-*, **bhel(ē)-*; Frisk 1970—1973.II:987—988 **bhel-*; Chantraine 1968—1980.II:1175 **bhel-*; Hofmann 1966:390—391 **bhel-*; Beekes 2010.II:1550 (pre-Greek loanword); Ernout—Meillet 1979:244; De Vaan 2008:230; Walde—Hofmann 1965—1972.I:524—535 **bhel-*; Orël 2003:34 Proto-Germanic **balluz*; Kroonen 2013:50 **ballan-* ‘ball’; De Vries 1977:70 **bhel-*; Onions 1966:70 and 71; Klein 1971:68 **bhel-*.

D. Yukaghir (Southern / Kolyma) *puléetka* ‘penis’. Nikolaeva 2006:369.

Buck 1949:4.49 testicle. Dolgopolsky 2008, no. 211, **bólX[a]* ‘tail, penis’; Takács 1997:374—375 (Proto-Afrasian **bul-(h)-* ‘penis’).

70. Proto-Nostratic root **bul-* (~ **bol-*):

Extended form:

(vb.) **bul-V-γ-* ‘to ripen, to blossom, to bloom, to sprout, to mature’;(n.) **bul-γ-a* ‘increase, growth, ripening, maturity, prosperity, blossoming’

Derivative of:

(vb.) **bul-* ‘to swell, to expand, to spread out, to overflow; to puff up, to inflate’;(n.) **bul-a* ‘large quantity or amount; expansion, spread, inflation; puff, blow’

- A. Proto-Afrasian **bul-Vγ-* ‘to grow, to mature’: Proto-Semitic **bal-aγ-* ‘to ripen, to mature, to attain puberty’ > Arabic *balāḡa* ‘to reach, to arrive, to come, to attain puberty, to ripen, to mature’; Ḥarsūsi *belōḡ* ‘to arrive’, *bēlēḡ* ‘to reach puberty, to be fully grown’; Mehri *bēlāḡ* ‘to reach maturity, puberty’, *bōlēḡ* ‘grown up, adult’; Šheri / Jibbāli *bélāḡ* ‘to reach puberty’. D. Cohen 1970—:69; Zammit 2002:100—101.
- B. Dravidian: Tamil *poli* ‘to flourish, to prosper, to abound, to increase, to live long and prosperously’, *polivu* ‘prosperity, abundance’, *pular* ‘to mature (as grain)’; Malayalam *poliyuka* ‘to be accumulated’, *polikka* ‘to measure corn-heaps, paying the reapers in kind’, *poli*, *policcal*, *polippu* ‘increase’, *polivu* ‘accumulation, contribution’, *polima* ‘increase, excellence’; Kannaḍa *hulisu* ‘to increase in bulk, to thrive, to grow rich’, *hulusu* ‘increase, richness’; Koḍagu *poli* (*poliv-*, *poliñj-*) ‘to increase’; Tuḷu *poli* ‘interest in kind, increase, abundance’, *pollusu*, *polsu* ‘interest, gain, luck’, *polleḷu* ‘abundance, increase’; Telugu *poli* ‘gain’. Burrow—Emeneau 1984:402, no. 4550.
- C. Proto-Indo-European **bʰul̥sʰi-*/**bʰol̥sʰi-*, **bʰlo̯sʰi-* > **bʰlō-* (later also **bʰlē-*) ‘to blossom, to sprout’: Greek φύλλον ‘leaf’; Latin *folium* ‘leaf’, *flōs* ‘a flower, blossom’; Old Irish *bláth* ‘flower’; Gothic *blōma* ‘flower’; Old Icelandic *blóm* ‘bloom, blossom, flower’, *blað* ‘leaf of a plant’; Old English *blōwan* ‘to bloom, to flower’, *blēd* ‘shoot, branch, fruit, flower’, *blæd* ‘leaf, blade’, *blōstma* ‘blossom, flower’; Old West Frisian *blām* ‘flower, bloom’; Old Saxon *blōmo* ‘flower, bloom’, *blōian* ‘to bloom’, *blad* ‘leaf, blade’; Dutch *bloeien* ‘to bloom’; Old High German *bluoēn*, *bluojan* ‘to bloom’ (New High German *blühen*), *bluomo* ‘flower, blossom’ (New High German *Blume*), *bluot* ‘flower, blossom, bloom’ (New High German *Blüte*), *blat* ‘leaf, blade’ (New High German *Blatt*); Tocharian A *pält*, B *pilta* ‘leaf’. Rix 1998a:72 **bʰleh₁-* ‘to bloom, to blossom’; Pokorny 1959:122 **bhel-*, **bhlē-*, **bhlō-*, **bhlə-* ‘leaf, bloom’; Walde 1927—1932.II:176—177 **bhel-*, **bhlē-*, **bhlō-*; Mann 1984—1987:85 **bhlōs-* (**bhlōj-*) ‘flower, bloom’, 122 **bhūlos*, *-ō(n)*, *-jom* ‘leaf, layer, film, tissue’; Watkins 1985:7 **bhel-* and 2000:9—10 **bhel-* ‘to thrive, to bloom’; Gamkrelidze—Ivanov 1984.II:468 **b[ʰ]el-*/**b[ʰ]loH-*/**b[ʰ]lH-* and 1995.I:389 **bʰel-*/**bʰloH-*/**bʰlH-* ‘to blow, to inflate’; Mallory—Adams 1997:207 (?) **bhloh_xdhos* ‘flower’, **bhel-* ‘to blossom, to bloom’; Boisacq

- 1950:1041 **bhel(e)*-, **bh(e)lē*-. **bh(e)lō*-, Hofmann 1966:406 **bhel*-, **bhlō*-, **bhlō-t*-, **bhlē-t*-, **bhlā-t*-, Frisk 1970—1973.II:1050—1051; Beekes 2010.II:1596—1597 **b^hel*-, **b^hlh₃*-, Chantraine 1968—1980.II:1232—1233 **bhel*-, Sihler 1995:42 **bholyom*; Walde—Hofmann 1965—1972.I:518—519 **bhlō*- (: **bhlē*-, **bhlā*-) and I:423—524 **bhel*- (**bhlē*-, **bhlō*-); Ernout—Meillet 1979:241 **bhlō*- and 244 **bhel*-, **bhol*-; De Vaan 2008:230 **d^holH-io*- ‘leaf’; Orël 2003:50 Proto-Germanic **blōmōjanan*-, **blōmōn*-; Kroonen 2013:70 **blōman*- ‘flower’; Lehmann 1986:76 **bhel*-, **bhlō*- ‘to flower’; Feist 1939:100 **bhlē*-, De Vries 1977:41 **bhlō*- and 45 **bhlō*-, Klein 1971:84 **bhlō*-, **bhlē*-, **bhlā*- and 86; Onions 1966:98, 101, and 102; Kluge—Mitzka 1967:82, 86, and 87; Kluge—Seebold 1989:90 **bhel*-, 93, and 94; Adams 1999:388; Van Windekens 1976—1982.I:358.
- D. Yukaghir (Southern / Kolyma) *polžičə* ‘leaf’. Nikolaeva 2006:356—357.
- E. Proto-Altaic **bōlo*- ‘to be, to become’: Proto-Mongolian **bol*- ‘to be, to become’ > Classical Mongolian *bol*- ‘to be, to become, to exist, to be possible’; Ordos *bol*- ‘to be, to become’; Khalkha *bol*- ‘to be, to become’; Buriat *bolo*- ‘to be, to become’; Shira-Yughur *bol*- ‘to be, to become’; Kalmyk *bol*- ‘to be, to become’; Monguor *boli*-, *ōli*- ‘to be, to become’; Dagur *bol*-, *bole*-, *bolo*- ‘to be, to become’. Proto-Turkic **bōl*- ‘to become’ > Old Turkic *bol*- (Orkhon, Old Uighur) ‘to become’; Karakhanide Turkic *bol*- ‘to become’; Turkish *ol* ‘to be, to become’; Gagauz *ol*- ‘to be, to become’; Azerbaijani *ol*- ‘to be, to become’; Turkmenian *bol*- ‘to become’; Uzbek *bul*- ‘to become’; Karaim *bol*- ‘to become’; Tatar *bul*- ‘to become’; Bashkir *bul*- ‘to become’; Kirghiz *bol*- ‘to become’; Kazakh *bol*- ‘to become’; Noghay *bol*- ‘to become’; Tuva *bol*- ‘to become’; Chuvash *pol*- ‘to become’; Yakut *buol*- ‘to become’. Poppe 1960:99 and 1955:29, 30, 59, 99; Street 1974:9 **bōl*- ‘to become’; Starostin—Dybo—Mudrak 2003:372—373 **bōlo* ‘to be’.
- F. Proto-Gilyak / Nivkh **blay(q)* ‘leaf’: East Sakhalin *play* ‘leaf’; South Sakhalin *play* ‘leaf’. Fortescue 2016:23.
- G. Eskimo-Aleut: Aleut *hula*- ‘to dawn, to begin (month or day), to be new (moon), to happen in the morning’, Atkan also ‘to bloom’. Fortescue—Jacobson—Kaplan 1994:268.

Sumerian *buluḡ₃* ‘to grow, to make grow’.

Buck 1949:8.56 leaf; 8.57 flower; 12.53 grow (= increase in size). Bomhard—Kerns 1994:206—207, no. 11; Illič-Svityč 1971—1984.I:181—182, no. 16, **bol?i* ‘to grow (of plants)’.

71. Proto-Nostratic root (reduplicated) **bul-bul-* (~ **bol-bol-*) (> **bum-bul-* [~ **bom-bol-*]):
- (vb.) **bul-bul-* (> **bum-bul-*) ‘to swell, to bubble up’;
- (n.) **bul-bul-a* (> **bum-bul-a*) ‘puff, bubble, swelling’
- Derivative of:
- (vb.) **bul-* ‘to swell, to expand, to spread out, to overflow; to puff up, to inflate’;
- (n.) **bul-a* ‘large quantity or amount; expansion, spread, inflation; puff, blow’
- A. Dravidian: Gondi *bomoli* ‘foam’, *bommul* ‘foam, bubble’, *bomoolee* ‘saliva, foam, froth’; Pengo *pumel* ‘foam’; Manda *pumbel* ‘foam’; Kui *pumbeli* ‘foam, froth’; Kuwi *pomboli* ‘foam’, *pumbulli* ‘froth’. Burrow—Emeneau 1984:378, no. 4280.
- B. Proto-Kartvelian **bumbul-* ‘down-feathers’: Georgian *bumbul-* ‘down-feathers’; Mingrelian *bumbul-* ‘featherbed’; Laz *bumbul-* ‘featherbed’. Klimov 1964:55.
- C. Proto-Indo-European **b^humb^hul-*, **b^homb^hol-* ‘puff, bubble, swelling’: Ossetic *būmbūl* ‘down-feathers’, (Digorian) *bomboli* ‘down-feathers’; Armenian *bmbul* ‘furry animal, ball of fluff, eiderdown’; Greek πομφόλυξ ‘a bubble’; Old Czech *búbel* ‘bladder, bubble, cyst’; Lithuanian *buṁbulis* ‘knot, knob, clump’. Probably also: English *bubble*; New High German (dial.) *bobbel*, *bubbel* ‘bubble’; Dutch *bobbel* ‘bubble’; Swedish *bubla* ‘bubble’; Danish *boble* ‘bubble’. Walde 1927—1932.II:108; Mann 1984—1987:123 **bhumbhulis*, *-os*, *-ā* ‘swelling, bulge, knob, puff’; Chantraine 1968—1980.II:880; Boisacq 1950:803; Hofmann 1966:279; Frisk 1970—1973.II:503; Beekes 2010.II:1171; Fraenkel 1962—1965.I:64; Falk—Torp 1903—1906.I:66; Onions 1966:122; Klein 1971:97.
- D. Yukaghir (Southern / Kolyma) (*pibil-*)*pubuški* (< **pumpuski*: < **pumpul-*) ‘pimple’. Nikolaeva 2006:372.
- E. Altaic: Manchu *bumbulča-* ‘to swell, to distend’.
- Sumerian *bu-bu-ul* ‘boil, abscess’.

72. Proto-Nostratic root **bul-* (~ **bol-*):
- (vb.) **bul-* ‘to mix, to mix up, to confuse’;
- (n.) **bul-a* ‘mixture, confusion, turbidity, blur’
- Derivative:
- (n.) **bul-a* ‘that which is dark, dark colored; that which has mixed colors, that which is spotted’
- A. Proto-Afrasian **bul-* ‘to mix, to mix up, to confuse’: Proto-Semitic **bal-* ‘to mix, to mix up, to confuse’ > Akkadian *balālu* ‘to mix, to mix up, to confuse, to mingle’; Hebrew *bālāl* [בָּלַל] ‘to mingle, to mix, to confuse’; Syriac *bālīl* ‘mixed, confused’; Mandaic *blila* ‘confused, idle, useless’;

Geez / Ethiopic *balla* [በለ] ‘to spoil, to ruin, to destroy, to mix, to confuse’. D. Cohen 1970— :67; Klein 1987:75; Leslau 1987:96. Proto-Semitic (reduplicated) **bal-bal-* ‘to confuse, to mix’ > Arabic *balbala* ‘to disquiet, to make uneasy or restive, to stir up, to rouse, to disturb, to trouble, to confuse’; Geez / Ethiopic *bābbala* [በበለ] ‘to be mixed up, messed up, confused, scattered’, *ʔabābbala* [አበበለ] ‘to mix, to confuse’; Tigre *ʔabālbāla* ‘to be confused’; Amharic *bolābbolä* ‘to combine *nug*-seeds with flax seeds’. D. Cohen 1970— :65; Klein 1987:74; Leslau 1987:85 and 96. Proto-Semitic **bal-aš-* ‘to destroy, to confuse’ > Hebrew *billaʿ* [בִּלְעַל] ‘to destroy, to confuse’; Soqotri *balaʿ* ‘to be changed, ruined’. D. Cohen 1970— :68. East Cushitic: Galla / Oromo (reduplicated) *bulbul-addä* ‘to mix’; Sidamo (reduplicated) *bulbul-* ‘to melt, to add water and shake, to mix’. Hudson 1989:100 and 355.

- B. Proto-Indo-European **bʰl-en-dʰ-/bʰl-on-dʰ-/bʰl-ŋ-dʰ-* ‘to mix, to blend, to stir, to confuse’: Gothic *blandan* ‘to mix, to mingle’; Old Icelandic *blanda* ‘to blend, to mix’, *blendingr* ‘blending, mixture’; Old English *blandan* ‘to mix’; Middle English *blundren* ‘to stir up, to confuse’; Old Saxon *blandan* ‘to mix’; Old High German *blantan* ‘to mix’; Lithuanian *blandūs* ‘troubled, turbid, thick’, *blėstis* ‘become dark’. Rix 1998a:73—74 **bʰlendʰ-* ‘to become blurred, murky, confused’; Pokorny 1959:157—158 **bhlendʰ-* ‘dim, reddish’; Walde 1927—1932.II:216 **bhlendʰ-*; Mann 1984—1987:82 **bhlendhō* ‘to mix, to confuse, to dazzle’, 84 **bhlŋdh-* ‘to confuse, to deceive, to err; confusion, error’, 84 **bhlondʰ-* ‘to confuse, to stir, to mix, to blur, to deceive’; Mallory—Adams 1997:147 **bhlendʰ-* ‘to be/make cloudy’; Orël 2003:47 Proto-Germanic **blādanan*; Kroonen 2013:66—67 **blandan-* ‘to mix, to mingle’; Feist 1939:98—99 **bhlendʰ-*; Lehmann 1986:74—75 **bhlendʰ-* ‘to be or make cloudy, to shimmer, to err’; De Vries 1977:42 and 43; Onions 1966:99 and 102; Klein 1971:85 and 86; Fraenkel 1962—1965.I:47—48; Smoczyński 2007.1:63—64.
- C. Yukaghir (Northern / Tundra) *pulʼaŋa-* ‘to rush about, to dash; to toss’. Nikolaeva 2006:369.
- D. Proto-Altaic **buli-* ‘to stir, to shake’: Proto-Mongolian **būli-* ‘to stir’ > Middle Mongolian *bule-* ‘to stir’; Khalkha *büle-* ‘to stir’; Buriat *būli-* ‘to stir’; Kalmyk *bülə-, bül-* ‘to stir’; Ordos *būli-* ‘to stir’. Proto-Turkic **bulga-* ‘to stir, to stir up’ > Old Turkic *bulŋa-* ‘to stir, to stir up’; Turkish *bula-* ‘to smear, to bedaub, to soil, to mix’; Turkmenian *bula-* ‘to stir, to stir up’; Uzbek *bula-, bulŋa-* ‘to stir, to stir up’; Uighur *bulŋu-* ‘to stir, to stir up’; Kirghiz *bulŋa-* ‘to stir, to stir up’; Kazakh *bilya-, bulŋa-* ‘to stir, to stir up’; Noghay *bilya-, bulŋa-* ‘to stir, to stir up’; Chuvash *pəlxan* ‘to become turbid’; Yakut *bulā-, bulkuy-, bilā-* ‘to stir, to stir up’; Dolgan *bulkuy-* ‘to stir, to stir up’. Starostin—Dybo—Mudrak 2003:381—382 **buli* ‘to stir, to shake, to smear’.

Buck 1949:5.17 mix. Möller 1911:27—28; Bomhard—Kerns 1994:207—208, no. 12; Illič-Svityč 1971—1984.I:185—186, no. 20, **bul* ‘precipitation, mud’.

73. Proto-Nostratic (n.) **bul-a* ‘that which is dark, dark-colored; that which has mixed colors, that which is spotted’:

Derivative of:

(vb.) **bul-* ‘to mix, to mix up, to confuse’;

(n.) **bul-a* ‘mixture, confusion, turbidity, blur’

- A. Proto-Afrasian **bul-* ‘dark colored; having mixed colors, spotted’: Semitic: Amharic *bullā* ‘yellow, brown’; Tigrinya *bullā* ‘light brown, white reddish’; Gurage *bula* ‘white horse’, *balbula* ‘reddish brown, brown (horse)’. (According to Leslau [1979:139], the Ethiopian Semitic forms are loans from Cushitic.) East Cushitic: Burji *bull-ānc-i* ‘gray; all mixed colors; spotted’; Hadiyya *bula* ‘(horse) spotted: black and white’; Konso *pull-a* ‘gray’. Sasse 1982:43.
- B. Dravidian: Tamil *pul* ‘tawny color’, *pullai* ‘dull, yellowish color’; Malayalam *pulla* ‘a yellowish color of cattle’; Kota *bul* ‘liver-colored’; Telugu *pula* ‘yellowish’, *pulla* ‘brown, tawny’; Gadba (Salur) *pula* ‘light brown color’ (loan from Telugu). Burrow—Emeneau 1984:381, no. 4310.
- C. Proto-Indo-European **b^{hl}-en-d^h-*/**b^{hl}-on-d^h-*/**b^{hl}-ŋ-d^h-* ‘mixed or dark colored’: Proto-Germanic **blundaz* ‘mixed colored, gray’ > Old English *blonden-feax*, *blandan-feax* ‘having mixed colored or gray hair’. Germanic loans in: Medieval Latin *blundus*, *blondos* ‘yellow’; French *blond(e)* ‘fair-haired, blond’; Italian *biondo* ‘fair-haired, blond’; Spanish *blondo* ‘blond’; Old Provençal *blon* ‘blond’. Pokorny 1959:157—158 **bhlendh-* ‘dim, reddish’; Orël 2003:47 Proto-Germanic **blādanan*.

Buck 1949:15.63 dark (in color).

74. Proto-Nostratic root **bul-* (~ **bol-*):

(vb.) **bul-* ‘to crush, to grind, to weaken, to wear down; to become worn out, weak, tired, old’;

(n.) **bul-a* ‘that which is worn out, weak, tired: weakness, decline, decay, wear, etc.; (adj.) worn out, weak, tired, old’

- A. Proto-Afrasian **bul-* ‘(vb.) to crush, to grind, to weaken, to wear down; to become worn out, weak, tired, old; (adj.) worn out, weak, tired’: Proto-Semitic **bal-ay-* ‘(vb.) to become worn out, weak, tired, old; (adj.) worn out, weak, tired’ > Akkadian *balū* ‘to come to an end, to become extinguished’; Hebrew *bālāh* [בָּלָה] ‘to become old and worn out’, *beleh* [בִּלֶּה] ‘worn out, old’, *bālī* [בָּלִי] ‘destruction, defeat, failure’; Aramaic *bālē* ‘to become worn out’; Ugaritic *bly-m* ‘worn out’; Arabic *baliya* ‘to be or become old, worn, shabby; to dwindle away, to vanish; to deteriorate, to

decline, to become decrepit; to disintegrate (corpse), to decay, to rot; to wear out', *bilan* 'decline, deterioration; decay, putrefaction, decomposition; worn condition; wear; shabbiness', *balīy* 'worn, decrepit, old, shabby', *balīya* 'trial, tribulation, affliction, distress, misfortune, calamity'; Mehri *bəlō* 'to trouble, to tire out; to nag, to interrupt'; Ḥarsūsi *belō* 'to trouble; to nag'; Šheri / Jibbāli *bélé* 'to tire out, to nag'; Geez / Ethiopic *balya* [ጸለየ] 'to be old, worn out, decrepit, obsolete', *bəlu* [ጸለጽ] 'old, ancient, antiquated, decrepit, obsolete, worn out'; Tigrinya *bäläyā* 'to be old, worn out'; Tigre *bāla* 'to be old, worn out'; Amharic *bəlu* 'old' (loan from Geez). D. Cohen 1970—:66; Klein 1987:74; Leslau 1987:98; Murtonen 1989:113; Zammit 2002:101. East Cushitic: Afar *bulul-* 'to become pulverized'; Galla / Oromo *bull-aw-* 'to become pulverized'; Konso *pull-a* 'flour made from dried ensete'. Sasse 1982:43. Highland East Cushitic **bulle* 'flour' > Burji *bull-a* 'a type of flour'; Gedeo / Darasa *bulle* 'flour', *bull-eess-* 'to grind', *bullo?* 'to be fine (for example, powder)'; Hadiyya *bullo* 'flour, porridge'; Sidamo *bullee* 'flour', *bulleess-am-* 'to be fine (for example, powder)'. Hudson 1989:65 and 74.

- B. Elamo-Dravidian: Middle Elamite *pu-lu-un-ri* 'one who destroys'. Dravidian: Tamil *pulampu* (*pulampi-*) 'to fade', *pular-* 'to fade, to wither, to faint, to become weak, to decrease'; Malayalam *poliyuka* 'to be extinguished', *polikka* 'to extinguish', *polivu* 'extinction', *policcal*, *polippu* 'destruction'; Telugu *poliyu* 'to die, to be destroyed or spoiled', *poliyincu* 'to kill', *poliyika* 'death, destruction'; Kuṛux *polnā* 'to be unable, to fail'; Malto *pole* 'to be unable, to be helpless, to be vanquished', *poltre* 'to vanquish, to tire out'. Burrow—Emeneau 1984:404, no. 4571.
- C. Proto-Indo-European **b^hol-/b^hl-* '(adj.) worn out, weak; (n.) misfortune, calamity': Greek φλαῦρος 'bad, useless, mean, shabby'; Gothic *balwjan* 'to torment, to plague', **balweins* 'punishment, torture', *blauþjan* 'to abolish, to make void'; Old Icelandic *böl* 'bale, misfortune', *blauþr* 'soft, weak'; Swedish *blöd* 'weak, timid', *blödig* 'sentimental'; Old English *bealo* 'evil, calamity, injury', *blēat* 'miserable'; Old Frisian *balu* 'evil'; Old Saxon *balu* 'evil', *blōdian* 'to make weak, timorous', *blōdi* 'timorous'; Old High German *balo* 'destruction', *blōdi* 'weak, timorous' (New High German *blöde* 'bashful, timid, shy'), *blōz* 'bare, naked' (New High German *bloß*); Old Church Slavic *bolēti* 'to be sick'; Lithuanian *bliūkšti* 'to become weak'. Pokorny 1959:125 **bheleu-* 'to hit, to weaken', 159 **bhlēu-*, **bhlau-*, **bhlū-* 'weak, miserable'; Walde 1927—1932.II:189 **bhol-*, II:208—209 **bhlau-*; Mann 1984—1987:81 **bhlauros*, **bhlausros* (?), 81 **bhlauros*, *-jos* 'limp, timid'; Watkins 1985:7 **bhelu-* and 2000:10 **bhel-u-* 'to harm'; Boisacq 1950:1028; Beekes 2010.II:1575 (no clear etymology); Chantraine 1968—1980.II:1207; Frisk 1970—1973.II:1021—1022; Hofmann 1966:399; Fraenkel 1962—1965.I:50; Kroonen 2013:50 Proto-Germanic **balwa-* 'evil'; Orël 2003:34 Proto-Germanic **balwan*, 34—35 **balwa-wīsaz*; Feist 1939:79 and 87; Lehmann 1986:60 and 75;

Klein 1971:68; Onions 1966:70; Boutkan—Siebinga 2005:31; Kluge—Mitzka 1967:86; Kluge—Seebold 1989:93.

- D. Yukaghir (Southern / Kolyma) *pul'gəžej-* 'to break away', *pul'd'əgədej-* 'to drop, to let go', *pul'd'əgə-* 'to be loose (of the binding of a ski); to break loose (of a dog); to become unhinged (of a door)', (Northern / Tundra) *pulgej-* 'to go out, to grow out', *puld'i-* 'to break frequently'. Nikolaeva 2006:368—369.
- E. Altaic: Mongolian *bular-* 'friable, crumbly, soft (of soil)'.
- F. Proto-Gilyak / Nivkh **bol-* 'to fall over': Amur *pol-dʷ* 'to fall over, to lose balance' [*volu-* 'to knock over, to fell']; North Sakhalin *pol-t* 'to fall over'; East Sakhalin *pol-d* 'to fall over' [*volu-* 'to throw down, to fell']. Fortescue 2016:24.

Buck 1949:4.82 weak; 4.84 sick, sickness; 4.91 tired, weary; 14.15 old; 16.72 bad. Bomhard—Kerns 1994:209—210, no. 14; Möller 1911:28—29.

75. Proto-Nostratic (n.) **bulʷ-a* 'a kind of small bird: pigeon, dove':

- A. Proto-Afrasian **bul-* 'a kind of small bird: pigeon, dove': Proto-Semitic **bul-* 'a kind of small bird' > Akkadian *bulīlu* 'a species of crested bird'; Arabic *bulbul* 'nightingale'; Mandaic *bulbul* 'nightingale'; Tigrinya *bāla* 'a small brown bird'; Gurage (Muher) *bulle* 'dove, pigeon', (Masqan, Gogot, Soddo, Wolane) *bullal* 'pigeon'; Amharic *bəlul*, *bullal* 'turtledove'. D. Cohen 1970— .2:65. Berber: Ahaggar *ābilbil* 'a kind of bird (white, with a yellow bill, larger than a pigeon)'; Wargla *bibelli* 'fowl, poultry'. Chadic: West Chadic: Hausa (dial.) *bóló* 'dove'; Sura *mbul* 'dove'; Ankwe *bel* 'dove'; Karekare *beləwi* 'dove'; Bolewa *bole* 'dove'; Dera *hīlḥil* 'swallow'. Central Chadic: Pižimdi *mbolèdi* 'dove'. East Chadic: Gabri *bélu* 'dove, pigeon'; Bidiya *bályà* 'turtledove'. (?) Cushitic: Highland East Cushitic: Sidamo *buloʷe* 'bird'. Militarëv—Kogan 2005.II:85—86, no. 60, **bVl-* 'a kind of small bird'; Orël—Stolbova 1995:81, no. 330, **bul-* 'dove'; Blažek 2003b:240 — according to Blažek, Beja / Beḍawye *belbel* 'wild dove' is "borrowed from Ar. *bulbul*, p. *balābil* 'nightingale'...".
- B. Dravidian: Tamil *puḷ* 'bird; stick used in the game of tipcat'; Malayalam *puḷ* 'any small bird'; Kota *puḷ*, *piḷ* 'small stick used in tipcat'; Toda *pīḷ* 'bird'; Telugu *pulūgu* 'bird'. Burrow—Emeneau 1984:382, no. 4319.

Different (erroneous) etymology in Dolgopolsky 2008, no. 197a, **bVLLV* 'dove'.

76. Proto-Nostratic root **bun-* (~ **bon-*):

- (vb.) **bun-* 'to puff up, to inflate, to expand, to swell';
 (n.) **bun-a* 'rounded protuberance, swelling, lump, hump, growth'

Extended form:

(vb.) **bun-V-g-* ‘to swell, to increase, to expand’;

(n.) **bun-g-a* ‘swelling’; (adj.) ‘swollen, fat, thick’

Derivative:

(vb.) **bun-* ‘to flow, to overflow’;

(n.) **bun-a* ‘flow, flood’

- A. Proto-Afrasian **b[u]n-* ‘to puff up, to inflate, to expand, to swell, to grow, to abound’: Semitic: Akkadian *banū* ‘to grow; to be pleasant, friendly (said of the face)’, *bunnū* ‘to make grow’, *bunnannū* ‘general region of the face (especially the eyes and nose); outer appearance, figure, likeness, features’, *bunnu* ‘favor’, *bunnū* ‘beautiful’. D. Cohen 1970—:71. Semantic development probably as follows: ‘(friendly) face’ < ‘puffed up (said of cheeks, from smiling)’. Egyptian *bnn* ‘bead, pellet’, *bnnt* ‘pellet’ *bng* ‘to have plenty, to abound in (food)’. Hannig 1995:254 and 255; Erman—Grapow 1926—1963.1:460 and 1:464; Faulkner 1962:83.
- B. Proto-Dravidian **poṅk-* ‘to increase, to swell, to expand’: Tamil *poṅku* (*poṅki-*) ‘to boil up; to bubble up by heat, to foam and rage (as the sea); to increase; to swell; to shoot up; to be elated; to burst with anger; to be swollen; to rise; to grow high; to abound, to flourish; to be fruitful; to cook’, *poṅkam* ‘increase, abundance, joy, splendor’; Malayalam *poṅṅuka* ‘to boil over, to bubble up, to spread’; Kota *poṅg-* (*poṅgy-*) ‘to increase magically in number’; Kannada *poṅgu* ‘to boil over, to burst open, to expand, to open, to blossom, to swell, to be elated, to exult, to be overjoyed’; Kodagu *poṅṅ-* (*poṅṅi-*) ‘to swell’; Tulu *boṅguni* ‘to be distended’, *boṅky*, *boṅku* ‘protuberance’; Telugu *poṅgu* ‘to bubble up, to boil, to effervesce, to rejoice, to be elated, to be puffed up, to be proud’; Kolami *poṅg-* (*poṅkt-*) ‘to boil over’; Naikri *poṅg-* ‘to expand’. Burrow—Emeneau 1984:395—396, no. 4469.
- C. Proto-Indo-European **bʰongʰ-/bʰngʰ-* (secondary full-grade form: **bʰengʰ-*) ‘to swell, to fatten, to grow, to increase’, **bʰngʰu-* ‘swollen, fat, thick’: Sanskrit *banhate* ‘to grow, to increase’, *bahú-h* ‘much, abundant, great, large’; Greek *παχύς* ‘thick, stout, fat, massive’; Old Icelandic *bingr* ‘bed, bolster’, *bunga* ‘elevation’, *bunki* ‘heap, pile’; Old High German *bungo* ‘clod, lump’; Latvian *biezs* ‘thick’; (?) Hittite *pa-an-ku-uš* ‘all, whole’ (for an alternative etymology, cf. Polomé 1968:98—101). Pokorny 1959:127—128 **bhenḡh-*, **bhnḡh-* (adj. **bhnḡhú-s*) ‘thick, dense’; Rix 1998a:61 **bʰengʰ-* ‘to make thick, solid, firm, dense’; Walde 1927—1932.II:151 **bhenḡh-*, **bhnḡh-* (adj. **bhnḡhú-s*); Mann 1984—1987:87 **bhnḡh-* ‘big, mass, lump’, 124 **bhunghos*, -ā ‘hump, bulge, growth’; Watkins 1985:7 **bhenḡh-* (zero-grade form **bhnḡhu-*) and 2000:10 **bhenḡh-* ‘thick, fat’; Gamkrelidze—Ivanov 1984.I:174 and II:782 **b[ʰ]enḡ[ʰ]-*, **b[ʰ]nḡ[ʰ]-* and 1995.I:140 and I:684 **bʰenḡʰ-*, **bʰnḡʰ-* ‘thick, solid’; Mayrhofer 1956—1980.II:400 and II:424—425; Mallory—Adams 1997:3 **bhenḡhus* ‘thick,

abundant'; Boisacq 1950:753 **bhṛghú-s*; Hofmann 1966:256 **bhṛghús*; Chantraine 1968—1980.II:866 **bhṛgh-*; Frisk 1970—1973.II:484—485 **bhṛgh-*; Beekes 2010.II:1159—1160 **bḥṛḡh-u-*; Orël 2003:62 Proto-Germanic **bunḡōn*, 62 **bunkōn*; De Vries 1977:37 and 65; Kloekhorst 2008b:624—625; Sturtevant 1951:40, §62d, Indo-Hittite **bʰngʷéws*; Puhvel 1984—.8:84—93 **bhṛghú-*; Wodtko—Irslinger—Schneider 2008:13—15 **bʰenḡh-*.

- D. Uralic: Proto-Finno-Ugrian **puṇka* (**poṇka*) 'rounded protuberance, lump' > Estonian *pung* 'rounded protuberance (bud, knob, etc.)'; Lapp / Saami *bug'ge* 'bump, lump; hump; swollen or expanded object'; Mordvin *pokol'* 'lump, protuberance'; Zyrian / Komi *bugyl'* 'hump, ball, globe'; Vogul / Mansi *puuṇhläp* 'having a knob (or knobs)'; Ostyak / Xanty (Tremyugan) *puṇkəl*, (Southern) *poṇḡəl* 'knob, knoll, protuberance; gnarl on a tree; clod of snow', (Tremyugan) *puṇkət*, (North Kazym) *poṇət*, (Southern) *poṇḡət* 'abscess, boil, gnarl on a tree'; Hungarian *bog* 'knob; thickening on a plant stalk; gnarl on a tree'. Collinder 1955:109 and 1977:123—124; Rédei 1986—1988:404 **puṇka* (**poṇka*). Yukaghir (Southern / Kolyma) *punkə* 'hill', *pungəgə-* 'to burst (intr.); to thunder, to clatter, to make a noise', *pungunə-* 'swollen', (Northern / Tundra) *punke* 'hummock', *puṇed'ile* 'pimple', *puṇed'ilere-* 'to get covered in pimples'. Nikolaeva 2006:371. The unextended form may be preserved in Yukaghir (Northern / Tundra) *pönṇigej-* 'to become big'. Nikolaeva 2006:360.
- E. Altaic: Manchu *boṇgo* 'point, apex; first' (cf. *boṇgo de gene-* 'to go first' [*gene-* = 'to go']); Oroch *boṇgo* 'fellow, chap, lad'; Solon *boṇḡ* 'thick, big'. Illič-Svityč 1971—1984.I:182—183, no. 17.
- F. Proto-Eskimo **pəṇur* 'mound or hillock': Alutiiq Alaskan Yupik *pəṇuq* 'hill'; Central Alaskan Yupik *pəṇuq* 'hill'; Naukan Siberian Yupik *pəṇuXqaq* 'hill'; Central Siberian Yupik *pəṇuq* 'hillock', *pəṇur-* 'to swell, to rise in a lump'; Sirenik *pəṇuynəX* 'hillock', *pəṇkuṭtaX* 'hill'; Seward Peninsula Inuit *piṇu(q)* 'dune, mound'; West Canadian Inuit *piṇuq* 'hill'; East Canadian Inuit *piṇuq* 'pimple'; North Alaskan Inuit *piṇu* '(n.) mound, pimple; (vb.) to develop a pimple, to swell (wave)', *piṇuktaaq* 'small round hill isolated in a flat area'; Greenlandic Inuit *piṇu* 'hillock, hummock'. Fortescue—Jacobson—Kaplan 1994:255. Proto-Inuit **pəṇuy(y)ak* or **pəṇuy(y)aq* 'swelling on skin' > North Alaskan Inuit *pəṇuyaq* 'ringworm, pimple'; West Canadian Inuit *piṇuyaq* 'wart'; Greenlandic Inuit *piṇuyak* 'blister'. Fortescue—Jacobson—Kaplan 1994: 255.

Sumerian *bun* 'breath', *bún* '(vb.) to blow, to inflate; (n.) breath', *bún* 'nose'.

Buck 1949:4.204 face; 12.63 thick (in dimension); 12.83 sphere; 13.13 whole; 13.15 much, many. Bomhard—Kerns 1994:223—224; Illič-Svityč 1971—1984.I:182—183, no. 17, **bongä* '(adj.) fat; (vb.) to swell'; Dolgopolsky to

2008, no. 217, **bungä* ‘(adj.) thick; (vb.) to swell’; Hakola 2000:148, no. 651; Takács 2004a:198, no. 126; Fortescue 1998:157.

77. Proto-Nostratic root **bun-* (~ **bon-*):

(vb.) **bun-* ‘to flow, to overflow’;

(n.) **bun-a* ‘flow, flood’

Derivative of:

(vb.) **bun-* ‘to puff up, to inflate, to expand, to swell’;

(n.) **bun-a* ‘rounded protuberance, swelling, lump, hump, growth’

A. Proto-Afrasian **b[u]n-* ‘to flow, to overflow’: Egyptian *bnn* ‘to overflow’, *bnnb* ‘to flow, to run’. Hannig 1995:254; Erman—Grapow 1926—1963.1:459 and 1:460; Faulkner 1962:82—83. Proto-Chadic **bəna* ‘to wash oneself, to bathe’ > Bole *bināa* ‘to wash oneself, to bathe’; Hausa *wànkàà* ‘to wash something, to wash off or away’; Tera *vənə* ‘to wash oneself, to bathe’; Paduko *para* ‘to wash oneself, to bathe’. Newman 1977: 33; Jungraithmayr—Ibriszimow 1994.I:174 and II:338—339.

B. Dravidian: Tamil *punal*, *puṇai* ‘water, flood, river’; Malayalam *punal*, *puṇal* ‘water, river’; Kannaḍa *ponal* ‘stream, river’. Burrow—Emeneau 1984:383, no. 4338. Gondi *pōṅānā* ‘to flow; to be washed away, to drown; (of a river) to overflow its banks’, *poṅānā* ‘to flow’, *pongānā* ‘to float away’, *pongsahtānā* ‘to cause to flow (water, blood, etc.)’, *poṅ-* ‘to flow (saliva); to flow, to drop (tears)’, *pōñ-* ‘(pus or blood) to come out of a wound’; Konda *poṅ-* ‘to be spilled’, *pok-* ‘to spill; to pour (water)’; Pengo *boṅ-* ‘to be spilled’, *bok-* ‘to spill’; Kui *ponga* (*pongi-*) ‘to be spilt, scattered’, *popka* (< **pok-p-*; *pokt-*) ‘to spill, to scatter’; Kuwi *bōkhali* ‘to spill’, *bokh’nai* ‘to shed, to spill’. Burrow—Emeneau 1984:396, no. 4470.

Buck 1949:9.36 wash.

78. Proto-Nostratic root **bur-* (~ **bor-*):

(vb.) **bur-* ‘to twist, to turn’;

(n.) **bur-a* ‘twist, turn’

Derivatives:

(vb.) **bur-* ‘to fight, to wrangle (over), to quarrel, to wrestle’;

(n.) **bur-a* ‘fight, dispute, quarrel, battle, struggle’

(vb.) **bur-* ‘to bore, to pierce’;

(n.) **bur-a* ‘gimlet, borer, auger’

A. Afrasian: Proto-Semitic **bar-am-* ‘to twist, to twine’ > Arabic *barama* ‘to twist, to twine (a rope)’, *barīm* ‘rope; string, cord, twine’. D. Cohen 1970—:85. Proto-Semitic **bar-aw/y-* ‘to tie, to bind’ > Akkadian *birītu*, *barītu*, *berittu*, *birtu*, *bertu* ‘link, clasp, fetter’; Hebrew *bərīṯ* [בְּרִית] ‘covenant, pact’. Murtonen 1989:120.

- B. Proto-Kartvelian **br-un-* ‘to spin, to rotate’: Georgian *br-un-va* ‘to spin, to rotate’, *bor-b-ali* ‘wheel, potter’s wheel’, *bru* ‘dizziness’, *tav-bru* ‘dizziness in the head’; Mingrelian *bur-in-* ‘to throw something with spinning; to whirl’. Klimov 1998:19 **brun-* ‘to spin, to whirl’; Fähnrich 1994:230 and 2007:72 **bor-*, 75—76 **br-*; Schmidt 1962:98; Fähnrich—Sardshweladse 1995:59 **bor-*, 60 **br-*. Proto-Kartvelian (reduplicated; dissimilated from earlier **bor-bora-*) **borbala-* ‘spider’: Georgian *borbala-* ‘spider’; Mingrelian *bo(r)bolia-* ‘spider’; Laz *bombula-* ‘spider’. Klimov 1964:53 **borbala-* and 1998:17 **borbal-* ‘spider’. Assuming semantic development from ‘to spin, to twist’ as in Old English *spīþra* ‘spider’ < **spinþron* < **spinnan* ‘to spin, to twist’.
- C. Uralic: Proto-Finno-Ugrian **purk3* ‘to twist, to turn’ > Mordvin (Erza) *puvrá-*, (Moksha) *puvrá-*, *puvoá-* ‘to turn (tr.), to wind, to turn around; to put out of joint, to dislocate’; Votyak / Udmurt *porjal-* ‘to turn around (intr.), to whirl around’; Hungarian *forog-* ~ *forg-* ‘to turn (intr.), to revolve; to whirl, to rotate; to circulate; to move (intr.)’, *fordul-* ‘to turn, to turn around (intr.)’, *fordit-* ‘to turn (tr.)’; Vogul / Mansi *poger-* ‘to roll (intr.), to trundle’. Collinder 1955:78 and 1977:95; Rédei 1986—1988:414 **pʁrk3-* (**pʁrʁ3-*); Décsy 1990:106 **purka/*pirkä* ‘to twist, to turn’. Yukaghir (Southern / Kolyma) *porqo-* ‘crooked’, *porqušej-* ‘to bend’, *porqəjə* ‘curved bank’, *porqušu-* ‘to bend’, *porqəjəñ-* ‘steep’. Nikolaeva 2006:362.
- D. Altaic: Proto-Turkic **bur(a)-* ‘to twist, to wind around’ > Turkish *bur-* ‘to twist, to wring; to castrate’, *burma* ‘act of twisting; castration; screw; convolution; griping of the stomach; screwed, twisted, castrated’, *buruk* ‘twisted, sprained’; Gagauz *bur-* ‘to twist, to wind around’; Azerbaijani *bur-* ‘to twist, to wind around’; Turkmenian *bur-* ‘to twist, to wind around’; Uzbek *bur-*, *bura-* ‘to twist, to wind around’; Uighur *bur-* ‘to twist, to wind around’; Karaim *bur-* ‘to twist, to wind around’; Tatar *bor-* ‘to twist, to wind around’; Bashkir *bor-* ‘to twist, to wind around’; Kirghiz *bur-*, *bura-* ‘to twist, to wind around’; Kazakh *bur-*, *bura-* ‘to twist, to wind around’; Noghay *bur-*, *bura-* ‘to twist, to wind around’; Chuvash *pʁʷr-* ‘to twist, to wind around’. Starostin—Dybo—Mudrak (2003:955—956) include the above forms under Proto-Altaic **mura* ‘round; to turn, to return’.

Buck 1949:10.12 turn (vb.); 10.14 wind, wrap (vb.). Bomhard—Kerns 1994:202, no. 7; Dolgopolsky 2008, no. 221, **bUrV* ‘to turn round, to rotate’.

79. Proto-Nostratic root **bur-* (~ **bor-*):
 (vb.) **bur-* ‘to fight, to wrangle (over), to quarrel, to wrestle’;
 (n.) **bur-a* ‘fight, dispute, quarrel, battle, struggle’

Derivative of:

(vb.) **bur-* ‘to twist, to turn’;

(n.) **bur-a* ‘twist, turn’

- A. Afrasian: Semitic: Arabic *barā* ‘to vie, to compete, to contend, to be rivals; to meet in contest, to try each other’s strength’; Sabaeen *brw* ‘to slaughter; to contend with, to attack’. D. Cohen 1970— :82.
- B. Dravidian: Tamil *poru* ‘to fight, to engage in battle, to compete, to dash against (as waves)’, *pōr* ‘battle, fight, war, rivalry’; Malayalam *porutuka* ‘to fight, to vie, to emulate’; Kannaḍa *pōr* ‘to fight, to wrestle, to strive’, *pōr* ‘quarrel, fight, battle, wrestling’; Tuḷu *pōriyuni* ‘to wrestle, to quarrel’, *pordu* ‘battle, combat’; Telugu *pōru* ‘to fight, to contend, to struggle, to rival, to compete’, *pōru* ‘fight, battle, war, quarrel, rivalry, teasing’; Kui *prohpa-* (*proht-*) ‘to rebuke, to upbraid, to reprove, to fight, to wage war’, *pōru* ‘quarrel, contention’. Burrow—Emeneau 1984:401, no. 4540; Krishnamurti 2003:8 **pōr* ‘fight, battle’ and 9 **pōr*/**por-u-* ‘to fight’.
- C. Proto-Kartvelian **brg-* ‘to wrestle’: Georgian *br3-* ‘to wrestle, to fight’, *br3-ola* ‘struggle, fight’; Mingrelian *burž-* ‘to wrestle, to grapple (roughly), to turn, to toss’, *burž-ap-i* ‘dispute, quarrel, fight, wrestling match’; Svan *libərgjēl* ‘to wrestle’. Fähnrich 1994:230 and 2007:79—80 **br3-*; Fähnrich—Sardshweladse 1995:64—65 **br3-*; Klimov 1964:53 **brg-* and 1998:18 **brg-* ‘to wrestle’; Schmidt 1962:73 (fn. 3) and 99. Proto-Kartvelian **burs-* ‘to fight, to wrangle’: Georgian *burs-* ‘to fight unfairly, to wrangle’; Mingrelian *burs-* ‘to barge into, to brawl, to be rowdy’, *mi-ša-burs-u-a* ‘to twist, to turn’. Fähnrich 2007:84 **burs-*; Fähnrich—Sardshweladse 1995:67—68 **burs-*.

Buck 1949:20.11 fight (vb.); 20.12 battle. Bomhard—Kerns 1994:197—198, no. 3.

80. Proto-Nostratic root **bur-* (~ **bor-*):

(vb.) **bur-* ‘to bore, to pierce’;

(n.) **bur-a* ‘gimlet, borer, auger’

Derivative of:

(vb.) **bur-* ‘to twist, to turn’;

(n.) **bur-a* ‘twist, turn’

- A. Proto-Afrasian **bur-* ‘to bore, to pierce’: Proto-Semitic **bar-a3-* ‘to bore, to pierce’ > Aramaic *bəraz* ‘to bore, to pierce’; Arabic *barzaḥ* ‘interval, gap, break’; Ḥaḍramawt *barzat-* ‘hole’. Proto-Semitic (reduplicated) **bar-bar-* ‘to bore, to pierce, to hollow out’ > Amharic *boräbborä* ‘to hollow out, to cut a groove’; Tigre *bärabära* ‘to pierce’. Proto-Semitic **bar-ar-* ‘to pierce, to penetrate’ > Geez / Ethiopic *barra* [ጸፈ], *barara* [ጸፈፈ] ‘to pierce, to penetrate, to go through’; Amharic *bärrärä* ‘to pierce, to make a

- hole in a water jug', *bärr* 'door, gate'; Tigrinya *bärr* 'passage, entrance'. D. Cohen 1970— :81, 83, and 87; Leslau 1987:107. Berber: Nefusa *bārsi* 'clump of earth'; Tamazight *brāc* 'to crush, to grind, to be crushed, to bruise', *abrāc* 'crushing, grinding'; Riff *abārsāssi* 'clump of earth'; Kabyle *ābrāc* 'to crush, to grind', *abrārāc* 'grain, lump'. Cushitic: Somali *burur* 'broken piece'; Saho *burūr* 'broken piece'.
- B. Dravidian: Tuḷu *burma*, *burmu* 'a gimlet', *perepini* 'to bore, to perforate', *perevuni* 'to be bored, perforated', *berpuri* 'a borer'; Tamil *purai* 'tubular hollow, tube, pipe, windpipe'. Burrow—Emeneau 1984:380, no. 4297.
- C. Proto-Indo-European **b^hor-/*b^hṛ-* 'to bore, to pierce': Greek *φάρω*, *φάρω* 'to plow', *φάρος* 'plow'; Armenian *brem* 'to dig out, to drill (out)'; Albanian *brimë* 'hole'; Latin *fōrō* 'to bore, to pierce'; Old Icelandic *bora* 'to bore, to bore holes in', *borr* 'borer, auger, gimlet'; Old English *borian* 'to bore, to pierce', *bor* 'auger, gimlet'; Middle Dutch *boren* 'to bore'; Old High German *borōn* 'to bore' (New High German *bohren*), *boro* 'auger' (New High German *Bohrer*); Russian *bort'* [борть] '(beehive in) hollow tree trunk, hollowed-out tree'. Rix 1998a:64—65 **b^herH-* 'to work with a sharp tool'; Pokorny 1959:133—135 **bher-* 'to work with a sharp tool'; Walde 1927—1932.II:159—161 **bher-*; Mann 1984—1987:110—111 **b^hṛāiō* (**bhur-*) 'to bore, to pierce', 126 **bhurō*, **bhurāiō* 'to incise, to bore'; Watkins 1985:7 **bher-* and 2000:10 **bher-* (also **bherā-*) 'to cut, to pierce, to bore'; Mallory—Adams 1997:549 **bher-* (pres. **bhórje/o-*) 'to strike (through), to split'; Gamkrelidze—Ivanov 1984.II:707 **b^h[^h]er-* and 1995.I:612 **b^her-* 'to work (for example, wood, land) with a sharp tool'; Frisk 1970—1973.II:392; Chantraine 1968—1980.II:1179 **bher-*; Boisacq 1950:1016—1017 **bher(e)-*; Beekes 2010:1554—1555 **b^herH-*; Hofmann 1966:392 **bher-*; Ernout—Meillet 1979:248—249 **bhorō*; Walde—Hofmann 1965—1972.I:481—482; De Vaan 2008:235—236 **b^horH-ie/o-* 'to pierce, to strike' (?); Orël 2003:62 Proto-Germanic **buraz*, 64 **burōjanan*, 64 **burōn*; De Vries 1977:49—50 and 51; Kroonen 2013:85 Proto-Germanic **burōjan-* 'to bore'; Onions 1966:108; Klein 1971:89 **bher-*; Kluge—Mitzka 1967:89; Kluge—Seebold 1989:96 **bher-*.
- D. Proto-Uralic **pura* 'borer, auger': Finnish *pura* 'borer, auger, (big) awl'; Vogul / Mansi *pore*, *porä* 'awl'; Ostyak / Xanty *pôr* 'borer, auger'; Hungarian *fúr-* 'to bore, to drill'; Yurak Samoyed / Nenets *parō* 'borer, auger'; Selkup Samoyed *pur* 'borer, auger'; Kamassian *părāj* 'borer, auger'. Collinder 1955:52 and 1977:70; Décsy 1990:106 **pura* 'to drill, to push; to squeeze (out)'; Rédei 1986—1988:405 **pura*; Sammallahti 1988:539 Proto-Uralic **purā* 'drill', Proto-Finno-Ugrian **pura*, Proto-Ugric **pūra*; Janhunen 1977b:114.
- E. Altaic: Mongolian *buryui-* 'a piece of wire used to clean a smoking pipe'. Turkish *bur-* 'to bore a hole', *burgu* 'auger, gimlet, corkscrew'; Tatar *borau* 'borer, auger'.

Sumerian *būr* ‘to bore through, to pierce’.

Buck 1949:9.46 bore. Bomhard—Kerns 1994:196—197, no. 2; Brunner 1969:27, no. 73; Illič-Svityč 1971—1984.I:186—187, no. 21, **bura* ‘to bore’; Möller 1911:33—34; Hakola 2000:149, no. 656; Dolgopolsky 2008, no. 251, **bōr[a]* ‘to pierce, to bore’.

81. Proto-Nostratic root **bur-* (~ **bor-*):

(vb.) **bur-* ‘to blow, to blow about, to whirl, to rage’;

(n.) **bur-a* ‘storm, whirl, rage’

- A. Proto-Afrasian **bur-* ‘to blow’: Proto-Southern Cushitic **bur-* ‘to blow (of wind)’ > Alagwa *bur-* ‘to fan’; K’wadza *bul-* ‘to blow’; Dahalo *bíri* ‘to fart’. Ehret 1980:140. Proto-Southern Cushitic **buru-* ‘dust, blowing dust’ (derivative of **bur-* ‘to blow’) > K’wadza *bulatiko* ‘high stratus overcast’; Asa *bu’urita* ‘cloud’; Ma’a *maburú* ‘dung (of sheep or goat)’; Dahalo *bíruna* ‘dust’. Ehret 1980:141. Proto-Chadic **bVr-* ‘to blow’ > Kwang *bō:ré* ‘to blow’; Kera *bò:rè* ‘to blow’. Jungraithmayr—Ibriszimow 1995.I:15 **b-r* ‘to blow’ and II:32—33.
- B. Dravidian: Kui *buru*, *burku* ‘fine rain’; Kuwi *būri būri rīnai*, *būri pīyu rīnai* ‘to mizzle, to drizzle’, *būri pīyu*, *buri buri pīyu* ‘drizzle’. Burrow—Emeneau 1984:379, no. 4288.
- C. Proto-Indo-European **b^hur-/b^hy-* ‘to move rapidly, to rage, to quiver, to palpitate’: Sanskrit *bhurāti* ‘to move rapidly, to stir, to palpitate, to quiver, to struggle (in swimming)’, *bhurváni-h* ‘restless, excited’; Greek *φῶρω* ‘to mix’; Latin *furō* ‘to rage’; Old Icelandic *byrr* ‘fair wind’; Old English *byre* ‘strong wind, storm’; East Frisian *bur* ‘wind’; Middle High German *burren* ‘to rush, to roar, to whirr’; Armenian *burn* ‘violence’; Old Church Slavic *burja* ‘storm’. Pokorny 1959:132—133 **bher-* ‘to well up’; Walde 1927—1932.II:157—159 **bher-*; Mann 1984—1987:126 **bhūr-* ‘wild, dashing; dash, passion’, 126 **bhūrō*, *-iō* (expressive variant **bhur-*) ‘to rush, to roar, to rage’; Mayrhofer 1956—1980.II:508—509 and 509—510; Boisacq 1950:1042; Frisk 1970—1973.II:1054—1055; Beekes 2010.II:1598—1599 (pre-Greek loanword); Chantraine 1968—1980.II:1235—1236; Hofmann 1966:406—407 **bhur-iō*; De Vaan 2008:252; Walde—Hofmann 1965—1972.I:570—572; Ernout—Meillet 1979:263; De Vries 1977:68.
- D. Proto-Uralic **purki* ‘snowstorm, drifting of snow’, **purka-* ‘to whirl, to fall, to drift (of snow)’: Finnish *purku*, *pyrky* ‘snowstorm, whirling, drifting of snow, snowdrift’; Lapp / Saami *bor’gá* ‘cloud, spray of snow’; Cheremis / Mari *purge-* ‘to fall, to whirl (of snow or dust)’, *purgōž* ‘snowstorm, drifting of snow’; Vogul / Mansi *paark*, *poarka* ‘snowstorm, drifting of snow, a place drifted over with snow’; Ostyak / Xanty *pörki* ‘drifting of snow’. Collinder 1955:52 and 1977:70; Sammallahti 1988:547 Proto-Finno-Ugrian **purki* ‘snow flurry’; Rédei 1986—1988:406—407 **purk3*;

Zhivlov 2023:123, 164, and 165 Proto-Uralic **purki* ‘snowstorm, snow-drift’, **purka-* ‘to be a snowstorm’.

- E. Proto-Altaic **böru* ‘dust, smoke; whirlwind’: Proto-Tungus **bure-ki* ‘dust, new-fallen snow’ > Evenki *burki* ‘new-fallen snow’; Lamut / Even *burku* ‘new-fallen snow’; Manchu *buraki* ‘dust’; Jurchen *bureŋ-ki* ‘dust’; Ulch *burexi* ‘dust’; Nanay / Gold *burexi* ‘dust’; Oroch *burexi* ‘dust’. Proto-Mongolian **bur-gi-*, **bür-gi-* ‘to rise (of dust, smoke)’ > Written Mongolian *burgi-(ra-)*, *bürgi-ni-* ‘to rise in clouds; to whirl (as dust, water, or smoke)’; Middle Mongolian *burqaliḡ* ‘whirlwind’; Khalkha *borgi-* ‘to rise (of dust, smoke)’; Buriat (Tsongol) *burya-*, *buryol-* ‘to rise (of dust, smoke)’; Kalmyk *bürgn-*, *bürgəñ-* ‘to rise (of dust, smoke)’; Ordos *burgila-*, *burgi-* ‘to rise (of dust, smoke)’. Proto-Turkic **bur-uk-* ‘(n.) dust, smoke, soot; (vb.) to blow (of a snowstorm); to curl (of smoke); to choke (in smoke); to produce smoke puffs’ > Turkmenian *burug-sa-* ‘to curl (of smoke)’; Uzbek *buruq-sa-* ‘to curl (of smoke)’; Uighur *burux-t-un bolmaq* ‘to choke (in smoke)’; Kirghiz *buruq-su-* ‘to curl (of smoke)’; Yakut *buruo* ‘smoke’; Dolgan *buruo* ‘smoke’. Poppe 1960:21, 79, and 102; Street 1974:9 **bur-* ‘to rotate rapidly’; Starostin—Dybo—Mudrak 2003: 375—376 **boru* ‘dust; smoke, whirlwind’.
- F. Proto-Eskimo **pirtur* ‘snowstorm’: Alutiiq Alaskan Yupik *piXtuq* ‘snowstorm’; Central Alaskan Yupik *piXtuk*, *piXta* ‘snowstorm’; Naukan Siberian Yupik *piXtuq* ‘snowstorm’; Central Siberian Yupik *piXtuq* ‘drifting snow’; Seward Peninsula Inuit (Imaq) *piqtuq* ‘snowstorm’; West Canadian Inuit *piqtuq* ‘drift snow’; East Canadian Inuit *piiqtuq* ‘snow flurry’; Greenlandic Inuit *pirtuq* ‘snowstorm’. Fortescue—Jacobsen—Kaplan 1994:264. Proto-Eskimo **pircir-* ‘to be a snowstorm’: Alutiiq Alaskan Yupik *piXciq-* ‘to be a snowstorm’; Central Alaskan Yupik *piXcir-* ‘to be a blizzard’; Naukan Siberian Yupik *piXsir-* ‘to be a blizzard’; Seward Peninsula Inuit *piqsiq-* ‘to be a snowstorm’; North Alaskan Inuit *piqsiq-* ‘to be a wet snowstorm’; Western Canadian Inuit *piqsiq-* ‘to drift (snow)’; Eastern Canadian Inuit *pirsi(q)-* ‘to drift (snow)’; Greenlandic Inuit *pirsir-* ‘to be a snowstorm’. Fortescue—Jacobsen—Kaplan 1994:264.

Buck 1949:10.26 shake (vb. tr.); 10.38 blow (vb. intr.); 16.43 rage, fury. Illič-Svityč 1971—1984.I:188—190, no. 23, **burA* ‘(sand) storm, snowstorm’; Bomhard—Kerns 1994:225—226, no. 31; Hakola 2000:141—142, no. 619; Dolgopolsky 2008, no. 252, **bu’u(-KU)* (or **bu’ü(-KU)*) ‘to spurt, to gush forth, to boil, to seethe’.

82. Proto-Nostratic root **bur-* (~ **bor-*):
 (vb.) **bur-* ‘to bite, to eat’;
 (n.) **bur-a* ‘food’

- A. Proto-Afrasian **bor-* ‘to bite, to eat’: Proto-Semitic **bar-ay-* ‘to eat’ > Hebrew *bārāh* [בָּרַח] ‘to eat (bread)’, *bārūθ* [בָּרוּת], *bārōθ* [בָּרוֹת] ‘food, nourishment’ (a hapax legomenon in the Bible). Klein 1987:83 and 84. Egyptian *br* ‘food, nourishment’, *brbr* ‘food, drink’, *brbs* ‘a kind of drink’. Erman—Grapow 1926—1963.1:465 and 1:466; Hannig 1995:256 and 257. East Chadic **HV-bwar-* ‘to eat’ > Tumak *bor* ‘to eat’. Orël—Stolbova 1995:77, no. 315, **bor-* ‘to eat’.
- B. Indo-European: Sanskrit *bhārvati* ‘to chew, to devour’; Avestan *baoirya-* ‘to chew’, *baourvō* ‘food’. Walde 1927—1932.II:164—165 **bher-* ‘to devour, to eat’; Mayrhofer 1956—1980.II:481—482.
- C. Uralic: Proto-Finno-Ugrian **pure-* ‘to bite, to eat’ > Finnish *pure-* ‘to bite’; Estonian *pure-* ‘to bite’; Lapp / Saami *borrâ-/borâ-* ‘to eat, to bite (of dog, etc.)’; Mordvin *pore-* ‘to chew, to gnaw, to corrode’; Cheremis / Mari *pōra-*, *pura-* ‘to bite, to chew’; Votyak / Udmurt *pur-* ‘to bite, to bite to pieces (of dogs)’; Zyrian / Komi *pur-* ‘to bite (of animals)’; Vogul / Mansi *pur-* ‘to bite’; Ostyak / Xanty *pōr-* ‘to bite’. Collinder 1955:109—110 and 1977:124; Décsy 1990:106 **pura* ‘to bite’; Rédei 1986—1988:405—406 **pure-* ‘to bite’; Sammallahti 1988:539 Proto-Uralic **pori-* ‘to bite’. See also Janhunen 1977b:127—128 Proto-Samoyed **por-* ‘to eat’.

Buck 1949:4.58 bite (vb.); 5.11 eat. Hakola 2000:150, no. 660.

83. Proto-Nostratic root **bur-* (~ **bor-*):

- (vb.) **bur-* ‘to cover, to wrap up’;
(n.) **bur-a* ‘cover, covering’

- A. Afrasian: Berber: Kabyle *sburr* ‘to cover, to wrap up’.
- B. Dravidian: Tamil *pōr* ‘to wear, to wrap oneself in, to cover, to envelope, to surround’, *pōrvai* ‘covering, wrapping, upper garment, cloak, rug’; Malayalam *pōrkkuka* ‘to wrap, to cloak’; Telugu *pōruva* ‘cloth’; Kōḍagu *poraḍ-* (*poraḍuv-*, *poraḍ-*) ‘to dress (well)’; Kolami *porkip-* ‘to cover, to close’; Naikri *porkip-* ‘to cover, to close’; Gadba *porege* ‘loincloth’; Gondi *poriyā* ‘loincloth’; Kōṇḍa *porpa-* ‘to cover the body with a garment, to put on an upper garment’; Pengo *por-* ‘to put on an upper garment, to wear round the shoulders’; Māṇḍa *pur-* ‘to put on an upper garment’; Kui *porpa* (*port-*) ‘to wrap around the body, to put on an upper cloth’; Kuwi *por-* ‘to wrap around myself, to wear (cloak)’, *porbi ki-* ‘to cover another’, *porvu* ‘a cover’. Burrow—Emeneau 1984:406, no. 4590.
- C. Proto-Kartvelian **bur-* ‘to muffle up, to wrap up, to darken’: Georgian *bur-* in *da-bur-va* ‘to muffle up, to darken’; Mingrelian *bur-* in *burua-* ‘to patch, to mend’; Laz *bur-* in *o-bur-u* ‘to patch, to mend’; Svan *bur-* ‘to darken’, *buri* ‘dark’ in *rəhijburi* (idiomatic) ‘life’ (that is, ‘light and dark’: *rəhi* ‘clear [light]’), *bi-bwr-e* ‘to darken something, to get dark’, *libwrāl* ‘to become dark’, *mubwir* ‘dark; darkness’ (semantics as in Latin *obscurus*

‘dark’, originally ‘covered’). Fährnich—Sardshweladse 1995:67 **bur-*; Klimov 1964:55 **bur-* and 1998:20 **bur-* ‘to muffle up, to wrap up, to darken’; Fährnich 1994:230 and 2007:82 **bur-*.

- D. Proto-Indo-European **b^hur-* ‘(vb.) to cover; (n.) covering’: Latin *furfur* (< **b^hur-b^hur-*) ‘the husks of grain, bran; a scaly infection of the skin’, that is, ‘the external covering of certain fruits or seeds of plants’. Perhaps also **b^hur-* in Hittite *ḫa-pu-ri-in* (acc. sg.) ‘prepuce, foreskin’, that is, /ḫa-bur-/ ‘the skin covering the head of the penis’.
- E. Proto-Altaic **būri-* (~ -*jū-*, -*e*) ‘(vb.) to cover; (n.) shade’: Proto-Tungus **bū-* ‘to shade (light)’ > Evenki *bū-* ‘to shade (light)’. Perhaps also Evenki *boro* ‘dusk’; Manchu *boro* ‘hat (made of straw)’. Proto-Mongolian **bürü-* ‘(vb.) to cover; (n.) dusk, darkening’ > Written Mongolian *bürüy*, *bürüg* ‘dark, darkness’; Khalkha *büre-* ‘to cover’, *bürül*, *bürüy* ‘dusk, darkening’; Buriat *būri-* ‘to cover’, *bürül*, *bürür* ‘dusk, darkening’; Kalmyk *būr-* ‘to cover’, *bürü* ‘dusk, darkening’; Ordos *būri-* ‘to cover’; Dagur *burī*, *burgiēn* ‘dusk, darkening’; Monguor *burə-*, *burī-* ‘to cover’. Poppe 1955:50—51. Proto-Turkic **bürü-*, **būr-ke-* ‘to cover up’ > Karakhanide Turkic *bürün-* ‘to be covered’, *bürkek* ‘cloudy’, *bürkür-* ‘to become cloudy’; Turkish *bürü-* ‘to wrap, to enfold, to cover up’, *bürülü* ‘wrapped up, enfolded’, *bürüm* ‘a wrapping up, folding; fold’; Gagauz *bürü-* ‘to cover up’; Azerbaijani *bürü-* ‘to cover up’; Turkmenian *büre-* ‘to cover up’; Uzbek *burka-* ‘to cover up’; Uighur *pū(r)kā-* ‘to cover up’; Tatar *börke-* ‘to cover up’; Bashkir *börkä-n-* ‘to be covered’; Kirghiz *bürkō-* ‘to cover up’; Kazakh *bürke-* ‘to cover up’; Noghay *bürke-* ‘to cover up’; Tuva *bürge-* ‘to cover up (also of clouds)’; Chuvash *pəwrke-* ‘to cover up’; Yakut *bürüy-*, *bürküy-* ‘to become cloudy’; Dolgan *bürüy-* ‘to become cloudy’, *bürkük* ‘cloudy’. Poppe 1960:111 and 135; Street 1974:10 **būr-* ‘to cover, to enclose’; Starostin—Dybo—Mudrak 2003:374 **börk’i* ‘to cover; cover’ and 385—386 **būri* (~ -*jū-*, -*e*) ‘to cover; shade’.

Sumerian *bur* ‘to spread (out), to cover over (with a garment)’.

Buck 1949:1.62 darkness; 12.25 shut, close (vb.); 12.26 cover (vb.). Illič-Svityč 1971—1984.I:191—192, no. 26, **būri* ‘to cover’; Dolgopolsky 2008, no. 239, **būryi* ‘to cover’; Bomhard—Kerns 1994:225, no. 30.

84. Proto-Nostratic (n.) **bur-a* ‘(fine, soft) feathers, fur, wool, (body) hair’:

- A. Afrasian: Egyptian *br* in *br n sd* ‘tuft of hair on [the end of] the tail’ (*sd* = ‘tail’). Hannig 1995:256.
- B. Dravidian: Malayalam *pūṭa* ‘down of birds, wool, fine hair’; Kota *kam bu-* (*kam-* < *kaṇ* ‘eye’) ‘eyebrow’; Tuḷu *puḷle* ‘plume, feather’; Kolami *bu-r* ‘eyelash, eyebrow’, *būr* ‘fur’; Naiki *būr* ‘down, fine feathers’; Parji (pl.) *būdūl* ‘hair, fine feathers, down’; Gadba (pl.) *burgul* ‘eyebrows’; Gondi

būrā, *bura* ‘down’, *burā* ‘feather’, *būiyā* ‘down’, *buiyā* ‘hair, feathers’; Konḡa *bulus* ‘pubic hair, feathers, hair (on legs and chest)’, *burus* ‘feathers, down’; Pengo *būra* ‘small feathers, down, wool, pubic hair’; Maṇḡa *būriṇ* ‘pubic hair’; Kui *būri*, *būru* ‘hair, fur, feather, wool’, *pṛuma* ‘feather’; Kuwi *kanu būru* ‘eyebrow’, (pl.) *būrka* ‘down’; Malto *purgu* ‘hair on the body’; Brahui *puṭ* ‘hair’. Burrow—Emeneau 1984:385, no. 4358. Dolgopolsky (2008, no. 231) has identified three distinct Proto-Dravidian roots that have been lumped together by Burrow—Emeneau in this etymology: (1) **pūt-* ‘down, fine hair’; (2) **pūr-* ‘hair, fur, feathers’; and (3) **pur/rV-* ‘eyelash, eyebrow’. In accordance with Dolgopolsky’s views, the forms for ‘eyelash, eyebrow’ are to be removed from this etymology and compared instead with Proto-Indo-European **b^hr-uH-* ‘eyelash, eyebrow’ (see below).

- C. Kartvelian: Proto-Georgian-Zan **burdga-* ‘down, plumage’ > Georgian *burdya-* ‘down, plumage’; Mingrelian *burdya-* ‘down; shaggy’; Laz *bundyā-* ‘down, plumage’. Klimov 1964:55 **burdya-* and 1998:20—21 **burdya-* ‘down, plumage’; Fähnrich 2007:84 **burdy-*. Proto-Georgian-Zan **burt’q’l-* ‘down and plumage’ > Georgian *burt’q’l-* ‘down and plumage’; Mingrelian *but’q’u-* ‘soft’. Svan *bint’q’-il-* ‘down’ appears to be a loan. Klimov 1964:55 **burtq̄l-* and 1998:21 **burtq̄l-* ‘down and plumage’; Fähnrich—Sardshweladse 1995:68 **burtq̄l-*; Fähnrich 2007:85 **burtq̄l-*.

Buck 1949:4.14 hair; 4.393 feather; 6.22 wool; 6.28 fur. Dolgopolsky 2008, no. 231, **bū|ur[ʔ]V* ‘lock of hair, down’.

85. Proto-Nostratic (n.) **bur-a* ‘wing, pinion, feather(s)’:

Comments:

1. There was probably a corresponding Proto-Nostratic verb form **bur-* ‘to fly’, which is attested in Ethiopic Semitic, Highland East Cushitic, and Central Chadic within Afrasian (cf. Militarev—Kogan 2000.I:3—4, no. 1).
 2. This is similar to the preceding etymology, and the two may ultimately be related. Indeed, the Kartvelian evidence can be grouped with either one.
- A. Proto-Afrasian (n.) **bur-* ‘wing, pinion, feather(s)’: Proto-Semitic **ʔa-br-* / **ʔi-br-* ‘wing, pinion’ > Akkadian *abru* ‘wing (of bird), fin (of fish)’; Ugaritic *ibr* ‘wing’; Hebrew *ʔeḇrāh* [עֶבְרָחַ] ‘pinion’; Palmyrene *ʔbr* ‘wing’; Syriac *ʔebrā* ‘wing’; Mandaic *ʔbra* ‘wing, pinion’. Militarev—Kogan 2000.I:3—4, no. 1, Proto-Semitic **ʔa/ibr-* ‘pinion, wing’, Proto-Afrasian **ʔabVr-* ‘wing’ — they note: “What looks like a Sem.-Beja **ʔabVr-* is probably a deverbal noun (cf. [Bla. Beḡ. 2]) with prefixed **ʔa-* from **b(i)rr* ‘to fly’”; Klein 1987:4; D. Cohen 1970— :5 **ʔbr*; Murtonen 1989:81. Proto-Semitic (Ethiopic) **barr-* ‘to fly’ > Ethiopic / Geez *barra*

[ḥ] ‘to fly, to run fast’; Tigrinya *bārārä* ‘to fly’; Tigre *bārā* ‘to fly’; Amharic *bārrärä*, *bərr alä* ‘to fly’; Argobba *bərr ala* ‘to fly’; Harari *bārāra* ‘to fly’; Gurage *bārārä*, *bārrärä* ‘to fly’. Leslau 1987:107. Note: Regarding the Ethiopic Semitic forms, Militarëv—Kogan (2000.I:3—4, no. 1) observe: “Borrowing from C. Cushitic cannot be ruled out.” Cushitic: North Cushitic: Beja / Beḍawye *anbir*, *ambir* ‘wing, feather, chest’, *anbuur*, *anbuur*, *ambuud* ‘wing’. Blažek 2020:27. Highland East Cushitic: Burji *burr-* ‘to fly’; Kambata *burri y-* ‘to fly’. Hudson 1989:66 Proto-Highland East Cushitic **barar-* ‘to fly’?; Sasse 1982:44 — Sasse notes: “PEC **-brir-* (pref. conj.) ‘fly’ is attested in Sa. *-brir-* (pref. conj.). Other languages have only suffix conjugation forms with different vocalizations, probably reflections of deverbal nouns: Or. *barar-*, caus. *barr-is-*, Had. *barar-*.” Central Chadic: Musgum *bara* ‘to fly, to jump’; Kwang *bre* ‘to fly’.

- B. Dravidian: Telegu *puri* ‘peacock’s tail’; Kolami *pūrage* ‘peacock’s tail’; Parji *pūril* (pl.) ‘peacock’s tail feathers’; Gondi *pūri* ‘peacock’s tail’; Konda *puri* ‘feather of a peacock’. Burrow—Emeneau 1984:386, no. 4367.

Buck 1949:4.392 wing; 4.393 feather — Buck notes: “The majority of the words for ‘feather’ are cognate with words for ‘wing’...” Different (false) etymology in Dolgopolsky 2008, no. 242, **bur[u]dV[g]V* (~ **bar[u]dV[g]V*?) ‘facial hair, animal’s body hair, down’.

86. Proto-Nostratic (n.) **bur-a* ‘eyelash, eyebrow’:

- A. Dravidian: Kota *kam bu-* (*kam-* < *kaṇ* ‘eye’) ‘eyebrow’; Kolami *bu-r* ‘eyelash, eyebrow’; Gadba (pl.) *burgul* ‘eyebrows’; Kuwi *kanu būru* ‘eyebrow’. Burrow—Emeneau 1984:385, no. 4358 (see above for the complete entry from Burrow—Emeneau).
- B. Proto-Indo-European **bʰr-uH-* (> **bʰrū-*) ‘eyelash, eyebrow’: Sanskrit *bhrū-* ‘an eyebrow, the brow’; Pāli *bhamu-*, *bhamuka-*, *bhamukha-* (< **bhramu-* < **bhrūmu-* [cf. Gray 1902:29, §57] ‘eyebrow’; Khowār *brū* ‘eyebrow’; Avestan (f. dual) *brvat-* ‘eyebrows’; Greek ὀφρύς ‘the brow, eyebrow’; Middle Irish (gen. dual) *brúad* ‘eyebrow’; Old Icelandic *brún* (< **bʰruwōn-*) (pl. *brynn*) ‘eyebrow’; Faroese *brún* ‘eyebrow’; Norwegian *brūn* ‘eyebrow’; Swedish (properly a plural form) *bryn* ‘eyebrow’; Danish (properly a plural form) *bryn* ‘eyebrow’; Old English *brū* ‘eyebrow; eyelid, eyelash’ (Modern English *brow*); Lithuanian *bruvis* ‘eyebrow’; Old Church Slavonic *brъvъ* ‘eyebrow’; Serbo-Croatian *öbrva* ‘eyebrow’; Polish *brwi* ‘eyebrow’; Russian *brov* [бровь] ‘eyebrow’; Tocharian A *pärwān-*, B (dual) *pärwāne* ‘eyebrows’. Pokorny 1959:172—173 **bhrū-* ‘eyebrow’; Walde 1927—1932.II:206—207 **bhrū-* ‘eyebrow’; Mann 1984—1987:108 **bhrūn-* (**bhreun-*, **bhrun-*) ‘edge, top, crest, brow’ and 108—109 **bhrūs* ‘brow’; Gamkrelidze—Ivanov 1984.II:786, fn. 1, **bʰ[ʰ]ruH-*,

II:812 **b^[h]ruH-* and 1995.I:688, fn. 11, **b^hruH-* ‘eyebrow(s)’, I:712 **b^hruH-*; Watkins 1985:9 **bhrū-* (contracted from **bhru₂-*) and 2000:13 **bhrū-* (contracted from **bhru₂-*) ‘eyebrow’; Mallory—Adams 1997:188 **bhrúh_s* ‘eyebrow’ and 2006:41, 175 **bhrúh_s* ‘eyebrow’; Mayrhofer 1956—1980.II:534—536; Boisacq 1950:733—734 **obhrū-* (**obhrēu-*) : **bhrū-*, **bhrēuā* in Old Icelandic *brá* ‘eyelash’ (see below); Frisk 1970—1973.II:454—455 *bhrú_s*; Chantraine 1968—1980.II:842—843; Hofmann 1966:246 **bhr-ēus*, **bhrū-es* (**bhruyés*); Beekes 2010.II:1135—1136; Orël 2003:60 Proto-Germanic **brūwō*; De Vries 1977:60; Falk—Torp 1903—1906.1:80; Barnhart 1995:88; Onions 1966:121 **bhrūs*; Klein 1971:97; Adams 1999:374 **b^hruh_x-*; Van Windekens 1976—1982.I:366—367 **bhruy(ā)-* < **bhrū-*, **bhruy-*; Derksen 2008:66 **h₃bhruH-s*; Wodtko—Irslinger—Schneider 2008:41—45 **b^hruH-*; Winter 1965b:192 **bhrwX-*; Brugmann 1904:150 **bhrū-s* (for **bhrēu-s*) ‘eyebrows’. The following Germanic forms may belong here as well: Old Icelandic *brá* ‘eyelash’; Faroese *brá* ‘eyelash’; Norwegian (dial.) *braa* ‘eyelash’; Old Swedish *brā* ‘eyelash’; Old Danish *brå* ‘eyelash’; Old English *bræw*, *brēaw* ‘eyelid’ (Middle English *brēu* ‘eyelid, eyebrow; bank, river-side’, Modern English [dial.] *brae* ‘steep bank’); Old Frisian *brē* ‘eyebrow’; Old Saxon *brāha*, *brāwa* ‘eyebrow’, *slegi-brāwa* ‘eyelid’; Dutch *brauw* in *wenkbrauw* ‘eyebrow’; Old High German *brāwa* ‘eyebrow’ (New High German *Braue*), *wint-prāwa* ‘eyelash’. Orël 2003:57 Proto-Germanic **brēxwō* ~ **braxwan*; Kroonen 2013:76 Proto-Germanic **brēwō-* ‘eyebrow’; De Vries 1977:51—52; Onions 1966:113; Klein 1971:92; Boutkan—Siebinga 2005:59; Kluge—Mitzka 1967:96; Kluge—Seebold 1989:103. Opinions differ on the origin of the above forms. Some scholars consider them to be derived from the full-grade variant of the Proto-Indo-European stem underlying **b^hr-uH-* ‘eyelash, eyebrow’ through laryngeal metathesis, **b^hr-ewH-* > **b^hr-eHw-* (cf. Lehmann 1952:47—48, §5.3a, **bhreXw-*; Polomé 1965:39, fn. 171, Old English *bræw* < **bhreHw-*, Tocharian *pärwā-* < **bhrwH-*), while others compare them with Gothic **brahv* (< **brah+wa-* [cf. Orël 2003:57; Feist 1939:103; Lehmann 1986:78]) ‘glance’, found only in the phrase *in brahva augins* ‘in the twinkling of an eye’ (translates Greek ἐν ῥιπῇ ὀφθαλμοῦ), and derive the lot from Proto-Indo-European **b^hr-eE-k^h-* ‘to shine, to gleam, to glitter’ (cf. Pokorny 1959:141—142 **bherək-*, **bhrēk-* ‘to shine, to gleam, to glitter’; Walde 1927—1932.II:169 **bherek-*; Feist 1939:103—104 Proto-Germanic base forms **brēhwō*, **brēgwō*, **brēhwī*, root **brēh-* ‘to light up, to sparkle’; Lehmann 1986:78—79 **bhrēk-* ‘to gleam’; Kluge—Mitzka 1967:96 **bherek-* ‘to shine, to gleam, to glitter’ [but not Kluge—Seebold 1989:103]). According to De Vries (1977:51—52), however, two different stems are involved here: (1) Old Icelandic *brá* ‘eyelash’, related to Sanskrit *bhrū_h-* ‘an eyebrow, the brow’, Old Icelandic *brún* ‘eyebrow’, Old English *brū* ‘eyebrow; eyelid, eyelash’, etc. (see above), and (2) Old Icelandic *brá*

‘beam (of light)’, as in, for example, *brá-máni* ‘moonbeam’, *brá-sól* ‘sunbeam’, related to Gothic **brahv*, both of which are, in turn, derived from the same stem found in Old Icelandic *brjá* ‘to sparkle, to glitter, to gleam’, Middle High German *brehen* ‘to light up, to sparkle’, etc. (< Proto-Germanic **breḡan* [cf. Orël 2003:55; De Vries 1977:57]).

Buck 1949:4.206 eyebrow. Dolgopolsky 2008, no. 237, **bûrûHV* ‘eyebrow, eyelash’.

87. Proto-Nostratic (n.) **bur^y-a* used as the base for several insect names, perhaps originally ‘buzzing insect’ (if this be the case, the following underlying verb form may be implied here: Proto-Nostratic **bur^y-* ‘to make a buzzing sound’):
- A. Proto-Afrasian **bur-* ‘insect (generic term)’: Proto-Semitic **bur-* ‘a kind of insect’ > Akkadian *burta*, *burti* in *burta šamḫat*, *burti šamḫat* (also *burdi šamḫat*, *bur-di šá-ḫi*) ‘caterpillar’; Gurage (Muher) *burä*, (Chaha, Gyeto) *burä*, (Ennemor) *būra*, (Eža) *b^wəra* ‘insect that eats the root of the *āsāt*’. North Omotic: Benesho *bur* ‘fly of the biting type’. Militarëv—Kogan 2005.II:88—89, no. 62, **bur-* ‘a kind of insect’ — Militarëv—Kogan also list potential Berber, Chadic, and Cushitic cognates, but they note: “Afrasian insect names with the biconsonantal element **bVr-* exhibit a wide semantic variety (‘locust’, ‘kind of flying insect’, ‘ant, termite’), probably implying a reconstruction of more than one protoform.” I concur — see the comment below.
 - B. Proto-Dravidian **puṛ-u-* ‘insect (generic term), worm’: Tamil *puṛu* ‘worm, maggot’; Malayalam *puṛu* ‘worm, caterpillar, maggot, grub, moth, mite’; Kannada *puṛu*, *puṛa* ‘worm, insect (in general), snake’; Kota *pu-* ‘worm, maggot’; Koḍagu *puḷu* ‘worm’; Tuḷu *puri* ‘worm, mite, moth, skin parasite’; Telugu *pur(u)gu*, *pur(u)vu*, *pruvu* ‘worm, any insect or reptile, snake’; Kolami *purre* ‘worm’; Naiki *purre* ‘worm’; Naikṛi (of Chanda) *pur(r)e* ‘worm, insect’; Parji *puṛut* ‘worm’; Gadba *puḍut* ‘insect’; Gondi *puṛī*, *puṛi* ‘worm, insect’; Pengo *prī* ‘worm, insect’; Kui *pṛiu*, *pṛīu* ‘wingless insect, worm, maggot’; Kuwi *prīyūli* ‘caterpillar’. Burrow—Emeneau 1984:381, no. 4312; Krishnamurti 2003:12 **puṛ-u-* ‘insect’ and 110 **puṛ-u* ‘worm’.
 - C. (?) Indo-European: Proto-Germanic **br-em-* ‘buzzing insect’ > Old High German *brema* ‘horsefly, gadfly’ (New High German *Bremse*); Old Saxon *brimissa* ‘gadfly’; Middle Dutch *breemse*, *bremse* ‘gadfly, locust, beetle’; Old English *brimse* ‘gadfly’; Middle English *brēse*, *brimse* ‘gadfly, locust’. Note: Alternatively, these forms may be derived from Proto-Indo-European **b^herm-/b^horm-/b^hṛm-*, **b^hrem-/b^hrom-/b^hṛm-* ‘to buzz, to hum, to make a sound’ instead (see above, Proto-Nostratic **bar-* (~ **bār-*: (vb.) **bar-* ‘to make a sound, to utter a noise’; (n.) **bar-a* ‘sound, noise’).
 - D. Altaic: Written Mongolian *buryuusu(n)* ‘mosquito, gnat’.

Buck 1949:3.81 insect; 3.84 worm.

Comment: Most likely, several Nostratic proto-forms are involved here. These forms have been confused in Indo-European and Afrasian. Consequently, it is difficult to sort out which forms in the daughter languages go back to which Proto-Nostratic roots.

88. Proto-Nostratic root **buw-* (~ **bow-*):

(vb.) **buw-* ‘to go, to come, to proceed, to spend time’;

(n.) **buw-a* ‘going, coming, staying; abode, dwelling, residence’

A. Proto-Afrasian **buw-* ‘to come, to go (in), to enter’: Proto-Semitic **baw-aʔ-* ‘to enter, to go in, to abide, to dwell’ > Hebrew *bōʔ* [בּוֹא] ‘to come in, to come, to go in, to enter’; Arabic *bāʔa* ‘to come again, to return, to come back; to take a place, to settle down, to live or stay at a place, to reside’, *mabāʔa* ‘abode, dwelling, habitation’; Old Akkadian *buāʔum* ‘to come’; Amorite *bwʔ* ‘to come’; Ugaritic *bā* ‘to come, to enter’; Sabaeen *bwʔ* ‘to enter’; Geez / Ethiopic *bōʔa* [ቦአ] ‘to enter, to penetrate, to proceed, to penetrate, to be involved, to intermingle, to have intercourse’; Tigrinya *bōʔa* ‘to enter’; Tigre *bōʔa* ‘to enter’; Harari *bōʔa* ‘to enter, to go in’. D. Cohen 1970— :50; Murtonen 1989:107—108; Klein 1987:65; Leslau 1987:114—115; Militarev 2010:60; Zammit 2002:103. Cushitic: Beja / Beɣawye *biʔ-* ‘to return home, to rest’. Reinisch 1895:38. North Bauchi Chadic **buw-* ‘to come’ > Jimbinanci *boo-* ‘to come’; Warjanci *buw-* ‘to come’; Miyanci *bəə-/bu-* ‘to come’; Mburkanci *buu-* ‘to come’; Kariyanci *bə-/buu-* ‘to come’. Skinner 1977:16. Different etymology in Orël—Stolbova 1995:39—40, no. 157, **baʔ-/baw-/bay-* ‘to walk, to go’.

B. Dravidian: Tamil *pō* (*pōv-/pōkuv-/pōtuv-*, *pōṇ-/pōyin-*; neg. *pōk-*) ‘to go, to proceed, to go away, to reach a destination, to be admissible, to become long, to extend, to spread, to exceed, to be tall, to become expert in, to undergo, to cease, to abandon, to go by, to lapse, to disappear, to be lost, to die’, *pōkai* ‘departure’, *pōvi* ‘to cause to go, to lead’, *pōkku* (*pōkki-*) ‘to cause to go, to send, to complete, to perform, to pass or spend (as time), to ruin, to kill’; Malayalam *pōka* ‘to go, to go away, to go towards, to be lost, to be able’, *pōkkuka* ‘to make to go, to remove’; Kota *po-k-* (*po-ky-*) ‘to spend (time)’; Kannaḍa *pō*, *pōgu*, *pōguha* ‘going, departing, proceeding’, *pōgu*, *hōgu*, *ōgu* ‘to go, to go away, to pass away, to be spent’; Tulu *pōpini* ‘to go, to go away, to be lost, to disappear, to depart, to start, to pass (of time)’; Telugu *pōvu* (stems *pō-*, *pōy-*) ‘to go, to proceed, to pass, to be over, to be lost, to disappear, to be ruined, to die, to begin’, *pōka* ‘going, movement, departure, conduct, behavior’; Konḍa *pōk-* ‘to spend’; Pengo *pōk-* ‘to spend’. Krishnamurti 2003:103 **pō-* ‘to go’; Burrow—Emeneau 1984:404—405, no. 4572.

- C. Proto-Indo-European **b^hewH-/b^howH-/b^huH-* (> **b^hū-*) ‘to spend (time), to abide, to dwell’: Sanskrit *bhávati* ‘to become, to be, to exist, to live, to stay, to abide’; Albanian *buj* ‘to spend the night’; Gothic *bauan* ‘to dwell, to inhabit’; Old Icelandic *búa* ‘to prepare, to make ready; to dress, to attire, to adorn; to fix one’s abode in a place; to deal with, to treat; to live, to dwell; to have a household; to be; to behave, to conduct oneself’, *bú* ‘household, farming’, *ból* ‘lair’; Swedish *bo* ‘to dwell’; Danish *bo* ‘to dwell’; Norwegian *bua*, *bu* ‘to dwell’; Old English *būan* ‘to dwell, to inhabit, to occupy (house)’, *bū* ‘dwelling’, *būnes* ‘dwelling’, *būr* ‘bower, apartment, chamber; storehouse, cottage, dwelling’, *bōgian* ‘to dwell, to take up one’s abode’; Old Frisian *bowa*, *būwa* ‘to dwell’, *bōgia* ‘to dwell’; Old Saxon *būan* ‘to dwell’; Dutch *bouwen* ‘to dwell’; Old High German *būan*, *būwan*, *būen*, *būwen* ‘to dwell’ (New High German *bauen*). Pokorny 1959:146—150 **bheu-*, **bheuā-* (**bhūā-*, **bhūē-*): **bhōu-*: **bhū-* ‘to grow, to prosper’; Walde 1927—1932.II:140—144 **bheu-*; Mann 1984—1987:97 **bhōuān-* ‘dwelling’; Watkins 1985:8 **bheuā-* (also **bheu-*) and 2000:11—12 **bheuā-* (also **bheu-*) ‘to be, to exist, to grow’; Mayrhofer 1956—1980.II:485—487; Orël 1998:39 and 2003:52—53 Proto-Germanic **bōw(w)anan*, 53 **bōwwiz*, 53 **bōwwjanan*, 65 **būwan*, 65 **būwiz*, 65 **būwōn*; Kroonen 2013:84 Proto-Germanic **būra-* ‘cabin, hut’ and 86 Proto-Germanic **buwwēn-* ‘to dwell; to form, to build’; Feist 1939:83—84 **bhō(u)-*, **bhū-*; Lehmann 1986:63—64; Boutkan—Siebinga 2005:66; De Vries 1977:63 **bheu-*; Torp 1919:47; Falk—Torp 1903—1906.1:65 **bheuā-*; Kluge—Mitzka 1967:57 **bhū-*; Kluge—Seebold 1989:64—65 **bhewā-*.

- D. Altaic: Manchu *boo* (< Khitan **buang*) ‘house, room; family’.

Sumerian *BU* ‘to reach or arrive at a destination; to come upon, to meet, to encounter’.

Buck 1949:7.11 dwell. Bomhard—Kerns 1994:202—203, no. 8; Dolgopolsky 2008, no. 163, **boʔV* ‘to go’; Möller 1911:37.

89. Proto-Nostratic root **buw-* (~ **bow-*):

(vb.) **buw-* ‘to become, to arise, to come into being, to grow’;

(n.) **buw-a* ‘growth, fullness, prosperity; blossom, bloom’

- A. Proto-Afrasian **buw-* ‘to become large, to grow, to arise’: Egyptian *bwʕ* ‘to be high’. Hannig 1995:251; Erman—Grapow 1921:48 and 1926—1963.1:454. Cushitic: Proto-Sam **buuḥ-* ‘to be full’ > Rendille *buḥ* ‘to be full’; Somali *buḥ*, *buuḥ-so* ‘to be full’. Proto-Sam **buuḥ-i*, **buuḥ-ica* ‘to fill’ > Rendille *buhi* ‘to fill’; Somali *buuhi* ‘to fill’; Boni *buuhi*, *buhhia* ‘to fill’. Proto-Sam **buur* ‘big (of things)’ > Rendille *buur* ‘big (of things)’; Somali *buur-an* ‘stout’. Heine 1978:54 and 55.

- B. Elamo-Dravidian: Royal Achaemenid Elamite (reduplicated) *pu-pu-ma* (?) ‘the act of filling’, *pu-pu-man-ra* ‘one who (continuously) fills’, *pu-* ‘to be full’. Dravidian: Tamil *pū* ‘to blossom, to flower, to bloom, to flourish, to menstruate, to produce (as flower), to create, to give birth to’; Malayalam *pū*, *pūvu* ‘flower, blossom, comb of cock, menses’, *pūkka* ‘to blossom, to bud, to expand, to menstruate’; Kannada *pū* (*pūt-*) ‘to flower, to blossom, to bloom’, *pūvu* ‘flower’; Telugu *pū* ‘flower, blossom’, *pūvu*, *puvva* ‘flower, blossom’, *pūcu* ‘to flower, to blossom, to bloom’; Kolami *puv* ‘flower’; Gadba (Ollari) *pūp-* (*pūt-*) ‘to flower, to blossom’; Konda *puvu* ‘flower, blossom; cataract of eye’, *pū-* ‘to flower, to blossom’. Burrow—Emeneau 1984:384, no. 4345; Krishnamurti 2003:277 **pū* ‘flower’.
- C. Proto-Indo-European **b^hewH-*/**b^howH-*/**b^huH-* (> **b^hū-*) ‘to become, to arise, to come into being, to grow’: Sanskrit *bhāvati* ‘to become, to be, to arise, to come into being, to exist’, *bhūtá-h* ‘become, been, gone, past’, *bhūti-h*, *bhūti-h* ‘well-being, prosperity, wealth, fortune’; Greek φύω ‘to bring forth, to produce, to put forth; to grow, to increase, to spring up, to arise’; Latin (perfect) *fuī* ‘to be, to exist’, *fīō* ‘to be made, to come into existence’; Old Irish *buith* ‘being’; Old English *bēon* ‘to be, to exist, to become, to happen’; Old Frisian (1st sg. pres.) *bim* ‘(I) am’; Old Saxon (1st sg. pres.) *bium*, *biom* ‘(I) am’; Old High German (1st sg. pres.) *bim* ‘(I) am’ (New High German *bin*); Lithuanian *būti* ‘to be, to exist’, *būvis* ‘existence’; Old Church Slavonic *byti* ‘to be’. Rix 1998a:83—85 **b^hueh₁-* ‘to grow, to prosper’; Pokorny 1959:146—150 **bheu-*, **bheuə-* (**bheuā-*, **bheuē-*): **bhōu-*: **bhū-* ‘to grow, to prosper’; Walde 1927—1932.II:140—144 **bheu-*; Mann 1984—1987:76 **bheuō* ‘to be’, 116 **bhū-* (**bhuu-*) ‘to be’; Watkins 1985:8 **bheuə-* (also **bheu-*) and 2000:11—12 **bheuə-* (also **bheu-*) ‘to be, to exist, to grow’; Gamkrelidze—Ivanov 1984.I:178 **b^hueu-* ‘to be’, I:198 **b^hueuH-*, I:206 **b^hueuH-*/**b^hueuH-* > **b^hū-* and 1995.I:177 **b^hueuH-*/**b^hueuH-* > **b^hū-* ‘to be, to originate’; Mallory—Adams 1997:53 **bheu(h_x)-* ‘to come into being, to be; to grow’; Mayrhofer 1956—1980.II:485—487; Chantraine 1968—1980.II:1233—1235 **bhū-*, **bheuə-*/**bhw-e₂-*/**bhu-e₂-*; Boisacq 1950:1043—1044 **bheuā-*, **bheuē-*, **bhū-*; Frisk 1970—1973.II:1052—1054; Beekes 2010.II:1597—1598 **b^heh₂u-*; Hofmann 1966:407—408 **bheuā-*, **bheuē-*, **bhū-*; De Vaan 2008:246—247; Ernout—Meillet 1979:257—258; Walde—Hofmann 1965—1972.I:557—559 **bhēu-* (**bheuā-*, **bheuē-*); Orël 2003:44 Proto-Germanic **bewwanan*; Onions 1966:81; Klein 1971:74; Boutkan—Siebinga 2005:32; Fraenkel 1962—1965.I:68; Smoczyński 2007.1:83; Wodtko—Irslinger—Schneider 2008:46—58 **b^hueh₂-*.
- D. (?) Proto-Uralic **puwe* ‘tree, wood’: Finnish *puu* ‘tree, wood, firewood’; Estonian *puu* ‘tree, wood, firewood’; Cheremis / Mari *pu* ‘wood, firewood’; Votyak / Udmurt *-pu* ‘tree, wood’; Zyrian / Komi *pu* ‘tree, wood’; Vogul / Mansi *-pā* ‘tree’; Hungarian *fa* ‘tree, wood’; Yurak Samoyed / Nenets *pææ*, *peæ*, (accusative plural) *pii* ‘wood, stick, cane,

forest'; Tavgi Samoyed / Nganasan *faa* 'tree'; Yenisei Samoyed / Enets *fεε*, *pεε*, *pāε* 'tree'; Selkup Samoyed *puu*, *poo* 'tree, wood, firewood, stick'; Kamassian *pā* 'tree, wood, firewood, forest'; Koibal *pa* 'tree', *pā* 'forest'; Motor *ha*, *hāh* 'tree'; Taigi *hā* 'forest'; Karagas *hy* 'tree'. Rédei 1986—1988:410—411 **puwe*; Décsy 1990:106 **punga* 'tree, wood'; Collinder 1955:53 and 1977:71; Sammallahti 1988:539 Proto-Uralic **pu/o/äxi/i* 'tree', Proto-Finno-Ugrian **puxi*; Janhunen 1977b:117; Zhivlov 2023:160 **pawi* 'tree'. (?) Yukaghir (Southern / Kolyma) *pibil* (< **piw-*) 'coniferous needles', *pibil-pubuški* 'larch tree bud'. Nikolaeva 2006:353.

- E. Proto-Altaic **biyu-* 'to be, to sit': Proto-Tungus **bi-* 'to be' > Evenki *bi-* 'to be'; Lamut / Even *bi-* 'to be'; Negidal *bī-* 'to be'; Manchu *bi-* 'to be, to exist'; Ulch *bi-* 'to be'; Orok *bi-* 'to be'; Nanay / Gold *bi-* 'to be'; Oroch *bī-* 'to be'; Udihe *bi-* 'to be'; Solon *bi-* 'to be'. Proto-Mongolian **büyi-* 'to be' > Classical Mongolian *bü-* (*bö-*) 'to be'; Khalkha *biy-* 'to be'; Buriat *bī-* 'to be'; Kalmyk *bī-* 'to be'; Ordos *bī-* 'to be'; Moghol *be-*, *bi-* 'to be'; Dagur *bie-* 'to be'. Poppe 1960:99, 111, 112, and 125; Street 1974:10 **bü-* 'to be'; Starostin 1991:280, no. 129, **bui-*; Starostin—Dybo—Mudrak 2003:342 **biju* 'to be, to sit'.

Buck 1949:1.22 mountain, hill; 1.42 tree; 9.91 be; 9.92 become; 12.31 high. Hakola 2000:151, no. 666; Illič-Svityč 1971—1984.I:184—185, no. 19, **buHi* 'to grow up, to arise'; Bomhard—Kerns 1994:203—205, no. 9; Dolgopolsky 2008, no. 181, **buHi* 'to grow, 2008, to become'.

22.3. PROTO-NOSTRATIC *p^h (> PROTO-AFRASIAN *p)

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
p ^h -	p-	p-	p-	p ^h -	p-	p ^h -	p-
-p ^h -	-p-	-pp-/v-	-p-	-p ^h -	-p-	-p ^h -	-p(p)-

90. Proto-Nostratic root *p^hač^h- (~ *p^həč^h-):

(vb.) *p^hač^h- ‘to split or break open, to split or break apart’;

(n.) *p^hač^h-a ‘crack, split, opening, break’

- A. Proto-Afrasian *pac- ‘to destroy, to break’: Proto-Semitic *pac-ac- ‘to destroy, to break’ > Akkadian *pasāsu* ‘to wipe out, to destroy’; Hebrew *pāsas* [פָּסַס] ‘to end, to cease, to disappear, to vanish’; Aramaic *pāsas* ‘to dissolve, to pluck apart’. Klein 1987:517; Murtonen 1989:342. Proto-Semitic *pac-ak’- ‘to part, to open wide’ > Hebrew *pāsak* [פָּסַק] ‘to divide, to split’, *pesek* [פֶּסֶק] ‘detached piece, remainder’; Aramaic *pāsak* ‘to cut, to split, to sever’; Akkadian *pasāku* ‘to cut’ (?). Klein 1987:517; Murtonen 1989:343; Jastrow 1971:1199—1201. East Chadic *pac- ‘to break’ > Tumaq *paž-* ‘to break’. (?) Southern Cushitic: Proto-Rift *pas- or *pats- ‘daybreak, dawn’ > Burunge *pisaru* ‘daylight’; Alagwa *pisema* ‘dawn’; K’wadza *pasiko* ‘sky’. Ehret 1980:339. Assuming semantic development from ‘to come out, to break forth’ as in Lithuanian *rytas* ‘morning’, from the same root found in Latvian *rietu* ‘to break forth’. Orël—Stolbova 1995:412, no. 1416, *pac- ‘to break, to destroy’.
- B. Kartvelian: Mingrelian *pač-* (< *peč-) ‘to open’. Illič-Svityč 1965:360 Proto-Kartvelian *pec₁-.
- C. Uralic: Proto-Finno-Ugrian *pāče- ‘to split or break open, to split or break apart’ > Lapp / Saami (Southern) *piätseke-* ‘to go apart (of the boards of a boat)’; Ostyak / Xanty *pěčäyäl-* ‘to tear or rip off, to come off (button)’; Vogul / Mansi *pišt-, peešt-, peešat-* ‘to let loose’; Hungarian *fesl-* ‘to open (of a bud), to rip up (of a seam)’. Collinder 1955:106; Sammallahti 1988:546 Proto-Finno-Ugrian *pecä- ‘to rip up’; Rédei 1986—1988: 358—359 *pāče-.
- D. Proto-Altaic *p^hač^hV- ‘to open, to split up’: Proto-Tungus *pač- ‘crack, split, interval’ > Evenki *hačiq* ‘crack, split, interval’. Proto-Mongolian *(h)ača ‘bifurcation’ > Middle Mongolian *āčiba* ‘bifurcation’; Written Mongolian *ačan* ‘bifurcation’; Khalkha *ac* ‘bifurcation’; Buriat *asa* ‘bifurcation’; Kalmyk *acə* ‘bifurcation’; Ordos *ača* ‘bifurcation’. Proto-Turkic *ač- ‘to open’ > Old Turkic *ač-* ‘to open’; Turkish *aç-* ‘to open, to begin, to reveal’; Azerbaijani *ač-* ‘to open’; Turkmenian *ač-* ‘to open’; Karaim *ač-* ‘to open’; Uzbek *oč-* ‘to open’; Tatar *ač-* ‘to open’; Bashkir *as-*

‘to open’; Kirghiz *ač-* ‘to open’; Kazakh *aš-* ‘to open’; Noghay *aš-* ‘to open’; Chuvash *uś-* ‘to open’; Yakut *as-* ‘to open’. Starostin—Dybo—Mudrak 2003:1116 **pʰačʰV* ‘to open, to split up’; Poppe 1960:63 and 94; Street 1974:7 **ača-* ‘to fork; to open out, to come together’.

Buck 1949:12.24 open (vb.); 14.43 dawn; 14.44 morning. Bomhard—Kerns 1994:256, no. 65; Illič-Svityč 1965:360 **pāče-* ‘to open’ (?) (‘расширять[ся]’ ?); Dolgopolsky 2008, no. 1663, **pāčV* ‘to open’.

91. Proto-Nostratic root **pʰačʰ-* (~ **pʰəčʰ-*):

(vb.) **pʰačʰ-* ‘to cover up’;

(n.) **pʰačʰ-a* ‘skin, hide, covering’

A. Afrasian: Semitic: Akkadian *pašānu* ‘to cover up, to veil’.

B. Dravidian: Tamil *paccāi* ‘skin, hide; covering (as of the body of a *yār*)’; Tuḷu *pāca* ‘skin of the leg’; Brahuī *pacx* ‘natural outer sheath or covering, bark’, *pacīrok*, *pacīronk* ‘outer layer or crust’. Burrow—Emeneau 1984:343, no. 3833.

C. Proto-Kartvelian **pečʰw-* ‘skin, hide, covering’: Georgian *becʰv-i* (dissimilated from **pecʰw-*) ‘skin, hide, fur, hair, fiber’; Mingrelian *pačʰv-/pičʰu-* ‘skin, hide, hair, fiber’, *do-pačʰv-a* ‘to bat an eyelash’. Fähnrich—Sardshweladse 1995:357 **peçw-*; Fähnrich 2007:64 **beçw-*.

Buck 1949:4.12 skin, hide.

92. Proto-Nostratic root **pʰaħ-* (~ **pʰəħ-*):

(vb.) **pʰaħ-* ‘to eat’;

(n.) **pʰaħ-a* ‘food, nourishment’

A. Proto-Afrasian **paħ-* ‘to take into the mouth, to eat’: Semitic: Arabic *fahasa* ‘to take out of the hand with the tongue or lips’. Egyptian (Demotic) *phs* ‘to bite’ (also *pzh* ‘to bite’); Coptic *pōhs* [ⲡⲟⲩⲥ] ‘to bite’. Vycichl 1983:167; Černý 1976:132. Proto-Southern Cushitic **paħ-* or **peħ-* ‘to eat’ > Kʼwadza *pis-* ‘to serve up portions of food’; Ma’a *-pá* ‘to eat’. Ehret 1980:144. Ehret 1995:92, no. 42, **paħ-* or **peħ-* ‘to take into the mouth’.

B. Proto-Indo-European **pʰeh₂-* [**pʰaħh₂-*]/**pʰoh₂-* > **pʰā-/pʰō-* ‘to feed’: Latin *pāscō* ‘to feed’, *pābulum* ‘food, nourishment’, *pānis* ‘bread’; Gothic *fōdjan* ‘to feed, to nourish’, *fōdeins* ‘food, nourishment’; Old Icelandic *fæða* ‘to feed’, *fōðr* ‘fodder’; Old English *fēdan* ‘to feed’, *fōda* ‘food’, *fōdor*, *fōdder* ‘food, fodder, food for cattle’; Old Frisian *fēda* ‘to feed’; Old Saxon *fōdian* ‘to feed’; Old High German *fuottan* ‘to feed’, *fuoter* ‘food, nourishment’ (New High German *Futter*). Rix 1998a:415 **peh₂-* ‘to take care of, to watch over, to feed’; Pokorny 1959:787 **pā-*, **pə-* ‘to feed’;

Walde 1927—1932.II:72—73 *pā-; Mann 1984—1987:897 *pǎ- ‘to feed, to guard’, 900 *pǎjō ‘to feed, to guard’, 906 *pǎškō ‘to feed, to tend, to protect’, 907 *pǎt- (*pǎt-) ‘to protect, to foster, to feed’; Watkins 1985:46 *pā- (contracted from *pa₂-) and 2000:61 *pā- ‘to protect, to feed’ (oldest form *pe₂₂-, colored to *pa₂₂-, contracted to *pā-); Mallory—Adams 1997:198 *peh₂- ‘to guard, to protect, to cause to graze’; Ernout—Meillet 1979:486; Walde—Hofmann 1965—1972.II:260; De Vaan 2008:448—449; Kroonen 2013:150 Proto-Germanic *fōdjan- ‘to feed, to rear’ and 150 *fōdra- ‘fodder’; Orël 2003:109 Proto-Germanic *fōdjanan, 109 *fōdōn; Feist 1939:157 *pǎ-; Lehmann 1986:119—120; De Vries 1977:136 and 149; Onions 1966:349 and 368; Kluge—Mitzka 1967:227; Kluge—Seebold 1989:238.

Buck 1949:5.11 eat; 5.12 food. Bomhard—Kerns 1994:246—247, no. 52.

93. Proto-Nostratic (n.) *p^hak^h-a ‘scab, dried mucus’:

- A. Dravidian: Tamil *pakku* ‘scab of a sore, dried mucus of the nose’; Kannaḍa *hakku* ‘crusted or dried mucus or rheum, scab’, *hakkale* ‘an incrustation’; Telugu *pakku* ‘scab’; Gadba (Salur) *pakku* ‘dried portion of any bodily secretion, scab’. Burrow—Emeneau 1984:341, no. 3811.
- B. Proto-Kartvelian *p^hakl- ‘scab, pockmark’: Georgian *pakl-i* ‘scab’; Laz *pukur-i*, *pukir-i*, *purk-i*, *purk’-i* ‘pockmark’; Svan *pakär* ‘abscess, boil, pus’. Fähnrich 2007:429 *p^hakl-; Fähnrich—Sardshweladse 1995:351—352 *p^hakl-.

94. Proto-Nostratic (n.) *p^hal-a (metathesized variant *lap^h-a in Uralic, Altaic, and part of Afrasian) ‘spleen’:

- A. Proto-Afrasian *pal- ~ *lap- (metathesis from *pal-) ‘spleen’: East Cushitic: Afar *aleefu* ‘spleen’ (prefix *ʔa-, secondary *-e-). Proto-Highland East Cushitic *hifella ‘spleen’ (prefix *hi-, secondary *-e-) > Hadiyya *hilleffa* ‘spleen’; Kambata *efeella* ‘spleen’; Sidamo *efelegg’o* ‘spleen’. Hudson 1989:140. West Chadic *lap- ‘spleen’ > Sura *llap* ‘spleen’; Angas *lap* ‘spleen’; Kulere *ma-laf* ‘liver’. Orël—Stolbova 1995:358, no. 1651, *lap- ‘spleen’.
- B. Dravidian: Tuḷu *pallè* ‘spleen’; Telugu *balla* ‘enlargement of the spleen’; Parji *bella* ‘spleen’; Kuwi *balla*, *bella*, *bela* ‘spleen’. Burrow—Emeneau 1984:355, no. 3995.
- C. Proto-Indo-European *(s)p^hel-, *(s)p^hl- ‘spleen’ (plus various extensions: *(s)p^hel-gh-, *(s)p^hel-gh-en-, *(s)p^hel-gh-eA, *(s)p^hl-eH-gh-, *(s)p^hl-n-gh-, etc.): Sanskrit *plīhān-* ‘spleen’; Bengali *pilihā*, *pilā* ‘spleen’; Hindi *pīlha*, *pilāi* ‘spleen’; Punjabi *liph* ‘enlarged spleen’; Avestan *spərəzan-* ‘spleen’; Armenian *p^haycatn* ‘spleen’; Greek σπλήν ‘spleen’, (pl.) σπλάγχνα ‘the

inward parts'; Latin *liēn* 'spleen'; Old Irish *selg* 'spleen'; Breton *felc'h* 'spleen'; Old Church Slavic *slězena* 'spleen'; Russian *selezenka* [селезёнка] 'spleen'. Pokorny 1959:987 **sp(h)elǵh(en, -ā)*, **splenǵh-*, **splēǵh-* 'spleen'; Walde 1927—1932.II:680 **sp(h)elǵh(en, -ā)*, **splenǵh-*, **splēǵh-*; Mann 1984—1987:1253 **spelēǵhnos*, *-ā* (**speləǵhnos*, *-ā*; **splīǵhēn-*) 'spleen'; Gamkrelidze—Ivanov 1984.II:815 **sp[h]elǵ[h]-* and 1995.I:715 **sp^helǵh-* 'spleen'; Mallory—Adams 1997:538 **spelǵh-* 'spleen'; Watkins 1985:63 **spelgh-* and 2000:82 **spelgh-* 'spleen, milt'; Mayrhofer 1956—1980.II:385—386 **sphl-ǵh-*, **sphl-i-ǵh-*, **sphl-i-ə-ǵh-*, **sphl-ŋ-ǵh-*; Burrow 1973:134, fn. 1; Boisacq 1950:899; Frisk 1970—1973.II:769—770; Hofmann 1966:329—330 **sp(h)elǵh(en)*, **splenǵh-*, **splēǵh-*; Chantraine 1968—1980.II:1039—1040; Beekes 2010.II:1384—1385 **spl(ē)g^h-n-*; De Vaan 2008:340; Ernout—Meillet 1979:357—358; Walde—Hofmann 1965—1972.I:799.

- D. Uralic: Proto-Finno-Ugrian **läppz* 'spleen, milt' (assuming metathesis from **pälz* as in Punjabi *lipph* 'enlarged spleen' and Hadiyya *hilleffa* 'spleen', cited above) > Hungarian *lép* 'spleen, milt'; Cheremis / Mari *lepə*, *lep* 'spleen'; Votyak / Udmurt *lup* 'spleen'; Zyrian / Komi *lop* 'spleen'. Collinder 1955:95, 1960:412 **leppz* (or **deppz*), and 1977:111; Rédei 1986—1988:242 **läppz* (**däppz*) or **leppz* (**deppz*); Sammallahti 1988:543 Proto-Finno-Ugrian **däpd/ppä* 'milt', Proto-Finno-Permian **däpdä*, Proto-Ugric **däppä*.
- E. Proto-Altaic **liap^hV* 'spleen' (assuming metathesis from **p^hialV*): Proto-Mongolian **niyalta* 'spleen (of animals)' > Written Mongolian *nayalta*, *niyalta* 'spleen'; Khalkha *nālt* 'spleen'; Buriat *nāлта* 'spleen'; Ordos *nāлта* 'spleen'. Tungus: Oroch *lipče* 'spleen'. Turkic: Tuva *čavana* (< **yapal*) 'spleen'. Starostin—Dybo—Mudrak 2003:875 **liap^hV* 'spleen'.

Bomhard 1996a:232—233, no. 651; Dolgopolsky 2008, no. 1311, **l[æ]pA* 'spleen' and, no. 1727, **pAl[V]gæ* \neg **pAl[V]gæ* 'spleen'; Hakola 2000:132, no. 574.

95. Proto-Nostratic root **p^hal-* (\sim **p^həl-*):

(vb.) **p^hal-* 'to split, to cleave';

(n.) **p^hal-a* 'split, crack'

Derivative:

(n.) **p^hal-a* 'stone'

- A. Proto-Afrasian **pal-* 'to split, to cleave': [Proto-Semitic **pal-ag-* 'to split, to cleave, to divide' > Hebrew *pālay* [פָּלַי] 'to split, to cleave, to divide', *peley* [פֶּלֶי] 'canal, channel'; Arabic *falaḡa* 'to split, to cleave'; Phoenician *plg* 'to divide'; Ugaritic *plg* 'canal, stream'; Akkadian *palgu* 'canal'; Ḥarsūsi *felēg* 'water-course'; Mehri *fālēg* 'stream, water-course'; Šheri / Jibbāli *fālōg* 'to split open, to make a hole in (tin, barrel, rock)', *fēlēg*

‘oasis’ (Eastern dialect = ‘stream’); Geez / Ethiopic *falaga* [ፈለገ] ‘to flow, to cause to flow in torrents, to dig out, to hollow out, to divide, to split, to hew, to prepare, to arrange’, *falag* [ፈለግ] ‘river, brook, valley’, *fəlug* [ፍሉግ] ‘hollow, hollowed, dug out, divided, prepared, ready, arranged’; Tigre *fäläg* ‘ravine’; Tigrinya *fäläg* ‘riverbed’; Amharic *fäläg* ‘stream’ (Geez loan). Klein 1987:508; Leslau 1987:159; Murtonen 1989:340. Proto-Semitic **pal-ay-* ‘to separate, to divide’ > Arabic *faliya* ‘to be cut off’; Aramaic *pālā* ‘to split, to cut open’; Geez / Ethiopic *falaya* [ፈለየ] ‘to separate, to divide, to distinguish’; Tigrinya *fäläyā* ‘to separate’; Tigre *fäla* ‘to separate’. Leslau 1987:161. Proto-Semitic **pal-aḥ-* ‘to split, to cleave’ > Hebrew *pālah* [פָּלַח] ‘to cleave’; Arabic *falaha* ‘to split, to cleave, to plow, to till’. Klein 1987:509; Murtonen 1989:340. Proto-Semitic **pal-am-* ‘to split, to divide’ > Arabic (Daḡina) *falam* ‘to notch, to indent’; Geez / Ethiopic *falama* [ፈለመ] ‘to split, to divide, to strike the first blow (in combat), to be the first to do something’; Tigre *fälma* ‘to break to pieces’; Tigrinya *fällämä* ‘to begin’; Amharic *fällämä* ‘to strike the first blow, to initiate an action’. Leslau 1987:159. Proto-Semitic **pal-ak-* ‘to split, to cleave, to break forth’ > Akkadian *palāku* ‘to kill’; Arabic *falaka* ‘to split, to cleave; to burst, to break (dawn)’; Sabaean *flk* ‘system of irrigation by dispersion of water by means of inflow cuts’; Šheri / Jibbāli *fālāk* ‘to split, to crack’; Tigrinya *fālākākā* ‘to split up, to crack up’; Tigre *fālāk* ‘division’; Harari *fālāka* ‘to hit the head with a stone or stick so that blood comes out or the head swells’; Amharic *fālākākākā* ‘to split, to break loose’; Gurage (Wolane) *fālākākā* ‘to card wool by splitting’. Leslau 1963:62 and 1979:232. Proto-Semitic **pal-at-* ‘to separate’ > Hebrew *pālaṣ* [פָּלַץ] ‘to escape’; Phoenician *plṭ* ‘to escape’; Geez / Ethiopic *falaṭa* [ፈለጠ] ‘to separate’; Harari *fälāṭa* ‘to split wood with an ax’; Argobba *fällāṭa* ‘to split’; Amharic *fällāṭā* ‘to split’; Gurage *fälāṭā* ‘to split wood with an ax’. Klein 1987:509; Leslau 1963:63, 1979:232, and 1987:161; Murtonen 1989:340—341. Proto-Semitic **pal-as^v-* ‘to break open or through’ > Hebrew *pālaš* [פָּלַשׁ] ‘to break open or through’; Akkadian *palāšu* ‘to dig a hole’. Klein 1987:512. Proto-Semitic **pal-al-* ‘to separate, to divide’ > Arabic *falla* ‘to dent, to notch, to blunt; to break; to flee, to run away’; Hebrew *pālal* [פָּלַל] ‘to arbitrate, to judge’; Akkadian *palālu* ‘to have rights, to secure someone’s rights’; Sabaean *fll* ‘to cut channels’; Mehri *fāl* ‘to make off, to get away’; Šheri / Jibbāli *fell* ‘to make off, to get away, to run away’; Geez / Ethiopic (reduplicated) *falfala* [ፈለፈለ] ‘to break out, to burst, to gush’; Tigre *fälāla* ‘to sprout forth, to break through’; Tigrinya *fälfälä* ‘to break, to make a hole’; Amharic *fäläffälä* ‘to shell (peas, beans), to gush out’; Harari *filäfäla* ‘to detach a piece from the main bunch (bananas, corn), to shell, to pick up grains one by one from the stock’; Gurage *fäläffälä* ‘to shell, to hatch out, to make a hole by scratching’. Klein 1987:511; Leslau 1987:158—159. Proto-Semitic **pal-aṣ-* ‘to split, to cleave’ > Arabic *fala^a* ‘to split, to cleave, to rend, to tear asunder’, *fala^c*,

filʰ ‘crack, split, crevice, fissure, cleft, rift’.] Berber: Tuareg *əfli*, *əfləh* ‘to be split; to split, to crack’, *səfli*, *zəfləh* ‘to cause to split’; Siwa *əfli* ‘to be split’; Mzab *fəl* ‘to pierce; to be pierced’; Kabyle *flu* ‘to pierce’. Proto-East Cushitic **faldj-* ‘(vb.) to split (wood); (n.) log’ > Yaaku *pilc-* ‘small sticks of firewood’; Galla / Oromo *falat’-a* ‘log’, *falat’-* ‘to cut wood’; Somali *falliid* ‘a chip of wood, splinter’; Saho *-fliḍ-* ‘to split’. Sasse 1979:26 and 31. West Chadic **pal-* ‘to cut off’ > Hausa *fallè* ‘to hit someone hard’. Central Chadic **pal-* ‘to cut’ > Zime *fal-* ‘to cut’. Central Chadic **pal-* ‘to break (stone)’ > Mafa *pal-* ‘to break (stone)’. East Chadic **pal-* ‘to carve, to cut, to peel’ > Tumak *pāl-* ‘to carve, to cut, to peel’; Sokoro *fal-* ‘to carve, to cut, to peel’. Orël—Stolbova 1995:416, no. 1937, **pal-* ‘to break’, and no. 1938, **pal-* ‘to cut, to divide’. Note: The Semitic forms are phonologically ambiguous — they may belong with Proto-Afrasian **fil-* ‘to split, to cleave’ instead (cf. Orël—Stolbova 1995:191, no. 845, **fvl-* ‘to divide, to pierce’).

- B. Dravidian: Kuṛux *palknā* ‘to cut lengthwise, to split, to crack (the earth, a wall), to chap (the hands, etc.)’; Malto *palke* ‘to cut up (as fruit or vegetables)’; Parji *palva* ‘to split a piece of wood’. Burrow—Emeneau 1984:355, no. 3991. Tamil *pāl* ‘part, portion, share, dividing’; Malayalam *pāl* ‘part’; Kota *pa-lm* ‘portion, division’; Toda *po-lm* ‘share’; Kannaḍa *pāl* ‘division, part, portion, share’; Koḍagu *pa-li ma-d-* ‘to divide, to distribute’; Tuḷu *pāḷu* ‘share, portion, part, division’; Telugu *pālu* ‘share, portion, part, share, lot, fraction’; Parji *pēla* ‘portion’. Burrow—Emeneau 1984:364, no. 4097.
- C. [Proto-Kartvelian **plet-/plit-* ‘to pull, tear, or rip apart’: Georgian *plet-*, *plit-* ‘to pull, tear, or rip apart’; Laz *plat-* ‘to get worn out; to tear to pieces’; Svan *pet-*, *pt-* ‘to pluck (wool)’. Fähnrich—Sardshweladse 1995:358 **plet-/plit-*; Fähnrich 2007:437 **plet-/plit-*; Klimov 1998:202 **plet-* : **plit-* : **plt-* ‘to wear out’.] Note: The Kartvelian material may belong either here or with Proto-Nostratic **phily-* (~ **phely-*) ‘(vb.) to split, to cleave; (n.) split, crack’.
- D. [Proto-Indo-European **(s)phel-/*(s)phol-/*(s)phl-*, **(s)phl-* (plus various extensions) ‘to split, to cleave’: Sanskrit *phálati* ‘to split, to cleave’, *sphátati* (< **sphalt-*) ‘to burst, to expand’; Kashmiri *phalun* ‘to be split’, *phālawun* ‘to split, to cleave’; Marathi *phāḷṇē* ‘to tear’; Old Icelandic *flá* ‘to flay’, *flaska* ‘to split’, *flakna* ‘to flake off, to split’; Old English *flēan* ‘to flay’; Dutch *vlaen* ‘to flay’; Old High German *spaltan* ‘to split, to cleave’ (New High German *spalten*); Lithuanian *plyšti* ‘to split, to break, to burst’. Rix 1998a:525 **(s)pelH-* ‘to split (off), to cleave’, 525 **(s)pelt-* ‘to split’; Pokorny 1959:834 **plē-*, **plə-* ‘to split off’, 835 **plēk-*, **plāk-*, **plēik-*, **plīk-* ‘to tear off’, 985—987 **(s)p(h)el-* ‘to split off’, 937 **(s)p(h)elg-* ‘to split’; Walde 1927—1932.II:93 **plēi-*, **plāi-*, **plī-*, II:98—99 **plēk-*, **plāk-*, **plēik-*, **plīk-*, II:677—679 **(s)p(h)el-*, II:680 **sp(h)elg-*; Mann 1984—1987:949 **pleiks-* (**pleisk-*), 1270 **sphālt-* ‘to

bang, to burst'; Mallory—Adams 1997:567 *plek- 'to break, to tear off'; Watkins 1985:52 *plēk- (*pleik-) 'to tear', 63 *spel- 'to split, to tear off' and 2000:68 *plē-(i)k- (also *pleik-) 'to tear' (oldest form *ple_{2i}-(i)k-), 2000:82 *spel- 'to split, to break off'; Mayrhofer 1956—1980.II:393; Orël 2003:361; De Vries 1977:127, 128, and 129; Onions 1966:361; Klein 1971:285; Kluge—Mitzka 1967:718—719; Kluge—Seebold 1989:682; Fraenkel 1962—1965.I:625.] Note: The Indo-European material may belong either here or with Proto-Nostratic *phily- (~ *pheby-) '(vb.) to split, to cleave; (n.) split, crack'.

- E. Proto-Uralic *pälä 'side, half': (?) Finnish *pieli* in *suupieli* 'corner of the mouth' (*suu* = 'mouth'), *pieltä*- 'to tilt, to stand unevenly (for example, a pot), to stand unsteadily, to tip to the side, to give way', *pielos*, *pielus* 'edge, margin, border'; Lapp / Saami *bælle/bæle*- 'side, half (especially of a thing divided lengthwise); one of a pair, of two things which belong together, the fellow of something, one like something'; Mordvin *pel'* 'side', *pele* 'half'; Cheremis / Mari *pel* 'side', *pelə* 'half'; Votyak / Udmurt *pal* 'side; half'; Zyrian / Komi *pöl* 'side; half'; Vogul / Mansi *pääl*, *poäl* 'side; half'; Ostyak / Xanty *pelək*, (Southern) *pelək* (derivative) 'side; half'; Hungarian *fél-/fele*- 'half; one side (of two)'; Yurak Samoyed / Nenets *peelee* 'half'; Selkup Samoyed *pele* 'half', *pelek(a)* 'half (longitudinal); side; part'; Tavgi Samoyed / Nganasan *fealea* 'half'; Yenisei Samoyed / Enets (Hantai) *feđe*, (Baiha) *ferie* 'half'; Kamassian *pjeel* 'half, side'. Collinder 1955:48—49 and 1977:67; Rédei 1986—1988:362—363 *pälä; Décsy 1990:105 *pälä 'half'; Sammallahti 1988:540 Proto-Uralic *pälä 'half'; Janhunen 1977b:120; Zhivlov 2023:166 Proto-Uralic *pälä 'side, half'.
- F. Proto-Chukchi-Kamchatkan *pəl- 'to scrape skin': Alyutor *pl-ineŋ* 'flint scraper for treating skins with'; Kamchadal / Itelmen *tpli-s* 'to scrape (tr.)', (Western) *pleskas* 'to scrape', *plez* 'to prepare skin'. Fortescue 2005:221. For the semantic development, cf. Old Icelandic *flá* 'to flay', Old English *flēan* 'to flay', and Dutch *vlaen* 'to flay', cited above.

Buck 1949:9.27 split (vb. tr.); 9.28 tear (vb. tr.); 13.24 half. Brunner 1969:22, no. 38; Bomhard—Kerns 1994:230—231, no. 35; Möller 1911:196—197; Hakola 2000:130—131, no. 568; Dolgopolsky 2008, no. 1703, *PälqA 'half, part', no. 1717, *Pä[l]Vkv 'to split lengthwise, to divide', no. 1718, *pal[V]tV 'to split; axe', and, no. 1720, *PVLhE[ʒ]V and/or *PVLhE[ç|ç]V 'to split, to separate'.

96. Proto-Nostratic (n.) *p^hal-a 'stone':

Derivative of:

(vb.) *p^hal- 'to split, to cleave' (in the sense 'to chip or break stone[s]');

(n.) *p^hal-a 'split, crack'

- A. Proto-Afrasian **pal-* ‘stone’: Semitic: Hebrew *peleḥ* [פֶּלֶחַ] ‘millstone’; Akkadian *pīlu*, *pūlu* ‘limestone cutting-block’. Klein 1987:509. Chadic: Lamang *palak* ‘stone’.
- B. Proto-Indo-European **phels-/pʰols-/pʰls-* ‘stone’: Greek πέλλα (< *πελσῶ) ‘stone’; Sanskrit *pāṣāṇā-h*, *pāṣyā* (< *parṣ-) ‘stone’; Pāli *pāsāṇa-* ‘stone, rock’; Pashto *parṣa* ‘stone’; Old Irish *ail* ‘rock’; Old Icelandic *ffjall* ‘mountain, fell’, *fell* ‘fell, hill, mountain’; Old Saxon *felis*, *fels* ‘stone’; Old High German *felis*, *felisa* ‘stone’ (New High German *Fels*). Pokorny 1959:807 **peli-s-*, **pel-s-* ‘rock’; Walde 1927—1932.II:66—67 **pel(e)s-*; Mann 1984—1987:1649 **pel-*, **pelis-*; Watkins 1985:49 **pelis-* (also **pels-*) and 2000:64 **pel(i)s-* ‘rock, cliff’; Mallory—Adams 1997:548 (?) **pel(i)s* ‘stone, rock’; Mayrhofer 1956—1980.II:266; Boisacq 1950:763 **pels-*; Frisk 1970—1973.II:499 **pels-*; Chantraine 1968—1980.II:877 **pels-*; Beekes 2010.II:1168 Proto-Greek *πελσῶ; Kroonen 2013:134 Proto-Germanic **fel(e)sa-* ‘mountain’; Orël 2003:98 Proto-Germanic **felzan* ~ **fel(e)zaz*; De Vries 1977:123 **felza-*; Kluge—Seebold 1989:209.
- C. Chukchi-Kamchatkan: Proto-Chukotian **palayvən* ‘circle of hearth stones’ (?) > Chukchi *palakwən* ‘stones used for surrounding the dead body exposed in the open’; Kerek (Kamen) *palayvun*, (Paren) *palawkun* ‘flat stones by the hearth’. Fortescue 2005:208.

Buck 1949:1.44 stone; rock. Bomhard—Kerns 1994:232, no. 36; Brunner 1969:24, no. 52.

97. Proto-Nostratic root **phal-* (~ **pʰal-*):
 (vb.) **phal-* ‘to spread, to extend’;
 (n.) **phal-a* ‘that which is wide, flat, level, broad, open: expanse, open space or surface’; (adj.) ‘wide, flat, level, broad, open’
 Derivative:
 (n.) **phal-a* ‘flat of the hand, palm’
- A. Proto-Afrasian **pal-* ‘flat, level, broad’: Proto-Semitic **pal-/pīl-* ‘flat, level, broad’ > Hebrew *pālas* [פָּלַס] ‘to be even, level’, *peles* [פֶּלֶס] ‘balance, scale’; Phoenician *pīs* ‘level’; Arabic *faltāḥa* ‘to make broad; to broaden, to flatten’, *fiṭāḥ* ‘broad, flattened, flat’; Akkadian *palkū* ‘wide’, *napalkū*, *nepelkū* ‘(vb.) to become wide, wide open, extended, wide apart; (adj.) wide, spacious’. Klein 1987:511. Berber: Tamazight *fliy* ‘wide’. Chadic: Hausa *fālale* ‘large flat rock’.
- B. Dravidian: Kannaḍa *həlu* ‘thinned’; Telugu *paluca* ‘thin, not thick (applied to a solid or a liquid), rare, not dense, not close, sparse; light, slight, contemptible’, *palucana* ‘thinness’; Koṇḍa *palsa* ‘thin (of liquid)’, *palsan* ‘thinly, sparsely’; Kuṛux *pelpelē* ‘very thin, transparent’. Burrow—Emeneau 1984:355, no. 3989.

- C. Proto-Indo-European *p^hel-/ *p^hol-/ *p^hl-; *p^hel^hh-, *p^hle^hh- [**p^hla^hh-*] > *p^hlā-, *p^hl^hh- ‘level, flat, wide, broad’: Hittite *pal-ḫi-iš* ‘broad’; Sanskrit *prthú-h* ‘wide, broad’, *práthati* ‘to spread, to extend’; Greek *πλάτύς* ‘wide, broad, flat, level’; Latin *plānus* ‘even, level, flat’; Lithuanian *plónas* ‘thin’, *plóstas* ‘expanse, space’; Welsh *llydan* ‘wide, broad’; Old Icelandic *flatr* ‘flat, level’, *flet* ‘the raised flooring along the side-walls of a hall’; Old English *flett* ‘floor; dwelling, house, hall’; Old High German *flaz* ‘flat, level’. Pokorny 1959:805–807 *pelə-, *plā- ‘broad, flat’; Walde 1927–1932.II:61–63 *pelā-; Mann 1984–1987:946 *plānos, -is ‘(adj.) flat; (n.) surface, plane’, 947 *platējō ‘to smooth, to flatten, to level’, 947 *plātos, -is, -ios, -iā ‘flatness, flat object, extent, spread’, 947 *plātros, -ā, -is, 948 *platus ‘broad’, 966 *pl^hthanos, -is ‘(adj.) broad; (n.) breadth, expanse’, 966 *pl^hthus ‘(adj.) wide; (n.) breadth, the wide, expanse, earth’; Watkins 1985:48–49 *pelə- ‘(adj.) flat; (vb.) to spread’, 51 *plāk- (also *plak-) ‘to be flat’, 51–52 *plat- ‘to spread’ and 2000:64 *pelə- ‘to spread’ (oldest form *pel₂-, with variant [metathesized] form *ple₂-, colored to *pla₂-, contracted to *plā-), 67 *plāk- ‘to be flat’, 68 *plat- (also *pletə-) ‘to spread’; Burrow 1973:72 *pl-et-H-; Gamkrelidze–Ivanov 1984.II:781 *p^hl(e)l-H-/-t^hl- and 1995.I:218 *p^hl-t^hH-eu-, *p^hl-t^hH-u- ‘wide’ and I:683–684 *p^hel-H-/-t^h- ‘wide, flat’; Mallory–Adams 1997:83 *pl^hth₂ú- ‘broad, wide’, 205–206 *pel_hak- ‘to spread out flat’; Mayrhofer 1956–1980.II:333 and 362–363; Boisacq 1950:792 *plet(h)- : *plāt- : *plēt- : *plōt-; Frisk 1970–1973.II:553–554 *pletə-, *pl^htə-; Hofmann 1966:274 *plāt- (*plēt-); Chantraine 1968–1980.II:912 *plet₂-, *pl^ht₂-; Beekes 2010.II:1205 *pleth₂-; Ernout–Meillet 1979:512–513; Walde–Hofmann 1965–1972.II:318; De Vaan 2008:470; Orël 2003:105 Proto-Germanic *flataz; Kroonen 2013:144–145 Proto-Germanic *flata- ‘flat’ and 145 *flatja- ‘floor’; De Vries 1977:129 and 130–131; Onions 1966:360 Common Germanic *flataz; Klein 1971:284; Kloekhorst 2008b:620–621; Puhvel 1984–.8:64–68 *pel-A₁-, *pl-é-A₁; Sturtevant 1951:42, §65; Smoczyński 2007.1:476; Derksen 2015:367 *pleh₂-no-; Fraenkel 1962–1965.I:628–629; Wodtko–Irslinger–Schneider 2008:562–564 *pleh₂- and 564–566 *pleth₂-.
- D. Proto-Altaic *p^hāla ‘field, level ground’: Proto-Tungus *pāla-n ‘meadow, open ground; floor’ > Evenki *hālinr^h* ‘meadow, open ground’; Manchu *fala(n)* ‘floor, threshing floor’; Negidal *palan* ‘floor’; Ulch *pala(n)* ‘floor’; Oroch *pālla(n)* ‘floor’; Nanay / Gold *palā* ‘floor’. Proto-Turkic *ala-n, *ala-ŋ ‘level ground, plain’ > Karakhanide Turkic *alaŋ* ‘level ground, plain’; Turkmenian *alaŋ*, *āla* ‘level ground, plain’; Turkish *alan* ‘clearing (in a forest), open space, square (in a town)’; Karaim *alaŋ* ‘level ground, plain’; Tatar *alan* ‘level ground, plain’; Noghay *alaŋ* ‘level ground, plain’; Kazakh *alaŋ* ‘level ground, plain’; Tuva *alāq*, *alandi* ‘level ground, plain’; Chuvash *ol^hχ* ‘level ground, plain’; Yakut *alās*, *alī* ‘level ground, plain’;

Dolgan *alín*, *alī* ‘level ground, plain’. Starostin—Dybo—Mudrak 2003:1120—1121 **p̣āla* ‘field, level ground’.

- E. Proto-Chukchi-Kamchatkan **pəlyər(r)a-* ‘flat’: Chukchi *nə-pəlyətrə-qən* ‘flat’, *pəlyətra-t-* ‘to flatten, to bend down close to the ground’, *rə-pəlyətra-w-* ‘to smooth out, to flatten’; Koryak *pəlyrəj-at-* ‘to flatten oneself, to huddle up in a ball’; Kamchadal / Itelmen *pslajs-laX-* ‘flat’. Fortescue 2005:222.
- F. (?) Proto-Gilyak / Nivkh **pal(η)* ‘floor’: Amur *p^hal* ‘floor’; East Sakhalin *p^halη* ‘floor’. Note: According to Fortescue (2016:132), these may be loans from Russian *pol* [пол] ‘floor, ground’.

Buck 1949:9.32 stretch; 12.61 wide, broad; 12.65 thin (in dimension); 12.71 flat. Bomhard—Kerns 1994:243—244, no. 48; Brunner 1969:23, no. 43; Dolgopolsky 2008, no. 1708, **[p]ōlχ|q|Γa* ‘broad and flat’.

98. Proto-Nostratic (n.) **p^hal-a* ‘flat of the hand, palm’:

Derivative of:

(vb.) **p^hal-* ‘to spread, to extend’;

(n.) **p^hal-a* ‘that which is wide, flat, level, broad, open: expanse, open space or surface’; (adj.) ‘wide, flat, level, broad, open’

- A. Proto-Indo-European **p^hl̥h^h-meA* [**p^hl̥h^h-maA*] ‘palm of the hand’: Greek *παλάμη* ‘the palm of the hand, the hand’; Latin *palma* ‘the palm of the hand’; Old Irish *lám* ‘hand, arm’; Old English *folm*, *folme* ‘palm of the hand, hand’; Old Saxon *folm* ‘palm’; Old High German *folma* ‘palm’. Pokorny 1959:806 (**p_el̥mā* [**p_il̥mā*]); Walde 1927—1932.II:62 (**p_el̥mā* [**p_il̥mā*]); Mann 1984—1987:965 **p_il̥mā* ‘palm of the hand’; Watkins 1985:49 (**p_il̥mā*); Mallory—Adams 1997:255 **pólh_{am}* ‘palm of the hand’; Chantraine 1968—1980.II:852; Beekes 2010.II:1145 **plh₂-(e)m-*; Hofmann 1966:250 **p_el̥mā*; Boisacq 1950:741 **p_il̥mā*; Frisk 1970—1973.II:466; De Vaan 2008:441; Walde—Hofmann 1965—1972.II:240—241 **p_el̥mā*; Ernout—Meillet 1979:476—477; Kroonen 2013:159 Proto-Germanic **fulmō-* ‘palm of the hand’; Orël 2003:118 Proto-Germanic **fulmō*; Wodtko—Irslinger—Schneider 2008:562 **p_ilh₂-mo/ah₂-*.
- B. Proto-Altaic **p^hāl^hηa* (~ -e) (< **p^hālⁱηa* ?) ‘palm (of the hand)’: Proto-Tungus **palηa* ‘palm (of the hand)’ > Manchu *falanḡū* ‘palm (of the hand)’; Evenki *hanηa* ‘palm (of the hand)’; Lamut / Even *hanη₂* ‘palm (of the hand)’; Ulch *paña* ‘palm (of the hand)’; Oroch *χαηηa*, *χαηa* ‘palm (of the hand)’; Nanay / Gold *payηa* ‘palm (of the hand)’; Negidal *χαήηa* ‘palm (of the hand)’; Oroch *χαηa*, *χαηηa* ‘palm (of the hand)’. Proto-Mongolian **haliga(n)* ‘palm (of the hand)’ > Middle Mongolian *χalaqan* ‘palm (of the hand)’; Written Mongolian *alaya(n)* ‘palm (of the hand)’; Khalkha *alga* ‘palm (of the hand)’; Buriat *ālga(n)* ‘palm (of the hand)’; Ordos *alaga* ‘palm (of the hand)’; Dagur *χaləg* ‘palm (of the hand)’; Kalmyk *ālχən*

‘palm (of the hand)’; Moghol *olaqei* ‘palm (of the hand)’. Poppe 1960:95; Street 1974:22 **pala* ‘palm of the hand’; Starostin—Dybo—Mudrak 2003:1121—1122 **p’āl̥ja* (~-e) ‘palm (of hand)’.

Bomhard—Kerns 1994:244, no. 49; Illič-Svityč 1971—1984.III:93—95, no. 369, **p’aliHma* ‘palm’; Dolgopolsky 2008, no. 1728, **pa[í]Hiŋa* ‘palm of hand’.

99. Proto-Nostratic root **p^hal-* (~ **p^həl-*):

(vb.) **p^hal-* ‘to fill’;

(n.) **p^hal-a* ‘fullness’; (adj.) ‘much, many’

A. Dravidian: Tamil *pala* ‘many, several, diverse’, *palar* ‘many or several persons, assembly, society’, *pal* ‘many’; Malayalam *pala* ‘many, several, various’; Kannaḍa *pala*, *palavu* ‘much, many, several, various’, *palar*, *palambar*, *palavar* ‘several persons’; Telugu *palu* ‘many, several, various, different’; Malto *palware* ‘to be multiplied, to be bred’, *palwatre* ‘to breed, to rear’. Burrow—Emeneau 1984:355, no. 3987; Krishnamurti 2003:266 **pal-V-* ‘many’.

B. Proto-Indo-European **p^hel̥-/p^hol̥-/p^hl̥-*, **p^hle̥-/p^hlo̥-* (> **p^hl̥e-/p^hl̥ō-*) ‘to fill’: Sanskrit *pí-par-ti* ‘to fill, to nourish, to sate’, *pr-nā-ti* ‘to fill’, *purú-h* ‘much, many, abundant’, *pūrṇá-h* ‘full, filled’, *prāṇa-h* ‘filled, full’; Avestan *pouru-* ‘much, many’; Old Persian *paru-* ‘much, many’; Greek πίμπλημι ‘to fill full of’, πλέος ‘full’, πλήθω ‘to be or become full of’, πολύς ‘much, many’; Latin *plēnus* ‘full’, *plūs* ‘more’, *pleō* ‘to fill, to fulfill’; Old Irish (*h*)il ‘many’, *lin(a)id* ‘to fill’, *lán* ‘full’; Welsh *llawn* ‘full’; Cornish *luen*, *leun*, *len* ‘full’; Breton *leun* ‘full’; Gothic *filu* ‘great, very much’, *fulls* ‘full’, *fulljan* ‘to fill, to fulfill’, *fullō* ‘fullness’; Old Icelandic *fylla* ‘to fill’, *fullr* ‘full’; Old English *full* ‘filled, full’, *fulla* ‘fullness’, *fyllan* ‘to fill, to fill up; to replenish, to satisfy’, *fela*, *feolu* ‘much, many’; Old Frisian *fullia* ‘to fill’, *foll*, *full* ‘full’, *felo*, *fel(e)* ‘much, many’; Old Saxon *fullian* ‘to fill’, *ful* ‘full’, *filu*, *filo* ‘much, many’; Dutch *vullen* ‘to fill’, *vol* ‘full’, *veel* ‘much, many’; Old High German *fullen* ‘to fill’ (New High German *füllen*), *foll* ‘full’ (New High German *voll*), *filu*, *filo* ‘much, many’ (New High German *viel*); Lithuanian *pilnas* ‘full’; Old Church Slavic *plъnъ* ‘full’; Armenian *li* ‘full’. Rix 1998a:434—435 **pleh₁-* ‘to fill, to be full’; Pokorny 1959:798—801 **pel-*, **pelə-*, **plē-* ‘to fill’; Walde 1927—1932.II:63—65 **pel-*, **pel(ē)-*, **peleu-*: **pélū*, **pélú-*; Mann 1984—1987:918 **pelu* ‘much, many’, 918 **peluō* ‘to fill’, 949 **plēdh-* (**plēdhō*; **plēdhu-*) ‘fullness, flood, swarm, glut; crowd; to fill, to swarm’, 949—950 **plej-*, **plēj-* ‘full, fulsome; flow, flood’, 950 **plējō* ‘to overflow, to abound, to fill’, 950 **plējos*, -ə ‘full, overflowing, spreading, rampant; fullness, flood’, 953 **plēnō* (**plē-nu-mi*) ‘to fill’, 953 **plēnos* ‘full’, 954 **plētos*, -is ‘spreading, spread, flooding, full’, 964 **pl-* ‘to fill’.

965 **p̥lnējō* (**p̥lneu-*) ‘to fill, to be full’, 965 **p̥l̥nos* ‘full’, 966 **p̥l̥tos* ‘filled, full’, 966 **p̥lus* (**p̥l̥u-*) ‘full’, 972–973 **pol-* ‘much, many; abundance’, 974 **poluos* (**polus*, **polu*) ‘full, big; much, many, abundant; spate’, Watkins 1985:48 **pelə-* and 2000:64 **pelə-* ‘to fill’ (oldest form **pelə₁-*, with variant [metathesized] form **pleə₁-*, contracted to **plē-*; zero-grade form **p̥l̥ə-*; suffixed form **p(e)l̥ə-u-*); Gamkrelidze—Ivanov 1984.I:234 **p̥[h̥]elH-*, **p̥[h̥]leH-* and 1995.I:204, I:209 **p̥hel-H-*, **p̥hl-eH-*, **p̥hl̥-H-* ‘full’; Mallory—Adams 1997:201 **pelh₁-* ‘to fill’ and 214 **p̥hl̥nós* ‘full’; Mayrhofer 1956—1980.II:282—284 **plē-*, **pel(ə)-*, **p̥l̥(ə)*, II:311, and II:324 **p̥l̥ə-nó-*; Boisacq 1950:783—784 **pelē-* and 802 **p̥llu-*; Frisk 1970—1973.II:537—538 and II:577—578 **p̥llú-*; Hofmann 1966:269—270 **pel(ē)-* and 279; Beekes 2010.II:1191—1192 **pleh₁-*; Chantraine 1968—1980.II:901—902 **pleə₁-* and II:927 **p̥llu-*, **pelə₁-* / **plē-*; Ernout—Meillet 1979:515—516 **plē-*, **plə-* and 517—518 **plə-*; Walde—Hofmann 1965—1972.II:322 **p(e)lē-*, II:322—323, and II:327—328; De Vaan 2008:472—473; Orël 2003:118 Proto-Germanic **fullaz*, 118 **fullin*, 118 **fulljanan*, 118 **fullnōjanan*, 118 **fullōjanan*, 118 **fullōn*; Kroonen 2013:159 Proto-Germanic **fulla-* ‘full’; Feist 1939:152—153 **p̥élu-* and 172; Lehmann 1986:116 and 131; De Vries 1977:146 and 148; Onions 1966:356 and 380; Klein 1971:281 and 298 **pelē-*, **plē-*; Boutkan—Siebinga 2005:105, 132, and 133; Kluge—Mitzka 1967:223, 821, and 824—825 **pel-* : **plē-*; Kluge—Seebold 1989:236, 765, and 768; Fraenkel 1962—1965.I:591; Smoczyński 2007.1:459.

- C. Proto-Uralic **palyz* ‘much’: Finnish *paljo* ‘much’; Estonian *palju* ‘much’; Cheremis / Mari *pülä* ‘rather much, considerable amount’; (?) Vogul / Mansi *poäl’* ‘dense, tight’; Yenisei Samoyed / Enets *fod’e-me-* ‘to thicken, to become thick’; Yurak Samoyed / Nenets *pal’?*, *paju* ‘dense, tight, thick’, *pal’* ‘disheveled (for example, the hair)’, *paaji-* ‘to swell up, to fester’. Rédei 1986—1988:350—351 **paljz*; Collinder 1955:46, 1960:408 **paljz*, 1965:31, and 1977:64; Décsy 1990:105 **palja* ‘thick’. Yukaghir (Northern / Tundra) *pel-* ‘to overtake’, *pelie-* ‘to be enough’, *peld’ii-* ‘to bring to an end’. Nilolaeva 2006:346.
- D. (?) Proto-Altaic **p̥h̥üle* (~ *-i*) ‘(vb.) to be left over; (n.) surplus’: Proto-Tungus **pule-* ‘(vb.) to be left over; (n.) surplus’ > Manchu *fulu* ‘surplus, excess, left over, extra’; Evenki *hele-*, *hule-* ‘(vb.) to be left over; (n.) surplus’; Lamut / Even *hul-* ‘(vb.) to be left over; (n.) surplus’; Ulch *pule-* ‘(vb.) to be left over; (n.) surplus’; Oroch *pule-* ‘(vb.) to be left over; (n.) surplus’; Nanay / Gold *pule-* ‘(vb.) to be left over; (n.) surplus’; Oroch *hule-* ‘(vb.) to be left over; (n.) surplus’; Udihe *hule-* ‘(vb.) to be left over; (n.) surplus’; Solon *ule-* ‘(vb.) to be left over; (n.) surplus’. Proto-Mongolian **hüle-* ‘(vb.) to be left over, to remain; (n.) surplus’ > Classical Mongolian *üle-* ‘to be superfluous’, *üle* ‘enough, sufficiently’; Khalkha *üle-* ‘(vb.) to be left over; (n.) surplus’, *ilū* ‘more than’, *ülde-* ‘to remain, to be left over’; Buriat *üle-* ‘(vb.) to be left over; (n.) surplus’, *ülū* ‘more than’, *ülde-* ‘to

remain, to be left over'; Kalmyk *ülü*, *ilü* 'more than', *ülde*- 'to remain, to be left over'; Ordos *üli*-, *üle*- '(vb.) to be left over; (n.) surplus'; Dagur *χulu*- '(vb.) to be left over; (n.) surplus', *χulü* 'more than'; Monguor *fulē*- '(vb.) to be left over; (n.) surplus', *fulü* 'more than'. Poppe 1960:12, 111, and 126; Collinder 1955:145—146 and 1977:155; Street 1974:24 **püle*- 'to be enough, to be in excess'; Starostin—Dybo—Mudrak 2003:1181—1182 **p'üle* (~-i) 'to be left; surplus'.

- E. Proto-Chukchi-Kamchatkan derivational affix **pəl*- 'completely' (?): Chukchi *p(ə)l*- (with comitative case) 'reserve-', (with negative *e*...-*ke*) '(not) completely'; Alyutor *p(ə)li*- 'completely, intensely'; Koryak *p(ə)l*- 'well, intensely'; Kamchadal / Itelmen *ᵒp-laX*- 'big', *pəlse-kas* 'to swell, to increase'. Fortescue 2005:420.

Buck 1949:13.15 much, many; 13.16 more; 13.162 most; 13.21 full. Bomhard—Kerns 1994:247—248, no. 54; Hakola 2000:131, no. 571; Dolgopolsky 2008, no. 1710, **palyū* 'much, superfluous'.

100. Proto-Nostratic (n.) **p^hal-a* 'settlement, settled place':

- A. Dravidian: Tamil *paḷli* 'hamlet, herdsman's village, hermitage, temple (especially of Buddhists and Jains), palace, workshop, sleeping place, school room'; Malayalam *paḷli* 'hut, small settlement of jungle tribes, public building, place of worship for Buddhists or foreigners, mosque, royal couch'; Kannaḍa *paḷli*, *haḷli* 'settlement, abode, hamlet, village', *paḷḷiru* 'to rest, to inhabit'; Telugu *paḷli* 'hut', *paḷliya*, *palle* 'small village'. Krishnamurti 2003:8 **paḷḷ-i* 'hamlet'; Burrow—Emeneau 1984:358, no. 4018.
- B. Proto-Indo-European **p^hlH*- 'fortified settlement': Sanskrit *pūr* (gen. sg. *purāḥ*) 'rampart, wall, stronghold, fortress, castle, city, town'; Greek πόλις (Homeric πτόλις) 'city, citadel'; Lithuanian *pilis* 'castle'; Latvian *pils* 'castle'. Pokorny 1959:799 **pel*- 'citadel, fortified high place'; Walde 1927—1932.II:51 (**pel*-), **pelə*-; Mann 1984—1987:1008 **pul*- (**pulos*, **puls*) 'stronghold, gateway'; Gamkrelidze—Ivanov 1984.II:744 **p^hel*- and 1995.I:648 **p^hel*- 'fortress, fortified city'; Watkins 1985:49 **pelə*- and 2000:64 **pelə*- 'citadel, fortified high place'; Mallory—Adams 1997:210 **pelh_x*- 'fort, fortified place'; Mayrhofer 1956—1980.II:327; Boisacq 1950:802; Hofmann 1966:279; Beekes 2010.II:1219—1220 **pelH*-; Chantraine 1968—1980.II:926—927; Frisk 1970—1973.II:576—577; Prellwitz 1905:378—379; Fraenkel 1962—1965.I:590—591; Smoczyński 2007.1:458.
- C. Uralic: Proto-Finno-Ugrian **palyz* 'village, dwelling place' > (?) Finnish *palva*- in some place-names; (?) Karelian *palvi* 'dwelling-place, habitation'; Hungarian *falufalva*- 'village, hamlet'; Ostyak / Xanty *pugəl* (< *-*ly*-), *pugət* 'village'; Vogul / Mansi *pōḍwl* 'village'. Collinder 1955:77

and 1977:94; Joki 1973:359—360; Rédei 1986—1988:351 **palʏz*; Sammallahiti 1988:548 **pālwa* ‘village; idol’.

- D. (?) Proto-Altaic **pǎlagV* ‘fortress, group of houses’: Proto-Tungus **palVga* ‘a group of houses’ > Manchu *falga* ‘clan, tribe; all the people living on one street, quarter of a town’. Proto-Mongolian **balaga-sun* ‘city, fortress’ > Written Mongolian *balyasu(n)* ‘city, town’; Khalkha *balgas* ‘city, town; ruins of the site of an ancient town’; Buriat *balgāha(n)*, *balgān* ‘hovel’; Kalmyk *balʏsɯ* ‘city, fortress’; Ordos *balgasu*, *balgus* ‘city, fortress’; Monguor *ba(r)gāsə*, *wargāsə* ‘city fortress’; Dagur *balga*, *balag* ‘house, dwelling place’. Proto-Turkic **bialik* ‘city, fortress’ > Old Turkic (Orkhon, Old Uighur) *balīq* ‘city, fortress’; Karakhanide Turkic *balīq* ‘city, fortress’; Sary-Uighur *balīq*, *paluq* ‘city, fortress’; Chuvash *püler* ‘city, fortress’. Starostin—Dybo—Mudrak 2003:1092 **pǎlagV* ‘fortress, group of houses’. At least some (possibly all) of these forms may be loanwords (from Uralic ?) (cf. Sinor 1981).

Buck 1949:19.15 city, town. Illič-Svityč 1971—1984.III:89—93, no. 368, **p'alga* ‘fortified settlement’; Bomhard—Kerns 1994:249, no. 55; Hakola 2000:131, no. 572; Dolgopolsky 2008, no. 1700, **palV[g]V* ‘settlement, home, wall’.

101. Proto-Nostratic (n.) **pʰal-a* ‘thumb, big toe’:

- A. (?) Proto-Kartvelian **polo-* ‘hoof’: Georgian *polo-*, *pol-* ‘large hoof’ (Gurian *polo-* ‘big foot, ugly foot’ [this may be a loan from Laz]); Mingrelian *polo-* ‘hoof, foot’, *na-pol-e-* ‘hoof tracks’; Laz (*m*)*polo-*, *mpulo-* ‘calf of leg, lower part of leg’. Svan *pol* ‘hoof’ is a Georgian loan. Klimov 1998:203 **polo-* ‘hoof’; Fähnrich—Sardshweladse 1995:358—359 **pol-*; Fähnrich 2007:438 **pol-*. According to Klimov, the Kartvelian forms may be loans from Proto-Indo-European **pōlo-* ‘big toe, thumb’.
- B. Proto-Indo-European **pʰol-*, **pʰōl-* ‘thumb, big toe’: Latin *pollex* ‘thumb, big toe’; Late Church Slavic *palъць* ‘thumb’; Polish (dial.) *palic* ‘finger’. Pokorny 1959:840—841 **polo-*, **pōlo-* ‘swollen, thick’; Walde 1927—1932.II:102 **pōlo-*; Watkins 1985:52 **pol-* ‘finger’; Mallory—Adams 1997:255 **pólik(o)s* ‘finger, thumb’; Ernout—Meillet 1979:519; Walde—Hofmann 1965—1972.II:332—333; De Vaan 2008:478 **por-likʰ-s*.
- C. Proto-Uralic **pālkā* ‘thumb’: Lapp / Saami *bæl'ge* ‘thumb’; Mordvin (Erza) *pel'ka* ‘thumb’, (Moksha) *pel'ke* ‘thumb’; Votyak / Udmurt *pōly* ‘thumb’; Zyrian / Komi *pel*, *pev*, *pej* ‘thumb; top, pinnacle, protruding, curved, arched part, end, point’; Vogul / Mansi *pääji* ‘thumb’, (Northern) *pal'e* ‘thumb’; (?) Yurak Samoyed / Nenets *piiketee*, *piikicea* ‘thumb, finger’; (?) Tavgi Samoyed / Nganasan *feaja* ‘thumb’; (?) Yenisei Samoyed / Enets (Hantai) *fiit'u* ‘thumb’, (Baiha) *fiid'u* ‘thumb’; (?) Kamassian *piidi* ‘thumb’. Collinder 1955:5 and 1977:27; Rédei 1986—

1988:363 **pälkä* ‘thumb’; Décsy 1990:105 **pälkä*/**päkä* ‘thumb’; Sammallahiti 1988:353 Proto-Finno-Permian **pelkä* ‘thumb’; Janhunen 1977b:123.

Buck 1949:4.342 thumb. Dolgopolsky 2008, no. 1726, **pälχ|yV* ‘thumb, big toe; (?) finger’; Bomhard—Kerns 1994:249—250, no. 56.

102. Proto-Nostratic root **p^hal-* (~ **p^həl-*):

(vb.) **p^hal-* ‘to cover, to hide, to conceal’;

(n.) **p^hal-a* ‘covering’

- A. Proto-Kartvelian **pal-* ‘to hide, to bury’: Georgian *sa-pl-av-i* ‘grave’, *pal-*, *pl-* ‘to bury, to stick in’ (in Old Georgian, ‘to hide, to bury’); Mingrelian *pul-* ‘to hide, to bury’; Laz *m-pul-* ‘to hide, to bury’. Klimov 1964:187 **pal-* and 1998:197 **pal-* ‘to hide, to bury’; Schmidt 1962:136; Fähnrich 1994:235 and 2007:423 **pal-*; Fähnrich—Sardshweladse 1995:347—348 **pal-*; Jahukyan 1967:74.
- B. Proto-Indo-European **p^hel-/p^hol-/p^hl-* ‘to cover, to hide, to conceal’: Sanskrit *paṭa-h* (**-lt-* > *-t-*) ‘woven cloth, garment, blanket’, *paṭāla-m* ‘cover, veil’; Latin *palla* ‘a long wide upper garment of Roman women, held together by brooches; robe, mantle’, *pallium* ‘a covering, cover’, *pallula* ‘little cloak or mantle’; Gothic *filhan* ‘to conceal, to bury’; Old Icelandic *fela* ‘to hide, to conceal’, *fylgsni* ‘hiding-place’; Old English *be-fēolan* ‘to put away (under the earth), to bury’; Old Frisian *bi-fella* ‘to conceal, to commit’; Old Saxon *bi-felhan* ‘to commit, to entrust, to bury’; Old High German *felahan*, *bi-fel(a)han* ‘to transmit, to entrust, to bury’ (New High German *befehlen*); Old Prussian *pelkis* ‘cloak’. Rix 1998a:424 **pelk-* ‘to wrap, to enclose, to hide, to conceal’; Pokorny 1959:803—804 **pel-*, **pelə-*, **plē-* ‘to hide’; Walde 1927—1932.II:58—59 **pel-* ‘skin, hide’; Mann 1984—1987:917—918 **pelt-* ‘wrap, cloak, cover, screen’; Mayrhofer 1956—1980.II:189 and 190; Orël 2003:97 Proto-Germanic **felxanan*; Kroonen 2013:135 Proto-Germanic **felhan-* ‘to hide’; Feist 1939:151—152 **pel-ē-*; Lehmann 1986:115; De Vries 1977:116 **pel-* and 148; Kluge—Mitzka 1967:60 **pelk-*; Kluge—Seebold 1989:68 **pel-*; De Vaan 2008:440 “no etymology”.

Sumerian *pāla*, *pāla* ‘clothes, clothing (of a god or king)’.

Buck 1949:6.12 clothing, clothes; 12.26 cover (vb.); 12.27 hide, conceal. Bomhard—Kerns 1994:252, no. 59.

103. Proto-Nostratic root **p^halv-* (~ **p^həlv-*):

(vb.) **p^halv-* ‘to burn, to be warm; to smart, to be painful’;

(n.) **p^halv-a* ‘burn, burning sensation, pain’

- A. Proto-Kartvelian **o-pl-* ‘sweat, perspiration’: Georgian *opli* ‘sweat’; Mingrelian *upu*, *up-i* ‘sweat’; Laz *upi* ‘sweat’; Svan *wop*, *wep* (< **wöp-* < **opi*) ‘sweat’. Klimov 1964:151 **opl-* and 1998:146 **opl-* ‘sweat’; Schmidt 1962:129; Fähnrich—Sardshweladse 1995:270 **opl-*; Fähnrich 1994:222 and 2007:326—327 **opl-*; Jahukyan 1967:74. Semantic development from ‘heat; hot’ to ‘sweat, perspiration’ as in Old Church Slavic *potъ* (< **poktъ*) ‘sweat, perspiration’, from the same root found in *pekъ* ‘heat’, *peštъ* ‘oven’, **pekъ*, **pešti* ‘to bake, to burn’, etc. (cf. Pokorny 1959:798; Derksen 2008:415 **pok^w-to-*).
- B. Proto-Indo-European **phel-/p^hol-*, **p^hl-oH-* > **p^hl-ō-* ‘to burn, to be warm; to smart, to be painful’: Old Icelandic *flóna* ‘to become warm’, *flóa* ‘to heat, to warm’, *flór* ‘warm’, *flær* ‘warmth, heat’; Norwegian *flø* ‘tepid, lukewarm’; Old Church Slavic *poljъ*, *polěti* ‘to burn’, *plamy* ‘flame’; Tocharian A *pälk-*, B *pälk-*, **pelk-* ‘to burn; to cause pain, to trouble, to distress’. Rix 1998a:422—423 (?) **pel-* ‘to blaze’; Pokorny 1959:805 (**pel-*), **pol-*, **plē-*, **plō-* ‘to burn, to be warm’; Walde 1927—1932.II:59—60 (**pel-*), **pol-*, **plē-*, **plō-*; Mann 1984—1987:903 **pal-*, **paljō* (?); De Vries 1977:133 and 135; Torp 1919:127; Adams 1999:378; Van Windekens 1976—1982.I:357. Note: both Adams and Van Windekens derive the Tocharian forms from Proto-Indo-European *bhelg-* ‘to shine’. This seems far less likely than the derivation proposed here.
- C. Proto-Uralic **palʷa-* ‘to burn; to be cold, to be freezing; to smart’: Proto-Finnic **pala-* ‘to burn’ > Lapp / Saami *buolle-/buole-* ‘to burn (intr.), to smart (of skin)’, *buolaš/buollášâ-* ‘frost; frosty, with rather severe frost’, *boal’de-* ‘to burn (tr.), to smart (e.g., wound)’, *ból’tu-* ‘to become swollen or red through being frozen (of face or hands)’, Lule (also) ‘to get frost-bitten (of a part of the body)’; Finnish *pala-* ‘to burn (intr.)’, *palele-* ‘to be cold, to be freezing, to feel chilly’, *peleltu-* ‘to freeze (intr.), to be frost-bitten, to be blighted by frost’, *poltta-* ‘to burn (tr.), to scorch, to singe, to scald’; Mordvin *palo-* ‘to burn (intr.); to be cold, to be freezing (of parts of the body)’, *pulta-* ‘to burn (tr.)’; Vogul / Mansi *pool’-* ‘to freeze’; Ostyak / Xanty *pěj*, (Southern) *pěj* ‘thick, ice-crust’, (Southern) *pějät-* ‘to get cold, to catch cold’; Hungarian *fagy* ‘frost, freezing; chill’, *fagy-* ‘to freeze, to become frozen, to coagulate’. Collinder 1955:106 and 1977:120; Rédei 1986—1988:352 **pal’a*; Zhivlov 2023:159 Proto-Finnic **pala-* ‘to burn’.

Buck 1949:1.85 burn (vb.); 4.55 sweat (sb.); 15.85 hot, warm; 15.86 cold. Bomhard—Kerns 1994:254—255, no. 63; Dolgopolsky 2008, no. 1725, **pal̥l̥H[ā]* ‘to burn (intr.); to be heated on fire’; Hakola 2000:131, no. 569.

104. Proto-Nostratic root **p^haŋ-* (~ **p^həŋ-*):
 (vb.) **p^haŋ-* ‘to take in hand, to take hold of, to handle’;
 (n.) **p^haŋ-a* ‘hand, handle’

Extended form (Indo-European and Uralic [but not Yukaghir]):

(vb.) *p^haŋ-V-k^{wh}- ‘to take in hand, to take hold of, to handle’;

(n.) *p^haŋ-k^{wh}-a ‘hand, handle’

- A. Afrasian: Highland East Cushitic: Gedeo / Darasa *fanno* ‘handle’. Hudson 1989:239.
- B. Dravidian: Kui *pāṇba* (*pāt-*), *pānpa* (*pānt-*) ‘(vb.) to obtain, to get, to receive, to find; (n.) obtaining, getting, finding, wealth’; Kuwi *pa?* (*pat-*; past participle *paṇbi*) ‘to find, to get’, *pa?*- (*pāt-*; infinitive *pāḍeli*; negative *prā-*; imperative 2nd sg. *prāmu*) ‘to obtain’, *pā?nai* ‘to get, to have’, *pānpu* ‘the receipt’, *pān-/pṇa?*- ‘to receive, to get’. Burrow—Emeneau 1984:362, no. 4072.
- C. Proto-Indo-European *p^henk^{wh}e ‘five’: Sanskrit *pāñca* ‘five’; Avestan *panča* ‘five’; Armenian *hing* ‘five’; Greek πέντε ‘five’; Albanian *pesë* ‘five’; Latin *quīnque* ‘five’; Umbrian **pompe* ‘five’, *pump-* in *pumpeṛias* ‘groups of five’; Oscan **pompe* ‘five’, *púmp-* in *púmperiais* ‘*groups of five’ (name of a festival); Old Irish *cóic* ‘five’; Gaulish *pempe-* ‘five’; Old Welsh *pimp* ‘five’; Cornish *pypm* ‘five’; Breton *pemp* ‘five’; Gothic *fimf* ‘five’; Old Icelandic *fimm* ‘five’; Faroese *fimm* ‘five’; Danish *fem* ‘five’; Norwegian *fem* ‘five’; Swedish *fem* ‘five’; Old English *fif* ‘five’; Old Frisian *fif* ‘five’; Old Saxon *fif* ‘five’; Dutch *vijf* ‘five’; Old High German *finf*, *finf* ‘five’ (New High German *fünf*); Lithuanian *penki* ‘five’; Old Church Slavonic *petъ* ‘five’; Russian *pjatʹ* [пять] ‘five’; Tocharian A *pāñ*, B *piś* (< *pāñś) ‘five’. Pokorny 1959:808 **penk^{ue}* ‘five’; Walde 1927—1932.II:25—26 **penq^{ue}*; Mann 1984—1987:919 **penque* ‘five’; Watkins 1985:49 **penk^{ue}* (assimilated form **pempe* > Germanic **finf*) and 2000:64—65 **penk^{ue}* ‘five’; Gamkrelidze—Ivanov 1984.II:845, II:847, II:849 **p^h[h]enk^h[h]^oe* and 1995.I:743, I:745, I:746, I:747 **p^henk^h^oe* ‘five; total of fingers’; Mallory—Adams 1997:401 **pénk^{ue}* ‘five’ and 2006:308 **pénk^{ue}* ‘five’; Mayrhofer 1956—1980.II:187; Boisacq 1950:767—768 **pénq^{ue}*; Chantraine 1968—1980.II:882 **penk^{ue}*; Hofmann 1966:260 **pénq^{ue}*; Frisk 1970—1973.II:506—507 **pénq^{ue}*; Beekes 2010.II:1172—1173 **penk^{ue}*; De Vaan 2008:509; Ernout—Meillet 1979:558; Walde—Hofmann 1965—1972.II:407—408 **penq^{ue}*; Orël 1998:326 and 2003:98 Proto-Germanic **fēnfē*; Kroonen 2013:140 Proto-Germanic **finfe-* ‘five’; Lehmann 1986:117 **pénk^{ue}*; Feist 1939:154 **pénk^{ue}*; De Vries 1977:120; Torp 1919:100; Onions 1966:358 Common Germanic **finfi*; Klein 1971:283 **penq^{ue}*; Boutkan—Siebinga 2005:113 **penk^{ue}*; Kluge-Mitzka 1967:224 Proto-Germanic **fēm̃f(e)*; Kluge—Seebold 1989:236 **penq^{ue}*; Adams 1999:388 **pénk^{ue}*; Van Windekens 1976—1982.I:360—361 **penq^{ue}*; Blažek 1999b:219—233 **pénk^{ue}*; Fraenkel 1962—1965.I:470; Smoczyński 2007.1:450; Derksen 2008:400 **penk^{ue}*. Note: Horowitz (1992) derives the Proto-Indo-European word for the number ‘five’ from an unattested verb stem **penk^w-* ‘to take in hand, to handle’ — this

proposal is endorsed by Blažek (1999b:228—229). Proto-Indo-European **ph₂nk^{wh}-st^{hi}-* ‘fist’: Proto-Germanic **funxstiz* > West Germanic **fūxsti-* > **fūsti-* > Old English *fīst* ‘fist’; Old Frisian *fest* ‘fist’; Middle Low German *fūst* ‘fist’; Middle Dutch *veest* ‘fist’ (Dutch *vuist*); Old High German *fūst* ‘fist’ (New High German *Faust*). Serbian Church Slavic *pęstь* ‘fist’. Mann 1984—1987:968 **p₂nkstis* [**p₂nqstis* ?] ‘fist’; Mallory—Adams 1997:255 **p₂ṇ(k^w)stī-* ‘fist’; Derksen 2008:399 **p₂nk^w-s-ti-*; Orël 2003:118—119 Proto-Germanic **funxwstiz*; Kroonen 2013:160 Proto-Germanic **funhsti-* ‘fist’; Klein 1971:283; Onions 1966:358 **fūsti-* < **fūxstiz* < **funxstiz* ‘fist’; Boutkan—Siebinga 2005:107; Kluge—Mitzka 1967:187; Kluge—Seebold 1989:205 **p₂nk-sti-*; Wodtko—Irslinger—Schneider 2008:566—568 **p₂ṇk(u)stī-*. Proto-Indo-European **ph₂enk^{wh}-rō-* ‘finger’: Proto-Germanic **fi₂ṅgraz* ‘finger’ > Gothic *figgrs* ‘finger’; Old Icelandic *fi₂ng* ‘finger’; Faroese *fi₂ngur* ‘finger’; Swedish *fi₂nger* ‘finger’; Norwegian *fi₂nger* ‘finger’; Danish *fi₂nger* ‘finger’; Old English *fi₂nger* ‘finger’; Old Frisian *fi₂nger* ‘finger’; Old Saxon *fi₂ngar* ‘finger’; Dutch *vi₂nger* ‘finger’; Old High German *fi₂ngar* ‘finger’ (New High German *Finger*). Orël 2003:99 Proto-Germanic **fi₂ṅgraz*; Kroonen 2013:141 Proto-Germanic **fi₂ngra-* ‘finger’; Feist 1939:150; Lehmann 1986:114; De Vries 1977:120 **penk^u-res*; Torp 1919:105 Indo-European **penqrō-*; Boutkan—Siebinga 2005:114—115; Onions 1966:357 Common Germanic **fi₂ṅgraz*; Klein 1971:282; Kluge—Mitzka 1967:198; Kluge—Seebold 1989:215 **fi₂ngra-*.

- D. Proto-Uralic **pa₂ŋka* ‘handle, shaft, grip’: (?) Finnish *panka* ‘pail handle; distaff; halter for reindeer’ (the meaning ‘halter for reindeer’ is borrowed from Lapp / Saami), *panki*, *pankki* ‘pail, bucket’; (?) Estonian *pang* ‘pail, bucket’ (dial. ‘handle, grip’); (?) Lapp / Saami (Norwegian) *bag’ge*, -gg- ‘halter for reindeer, horse, or cow’, (Lule) *paggee* ‘halter’; (?) Mordvin (Erza) *pa₂ngo* ‘female head-dress’, (Moksha) *pa₂nga* ‘head-dress worn by Mordvin women’; (?) Vogul / Mansi (Lower Konda) *pō₂ḡkālaj* ‘rein(s)’; (?) Yurak Samoyed / Nenets *pa₂ŋk* ‘handle of an axe’; (?) Yenisei Samoyed / Enets (Hatanga) *foggo*, (Baiha) *poggo* ‘handle of a hatchet or a hammer’; (?) Tavgi Samoyed / Nganasan *fōnka* ‘handle of a hatchet or a hammer’; (?) Selkup Samoyed (Middle Tas) *paq* ‘handle’, (Upper Ket) *pa₂ŋka* ‘handle of a knife’; (?) Kamassian *pā₂ŋa*, *pā₂ŋŋa*, *pa₂ŋa* ‘handle’. Rédei 1986—1988:354—355; Fortescue 1998:156 Proto-Uralic **pa₂ŋka*, Proto-Samoyed **pā₂ŋkə* ‘shaft, handle’; Décsy 1990:105 **pa₂nga* ‘handle, grip’; Janhunen 1977b:113. Yukaghir (Southern / Kolyma) *pe:di₂ce* (< **pentičə*) ‘finger’. Nikolaeva 2006:350.
- E. (?) Chukchi-Kamchatkan: Proto-Chukotian **(lə)pā₂ŋrə-* ‘to give out, to hand out’ > Chukchi *pā₂ŋrə-* ‘to give, to provide, to hand out’, *ya-lpā₂ŋrə-lən* ‘provided with’; Kerek *pā₂ŋəi-* ‘to give, to provide (guest)’; Koryak *pā₂ŋjə-* ‘to provide, to hand out’; Ayutor (*l*)*pā₂ŋrə-* ‘to give out’. Fortescue 2005:224. For the semantic development from ‘to take in hand, to take hold of, to handle’ to ‘to give out, to hand out’, cf. Buck 1949:11.21 give.

Buck 1949:4.33 hand; 11.14 seize, grasp, take hold of; 11.16 get, obtain; 11.21 give. Fortescue 1998:156 *paŋkiy- ‘to grasp’.

105. Proto-Nostratic (n.) *p^haŋ-a ‘front part, head, forehead, face’:

- A. Proto-Afrasian *pan-, *pin- ‘front part, forehead, face’: Proto-Semitic *pan- ‘front part, face’ > Akkadian *pānu* ‘front part; (pl.) face, countenance’, *pānū* ‘earlier, prior’, *pānātu* ‘front’; Hebrew **pāneh* [פָּנֶה], (pl.) *pānīm* [פָּנִים] ‘face, front part’; Phoenician (pl.) **pnm* ‘face, front part’, *lpn* ‘before’; Ugaritic (pl.) *pnm* ‘face’, *lpn* ‘before’; Mehri *fōnəh* ‘earlier, before’, *fənfənw-* ‘in front of, before’; Šheri / Jibbāli *fēne* ‘face, front part’, *fēné* ‘earlier, firstly, in front of’; Harsūsi *fēn* ‘before, in front of; earlier, ago’; Soqotri *fāne* (*fēne*) ‘face, surface’. Klein 1987:513—514; Murtonen 1989:341—342. Cushitic: Proto-Agaw **fin-* ‘forehead, face’ > Awngi / Awiya *fen*, *feni* ‘forehead, face’. (?) Southern Cushitic: Proto-Rift **pand-* (-d- suffix ?) ‘prominence, protuberance, projecting surface or point’ > Iraqw *panda* ‘abnormal backward extension of skull’; Burunge *panda* ‘forehead, face; in front’; Alagwa *panda* ‘forehead, face; in front’; Asa *pandek* ‘knife’ (“[s]emantic derivation: via an intermediate specification of the root to apply to a particular kind of projection, the blade or point of a weapon”). Ehret 1980:339. East Chadic **pVn-* ‘temple’ > Kera *pən-ay* ‘temple’. Orël—Stolbova 1995:417, no. 1943, **pan-*/**pin-* ‘face’.

Comment: Militarëv—Kogan (2000.I:188—190, no. 215) reconstruct Proto-Semitic (n.) **pan-* ‘face’, Proto-Afrasian **pVn-* ‘face, nose’. Militarëv—Kogan note: “Derived from ‘face’ are also MSA: Mhr. *fənfənw-* (redupl.) ‘earlier, in front of, before’, *fōnəh* ‘earlier’ [JM 96] and Hrs. *fēn* ‘before, in front of’, *fēnōhen* ‘forward, earlier’ [JH 33].”

- B. Dravidian: Kannaḍa *paṇe*, *haṇe*, *aṇe*, *haṇi* ‘forehead’; Tuḷu *haṇè*, *aṇè* ‘forehead’. Burrow—Emeneau 1984:348, no. 3896.
- C. Proto-Uralic **pāŋe* ‘head; point, tip; end; beginning’: Finnish *pää* ‘head; point, tip; end; beginning’; Estonian *pea*, *pää* ‘head; point, tip; end; beginning’; (?) Lapp / Saami *bagŋe/baŋe-* ‘the thickest part of the reindeer antler, closest to the head’; Mordvin *pe/pej-* ‘the end’; Votyak / Udmurt *puŋ*, *pun*, *pum* ‘end, edge, point’; Zyrian / Komi *pon*, *pom* ‘end; beginning, point’; Vogul / Mansi *pōŋ*, *pāŋk* ‘head, beginning’; Hungarian *fő*, *fej* ‘head; source, origin, beginning’, *befejez-* ‘to conclude, to finish, to bring to an end’ (*be-* means ‘in’, *-z-* is a suffix); (?) Yurak Samoyed / Nenets *pa-* ‘to begin’; Tavgi Samoyed / Nganasan *feaj* ‘end, extremity, tip’. Collinder 1955:47 and 1977:65—66; Rédei 1986—1988:365—366 **pāŋe* ‘head’; Décsy 1990:105 **pāngä* ‘head’; Sammallahti 1988:548 Proto-Finno-Ugrian **pāŋi* ‘head’.

Buck 1949:4.20 head; 4.204 face; 4.205 forehead. Dolgopolsky 2008, no. 1750, **[p]äḡV* ‘forehead’ ([in descendant languages] → ‘face, head’); Hakola 2000:127, no. 550; Fortescue 1998:156.

106. Proto-Nostratic root **p^har-* (~ **p^har-*):

(vb.) **p^har-* ‘to be fond of, to care for, to feel affection for; to be pleased, happy, satisfied, or delighted with’;

(n.) **p^har-a* ‘love, affection; delight, joy’

- A. Proto-Afrasian **p[a]r-* ‘(vb.) to be fond of, to care for, to feel affection for; to be pleased, happy, satisfied, or delighted with; (n.) love, affection; delight, joy’: Proto-Semitic **par-aḥ-* ‘to be glad, happy, delighted; to rejoice’ > Arabic *fariḥa* ‘to be glad, happy, delighted; to rejoice; to be gay, merry, cheerful’, *farah* ‘joy, gladness, glee, gaiety, hilarity, mirth, exhilaration, merriment, joy’, *farḥa* ‘joy’, *fariḥ*, *fāriḥ* ‘merry, gay, cheerful, joyful, glad, delighted, happy’; Mehri *fīrəḥ* ‘to be happy’, *fərhāt* ‘happiness’, *fōrəḥ* ‘to make happy’; Ḥarsūsi *fēreh* ‘to rejoice, to be happy’, *ferhet* ‘happiness’, *fēreh* ‘to make happy’; Šheri / Jibbāli *fērəḥ* ‘to be happy, pleased’, *effrāḥ* ‘to make happy’, *farḥ*, *fərhāt* ‘happiness’. Zammit 2002:318. Berber: Tuareg *ifrar* ‘to be good, to be abundant, to be of good quality’, *səfrər* ‘to make good, to make abundant, to make of good quality’, *təfərə* ‘character of that which is good, good quality, abundance’.
- B. Dravidian: Tamil *pari* ‘to be affectionate’, *pari* ‘love, affection’, *parivu* ‘affection, love, devotion, piety, delight, pleasure’; Malayalam *parivu* ‘love’; Kannaḍa *paraḷiga* ‘paramour’; Telugu *perima* ‘love, affection’. Burrow—Emeneau 1984:353, no. 3984.
- C. Proto-Indo-European **p^hreyH-*/**p^hroyH-*/**p^hriH-* (> **p^hrī-*) ‘to be fond of, to care for, to feel affection for; to be pleased, happy, satisfied, or delighted with’: Sanskrit *prīṇāti* ‘to please, to gladden, to delight, to gratify, to cheer, to comfort, to soothe, to propitiate; to be pleased or satisfied with, to delight in, to enjoy’, *prīyate* ‘to be pleased’, *priyā-ḥ* ‘beloved, dear’, *premān-* ‘affection, kindness, fondness, love’, *préyas-* ‘dearer, more agreeable; a lover, a dear friend’, *prīti-ḥ* ‘pleasure, joy, gladness, satisfaction’; Avestan *frīnāiti* ‘to love, to praise’, *fr̥yō* ‘dear’; Welsh *rhydd* ‘free’; Gothic *freis* ‘free’, *frijei*, *frei-hals* ‘freedom’, *frijōn* ‘love’, *freidjan* ‘to take care of’, *frijōnds* ‘friend’, *friapwa* ‘showing love’; Old Icelandic *frjá* ‘to love’, *frjáls* ‘love’, *fríða* ‘to adorn’, *fríðr* ‘beautiful, handsome, fine’, *frændi* ‘kinsman’, *fríða* ‘to pacify’, *fríðr* ‘peace’, *fríðill* ‘lover’; Old English *frēo* ‘free; noble; joyful’, *frēond* ‘friend; relative; lover’, *frēod* ‘affection, friendship, good-will, peace’, *frēogan*, *frīgan* ‘to free, to love’, *frēo* ‘lady, woman’, *friodu* ‘peace’; Old Frisian *friund* ‘friend’, *frī* ‘free’; Old Saxon *friund* ‘friend’, *frī* ‘free’; Dutch *vriend* ‘friend’; Old High German *vrīten* ‘to cherish’, *frī* ‘free’ (New High German *frei*), *friunt* ‘friend’ (New High German *Freund*), *fridu* ‘peace’ (New High German

Friede), *frīhals* ‘free man’; Old Church Slavic *prějō*, *prijati* ‘to be favorable’, *prijatelb* ‘friend’, *prijaznъ* ‘love’; Latvian *priēks* ‘joy’. Rix 1998a:441 **prejH-* ‘to delight in’; Pokorny 1959:844 **prāi-*, **prai-*, **prī-* (**pri-*) ‘to like’; Walde 1927—1932:II:86—87 **prēi-*, **prai-*, **prī-* (**pri-*); Mann 1984—1987:988 **prija-* (**priā-*, **priē-*) ‘dear’, 988—989 **priājō* ‘to like, to love, to favor’, 989 **priēt-* (**priāt-*, **priūt-*) ‘beloved, dear’, 989 **prijos*; Watkins 1985:53 **prī-* (contracted from **priā-*) and 2000:69 **prī-* ‘to love’ (oldest form **priā-*, contracted to **prī-* [before consonants] and **priy-* [before vowels]); Mallory—Adams 1997:358 **pri_xeha-* ‘love’, **pri_x-neha-*, **pri_xós* ‘of one’s own’ > ‘dear’ and 642 **pri_x-* ‘to be pleasing, to be one’s own’, **pri_xéha* ‘wife’; Mayrhofer 1956—1980:II:378—380 and II:380; Orël 2003:113 Proto-Germanic **frijadwō*, 114 **frijaz*, 114 **frijōjanan*, 114—115 **frijōndz*; Kroonen 2013:155 Proto-Germanic **fri(j)a-* ‘free’, 155 **fri(j)ōn-* ‘to love’, 155 **fri(j)ōnd-* ‘friend’, and 156 **friþu-* ‘friendship, peace’; Lehmann 1986:127, 127—128, 128, and 128—129; Feist 1939:167, 167—168, and 168; De Vries 1977:142, 142—143, 143, and 145; Onions 1966:375—376 and 377; Klein 1971:295 and 296; Boutkan—Siebinga 2005:130 and 131; Kluge—Mitzka 1967:216, 218, and 219; Kluge—Seebold 1989:230—231 and 232; Wodtko—Irslinger—Schneider 2008:568—573 **prejH-*.

Buck 1949:16.27 love (sb.; vb.); 16.71 good (adj.). Blažek 1992c:245, no. 2; Bomhard 1996a:217—218, no. 622; Dolgopolsky 2008, no. 1785, **paR[a]Xi* (= **par[a]Xi* ?) ‘happy, dear’.

107. Proto-Nostratic root **p^har-* (~ **p^hər-*):

- (vb.) **p^har-* ‘to separate, to divide, to break (apart)’;
- (n.) **p^har-a* ‘part, portion, share’

A. Proto-Afrasian **par-* ‘to separate, to divide, to break (apart)’: Proto-Semitic **par-ad-* ‘to separate, to divide’ > Hebrew *pāraḏ* [פָּרַד] ‘to separate, to divide’, *pēraḏ* [פֶּרַד] ‘to separate, to disintegrate, to loosen, to decompose’; Aramaic *pāraḏ* ‘to separate, to scatter’; Mandaic *prḏ* ‘to break through, to tear apart’; Arabic *farada* ‘to set aside, to separate, to segregate’; Sabaeen *frd* ‘sole, unique’; Geez / Ethiopic *farada* [ፈረደ] ‘to separate, to judge’, *fərud* [ፍሩድ] ‘separated’, *fərd* [ፍርድ] ‘judgment’; Tigre *fārda* ‘to judge’; Tigrinya *fārādā* ‘to judge’; Amharic *fārrādā* ‘to judge, to dispense justice, to render judgment, to pronounce sentence’, *fərd* ‘judgment, sentence, justice, trial, verdict’; Gurage *fārādā* ‘to judge, to pass judgment’; Harari *fārāda* ‘to judge’. Zammit 2002:318; Murtonen 1989:346; Klein 1987:523; Leslau 1963:63—64, 1979:241, and 1987:165. Proto-Semitic **par-ak-* ‘to separate, to divide’ > Hebrew *pārak* [פָּרַק] ‘to break, to break in pieces; to break off; to deliver, to set free’, *perek* [פֶּרֶק] ‘violence, murder’; Arabic *faraqa* ‘to separate, to part, to split, to divide, to

sever'; Ugaritic *prk* 'to break, to open'; Akkadian *parāku* 'to separate, to detach, to remove'; Mandaic *prk* 'to sever, to detach, to free, to deliver, to save'; Sabaeen *frk* 'to leave, to escape'; Mehri *ferōk* 'to distribute, to divide'; Šheri / Jibbāli *fstrak* 'to become separated'; Ḥarsūsi *fāterek* 'to be or become separated'; Geez / Ethiopic *faraqa* [ፈረቀ] 'to save, to redeem, to divide, to separate, to create'; Tigre *fārka* 'to pierce, to perforate'; Tigrinya *färrākā* 'to split, to divide'; Amharic *färrākā* 'to separate, to divide'; Gurage *färākā* 'to split, to tear off a branch'. Zammit 2002:320; Murtonen 1989:349; Klein 1987:532; Leslau 1987:166. Proto-Semitic **par-at*- 'to divide into parts' > Hebrew *pāraṭ* [פָּרַט] 'to change (money); to give details, to itemize; to divide into parts'; Syriac *pəraṭ* 'to rend, to tear away, to burst open'; Akkadian *parātu* 'to separate, to remove, to break off'; Arabic *faraṭa* 'to separate, to part'; Šheri / Jibbāli *fērōṭ* '(car, bus) to go off without one'; Ḥarsūsi *ferōṭ* 'to depart without one (caravan, car)'; Mehri *fērōṭ* 'to slip out of one's hands; (car, bus, etc.) to go off without one'; [Tigrinya *fārṭa*^o *bälä*, (with metathesis) *fäṭra*^o *bälä* 'to be torn, to burst'; Harari *fārāṭa* 'to burst (a wound from which liquid or pus comes out)'; Amharic *färräṭä* 'to burst, to smash'; Argobba *färräṭa* 'to burst, to smash'; Gurage *färäṭä* 'to burst, to burst and make the sound of bursting, to explode']. Klein 1987:527; Leslau 1979:245; Murtonen 1989:347—348. Proto-Semitic **par-ax*- 'to break out' > Hebrew *pāraḥ* [פָּרַח] 'to break out (of leprosy and like eruptions), to break open (a boil)'; Šheri / Jibbāli *fērəx* '(egg) to split open'; Mehri *fərōx* '(girl) to throw the legs wide apart in playing (which is punished by a slap)'. Murtonen 1989:347. Proto-Semitic **par-ar*- 'to break; to destroy' > Akkadian *parāru* 'to break, to destroy, to annihilate'; Hebrew *pārar* [פָּרַר] 'to break; to destroy; to put an end to, to frustrate', *pārār* 'to crush, to crumble, to break into crumbs'; Aramaic *pərar* 'to crush, to crumble'; Geez / Ethiopic *farra* [ፈረ] 'to shell, to husk'; Tigrinya *färrärä* 'to dissolve'; Amharic *fär(r)* 'furrow'. Klein 1987:533; Leslau 1987:166; Murtonen 1989:346. Proto-Semitic (reduplicated) **par-par*- 'to crumble, to break' > Arabic *farfara* 'to cut, to break, to tear to pieces'; Aramaic *parper* 'to break'; Geez / Ethiopic *farfara* [ፈርፈረ] 'to crumble bread', *fərfār* [፩ርፋር] 'crumbs'; Tigre *färfärä* 'to be reduced to powder'; Tigrinya *färfärä* 'to cut wood or a stone into small pieces, to break into small pieces', *fərfar* 'small pieces of wood'; Amharic *färäffärä* 'to crumble'; Harari *firäffärä* 'to crumble into small pieces'; Gurage *färäffärä* 'to crumble bread', *fərfar* 'bread crumbs'; Argobba *färäffari* 'crumbs'. Leslau 1963:64, 1979:241, and 1987:165. Proto-Semitic **par-ac*- 'to break through' > Hebrew *pāraṣ* [פָּרַצ] 'to break through, to break or burst out', *pereṣ* [פְּרָצ] 'breach (in a wall)'; Aramaic *pəraṣ* 'to break through'; Mandaic *prṣ* 'to break through'; Akkadian *parāṣu* 'to break through'; Ugaritic *prṣ* 'to open'; Arabic *faraṣa* 'to cut'; Geez / Ethiopic *faraṣa* [ፈረጸ] 'to break open, to cut open, to split'; [Tigrinya *fārṭa*^o *bälä*, (with metathesis) *fäṭra*^o *bälä* 'to be torn, to burst'; Harari *fārāṭa* 'to burst

(a wound from which liquid or pus comes out)'; Amharic *färrätä* 'to burst, to smash'; Argobba *färrätä* 'to burst, to smash'; Gurage *färätä* 'to burst, to burst and make the sound of bursting, to explode'. Klein 1987:532; Leslau 1987:167; Murtonen 1989:349. Proto-Semitic **par-am-* 'to cut, to split' > Hebrew *pāram* [פָּרַם] 'to tear, to rend'; Syriac *pāram* 'to cut, to split, to chop'; Arabic *farama* 'to cut into small pieces (meat, tobacco), to mince, to chop, to hash (meat)'. Klein 1987:529; Murtonen 1989:348. Arabic *faraza* 'to set apart, to separate, to detach, to isolate'. Proto-Semitic **par-at-* 'to split' > Aramaic *pārath* 'to split up'; Mandaic *pṛt* 'to split up'. Proto-Semitic **par-as-* 'to separate, to divide' > Hebrew *pāras* [פָּרַס] 'to break in two, to divide'; Aramaic *pāras* 'to divide, to break up'; Akkadian *parāsu* 'to separate, to divide'; Arabic *farasa* 'to kill, to tear (prey)'; Geez / Ethiopic *farasa* [ፈረሰ] 'to be demolished, to be destroyed'; Tigre *fārsa* 'to be ruined'; Tigrinya *fāräsä* 'to be ruined'; Argobba (*a*)*färräsä* 'to demolish'; Amharic *färräsä* 'to be demolished'; Gurage (Gogot) *färräsä* 'to be demolished', (Endegeñ) *afäräsä* 'to demolish, to destroy'. Klein 1987:530; Leslau 1987:167; Murtonen 1989:348. Arabic *farā* 'to split lengthwise, to cut lengthwise; to mince, to chop'. Arabic *farāḡa* 'to open, to part, to separate, to cleave, to split, to breach'. Zammit 2002:318. Egyptian *pr̥t*, *pr̥d* 'to separate', *pr̥h* 'to divide, to separate', *pr̥š* 'to break open'; Coptic *pōrg̃* [ⲡⲟⲣⲉ] 'to divide, to separate'. Hannig 1995:287; Vycichl 1983:164; Černý 1976:129. Berber: Tawlemmet *fardat* 'to be cut into small pieces', *saffərdət* 'to cut into small pieces'; Tamazight *afərdū* 'wooden mortar', *tafərdut* 'small mortar, a piece of wood used to plug a hole', *sfurdu* 'to crush, to pound', *tişfərdut* 'pestle'; Zenaga *affurdi* 'large wooden mortar'. [Proto-Southern Cushitic **parah-* 'to pull apart' > Iraqw *parhami* 'piece'; Asa *parames-* 'to split up (firewood)'; Ma'a *-pará'a* 'to disperse', *-parāti* 'to scatter (something)'; Dahalo *poroh* 'to pull apart'. Ehret 1980:143. Note: Some of the Southern Cushitic forms may belong with **p^har-* (~ **p^har-*) '(vb.) to spread, to scatter; (n.) breadth, width, extension, space; (adj.) broad, extended, spread out, scattered'.] West Chadic **par-* 'to smash, to break to pieces' > Angas *par-p-* 'to smash'; Tangale *puure-* 'to break to pieces'. Central Chadic: Mofu *pərč-* 'to cut'. Ehret 1995:95, no. 50, **par-/pir-* 'to separate', **pur-* 'to take apart'; Orël—Stolbova 1995:418, no. 1951, **par-* 'to break, to thresh', 420, no. 1957, **parVm-* 'to cut, to split', 420, no. 1958, **parok-* 'to tear, to rip', 420, no. 1959, **paruç-* 'to cut, to break through'.

- B. Dravidian: Tamil *pari* (-v-, -nt-) 'to separate, to be sundered, to break off, to be destroyed, to cut asunder, to destroy', *pari* (-pp-, -tt-) 'to cut asunder', *paruṅku* (*paruṅki-*) 'to pluck (as fruit), to tear off'; Tuḷu *paripuni* 'to tear, to rend'; Kolami *part-* (*paratt-*) 'to cut up'; Parji *parṅg-* 'to be split', *parkip-* (*parkit-*) 'to split, to plow for the first time', *parka* 'piece, portion, split piece of wood'; Kuwi *par-* 'to dig a ditch'; Malto *parḡe* 'to split, to cleave, to rend'. Burrow—Emeneau 1984:353, no. 3962.

- C. Proto-Kartvelian **pric*- ‘to tear, to rend, to break or burst apart’: Georgian *p(x)ric*-/*p(x)rec*- ‘to tear, to rend’, *prec*-il- ‘torn’; Mingrelian *buric*- ‘to tear, to rend’; Laz *bric*-/*bruc*- ‘to break, to burst, to tear’, *brac*-el- ‘torn’. Fähnrich—Sardshweladse 1995:62 **breç*-/**breç*-; Fähnrich 2007:77—78 **breç*-/**breç*-; Klimov 1964:190 **priç*- and 1998:204 **preç*- : **priç*- ‘to tear, to rend’, 1998:204 **preç*-il- ‘torn’.
- D. Proto-Indo-European **pher*-/**phor*-/**ph₂*- ‘to separate, to divide’: Sanskrit *pūrtá*-m ‘gift, reward’; Greek *περάω* ‘to carry beyond the seas for the purpose of selling, to sell abroad’, *πέρνημι* ‘to export for sale, to sell (as slaves)’, *πορᾶν* ‘to furnish, to present, to offer’; Latin *pār* ‘equal’, *pars* ‘part, portion, share’, *portiō* ‘part, section, division’; Old Irish *rann* ‘part’; Lithuanian *perkù*, *peĩkti* ‘to buy’. Rix 1998a:427 **perh₂*- ‘to sell’; Pokorny 1959:817 **per*-, **perə*- ‘to sell, to divide’; Walde 1927—1932.II:40—41 **per*-; Mann 1984—1987:924 **perk̑*- ‘to split, to breach’; Rix 2001:474 **perh₂*- ‘to sell’; Watkins 1985:50 **per*- ‘to traffic in, to sell’ (< ‘to hand over, to distribute’) and 2000:66 **perə*- ‘to grant, to allot’; Mallory—Adams 1997:185 **per*- ‘to exchange, to barter’ and 441 (?) **pr₁(h₃)tis* ‘what is distributed’; Mayrhofer 1956—1980.II:324; Chantraine 1968—1980.II:888 and II:928; Frisk 1970—1973.II:516—517 and II:579—580; Hofmann 1966:265 **per*- ‘to sell’; Boisacq 1950:757—758, 774, and 804; Beekes 2010.II:1178—1179 **perh₂*- and II:1222 **perh₃*-; Ernout—Meillet 1979:481, 485, and 524; De Vaan 2008:444; Walde—Hofmann 1965—1972.II:250—251 and II:257—258.
- E. Uralic: Proto-Finno-Ugrian **päre* ‘small piece, bit, fragment’ > Finnish *päre* ‘shingle, splint’ (> Lapp / Saami *bærâ/bærâgâ*- ‘splinter, chip, thin flat piece of wood used for lighting purposes’); (?) Votyak / Udmurt *pyry*, *pyr* ‘crumb, fragment’; Zyrian / Komi *pyryg*, *pyrig* ‘crumb, fragment’; Vogul / Mansi *-poâr* ‘piece, bit’; Ostyak / Xanty *pär* ‘small piece, bit; shingle (for making fire)’. Collinder 1955:106—107 and 1977:121; Rédei 1986—1988:366 **päre*.
- F. Altaic: Manchu *farsi* ‘piece, strip’, *farsila*- ‘to cut or make in pieces’.
- G. Chukchi-Kamchatkan: Proto-Chukotian **pər*- ‘to pull, tear, pluck, or rip out’ > Chukchi *pər*- ‘to pull out by root, to rip out’; Koryak *pəj*- ‘to pluck, to harvest, to peel, to take away; to take off (clothing)’; Alyutor *pr*- ‘to pluck, to take off’. Fortescue 2005:225.
- H. Proto-Gilyak / Nivkh **prarq*- ‘to snap’: Amur *phrarq-č* ‘to snap’; East Sakhalin *phrarq-t* ‘to snap’. Fortescue 2016:136.

Buck 1949:12.33 separate (vb.); 12.232 divide; 13.23 part (sb.). Bomhard—Kerns 1994:232—233, no. 37; Dolgopolsky 2008, no. 1775, **päri*[?]/*E* (or **päryE* ?) ‘to tear, to split’, no. 1791, **p̥r̥iç* ‘to break through, to tear’, and, no. 1792, **p̥ärga* ‘to split, to crack’.

108. Proto-Nostratic root *p^har- (~ *p^har-):(vb.) *p^har- ‘to spread, to scatter’;(n.) *p^har-a ‘breadth, width, extension, space’; (adj.) ‘broad, extended, spread out, scattered’

- A. Proto-Afrasian *par- ‘to spread, to scatter’: Proto-Semitic *par-atl- ‘to spread, to scatter’ > Hebrew *pāraś* [פָּרַשׁ] ‘to spread, to expand, to spread out’, *pēraś* [פָּרַשׁ] ‘to stretch, to spread, to scatter’; Aramaic *pāras* ‘to spread out, to extend’; Arabic *faraša* ‘to spread, to spread out’; Ḥarsūsi *ferōś* ‘to spread’; Šheri / Jibbāli *fērōś* ‘to spread’; Mehri *fārōś* ‘to spread’. Klein 1987:533; Murtonen 1989:350; Zammit 2002:319. Arabic *farada* ‘to spread, to spread out, to extend, to stretch’. Egyptian *prš* ‘to stretch out’; Coptic *pōrš* [ⲡⲟⲣⲥ] ‘to spread, to stretch, to extend’. Vycichl 1983:164; Černý 1976:128. Berber: Tuareg *əfrəd* ‘to sweep, to be swept’, *səfrəd* ‘to make sweep’, *tasəfrətt* ‘broom’; Ghadames *əfrəd* ‘to split in two (a fruit)’; Mزاب *əfrəd* ‘to sweep, to be swept’; Kabyle *əfrəd* ‘to sweep, to clean’. [Proto-Southern Cushitic *paraḥ- ‘to pull apart’ > Iraqw *parḥami* ‘piece’; Asa *parames-* ‘to split up (firewood)’; Ma’a -*pará’a* ‘to disperse’, -*parāti* ‘to scatter (something)’; Dahalo *poroh* ‘to pull apart’. Ehret 1980:143. Note: At least some of the Southern Cushitic forms may belong with *p^har- (~ *p^har-) ‘(vb.) to separate, to divide, to break (apart); (n.) part, portion, share’.]
- B. Dravidian: Tamil *para* ‘to spread, to be diffused, to be flattened, to be broad’; Malayalam *parakka* ‘to spread, to be diffused, to be extended, to become large’; Kota *pard-* (*pardy-*) ‘to spread over large space’; Kannada *paraḍa* ‘to spread, to extend, to be diffused’; Telugu *parapu*, *paraḥapu* ‘broad, extended, expanded’, *paravu* ‘to spread’; Parji *parp-* (*part-*) ‘to spread’. Burrow—Emeneau 1984:351—352, no. 3949; Krishnamurti 2003:277 and 279 *par-a ‘to spread’.
- C. Proto-Indo-European *p^her-/ *p^hor-/ *p^hṛ- ‘to spray, to sprinkle, to scatter’ (extended forms: *p^her-s-/ *p^hor-s-/ *p^hṛ-s-, *p^her-ew-/ *p^hor-ow-/ *p^hṛ-u-, *p^her-eE- [> *p^hṛ-ē-]); Sanskrit *pruṣṇóti* ‘to sprinkle, to wet, to shower’, *prīśat-* ‘spotted, speckled, piebald, variegated; sprinkling; a drop of water’, *pārśati* ‘to sprinkle’; Greek *πρήθω* ‘to blow up, to swell out by blowing’, *πίμπρημι* ‘to blow up, to distend’ (also ‘to burn, to burn up’); Old Icelandic *fors* ‘waterfall’, *frýsa* ‘to snort, to whinny (of a horse)’, *frusa* ‘to spray, to sprinkle’, *frauð*, *froða* ‘froth’ (> English *froth*), *freyða* ‘to froth’; Old English *āfrēoþan* ‘to froth’; Old Church Slavic *para* ‘steam’; Slovenian *prhati* ‘to strew; to drizzle’; Hittite (reduplicated) (3rd sg. pres.) *pa-ap-pār-aš-zi* ‘to sprinkle, to pour’; Tocharian B *pārs-* ‘to sprinkle’, *pārsāntse* ‘resplendent, speckled’. Rix 1998a:441—441 *preh₁- ‘to blow up’, 445 *preus- ‘to spray’; Pokorny 1959:809—810 *per-, *perə-, *prē-, *preu- ‘to spray’, 823 *pers- ‘to spray, to sprinkle’; Walde 1927—1932.II:27—28 *per-, (A) *per(ē)-, (B) *pr-eu- and II:50 *pers-; Mann 1984—1987:986

preus-* ‘to sprinkle, to spray, to wash’, 997 **prūs-* (phrūs-*) ‘to snort, to spray’; Mallory—Adams 1997:72 **per-* ‘to blow (on a fire)’, **preus-* and 540 **pers-* ‘to sprinkle’; Mayrhofer 1956—1980.II:230, II:336—337 and II:380—381 **prus-*; Boisacq 1950:784—785 **pere-*, **perē-* ‘to spurt out, to gush forth (fire, fluid)’; Frisk 1970—1973.II:538—539; Hofmann 1966:270; Chantraine 1968—1980.II:902—903; Orël 2003:120 Proto-Germanic **fursaz*; Kroonen 2013:161—162 Proto-Germanic **fursa-* ‘gush’ (?); De Vries 1977:139, 140, 142, and 145; Adams 1999:375 **pers-* ‘to sprinkle’; Van Windekens 1976—1982.I:365 **pers-*; Sturtevant 1951:65, §87. Proto-Indo-European **p^herk^h-*/**p^hrok^h-*/**p^hrk^h-* ‘spotted, speckled’: Sanskrit *pṛśni-h* ‘spotted’; Greek περκνός ‘dark-colored’; Old Irish *erc* ‘speckled’; Old High German *faro* ‘colored’, *far(a)wa* ‘color’ (New High German *Farbe*). Pokorny 1959:820—821 **perk-*, **prek-* ‘speckled’; Walde 1927—1932.II:45—46 **perk-*, **prek-*; Mann 1984—1987:924 **perkos*, -*ā* ‘spot, dot’; 924 **perks-* ‘to scatter, to sprinkle’, 999—1000 **pṛks-* ‘speckle, spot; to sprinkle, to spray’, 1000 **pṛk-* ‘spot, speckle; to spray’; Watkins 1985:50 **perk-* and 2000:66 **perk-* ‘speckled’; Gamkrelidze—Ivanov 1984.II:594 **p^herk^h-* and 1995.I:454 (fn. 52), I:509 **p^herk^h-* ‘spotted’; Mallory—Adams 1997:537 **perk-* ‘speckled’; Frisk 1970—1973.II:515—516 **perk-*, **pork-*, **pṛk-*; Boisacq 1950:773—774 **perk-*, **prek-*; Chantraine 1968—1980.II:887; Hofmann 1966:265 **perk-*, **prek-*; Beekes 2010.II:1178 **perk-*; Kroonen 2013:130 Proto-Germanic **farwa-* ‘colorful’ (< **pork-uo-*); Orël 2003:93 Proto-Germanic **farxwaz*; Kluge—Mitzka 1967:184; Kluge—Seebold 1989:202—203 (German *Farbe* < Proto-Indo-European **q^uor-wo-* ‘form, shape, color’); Mayrhofer 1956—1980.I:336 and 1986—2001.II:164. Proto-Indo-European *(*s*)*p^her-*/*(s)*p^hor-*/*(s)*p^hṛ-* ‘to spread, to scatter, to strew’: Latin *spargō* ‘to scatter, to strew’; Armenian *p^harat* ‘dispersed, scattered’; Greek σπείρω ‘to scatter seed, to sow’; Old High German *spreitan* ‘to spread’; (?) Hittite (3rd sg. pres.) *iš-pa-a-ri*, *iš-pár-ri-ya-az-zi*, *iš-pár-ri-iz-zi* ‘to spread, to trample’. Rix 1998a:533—534 **sp^herh₂g-* ‘to hiss, to sizzle, to crackle’ (given as possible source of Latin *spargō*); Walde 1927—1932.II:670—672 **sp(h)er-*, 672—675 **sp(h)er(e)-g-*, **sp(h)erē-g-*; Pokorny 1959:993—995 *(s)*p(h)er-*, **sprei-*, **spreu-* ‘to scatter, to strew, to sow’, 996—998 *(s)*p(h)ereg-*, *(s)*p(h)erəg-*, *(s)*p(h)rēg-* ‘to strew’; Mann 1984—1987:1252 **spargos* (**spharg-*) ‘point, prick, dot’, 1255 **sperjō* (**spər-*) ‘to scatter, to sow’, 1267 **spṛjō* ‘to blow, to scatter’, 1270—1271 **sperō*, -*jō*; Watkins 1985:63—64 **sper-* and 2000:83 **sper-* ‘to strew’; Mallory—Adams 1997:500 **sper-* ‘to strew, to sow’; Beekes 2010.II:1379—1380 **sper-*; Chantraine 1968—1980.II:1035—1036 **sper-*; Hofmann 1966:327 **sp(h)er-*; Frisk 1970—1973.II:762—763 **sp(h)er-*; Boisacq 1950:894—895 **sp(h)er-*, **sp(h)erē-*; Ernout—Meillet 1979:638; Walde—Hofmann 1965—1972.II:566—567 **sper-*; De Vaan 2008:578; Sturtevant 1951:63, §85; Kroonen 2013:469 Proto-Germanic **spraidjan-* ~ **spraitjan-* ‘to

spread, to disperse'; Orël 2003:366 Proto-Germanic **spraidjanan*, 367 **sprīðanan*.

D. Altaic: Manchu *fara-* 'to spread freshly harvested grain out to dry'.

Sumerian *pār* 'to spread or stretch out'.

Buck 1949:9.32 stretch; 9.34 spread out, strew; 10.38 blow (vb. intr.). Brunner 1969:23, no. 40, and 25, no. 62; Bomhard—Kerns 1994:241—242, no. 46; Dolgopolsky 2008, no. 1777, **pAri[ʕ]V* 'to strew, to spread, to extend'.

109. Proto-Nostratic root **p^har-* (~ **p^hər-*):

(vb.) **p^har-* 'to press forward, to precede, to hasten in advance, to overtake, to surpass, to outstrip';

(n.) **p^har-a* 'leader, master, lord, hero'; (adj.) 'chief, foremost, first'

- A. Proto-Afrasian **p[a]r-* 'to precede, to surpass, to outstrip, to overtake': Proto-Semitic **par-aʕ-* 'to surpass, to outstrip, to excel' > Hebrew *peraʕ* [פֶּרַע] 'leader, prince'; Ugaritic *pr^o* 'chief'; Arabic *faraʕa* 'to surpass, to outstrip, to excel'; Sabaean *fr^o* 'summit'; Šheri / Jibbāli *fēraʕ* 'to win', *fēraʕ* 'brave', *fēr^oūn* 'strong and muscular, brave; winner'; Harsūsi *fēra* 'brave'; Mehri *fōra* 'to win (usually children) in a game where palms are turned up and down', *frā* 'to go up, to ascend', *farʔ* 'brave'. Murtonen 1989:348. Arabic *faraṭa* 'to precede, to hasten in advance, to overtake'. Egyptian *pri* 'to go up, to ascend; to advance against', *pry* 'champion, hero'. Erman—Grapow 1921:54 and 1926—1963.1:520—521; Faulkner 1962:90—91 and 91; Hannig 1995:283—284 and 285; Gardiner 1957:565.
- B. Elamo-Dravidian: Middle Elamite *pa-ar-qa* 'formerly, in former times'.
- C. Proto-Indo-European **p^her-/p^hor-/p^hṛ-* base of prepositions and preverbs with a wide range of meanings such as 'in front of, forward, before, first, chief, forth, foremost, beyond': Sanskrit *pāraḥ* 'far, distant', *purāḥ* 'in front, forward, before', *purati* 'to precede, to go before', *prá* 'before, in front', *práti* 'towards, near to, against', *pratarám* 'further', *prathamá-h* 'foremost, first'; Greek *πέρᾱν*, *πέρην* 'across, beyond, on the other side', *παρά*, *παρά* 'beside', *πάρῳ* 'before', *πρό* 'before', *πρότερος* 'before, in front of, forward', *πρῶτος* 'first, foremost', *πρόμος* 'chief, foremost, first', *πρόκα* 'forthwith', *πρός*, *πρὸς* 'from'; Latin *per* 'through, along, over', *prae* 'before, in front', *prior* 'former, first', *prīmus* 'first, foremost', *prō* 'before, in front of'; Umbrian *pernaiaf* 'from in front', *perne* 'before'; Gothic *faur* 'for, before', *fauja* 'master, lord', *fairra* 'far', *faura* 'before, for, on account of, from', *fram* 'from, by, since, on account of', *framis* 'further, onward', *frumists* 'first, foremost, best, chief', *fruma* 'the former, prior, first', *frums* 'beginning'; Old Icelandic *for-* 'before', *ffarri* 'far off', *fram* 'forward', *fyrr* 'before, sooner', *fyrstr* 'first'; Old English *feorr* 'far', *feorran* 'from afar', *for*, *fore* 'before', *forma* 'first', *fram* 'from', *frum*

‘first’, *fyrst*, *fyrest* ‘first’, *fyrmost* ‘first’; Old Frisian *for* ‘before’, *fara*, *fore* ‘before’, *ferest* ‘first’, *forma* ‘first’, *vorsta*, *fersta* ‘prince’; Old Saxon *for*, *fur* ‘before’, *for(a)*, *far* ‘before’, *forma* ‘first’, *furi* ‘before’, *furist* ‘first, foremost’, *furisto* ‘prince’; Old High German *furi* ‘before, for’ (New High German *für*), *fora* ‘before’ (New High German *vor*), *furist* ‘first’, *fir(i)*- ‘opposite’ (New High German *ver-*); Lithuanian *priẽ* ‘at, near, by’, *prõ* ‘through, past, by’, *priẽš* ‘against’; Hittite *pa-ra-a* ‘forth’, *pi-ra-an* ‘before, forth’; Luwian *pár-ra-an* ‘before, in front’, *pa-ri-ya-an* ‘beyond; exceedingly, especially’; Lycian *przze/i-* ‘front, foremost’, *pri* ‘forth; in front’. Pokorny 1959:810—816 **per-* ‘passing beyond’; Walde 1927—1932.II:29—38 **per-*; Mann 1984—1987:922 **perām-* (**perāmos*, -ā) ‘away, across, farthest’, 926 **perñ-* (**perñt-*) ‘beyond, away, far’, 976 **por-* (**poro-*), 989—990 **pro*, **pro-* (**prō*, **p̥ro*, **p̥rō-*) ‘forward, forth, away, for’, 992 **prōi-* ‘ahead, before, earlier, soon’ (variant **prōjām*), 992 **prok-* ‘forth, forward; later, late; advance’, 993 **prom-*, **p̥rom-*, **prōm-* (**promi-*) ‘forth, forward, on, forthcoming, first, beyond’, 996 **prō-ter-* (comparative of **prō-*), 996 **pro-tān-* (**pro-ten-*, **pro-tn-*), 996 **pro-tāmo-*, 996—997 **proti* (**p̥roti*, **protiō*) ‘forward, toward, against’, 997 **prōu-* ‘forward, forth, forthright, straight’ (variant **proū-*), 998 **p̥i-*, **p̥i-* (**p̥ar-*), 998—999 **p̥ri* (**p̥ari*, **prai*, **pri*) ‘before, at, to’, 999 **p̥ri-tero-* (**p̥ri-tero-*), 1004 **p̥i-ūs* ‘first, foremost’; Watkins 1985:49—50 **per* and 2000:65—66 **per* base of prepositions and preverbs with the basic meanings of ‘forward, through’ and a wide range of extended senses such as ‘in front of, before, early, first, chief, toward, against, near, at, around’; Gamkrelidze—Ivanov 1984.I:199 **p[h]ros*, I:200 **p[h]rH-*, II:843 **p[h](e)rH-*, **p[h]rei-uo-*, **p[h]r-is-mo-*, **p[h]r-is-t[h]o-*, **p[h]r-H-mo-*, **p[h]r-H-uo-* and 1995.I:172 **phros* ‘earlier’, I:173 **phrH-*, I:741 **pherH-* (**phrH-*) ‘front, forward’, **phrei-wo-* ‘only, single’, **phr-is-mo-* ‘first’, **phr-is-tho-* ‘first’, **phr-H-mo-* ‘first’, **phr-H-wo-* ‘first’; Mallory—Adams 1997:60—61 **ph_aéh₁* ‘in front of; before (of time)’, **ph_aéi* ‘in front of; before (of time)’, **pro* ‘forward, ahead, away’; Mayrhofer 1956—1980.II:214—215, II:309—310, II:350—353 **prō*, II:358 **pro-tero-*, II:358—360 **proti*/*preti*, and II:363—364 **pro-* : **p̥r-*; Boisacq 1950:746 **p̥i*, **p̥irai*, **prai*, 748 **p̥iros*, **per-*, **p̥r-*, 770—771 **per-*, 814 **pro*, **prō*, 814 **pro-qo-*, 815 **pro-mo-*, 816, 816—817 **proti*, 819—820 **p̥i-to-*s; Frisk 1970—1973.II:472—473, II:476 **p̥rós*, II:596—597 **pro*, II:599, II:600, II:600—601, II:603, and II:609—610; Chantraine 1968—1980.II:856—857, II:939; II:940, II:941, II:942, and II:945—946; Beekes 2010.II:1151 **prh₂-*, II:1154 **prh₂-*, II:1175 **per*, II:1176 **per-*, II:1233—1234 **prei*, II:1235 **pro*, II:1237 **pro-k-*, II:1237—1238 **promo-*, II:1238 **proti*, II:1239 **pro-ti-o-*, II:1240 **pro-tero-*; Hofmann 1966:253 **p̥i-*, 253 **peros*, 284 **prō*, 284 **pro-qo-*, 284—285 **pro-mo-s*, 285 **pro-tero-*, 285 **pro-ti*, **preti*, and 286; Ernout—Meillet 1979:497 **peri*, **per*, 529—530, 535, 536—537 **pro*, **prō*; Walde—Hofmann 1965—1972.II:283—

286 *peri, *per, II:351, II:362—363, and II:364—365; De Vaan 2008:459—560, 485—486, 488—489, and 489—490; Orël 2003:111 Proto-Germanic *frama, 111*framaz, 116* frumaz ~ *frumōn, 119 *fur(a), 119 *furai, 119 *furxaz, 120 *furistaz; Kroonen 2013:156 Proto-Germanic *frōi- ‘early’, 157 *fruman- ‘former, first’, 161 *furi ‘in front of, for’; Feist 1939:137 *per, *peri, 141, 145 *perā, 160, 164, and 169—170 *pramo-; Lehmann 1986:104, 110 *pr-, 110—111 *perā, 121 *pro, 124 *pro-mo-, and 129—130 *prmo-; De Vries 1977:123—124, 137, 139—140, 148, and 149; Onions 1966:357, 368, 369, and 378; Klein 1971:283 *prō-, 290 *per-, *pr-, and 297; Boutkan—Siebinga 2005:123; Kluge—Mitzka 1967:225, 811, and 825; Kluge—Seebold 1989:237 *per-, 757, and 768—769; Brugmann 1904:472—476 *per- (*pr-, *pr-): (1) *pro, *prō; (2) *preti, *proti; (3) *prai; (4) *prres, *prros; (5) *pr; (6) *peri, *per; Fraenkel 1962—1965.I:652—653 and II:657; Smoczyński 2007.1:483 and 1:486. Notes: Some of the forms cited here may be from Proto-Indo-European *pher-/*phor-/*phr- ‘to go or pass; to go or pass over or across; to go forth or out’ instead. Still others may be from Proto-Indo-European *pheri ‘around’, which is listed below under Proto-Nostratic *phir- (~ *pher-) ‘(vb.) to twist, to turn; (n.) twist, twining, turn; twine, string, rope, cord’. Indo-European loan in Kartvelian: cf. Georgian p’irveli ‘first’ (cf. Blažek 1999b:85 Indo-European *prH₂-wó-).

- D. Eskimo: Proto-Inuit *parla- ‘to hurry eagerly towards’ > Sirenik *parlāy-* ‘to jump across something’; Seward Peninsula Inuit *parliuq-* ‘to welcome’; North Alaskan Inuit *parla-* ‘to welcome, to greet’; Western Canadian Inuit *parla-* (Netsilik) ‘to fight to be first’, (Caribou) ‘to tremble with eagerness when hunting caribou’; Eastern Canadian Inuit *parla-* ‘to throw things at them to eat, to hurry to eat (to get most)’. Fortescue—Jacobson—Kaplan 1994:251.

Sumerian *para*₅ ‘king, prince’ (Semitic loan?).

Buck 1949:13.34 first; 14.23 hasten, hurry (vb. intr.); 19.35 prince. Bomhard—Kerns 1994:236—237, no. 41; Möller 1911:201; Blažek 2004:15—18.

110. Proto-Nostratic root *phar- (~ *phār-):

(vb.) *phar- ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated; to flutter, to fly, to flee’;

(n.) *phar-a ‘flying, flight, fleeing’

Derivative:

(n.) *phar-a ‘equid: horse, wild ass, onager, mule, etc.’

Note also:

(vb.) *phir- ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated; to flutter, to fly, to flee’;

(n.) *phir-a ‘flying, flight, fleeing’

- A. Dravidian: Tamil *para* (*parapp-*, *parant-*) ‘to fly, to hover, to flutter; to move swiftly, to hasten, to be in a hurry; to be greatly agitated; to be scattered, dispersed, to disappear’, (reduplicated) *parapara* ‘to hasten, to hurry’, *paravai* ‘bird, wing, feather, bee’, *pari* ‘to run away, to flow out quickly, to be displaced suddenly, to give way, to fly off, to be discharged’, *parai* ‘flying, wing, feather, bird’; Malayalam *parakka* ‘to fly, to flee’; Kota *parn-* (*parnd-*) ‘to fly, to run fast without stopping’; Kannada *pari*, *paru* ‘flying, running swiftly’; Tuḷu *pāruni* ‘to run, to fly, to escape’; Telugu *paraacu* ‘to run away, to flee, to flow; to cause to flee’, *pāru* ‘to run, to flow’. Burrow—Emeneau 1984:358, no. 4020. Tamil *pari* (*-v-*, *-nt-*) ‘to run, to go out, to escape’, *pari* (*-pp-*, *-tt-*) ‘(vb.) to run, to proceed; (n.) motion, speed, rapidity, pace of a horse, horse’, *parippu* ‘motion’; Malayalam *pari* ‘horse’; Toda *pary-* (*parc-*) ‘(horse) to gallop; to ride at a gallop’; Kannada *pari*, *hari* ‘(vb.) to run, to flow, to proceed (as work), to go away, to disappear, to be discharged (as debt); (n.) moving, running, flowing, stream’; Tuḷu *pariyuni*, *hariyuni* ‘to run, to flow’; Telugu *parugu*, *paruvu*, *parvu* ‘running, a run’, *pāru* ‘to run, to run away’, *paruviḍu* ‘to run’; Malto *parce*, *parctre* ‘to run away’. Burrow—Emeneau 1984:353, no. 3963.
- B. Proto-Kartvelian **par-*, **pr-en-* ‘to fly’: Georgian *pr-en-* ‘to fly’, *pr-t-e* ‘wing’, (*m-*)*pr-in-v-el-i* ‘bird’; Mingrelian *purin-* ‘to fly’; Laz *purtin-* ‘to fly’. Fähnrich 1994:235 and 2007:425 **par-*; Fähnrich—Sardshweladse 1995:348 **par-*; Klimov 1964:190 **prin-* and 1998:203 **pr-en-* : **pr-in-* ‘to fly’; Schmidt 1962:136. Proto-Kartvelian **partx-/prtx-* ‘to flutter, to fly’: Georgian *partx-*, *prtx-* ‘to flutter’; Laz *putx-* ‘to fly up, to take flight, to rise’. Fähnrich—Sardshweladse 1995:349—350 **partx-/prtx-*. Proto-Kartvelian **parpat-* ‘to flit, to flutter’: Georgian *parpat-* ‘to flit, to flutter’; Mingrelian *porpot-* ‘to flit, to flutter’. Klimov 1998:197 **parpaṭ-* ‘to flit, to flutter’; Fähnrich 2007:427 **parpaṭ-*; Fähnrich—Sardshweladse 1995:350 **parpaṭ-* (reduplicated form of **par-* ‘to fly’).
- C. Proto-Indo-European **pher-/phor-/ph₂-* ‘(vb.) to fly, to flee; (n.) feather, wing’: Sanskrit *parṇá-m* ‘wing, feather’; Hittite (3rd sg.) *pár-aš-zi* ‘to flee’; Latin *-perus* in *properus* ‘quick, rapid, hasty’, *properō* ‘to hasten’; Old English *fearn* ‘fern’ (originally ‘feathery leaf’); Old Saxon *farn* ‘fern’; Dutch *varen* ‘fern’; Old High German *farn* ‘fern’ (New High German *Farn*); Russian Church Slavic *perō*, *p̣rati* ‘to fly’, *pero* ‘feather’; Czech *prchnouti* ‘to flee’; Polish *pierzchnąć* ‘to flee’; Serbo-Croatian *prhati* ‘to fly up’; Russian *porxát* [порхать] ‘to flutter, to fly about’, *peró* [перо] ‘feather, plume’. Pokorny 1959:816—817 **per-*, **perə-* ‘to flee’, 850; Walde 1927—1932.II:39—40 **per-*; Mann 1984—1987:922 **perənt-* (**pernt-*) ‘birdlife, bird(s)’, 926 **peros*, *-om*, *-jom* ‘feather, wing’, 926 **peros* ‘swift, swiftness’, 927 **perperos* ‘flighty, giddy’; Watkins 1985:50 **per-* and 2000:66 **per-* ‘to lead, to pass over’; Mallory—Adams 1997:646 **pornóm* ‘wing, feather’; Walde—Hofmann 1965—1972:372—

373; Ernout—Meillet 1979:539; Mayrhofer 1956—1980.II:223—224 **per*- ‘to fly’; Kroonen 2013:129—130 Proto-Germanic **farna*- ‘fern’ (< **ptorH-no*-); Orël 2003:94 Proto-Germanic **farnan*; Onions 1966:351 West Germanic **farno* (< **porno*-); Klein 1971:278; Kluge—Seebold 1989:203; Kluge—Mitzka 1967:184—185 **por-no*-.

- D. Proto-Gilyak / Nivkh (reduplicated) **par(par)*- ‘to flap wings’: Amur (reduplicated) *p^harp^har-dy*- ‘to flap wings’; South Sakhalin (reduplicated) *parfər*- ‘to flap wings’. Fortescue 2016:132.

Buck 1949:3.64 bird; 4.292 wing; 4.393 feather; 10.37 fly (vb.); 10.51 flee; 14.21 swift, fast, quick. Dolgopolsky 2008, no. 1758, **parV* ‘to fly, to jump’; Bomhard—Kerns 1994:242—243, no. 47.

111. Proto-Nostratic (n.) **p^har-a* ‘running, rapid motion, speed’ > ‘equid: horse, wild ass, onager, mule, etc.’ in Afrasian and Dravidian

Derivative of:

(vb.) **p^har*- ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated; to flutter, to fly, to flee’;

(n.) **p^har-a* ‘flying, flight, fleeing’

- A. Proto-Afrasian **par-a(r/?w)*- ‘equid: horse, wild ass, onager, mule’ (< ‘swiftness, swift moving’): Proto-Semitic **par-(a)?*- ‘wild ass, onager’ > Hebrew *pere?* [פֶּרֶז] ‘wild ass’; Arabic *fara?* ‘wild ass, onager’; Akkadian *parū* ‘onager, mule’. Klein 1987:522 — Klein notes: “The orig. meaning of these words is prob. ‘runner’.”; Murtonen 1989:346; Militarëv—Kogan 2005.II:234—235 Proto-Semitic **par(a)?*- ‘wild ass’. East Cushitic: Somali *faraw* ‘zebra’; Arbore *faraw* ‘horse’. Omotic: Wolaita, Gamu *fara* ‘horse’. Militarëv—Kogan 2005.II:234—235, no. 176, Proto-Afrasian **para(r/?w)*- ‘a kind of equid’.

Proto-Afrasian **par-ad*- ‘equid: horse, wild ass, onager, mule’ (< ‘swiftness, swift moving’): Proto-Semitic **pard*- ~ **pird*- ‘a kind of equid: mule’ > Akkadian *perdum* ‘a kind of equid’; Hebrew *pereð* [פֶּרֶד] ‘mule’, (f.) *pirdāh* [פִּרְדָּה] ‘female mule’; Jewish Palestinian Aramaic *pirdā* ‘mule’; Ugaritic *prd* ‘mule’. Klein 1987:523; Militarëv—Kogan 2005.II:235—236, no. 177, Proto-Semitic **pi/ard*- ‘an equid’. Cushitic: Central Cushitic: Bilin *farad* ‘horse’; Qwara, Dembea, Awngi *farzā* ‘horse’. East Cushitic: Somali *fārdó* ‘horse’; Galla / Oromo *fardo* ‘horse’; Gedeo / Darasa *faracco* ‘horse’ (pl. *farado*); Kambata (pl.) *faarsu* ‘horses’; Sidamo *faradó* (pl. *faradda*) ‘horse’. Hudson 1989:81. Omotic: Koyra *farazi* ‘horse’; Yemsa *faza* ‘horse’. Militarëv—Kogan 2005.II:235—236, no. 177; Orël—Stolbova 1995:420, no. 1961, **parVd*- ‘equid’.

Proto-Afasian **par-aš-* ‘horse’: Proto-Semitic **par-aš-* ‘horse’ > Hebrew *pārāš* [פָּרָשׁ] ‘horse, steed; horseman, rider; knight’; Palmyrene *prš* ‘horseman, cavalry-man’; Nabataean *prš* ‘horseman, cavalry-man’; Judaic Aramaic *pārāš* ‘horseman, knight’; Mandaic *paraša* ‘mounted soldier, horseman, cavalry-man, mounted archer’; Arabic *faras* ‘horse, mare; knight (chess)’, *farāsa* ‘horsemanship’; Sabaeen *frs* ‘horse, mare; cavalry-man, cavalry’; Geez / Ethiopic *faras* [ፋረስ] ‘horse’; Tigre *fārās* ‘horse’; Tigrinya *fārās* ‘horse’; Amharic *fārās* ‘horse’; Gurage *fārās* ‘horse’; Harari *fārāz* ‘horse’. Militarëv—Kogan 2005.II:242—245, no. 182, Proto-Semitic **paraš-* ~ **paras-* ‘horse’; Klein 1987:533; Murtonen 1989:349. Central Cushitic: Qwara *farsā* ‘horse’. East Cushitic: Saho-Afar *farās* ‘horse’; Somali *fāras-* ‘horses; Hadiyya *farasšo* (pl. *farado*) ‘horse’; Sidamo *farasšo* (pl. *farado*) ‘horse’; Harso *paraso* ‘horse’. Omotic: Shinasha *farša* ‘horse’. Hudson 1989:81.

- B. Dravidian: Tamil *pari* (-v-, -nt-) ‘to run, to go out, to escape’, (-pp-, -tt-) ‘to run, to proceed’, *pari* ‘motion, speed, rapidity; pace of a horse, a horse’, *parippu* ‘motion’, *pariyal* ‘going fast’; Malayalam *pari* ‘horse’; Toda *pary-* (*parc-*) ‘(horse) to gallop; to ride at a gallop’; Kannada *pari*, *hari* ‘to run, to flow, to proceed (as work), to go away, to disappear, to be discharged (as a debt)’, *pari*, *hari* ‘moving, running, flowing, stream’, *parike*, *pariya* ‘running’, *parivu* ‘running, flowing, current’; Tuḷu *pariyuni*, *hariyuni* ‘to run, to flow’, *paripuni* ‘to flow (as water)’, *parapu* ‘flowing, running’; Telugu *parugu*, *paruvu*, *parvu* ‘running, a run’, *paruviḍu* ‘to run’, *parapu* ‘to cause to flow’, *pāru* ‘to run, to run away, to move the bowels, to purge, to fly’. Burrow—Emeneau 1984:353, no. 3963.

Buck 1949:3.41 horse. Slightly different etymologies in Dolgopolsky 2008, no. 1786, **pAr[y]V* ‘to run, to flee’, and no. 1788, **PVRCV* ‘to flee, to run (from, after somebody)’.

112. Proto-Nostratic (n.) **p^har-a* ‘calf, heifer’:

Note also:

(n.) **p^hur-a* ‘calf, heifer’

- A. Proto-Afrasian **par-* ‘young bull or calf’: Proto-Semitic **par-/pur-* ‘young bull or calf’ > Hebrew *par* [פָּר] ‘young bull or calf’, *pārāh* [פָּרָה] ‘heifer, calf’; Ugaritic *pr* ‘bull’; Akkadian *pūru* ‘young bull or calf’. Klein 1987:522; Militarëv—Kogan 2005.II:239—242, no. 181, Proto-Semitic **parr-* ‘young of small or large cattle’. Egyptian *pry* ‘ferocious bull’. Faulkner 1962:91; Erman—Grapow 1926—1963.1:526; Hannig 1995:285 and 2006:922; Gardiner 1957:565. Central Chadic **par-* ‘cattle’ > Mbari *far-ay* ‘cattle’. Orël—Stolbova 1995:418, no. 1950, **par-* ‘cattle’.
- B. Proto-Indo-European **p^hor-/p^hṛ-* ‘young bull or calf’: Sanskrit *pṛthuka-h* ‘young animal’; Armenian *orth* ‘calf’; Greek πόρις, πόρταξ, πόρτις ‘calf,

heifer, young cow'; Old Icelandic *farri* 'bullock'; Old English *fearr* 'bull'; Old High German *far*, *farro* 'bullock' (New High German *Farre*); Middle High German *verse* 'heifer' (New High German *Färse*). Pokorny 1959:818 **per-* 'to bear, to bring forth'; Walde 1927—1932.II:41—42 **per-*; Mann 1984—1987:979 **porstis* (**prsth-*) 'calf, youngster', 1653 **poris*, **poruis* (?); Watkins 1985:50 **per-* 'the young of an animal'; Mallory—Adams 1997:24 (?) **per-* 'offspring (of an animal)'; Boisacq 1950:804—805 **per-*; Frisk 1970—1973.II:580; Chantraine 1968—1980.II:928—929; Hofmann 1966:280 **per-*; Beekes 2010.II:1222 **por-i-*; Orël 2003:94 Proto-Germanic **farzōn*; Kroonen 2013:130 Proto-Germanic **farza(n)-* 'young bull' (< **pors-ó(n)-*); De Vries 1977:113 Germanic **farzan-*; Kluge—Mitzka 1967:185; Kluge—Seebold 1989:203; Mayrhofer 1956—1980.II:332—333.

Buck 1949:3.21 bull; 3.24 calf. Möller 1911:202—203; Dolgopolsky 2008, no. 1783, **p[o]r[w]V* 'female young ruminant'; Blažek 2013:48, no. 28.

113. Proto-Nostratic (n.) **p^har-a*, (?) **p^hur-a* 'house':

- A. Proto-Afrasian **par-* 'house': Egyptian *pr* 'house'; Coptic *-pōr* [-*ⲡⲟⲣ*], *per-* [*ⲡⲉⲣ*-] 'house'. Hannig 1995:278—279; Faulkner 1962:89; Erman—Grapow 1921:53 and 1926—1963.1:511—516; Gardiner 1957:565; Vycichl 1983:162; Černý 1976:127. Berber **far(r)-* 'enclosure' > Ahaggar *a-farra* 'enclosure'; Tawlemmet *a-farra* 'enclosure'. East Chadic **par-* 'hangar' > Migama *para* 'hangar'. Orël—Stolbova 1995:418, no. 1949, **par-* 'house, enclosure'.
- B. Proto-Dravidian **puray* 'house, dwelling' (< **pār-* ?): Tamil *purai* 'house, dwelling, small room', *pirai* 'shed, factory', *puraiyan* 'house, cottage, dwelling made of leaves', *puraiyul* 'house'; Malayalam *pura* 'house (especially thatched house), hut, room'; Koḍagu *pore* 'thatched roof'; Tuḷu *porè*, *purè* 'roof, ceiling', *pura* 'house'. Burrow—Emeneau 1984:379—380, no. 4294.
- C. Indo-European: Hittite (nom.-acc. sg.) *pí-ir* (< **p^hēr*) 'house', (dat. sg.) *pár-ni*, *pár-na* (< **p^hī-n-*), (dat. pl.) *pár-na-aš*; Luwian (dat.-loc. sg.) *pár-ni* 'house'; Hieroglyphic Luwian *parn-* 'house'; Lycian *prñna-* 'house', *prñnawati* 'to build, to construct'; Lydian *bira-* 'house'. Kloekhorst 2008b:666.
- D. Proto-Gilyak / Nivkh **prə* '(storage) hut': Amur *prə* '(storage) hut'; South Sakhalin *přə* 'hut' [according to Austerlitz, 'shelter']. Fortescue 2016:137.

Buck 1949:7.12 house. Bomhard—Kerns 1994:253, no. 61.

114. Proto-Nostratic root **p^har-* (~ **p^hər-*):(vb.) **p^har-* ‘to go or pass; to go or pass over or across; to go forth or out’;(n.) **p^har-a* ‘going, passage, journey, crossing’

- A. Proto-Afrasian **par-* ‘to go out’: Egyptian *pri* ‘to go, to come out, to go forth; to go up, to ascend’, *prw* (*priw*) ‘motion, procession, outcome, result’, *pri* ‘(ritual) procession’; Coptic *pire* [πειρε] ‘to come forth’. Hannig 1995:283—284 and 285; Faulkner 1962:90—91; Gardiner 1957:565; Erman—Grapow 1921:54 and 1926—1963.1:518, 1:525, 1:526; Černý 1976:127; Vycichl 1983:162. Cushitic: Beja / Beḍawye *farā*’- ‘to go out’. Reinisch 1895:82. Saho-Afar **far-* ‘to go out’ > Saho *far-* ‘to go out’. Orël—Stolbova 1995:419, no. 1955, **par-/pir-* ‘to go out’. Orël—Stolbova also include Hadiyya *fir-* ‘to go out, to exit’ (< Highland East Cushitic **fir-* ‘to go out’). However, Hudson (1989:71 and 409) derives Hadiyya *fir-* from Proto-Highland East Cushitic **ful-* ‘to go out, to exit’.
- B. Elamo-Dravidian: Middle Elamite *pa-ri-* ‘to come, to reach; to go, to start, to set out’.
- C. Proto-Indo-European **p^her-/p^hor-/p^hṛ-* ‘to go or pass; to go or pass over or across; to go forth or out’: Sanskrit *pīparti* ‘to bring over or to, to bring out of, to deliver from, to rescue, to save, to protect, to escort, to further, to promote; to surpass, to excel’, (causative) *pārāyati* ‘to bring over or out’, *pārā-h* ‘bringing across’; Avestan (causative) *-pārayeite* ‘to convey across’; Greek *περάω* ‘to pass across or through, to pass over, to pass, to cross’, *πορίζω* ‘to carry, to bring about, to provide, to furnish, to supply, to procure, to cause’, *πόρος* ‘a means of crossing a river, ford, ferry’; Latin *portō* ‘to bear or carry along, to convey’, *portus* ‘harbor, haven, port’; Gothic **faran* ‘to wander, to travel’, **farjan* ‘to travel’, **at-farjan* ‘to put into port, to land’, **us-farpō* ‘shipwreck’; Old Icelandic *ferja* ‘to ferry over a river or strait’, *far* ‘a means of passage, ship’, *fara* ‘to move, to pass along, to go’, *farmr* ‘freight, cargo, load’, *færa* ‘to bring, to convey’, *för* ‘journey’; Old English *faran* ‘to go, to march, to travel’, *fær* ‘going, passage, journey’, *ferian* ‘to carry, to convey, to lead’, *för* ‘movement, motion, course’, *ford* ‘ford’; Old Frisian *fara* ‘to travel’; Old Saxon *fara* ‘to travel’, *fōrian* ‘to lead, to convey’, *ferian* ‘to lead, to ferry across’; Dutch *varen* ‘to travel’; Old High German *faran* ‘to travel’ (New High German *fahren*), *ferien*, *ferren* ‘to lead, to ferry across’, *fuoren* ‘to lead, to convey’ (New High German *führen*), *fuora* ‘journey, way’ (New High German *Fuhre*), *furt* ‘ford’ (New High German *Furt*). Rix 1998a:425 **per-* ‘to pass over or across, to traverse’; Pokorny 1959:816—817 **per-*, **perə-*; Walde 1927—1932.II:39—40 **per-*; Mann 1984—1987:924 **periō*, 926 **perō* ‘(to pass through)’, 977 **porejō* ‘to convey’, 978 **pormos* ‘going, gait, progress, ferry, freight’, 978 **poros* ‘passage, crossing, track, space, period’, 979 **port-* (**portos*, *-ā*, *-us*, *-is*) ‘way, passage, gate’, 1003—1004 **pīt-* (**pītos*, *-ā*, *-is*, *-us*) ‘passage, crossing, way, fort, shallow’; Watkins

1985:50 *per- and 2000:66 *per- ‘to lead, to cross over’; Gamkrelidze—Ivanov 1984.II:883 *p^h[orH- and 1995.I:779 *p^horH- ‘passageway’; Mallory—Adams 1997:228—229 *per- ‘to pass through’; Mayrhofer 1956—1980.II:258 and II:284; Chantraine 1968—1980.II:929; Frisk 1970—1973.II:491—492; Boisacq 1950:757—758 *per-; Hofmann 1966:257—258 *per-; Beekes 2010.II:1163—1164 *per-; De Vaan 2008:482—483; Orël 2003:93 Proto-Germanic *faran, 93 *faranan, 93 *fardiz, 93 *farjanan. 93 *farjōn, 94 *farō; Kroonen 2013:128 Proto-Germanic *faran- ‘to go’, 128 fardi- ‘journey’, 129 *farjōn- ‘ferry’, 129 *farma- ‘moving’ (?), and 160 *furdu- ‘ford’; Feist 1939:142—143 *per-; Lehmann 1986:108—109 *per-; De Vries 1977:112, 118, 150, and 151; Onions 1966:345, 352, and 369; Klein 1971:273 *per-, 278, and 290; Boutkan—Siebinga 2005:101; Kluge—Mitzka 1967:180 *per-, *por-, 223, and 225—226 *prtú-; Kluge—Seebold 1989:199 *per-, 236, and 237—238 *prtú-.

- D. Proto-Gilyak / Nivkh *prə- ‘to come’: Amur p^hra-dv ‘to come’; North Sakhalin p^hřaj vi-t ‘to come’ (Proto-Gilyak / Nivkh *wi- ‘to go’); East Sakhalin p^hřaj(j)-d / p^hřara-d ‘to come’; South Sakhalin p^hřa-nt ‘to come’. Fortescue 2016:137.

Sumerian pàr ‘to go or pass by, to go past’.

Buck 1949:10.47 go; 10.62 bring; 10.63 send; 10.64 lead. Bomhard—Kerns 1994:260, no. 69; Dolgopolsky 2008, no. 1768, *PVRV ‘to cross, to pass through’.

115. Proto-Nostratic root *p^har^y- (~ *p^har^y-):

(vb.) *p^har^y- ‘to cover’;

(n.) *p^har^y-a ‘covering’

- A. Proto-Dravidian *par- ‘to cover’: Pengo prak- (-t-) ‘to cover’; Manda prak- ‘to cover, to close the eyes’; Kui planga (plangi-) ‘to be covered’, plapka (< plak-p-; plakt-) ‘to cover with something’. Burrow—Emeneau 1984:357, no. 4008.
- B. Proto-Kartvelian *par- ‘to cover’: Georgian par- ‘to cover, to hide’; Mingrelian por- ‘to cover’; Svan par-/pr- (li-pr-eni, li-l-pär-i) ‘to cover something’. Klimov 1964:187 *par- and 1998:197 *par- : *pr- ‘to cover’; Schmidt 1962:135; Fähnrich—Sardshweladse 1995:348 *par-; Fähnrich 1994:235 and 2007:424—425 *par-.

Buck 1949:12.26 cover (vb.).

116. Proto-Nostratic root **p^har^y-* (~ **p^hər^y-*):(vb.) **p^har^y-* ‘to ripen, to mature, to grow old, (hair) to turn gray’;(n.) **p^har^y-a* ‘ripeness, maturity’; (adj.) ‘ripe, mature, gray’

- A. Proto-Afrasian **par-* ‘white’: Chadic: Hausa *fárú* ‘white’; Guruntum *fari* ‘white’; Margi *pàrt^h*, *pàrtù* ‘white’; Gisiga-Marua *babaraŋ* ‘white’; Gidar *bábara* ‘white’; Lele *bòré* ‘white’; Kabalay *bùrùwa* ‘white’; Dangla *pórtà* ‘white’; Migama *púrtà* ‘white’; Jegu *pórórán* ‘white’; Birgit *fóróórà* ‘white’. Jungraithmayr—Ibrizimow 1994.I:178 **pr*, II:344—345; Newman 1977:34, no. 145. Omotic: Yemsa / Janjero *poro* ‘white’.
- B. Dravidian: Tamil *paṛu* (*-pp-*, *-tt-*) ‘to ripen (as fruits, grain), to grow, to mature, to arrive at perfection (as knowledge, piety), to become old, to come to a head (as a boil), to change color by age, to become pale or yellowish (as the body by disease), to become flexible, to become pliant’, *paṛu*, *paṛuppu* ‘ripeness, yellowness (of fruits), leaf turned yellow with age’, *paṛunu* (*paṛuni-*), *paṛunu* (*paṛuni-*) ‘to grow ripe, to become mellow, to mature, to be full or perfect’, *paṛam* ‘ripe fruit’; Malayalam *paṛukka* ‘to grow ripe, to become well-tempered, to suppurate, to decay’, *paṛuppu* ‘ripening of fruit’, *paṛam* ‘ripe fruit, ripe plantains’; Kota *paṛv-* (*paṛd-*) ‘(fruits) to become ripe, (boil, sore) to open’; Tuḷu *paṛnduni* ‘to be ripe, to mature, (hair) to turn gray’, *paṛndu* ‘ripeness, ripe fruit, ripe plantains; ripe, gray’; Telugu *paṇḍu* ‘to ripen, to mature, to yield, to produce, to win (in a game)’; Kolami *paṇḍ-* (*paṇḍt-*) ‘to become ripe’; Gadba (Salur) *paṛṇ-* ‘(hair) to become gray’; Gondī *paṇḍānā*, *paṇḍīnā* ‘to become ripe’, *paṇḍ-* ‘to become ripe, (hair) to become gray’; Kōṇḍa *paṇḍ-* ‘to ripen, (hair) to become gray’, *paṛu* ‘fruit’; Pengo *paṛ* ‘fruit’; Maṇḍa *paṛ* ‘fruit’; Kuwī *paṇḍu* ‘ripe fruit’. Burrow—Emeneau 1984:356—357, no. 4004; Krishnamurti 2003:192 **paṛ-V-* ‘to ripen’.
- C. Proto-Kartvelian **per-* ‘gray’: Georgian *per-o* ‘gray’; Svan *pār-w* (< **per-w* < **per-o*) ‘gray’. Fähnrich 2007:432—433 **per-*; Fähnrich—Sardshweladse 1995:354 **per-*.

117. Proto-Nostratic root **p^has^y-* (~ **p^həs^y-*):(vb.) **p^has^y-* ‘to breathe out, to blow; to fart’;(n.) **p^has^y-a* ‘a fart’

- A. Proto-Afrasian **p[a]s^y-* ‘to breathe out, to blow; to fart’: Proto-Semitic **pas^y-aw-* ‘to breathe out, to blow; to fart’ > Akkadian *pašū* ‘to breathe out, to expire’; Arabic *fasā* ‘to fart noisily’; Geez / Ethiopic *fasawa* ‘to fart’, *fasaw* [ፈሰው], *fasəw* [ፈሰው] ‘a fart’; Tigre *fäša* ‘to fart’; Tigrinya *fäsäwä* ‘to fart’; Amharic *fässa* ‘to fart’; Gafat *fʷäsa* ‘to fart’; Gurage (Soddo) *foššä* ‘to fart’, *fos* ‘a fart’; Harari *fäs* ‘a fart’. Leslau 1963:65, 1979:246, and 1987:168. Ethiopian Semitic loan in Bilin *fäšä-* ‘to fart’. Orël—Stolbova 1995:186, no. 821, reconstruct Proto-Afrasian **fos[i]ʔ-* ‘to

breathe’ on the basis of a comparison of Akkadian *pašū* ‘to breathe out, to expire’ with the following Highland East Cushitic forms: Hadiyya *fooš-eʔ*- ‘to breathe’, *fooša* ‘odor, smell’; Kambata *fooš-eeʔ*- ‘to breathe’, *fosša* ‘odor, smell’, *fooš-EEK-fiuucc*- ‘to pant’. However, these forms are to be derived from Proto-Highland East Cushitic **fool*- ‘to breathe’, **foole* ‘breath, odor, smell’ (cf. Hudson 1989:31), and are thus not related to the Semitic forms cited above as proposed by Orël—Stolbova.

- B. Dravidian: Kannaḍa *hasuku* ‘sharp, disagreeable smell’; Telugu *pasi* ‘smell, scent’. Burrow—Emeneau 1984:343, no. 3826.
- C. Proto-Indo-European **p^{hes}-t’-/p^{hos}-t’*- ‘to fart’: Latin *pēdō* ‘to fart’, *pōdex* ‘anus’; Greek βδέω ‘to fart’; Old English *fisting* ‘gentle fart’; Middle High German *vist*, *vīst* ‘gentle fart’ (New High German *Fist*); Czech *pezd* ‘anus, fart’, *bzdít* ‘to fart’; Serbo-Croatian *bāzdeti* ‘to fart’; Russian *bzdet’* [бздеть] ‘to fart’; Ukrainian *bzdity* ‘to fart’; Polish *bździeć* ‘to fart’; Lithuanian *bezdū*, *bezdėti* ‘to fart’; Latvian *bzdēt* ‘to fart’. Rix 1998a:429 **pesd*- ‘to fart’; Pokorny 1959:829 **pezd*- ‘to fart’; Walde 1927—1932.II:68—69 **pezd*-; Mann 1984—1987:928 **pesdō* ‘to fart’; Watkins 1985:51 **pezd*- and 2000:67 **pezd*- ‘to fart’; Mallory—Adams 1997:194 **pesd*- ‘to fart’; Boisacq 1950:117 **p[e]zd*-; Frisk 1970—1973.I:230 **pezd*-, **pzd*- > **bzd*-; Hofmann 1966:34 (Greek βδέω < *βδδέω); Beekes 2010.I:209 **pesd*-; Chantraine 1968—1980.I:171—172 **pezd*-; Ernout—Meillet 1979:493 **pezd*-; Walde—Hofmann 1965—1972.II:273—274 **pezd*-; De Vaan 2008:454—455; Orël 2003:101 Proto-Germanic **festiz*; Onions 1966:358 Germanic **fisti*- (< **fest*- < **pezd*-); Kluge—Mitzka 1967:200 (New High German *Fist* < **peis*-); Kluge—Seebold 1989:216 (Proto-Germanic **fisti*- < **pezdi*-); Shevelov 1964:95; Smoczyński 2007.1:58 **pésd-e*-, **psd-éje*- (> Greek βδέω); Fraenkel 1962—1965.I:42.

Sumerian *peš*, *peš₅*, *peš₆* ‘to breathe, to respire; to breathe a sigh of relief; to blow’.

Buck 1949:4.64 fart, break wind (vb.). Bomhard—Kerns 1994:237—238, no. 42; Möller 1911:205.

118. Proto-Nostratic root **p^{has}y*- (~ **p^{has}y*-):

- (vb.) **p^{has}y*- ‘to split, to cleave, to break, to shatter’;
(n.) **p^{has}y-a* ‘split, break; part, share, portion’

- A. Proto-Afrasian **pas^y*- ‘to split, to cleave, to break, to shatter’: Proto-Semitic **pas^y-ax*- ‘to tear, to render asunder, to sever’ > Hebrew *pāšah* [פָּשַׁח] ‘to tear to pieces’; Syriac *pāšah* ‘to tear, to rend asunder, to cut off’; Arabic *fasaḥa* ‘to dislocate, to disjoint, to sever, to sunder, to tear’. Klein 1987:534. Proto-Semitic **pas^y-at*- ‘to tear off, to strip off’ > Hebrew

pāšaṭ [ܡܫܬ] ‘to strip off, to flay’; Syriac *pāšaṭ* ‘to stretch out, to extend, to reach out’; Akkadian *pašāṭu* ‘to expunge, to obliterate’. Klein 1987:534. (?) Egyptian *pzš* (if dissimilated from **pšš*) ‘to divide, to share; division’, *pzšty* ‘part, division’, *pzšt* ‘sharing out; share, portion’; Coptic *pōš* [ⲡⲟⲩⲱ] ‘to divide’, *paše* [ⲡⲁⲩⲉ] ‘division, half’. Faulkner 1962:94—95; Hannig 1995:294; Gardiner 1957:566; Erman—Grapow 1921:55 and 1926—1963.1:553—554; Vycichl 1983:166; Černý 1976:130 and 131. Berber: Tuareg *əfsi* ‘to break up, to be broken up, to melt (grease, ice), to liquify’; Mzab *əfsi* ‘to melt’, *əfsu* ‘to disentangle, to undo’; Tamazight *əfsəy* ‘to melt, to dissolve’, *fsu* ‘to undo, to stretch out, to disentangle; to be undone, *əfsay* ‘melting, dissolution’; Kabyle *əfsi* ‘to melt, to be broken up, to fray, to be undone’.

- B. Proto-Dravidian **pā(y)-*/**pac-* ‘to divide, to separate, to distribute’: Tamil *payal* ‘half, share’; Kannaḍa *pañcu*, *pasu* (*pacc-*) ‘to divide, to separate, to part, to distribute, to share; to be divided, etc.’, *pacci*, *paccu* ‘part, portion’, *pasuge* ‘dividing, separation, division’; Tuḷu *pasalu* ‘the share of the fisherman’; Telugu *pancu* ‘to distribute, to divide’; Kolami *pay-*, *paiy-* ‘to divide’; Naikṛi *payk-* ‘to distribute’; Parji *payp-* (*payt-*) ‘to share’; Gadba (Salur) *pay-* ‘to divide into shares’, *payp-* (*payup-*) ‘to distribute’; Pengo *paspa* ‘to divide, to distribute’; Kui *pahpa* (*paht-*) ‘to share, to apportion’, *pahari* ‘part, share, portion’. Burrow—Emeneau 1984:350—351, no. 3936; Krishnamurti 2003:149 **pay-V-* ‘to break, to separate’. Tuḷu *pāpaṭē* ‘parting of the hair on a female’s forehead’; Telugu *pāyu* ‘to separate (intr.), to leave, to quit, to be disentangled’, *pācu* ‘to remove’, *pāpu* ‘to separate (tr.), to divide, to part, to remove, to efface’, *pāya* ‘branch, division, clove or division of garlic’, *pāpaṭa* ‘the parting of the hair’; Kolami *pa-p-* (*pa-pt-*) ‘to comb’; Naikṛi *pāp-* ‘to comb’; Gondi *pāyā* ‘parting of the hair’; Konda *pāy-* ‘to leave, to be gone’. Burrow—Emeneau 1984:363, no. 4089.
- C. Proto-Kartvelian **pešk-* (‘to burst, to break’ >) ‘to dehisce (noisily)’: Georgian *piš-* in (reduplicated) *piš-piš-i* ‘popping noise made when broth or porridge is brought to a boil’, [*pš-*] ‘to husk’; Mingrelian *pašk-*, *pešk-* ‘to dehisce, to burst (noisily)’; Svan *pišg-/pšg-* ‘to explode (noisily)’. Klimov 1964:188—189 **peš-* and 1998:201 **peš-* : **pš-* ‘to dehisce (noisily, with a crack)’; Fähnrich—Sardshweladse 1995:356—357 **peš-/piš-*; Fähnrich 2007:435 **peš-/piš-*. For the semantics, cf. Gurage *fārātā* ‘to burst, to burst and make the sound of bursting, to explode’ from the same root found in: Hebrew *pāraš* [פָּרַשׁ] ‘to break through, to break, to burst’, *pereš* [פֶּרֶשׁ] ‘breach, gap’; Arabic *faraša* ‘to cut, to split, to tear, to injure’; Akkadian *parāšu* ‘to break through’; etc.
- D. Proto-Uralic **pasʷ3-* ‘to break, to shatter; to tear, to split’: Votyak / Udmurt *paś* ‘hole, opening’; Zyrian / Komi *paś* in *paś mun-* ‘to shatter into fragments, to fall and scatter, to fall and shatter’, *paś vart-* ‘to beat into small bits, to crush to pieces’; Selkup Samoyed *paase*, *pas* ‘fissure, tear,

break'; Kamassian *buzoj* 'a crack, crack in the floor, tear', *puzoj* 'cleft, tear'. Collinder 1955:47 and 1977:65; Rédei 1986—1988:357—358 **paś3*; Décsy 1990:105 **pasja* 'hole, opening'; Janhunen 1977b:114. Yukaghir (Southern / Kolyma) *pašal'aš-* 'to bend or break an iron or wooden thing', *pašal'a-* 'to get blunt, to get notches (of a wooden or iron thing)'. Nikolaeva 2006:344.

Sumerian *peš₅* 'to break, to smash, to shatter'.

Buck 1949:9.26 break (vb. tr.); 9.27 split (vb. tr.); 9.28 tear (vb. tr.). Bomhard—Kerns 1994:245—246, no. 51.

119. Proto-Nostratic (n.) **p^has^y-a* 'sperm, semen; male genitals, penis; descendant, offspring':

- A. Proto-Dravidian **pā(y)-*/**pac-* 'descendant, offspring': Tamil *payal*, *paiyal*, *paital*, *pacal* 'boy', *paiyan* 'boy, son', *paical* 'small boy, urchin', *pacalai* 'infancy, tenderness', *payalai* 'young one'; Malayalam *paital*, *paśakan* 'child', *paśunnaḷ* 'children'; Kota *payl* 'young grain plant (not paddy), child'; Kannaḍa *pasuḷa*, *pasuḷe* 'child', *pasuḷetana* 'childhood', *haykaḷu* 'male or female children', *hayda* 'a boy', *peyya* 'calf'; Koḍagu *pajja* 'Holey girl'; Tuḷu *pasi* 'boy, child', *paiyya* 'child', *paiyyē*, *paiyery*, *paiyyery* 'child, boy; Pariah's child'; Koraga *payali* 'child'; Telugu *paida* 'boy, child', *paidali* 'woman', *peyya*, *pēya* 'calf, female calf, heifer'; Naiki (of Chanda) *paya*, *piya* 'calf'; Parji *peyya* 'calf'; Gadba (Ollari) *pē-pāp* 'young calf', (Salur) *beḍḍa-peyyā* 'young cow' (*beḍḍa* 'female'); Gondi *pedī* 'girl', *pedā* 'girl, child', *pedāl* 'child, children', *pēḍal* 'son, boy', *pēkur*, *pēkor*, *pēkal* 'boy'. Burrow—Emeneau 1984:351, no. 3939. Semantics as in Old English *fæsl* 'seed, offspring, progeny' (see below).
- B. Proto-Indo-European **p^hes-*/**p^hos-* 'penis': Sanskrit *pāsas-* 'penis'; Greek *πέος* 'penis', *πόσθη* 'penis'; Latin *pēnis* (< pre-Latin **pes-ni-s*) 'penis'; Old Icelandic *fösull* 'a brood'; Old High German *faselt* 'penis', *fasel* 'seed, offspring, progeny' (Middle High German *vasel*, New High German [dial.] *Fasel* 'barrow [of pigs]; brood, young [of animals]', also in *Faselschwein* 'brood-pig', [older] *Faselsau* 'brood-sow', *Faselhengst* 'stallion', *Faselvieh* 'breeding-cattle'); Old English *fæsl* 'seed, offspring, progeny'. Pokorny 1959:824 **pes-*, **pesos-* 'penis'; Walde 1927—1932.II:68 **pes-*, **pesos-*; Mann 1984—1987:928 **pesalos*, 929 **pesos* 'penis'; Watkins 1985:50 **pes-* and 2000:67 **pes-* (suffixal form **pes-ni-*) 'penis'; Gamkrelidze—Ivanov 1984.II:817 **p^h[h]es-os-* and 1995.I:716 **p^hes-os-* 'penis'; Mallory—Adams 1997:507 **pésēs-* 'penis'; Mayrhofer 1956—1980.II:241; Hofmann 1966:262 **pesos*; Chantraine 1968—1980.II:882 **pesos*; Frisk 1970—1973.II:507 **pésos*; Beekes 2010.II:1173 **pes-os-*; Boisacq 1950:768 **pes-os*; De Vaan 2008:458; Walde—Hofmann 1965—

1972.II:281 **pes-nis*; Ernout—Meillet 1979:496; Orël 2003:94 Proto-Germanic **fas(u)laz*; De Vries 1977:151; Kluge—Mitzka 1967:185—186; Kluge—Seebold 1989:204.

- C. Uralic: Proto-Finno-Ugrian **pasʷ₃* ‘penis’ > Lapp / Saami *buoččâ/buožâ* ‘penis’; Hungarian *fasz* ‘penis’. Illič-Svityč 1971—1984.III:96—97, no. 371, Proto-Uralic **p/a/še*; Collinder 1955:74 and 1977:94; Rédei 1986—1988:345 **pac₃*; Sammallahti 1988:548 Proto-Finno-Ugrian **pā/o/ooši*.
- D. Altaic: Old Uighur *ās* ‘male genitals’.

Sumerian *peš* ‘sperm, semen’, *peš* ‘descendant, offspring, son’. Semantics as in Old English *fæsl* ‘seed, offspring, progeny’.

Buck 1949:4.492 penis. Illič-Svityč 1971—1984.III:96—97, no. 371, **p/a/se* ‘membrum virile’; Bomhard—Kerns 1994:253—254, no. 62.

120. Proto-Nostratic root **pʰath-* (~ **pʰəth-*):

(vb.) **pʰath-* ‘to flutter, to quiver, to tremble, to palpitate, to move rapidly’;

(n.) **pʰath-a* ‘haste, hurry’

- A. Proto-Afrasian **pat-* ‘to flutter, to quiver, to tremble, to palpitate, to move rapidly, to fall down’: Proto-Semitic **pat-* (**ha-pat-*, **pat-at-*, **pat-pat-*) ‘to fall down, to collapse, to weaken, to crumble’ > Arabic *ha-fata* ‘to fall down, to collapse; to suffer a breakdown’, *fatta* ‘to weaken, to undermine, to sap, to crumble’, *fatfata* ‘to fritter, to crumble (something, especially bread)’; Mandaic *ptt* ‘to crumble’; Hebrew *pāθaθ* [פָּתַח] ‘to break up, to crumble’; Aramaic *pəθaθ* ‘to crumble’; Harsūsi *fet* ‘to crumble’; Mehri *fət* ‘to crumble’; Geez / Ethiopic *fatta* [ፈተ], *fatata* [ፈተተ], *fattata* [ፈተተተ] ‘to break off a piece, to fracture, to crush, to break the Host during communion, to break and distribute (bread and anything else), to give out, to make a gift, to appoint a portion, to give a share’, *fatfata* [ፈተፈተ] ‘to crumble bread’; Tigre *fātāta* ‘to crumble bread, to break into small pieces’, *fātfāta* ‘to crumble’; Tigrinya *fättätä* ‘to crumble’, *fätfätä* ‘to crumble’; Amharic *fättätä*, *fätäffätä* ‘to crumble’; Gurage *fätäfätä* ‘to crumble’. Klein 1987:538; Leslau 1987:169—170 and 171; Murtonen 1989:351. Egyptian *ptpt* in *ptpt (r) hry* ‘to fall to the ground’ (*hry* = ‘that which is under’), *pth* ‘to cast to the ground’, *ptht* in *ptht nt ipdw* ‘flight of birds’ (*ipdw* = ‘birds’); Coptic *potpt* [ⲡⲟⲩⲧⲡⲧ] ‘to fall away, to make fall, to drop’. Faulkner 1962:96; Gardiner 1957:566; Vycichl 1983:165; Černý 1976:130; Hannig 1995:298 and 299; Erman—Grapow 1921:56, 57, and 1926—1963.1:563, 1:565—566. Note: Two distinct Proto-Afrasian roots seem to have fallen together in Semitic — **pat-* ‘to flutter, to quiver, to tremble, to palpitate, to move rapidly, to fall down’ > ‘to crumble’ and **pVt-* ‘to break, to split, to cut’ > ‘to crush, to crumble’ (cf. Orël—Stolbova 1995:433, no. 2030,

- **pVtok-* ‘to split, to cut’, 1995:178, no. 784, **fatVq-* ‘to pierce, to split’, and 1995:180, no. 795, **fet-* ‘to break, to cut’).
- B. Dravidian: Tamil *pataru* (*patari-*) ‘to be flurried, to be confused, to be impatient, to be overhasty, to hurry’, *patarram* ‘rashness, hurry’, *pataṭṭam* ‘trembling, agitation’, *patai* (*-pp-*, *-tt-*) ‘to throb (as in sympathy), to flutter, to quiver, to be in agony, to shake, to be anxious’; Malayalam *pataruka* ‘to be precipitate, overhasty, confused’, *patarikka* ‘to cause confusion’, *pata* ‘boiling, throbbing, foam, froth’, *patekka* ‘to palpitate, to boil up, to agitate’, *patappu* ‘throbbing’, *patapata* ‘boiling, hot, effervescing’, *patupata* ‘bubbling up’; Kannada *padaru* ‘to be overhasty, to speak unadvisedly, to talk nonsense’, *padap(p)u* ‘eagerness, zeal, pleasurable excitement’; Telugu *padaru*, *paduru*, *padaru*, *padur(u)cu*, *padrucu* ‘to be overhasty or precipitate, to be angry, to move, to be shaken’, *padaṭamu*, *padaṭu* ‘precipitation, hurry’; Malto *padrare*, *padkare* ‘to prattle’. Burrow—Emeneau 1984:349, no. 3910.
- C. Proto-Kartvelian **petk-* ‘to quiver, to tremble, to palpitate, to explode’: Georgian *petk-* ‘to vibrate, to explode’; Mingrelian *partk-al-* (< **patk-*) ‘to tremble, to palpitate’; Laz *pa(r)tk-al-* ‘to break, to palpitate’; Svan *li-ptk-we* ‘to strike, to split’. Fähnrich 1994:235 and 2007:432 **petk-*; Fähnrich—Sardshweladse 1995:353 **petk-*; Klimov 1964:188 **petk-* and 1998:199 **petk-* : **ptk-* ‘to break; to blow up’; Schmidt 1962:135. Proto-Kartvelian **pet-* ‘to be terrified, scared, frightened’ (< ‘to tremble, to shake’): Georgian *pet-i* ‘scaredy-cat’, *da-pet-eb-a* ‘to be terrified, scared, frightened’; Svan *li-pēt-e* ‘to be terrified, scared, frightened; to become enraged, infuriated, angry’. Fähnrich—Sardshweladse 1995:352—353 **pet-*; Fähnrich 2007:431 **pet-*.
- D. Proto-Indo-European **p^heth-/p^hoth-* ‘to fly, to rush, to pursue; to fall, to fall down’: Sanskrit *pátati* ‘to fly, to soar, to rush on; to fall down or off; to set in motion, to set out on foot; to rush on, to hasten’, (causative) *patáyati* ‘to fly or move rapidly along, to speed’, (passive) *pātyate* ‘to let fly or cause to fall; to fling, to hurl, to throw; to overthrow, to ruin, to destroy; to knock out (teeth); to set in motion, to set on foot; to rush on, to hasten’, *pátram* ‘wing, feather’, *pátvan-* ‘flying, flight’; Greek πέτομαι ‘to fly; (also of any quick motion) to fly along, to dart, to rush; to be on the wing, to flutter’, πίπτω ‘to fall, to fall down’, πτερόν ‘feather, bird’s wing’; Latin *petō* ‘to make for, to go to, to seek’; Old Irish *én* (< **ethn-* < **pet-no-s*) ‘bird’; Welsh *edn* ‘bird’; Old Breton *etn-* ‘bird’; Old Icelandic *ffjöðr* ‘feather, quill’; Swedish *ffäder* ‘feather’; Norwegian *ffjør*, *ffjoder* ‘feather’; Danish *ffær*, *ffeder* ‘feather’; Old English *feþer* ‘feather’, (pl.) *feþra* ‘wings’; Old Frisian *fethere* ‘feather’; Old Saxon *fethara* ‘feather’; Middle Dutch *vedere* ‘feather’ (Dutch *veer*); Old High German *fedara* ‘feather’ (New High German *Feder*), *fettāh* ‘wing’ (New High German *Fittich*); Hittite *pát-tar* ‘wing’, (3rd pl. pres.) *pít-ti-(ya-)an-zi* ‘to flee, to fly, to hasten’. Rix 1998a:431 **peth₂-* ‘to fly (up)’; Walde 1927—1932.II:19—22

*pet-, *petā-, *petā-; Pokorny 1959:825—826 *pet-, *petā-, *ptē-, *ptō- ‘to tumble down on’; Mann 1984—1987:931 *petō ‘to dash, to fly, to fall’; Watkins 1985:50—51 *pet- (*petā-) and 2000:67 *pet- (also *petā-) ‘to rush, to fly’; Gamkrelidze—Ivanov 1984.I:57 *p[h]et[h]- and 1995.I:50, I:125 (fn. 68), I:131, I:195, I:455 *p^het^h- ‘to fly’; Mallory—Adams 1997:208 *pet- ‘to fly’ and 646 *pet(e)r-, *pet(e)n- ‘wing, feather’; Mayrhofer 1956—1980.II:199 and II:203—204; Boisacq 1950:776 *pet-. 787 *pet-, and 821—822 *pet(e)- ‘to fly’, *pet(e)r-, *p(e)te-r- ‘wing, feather’; Frisk 1970—1973.II:521—522, II:542—543, and II:612—613; Hofmann 1966:266 *pet-, 271 *pet-, and 287 *peter- (*peten-); Chantraine 1968—1980.II:892, II:905—906, and II:947—948 *pet-/pt(2)-; Beekes 2010.II:1181—1182 *pet-, II:1195—1196 *petH-, II:1248 *pet-; Ernout—Meillet 1979:503—504 *pet-; Walde—Hofmann 1965—1972.II:297—298; De Vaan 2008:464—464; Lewis—Pedersen 1937:26, 47, and 82; Kroonen 2013:138—139 Proto-Germanic *feþrō- ‘feather’; Orël 2003:102 Proto-Germanic *feþrjan, 102 *feþrō; De Vries 1977:124—125; Torp 1919:112; Onions 1966:348 *pet-, *pt-; Klein 1971:276; Kluge—Mitzka 1967:188 and 200; Kluge—Seebold 1989:206 and 217.

- E. Proto-Eskimo *pattay- ‘to flap (wings), to flutter; to make a flapping noise, to clap, to slap’: Alutiiq Alaskan Yupik *pataxtur-* ‘to hurry’; Central Alaskan Yupik *patay-*, *pataxtur-* ‘to hurry’; Central Siberian Yupik *patay-* ‘to hit lightly’; Sirenik *patayara(ci)-* ‘to clap, to slap’; Seward Peninsula Inuit (Qawiaaraq) *patakaq-* ‘to hurry’; North Alaskan Inuit *pattak-* ‘to slap, to spank’, *patala-* ‘to get ready in a hurry, to feel one’s way in the dark’; Western Canadian Inuit *pattak-* ‘to applaud, to clap, to caress’; Eastern Canadian Inuit *patta(k)-* ‘to play ball’; Greenlandic Inuit *pattay-* ‘to knock something off someone with the hand’, *pattaat(i)-* ‘to play ball’, *pattattur-* ‘to flap wings’. Fortescue—Jacobson—Kaplan 1995:252 *pattay- ‘to clap or slap’.

Buck 1949:10.23 fall (vb.); 10.26 shake (vb. tr.); 10.37 fly (vb.); 16.42 anger; 16.43 rage, fury; 16.53 fear, fright. Bomhard—Kerns 1994:240—241, no. 45; Dolgopolsky 2008, no. 1830, *petV (or *pEtV ?) ‘to fly; bird’.

121. Proto-Nostratic root *p^hath- (~ *p^həth-):

- (vb.) *p^hath- ‘to open; to be wide, open, spacious, spread out; to stretch, to extend, to spread out’;
(n.) *p^hath-a ‘opening, open space’; (adj.) ‘wide, open, spacious’

- A. Proto-Afrasian *pat- ‘to open; to be wide, open, spacious, spread out; to stretch, to extend, to spread out’: Proto-Semitic *pat-aḥ-* ‘to open, to untie, to loosen’ > Hebrew *pāṭaḥ* [פָּתַח] ‘to open, to untie, to loosen’; Aramaic *pəṭaḥ* ‘to open’; Arabic *fataḥa* ‘to open’; Akkadian *pitū*, *petū*, *patū* ‘to open’; Phoenician *pṭh* ‘to open’; Ugaritic *pṭh* ‘to open’; Šheri / Jibbāli *fētəḥ*

‘to open’; Harsūsi *fetōh* ‘to open’; Mehri *fəth*, *fōtəh* ‘to open’; Geez / Ethiopic *fatha* [ፈጥሐ] ‘to open, to untie, to loosen, to unfasten, to release, to dissolve, to disengage, to make of no effect, to set free, to solve, to absolve, to forgive (sins), to judge’; Tigre *fätha* ‘to loosen, to open, to untie, to release’; Tigrinya *fäthe* ‘to loosen, to open, to untie, to release’; Harari *fätaha* ‘to untie, to set free’; Amharic *fäta* ‘to release, to untie, to unfasten, to divorce’; Argobba *fäta* ‘to undo, to release, to absolve of sin, to divorce’; Gurage *fäta* ‘to untie, to loosen, to divorce’. Klein 1987:536; Leslau 1979:247 and 1987:170; Zammit 2002:315; Murtonen 1989:351—352. Proto-Semitic **pat-ay-* ‘to be wide, spacious, open’ > Hebrew *pāṭāh* [פָּתָח] ‘to be wide, spacious, open’; Aramaic *pəṭā* ‘to be spacious’; Gurage (Wolane) *fätti* ‘wide, broad’. Gurage (Wolane) *fetätä* ‘to be wide, broad’, *afetätä* ‘to widen’. Klein 1987:536; Leslau 1979:248. Egyptian *pṯ* ‘to be open’. Erman—Grapow 1926—1963.1:565. Central Chadic **pVtVH-* ‘to open’ > Mofu *pəth-* ‘to open’. East Chadic **pit-* ‘to open’ > Bidiya *pit-* ‘to open’; Sokoro (reduplicated) *fitifiti* ‘to open’. Orël—Stolbova 1995:425—425, no. 1989, **pitaḥ-* ‘to open’.

- B. Dravidian: Tamil *pātti* ‘small field’; Malayalam *pātti* ‘garden bed’; Kannaḍa *pāti* ‘garden bed’; Tuḷu *pāti* ‘nursery for plants’; Telugu *pādu*, *pādi* ‘garden bed or plot’. Burrow—Emeneau 1984:362, no. 4078.
- C. Proto-Indo-European **p^heth-/p^hoth-* ‘to be wide, open, spacious, spread out; to stretch, to extend, to spread out’: Avestan *paθana-* ‘wide, broad’; Ossetic *fātän* ‘wide’; Greek περάννυμι ‘to spread out’, πέταλος ‘broad, flat’; Latin *pateō* ‘to be open’, *patulus* ‘standing open, open’; Old Welsh *etem* ‘fathom’; Scots Gaelic *aitheamh* ‘fathom’; Old Icelandic *faðmr* ‘outstretched arms, embrace; fathom’, *faðma* ‘to embrace’; Old English *fæþm* ‘outstretched arms, embrace; cubit, fathom’; Old Frisian *fethem* ‘fathom’; Old Saxon (pl.) *fathmos* ‘outstretched arms, embrace’; Dutch *vadem*, *vaam* ‘fathom’; Old High German *fadam*, *fadum* ‘cubit’ (New High German *Faden*). Rix 1998a:430—431 **peth₂-* ‘to spread out’; Pokorny 1959:824—825 **pet-*, **pēt-*, **petā-* ‘to stretch out’; Walde 1927—1932.II:18 **pet-* (**petā-*); Mann 1984—1987:907 **pat-* ‘space, pace, stretch’, 929 **pet-*, 932 **pāt-* (**pāth-*) ‘(vb.) to extend; (n.) extent; (adj.) wide, open’; Watkins 1985:51 **petā-* and 2000:67 **petā-* ‘to spread’; Mallory—Adams 1997:539 **peth_a-* ‘to spread out (the arms)’; Boisacq 1950:775—775 **petā-*; Chantraine 1968—1980.II:891; Frisk 1970—1973.II:520—521; Beekes 2010.II:1181 **peth₂-*; Hofmann 1966:265—266; Walde—Hofmann 1965—1972.II:262; Ernout—Meillet 1979:486—487; De Vaan 2008:449; Kroonen 2013:132 Proto-Germanic **fapma-* ‘fathom’; Orël 2003:95 Proto-Germanic **fapmaz*, 95 **fapmjanan*, 95 **fapmōjanan*; De Vries 1977:109; Onions 1966:347 **pot-*, **pet-*, **pt-*; Klein 1971:275; Boutkan—Siebinga 2005:109—110; Kluge—Mitzka 1967:179—180; Kluge—Seebold 1989:198 **petā-*.

- D. Proto-Altaic **p^hat^ha* ‘uncultivated land, field’: Proto-Mongolian **(h)atar* ‘uncultivated land, field’ > Written Mongolian *atar* ‘virgin land, unplowed or fallow land’; Khalkha *atar* ‘virgin land, wilderness’; Buriat *atar* ‘uncultivated land, field’; Mongruor *atər* ‘uncultivated land, field’. Proto-Turkic **Atir-^y* ‘watered field, boundary’ > Karakhanide Turkic *atiz* ‘any strip of land between two dikes’; Uighur *etiz* ‘watered field, boundary’; Turkmenian *atiz* ‘watered field, boundary’; Kazakh *atiz* ‘watered field, boundary’. Starostin—Dybo—Mudrak 2003:1127 **p^ʼat^ʼa* ‘uncultivated land, field’.

Buck 1949:1.24 plain, field; 12.24 open (vb.); 12.61 wide, broad. Bomhard—Kerns 1994:233—234, no. 38; Brunner 1969:77, no. 417; Möller 1911:205; Dolgopolsky 2008, no. 1835. **paṭhV* ‘to be open; open’.

122. Proto-Nostratic root **p^hat^ʼ-* (~ **p^hət^ʼ-*):
 (vb.) **p^hat^ʼ-* ‘to hasten, to move quickly’;
 (n.) **p^hat^ʼ-a* ‘foot’
- A. Proto-Afrasian **p[a]t^ʼ-* ‘(vb.) to hasten, to move quickly; (n.) foot’: Proto-Semitic **pat^ʼ-an-* ‘to be quick, rapid, fast’ > Geez / Ethiopic *faṭana* [ፈጠነ] ‘to be fast, to be swift, to hurry, to be in a hurry, to be prompt, to speed up’; Tigrinya *fāṭānā* ‘to be rapid’; Harari *fāṭāna* ‘to be fast, quick, rapid’; Gurage *fāṭānā* ‘to be fast, quick’; Amharic *fāṭṭānā* ‘to be fast, quick’. Leslau 1963:66, 1979:250—251, and 1987:171. Egyptian *pd* ‘foot, knee’, *pd* ‘to run away, to flee, to hasten’; Coptic *pat* [ⲡⲁⲧ] ‘leg, shin, knee, foot’, *pōt* [ⲡⲱⲧ] ‘to run, to flee’. Faulkner 1962:96; Erman—Grapow 1921:57 and 1926—1963.1:566; Gardiner 1957:566; Vycichl 1983:165; Černý 1976:129.
- B. Elamo-Dravidian: Middle Elamite *ba-at*, *pa-at* ‘foot; under’.
- C. Proto-Indo-European **p^het^ʼ-*/**p^hot^ʼ-* ‘foot’: Sanskrit *pāt* ‘foot’ (gen. sg. *padāḥ*), *padām* ‘step, footstep, position, site’; Greek πούς ‘foot’ (gen. sg. ποδός), πέδον ‘the ground, earth’; Armenian *otn* ‘foot’, *het* ‘footprint’; Latin *pēs* ‘foot’ (gen. sg. *pedis*); Umbrian *peṛum*, *persom-e* ‘ground’; Gothic *fōtus* ‘foot’; Old Icelandic *fet* ‘place, step’, *fótr* ‘foot’; Swedish *fot* ‘foot’; Norwegian *fot* ‘foot’; Danish *fod* ‘foot’; Old English *fōt* ‘foot’; Old Frisian *fōt* ‘foot’; Old Saxon *fōt*, *fuot* ‘foot’; Dutch *voet* ‘foot’; Old High German *fuoz* ‘foot’ (New High German *Fuß*); Luwian *pa-ta-a-aš* ‘foot’; Hittite *pi-e-da-an* ‘place’; Lycian *pddāt-* ‘place’, *pddēn-* ‘place, precinct’; Lithuanian *pādas* ‘sole of foot’; Tocharian A *pe*, B *paiyye* ‘foot’, A *pāts*, B *patsa* ‘bottom’. Pokorny 1959:790—792 **pēd-*, **pōd-* ‘foot’; Walde 1927—1932.II:23—25 **pēd-*, **pōd-*; Mann 1984—1987:909—911 **ped-*, **pēd-* ‘foot’, 911 **pedios*, *-iə* ‘of a foot; foot, base, firmness, link’; Watkins 1985:47 **ped-* and 2000:62 **ped-* ‘foot’; Gamkrelidze—Ivanov 1984.I:38, I:43, I:57, I:146 (fn. 1), I:154, II:786 (fn. 2), **p^hēt^ʼ-*, **p^hōt^ʼ-*

and 1995.I:33, I:38, I:50, I:125 (fn. 68), I:133, I:158, I:688 (fn. 12), *p^hēt-, *p^hōt- ‘foot’; Mallory—Adams 1997:208—209 *pōds ‘foot’ (acc. *pódṃ, gen. *pedós); Mayrhofer 1956—1980.II:204—205 and II:249; Frisk 1970—1973.II:485—486 *pedo-m and II:587—588 *pēd-, *pōd-; Boisacq 1950:754 and 808—809 *pēd-, *pōd-; Hofmann 1966:256 *pedom and 282 *pod-, *ped-; Chantraine 1968—1980.II:867 and II:932—933; Beekes 2010.II:1160—1161 *ped-o-, II:1227—1228 *pod-; Walde—Hofmann 1965—1972.II:293—295; Ernout—Meillet 1979:500—502 *ped-; De Vaan 2008:462; Orël 2003:110 Proto-Germanic *fōtz ~ *fōtuz; Kroonen 2013:152 Proto-Germanic *fōt- ‘foot’; Feist 1939:159—160 *ped-, *pod-; Lehmann 1986:121; Onions 1966:368 *pod-, *ped-; Klein 1971:289 *pōd-, *pēd-; De Vries 1977:118 and 139; Torp 1919:133; Kluge—Mitzka 1967:226; Kluge—Seebold 1989:238; Adams 1999:362 and 401—402; Van Windekens 1976—1982.I:369—370 and I:370 *ped-, *pod-; Fraenkel 1962—1965.I:521; Smoczyński 2007.1:435; Derksen 2015:342 *pódum; Wodtko—Irslinger—Schneider 2008:526—540 *ped-.

- D. (?) Yukaghir (Northern / Tundra) *petnu-* ‘to crawl, to go on all fours’, *petteŋ* ‘crawling’. Nikolaeva 2006:351.
- E. Proto-Altaic *p^hēta- ‘(vb.) to step, to walk; to hasten, to hurry; (n.) step, pace’: Proto-Tungus *pete- ‘to run quickly, to hurry; to jump’ > Evenki *hetekēn-* ‘to run quickly, to hurry’; Lamut / Even *heteken-* ‘to run quickly, to hurry’; Ulch *peten-* ‘to jump’; Oroch *potčo-* ‘to jump’; Nanay / Gold *petēn-* ‘to jump’; Negidal *χetexen-* ‘to jump’; Oroch *χete-* ‘to jump’; Udihe *χetigen-e-* ‘to jump’. Proto-Mongolian *(h)ada- ‘to hurry’ > Mongolian *adaγa-* ‘to hurry, to speed, to strive’, *adaγam* ‘hurry, speed’; Khalkha *adga-* ‘to hurry’; Kalmyk *adγə-* ‘to hurry’, *adm* ‘hurry, speed’. Proto-Turkic *āt- ‘(vb.) to walk, to step; (n.) step, pace’ > Turkish *adım* ‘step, pace’; Azerbaijani *adım* ‘step, pace’; Turkmenian (dial.) *āt-, āt-, āt-le-* ‘to step’, *ādīm* ‘step, pace’; Uzbek *odim* (dial. *adīm*) ‘step, pace’; Uighur *atli-* ‘to step’; Karaim *adīm* ‘step, pace’; Tatar *atla-* ‘to step’, *adīm* ‘step, pace’; Bashkir *atla-* ‘to step’, *adīm* ‘step, pace’; Kirghiz *atta-* ‘to step’, *adīm* ‘step, pace’; Kazakh *atla-* ‘to step’, *adīm* ‘step, pace’; Noghay *atla-* ‘to step’, *adīm* ‘step, pace’; Chuvash *ot-* ‘to walk’, *odym* ‘step, pace’; Yakut *atillā-* ‘to step’; Dolgan *atillā-* ‘to jump, to hop’. Starostin—Dybo—Mudrak 2003:1139 *p^hēta ‘to step, to walk’.

Buck 1949:4.37 foot. Bomhard—Kerns 1994:239, no. 44; Illič-Svityč 1965:368 *pata ‘foot’ (ступня); Dolgopolsky 2008, no. 1665, *pa[g]dV ‘foot’.

123. Proto-Nostratic (n.) *p^hat'-a ‘chaff, husk, (unripe or blighted) grain’:

- A. Dravidian: Tamil *patar* ‘chaff, husk, empty ears of grain; worthless person, emptiness, worthlessness’, *patar* (-pp-, -tt-) ‘to become useless’, *pataṭi* ‘chaff, blighted grain, husk, futility’; Malayalam *patir* ‘empty corn husk,

chaff', *patirikka* 'rice to be without grain'; Kannada *hadir* 'a very young, quite unripe fruit'. Burrow—Emeneau 1984:349, no. 3908.

- B. Proto-Kartvelian **pet'w-* 'millet': Georgian *pet'v-i* 'millet'; Mingrelian *pat'-i* 'millet'; Laz *pat'-i* 'millet'; Svan *pāt'w*, *pet'w* 'millet', *pet'w-ra* 'millet flour'. Klimov 1964:188 **petw-* and 1998:200 **petw-* 'millet'; Schmidt 1962:135; Fähnrich—Sardshweladse 1995:355 **petw-*; Fähnrich 1994:225 and 2007:433—434 **petw-*.

124. Proto-Nostratic root (Eurasianic only) **p^hek^{wh}-*:

(vb.) **p^hek^{wh}-* 'to warm, to heat' (> 'to cook, to bake');

(n.) **p^hek^{wh}-a* 'warmth, heat'; (adj.) 'warm, hot' (> 'cooked, baked')

- A. Proto-Indo-European **p^hek^{wh}-* 'to bake, to cook, to roast': Sanskrit *pācati* 'to cook, to bake, to roast', *pakti-ḥ* 'cooking, cooked food', *pakvā-ḥ* 'cooked, baked'; Pāli *pacati* 'to fry, to roast'; Avestan *pačaiti* 'to boil, to burn'; Greek πέσσω (Attic πέττω, later πέπτω) 'to cook, to dress, to bake; to soften, to ripen, to change (by means of heat)' (future πέψω); Latin *coquō* (< **quequō*) 'to cook, to prepare food; to bake, to burn; to ripen'; Welsh *pobi* 'to bake', *poeth* 'hot'; Albanian *pjek* 'to roast, to broil, to cook, to bake'; Lithuanian (with metathesis) *kepù*, *képti* 'to bake, to roast'; Old Church Slavic *pekō*, *pešti* 'to bake, to burn', *peštb* 'oven'; Tocharian A, B *pāk-* (active) 'to make ready for eating: to cook, to boil, to ripen'; Armenian *hac^h* 'bread'. Rix 1998:421—422 **pek^u-* 'to make ripe, to cook, to prepare food'; Pokorny 1959:798 **pek^u-* 'to cook'; Walde 1927—1932.II:17—18 **pek^u-*; Mann 1984—1987:920 **pequ^los*, *-om*, *-ā*, 920 **pequ^mmn-* (**pequ^{no}-*) 'baking, firing, cooking, cooked', 920—921 **pequ^oō*, *-iō* 'to bake, to cook, to roast, to ripen', 921 **pequ^os* (**poqu^u-*) 'cooking', 921 **pequ^tis* 'baking, cooking, roasting, ripening', 921 **pequ^tos* 'cooked, baked, roasted, ripened', 976 **poqu^u-* 'baked, cooked; baked or cooked object'; Mallory—Adams 1997:125 **pek^w-* 'to cook, to bake' and 2006:258 **pek^w-* 'to cook, to bake', 259—260 **pek^w-* 'to cook', **pek^wtis* 'cooking', **pek^wter-* 'cook'; Watkins 1985:48 **pek^w-* and 2000:63 **pek^w-* 'to cook, to ripen'; Gamkrelidze—Ivanov 1984.I:146 **p^[h]ek^[h]°*, I:410 fn. 1 **p^[h]ek^[h]°*, II:699 **p^[h]ek^[h]°* and 1995.I:125 **p^hek^h°* 'to cook', I:358 fn. 21 **p^hek^h°*, I:604 **p^hek^h°*; Mayrhofer 1956—1980.II:183, II:184, and II:185—186; Boisacq 1950:769—770 **pequ^oō*, **pequⁱō*; Hofmann 1966:262—263 **pek^u-* (Italo-Celtic assimilated to **quequ^o-*); Chantraine 1968—1980.II:884 **pek^w-* and 890 **pek^w-*; Frisk 1970—1973.II:519—520 **pek^u-io/e-*, **pek^u-o/e-*; Beekes 2010.II:1180—1181 **pek^w-*; Huld 1984:103—104 **pek^u-*; De Vaan 2008:134; Walde—Hofmann 1965—1972.I:270—271 *coquō* (< **quequō* < **pequ^oō*); Ernout—Meillet 1979:141—142 **pek^wō* (> **k^wek^wō*); Adams 1999:368 **pek^w-* 'to cook, to ripen' and 2013:393—394 **pek^w-* 'to cook, to ripen'; Van Windekens 1976—1982.I:355 **pek^u-*; Smoczyński 2007.1:275—276

- *pek^uō; Fraenkel 1962—1965.I:241 *pek^u-; Derksen 2008:393 *pek^w-; Wodtko—Irslinger—Schneider 2008:548—552 *pek^u-; Orël 1998:329.
- B. (?) Yukaghir (Southern / Kolyma) *pugō* ‘summer’, *puge-* ‘hot’, *pugelbā-* ‘to get warmer’, *pugelādej-* ‘to heat, to warm’, *puged’ə* ‘sweat’, *pugučə* ‘warmth’, (Northern / Tundra) *pugelwe-* ‘to get warmer’, *puguler-* ‘to heat, to warm’, *pugej-* ‘hot’, *pugud’e* ‘heat, warmth’, *puguo-* ‘warm’, *pugukie-* ‘to get warmer’. Nikolaeva 2006:366.
- C. Proto-Altaic *p^hekhV- (~ *p-) ‘hot, warm’: Proto-Tungus *peku- ‘hot’ > Evenki *heku* ‘hot’; Lamut / Even *hök* ‘hot’; Negidal *χeku-di* ‘hot’; Manchu *fiyakiya-* ‘to be hot from the sun’, *fiyakiyan* ‘burning hot; the sun’s heat’, *fiyaku-* ‘to heat, to dry by a fire, to dry in the sun; to bake’; Ulch *pukeuli* ‘hot’, *pêkki-* ‘to bake’; Orok *χekkuli*, *χekusi* ‘hot’ (loanword from Oroch); Nanay / Gold *peku* ‘hot’, *piqi-* ‘to warm, to heat’; Oroch *χeku*, *χekusi* ‘hot’; Udihe *χekuhi* ‘hot’, *piki-le-* ‘to bake’ (loanword from Ulch); Solon *eχūgdi* ‘hot’. Starostin—Dybo—Mudrak 2003:1084 *pek^hV- (~ *p^h-) ‘warm, hot’.

Buck 1949:5.21 cook; 5.22 boil; 5.23 roast, fry; 5.24 bake; 15.85 hot, warm. Greenberg 2000:41, no. 76; Dolgopolsky 2008, no. 1679, *pākō ‘to heat (on fire), to be hot’ (→ ‘to cook, to bake; to dry’); Illič-Svityč 1965:337—338 *pā[k]Λ [‘горячий’] ‘hot, warm’. The Kartvelian forms cited by Dolgopolsky are not included here — the original meaning appears to have been ‘to blow (air, wind, breeze), to dry in the air’ (cf. Fähnrich—Sardshweladse 1995:362 *puk-; Fähnrich 2007:443—444 *puk-: Georgian *puk’-v-a* ‘to let the air out’; Svan [Lower Bal] *li-pk’w-e* ‘to dry [something] in the air’, *puk’wi* ‘dry’). The Afrasian forms cited by Dolgopolsky and the Eskimo-Aleut and Chukchi-Kamchatkan forms cited by Greenberg are not included here due to problems with both the semantics and the phonology. Finally, the Uralic forms cited by Illič-Svityč and Dolgopolsky appear to be loanwords from North Germanic (cf. de Vries 1977:23; Falk—Torp 1903—1906.I:31—32: Old Icelandic *baka* ‘to bake; to warm and rub the body and limbs’, *bakstr* ‘baking; baked bread, especially communion bread; poultice, fermentation; warming, rubbing [of the body]’; Swedish *baka* ‘to bake’; Danish *bage* ‘to bake’ → Saami / Lapp [Lule] *pahkka* ‘hot; heat’, [Southern] *baakke* ‘hot; heat’, [Norwegian] *bak’kâ* ‘heat’, *bak’ka* ‘hot’).

125. Proto-Nostratic root *p^hel-:

- (vb.) *p^hel- ‘to tremble, to shake; to be frightened, fearful, afraid’;
 (n.) *p^hel-a ‘fright, fear’

- A. Afrasian: Proto-Semitic *pal-ax- ‘to fear, to be afraid; to respect, to venerate, to serve, to worship’ > Old Akkadian *palāḫum* ‘to fear, to be afraid; to respect, to venerate, to serve, to worship’, *palḫum* ‘feared, awe-inspiring’; Amorite *plḫ* ‘to fear’ (basic stem, Qal *yaplaḫ*, etc.); Imperial Aramaic *plḫ* ‘to serve, to worship’, *plḫ ʔlhʔ* ‘servant of God’; Syriac *pəlaḫ*

- ‘to serve (especially, to serve God), to worship’. Murtonen 1989:340. Semantic development as in Greek σέβομαι ‘to feel awe of’, sometimes ‘to fear’, commonly ‘to revere, to worship’; note also Hittite (1st sg. pres.) *na-aḥ-mi* ‘to fear, to respect, to revere’, *na-aḥ-ša-ra-az* ‘fear, reverence’.
- B. Proto-Indo-European **ph^hel-/ *ph^hl-* (secondary *o*-grade form: **ph^hol-*) ‘to tremble, to shake; to be frightened, fearful, afraid’: Greek πάλλω ‘to sway, to shake; (passive) to swing or dash oneself; to quiver, to leap (especially in fear)’, πελεμίζω ‘to shake, to make quiver or tremble’; Gothic *us-filma* ‘frightened, astonished’, *us-filmei* ‘astonishment’; Old Icelandic *fæla* ‘to frighten, to scare’, *fæling* ‘frightening’, *felmtr* ‘sudden fear, fright’, *felms-fullr* ‘alarmed, frightened’; Old English *eal-felo* ‘baleful, dire’; Middle High German *vālant* ‘devil’ (New High German [poet.] *Voland* ‘evil friend’, [dial.] *Valand* ‘devil, evil friend’); Old Church Slavic *plaxъ* ‘dread, fear, fright’, *plašiti* ‘to scare, to frighten’. Pokorny 1959:801 (**pel-*); Walde 1927—1932.II:52—53 **pel-* ‘to tremble, to shake’; Mann 1984—1987:916; Boisacq 1950:744 and 762; Frisk 1970—1973.II:469 and II:497—498; Chantraine 1968—1980.II:854 and II:875—876; Beekes 2010.II:1148 **pelh₁-*, II:1167; Hofmann 1966:251 **pel-* and 260 **pelem-*; Feist 1939:530 **pelem-*; Lehmann 1986:381 **pel-*; De Vries 1977:110, 117, and 149; Orël 2003:97 Proto-Germanic **felmaz*; Kluge—Mitzka 1967:823; Kluge—Seebold 1989:768.
- C. Proto-Uralic **pele-* ‘to fear, to be afraid’: Finnish *pelko* ‘fright, fear’; Lapp / Saami *bállâ-/bâlâ-* ‘to be afraid’; Mordvin *pele-* ‘to be afraid’; Votyak / Udmurt *pul-* ‘to be afraid’; Zyrian / Komi *pol-* ‘to be afraid’; Vogul / Mansi *pil-, pəl-* ‘to be afraid’; Ostyak / Xanty *pəl-*, (Southern) *pət-* ‘to be afraid’; Hungarian *fél-* ‘to fear, to be afraid’; Yurak Samoyed / Nenets *piil’u-, piir’u-* ‘to be afraid’; Tavgi Samoyed / Nganasan *filiti-* ‘to be afraid’; Yenisei Samoyed / Enets *fie-* ‘to be afraid’. Collinder 1955:47 and 1977:66; Rédei 1986—1988:370 **pele-*; Décsy 1990:105 **pelä* ‘to fear, to be afraid’; Sammallahti 1988:539 Proto-Uralic **peli-* ‘fear’; Janhunen 1977b:124—125.
- Buck 1949:16.53 fear, fright; 22.16 worship (vb.). Bomhard—Kerns 1994:255, no. 64; Hakola 2000:136, no. 592; Illič-Svityč 1971—1984.II:98—99, no. 337, **pelHi* ‘to tremble, to be afraid’; Dolgopolsky 2008, no. 1704, **pelqê* ‘to tremble, to fear’.
126. Proto-Nostratic root **ph^hid-* (~ **ph^hed-*):
 (vb.) **ph^hid-* ‘to seize, to hold, to clutch, to capture, to cling to’;
 (n.) **ph^hid-a* ‘hold, grasp’
- A. Dravidian: Tamil *piṭi* ‘to catch, to grasp, to seize, to clutch, to capture, to cling to, to contain, to carry, to keep back, to understand, to make a handful; to cling (intr.), to adhere, to be pleasing, to be suitable’, *piṭippu*

‘grasping, holding, seizure, catching, sticking, money amassed, handle’; Malayalam *piṭi* ‘grasp, hold, closed hand, handful, handle, hilt, memory’, *piṭikka* ‘to seize, to catch, to hold (as a vessel), to stick to, to understand, to take effect’; Kota *piṛc-* ‘to clench (hand)’; Kannaḍa *piḍi* ‘to seize, to catch, to grasp, to hold’; Koḍagu *pudī* (*pudip-*, *pudic-*) ‘to catch, to hold’; Telugu *piḍikili* ‘fist, hold, grasp, handful’; Parji *piḍk-* ‘to embrace’; Gondi *pīḍānā* ‘to snatch, to catch’. Burrow—Emeneau 1984:367—368, no. 4148; Krishnamurti 2003:115 **piṭ-i* ‘(vb.) to grasp; (n.) handle’.

- B. Uralic: Proto-Finno-Ugrian **pitä-* ‘to seize, to hold, to grasp, to cling to’ > Finnish *pitä-* ‘to keep, to hold, to retain, to maintain’; Mordvin (Erza) *ped'a-*, (Moksha) *pedā-* ‘to attach oneself, to adhere, to start, to begin in an obstinate way’; Cheremis / Mari *pidä-*, *pida-* ‘to tie, to knit’; Hungarian *fűz-* ‘to stitch, to sew, to thread; to attach, to bind, to tie’, *fűzér* ‘string, garland’. Collinder 1955:108 and 1977:122; Sammallahiti 1988:547 Proto-Finno-Ugrian **pitä-* ‘to keep, to hold’; Rédei 1986—1988:386 **pitä-*.

Buck 1949:11.14 seize, grasp, take hold of. Bomhard—Kerns 1994:250—251, no. 57; Hakola 2000:142—143, no. 623.

127. Proto-Nostratic (n.) **phily-a* ‘child, infant, youth, young of animals’:

Note: A related verb stem **phily-* ‘to wean’ may cautiously be reconstructed here, as hinted at by Militarev—Kogan 2005.II:230, no. 174:

Probably related to the PS verbal root **plw/y* ‘to separate, to wean’ for which v. LGz. 161. In Militarev’s view, the Afras. data below speak against this derivation, whereas in Kogan’s view, the Afras. evidence is so scarce and semantically remote that it can hardly influence one’s decision in the present question.

- A. Proto-Afrasian **pil-* ‘young of animals, yearling’: Proto-Semitic **pil-w/y-* ‘yearling foal, young of domestic animals’ > Arabic *filw*, *falūw*, *fulūw* ‘colt, foal’; Soqotri *fólhi* ‘a yearling calf, young of large animals’; Tigre *fəlit* ‘a yearling calf’, *fəhuy* ‘a weaned calf’. Militarev—Kogan 2005.II:230, no. 174, Proto-Semitic **pVlw/y-* ‘yearling foal, small of domestic animals’. North Cushitic: Beja / Beḍawye *filáy* ‘she-camel just foaled’ (this may be a loanword), *to-filáy-it-kamtu* ‘she-camel under two months in foal’. (?) East Cushitic: Hadiyya *fillak-icco* (pl. *fillaʔa*) ‘goat’; Kambata *fell-eccu* (pl. *felleʔu*) ‘goat’. Hudson 1989:277 and 316; Blažek 2003b:246. Militarev—Kogan 2005.II:230, no. 174, Proto-Afrasian **pVl(l)Vw/y-*, **pVw/yal-* ‘(young of) large or small cattle’.
- B. Dravidian: Tamil *piḷ* ‘tender beauty of a child’, *piḷlai* ‘child, son, youth, daughter, young of many animals’; Malayalam *piḷla* ‘child, infant, young of animals; small fruit’; Kannaḍa *piḷle*, *piḷla*, *pilla* ‘child, young of any

animal, that which is small or petty'; Tuḷu *pillè* 'child, baby'; Telugu *pilla* 'child, baby, young of any animal, girl; small, little, young', *pilaka*, *piluka* 'a young one, young shoot', *pilladi* 'girl, lass, young woman'; Kolami *pilla* 'baby, daughter, woman', *pilla pedda* 'females and males'; Naiki *pilla* 'girl, daughter'; Gondi *pilla*, *pila*, *pilal* 'young of animal', *pīla* 'girl, young one of animals', *pīla*, *pilla* 'child', *pilā* 'child, young of an animal'; Konda *pila* 'child, a small one'; Pengo *pilka* 'young shoot of tree'; Kuṛux *pellō* 'female child, female not arrived at puberty, bride or young woman (before she has had children), maidservant', *pell* 'maidservant'; Malto *peḷi* 'woman', *pelo* 'female (of plants)'; Brahui *pillōta* 'poor child, small child, orphan; miserable'. Burrow—Emeneau 1984:372, no. 4198.

- C. Proto-Indo-European **p^hlH-* 'filly, foal, colt' (Germanic only): Proto-Germanic **fulan-* 'foal' > Gothic *fula* 'foal, colt'; Old Icelandic *foli* 'foal', *fyl* 'foal, filly'; Norwegian *fole* 'foal'; Danish *føl* 'foal'; Swedish *fåle* 'colt, foal'; Old English *folā* 'foal, colt'; Old Frisian *folā* 'foal'; Old Saxon *folo* 'foal'; Dutch *veulen* 'foal, colt'; Old High German *folo* 'foal, filly, colt' (New High German *Fohlen*). Kroonen 2013:158 Proto-Germanic **fulan-*; Orël 2003:118 Proto-Germanic **fulōn*; Feist 1939:170—171; Lehmann 1986:130; De Vries 1977:137 and 147; Torp 1919:129; Falk—Torp 1910—1911.I:250; Onions 1966:356 and 366 Common Germanic **folon*; Klein 1971:288; Kluge-Mitzka 1967:211; Kluge—Seebold 1989:225; Walshe 1951:59. Note: The alleged Greek, Latin, Albanian, Welsh, and Armenian cognates widely discussed in the literature probably do not belong here (cf. Mann 1984—1987:973 **pōl-* 'foal, filly, mare' — "Lat. pullus, OE folā, OHG folo, id. unrelated") (traditional reconstructions [cf. Pokorny 1959:842—843; Walde 1927—1932.II:75—76; Watkins 1985:47 and 2000:62]; etc.): Greek πῶλος 'young horse, foal, filly; (poetic) young person' < **poH-lo-* (cf. Beekes 2020.II:1266 reconstructs **pōlH-*, **plH-* 'foal'; Martirosyan 2009:631—632); Latin *pullus* 'foal, chick, young of animal' < **put-s-lo-* (cf. De Vaan 2018:503); Albanian *pelë* 'mare' < Proto-Albanian **pōulā* (cf. Orël 1998:314; note also Kroonen 2013:158 [Albanian *pelë* < **pōlH-neh₂-*]; Huld 1983:102 — Huld notes: "...the long o-grade is unique to Greek, Albanian, Armenian and Celtic [MW *ebawl* < **Eekuo-poolos*].") — Albanian *pelë* 'mare' has also been compared with the verb *pjell* 'to bear, to give birth' (cf. Huld 1983:102 and 104); Middle Welsh *ebawl* 'foal, colt' (Modern Welsh *ebol* 'foal, colt', *eboles* 'filly'): *eb-* < **ekuo-s* 'horse', *awl* < **pōlHo-* 'colt' (cf. Kroonen 2013:158); Armenian *ul* 'kid, young of deer or gazelle' < **poH-lo-* — Martirosyan (2009:631—632) reconstructs Proto-Indo-European (nom.) **pōlH-s*, (gen.) **plH-ós*, while Beekes (2010.II:1266) rejects relationship between the Greek and Armenian forms.

Buck 1949:3.45 foal, colt.

128. Proto-Nostratic root *p^hin^y- (~ *p^hen^y-):

- (vb.) *p^hin^y- ‘to watch (over), to protect, to nourish, to nurture’;
 (n.) *p^hin^y-a ‘protection, care; feeding, nourishing, nourishment’

- A. Dravidian: Tamil *pēnu* (*pēni*-) ‘to treat tenderly, to cherish, to foster, to protect, to regard, to esteem, to honor, to treat courteously, to worship, to care for’, *pēn* ‘protection’, *pēnam* ‘tenderness, regard, care, nurture’, *piṇai* ‘protecting with loving care’; Malayalam *pēnuka* ‘to foster, to take care of’, *pēnam* ‘caution’, *peṇṇuka* ‘to take care of, to use, to take to oneself’; Telugu *pen(u)cu* ‘to nourish, to nurture, to foster, to support, to rear, to fatten, to increase, to extend’. Burrow—Emeneau 1984:392, no. 4436.
- B. Proto-Indo-European *p^hen- ‘food, protection’: Latin *penus* ‘food supplies, provisions’; Lithuanian *pėnas* ‘food’, *penù*, *penėti* ‘to feed, to fatten’; Gothic *fenea* ‘barley-groats, porridge’; Farsi *panāh* ‘refuge, protection’. Rix 1998a:424 *pen- ‘to feed’; Pokorny 1959:807 *pen- ‘to feed’; Walde 1927—1932.II:25 *pen-; Mallory—Adams 1997:199 *pen- ‘to feed, to fatten’; Mann 1984—1987:919 *penos ‘food, protection’; Ernout—Meillet 1979:496—497; De Vaan 2008:458—459; Walde—Hofmann 1965—1972.II:283; Feist 1939:147—148; Lehmann 1986:112; Fraenkel 1962—1965.I:569; Smoczyński 2007.1:449—450.
- C. Proto-Uralic *pun^ya- ‘to watch (over), to protect, to preserve, to keep’: Lapp / Saami (Kola) *binnje-/binje-* ‘to hoard, to keep, to protect, to preserve, to watch (over), to hold, to value’, *binnjej* ‘herdsman’; Yenisei Samoyed / Enets (Baiha) *foñiye-*, (Hatanga) *foneje-* ‘to watch (over), to pasture’, *foñidde*, *fonedde* ‘herdsman’. Collinder 1955:6 and 1977:27; Décsy 1990:106 *punja ‘to herd (reindeer)’; Rédei 1986—1988:413—414 *p^hñz-; Illič-Svityč 1971—1984.III:106—111, no. 373, Proto-Uralic *p^hñā (< *pēñā ?). (?) Yukaghir (Southern / Kolyma) *peñi-* ‘to put; to leave, to abandon’, *poño-* ‘to remain’, (Northern / Tundra) *poñi-* ‘to put; to leave, to abandon’, *poñinube* ‘place where clothes and other things are left’, *poñaa-* ‘to remain’. Nikolaeva 2006:359.

Buck 1949:5.12 food. Illič-Svityč 1971—1984.III:106—111, no. 373, */p^heHñā ‘to shepherd, to graze, to defend, to take care of’; Dolgopolsky 2008, no. 1746, *pEX|Qñā ‘to keep, to protect’; Koskinen 1980:72, no. 256; Bomhard—Kerns 1994:251—252, no. 58.

129. Proto-Nostratic root *p^hir- (~ *p^hher-):

- (vb.) *p^hir- ‘to bring forth, to bear fruit’;
 (n.) *p^hir-a ‘birth, issue, offspring, descendant, fruit’

- A. Proto-Afrasian *pir- ‘to bring forth, to bear fruit’: Proto-Semitic *par-ay- ‘to bring forth, to bear fruit’ > Hebrew *pārāh* [פָּרָה], *pārāʔ* [פָּרָא] ‘to bring forth, to bear fruit’, *pārī* [פָּרִי] ‘fruit’; Aramaic *pārā* ‘to bear fruit, to be

fruitful'; Phoenician *pry* 'to bear fruit'; Ugaritic *pr* 'fruit'; Sabaeen *fry* 'to cultivate'; Šheri / Jibbāli *efré?* 'to become ripe, to ripen'; Geez / Ethiopic *farya* [ፈርሃ], *faraya* [ፈረሃ] 'to bear fruit, to produce fruit, to yield fruit, to be fruitful, to engender', *fārē* [ፋሬ] 'fruit'; Tigrinya *fārāyā* 'to bear fruit'; Tigre *fāra* 'to bear fruit'; Amharic (*a*)*fārra* 'to bear fruit'; Gurage (*a*)*fārra* 'to bear fruit', *fre* 'fruit'. Klein 1987:522, 523, and 527—528; Leslau 1979:240 and 1987:167; Murtonen 1989:347. Proto-Semitic **par-ax-* 'to sprout' > Hebrew *pārah* [פָּרַח] 'to bud, to sprout'; Aramaic *pārah* 'to blossom, to sprout'; Akkadian *parāhu* 'to sprout', *pirhu* 'sprout', *pir'u* 'issue, offspring, descendant'; Arabic *farraha* 'to have young ones (bird), to hatch; to germinate, to sprout', *farh* 'young bird; shoot, sprout (of a plant or a tree)'; Šheri / Jibbāli *fērāg* '(flower) to open up', *fērg* 'fully-grown, fast grown'; Harsūsi *fātereg* 'to ripen, to bloom'; Mehri *fārōg* '(bird) to hatch (eggs)', *fātrāg* 'to bloom'; Geez / Ethiopic *farha* [ፈርሃ] 'to sprout, to germinate'. Murtonen 1989:347; Leslau 1987:166; Klein 1987:527. Egyptian *pṛt* 'fruit, seed, offspring, posterity', *pṛi* 'to be born, to arise from', *pṛh* 'flower, bloom, blossom'. Faulkner 1962:90 and 91; Erman—Grapow 1921:54; Hannig 1995:286 and 287. Berber: Guanche *a-faro* 'corn'. Cushitic: Galla / Oromo *firi* 'fruit'; Xamir *fir* 'fruit'; Bilin *fir* 'fruit'; Saho *fire* 'flowers, fruit'. Appleyard 2006:73; Reinisch 1887:125. Orël—Stolbova 1995:424, no. 1983, **pir-* 'fruit, corn', 425, no. 1984, **pirah-* 'sprout, flower' (derived from **pir-* 'fruit, corn'). Ehret 1995:106, no. 85, **fir-* 'to flower, to bear fruit'.

- B. Dravidian: Tamil *peru* (*peruv-*, *perr-*) 'to get, to obtain, to beget, to generate, to bear', *pīra* 'to be born, to be produced', *pīravi* 'birth'; Malayalam *peruka* 'to bear, to bring forth, to obtain, to get', *pēru* 'birth'; Kota *perv-* (*perd-*) 'to be born', *perp* 'birth'; Kannada *per-* (*pett-*) 'to get, to obtain, to beget, to bear'; Kodagu *per-* (*peruv-*, *pett-*) 'to bear (child)'. Burrow—Emeneau 1984:391, no. 4422.
- C. Proto-Indo-European **pher-/ph₂-* 'to bear, to bring forth': Latin *pariō* 'to bear, to bring forth'; Lithuanian *periù*, *perėti* 'to hatch'; (?) Gothic *fraiw* 'seed'; (?) Old Icelandic *fræ*, *frjó* 'seed', *frjóa* 'to fertilize, to multiply, to be fertile', *frjór* 'fertile', *frjó-ligr*, *frjó-samr* 'fruitful'; Swedish *frö* 'seed, grain'; Danish *frø* 'seed, grain'. Rix 1998a:427—428 **perh₃-* 'to get, to obtain'; Pokorny 1959:818 **per-* 'to bear, to bring forth'; Walde 1927—1932.II:41—42 **per-*; Mann 1984—1987:926 **perō*, *-iō* 'to breed'; Watkins 1985:50 **perā-* and 2000:66 **perā-* 'to produce, to procure'; Ernout—Meillet 1979:483—484; De Vaan 2008:445—446; Walde—Hofmann 1965—1972.II:255—256 **per-*; Fraenkel 1962—1965.I:573; Smoczyński 2007.1:451; Kroonen 2013:152 Proto-Germanic **fraiwa-* 'seed' ('[a] word with a debated etymology') — Kroonen also compares Old Icelandic *Freyr* 'fertility deity' (< **frauja-*) and *frygð* 'blossoming, excellence' (< **friuwwipō-*); Orël 2003:111 Proto-Germanic **fraiwjaz*;

Feist 1939:163; Lehmann 1986:123; Falk—Torp 1903—1906.I:201; De Vries 1977:145.

- D. Proto-Altaic *p^hūri ‘seed, offspring’: Proto-Tungus *pur- ‘young (boy, child); children; family; breed’ > Manchu *fursun* ‘shoots, sprouts (especially of grain)”; Evenki *hur-kēn* ‘young (boy, child)’, *hurū* ‘family’, *huril* ‘children’; Lamut / Even *hur-ken* ‘young (boy, child)’, *hurəl* ‘children, sons’; Ulch *purul* ‘children’; Negidal *χuyil* ‘children’; Orok *puriye* ‘young (boy, child)’, *puril* ‘children’; Nanay / Gold *puri* ‘family’, *puril* ‘children’; Oroch *χī* ‘children’; Solon *ukkēχēē*, *urkēχēē* ‘young (boy, child)’, *uril* ‘children’. Proto-Mongolian *hüre ‘seed; child, descendant’ > Written Mongolian *üre* ‘seed, grain, fruit; offspring, descendants; result, product’; Khalkha *ür* ‘seed, child, descendant’; Buriat *üri* ‘seed, child, descendant’; Kalmyk *ürn* ‘child, descendant’; Ordos *ür*, *üre* ‘child, descendant’; Dagur *χur* ‘child, descendant’; Monguor *furē* ‘fruit’. Poppe 1955:55. Proto-Turkic *urug (~ or-) ‘seed, kin, kind; child’ > Old Turkic *uruγ* ‘seed, kin, kind’; Karakhanide Turkic *uruγ* ‘seed, kin, kind’; Turkmenian *urug* ‘kin, kind’; Uzbek *uruγ* ‘seed’; Uighur *uruq* ‘seed’; Tatar *orliq* ‘seed’; Bashkir *orloq* ‘seed’; Kirghiz *uruq* ‘kin, kind’; Kazakh *urıq* ‘seed’; Noghay *urliq* ‘seed’; Tuva *uruγ* ‘child, girl’; Chuvash *vɛʷrɛʷ* ‘seed’; Yakut *urū* ‘relatives’; Dolgan *urū* ‘relatives’. Poppe 1960:111; Street 1974:24 *püre ‘seed, fruit; result, offspring’; Starostin—Dybo—Mudrak 2003:1187 *p^hūri ‘seed’.

Buck 1949:4.72 bear (of mother); 5.71 fruit. Bomhard—Kerns 1984:234—235, no. 39; Brunner 1969:22, no. 31; Möller 1911:203; Dolgopolsky 2008, no. 1761, *p[e]rV ~ *pūHrV (both from *pū?[e]rV ?) ‘fruit’, no. 1766, *pōr[i] (or *pōHar[i] ?) ‘child, offspring’, and, no. 1773, *Pār[?]V ‘to bring forth, to give birth (of animals), to breed; young of animals’.

130. Proto-Nostratic root *p^hir- (~ *p^her-):

(vb.) *p^hir- ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated; to flutter, to fly, to flee’;

(n.) *p^hir-a ‘flying, flight, fleeing’

Note also:

(vb.) *p^har- ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated; to flutter, to fly, to flee’;

(n.) *p^har-a ‘flying, flight, fleeing’

- A. Proto-Afrasian *pir- ‘(vb.) to move swiftly, to hasten, to be in a hurry, to be greatly agitated; to flutter, to fly, to flee; (n.) flying, flight, fleeing’: Proto-Semitic *par- (*na-par-, *par-ar-, *par-ax-, *par-ad-, *par-ah-, *par-par-) ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated; to flutter, to fly, to flee’ > Akkadian *naprušu* ‘to fly, to take flight, to flee’; Arabic *farra* ‘to flee, to run away, to desert’, *nafara* ‘to flee, to run

away', *farḥ* 'young bird', (reduplicated) *farfara* 'to move, (birds) to shake wings', *furfur* 'small bird'; Hebrew *pārah* [פָּרַח] 'to fly'; Aramaic *pərah* 'to fly', *parḥā* 'young bird'; Syriac *pəraō* 'to flee'; Ugaritic **pr* 'to flee' (imptv. *pr* 'flee!'), *npr* 'fowl'; Sabaeen *frh* 'to flee'; Harsūsi *fer* 'to fly, to jump, to spring', *ferfāyr* 'feather', *ferōd* 'to run off in panic, to stampede, to flee'; Šheri / Jibbāli *ferr* 'to fly, to flee, to jump up quickly', *fērōd* 'to stampede, to panic', *ferfōr* 'hasty', *ənfərfēr* 'to have a fit, to have epilepsy, to panic'; Mehri *fər* 'to fly, to jump up', *fərōd* 'to stampede, to panic, to make off, to run away', *fərfir* 'hasty person'; Geez / Ethiopic *farḥ* [ፈርዝ] 'chick, young bird', *ʔanfarfara* [አንፈርፈረ] 'to thrash about, to flail about, to move convulsively'; Tigre *fərfərāt* 'a bird'; Tigrinya *fārārā* 'to fly, to fly away', *ʔanfārfārā* 'to writhe, to flop about'; Amharic *tānfārāffārā* 'to flop around, to writhe, to thrash about', *fərfərt* 'partridge'. Klein 1987:527; Leslau 1987:165 and 166; Militarëv 2010:70 Proto-Semitic **prḥ*; Zammit 2002:318. Egyptian *pry* 'to soar, to rise'. Hannig 1995:283—284; Faulkner 1962:90—91 *prī* (2) 'to go up, to ascend'; Gardiner 1957:565; Erman—Grapow 1921:54 and 1926—1963.1:520—521. Berber: Kabyle *ffərfər* 'to flap the wings, to fly away; to fly; to go quickly', *ifərr* 'wing; leaves, foliage'; Tamazight *afṛaw* 'to fly', *afər* 'wing'; Semlal *firri* 'to fly'; Ahaggar *fəra-t* 'to fly'. Proto-Southern Cushitic **pur-* or **pir-* 'to fly' > Ma'a *púru* 'to fly', *-púrupúru* 'to hop'. Ehret 1980:321. Beja / Beɣawye *fir-* 'to fly'. Reinisch 1895:81. West Chadic **pir-* 'to soar' > Hausa *fīra* 'to soar'; Angas *fīir* 'to stretch the wings'. Central Chadic **pVr-* 'bird's flight' > Mafa *parr*, *perr* 'bird's flight'. Newman 1977:26 Proto-Chadic **pəra* 'to fly, to jump'. Ehret 1995:96, no. 51, **pir-* 'to fly'; Orël—Stolbova 1995:424, no. 1981, **pir-* 'to fly, to soar', and 422, no. 1971, **per-* 'bird'; Takács 2011a:116—117.

- B. Uralic: Proto-Finno-Permian **pir3* 'nimble, quick, swift' > Finnish *pireä* 'quick, swift, lively', *pirakka* 'lively'; Estonian *pirakas* 'lively, vigorous'; Lapp / Saami *bārok* 'nimble, quick, swift, light of foot'; Zyrian / Komi *peryd*, *peryt* 'quick, swift, speedy'. Rédei 1986—1988:732 **pir3*.

Buck 1949:3.64 bird; 4.292 wing; 4.393 feather; 10.37 fly (vb.); 10.51 flee; 14.21 swift, fast, quick. Bomhard—Kerns 1994:242—243, no. 47.

131. Proto-Nostratic root **phir-* (~ **pher-*):

(vb.) **phir-* 'to twist, to turn';

(n.) **phir-a* 'twist, twining, turn; twine, string, rope, cord'

- A. Dravidian: Tamil *piri* 'twist, strand, wisp', *puri* 'to be twisted, to curl, to turn', *puri* 'cord, twine, rope, strand, twist (as of straw), curl, spiral, conch'; Malayalam *piri* 'a twist, twining', *piriyuka* 'to be twisted, warped', *pirikka* 'to twist', *puri* 'twisting, string'; Kannaḍa *puri* 'twisting, twist, twine, string'; Tulu *piri* 'twist, spiral thread (as of a screw)', *piripuni* 'to

twist (as a rope)', *piripāvuni* 'to turn, to twist'; Telugu *piri*, *puri* 'twist, strand, twisting', *pirigonu* 'to be twisted, to twist'. Burrow—Emeneau 1984:370, no. 4177.

- B. Proto-Indo-European **p^heri* 'around': Sanskrit *pári* 'around'; Avestan *pairi* 'around'; Old Persian *pariy* 'around, about'; Greek *περί* 'around'. Pokorny 1959:810 **per*, **peri*; Walde 1927—1932.II:29—32 **per*, **peri*; Mann 1984—1987:922—923 **peri* (**per*, **per*-) 'through, over, around'; Watkins 1985:49—50 **per* and 2000:65 **per*- base of prepositions and preverbs with the basic meaning 'forward, through' and a wide range of extended senses such as 'in front of, before, early, first, chief, toward, against, near, at, around'; Mallory—Adams 1997:581 **per*- 'over, through, about'; Mayrhofer 1956—1980.II:216—217 **peri*, **per*-; Boisacq 1950:772—773 **peri* (**per*); Hofmann 1966:264 **peri* (**per*); Frisk 1970—1973.II:512—513 **péri*; Chantraine 1968—1980.II:886; Beekes 2010.II:1176 **per*-. For possible additional cognates, cf. Proto-Indo-European **p^her*-/ **p^hor*-/ **p^hr*- base of prepositions and preverbs with a wide range of meanings such as 'in front of, forward, before, first, chief, forth, foremost, beyond', which is listed above under Proto-Nostratic **p^har*- (~ **p^har*-) '(vb.) to press forward, to precede, to hasten in advance, to overtake, to surpass, to outstrip; (adj.) chief, foremost, first'.
- C. Proto-Uralic **pire* 'round; any round object; around, round about': Finnish *piiri* 'circumference, periphery; extent; compass, circle; department, district'; Lapp / Saami *birrá* 'round, all around; close (densely) round; round about, around; concerning, about'; Mordvin (Erza) *pire*, (Moksha) *pere* 'fenced place'; Selkup Samoyed *pör*, *pür* 'ring; round; wheel, circle', *pöruŋ*, *püruŋ* 'round, round about'; Kamassian *pjeeri* 'about, around, round about'. Collinder 1955:49, 1960:408 **pir*₃, and 1977:67; Rédei 1986—1988:384 **pire*; Décsy 1990:106 **pirä* 'circle'.
- D. Proto-Altaic **p^herkV*- 'to tie round, to surround': Proto-Tungus **perke*- 'to bind, to tie round' > Evenki *herke*- 'to bind, to tie round'; Lamut / Even *herk*₂- 'to wrap, to envelop'; Negidal *χeyke*- 'to bind, to tie round'; Oroch *pitu*- 'man's girdle'; Solon *ekke*- 'to bind, to tie round'. Proto-Mongolian **hergi*- 'to go round' > Written Mongolian *erge*-, *ergi*- 'to turn, to move around, to revolve'; Dagur *ergi*- 'to turn, to rotate'; Ordos *erge*- 'to turn, to rotate'; Khalkha *ergi*- 'to turn, to rotate'; Buriat *erye*- 'to turn, to rotate'; Monguor *χergi*- 'to turn, to rotate'; Kalmyk *ergi*- 'to turn, to move around'; Moghol *irga*- 'to spin a spindle'. Poppe 1955:46 and 153, 1960:104; Street 1974:23 **perki*- 'to turn, to revolve, to go around'; Starostin—Dybo—Mudrak 2003:1137 **p^herkV* 'to tie round, to surround'.
- E. Proto-Gilyak / Nivkh **pirk*- 'to turn': Amur *p^hirk-č* 'to turn'; North Sakhalin *p^hirk-t* 'to turn'; East Sakhalin (reduplicated) *p^hiŋpir-d* 'to turn, to spin'; South Sakhalin (reduplicated) *peŋkaŋpeŋkaŋ-nt* 'to turn, to spin'. Fortescue 2016: 134—135.

- F. Proto-Eskimo **pirðar-* ‘to braid or weave’: Naukan Siberian Yupik *pīiXə-* ‘to braid, to weave’; Central Siberian Yupik *pīiXə-* ‘to braid’; Sirenik *pīrcəR-* ‘to braid, to weave’; Seward Peninsula Inuit *pīrlaq-* ‘to braid’; North Alaskan Inuit *pīlʷraq-* ‘to braid’; West Canadian Inuit *pīlraq-* ‘to braid’; East Canadian Inuit *pīrrai-* ‘to plait’; Greenlandic Inuit *pīrtar-* ‘to twist’, *pīrtaa-* ‘to braid hair’. Fortescue—Jacobson—Kaplan 1994:263. Proto-Eskimo **pirðarar* ‘braid or woven thing’: Alutiiq Alaskan Yupik *pīiXaq* ‘woven mat’; Central Alaskan Yupik *pīiXaq* ‘two-ply cordage, string or interlaced fish’; Naukan Siberian Yupik *pīiXaq* ‘braided hair’; [Sirenik *pīrʒasaq* ‘braided hair’]; Seward Peninsula Inuit *pīrlaaq* ‘something braided (sinew, yarn, hair)’; Western Canadian Inuit *pīlraqtat* ‘braids’; Eastern Canadian Inuit *pīrraaq* ‘plait of hair, whale ligament, thread’; Greenlandic Inuit *pīrtaaq* ‘twisted sinew thread’. Fortescue—Jacobson—Kaplan 1995:263—264.

Sumerian *pir* ‘to wrinkle, to crumple; to be rolled up, contracted’. For the semantics, cf. Old English *wrincl* ‘a wrinkle’, *wrinclian* ‘to wrinkle’, diminutives formed from *wrencan* ‘to twist, to turn’ (cf. Klein 1971:832; Onions 1966:1015; Watkins 1985:76—77).

Buck 1949:10.12 turn (vb.); 10.13 turn around (vb.); 10.14 wind, wrap (vb.); 10.15 roll (vb.); 12.81 round; 12.82 circle. Bomhard—Kerns 1994:257, no. 66; Hakola 2000:139—140, no. 609; Dolgopolsky 2008, no. 1771, **pī[h]X[Q]RE* ‘around’ (the alleged Egyptian and Coptic cognates included by Dolgopolsky do not belong here and must be removed; furthermore, there is no evidence from the daughter languages to suggest that an initial **p-* is to be reconstructed at the Proto-Nostratic level).

132. Proto-Nostratic root **p^hir-* (~ **p^her-*):
 (vb.) **p^hir-* ‘to tremble, to shake; to be afraid, to fear’;
 (n.) **p^hir-a* ‘trembling, fear’
- A. Afrasian: Proto-Semitic **par-ah-* ‘to be afraid, to fear’ > Geez / Ethiopic *farha* [ፈርሀ], *farḥa* [ፈርሐ] ‘to be afraid, to fear, to revere’, *fərhat* [ፋርሐት] ‘fear, fright, terror, dread, awe, reverence’; Tigre *fārha* ‘to fear, to be afraid’; Tigrinya *fārhe* ‘to fear, to be afraid’; Amharic *färra* ‘to fear, to be afraid’, *fəračča* ‘fear’; Harari *fära* ‘to fear, to be afraid’; Gurage *färe* ‘to fear, to be afraid’, *färi* ‘fear’. Leslau 1987:165—166. Proto-Semitic **par-ak-* ‘to be terrified, afraid, frightened’ > Arabic *farīka* ‘to be terrified, to be dismayed, to be afraid’; Ḥarsūsi *ferōk* ‘to fear, to be afraid’, *fāyrek* ‘to be afraid, to fear’, *frōk* ‘to frighten’; Šheri / Jibbāli *fērək* ‘to be afraid, frightened’, *efūrək* ‘to frighten’, *efrək* ‘to frighten’, *šəfrək* ‘to be frightened’, *fərəkət* ‘fear’, *fərḳūn* ‘fearful’; Mehri *fīrək* ‘to be afraid, timorous’, *frōk* ‘to frighten’. Zammit 2002:320. Note: Orël—Stolbova (1995:188, no. 833)

reconstruct Proto-Afrasian **furVh*- ‘to fear’ on the basis of a comparison of the Ethiopian Semitic forms cited above and Lowland East Cushitic **fuur*- ‘to fear’, represented in, for example, Konso *fuur*- ‘to fear’ and Gidole *huur*- ‘to fear’. They assume that **fuur*- comes from earlier **fuHVR*-. They then claim that **fuHVR*- is to be derived from a still earlier **furVH*- through metathesis. This explanation is highly speculative and cannot be supported on the basis of the evidence they cite.

- B. Dravidian: Tamil *pirar* ‘to tremble’, *pirarcci*, *pirarvu* ‘shivering, trembling’, *pirakkam* ‘awe, fear’, *pirappu* ‘fear, alarm’; Kannada *piriki* ‘coward’; Telugu *piriki* ‘coward; timid, cowardly’. Burrow—Emeneau 1984:372, no. 4200(a).
- C. Proto-Kartvelian **pertx*- ‘to shake’: Georgian *pertx*- ‘to shake, to shake out, to beat out’; Mingrelian *partx*- ‘to clean, to scrub, to clean oneself’; Laz *patx*- ‘to shake, to shake out, to beat out’. Klimov 1964:188 **pertx*- and 1998:200 **pertx*- ‘to shake’; Fähnrich—Sardshweladse 1995:354—355 **pertx*-; Fähnrich 2007:433 **pertx*-. Proto-Kartvelian **prtx*- ‘to tremble, to quiver’: Georgian *prtx*- ‘to rouse oneself, to take care’, *prtx-il*- ‘careful’; Mingrelian (*p*)*ntx*- ‘to rouse oneself, to take care’; Laz *putx*- ‘to flutter about, to fly’; Svan *pə(r)tx-ən*-, *bərdγ-ən*- ‘to tremble, to quiver’. Klimov 1964:190 **prtx*- and 1998:204 **prtx*- ‘to tremble, to rouse oneself’; Fähnrich 1994:235; Fähnrich—Sardshweladse 1995:359 **prtx*-; Fähnrich 2007:440—441 **prtx*-.
- D. Proto-Indo-European **p^herkh^h*-/**p^hrk^h*- (secondary *o*-grade form: **p^hork^h*-) ‘to be afraid, to fear’: Gothic *faurhte* ‘fear’, *faurhts* ‘fearful, afraid’, *faurhtjan* ‘to be afraid’; Old English *fyrhto* (Northumbrian *fryhto*) ‘fear, fright’, (*ge*)*fyrht* ‘afraid’, *fyrhtan* ‘to frighten’, *forht* ‘fearful, afraid’, *forhtian* ‘to be afraid, to fear’; Old Frisian *fruchte* ‘fear’, *fruhtia* ‘to fear’; Old Saxon *foroht*, *foraht* ‘fear’, *forahtian* ‘to fear’; Old High German *furhten* ‘to fear’ (New High German *fürchten*), *forhta* ‘fear’ (New High German *Furcht*); Tocharian A *pärsk*-, *prask*-, B *pärsk*-, *präsk*- ‘to be afraid, to fear’, A *praski*, B *prosko*, *proskiye* or *proskye* ‘fear’. Rix 1998a:443 **preK*- ‘to be afraid’; Pokorny 1959:820 **perg*- ‘fear’; Walde 1927—1932.II:48—49 **perg*-; Mallory—Adams 1997:198 **perk*- ‘to fear’; Orël 2003:120 Proto-Germanic **furxtaz*, 120 **furxtin*, 120 **furxtjanan*; Kroonen 2013:161 Proto-Germanic **furhta*- ‘fearful’, **furhtjan*- ‘to fear’, **furhtō*- ‘fright’; Feist 1939:146—147; Lehmann 1986:111; Onions 1966:377; Klein 1971:296 **p^hrk*- ‘(vb.) to fear; (n.) fright’; Kluge—Mitzka 1967:225; Kluge—Seebold 1989:237 **perk*-; Van Windekens 1976—1982.I:366 **p^hrk*- and I:388; Adams 1999:375—376 **p(e)rK*- and 422.
- E. Proto-Altaic **p^hiüri*- ‘to be afraid, to be angry’: Proto-Tungus **purkē*- ‘to be bored, to be angry’ > Manchu *fuče*- ‘to get angry, mad, enraged’; Evenki *hurkē*- ‘to be bored’; Lamut / Even *hörken*- ‘to be bored’. Proto-Mongolian **hurin* ‘anger’ > Written Mongolian *urin* ‘ardent passion,

anger, dislike'; Khalkha *urin* 'anger'; Buriat *uri gari bološohon* 'to be in bad spirits'; Kalmyk *uŋ* 'anger'. Starostin—Dybo—Mudrak 2003:1162 **pǰūri* 'to be afraid, to be angry'. Different etymology in Poppe 1960:80, 83, 87, and 111 and Street 1974:24 (**pürk-* 'to be afraid').

Buck 1949:16.53 fear, fright. Bomhard—Kerns 1994:258—260, no. 68; Dolgopolsky 2008, no. 1793, **pürVKV* (or **pirVKV*) 'to be startled, to be scared, to fear'.

133. Proto-Nostratic root **phit*'y- (~ **phet*'y-):
 (vb.) **phit*'y- 'to give birth to';
 (n.) **phit*'y-a 'genitals (male or female); birth, origin'
- A. Proto-Afrasian **pīt*'y- ' (vb.) to give birth to; (n.) genitals (male or female)': Semitic: Arabic *faza*, *fazan* 'womb'. Central Chadic **pičur-in-* 'testicles' > Fali Jilvu *fčerin* 'testicles'; Fali Mubi *fučuru* 'testicles'. Orël—Stolbova 1995:70, no. 279, **bičur-/pičur-* 'pudenda' (according to Orël—Stolbova, the original Central Chadic stem seems to have been **pičur-*). The Semitic material cited by Orël—Stolbova is too divergent phonetically and semantically to be related to the Chadic forms. On the other hand, though not without problems of its own, the following may belong here: Egyptian *pzdd* 'testicles (of the god Seth)'.
- B. Dravidian: Tuḷu *picci* 'the testicles of an animal'; Telugu *picca* 'testicle'. Burrow—Emeneau 1984:367, no. 4140.
- C. Proto-Indo-European **phit*'- ' (vb.) to give birth to; (n.) birth; vulva, womb': Gothic *fitan* 'to be in labor, to give birth to'; Danish (Jutland) *fitte* 'vulva'; Old Irish *idu*, (gen. sg.) *idan*, (nom. pl.) *idain* 'birth pains, pains'. Feist 1939:155—156; Lehmann 1986:118.
- D. Proto-Altaic **phioži* (~ *p-*, *-ju-*) 'root, origin': Proto-Tungus **pužuri* 'root, beginning' > Manchu *fužuri* 'foundation, basis, origin'. Proto-Mongolian **hižayur* 'root, origin' > Written Mongolian *užuγur*, *ižayur* 'root, origin'; Khalkha *yožōr* 'root'; Dagur *ožōr* 'root, origin'; Monguor *sžūr* 'root, origin'; Ordos *ižūr* 'root, origin'; Buriat (Alar) *uzūr* 'root, origin'; Kalmyk *yožūr* 'root, origin'. Poppe 1955:42 and 119. Poppe 1960:12, 64, 121, and 139; Street 1974:24 **puža-gūr(i)* 'origin'; Starostin—Dybo—Mudrak 2003:1098 **pjoži* (~ *p-*, *-ju-*) 'root'.

Buck 1949:4.47 womb; 4.49 testicle. Bomhard 1996a:226—227, no. 640.

134. Proto-Nostratic root **phu?*- (~ **pho?*-):
 (vb.) **phu?*- 'to swell, to fatten';
 (n.) **phu?*-a 'swelling, fullness, fat(ness)'

- A. Proto-Afrasian *pu²- ‘to swell, to fatten’: Proto-Semitic *pa²-am- ‘to be or become full, to be fat’ > Hebrew *pīmāh* [פִּמָּה] ‘superabundance, fat’ (a hapax legomenon in the Bible); Arabic *fa²ama* ‘to quench one’s thirst with water; to be full’, *fa²ima* ‘to be fat’; Akkadian *piāmu* ‘robust’; Geez / Ethiopic *ʿaf²ama* [አፋአመ] ‘to put a morsel of food in another’s mouth, to give bread to a beggar’; Gafat (*tä*)*famä* ‘to take a mouthful’; Amharic *fämma* (< *fm²) ‘to eat’. Klein 1987:505; Leslau 1987:154. Proto-Southern Cushitic *pu²- ‘clump of hair’ > Iraqw *pu²umpu²ay* ‘clump of hair’; Ma’a *kipupú* ‘vulva’. Ehret 1980:146. Proto-Southern Cushitic *pu²us- ‘to swell, to rise’ > K’wadza *pu²us-* ‘to swell, to rise’; Ma’a -*pu²ú* ‘to rise (of the sun)’. Ehret 1980:146. According to Ehret, “[*pu²us- ‘to swell, to rise’] appears to be a verb derivative of the noun stem in [*pu²- ‘clump of hair’]; a pre-Southern Cushitic root with the meaning ‘clump, lump, mound, swelling’ would thus seem to underlie both [*pu²- ‘clump of hair’] and [*pu²us- ‘to swell, to rise’].”
- B. Proto-Indo-European *p^ho²(i/y)- ‘to swell, to fatten’: Sanskrit *páyate* ‘to swell, to fatten, to overflow, to abound’, *pívan-* ‘swelling, full, fat’, *páyas-* ‘milk’; Greek πῖον ‘fat, rich’, πῖον ‘fat; any fatty substance, cream’; Old Icelandic *feitr* (< Proto-Germanic **faitaz*) ‘fat’, *feita* ‘to fatten’, *feiti* ‘fatness’; Norwegian *feit* ‘fat’; Swedish *fet* ‘fat’; Danish *fed* ‘fat’; Old English *fætt* ‘fat’; Old Frisian *fatt, fett* ‘fat’; Old Saxon *feit* ‘fat’; Dutch *vet* ‘fat’; New High German *feist* ‘fat, stout’, *fett* ‘fatty, greasy’; Lithuanian *pienas* ‘milk’. Rix 1998a:419 **pejH-* ‘to swell up’; Pokorny 1959:793—794 **pej(ə)-*, **pī-* ‘to be fat’; Walde 1927—1932.II:73—75 **poi-*, **pī-*; Watkins 1985:47 **peia-*, **pei-* and 2000:62 **peia-* ‘to be fat, to swell’ (extended *o*-grade form **poid-*); Mallory—Adams 1997:194 **pih_{xyr}* ‘fat(ness)’; Benveniste 1935:168; Mayrhofer 1956—1980.II:212 **poi-* and II:297—298; Frisk 1970—1973.II:532; Chantraine 1968—1980.II:898—899; Boisacq 1950:781—782 **pōi-*, **pī-*; Hofmann 1966:268—269 **poi-*, **pī-*; Beekes 2010.II:1188 **piH-uer-*; Kroonen 2013:132 Proto-Germanic **faita-* ‘fat’; Orël 2003:90 Proto-Germanic **faitaz*; De Vries 1977:115—116; Torp 1919:99; Onions 1966:346—347 **poid-*; Klein 1971:274—275 **poi-*, **pī-* (extended form **poid-*, **pīd-*); Kluge—Mitzka 1967:191 and 194—195; Kluge—Seebold 1989:208 **peia-* and 211; Fraenkel 1962—1965.I:585; Smoczyński 2007.1:455. Proto-Indo-European *p^ho²(i/y)- ‘to drink, to swallow’: Sanskrit *pāti*, *páyate*, *píbatī* (< *p^hi-p^h2-e-t^hi) ‘to drink, to swallow’; Hittite (3rd sg. pres. act.) *pa-a-ši* ‘to swallow’; Greek πίνω (Lesbian, Aeolian πόνω) ‘to drink’; Albanian *pije-a* ‘drink, beverage’, *pi* ‘to drink’; Latin *bibō*, *pōtō* ‘to drink’; Old Irish *ibid* ‘to drink’; Old Prussian *poieiti* ‘to drink’; Old Church Slavonic *pijō*, *piti* ‘to drink’. Rix 1998a:417—418 **peh₃(i)-* ‘to drink’; Pokorny 1959:839—840 **pō(i)-*, **pī-* ‘to drink’; Walde 1927—1932.II:71—72 **pō(i)-*, **pī-*; Mann 1984—1987:934 **pibō* ‘to drink’, 935 **pījō* ‘to drink’, 935 **pījō-*, **pīj-*, 938 **pīnō* ‘to drink, to absorb’, 935 **pojos* (**poijos*), -es- ‘drinking, drink’;

Mallory—Adams 1997:175—176 **peh₃(i)-* ~ **pih₃-* ‘to swallow’ > ‘to drink’; Watkins 1985:52 **pō(i)-* (contracted from **po₂(i)-*) and 2000:68 **pō(i)-* ‘to drink’ (oldest form **pe₂(i)-*, colored to **po₂(i)-*, contracted to **pō(i)-*); Gamkrelidze—Ivanov 1984.I:402, I:426 **p^[h]oH-*, II:702, II:703 **p^[h]oH(i)-* and 1995.I:180 **p^hoH-s-*, I:352 and I:373 **p^hoH-*, I:607 **p^hoH(i)-*, I:608 **p^hoH(i)-*, I:856 **p^he₂-*, **p^hi-p^h?-e-thi* > **p^hi-p^h-e-thi* > Sanskrit *pi-b-a-ti*; Mayrhofer 1956—1980.II:252 and II:286—287 **pō(i)-*, **pe₂-* (= **pō-*), **pi-p₂-e-ti*; Boisacq 1950:785—786 **pōi-* : **pō(i)-*, **pī-*; Frisk 1970—1973.II:540—542 **pī-*, **pōi-*; Hofmann 1966:270—271 **pō(i)-*, **pī-*; Chantraine 1968—1980.II:904—905 **pōi-*, **pī-*; Beekes 2010.II:1194—1195 **peh₃-*, **ph₃-i-*; De Vaan 2008:71—72 and 485; Walde—Hofmann 1965—1972.I:103—104 **pō(i)-*, **pī-*; Ernout—Meillet 1979:70 and 529; Huld 1984:103 **piQ₁-*; Orël 1998:324—325; Kloekhorst 2008b:649.

Buck 1949:5.13 drink (vb.); 5.86 milk (sb.). Bomhard—Kerns 1994:235—236, no. 40.

135. Proto-Nostratic root **phul-* (~ **phol-*) stem indicating downward motion:
 (vb.) **phul-* ‘to fall, to fall down, to collapse, to ruin, etc.’;
 (n.) **phul-a* ‘fall, collapse, ruin’; (adj.) ‘fallen, ruined, weakened; low, base, vile, mean’
- A. Proto-Afrasian **p[u]l-* verbal stem indicating any kind of downward motion: ‘to fall, to fall down, to collapse, to set (sun), etc.’: Proto-Semitic **na-pal-* ‘to fall, to fall down’ > Hebrew *nāḫal* [נָחַל] ‘to fall, to lie’, *mappālāh* ‘decaying ruins, heap of rubble’, *mappeleθ* ‘fall, collapse’; Aramaic *nəḫal* ‘to fall, to fall down’; Akkadian *napālu* ‘to fall’ (West Semitic loan), *napalsuḫu* ‘to fall to the ground, to fall upon something, to throw oneself to the ground, to let oneself fall to the ground’; Ugaritic *npl* ‘to fall’; Arabic *nafl* ‘supererogation, what is optional, prayer of free will’, *naḫḫala* ‘to do more than is required by duty or obligation, to supererogate (specifically, prayers, charity, or the like)’, *naḫḫal* ‘booty, loot, spoil’; Sabaean *nfl* ‘to fall upon an enemy, to make an attack’; Mehri *hənḫul* ‘to throw stones down; (goats, etc.) to have stones fall onto them’; Šheri / Jibbāli *enḫel* ‘to throw stones down’. Klein 1987:422; Murtonen 1989:286. Hebrew *pālal* [פָּלַל] ‘to pray’ (originally ‘to prostrate oneself in prayer’). Klein 1987:511; Murtonen 1989:339. Proto-Semitic **ʔa-pal-* ‘to set (sun), to grow dark’ > Arabic *ʔafala* ‘to go down, to set (stars)’, *ʔufūl* ‘setting (of stars)’; Hebrew **ʔāḫal* [אָחַל] ‘to grow dark’, *ʔōḫel* [אָחַל] ‘darkness’, *ʔāḫēl* [אָחַל] ‘dark, obscure, gloomy’, *ʔāḫēlāh* [אָחַלָּה] ‘darkness’; Aramaic *ʔəḫal* ‘to grow dark, to darken’; Akkadian *aplu* ‘late’. Klein 1987:47; Murtonen 1989:98; Zammit 2002:75. West Chadic **pal-* ‘to fall’ > Sura

pal ‘to fall’; Chip *pal* ‘to fall’; Dera *yupele* ‘to fall’. Orël—Stolbova 1995:416, no. 1936, **pal*- ‘to fall’.

- B. Dravidian: Tamil *pul* ‘meanness, baseness’, *pulai* ‘baseness, defilement, vice, lie, adultery, outcast’, *pulaiyan* ‘a low-caste person’, (f.) *pulaicci*, *pulaitti*, *pulaimi* ‘baseness’, *punmai* ‘meanness, vileness, uncleanness’, *pallan* ‘vile, base person’, *polliyār* ‘low, base persons’, *pollā* ‘bad, vicious, evil, severe, intense’, *pollāṅku*, *pollāpu* ‘evil, vice, defect, deficiency, ruin’, *pollātu* ‘vice, evil’, *pollāmai* ‘evil, fault’, *pollāṇ* ‘a wicked man’, *polam* ‘badness, evil’; Malayalam *pula* ‘taint, pollution, defilement (especially by birth or death)’, *pulayan* ‘an outcast’, *pulacci* ‘a low-caste woman’, *pollā* ‘to be bad, evil’, *pollāta* ‘bad’, *pollāppu* ‘mischief’; Kannaḍa *pol*, *polla* ‘meanness, badness, noxiousness’, *pole* ‘menstrual flow, impurity from childbirth; defilement, meanness, sin’, *poleya* ‘a low-caste man’, (f.) *polati*, *polasu* ‘impurity’; Koḍagu *pole* ‘pollution caused by menstruation’, birth, or death’, *poleyē* ‘a low-caste man’, (f.) *polati* ‘a low-caste woman’; Tuḷu *polē* ‘pollution, defilement’, *polasy* ‘dirty, unclean’, *pile* ‘impurity from birth or menstruation, humility’; Telugu *pulu* ‘blemish or flaw (as in precious stone)’; Kuwi *pōla?a ki-* ‘to do wrong’; Brahui *poling* ‘stain, a stain on one’s character’. Burrow—Emeneau 1964: 402, no. 4547; Krishnamurti 2003:11 **pul-V-* ‘pollution’.
- C. Proto-Kartvelian **polwx-* ‘to fall down, to fall apart; to be ruined, debilitated, weakened’: Old Georgian *mo-polxw-eb-a* ‘to fall down, to fall apart; to be ruined, debilitated, weakened’, *mo-polxw-eb-ul-i* ‘ruined, debilitated, weakened’; Mingrelian *porxv-i* ‘antiquated, obsolete, out-of-date’, *porx-u* ‘bed-ridden, weak, feeble, decrepit, infirm’; Svan *porx-ä-j*, *porx-ä* ‘shuffling, lagging, straining (of gait)’. Fähnrich 2007:438 **polwx-*.
- D. Proto-Indo-European **phol-* ‘to fall, to fall down’: Armenian *phlanim* ‘to fall in’; Old Icelandic *falla* ‘to fall’, *fall* ‘fall, death, ruin, decay, destruction’, *fella* ‘to fell, to make to fall, to kill, to slay’; Old English *feallan* ‘to fall, to fall down, to fail, to decay, to die; to prostrate oneself’, *feall*, *fiell* ‘fall, ruin, destruction, death’, *fiellan* ‘to make to fall, to fell, to pull down, to destroy, to kill; to humble’; Faroese *falla* ‘to fall’; Danish *falde* ‘to fall’; Norwegian *falla* ‘to fall’; Swedish *fall* ‘fall, descent’, *falla* ‘to fall, to descend’; Old Frisian *falla* ‘to fall’, *fella* ‘to fell’, *fal* ‘fall’; Old Saxon *fallan* ‘to fall’, *fellian* ‘to fell’; Dutch *vallen* ‘to fall’, *vellen* ‘to fell’; Old High German *fallan* ‘to fall’ (New High German *fallen*), *fellan* ‘to fell’ (New High German *fällen*); Lithuanian *puolu*, *pulti* ‘to fall (up)on, to attack, to assault, to fall’; Latvian *puolu*, *pult* ‘to fall’. Pokorny 1959:851 **phōl-* ‘to fall’; Walde 1927—1932.II:103 **phōl-*; Watkins 1985:51 **p(h)ol-* and 2000:69 **pōl-* ‘to fall’; Mallory—Adams 1997:191 **phōl-* ‘to fall’; Orël 2003:91 Proto-Germanic **fallanan*; Kroonen 2013:125—126 Proto-Germanic **fallan-* ‘to fall’; De Vries 1977:110 and 117; Falk—Torp 1903—1906.I:146; Torp 1919:93; Skeat 1898:203 and 205; Kluge—Lutz 1898:71; Onions 1966:343 and 350; Klein 1971:272 **phol-* and 277;

Boutkan—Siebinga 2005:99 and 100; Kluge—Seebold 1989:200; Kluge—Mitzka 1967:182 **phōl-*; Fraenkel 1962—1965.II:666; Endzelins 1971:44, §26.

- E. (?) Proto-Gilyak / Nivkh (reduplicated) **pul(pul)-* ‘to crawl’: Amur (reduplicated) *fəvə-dʷ / fulvul-dʷ* ‘to crawl’; East Sakhalin (reduplicated) *fulful-d / fulvul-t* ‘to crawl’; South Sakhalin (reduplicated) *fulful-* ‘to crawl’. Fortescue 2016:137. Assuming semantic development as in the following Dravidian forms: Tuḷu *dōguni* ‘to crawl on hands and knees’; Kui *tronga (trongi-)* (vb.) ‘to roll, (child) to crawl’; (n.) ‘rolling; crawling’; etc. vs. Kuwi *torg-* ‘to fall’, *torginai* ‘to fall down’. Burrow—Emeneau 1984:308, no. 3514.

(?) Sumerian *pu-la* ‘(to be) insignificant, unimportant, mean, low, inferior’.

Buck 1949:1.62 darkness; 1.63 shade; 4.82 weak; 10.23 fall (vb.); 12.32 low; 14.17 late (adv.); 16.72 bad. Bomhard—Kerns 1994:247, no. 53; Illič-Svityč 1971—1984.III:97—106, no. 372, **p/ä/jlʌ* ‘to fall’.

136. Proto-Nostratic root **phulv-* (~ **pholv-*):

(vb.) **phulv-* ‘to swell’;

(n.) **phulv-a* ‘a swelling (on the skin): blister, abscess, pimple, etc.’

Derivative:

(n.) **phulv-a* ‘that which is fat, swollen, etc.’ (> ‘tallow, grease, fat, oil, blubber, etc.’ in the daughter languages)

- A. Dravidian: Tamil *poḷḷu (poḷḷi-)* ‘to blister, to swell’, *poḷḷal* ‘blister, swelling’; Malayalam *poḷḷu* ‘bubble’, *poḷḷuka* ‘to rise in bubbles or blisters’, *poḷḷal* ‘pustule, blistering’, *poḷḷikka* ‘to blister’, *poḷḷa* ‘blister, bubble’, *poḷukuka* ‘to blister’, *poḷukam* ‘blister, watery eruption’. Burrow—Emeneau 1984:404, no. 4563.
- B. Proto-Kartvelian (reduplicated) **pupul-* (< **pul-pul-*) ‘pimple’: Georgian *pupul-i* ‘dried up pimple’; Laz *pupu(r)-*, *pupul-* ‘pimple’; Mingrelian *pupul-* ‘abscess, pimple’. Klimov 1964:193 **pupul-* and 1998:207 **pupul-* ‘abscess’; Fähnrich—Sardshveladse 1995:362 **pul-*; Fähnrich 2007:444 **pul-*.

137. Proto-Nostratic (n.) **phulv-a* ‘that which is fat, swollen, etc.’ (> ‘tallow, grease, fat, oil, blubber, etc.’ in the daughter languages)

Derivative of:

(vb.) **phulv-* ‘to swell’;

(n.) **phulv-a* ‘a swelling (on the skin): blister, abscess, pimple, etc.’

- A. Uralic: Proto-Ugric **p[u]lvʲvʲʌ* ‘tallow, grease, fat’ > Ostyak / Xanty (Vah) *pol’t’* ‘fat’, (Krasnoyarsk, Nizyam) *put’* ‘fat, tallow’; Hungarian *faggyú*

‘tallow, suet’, *faggyaz*, *faggyúz* ‘(to smear with) tallow, grease’, *faggyús* ‘tallowy, greasy’. Rédei 1986—1988:881 Proto-Ugric *pɣl'éz ‘tallow, grease, fat’.

- B. Proto-Eskimo *puya ‘rancid residue of oil or grease’: Alutiiq Alaskan Yupik (Alaska Peninsula) *puya-* ‘to be permeated by stench (or stain)’; Central Alaskan Yupik *puya-*, *puyaləXtə-* ‘to be rancid (oil or grease)’ (Norton Sound Unaliq: ‘to be dirty’); Naukan Siberian Yupik *puya* ‘fat condensed on side of barrel’; Central Siberian Yupik *puya* ‘rancid residue of oil from blubber’; Sirenik *púya* ‘rancid residue of oil from blubber’, *puyapayɣuX* ‘smelling of rancid oil’; Seward Peninsula Inuit *puya* ‘dirt, grime; blubber dried on surface’; North Alaskan Inuit *puya* ‘dirt, sticky oil, blubber used to waterproof a skin boat’; Western Canadian Inuit *puyaq* ‘old oil or grease’, *puyaq-* ‘to get dirty’; Eastern Canadian Inuit *puyaq* ‘residue of oil, rancid oil, earwax’; Greenlandic Inuit *puya(k)* ‘dried rancid blubber oil (with which *umiaq* is greased)’, *puya-* ‘to be rancid, to have a layer of rancid blubber on it’. Fortescue—Jacobson—Kaplan 1994:271.

138. Proto-Nostratic (n.) *p^hur-a ‘calf, heifer’:

Note also:

(n.) *p^har-a ‘calf, heifer’

- A. Dravidian: Kota *po-ry* ‘young bullock’; Kannaḍa *hōri* ‘bull calf, bullcock’; Koḍagu *po-ri* ‘male buffalo’; Tuḷu *bōri* ‘bull, ox’. (?) Tamil *pori* ‘calf or buffalo’. Burrow—Emeneau 1984:406, no. 4593.
- B. Proto-Kartvelian *pur- ‘cow’: Georgian *pur-i* ‘cow, female buffalo’; Mingrelian *puž-i* ‘cow’; Laz *puž-i* ‘cow’; Svan *pur*, *pür*, *pir-w* ‘cow’. Klimov 1964:192 *pur- and 1998:206 *pur- ‘cow’; Fähnrich 1994:225 and 2007:445 *pur-; Fähnrich—Sardshweladse 1995:363 *pur-; Schmidt 1962:136.

Buck 1949:3.21 bull; 3.24 calf. Bomhard—Kerns 1994:244—245, no. 50; Dolgopolsky 2008, no. 1783, *p̥[o]r[w]V ‘female young ruminant’.

139. Proto-Nostratic root *p^huš- (~ *p^hoš-):

(vb.) *p^huš- ‘to breathe out, to sigh; to blow, to puff (up), to inflate’;

(n.) *p^huš-a ‘puff, breath, snort; bulge’

- A. Dravidian: Kannaḍa *bus*, *busu*, *bussu*, *bos* ‘a sound to imitate the puffing or hissing of a serpent, of a pair of bellows, of the snorting of cattle, etc.’; Koḍagu *bus ku-ṭ-* ‘to hiss’; Tuḷu *busu*, *busubusu*, *bussu* ‘gasping, panting, hissing’; Telugu *busa* ‘hiss of a serpent, hissing, snorting, snoring, a deep breath, a sigh’, *busabusa* ‘noise of the boiling of water’, *busabusal-āḍu* ‘to hiss’, *bussu* ‘hiss of a snake’; Kolami *puskarileng* ‘to hiss’. Burrow—Emeneau 1984:376, no. 4246.

- B. Proto-Indo-European **p^hus-* ‘to puff, to blow; to blow up, to inflate; to swell, to grow’: Sanskrit *púṣyati* ‘to thrive, to flourish, to prosper; to nourish, to be nourished’, *púṣpa-m* ‘flower, blossom’, *púṣya-h* ‘vigor’, *puṣṭi-h*, *púṣṭi-h* ‘fatness, prosperity’, *póṣa-h* ‘growth, prosperity’; Pāli *pupphati* ‘to bloom, to flower’, *pupphita-* ‘blooming, flowering’, *puppha-* ‘flower, menses’, *puṭṭha-* ‘nourished’; Latin *pustula* ‘blister, pimple’; Old Church Slavic **puxati* ‘to blow’; Russian *pyxtét’* [пыхтеть] ‘to puff, to pant’; Czech *pýcha* ‘pride’; Latvian *pūst* ‘to blow’. Rix 1998a:433 **peus-* ‘to bloom’; Pokorny 1959:846—848 **pū-*, **peu-*, **pou-*, **phu-* ‘to blow up’; Walde 1927—1932.II:79—81 **pū-*, **peu-*, **pou-*, **phu-*; Mann 1984—1987:1012 **pūskō* (**phūskō*) ‘to puff, to swell, to blow, to blow up, to well up, to erupt, to froth forth’, 1012 **pūskos*, *-ā* (**phūsk-*) ‘puff, froth, fizz, swell, bulge, bubble, bladder’, 1012 **pūslos* (**phūslo-*), *-is*, *-ā*, *-jə* ‘puff, blow, fizz, gush, vacuum, air-space, bladder’, 1012—1013 **pūsō* (**phūsō*), *-jō* ‘to fizz, to froth, to puff, to blow, to swell’; Watkins 1985:53 **pū-* (also **phū-*) and 2000:69 **pū-* (also **phū-*) ‘to blow, to swell’; Mallory—Adams 1997:72 **p(h)eu-* ‘to blow through an aperture so as to make a noise’; Mayrhofer 1956—1980.II:316—318 **p(h)us-* ‘to blow, to swell, to inflate’; De Vaan 2008:501—502; Ernout—Meillet 1979:547; Walde—Hofmann 1965—1972.II:392 **pu-*, **phū-*.
- C. Proto-Uralic **puš3-* ‘to blow’: (?) Finnish *puhu-* ‘to speak’ (dial. ‘to blow’), *puhalta-* ‘to blow’, *puhallas* ‘blowing’; Estonian *puhu-* ‘to breathe, to blow, to speak, to swell’; Lapp / Saami *bossa-/boso-* ‘to blow (also of the wind), to blow up (inflate), to blow on, to breathe heavily’; (?) Zyrian / Komi *pušky-* ‘to blow (of the wind); to blow up (the fire)’; Vogul / Mansi *pot-* ‘to sprinkle’, *putas-* ‘to spit’; Ostyak / Xanty *pōl-*, (Southern) *pāt-* ‘to spit’; Selkup Samoyed *puttu* ‘saliva’, *putona-* ‘to spit; to spout water; to pour out’. Collinder 1955:51 and 1977:69; Rédei 1986—1988:409—410 **puš3-* ‘to blow’.
- D. Proto-Altaic **p^hiūsi-* ‘to spray (from the mouth); to spout or pour forth’: Proto-Tungus **pisu-*, **pusu-* ‘to sprinkle (water)’ > Manchu *fusu-* ‘to sprinkle (water)’; Evenki *husu-* ‘to sprinkle (water)’; Lamut / Even *hus-* ‘to sprinkle (water)’; Ulch *pisuri-* ‘to sprinkle (water)’; Oroch *pisitči-*, *possoli-* ‘to sprinkle (water)’; Nanay / Gold *pisi-*, *fisi-*, *fuksu-* ‘to sprinkle (water)’. Proto-Mongolian **hösür-* ‘to sprinkle, to pour’ > Written Mongolian *ösür* ‘to rush forward, to sprinkle, to splash’; Khalkha *üsre-* ‘to sprinkle’; Kalmyk *ösr-* ‘to sprinkle’; Dagur *χesurə-* ‘to sprinkle’; Monguor *fuzuru-*, *fuzuru-* ‘to pour’. Proto-Turkic **üskür-* ‘to cough, to spray (from the mouth)’ > Turkish *öksür-* ‘to cough, to be at the last gasp’; Gagauz *üsur-* ‘to cough, to spray (from the mouth)’; Azerbaijani *öksür-* ‘to cough, to spray (from the mouth)’; Turkmenian *üsgür-* ‘to cough, to spray (from the mouth)’; Karaim *öksür-*, *öksir-* ‘to cough, to spray (from the mouth)’; Chuvash *üzər-* ‘to cough, to spray (from the mouth)’. Poppe 1960:11, 65,

and 133; Street 1974:24 **püsü-* ‘to squirt out, to pour’; Starostin—Dybo—Mudrak 2003:1163—1164 **p’üsi* ‘to sprinkle’.

Buck 1949:4.51 breathe; breath. Dolgopolsky 2008, no. 1815, **PušV* ‘to blow’; Illič-Svityč 1965:339 **puša* ‘to blow’ (‘дуть’).

22.4. PROTO-NOSTRATIC *p^h (> PROTO-AFRASIAN *f)

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
p ^h -	f-	p-	p-	p ^h -	p-	p ^h -	p-
-p ^h -	-f-	-pp-/-v-	-p-	-p ^h -	-p-	-p ^h -	-p(p)-

140. Proto-Nostratic root *p^haḥ- (~ *p^həḥ-):

(vb.) *p^haḥ- ‘to warm, to heat, to burn’;

(n.) *p^haḥ-a ‘fire, flame, spark’

Extended form:

(vb.) *p^haḥ-V-w- ‘to warm, to heat, to burn’;

(n.) *p^haḥ-w-a ‘fire, flame, spark’

- A. Proto-Afrasian *f[a]ḥ- ‘(vb.) to warm, to heat, to burn; (n.) fire, embers’: Proto-Semitic *paḥ-am- ‘glowing coal(s), embers’ > Hebrew *peḥām* [פֶּחָם] ‘coal, charcoal for embers’; Syriac *paḥmā* ‘coal, charcoal’; Ugaritic *pḥm* ‘live coal(s)’; Arabic *faḥm* ‘charcoal, coal’; Sabaean *fḥm* ‘incense altars’; Akkadian *pēntu* (for *pēm̄tu*) ‘glowing coal’; Geez / Ethiopic *fəḥm* [ፍሕም] ‘coals, carbon, live coals, embers’; Tigre *fāḥam* ‘charcoal’; Tigrinya *fəḥmi* ‘charcoal’; Argobba *fəḥam* ‘charcoal’; Amharic *fəḥm* ‘charcoal’; Gurage *fem* ‘coal’; Harari *fəḥama* ‘to be red hot’. Murtonen 1989:338; Klein 1987:502; Leslau 1987:157. Egyptian *wfḥ* ‘to burn’. Erman—Grapow 1926—1963.1:306. Central Chadic *ʔa-ff[wa]- ‘fire’ > Logone *fo* ‘fire’; Musgu *afu* ‘fire’; Gidar *afa* ‘fire’; Mbara *fee* ‘fire’. According to Orël—Stolbova (1995:186, no. 819), “irregular vowels in individual [Chadic] languages may continue *-yaHu-/*-waHu-”. They also consider the *w-* in Egyptian *wfḥ* to stand for a rounded vowel — in my opinion, the *w-* is a prefix. Orël—Stolbova 1995:186, no. 819, *foḥ- ‘(vb.) to burn; (n.) fire’.
- B. Dravidian: Tamil *pū* ‘spark (as of fire)’; Kui *pūvala* ‘spark’; Kuwi *pūya* ‘embers’, *puva* ‘spark’, *puyā* ‘burning coal’. Burrow—Emeneau 1984:384, no. 4347.
- C. Proto-Kartvelian *px- ‘warm (weather)’: Georgian *px-* in *za-px-ul-i* ‘summer’; Laz *px-* in *ma-px-a* ‘clear weather, cleared up (sky)’; Svan *px-* in *lu-px-w* ‘summer’, *mē-px-e*, *mā-px-e* ‘cleared up (sky)’. Fähnrich—Sardshweladse 1995:366—367 *px-; Klimov 1964:194 *px- and 1998:209 *px- ‘to be clear (of weather)’; Fähnrich 2007:450 *px-.
- D. Proto-Indo-European *p^héḥh-ur- [*p^háḥh-ur-], *p^həḥh-wór- ‘fire’: Hittite (nom.-acc. sg.) *pa-aḥ-ḥu-ur*, *pa-aḥ-ḥu-wa-ar*, *pa-aḥ-ḥur* ‘fire’, (gen. sg.) *pa-aḥ-ḥu-e-na-aš*; Luwian (nom. sg.) *pa-a-ḥu-u-ur* ‘fire’; Greek πῦρ ‘fire’; Umbrian *pir* ‘fire’; Gothic *fōn* ‘fire’, (gen. sg.) *funins*; Old Icelandic *fúrr* ‘fire’, *funi* ‘flame’; Old Danish *fyr* ‘fire’; Old English *fȳr* ‘fire’; Old Frisian

fiur, *fior* ‘fire’; Old Saxon *fiur* ‘fire’; Dutch *vuur* ‘fire’; Old High German *fiur*, *fuir* ‘fire’ (New High German *Feuer*); Tocharian A *por*, B *puwar* ‘fire’; Old Czech *půř* ‘glowing ashes, embers’; Armenian *hur* ‘fire’; (?) Old Prussian *panno* ‘fire’. Pokorny 1959:828 **peuōr*, **pūr* ‘fire’, (gen. sg.) **pu-n-és*, (loc. sg.) **puuēni*; Walde 1927—1932.II:14—15 **peuōr*, (gen. sg.) **pu-n-és*, (loc. sg.) **puuēni*; Mann 1984—1987:1016 **puuər* (**puʷur*, **pūr*) ‘fire’; Watkins 1985:53 **pūr-* (contracted from **puər-*, zero-grade form of **paərwr*) and 2000:61 **paərwr* ‘fire’ (oldest form **peərwr*, colored to **paərwr*, with zero-grade **pərur*, metathesized to **puərur*, contracted to **pūr*); Gamkrelidze—Ivanov 1984.I:210, I:274, II:699 **p[ʰ]HHur* and 1995.I:181, I:238—239, I:605 **pʰHHur* ‘fire’; Mallory—Adams 1997:202 **péh₂ur* ‘fire’; Benveniste 1935:169 **péh₂-w-r* > **péh₂ur*; Beekes 2010.II:1260—1261 **peh₂-ur*, **ph₂-uen-s*; Boisacq 1950:828—829; Hofmann 1966:291 **péuōr*, **punés*; Chantraine 1968—1980.II:956—957; Frisk 1970—1973.II:627—629 **p(e)uōr* : **pūr* : **puuēn-* : **pūn-*; Kloekhorst 2008b:612—613 **péh₂-ur*, **ph₂-uen-s*; Sturtevant 1951:40, §62d, Indo-Hittite **péxwr*; Puhvel 1984—.8:18—26 **péA₁wr*, (“collective” pl.) **p(e)A₁wōr*, (gen. sg.) **p(e)A₁wéns*; Orël 2003:121 Proto-Germanic **fuwer* ~ **fūr*; Kroonen 2013:151 Proto-Germanic **fōr-* ~ **fun-* ‘fire’ (< **péh₂-ur*; gen. sg. **ph₂-un-ós*); De Vries 1977:147 and 149; Falk—Torp 1903—1906.I:205; Feist 1939:158—159 **pāu-er* ‘fire’, (gen.) **pū-nós*; Lehmann 1986:120 **pex-w* ‘fire’; Onions 1966:357 West Germanic **fuir*; Klein 1971:282 **pewōr-*, **pūwer-*; Skeat 1898:209; Boutkan—Siebinga 2005:115 **peh₂-ur*, **p(e)h₂-uen-s*; Kluge—Mitzka 1967:195 **peuōr*; Kluge—Seebold 1989:212 **pehwr*, **phwnos*; Van Windekens 1976—1982.I:382—383 **peuōr*; Adams 1999:392—393 **peh₂wr*, **peh₂wōr*, **ph₂ur-*; Wodtko—Irslinger—Schneider 2008:540—545 **péh₂ur* (?), **p(e)h₂uōr*, **ph₂ur/n-*, **p(e)h₂uer/n-*; Miklosich 1886:269. Note: Old Prussian loanword in Finnish *panu* ‘fire(-god)’.

- E. Proto-Uralic **päjwä* ‘heat, sun’: Lapp / Saami *bivvâ/bivâ-* ‘to keep warm (not feel cold)’, *bivvâl* ‘warm (mild)’; Zyrian / Komi *pym* ‘hot, boiling; sweaty’; Ostyak / Xanty *pəm* ‘warmth, warm weather, hot, (hot) steam (in a Russian bath); (visible) breath’; Yurak Samoyed / Nenets *pyyw* ‘warm, dry wind (especially in the summer)’; Tavgi Samoyed / Nganasan *feabeme-* ‘to warm oneself’; Selkup Samoyed *pöö* ‘warm, hot; heat’; Kamassian *pide-* ‘to warm’. Décsy 1990:105 **pävä* ‘warm’; Collinder 1955:6, 1960:405 **päwэ*, and 1977:27; Rédei 1986—1988:366—367 **päwe*; Sammallahti 1988:540 **päjwä* ‘sun, warmth’; Janhunen 1977b:120 **pejwä*; Zhivlov 2023:166 Proto-Uralic **päjwä* ‘heat, sun’.

Buck 1949:1.81 fire. Bomhard—Kerns 1994:238—239, no. 43; Illič-Svityč 1965:352 **pīγwā* ‘fire’ (‘огонь’); Dolgopolsky 2008, no. 1671, **pä[γ]üwA* ‘fire’ (→ ‘heat’ → ‘daylight, day’).

141. Proto-Nostratic (n.) **p^hal-a* ‘skin, hide’:

- A. Proto-Afrasian **fal-*, **ful-* ‘skin, hide’: Proto-Southern Cushitic **fal-* or **faal-* ‘skin, hide; rash’ > Burunge *fala* ‘hide’; Asa *fulo* ‘hide’; Ma’a *-fwáli* ‘to scratch, to itch’, *ufwá* ‘rash’. Ehret 1980:150. East Chadic **pulVL-* ‘shell’ > Tumak *puləl* ‘shell’. Orël—Stolbova 1995:188, no. 831, **ful-* ‘hide, husk’.
- B. Proto-Indo-European **p^hel-* ‘skin, hide’: Greek πέλαμα ‘sole (of foot, of shoe)’, πελλο-ράφος ‘sewing skins together’ (ράπτω ‘to sew together’); Latin *pellis* ‘skin, hide’; Gothic **filleins* ‘made of leather’, *faura-filli* ‘foreskin’; Old Icelandic *ffall*, *fell* ‘skin, hide’; Swedish *ffäll* ‘skin, hide’; Old English *fell* ‘skin, hide, fur’, *fellen* ‘made of skins’, *filmen*, *fylmen* ‘film, thin skin, foreskin’; Old Frisian *fel* ‘skin, hide’, *filmene* ‘membrane on the eye, foreskin’; Old Saxon *fel* ‘skin’; Old High German *fel* ‘skin’ (New High German *Fell*), *fillin* ‘made of skins’; Lithuanian *plėvė* ‘membrane’; Russian *pleva* [плева] ‘membrane, film, coat’. Pokorny 1959:803—804 **pelə-*, **plē-* ‘skin, hide’; Walde 1927—1932.II:58—59 **pel-*; Mann 1984—1987:916—917 **peln-* ‘skin, membrane, film’; Watkins 1985:48 **pel-* and 2000:63 **pel-* ‘skin, hide’ (suffixal form **pel-no-*); Gamkrelidze—Ivanov 1984.I:227—228 **p^[h]el-H-* ~ **p^[h]l-eH-* (root **p^[h]el-*) and 1995.I:197 **p^hel-H-* ~ **p^hl-eH-* (root **p^hel-*) ‘skin’; Mallory—Adams 1997:268—269 **péln-* ‘animal skin, hide’; Frisk 1970—1973.II:499—500; Chantraine 1968—1980.II:877; Hofmann 1966:260; Boisacq 1950:763 **pel-*; Beekes 2010.II:1168 **pel -*; De Vaan 2008:455; Ernout—Meillet 1979:493—494; Walde—Hofmann 1965—1972.II:275—276 **pel-*; Orël 2003:97 Proto-Germanic **fellan*, 97 **fellinaz*, 97 **felmaz*; Kroonen 2013:135 Proto-Germanic **fella-* ‘membrane, skin, hide’; Feist 1939:152 **pel-*; Lehmann 1986:115—116 **pel-*; De Vries 1977:123; Onions 1966:349 **pello-* : **pelno-* and 356; Klein 1971:277 **pel-* and 281; Boutkan—Siebinga 2005:103; Kluge—Mitzka 1967:192 **pello-*; Kluge—Seebold 1989:209; Derksen 2015:366; Smoczyński 2007.1:474; Fraenkel 1962—1965.I:620.
- C. (?) Altaic: Proto-Turkic **el-tiri* ‘skin of kid or lamb’ > Turkish (dial.) *elteri* ‘skin of kid or lamb’; Turkmenian (dial.) *elter*, *elteri* ‘skin of kid or lamb’; Uighur *älterä* ‘skin of kid or lamb’; Tatar *iltir* ‘skin of kid or lamb’; Kazakh *eltirī* ‘skin of kid or lamb’; Noghay *eltiri* ‘skin of kid or lamb’. Starostin—Dybo—Mudrak 2003:1153—1154 **p‘iōle* ‘blanket, skin (as covering)’. Starostin—Dybo—Mudrak also include putative Tungus, Mongolian, and Japanese cognates with meanings like ‘(vb.) to dress, to soften, to tan (leather); (n.) blanket, sleeping bag, cloak’. These have not been included here since the semantics appear to be too divergent to support the Altaic etymology as written.

Buck 1949:4.12 skin, hide. Bomhard—Kerns 1994:252—253, no. 60.

142. Proto-Nostratic root *p^hid- (~ *p^hed-):

(vb.) *p^hid- ‘to tear, to pluck, to pull; to tear off, to pluck off, to pull off; to tear out, to pluck out, to pull out’;

(n.) *p^hid-a ‘the act of pulling, tearing, plucking’

- A. Proto-Afrasian *fed- ‘to tear, to pluck, to pull; to tear off, to pluck off, to pull off; to tear out, to pluck out, to pull out’: Egyptian *fdi* ‘to pluck (flowers), to pull up (plants), to uproot, to pull out (hair), to remove’, *fdq* ‘to sever, to divide, to part’. Hannig 1995:308 and 309; Faulkner 1962:99; Gardiner 1957:567; Erman—Grapow 1921:58. North Cushitic: Beja / Bedawye *fedig* (< *fedik-) ‘to split, to separate’. Reinisch 1895:76—77. Highland East Cushitic *fed- ‘to tear (cloth)’ > Burji *feedi*- ‘to tear (cloth)’. Hudson 1989:149. Orël—Stolbova 1995:179, no. 790, *fed- ‘to tear’, no. 791, *fedik- ‘to split’. Different etymology in Ehret 1995:100, no. 69, *fad- ‘to draw out, to pull out’.
- B. Dravidian: Tamil *piṭunku* (*piṭunki*-) ‘to pull out or off, to pluck up, to extort, to break through an obstruction, to vex, to give trouble’, *piṭunkal* ‘pulling out, extortion, annoyance’; Malayalam *piṭuṇṇuka* ‘to pull out, to extort, to vex’, *piṭaruka* ‘to be plucked up’, *piṭartuka* ‘to root up, to open a boil’; Toda *pīry-* (*pīrs-*) ‘(boil) opens’, *pīrc-* (*pīrc-*) ‘to open (a boil)’; Telugu *puḍuku* ‘to pluck off, to nip off, to squeeze, to press’; Kannada *pidaga*, *pidagu*, *pidugu* ‘trouble, affliction, disease’; Kui *prunga-* (*prungi*-) ‘to be snapped, broken off, plucked’, *prupka-* (< *pruk-p-; *prukt-*) ‘to snap, to break off, to pluck’, *brunga* (*brungi*-) ‘to be plucked out’, *brupka* (< *bruk-p-; *brukt-*) ‘to pluck, to pluck out, to pull out’. Burrow—Emeneau 1984:368, no. 4152.

Buck 1949:9.26 break (vb. tr.); 9.27 split (vb. tr.); 9.28 tear (vb. tr.).

143. Proto-Nostratic root *p^hilv- (~ *p^helv-):

(vb.) *p^hilv- ‘to split, to cleave’;

(n.) *p^hilv-a ‘split, crack’

- A. Proto-Afrasian *fil- ‘to split, to cleave’: [Proto-Semitic *pal-ag- ‘to split, to cleave, to divide’ > Hebrew *pālay* [פָּלַי] ‘to split, to cleave, to divide’, *peley* [פֶּלֶי] ‘canal, channel’; Arabic *falaḡa* ‘to split, to cleave’; Phoenician *plg* ‘to divide’; Ugaritic *plg* ‘canal, stream’; Akkadian *palgu* ‘canal’; Harsūsi *felēg* ‘water-course’; Mehri *fālēg* ‘stream, water-course’; Šheri / Jibbāli *fālōg* ‘to split open, to make a hole in (tin, barrel, rock)’, *fēlēg* ‘oasis’ (Eastern dialect = ‘stream’); Geez / Ethiopic *falaga* [ፈለገ] ‘to flow, to cause to flow in torrents, to dig out, to hollow out, to divide, to split, to hew, to prepare, to arrange’, *falag* [ፈለገ] ‘river, brook, valley’, *fālug* [ፍለገ] ‘hollow, hollowed, dug out, divided, prepared, ready, arranged’; Tigre *fālāg* ‘ravine’; Tigrinya *fālāg* ‘riverbed’; Amharic *fālāg* ‘stream’

(Geez loan). Klein 1987:508; Leslau 1987:159; Murtonen 1989:340. Proto-Semitic **pal-ay-* ‘to separate, to divide’ > Arabic *faliya* ‘to be cut off’; Aramaic *pālā* ‘to split, to cut open’; Geez / Ethiopic *falaya* [ፈለየ] ‘to separate, to divide, to distinguish’; Tigrinya *fäläyā* ‘to separate’; Tigre *fāla* ‘to separate’. Leslau 1987:161. Proto-Semitic **pal-ah-* ‘to split, to cleave’ > Hebrew *pālāḥ* [פָּלַח] ‘to cleave’; Arabic *falaḥa* ‘to split, to cleave, to plow, to till’. Klein 1987:509; Murtonen 1989:340. Proto-Semitic **pal-am-* ‘to split, to divide’ > Arabic (Daḡīna) *falam* ‘to notch, to indent’; Geez / Ethiopic *falama* [ፈለመ] ‘to split, to divide, to strike the first blow (in combat), to be the first to do something’; Tigre *fālma* ‘to break to pieces’; Tigrinya *fällämä* ‘to begin’; Amharic *fällämä* ‘to strike the first blow, to initiate an action’. Leslau 1987:159. Proto-Semitic **pal-ak-* ‘to split, to cleave, to break forth’ > Akkadian *palāku* ‘to kill’; Arabic *falaḥa* ‘to split, to cleave; to burst, to break (dawn)’; Sabaeen *flk* ‘system of irrigation by dispersion of water by means of inflow cuts’; Šheri / Jibbāli *fālāk* ‘to split, to crack’; Tigrinya *fālākākā* ‘to split up, to crack up’; Tigre *fālāk* ‘division’; Harari *fālāka* ‘to hit the head with a stone or stick so that blood comes out or the head swells’; Amharic *fālākākākā* ‘to split, to break loose’; Gurage (Wolane) *fālākākā* ‘to card wool by splitting’. Leslau 1963:62 and 1979:232. Proto-Semitic **pal-at-* ‘to separate’ > Hebrew *pālāt* [פָּלַט] ‘to escape’; Phoenician *plṭ* ‘to escape’; Geez / Ethiopic *falaṭa* [ፈለጠ] ‘to separate’; Harari *fālāṭa* ‘to split wood with an ax’; Argobba *fällāṭa* ‘to split’; Amharic *fällāṭā* ‘to split’; Gurage *fālāṭā* ‘to split wood with an ax’. Klein 1987:509; Leslau 1963:63, 1979:232, and 1987:161; Murtonen 1989:340—341. Proto-Semitic **pal-as^v-* ‘to break open or through’ > Hebrew *pālaš* [פָּלַשׁ] ‘to break open or through’; Akkadian *palāšu* ‘to dig a hole’. Klein 1987:512. Proto-Semitic **pal-al-* ‘to separate, to divide’ > Arabic *falla* ‘to dent, to notch, to blunt; to break; to flee, to run away’; Hebrew *pālāl* [פָּלַל] ‘to arbitrate, to judge’; Akkadian *palālu* ‘to have rights, to secure someone’s rights’; Sabaeen *flī* ‘to cut channels’; Mehri *fāl* ‘to make off, to get away’; Šheri / Jibbāli *fell* ‘to make off, to get away, to run away’; Geez / Ethiopic (reduplicated) *falfala* [ፈለፈለ] ‘to break out, to burst, to gush’; Tigre *fālāla* ‘to sprout forth, to break through’; Tigrinya *fālfālā* ‘to break, to make a hole’; Amharic *fālāffālā* ‘to shell (peas, beans), to gush out’; Harari *filāfāla* ‘to detach a piece from the main bunch (bananas, corn), to shell, to pick up grains one by one from the stock’; Gurage *fālāfālā* ‘to shell, to hatch out, to make a hole by scratching’. Klein 1987:511; Leslau 1987:158—159. Proto-Semitic **pal-aṣ-* ‘to split, to cleave’ > Arabic *falaṣa* ‘to split, to cleave, to rend, to tear asunder’, *fal^ṣ*, *fil^ṣ* ‘crack, split, crevice, fissure, cleft, rift’.] Berber: Tuareg *əfli*, *əfləh* ‘to be split; to split, to crack’, *səfli*, *zəfləh* ‘to cause to split’; Siwa *əfli* ‘to be split’; Mzab *fāl* ‘to pierce; to be pierced’; Kabyle *flu* ‘to pierce’. Highland East Cushitic **fil-d-* ‘to separate, to comb’ > Gedeo / Darasa *fil-*, *fi-l-* ‘to comb’, *fila* ‘comb’; Sidamo *fil-* ‘to choose the best ensete fibers’. Hudson

1989:43. Proto-Southern Cushitic *ful- ‘to bore a hole’ > Iraqw ful- ‘to bore a hole’. Ehret 1980:322. Ehret 1995:105, no. 81, *fil- ‘to cut a hole or cavity in’; Orël—Stolbova 1995:191, no. 845, *fvl- ‘to divide, to pierce’. Note: The Semitic forms are phonologically ambiguous — they may belong either here or with Proto-Afrasian *pal- ‘to split, to cleave’ (cf. Orël—Stolbova 1995:416, no. 1938, *pal- ‘to cut, to divide’).

- B. Dravidian: Tamil *pil* (*pilv*-, *piṇṭ*-, *pilp*-, *piṭṭ*-) ‘to burst open, to be rent or cut, to be broken to pieces, to disagree; to cleave asunder, to divide, to crush’, *pila* ‘to be split, cleaved, rent, cracked, disunited; to split, to cleave, to rend, to tear apart, to part asunder, to pierce’; Malayalam *pīlaruka* ‘to burst asunder, to split, to cleave’, *pīlarkka*, *pīlakka* ‘to split, to cleave, to rend’, *pelikka* ‘to burst, to split, to disembowel (fish)’; Tulu *pulevu* ‘a crack’; Kui *plinga* (*plingi*-) ‘to be split, burst, cracked’; Parji *pil*- ‘to crack’. Burrow—Emeneau 1984:371—372, no. 4194.
- C. [Proto-Kartvelian *plet-/*plit- ‘to pull, tear, or rip apart’: Georgian *plet*-, *plit*- ‘to pull, tear, or rip apart’; Laz *plat*- ‘to get worn out; to tear to pieces’; Svan *pet*-, *pt*- ‘to pluck (wool)’. Fähnrich—Sardshweladse 1995:358 *plet-/*plit-; Fähnrich 2007:437 *plet-/*plit-; Klimov 1998:202 *plet- : *plit- : *plt- ‘to wear out’.] Note: The Kartvelian material may belong either here or with Proto-Nostratic *p^hal- (~ *p^həl-) ‘(vb.) to split, to cleave; (n.) split, crack’.
- D. [Proto-Indo-European *(s)p^hel-/*(s)p^hol-/*(s)p^hl̥-, *(s)p^hl- (plus various extensions) ‘to split, to cleave’: Sanskrit *phálati* ‘to split, to cleave’, *sphátati* (< *sphalt-) ‘to burst, to expand’; Kashmiri *phalun* ‘to be split’, *phālawun* ‘to split, to cleave’; Marathi *phāḷṇē* ‘to tear’; Old Icelandic *flá* ‘to flay’, *flaska* ‘to split’, *flakna* ‘to flake off, to split’; Old English *flēan* ‘to flay’; Dutch *vlaen* ‘to flay’; Old High German *spaltan* ‘to split, to cleave’ (New High German *spalten*); Lithuanian *plyšti* ‘to split, to break, to burst’. Rix 1998a:525 *(s)pelH- ‘to split (off), to cleave’, 525 *(s)pelt- ‘to split’; Pokorny 1959:834 *plē-, *plə- ‘to split off’, 835 *plēk̥-, *plək̥-, *plēik̥-, *plīk̥- ‘to tear off’, 985—987 *(s)p(h)el- ‘to split off’, 937 *(s)p(h)elg- ‘to split’; Walde 1927—1932.II:93 *plēi-, *pləi-, *plī-, II:98—99 *plēk̥-, *plək̥-, *plēik̥-, *plīk̥-, II:677—679 *(s)p(h)el-, II:680 *sp(h)elg-; Mann 1984—1987:949 *pleik̥s- (*pleisk̥-), 1270 *sphālt- ‘to bang, to burst’; Mallory—Adams 1997:567 *plek̥- ‘to break, to tear off’; Watkins 1985:52 *plēk̥- (*pleik̥-) ‘to tear’, 63 *spel- ‘to split, to tear off’ and 2000:68 *plē-(i)k̥- (also *pleik̥-) ‘to tear’ (oldest form *ple₂i-(i)k̥-), 2000:82 *spel- ‘to split, to break off’; Mayrhofer 1956—1980.II:393; Orël 2003:361; De Vries 1977:127, 128, and 129; Onions 1966:361; Klein 1971:285; Kluge—Mitzka 1967:718—719; Kluge—Seebold 1989:682; Fraenkel 1962—1965.I:625.] Note: The Indo-European material may belong either here or with Proto-Nostratic *p^hal- (~ *p^həl-) ‘(vb.) to split, to cleave; (n.) split, crack’.

- E. Proto-Uralic **pilʷ3-* ‘to split, to cleave’: Votyak / Udmurt *pilʷ-* ‘to cut asunder, to split, to divide’; Zyrian / Komi *pelʷ-* ‘(a) part’, *pelʷ-* ‘to come off, to get loose, to crack off, to be split off’, *pelʷem* ‘splinter, small piece of wood, small board’; Tavgi Samoyed / Nganasan *filimia*, *filʷimiʷa* ‘little bit, fragment’. Collinder 1955:49, 1960:408 **pilʷ3-*, and 1977:67; Rédei 1986—1988:389 **poδʷ3*. But, note Dolgopolsky’s comment (2008, no. 1711): ‘hardly from FU **poδʷ3* [= **poδʷV*] ... because of its vowel’. Dolgopolsky reconstructs Proto-Finno-Ugrian **pelʷV* ‘to split, to divide, to crush’. It is Collinder’s reconstruction that is followed here.
- F. Proto-Eskimo **pilay-* ‘to butcher’: Alutiiq Alaskan Yupik *pilay-* ‘to butcher’; Central Alaskan Yupik *pilay-* ‘to slit, to cut into, to butcher’; Naukan Siberian Yupik *pilay-* ‘to cut, to perform surgery’; Central Siberian Yupik *pilay-* ‘to slit up, to butcher’; Seward Peninsula Inuit *pilak-* ‘to butcher’; North Alaskan Inuit *pilʷak-* ‘to butcher’; Western Canadian Inuit *pilak-* ‘to butcher’; Eastern Canadian Inuit *pilak-* ‘to butcher’; Greenlandic Inuit *pilay-* ‘to butcher’. Cf. Aleut (Atkan) *hilyi-* ‘to dig (for roots, etc.), to dig out (fox — its den)’. Fortescue—Jacobson—Kaplan 1994:262. Proto-Eskimo **pilaytur-* ‘to cut up’: Central Alaskan Yupik *pilaxtur-* ‘to undergo or perform surgery’; Central Siberian Yupik *pilaxtur-* ‘to cut repeatedly, to saw’; [Seward Peninsula Inuit *pilaaqtuq-* ‘to cut up (meat)’]; North Alaskan Inuit *pilʷaktuq-* ‘to perform surgery on’; Eastern Canadian Inuit *pilattu(q)-* ‘to cut up, to operate on’; Greenlandic Inuit *pilattur-* ‘to cut or saw up, to operate on’. Fortescue—Jacobson—Kaplan 1994:262. Proto-Inuit **pilaun* ‘knife for butchering’ > Seward Peninsula Inuit *pilaun* ‘large knife used for butchering’; North Alaskan Inuit *pilʷaun* ‘knife for butchering’; Western Canadian Inuit *pilaun* ‘knife for butchering’; Eastern Canadian Inuit *pilauti* ‘hunting knife, lancet’; Greenlandic Inuit (East Greenlandic) *pilaalaq* ‘knife’. Fortescue—Jacobson—Kaplan 1994:262.

Buck 1949:9.27 split (vb. tr.). Bomhard—Kerns 1994:230—231, no. 35; Dolgopolsky 2008, no. 1711, **pelʷ[i]yV* ‘to split, to separate’; Brunner 1969:22, no. 38; Möller 1911:196—197; Hakola 2000:140, no. 612; Fortescue 1998:156.

144. Proto-Nostratic root **pʰin-* (~ **pʰen-*):

(vb.) **pʰin-* ‘to break’;

(n.) **pʰin-a* ‘break’

- A. Proto-Afrasian **fin-* ‘to break’: Semitic: Arabic *fanaḥa* ‘to bruise a bone without breaking it; to subdue, to overcome, to humiliate’. Berber: Kabyle *sfunnəḥ* ‘to beat’. West Chadic **fin-H-* ‘to break’ > Kulere *fiŋy-* ‘to break’. Orël—Stolbova 1995:182, no. 804, **finaḥ-* ‘to break’.

- B. Dravidian: Parji *pin-* ‘to be broken’, *pinip-* (*pinit-*) ‘to break (tr.)’; Gadba (Ollari and Salur) *pun-* ‘to be broken’, (Ollari) *punup-* (*punut-*), (Salur) *punk-* (*punt-*) ‘to break (tr.)’; Gondi *pinkānā* ‘to break up (of stiff things like hard bread or sweets), to chew’; Brahui *pinning* ‘to be broken’. Burrow—Emeneau 1984:373, no. 4206.

Buck 1949:9.26 break (vb. tr.).

145. Proto-Nostratic root *p^hir- (~ *p^her-):

- (vb.) *p^hir- ‘to ask, to request, to entreat, to beseech, to pray’;
(n.) *p^hir-a ‘request, entreaty, prayer’

- A. Afrasian: Proto-Southern Cushitic *fir- ‘to pray, to ask for (something)’ > Iraqw *firim-* ‘to pray, to ask for (something)’; Burunge *firim-* ‘to pray, to ask for (something)’; Alagwa *firim-* ‘to pray, to ask for (something)’; Ma’a -fi ‘to perform (a ceremony)’. Ehret 1980:151.
- B. Proto-Indo-European *p^her^hkh-/*p^hork^h-/*p^hrk^hh-, *p^hre^hkh-/*p^hro^hkh-/*p^hrk^hh- ‘to ask, to request’: Sanskrit *pr̥cchāti* ‘to ask, to question, to interrogate, to inquire about’, *praśná-h* ‘question, inquiry, query’; Avestan *parəsaīti* ‘to ask, to question’, *frašna-* ‘question’; Armenian *harčanem* ‘to ask’, *harç* ‘question’; Latin *poscō* (< *porc-scō) ‘to ask, to request’, *prex* ‘request, entreaty’, *precor*, -ārī ‘to beg, to entreat, to request, to pray, to invoke’; Umbrian *persklum* ‘prayer’; Middle Welsh (3rd sg.) *arch-af* ‘to ask’, *arch* ‘request’; Gothic *fraiħnan* ‘to question’; Old Icelandic *fregna* ‘to ask’, *frétt* ‘inquiry’; Swedish (dial.) *frega* ‘to ask’; Old English *gefrāgian* ‘to learn by asking’, *fricgan* ‘to ask, to inquire, to question’, *frignan* ‘to ask, to inquire’, *freht*, *friht* ‘divination’; Old Frisian *frēgia* ‘to ask’, *frēge* ‘question’; Old Saxon *frāgōn* ‘to ask’; Old High German *frāgēn*, *frāhēn* ‘to ask’ (New High German *fragen*), *frāga* ‘question’ (New High German *Frage*), *forsca* ‘inquiry’; Lithuanian *peršù*, *prašýti* ‘to ask, to beg’; Old Church Slavic *prosi* ‘to ask’; Tocharian A *prak-*, *pärk-*, B *prek-*, *pärk-* ‘to ask’. Rix 1998a:442—443 *prek^h- ‘to ask’; Pokorny 1959:821—822 *perk^h-, *prek^h-, *prk^h-, *prk^h-skō ‘to ask, to request’; Walde 1927—1932.II:44 *perek^h- (*perk^h-, *prek^h-, *prk^h-); Mann 1984—1987:924 *perk^hskō, 985 *prek^h- ‘to ask, to petition’, 992—993 *prokō, -iō; *prok^h- (vb.) to beg, to ask; (n.) question’, 1001 *prks^h-, *prksmn^h- ‘question’, 1001 *prkskō ‘to ask, to beg, to beseech’; Gamkrelidze—Ivanov 1984.I:176, I:237, I:241 *p^h[^h]erk^h[^h]-, *p^h[^h]rek^h[^h]- and 1995.I:152, I:206, I:208, I:209 *p^her^hkh-, *p^hre^hkh- ‘to ask’; Watkins 1985:53 *prek^h- and 2000:69 *prek^h- ‘to ask, to entreat’; Mallory—Adams 1997:33 *perk^h- ‘to ask, to ask for’; De Vaan 2008:483; Ernout—Meillet 1979:525—526 and 534; Walde—Hofmann 1965—1972.II:346—347; Adams 1999:371—372 *prek^h-; Van Windekens 1976—1982.I:386; Orël 2003:112—113 Proto-Germanic *fregnanan ~ *frexnanan; Kroonen 2013:153 Proto-Germanic *frēgō- ‘question’, 154 *frehnan- ‘to announce;

rumor', and 162 **furskō-* 'inquiry'; Lehmann 1986:122—123 **per-k̂-*, **pre-k̂-*; Feist 1939:161—162 **pereḱ-*; De Vries 1977:140—141 and 142; Kluge—Mitzka 1967:214 **preḱ-*, **pṛḱ-*; Kluge—Seebold 1989:229; Mayrhofer 1956—1980.II:329; Fraenkel 1962—1965.I:647; Smoczyński 2007.1:464—465 **preḱ-/pṛḱ-*.

- C. Proto-Altaic **pḥīru-* 'to pray, to bless': Proto-Tungus **pirugē-* 'to pray' > Manchu *fīru-* 'to curse, to implore, to pray'; Evenki *hirugē-* 'to pray'; Lamut / Even *hirge-* 'to pray'; Negidal *χīγē-* 'to pray'; Solon *irugē-* 'to pray'. Proto-Mongolian **hirüye-* '(vb.) to pray, to bless; (n.) blessing, benediction' > Written Mongolian *irüge-* 'to bless, to pray', *irügel* 'blessing, benediction'; Middle Mongolian *hirü'er* 'blessing, benediction'; Khalkha *yörō-* 'to bless'; Kalmyk *yörēl* 'blessing, benediction'; Ordos *örō-* 'to bless', *öröl* 'blessing, benediction'; Buriat (Alar) *yürō-* 'to bless', *ürör* 'blessing, benediction'. Poppe 1955:97—98. Poppe 1960:12, 60, 116, 127; Street 1974:23 **pirü-* 'to pray, to ask', **pirü-ge-* 'to bless, to wish well'; Illič-Svityč 1971—1984.III:111—125, no. 373, Proto-Altaic **p'ir/u-*; Starostin—Dybo—Mudrak 2003:1144—1145 **p'īru* 'to pray, to bless'.

Buck 1949:18.31 ask (question, inquire); 18.35 ask, request; 22.17 pray; 22.23 bless. Illič-Svityč 1971—1984.III:111—125, no. 373, **p'irḱa* 'to ask, to request'; Dolgopolsky 2008, no. 1765, **pīRo-(Kæ)* 'to ask'; Bomhard—Kerns 1994:258, no. 67.

146. Proto-Nostratic root **pḥuth-* (~ **pḥoth-*):

(vb.) **pḥuth-* 'to vomit';

(n.) **pḥuth-a* 'vomit'

- A. Proto-Afrasian **fut-* 'to vomit': West Chadic **fut-* 'to vomit' > Sura *fiut* 'to vomit'; Angas *fut* 'to vomit'; Ankwe *fiut* 'to vomit'; Mupun *fiut* 'to vomit'. Cushitic: Werizoid **fat-* (< **fut-*) 'to vomit' > Gawwada (reduplicated) *fač-fat-* 'to vomit'. Orël—Stolbova 1995:189, no. 837, **fut-* 'to vomit'.
- B. Dravidian: Kuṛux *put^urnā* (*puttras*) 'to vomit'; Malto *putre* 'to vomit'. Burrow—Emeneau 1984:378, no. 4276.

Buck 1949:4.57 vomit (vb.).

147. Proto-Nostratic (n.) **pḥuth-a* 'hole, opening':

- A. Proto-Afrasian **fut-* 'hole, opening, vulva': Proto-Semitic **put-* 'vulva' > Hebrew *pōṯ* 'vulva' [פֹּת] (a hapax legomenon in the Bible). Klein 1987:535—536. Lowland East Cushitic **fut-* 'vulva, anus' > Somali *futo* 'vulva'; Galla / Oromo *futee* 'anus'. West Chadic **fut-* 'vulva' > Angas *fut* 'vulva'. Orël—Stolbova 1995:189, no. 836, **fut-* 'hole, vulva'.

- B. Proto-Indo-European *p^hut^h- ‘vulva’: Indo-Aryan *p(h)utta- ‘vulva’ > Prakrit *puttara*- ‘vulva’; Kashmiri *pūt* ‘part of the body behind the pudenda’; Kumaunī *putī* ‘vulva’, *phutī*, *phuddī* ‘vulva of a small girl’; Nepali *puti* ‘vulva’, *putu* ‘vulva of a young woman’. Proto-Germanic *fuðiz ‘vagina’ > Old Icelandic *fuð*- ‘vagina’; Norwegian *fud* ‘vagina, anus, backside’; Swedish *fod* ‘backside’; Middle High German *vut* (*vude*- in compounds) ‘vulva’, *vüdel* ‘girl’. Pokorny 1959:848—849 *pū-, *peya- ‘to stink, to smell bad’; Walde 1927—1932.II:82 *pū-, *pū-; Mann 1984—1987:1013 *putā, -iā ‘vulva; little girl; chick; youngster’; Rietz 1867.I:158; Turner 1966—1969.I:471; Mayrhofer 1956—1980.II:303—304. Kroonen 2013:162 Proto-Germanic *fuþi- ‘vagina’ (“no further etymology”). Different etymology in Orël 2003:116 (Proto-Germanic *fuðiz) and De Vries 1977:145—146; Torp 1919:138 (Germanic *fuþi-, *fudi-).
- C. Proto-Eskimo *putu ‘hole’: Central Alaskan Yupik *putu* ‘leather piece on skin boot with hole for bootlace’; Naukan Siberian Yupik *putu* ‘loop; hole, incision’; Central Siberian Yupik *putu* ‘hole made at edge of skin for running rope for stretching and drying’; Sirenik *puta* ‘hole’; Seward Peninsula Inuit *putu* ‘hole through something’; North Alaskan Inuit *putu* ‘hole through something’; Western Canadian Inuit *putu* ‘hole through something’; Eastern Canadian Inuit *putu* ‘hole through something’; Greenlandic Inuit *putu* ‘hole through something’. Fortescue—Jacobson—Kaplan 1994:269—270. Proto-Inuit *putzuq ‘hole worn in something’ > North Alaskan Inuit *pužzuq* ‘hole worn in boot sole’, (Nunamiut) *putzuq* ‘to be worn out, to have holes’; Greenlandic Inuit *puššuq* ‘hole worn (e.g., in boot sole)’. Fortescue—Jacobson—Kaplan 1994:270.

Buck 1949:12.85 hole.

148. Proto-Nostratic root *p^huw- (~ *p^how-):

- (vb.) *p^huw- ‘to puff, to blow, to exhale; to puff up, to inflate’;
 (n.) *p^huw-a ‘a puff, the act of blowing, breath’

- A. Proto-Afrasian *fuw- (> *fiw- in Chadic) ‘(vb.) to puff, to blow, to exhale; to puff up, to inflate; (n.) a puff, the act of blowing, breath’: Proto-Semitic *paw-ah- ‘to exhale, to blow’ > Hebrew *pūah* [פּוֹחַ] ‘to breathe, to blow’, (hif.) *hē-fīah* ‘to blow, to break wind’, *pūhā* ‘breath, wind’; Aramaic *pūah* ‘to breathe, to blow’; Arabic *fāha* ‘to diffuse an aroma, to exhale a pleasant odor’, *fawha* ‘fragrant emanation, breath of fragrance’, *fawwāh* ‘exhaling, diffusing (fragrance)’. Arabic *fāha* ‘to spread an odor, to emit a scent; to blow (wind); to break wind’. Klein 1987:496; Murtonen 1989:336—337. Proto-Southern Cushitic *fook’- ‘to catch one’s breath’ > Asa *fu?it*- ‘to catch one’s breath’; Ma’a *-fufu* ‘to catch one’s breath’; Dahalo *fook’*- ‘to catch one’s breath’. Ehret 1980:151. West Chadic *ffi/w[a]h- ‘to blow’ > Boklos *fu?* ‘to blow’; Sha *fyah* ‘to blow’; Dafo-Butura *fu?* ‘to blow’.

- Central Chadic **fiyaH-* ‘to smell’ > Mandara *ʔifiyaʔa* ‘to smell’. East Chadic **pVwaH-* > **pwaH-* ‘to blow’ > Tumak *po* ‘to blow’. Orël—Stolbova 1995:184, no. 813, **fiwaḥ-* ‘to smell, to blow’ and 184—185, no. 814, **fiwaq-* ‘to blow’.
- B. Dravidian: Malayalam *pūcci* ‘a fart’; Toda *pi-x iḍ-* (*iḍ-*) ‘to fart silently’; Kannada *pūsu* ‘to fart’; Tulu *pūpuni* ‘to fart’, *pūki* ‘a fart’; Koraga *pūmpu* ‘to fart’. Burrow—Emeneau 1984:385, no. 4354.
- C. Proto-Kartvelian **pu-* ‘to swell, to puff up, to inflate’: Georgian *puv-* ‘to rise (dough)’; Mingrelian *pu-* ‘to boil, to seethe’; Laz *pu-* ‘to boil, to seethe’; Svan *pw-*: *lipwe* ‘to boil’, *lipūli* ‘to blow at somebody or something’, *pūl* ‘whiff (puff)’. Fähnrich 1994:236 and 2007:443 **pu-*; Fähnrich—Sardshweladse 1995:361 **pu-*; Klimov 1964:192 **pu-* and 1998:206 **pu-* ‘to inflate, to rise’.
- D. Proto-Indo-European **phū-* ‘to puff, to puff up, to blow’: Sanskrit *phūt-karoti* ‘to puff, to blow’, *phupphusa-h* ‘the lungs’, *phulla-h* ‘expanded, blown (of flowers); puffed up (cheeks)’, *phullāti* ‘to expand, to open (as a flower)’; Oriya *phulibā* ‘to swell, to expand’; Pashto *pū*, *pūk* ‘a puff, a blast, the act of blowing’; Greek *φῦσα* ‘bellows’, *φῦσάω* ‘to blow, to puff’; Armenian *phukh* ‘breath, puff’; Lithuanian *pučiù*, *pūsti* ‘to blow, to puff’. Rix 1998a:433 (?) **peūt-* ‘to blow up, to inflate’; Walde 1927—1932.II: 79—81 **pū-*, **peu-*, **pou-*, **phu-*; Pokorny 1959:846—848 **pū-*, **peu-*, **pou-*, **phu-* ‘to blow up’; Mann 1984—1987:1012 **pūskō* (**phūskō*) ‘to puff, to swell, to blow, to blow up, to well up, to erupt, to froth forth’, 1012 **pūskos*, *-ā* (**phūsk-*) ‘puff, froth, fizz, swell, bulge, bubble, bladder’, 1012 **pūslos* (**phūslo-*), *-is*, *-ā*, *-iə* ‘puff, blow, fizz, gush, vacuum, air-space, bladder’, 1012—1013 **pūsō* (**phūsō*), *-iō* ‘to fizz, to froth, to puff, to blow, to swell’, 1013 **pūtiō* (**phūtiō*) ‘to blow, to puff’, 1014 **pūtos* (**phūt-*), *-ios*, *-ā*, *-iə* ‘puff, blow, gust’, 1014 **putlos* (**phutlo-*) ‘fizzy, frothy, puffy, windy, airy, vacuous’, 1015 **putros* (**phutros*) ‘blow, gust, gale, fury’; Watkins 1985:53 **pū-* (also **phū-*) and 2000:69 **pū-* (also **phū-*) ‘to blow, to swell’; Mallory—Adams 1997:72 **p(h)eu-* ‘to blow, to swell’; Mayrhofer 1956—1980.II:398; Chantraine 1968—1980.II:1236 **p(h)u-s-*; Beekes 2010.II:1599—1600; Hofmann 1966:407; Frisk 1970—1973.II:1055—1057; Boisacq 1950:1042—1043 **pheu-*, **phū-*; Fraenkel 1962—1965.II:677—67; Derksen 2015:373; Smoczyński 2007.1:4928.
- E. Proto-Uralic **puwa-* ‘to blow’: Hungarian *fúj-*, *fű-/fuv-* ‘to blow’; Mordvin *puva-* ‘to blow’; Cheremis / Mari *pue-* ‘to blow’; Vogul / Mansi *puw-* ‘to blow’; Ostyak / Xanty *pōg-* (Southern *pōw-*) ‘to blow’; Yurak Samoyed / Nenets *pu-* ‘to blow’; Tavgi Samoyed / Nganasan *fūala-*, *fūaru-* (derivative) ‘to blow’; Yenisei Samoyed / Enets (Hatanga) *fueŋa-*, (Baiha) *fuaša-* (derivative) ‘to blow’; Selkup Samoyed *puua-*, *puuwa-*, *puuŋa-* ‘to blow’; Kamassian *pūʔ-* ‘to blow’. Collinder 1955:12 and 1977:33; Rédei 1986—1988:411 **puw3-*; Décsy 1990:107 **puva* ‘to blow’; Sammallahti

1988:547 Proto-Finno-Ugrian *puwi- ‘to blow’; Janhunen 1977b:128—129; Zhivlov 2023:164 *puwa- ‘to blow’.

- F. Proto-Eskimo: *puvə-* ‘to swell’: Alutiiq Alaskan Yupik *puḡə-* ‘to swell’; Central Alaskan Yupik *puvə-* ‘to swell’; Naukan Siberian Yupik *puvə-* ‘to swell’; Central Siberian Yupik *puuvə-* [*puufqə-* ‘to become swollen in the face’]; Sirenik *puvə-* ‘to swell’; Seward Peninsula Inuit *puṭ-* ‘to be swollen’, *puvžak-* ‘to have a swelling’; North Alaskan Inuit *puvit-* ‘to be swollen’, *puviq-* ‘to inflate, to be inflated’; Western Canadian Inuit *puvit-* ‘to become swollen’, *puviq-* ‘to inflate’; Eastern Canadian Inuit *puviq-* ‘to be inflated, to swell (from putrefaction)’; Greenlandic Inuit *pui(k)* ‘swelling, tumor’, *puir-* ‘to inflate, to bulge, to swell (sail)’. Cf. Aleut *hum-* ‘to inflate, to swell’, *humta-* ‘to be swollen’. Fortescue—Jacobson—Kaplan 1994:270. Proto-Inuit **puvak* ‘lung’ > Seward Peninsula Inuit *puwak* ‘lung’; North Alaskan Inuit *puvak* ‘lung’; Western Canadian Inuit *puvak* ‘lung’; Eastern Canadian Inuit *puvak* ‘lung’; Greenlandic Inuit *puak* ‘lung’. Cf. Aleut *humyi-X* ‘lung’. Fortescue—Jacobson—Kaplan 1994:270. Proto-Eskimo **puvlay* or **puvlar* ‘bubble or air in something’: Naukan Siberian Yupik *puvlaq* ‘gas’; Seward Peninsula Yupik *puvlak* ‘air in something, bubble’; Western Canadian Inuit *puvlak* ‘bubble’; Eastern Canadian Inuit *pullaq* ‘bubble, air pressure’; Greenlandic Inuit *puṭṭay-* ‘to inflate, to be inflated’. Fortescue—Jacobson—Kaplan 1994:271. Proto-Inuit **puvala-* ‘to be fat’ > North Alaskan Inuit *puvala-* ‘to be fat and round’; Western Canadian Inuit *puvala-* ‘to be fat’; Greenlandic Inuit *puala-* ‘to be fat’. Fortescue—Jacobson—Kaplan 1994:270. Proto-Inuit **puviraq* ‘ball or balloon-like thing’ > North Alaskan Inuit *puviraq* ‘balloon, swim bladder’; Western Canadian Inuit *puviraq* ‘ball’; Eastern Canadian Inuit *puviraq* ‘small rubber balloon’; Greenlandic Inuit [*puiraašaq*, *puaašaq* ‘water-filled swelling’]. Fortescue—Jacobson—Kaplan 1994:270. Proto-Inuit **puvliq-* ‘to swell up’ > Seward Peninsula Inuit *puvliq-* ‘to become swollen with air’; North Alaskan Inuit *puvliq-* ‘to swell up’; Western Canadian Inuit *puvliq-* ‘to swell up’; Eastern Canadian Inuit *pulli(q)-* ‘to swell up’; Greenlandic Inuit *puṭṭir-* ‘to swell up (after a blow)’. Fortescue—Jacobson—Kaplan 1994:271.

Buck 1949:4.51 breathe; breath; 4.64 break wind, fart (vb.); 10.38 blow (vb. tr.). Bomhard—Kerns 1994:229—230, no. 34; Hakola 2000:146, no. 641; Dolgopolsky 2008, no. 1673, **puhV* ‘to blow’; Fortescue 1998:157.

22.5. PROTO-NOSTRATIC *p'

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
p'-	p'-	p-	p'-	p'-	p-	p-	p-
-p'-	-p'-	-pp-/v-	-p'-	-p'-	-p-	-p-	-p-/ -pp-

149. Proto-Nostratic (n.) *p'ap'-a 'old man, old woman':

- A. Proto-Kartvelian *p'ap'- 'grandfather': Georgian *p'ap'-i*, *p'ap'-a* 'grandfather'; Mingrelian *p'ap'-ul-i*, *p'ap'-u* 'great grandfather'; Laz *p'ap'-ul-i*, *p'ap'-u* 'grandfather'. Fähnrich 1994:221 and 2007:329 *pāp-; Klimov 1964:152 *pāpal- and 1998:147—148 *pāpa- 'grandfather'; Fähnrich—Sardshweladse 1995:271 *pāp-.
- B. Proto-Indo-European (f.) *p'āp'aA > *p'āp'ā 'old woman': (?) Oscan *babu* 'old priestess'; Russian *bāba* [баба] '(peasant) woman, old woman'; Czech *bāba* 'woman'; Serbo-Croatian *baba* 'old woman, midwife'. Mann 1984—1987:49 *bābā 'old woman'. Note: These forms are phonologically ambiguous.

Buck 1949:2.31ff. words for family relationship, p. 94 *papa, *appa, *baba 'father' or 'old man'; 2.35 father.

150. Proto-Nostratic root *p'ul- (~ *p'ol-):

(vb.) *p'ul- 'to swell';

(n.) *p'ul-a 'swelling, hump, lump, bulge'; (adj.) 'swollen, round, bulbous'

- A. Proto-Afrasian *p'ul- 'to swell', (reduplicated) *p'ul-p'ul- '(vb.) to swell; (adj.) swollen, round': Omotic: Welamo *p'up'ule* 'egg'; Dache *bubule* 'egg'; Dorze *bu:bulé* 'egg'; Oyda *bubule* 'egg'; Male *bu:la* 'egg'; Kachama *p'up'ule* 'egg'; Koyra *bubu:le* 'egg'; Gidicho *bubu:le* 'egg'; Zergula *bubile* 'egg'; Zayse *bubile* 'egg'. Omotic loan in Burji *bulbul-ée* ~ *bubul-ée* 'egg'. Sasse 1982:43. Ehret 1995:116, no. 109, *p'ul- 'shell'. Ehret considers the Omotic forms cited above to be loans from East Cushitic — he reconstructs Proto-East Cushitic *b'ulb'ul- 'shell' (> Yaaku *bolboli* 'egg'; Somali *bulbul* 'thick hair'). Assuming semantic development as in Lithuanian *paūtas* 'egg' from the same root found in Lithuanian *pūsti* 'to blow, to swell up' and Latvian *pūte* 'blister, pustule'.
- B. Proto-Indo-European *p'ul-, *p'ol- 'swollen, round', (reduplicated) *p'ulp'ul-, *p'olp'ol- (dissimilated to *p'ump'ul-, *p'omp'ol-, *p'omp'ul-): Sanskrit *buli-h* 'buttocks, vulva'; Greek βολβός 'a bulb', (reduplicated) βομβυλίζ 'bubble'; Latin *bullā* 'a round swelling', *bulbus* 'a bulb; an

onion' (Greek loan); East Frisian *pol* 'plump'; Armenian *bol*k 'radish'; Lithuanian *bulis*, *bùlė*, *bulė* 'buttocks'. Pokorny 1959:103 **bol-* 'node, bulb'; Walde 1927—1932.II:111—112 **bol-*, **bul-*; Mann 1984—1987:53 **bombos* 'lump, bulge', 55 **bubul-* 'knot, knob', 56 **bul-* 'bulge, buttocks', 56 **būlō* 'to thrust, to cram, to bulge', 57 **bumbul-* (**buməl-*) 'swelling; bulge, fat bottle or pot'; Mayrhofer 1956—1980.II:439—440; Boisacq 1950:126 **bol-*, **bulbul-*; Chantraine 1968—1980.I:183—184; Frisk 1970—1973.I:249—250; Hofmann 1966:37; Prellwitz 1905:80; Beekes 2010.I:225; Walde—Hofmann 1965—1972.I:122 **bol-*; Ernout—Meillet 1979:78; Fraenkel 1962—1965.I:63—64; Smoczyński 2007.1:80.

- C. Proto-Altaic **pula-* (~ -o-) 'to swell': Proto-Tungus **pul-* 'hump; swelling, convexity' > Evenki *hulin* 'hump', *hulka* 'swelling, convexity'; Lamut / Even *hulḥn* 'hump'; Oroch *pulu* 'swelling, convexity'. Proto-Mongolian **bula-* 'lump, swelling' > Mongolian *bulu* 'bump on the body, the thick end of a marrow bone', *bulduru* 'bump, lump, wen, swelling; hillock, knoll', *bultai-* 'to stick out, to appear, to show slightly'; Khalkha *bulū*, *buldrū* 'swelling, lump'; Buriat *bula*, *bulū* 'swelling, lump'; Kalmyk *bulə* 'swelling, lump'; Dagur *bol* 'swelling, lump'. Mongolian loans in Manchu *bulḗan* 'growth on the skin', *bultaxūn* 'prominent, obvious, bulging', *bultaxūri* 'bulging out (especially the eyes)', *bultari* 'sticking out, swollen'. Starostin—Dybo—Mudrak 2003:1108—1109 **pula* (~ -o-) 'to swell'.

Buck 1949:4.48 egg.

151. Proto-Nostratic root **p'ulv-* (~ **p'olv-*):

(vb.) **p'ulv-* 'to blow about; to give off smoke, vapor, steam';

(n.) **p'ulv-a* 'mist, fog, haze; smoke, steam; cloud'

- A. Dravidian: Toda *piḷmozṃ* (z = [dz]) 'mist in valleys or on hills'; Kodagu *pu-ḷi* 'mist on mountains'. Burrow—Emeneau 1984:386, 4375.
 B. Kartvelian: Mingrelian *p'ula* 'steam'; Laz *p'ula*, (Atinuri) *p'ulera* 'cloud'.
 C. Yukaghir (Southern / Kolyma) *puj-* 'to blow'. Nikolaeva 2006:367.
 D. Proto-Eskimo **puyur* 'smoke': Alutiiq Alaskan Yupik *puyuy* 'smoke'; Central Alaskan Yupik *puyuy* 'smoke', *puyux̄tə-* 'to smoke (fish)'; Naukan Siberian Yupik *puyuy* 'smoke'; Central Siberian Yupik *puyuy* 'smoke'; Sirenik *puyəX* 'soot, smoke'; Seward Peninsula Inuit *puyuy* 'steam'; North Alaskan Inuit *puyuy* 'smoke from chimney', *puyuy-* 'to smoke, to make smoke', *puyuuq-* 'to smoke (fire or chimney)'; Western Canadian Inuit *puyuy* 'smoke', *puyuy-* 'to give off smoke'; Eastern Canadian Inuit *puyuy-* 'to give off steam', *puyuy* 'water vapor, tobacco smoke, puffball (mushroom)'; Greenlandic Inuit *puyuy* 'smoke, steam, mist', *puyuur-*, *puyuur-* 'to give off smoke or steam; to be infected by a dead person', (North Greenlandic / Polar Eskimo) *puyuy-* 'to smoke (pipe)'. Aleut *huyux̄*

‘smoke, steam’. Fortescue—Jacobson—Kaplan 1994:272. Proto-Yupik **puyuqə-* ‘to be smoked or sooty’ > Alutiiq Alaskan Yupik *puyuqə-* ‘to smoke (fish)’; Central Alaskan Yupik *puyuqə-* ‘to be smoked (food); to be full of smoke (clothes)’; Central Siberian Yupik *puyuqə-*, *puyuxqə-* ‘to become sooty’. Fortescue—Jacobson—Kaplan 1994:272. Proto-Inuit **puyuraq* or **puyurak* ‘frost smoke (snowy mist)’ > North Alaskan Inuit *puyuala-*, *putcuala-* ‘to make steam or smoke’; Western Canadian Inuit *puyuaryuk* ‘kind of weather when powder snow in the air is like smoke’; Eastern Canadian Inuit *puyuraq-* ‘to be a light mist’, (Itivimmiut) *puyuraq*, *puyuqqiq* ‘light mist’; Greenlandic Inuit *puyurak* ‘frost smoke’, *puyuray-* ‘to be mist from the sea, to be frost smoke’, *puyuralak*, *puyualak* ‘dust’, *puyu(r)ala-* ‘to be dusty’. Fortescue—Jacobson—Kaplan 1994:272.

- E. Proto-Chukchi-Kamchatkan **pujæ-* ‘smoke or steam’ (?): Chukchi [*pujʔepuj*] ‘soot’; Koryak *puje-* ‘to bake; to cook bear meat in a pit over heated stones’, *pujepuj* ‘meat cooked in a pit over heated stones’; Kamchadal / Itelmen (Western) *pojaz* ‘to steam’, *pojakaz* ‘to take a steam bath’, *pojatez* ‘to give off steam’, (Eastern) *kimpxejc* ‘to smoke’. Fortescue 2005:218.

Buck 1949:1.73 cloud; 1.74 mist (fog, haze). Illič-Svityč 1971—1984.I:179—180, no. 13, **bilwi* ‘cloud’; Dolgopolsky 2008, no. 198, **biLuʔê* (= **biʔuʔê* ?) ‘cloud’. The Uralic forms cited by Illič-Svityč and Dolgopolsky are too divergent phonologically and should not be included here; the same objection applies to the Turkic forms they cite, which Starostin—Dybo—Mudrak (2003:382) derive from Proto-Altaic **būlu* [~ -a, -o] ‘cloud’.

152. Proto-Nostratic root **pʔutʔ-* (~ **pʔotʔ-*):

(vb.) **pʔutʔ-* ‘to cut, tear, break, or pull off or apart’;

(n.) **pʔutʔ-a* ‘cut-off, pulled-off, torn-off, or broken-off piece or part’

- A. Afrasian: Proto-Semitic **batʔ-* ‘to cut, tear, break, or pull off or apart’ (with numerous extensions): Arabic *baʔara* ‘to split, to cleave, to cut open (tumors)’. D. Cohen 1970— :61. Arabic *baʔta* ‘to cut open’. D. Cohen 1970— :59—60. Geez / Ethiopic *boʔala* [ፀለለ] ‘to cut’; Amharic *bäʔtälä* ‘to be torn, to be uprooted’. D. Cohen 1970— :60; Leslau 1987:113. Arabic *baʔaša* ‘to attack with violence, to bear down on, to fall upon someone; to knock out; to hit, to strike; to land with a thud (on)’; Aramaic *bəʔaš* ‘to stamp’; Syriac *buʔšəṯā* ‘striking with the heels’; Geez / Ethiopic *baʔasa* [ፀለለ] ‘to break, to detach, to cut off’; Tigrinya *bäʔtäsä* ‘to break by pulling’; Amharic *bäʔtäsä* ‘to break a string or the like, to detach (a button), to snip (thread)’, *bəʔtäs* ‘cut-off piece, strip of paper, clipping, scrap (of cloth)’; Harari *bäʔäsa* ‘to break by pulling’; Gafat *biʔtäsä* ‘to break by pulling’; Argobba *beʔtäsä* ‘to break by pulling’; Gurage (Zway) *bäʔäsä* ‘to break off by pulling, to tear a string by pulling’. D. Cohen

- 1970— :61; Leslau 1963:48, 1979:166, and 1987:114. Amharic *bättäkä* ‘to cut apart’, *boččäkä* ‘to tear’, *bočäččäkä* ‘to tear to shreds’. D. Cohen 1970— :60—61. Geez / Ethiopic *baṭṭa* [ቤጥሐ] ‘to make an incision, to make gashes, to scarify, to scratch open, to cut with a scalpel’, *bəṭṭat* [ቤጥሐት] ‘incision, a cutting up’; Amharic *bättä* ‘to make an incision, to scarify’. D. Cohen 1970— :59; Leslau 1987:113.
- B. Dravidian: Kolami *put-* (*putt-*) ‘to cut in pieces, to pluck (flower), to break (rope)’; Naikri *put-* ‘to cut, to pluck’; Naiki (of Chanda) *put-* ‘to be cut, to break (intr.)’, *putuk-* ‘to cut to pieces’; Kurux *pud^ugnā* (*pudgas*) ‘to pluck out (hair, etc.), to strip (fowl) by plucking’. Burrow—Emeneau 1984:378, no. 4277.
- C. Proto-Kartvelian **p’ut-wñ-* ‘to pluck (poultry)’: Georgian *p’ut’(n)-* ‘to pluck (poultry)’; Mingrelian *p’ut’on-* ‘to pluck (poultry)’. Klimov 1964: 154 **puṭwñ-* and 1998:152 **puṭ-wn-* ‘to pluck (poultry)’; Fähnrich 2007: 335 **puṭ-*.
- D. Yukaghir (Southern / Kolyma) *putinmu-* ‘to divide in two’, *putil* ‘piece (of fish); half; middle’. Nikolaeva 2006:372.

Buck 1949:9.28 tear (vb. tr.).

22.6. PROTO-NOSTRATIC *d

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
d-	d-	t-	d-	d ^h -	t-	d-	t-
-d-	-d-	-t(t)-	-d-	-d ^h -	-t-	-d-	-ð-

153. Proto-Nostratic relational marker **da-* (~ **də-*) ‘along with, together with, in addition to’:

- A. Proto-Afrasian **da*, **di* ‘along with, together with, in addition to’: Berber: Kabyle *d*, *yid*, *id-* ‘with, together with, and’; Tamazight (Ayt Ndhir) *d* ‘with, and’; Tuareg *d*, *əd* ‘and, with together with’; Nefusa *əd*, *did* ‘and, with’; Ghadames *əd*, *did* ‘and, with’; Zenaga *əd*, *id*, *d* ‘and with’; Mzab *əd*, *did* ‘and, with’.. Central Cushitic: Bilin comitative case suffix *-dī* ‘together with’; Quara *-dī* ‘together with’. Reinisch 1887:93; Appleyard 2006:23—24. Highland East Cushitic: Burji *-ddi* locative suffix (with absolute case) in, for example, *miná-ddi* ‘in the house’. Sasse 1982:54. Proto-Chadic **də-* ‘with, and’ > Hausa *dà* ‘with; and; by, by means of; regarding, with respect to, in relation to; at, in during; than’; Kulere *tu*; Bade *də*; Tera *nda*; Gidar *di*; Mokulu *ti*; Kanakuru *də*. Newman 1977:34. Note: Diakonoff (1988:61) reconstructs comitative-dative case endings **-dV*, **-Vd* for Proto-Afrasian on the basis of evidence from Cushitic (Agaw) and Berber-Libyan.
- B. Proto-Kartvelian **da* ‘and’: Georgian *da* ‘and’; Mingrelian *do*, *ndo* ‘and’; Laz *do* ‘and’. Klimov 1964:68—69 **da* and 1998:35—36 **da* ‘and’; Schmidt 1962:103; Fähnrich—Sardshweladse 1995:97—98 **da*; Fähnrich 2007:120—121 **da*.
- C. Elamo-Dravidian: Royal Achaemenid Elamite, Neo-Elamite *da* (also *-da* in *-be-da*, *e-da*, *ku-da*, etc.) ‘also, too, as well, likewise; so, therefore, hence, consequently, accordingly; thereby, thereupon’. Note also: Middle Elamite, Neo-Elamite *tak* ‘also’ (< *da-* ‘also’ + *a-ak* ‘and’).
- D. Proto-Indo-European **-d^{he}*, **-d^{hi}* suffixed particle: Sanskrit *sa-há* (Vedic *sa-dha*) ‘with’, *i-há* ‘here’ (Prakrit *i-dha*), *kú-ha* ‘where?’, *á-dhi* ‘above, over, from, in’; Avestan *iḍa* ‘here’, *kudā* ‘where?’; Greek locative particle *-θι*, in, for example, *οἴκο-θι* ‘at home’, *πό-θι* ‘where?’; Old Church Slavic *kъ-de* ‘where?’, *сѣ-de* ‘here’. Burrow 1973:281; Brugmann 1904:454—455 **-dhe* and **-dhi*; Fortson 2010:119 **-dhi* and **-dhe*.
- E. Proto-Altaic dative-locative particle **da*: Tungus: Manchu dative-locative suffix *-de*. The locative suffix is *-du* in other Tungus languages. Common Mongolian dative-locative suffix **-da* > Mongolian *-da*; Dagur *-da*; Khalkha *-dv*; Buriat *-da*; Kalmyk *-dv*; Moghol *-du*; Ordos *-du*; Monguor *-du*. Poppe 1955:195—199. Regarding the *-du* variant, Greenberg

(2000:156) notes: “It seems probable that the vowel here has been influenced by the dative-allative *ru...*” Common Turkic (except Yakut) locative suffix *-da/-dä* > Old Turkic locative-ablative suffix *-dA*; Chagatay locative suffix *-DA*; Turkish locative suffix *-DA*; Azerbaijani locative suffix *-dA*; Turkmenian locative suffix *-dA*; Tatar locative suffix *-DA*; Bashkir locative suffix *-DA*; Kazakh locative suffix *-DA*; Noghay locative suffix *-DA*; Kirghiz locative suffix *-DA*; Uzbek locative suffix *-Dā*; Uighur locative suffix *-DA*. Turkish *da, de* (also *ta, te*) ‘and, also, but’. Menges 1968b:110.

- F. Proto-Chukchi-Kamchatkan instrumental case marker **-tæ* and the suffix **-tæ* in the comitative 1 case marker **kæ-* *-tæ* ‘together with’ (both class 1). Fortescue 2005:426. Perhaps also Proto-Chukotian **to* ‘and’ > Koryak *to* ‘and’; Alyutor *tu* (Palana *to*) ‘and’. Fortescue 2005:288.

Sumerian *da* ‘with, together with, along with, besides’.

Illič-Svityč 1971—1984.I:212—214, no. 59, **da* locative particle, I:214—215, no. 60, **daH* intensifying and conjoining particle; Bomhard 1996a:135—136; Greenberg 2000:155—157; Dogolopolsky 2008, no. 508, **d[E]H₁a* ‘with, together with’ and no. 579, **d[oy]a* (> **da*) ‘place’.

154. Proto-Nostratic (n.) **da-* ‘mother, sister’; (reduplicated) (n.) **da-da-* ‘mother, sister’ (nursery words):

- A. Proto-Afrasian **dad(a)-* ‘mother’: West Chadic **dad-* ‘mother, sister’ > Ngizim *dāadā* term of reference or address used with one’s mother, term of reference or address used with an older sister or person with whom one is close and is of approximately the age of an older sister. Central Chadic **dad-* ‘mother’ > Gisiga *dada* ‘mother’. Orël—Stolbova 1995:141, no. 612, **dad-* ‘mother’.
- B. Dravidian: Tuḷu *daḍḍe* ‘a sow’; Parji *ḍaḍḍa* ‘female of animals and birds’; Gondi *ḍaḍḍa* ‘female of animals’; Malto *ḍadi* ‘the female of quadrupeds’. Burrow—Emeneau 1984:264, no. 3044.
- C. Proto-Kartvelian **ded(a)-* ‘mother’: Old Georgian *deday* ‘mother’; Mingrelian *dida* ‘mother’; Laz *dida* ‘old woman, grandmother’; Svan *dede* ‘mother, mommy’, *dādw* ‘female’ (Svan *di* and *dija* ‘mother, mommy’ are loans from Mingrelian). Klimov 1964:71—72 **deda-* (Klimov compares Indo-European **dhē-dh[ē]* stem used to designate various relatives, cf. Gk. *τῆθῆ* ‘grandmother’, *τῆθίς* ‘aunt’) and 1998:38 **deda-* ‘mother’; Fähnrich—Sardshweladse 1995:105—106 **ded-*; Fähnrich 1994:220 and 2007:128—129 **ded-*. Proto-Kartvelian **da-* ‘sister’: Georgian *da* ‘sister’; Mingrelian *da* ‘sister’; Laz *da* ‘sister’; Svan *dä-j* ‘sister’. Klimov 1964:69 **da-* and 1998:36 **da-* ‘sister’; Fähnrich—Sardshweladse 1995:97 **da-*; Schmidt 1962:103; Fähnrich 2007:119—120 **da-*. Proto-Kartvelian **da-*

did- ‘elder sister’: Georgian *mdad-*, *mdade-* ‘virgin, maiden’; Laz *dad-* ‘aunt, stepmother’. Klimov 1964:69—70 **da-did-* and 1998:36 **da-did-* ‘elder sister’.

Buck 1949:2.36 mother.

155. Proto-Nostratic root **dab-* (~ **dəb-*):

(vb.) **dab-* ‘to make fast, to join together, to fit together, to fasten (together)’;

(n.) **dab-a* ‘joining, fitting, fastening’

- A. Proto-Afrasian **dab-* ‘to stick together, to join together’: Proto-Semitic **dab-ak-* ‘to stick together, to join together, to adhere’ > Hebrew *dāḇaḵ* [דָּבַח] ‘to adhere, to cling to’, *deḇeḵ* [דִּבֵּחַ] ‘joining, soldering’; Aramaic *dāḇaḵ* ‘to stick together, to join’; Arabic *dabiḵa* ‘to stick, to adhere’. Klein 1987:113; Murtonen 1989:143; D. Cohen 1970—:211—212. Proto-Semitic **dab-al-* ‘to stick together, to unite’ > Arabic *dabala* ‘to bring together, to gather, to unite’; Geez / Ethiopic *dabala* [ደበለ] ‘to bring together, to gather, to make braids, to plait’; Harari *dābāla* ‘to add, to put together, to include’; Tigre *dābbāla* ‘to stick together’; Amharic *dābbālā* ‘to double, to unite, to add’; Gurage *dābālā* ‘to add, to join, to unite’. D. Cohen 1970—:209—210; Leslau 1963:52—53, 1979:195—196, and 1987:120. Cushitic: Proto-Sam **dab-* ‘to plait’ > Rendille *dab-i* ‘to plait’; Boni *tob/toba* ‘to plait’. Heine 1978:55. Proto-Southern Cushitic **daba* ‘hand’ > Iraqw *dawa* ‘hand, arm’; Burunge *daba* ‘hand, arm’; Alagwa *daba* ‘hand, arm’; Dahalo *dāḇa* ‘hand’, *dāwattē* (< **dāḇa-wattē*) ‘five’. Ehret 1980:162.
- B. Proto-Indo-European **dhabh-* ‘to fit together’: Armenian *darbin* (< **dhabh-rino-*) ‘smith’; Latin *faber* ‘skillful’; Gothic *ga-daban* ‘to be fitting, to happen’; Old Icelandic *dafna* ‘to thrive’; Old English *gedæftan*, *dæftan* ‘to make smooth; to put in order, to arrange’, *gedæfte* ‘gentle, meek’, *gedafnian* ‘to be fitting or becoming’, *gedafen* ‘(adj.) suitable, fitting; (n.) due, right, what is fitting’, *gedēfe* ‘fitting, seemly; gentle, meek’; Dutch *deftig* ‘proper, noble’; Lithuanian *dabinti* ‘to adorn, to decorate’; Old Church Slavic *dobrŭ* ‘good’, *doba* ‘opportunity’. Pokorny 1959:233—234 **dhabh-* ‘to fix, to suit’; Walde 1927—1932.I:824—825 **dhabh-*; Mann 1984—1987:175 **dhabh-* ‘fitting; fit, able; joint’; Watkins 1985:12—13 **dhabh-* and 2000:17 **dhabh-* ‘to fit together’; Mallory—Adams 1997:139 **dhabhros* ‘craftsman’; Ernout—Meillet 1979:208; De Vaan 2008:197; Walde—Hofmann 1965—1972.I:436—437; Orël 2003:66 Proto-Germanic **dābanan*, 66 **dābnōjanan*; Kroonen 2013:86 Proto-Germanic **daban-* ‘to fit’; Feist 1939:176 **dhabh-*; Lehmann 1986:138—139 **dhabh-* ‘fitting, applicable’; De Vries 1977:71; Onions 1966:241 and 252; Klein 1971:188 and 198 **dhabh-* ‘to become, to be suitable’; Fraenkel 1962—1965.I:79; Derksen 2015:110 **dhabh-*.

Sumerian *dab* ‘to grasp, to seize, to take; to pack; to bind, to fasten (together); to hold’, *dab₅* ‘to catch, to seize, to capture; to take; to grasp; to pack; to bind; to hold tightly’. Semantic development as in Gothic *fahan* ‘to capture, to seize’, Old Icelandic *fá* ‘to grasp with the hands, to get hold of’, Old English *fēgan* ‘to join, to unite’, all from the same stem found, for example, in Greek πῆγνυμι ‘to make fast, to join, to fasten together’ (cf. Lehmann 1986:102).

Buck 1949:9.42 artisan, craftsman; 9.943 fitting, suitable; 11.14 seize, grasp, take hold of. Brunner 1969:75, no. 407; Bomhard—Kerns 1994:262—264, no. 71.

156. Proto-Nostratic root **dag-* (~ **dag-*):

(vb.) *dag-* ‘to put, to place, to put in place; to be put in place, to be stable, to be firmly established’;

(n.) **dag-a* ‘place’

A. Proto-Afrasian **d[a]g-* ‘(vb.) to put, to place, to put in place; to be put in place, to be stable, to be firmly established; (n.) place’: Semitic: Arabic *dağana* ‘to remain, to stay, to abide; to get used to, to become accustomed to, to become habituated; to become tame, domesticated’. Tigre *dagge* ‘village, somewhat large settlement’. Egyptian *dgj* ‘to plant, to stick; to build, to construct, to install’. Coptic *tōdōce* [ἮΩΩ፪] ‘to join, to attach, to plant; to be fixed, joined’. Hannig 1995:989; Erman—Grapow 1921:217 and 1926—1963.5:499; Černý 1976:207; Vycichl 1983:227. Berber: Ahaggar *ədəh* (pl. *idəggən*) ‘place’; Zenaga *əžgən* ‘to put’. East Cushitic: Proto-Boni **deg-* ‘to settle down’.

B. (?) Proto-Dravidian **tañk-* ~ **takk-* ‘to be put in place, to be stable, to be firmly established; to stay, to abide, to remain’: Tamil *tañku* (*tañki-*) ‘(vb.) to stay, to abide, to remain, to be stable, to be firmly established, to be retained in the mind, to exist, to halt, to wait, to delay; to be obstructed, reserved, or kept back; (n.) staying, stopping’, *tañkal* ‘stopping, halting, resting, delay, halting, place, persistence, stability’, *takku* (*takki-*) ‘to come, to stay; to become permanent, lasting (as a possession or acquisition); to be retained’, *takkam* ‘stability’; Malayalam *tañnuka* ‘to stop, to come into possession, to be there, to be arrested in the midst of progress’, *tañnal* ‘rest, shelter’, *tañnika* ‘to delay, to stop’, *takkuka* ‘to be obtained’, *tañcuka* ‘to stop, to remain’, *tañcam* ‘being at rest, posture’; Kota *tañg-* (*tañgy-*) ‘to spend time in a place away from home’; Toda *tok-* (*toky-*) ‘to last long (money, situation), (child) to live long’; Kannada *tañgu* ‘(vb.) to stop, to stay, to tarry, to sojourn, to lodge; (n.) stoppage, halt, a day’s journey’, *dakka* ‘(vb.) to accrue to, to be obtained, to fall to one’s share, to come into and remain in one’s possession, to remain, to be preserved; (n.) acquirement, attainment, possession, property’; Tuḷu *dakkati* ‘possession, control, appropriation, digest’, *dakkāvoṇuni* ‘to retain or digest anything’.

eaten, to misappropriate successfully, to take charge', *daksāvuni* 'to bring into another's possession', *daksuni* 'to be retained or digested (as food, medicine, etc.), to be misappropriated successfully'; Telugu *takku* 'to remain, to be left, to be excepted or omitted', *takkina* 'remaining, other', *dakku*, *ḍakku* 'to remain, to be left as a balance or residue, to be saved or spared'; Kolami *tak-* (*takt-*) 'to live (in a place), to remain, to stay (for example, silent)'; Naikri *tak-* 'to stay, to remain'; Gondi *taggānā* 'to wear well (of clothes), to remain in one's service (of servants)', *tagg-* 'to stay, to last'. Burrow—Emeneau 1984:260—261, no. 3014.

- C. Proto-Kartvelian **deg/*dg-* 'to stand': Georgian *deg-/dg-* 'to stand', *dg-om-a* 'to put, to place, to set; to stand', *a-dg-il* 'place'; Mingrelian *dg-* 'to stand'; Laz *dg-* 'to stand'. Klimov 1964:70; **dg-* and 1998:38 **deg-* : **dg-* 'to stand' (Klimov includes Svan *g-* 'to stand'); Schmidt 1962:104—105; Fähnrich—Sardshweladse 1995:104—105 **deg/*dg-*; Fähnrich 1994: 231 and 2007:127—128 **deg/*dg-*. Proto-Kartvelian **dgam-/dgm-* 'to put, to place, to set; to stand': Georgian *dgam-/dgm-* 'to put, to place, to set'; Mingrelian *dgum-*, *dgəm-* 'to put, to place, to set'; Laz *dgim-* 'to put, to place, to set'. Klimov 1964:71 **dgam-/dgm-* and 1998:37 **dg-am-* : **dg-m-* 'to put, to stand' (Klimov includes Svan *gem-* : *gm-* 'to put'); Fähnrich—Sardshweladse 1995:104—105 **deg/*dg-*. Proto-Kartvelian **dg-en-* 'to put, to place, to set': Georgian *dgen-/dgin-* 'to put, to place, to set'; Mingrelian *dgin-* 'to put, to place, to set'; Laz *dgin-* 'to put, to place, to set'. Klimov 1964:71 **dg-in-* and 1998:37 **dg-en-* : **dg-in-* 'to put'; Fähnrich—Sardshweladse 1995:104—105 **deg/*dg-*.
- D. Proto-Indo-European **d^heg^h-om-*, **d^hg^h-om-* 'earth, land, ground; human being': Sanskrit (**d^hg^yh-om-* > **džham-* > **ḍžham-* > **ṭṣam-* >) *kṣam-* 'earth, ground'; Greek *χθών* (< **d^hg^h-ōm-* through metathesis of the initial consonant group) 'earth, ground; a particular land or country', *χαμαί* 'on the ground'; Albanian *dhe* 'earth, land'; Latin *humus* 'earth, ground, soil', *homō* 'human being, man'; Gothic *guma* 'man'; Old Icelandic *gumi* 'man' (poetic), *brúð-gumi* 'bridegroom'; Swedish *brudgum* 'bridegroom'; Old English *guma* 'man, hero', *brȳd-guma* 'bridegroom'; Old Frisian *goma* 'man', *breid-goma* 'bridegroom'; Old Saxon *gumo*, *gomo* 'human being, man', *brūdi-gomo* 'bridegroom', Dutch *bruidegom* 'bridegroom'; Old High German *gomo* 'human being, man', *gomman*, *gom(m)en*, *gamman*, *goum(m)an* 'man', *brūti-gomo* 'bridegroom' (New High German *Bräutigam*); Old Irish *dú* 'place', *duine* 'person'; Old Church Slavic *zemlja* 'earth'; Old Lithuanian *žmuō* 'human being, person'; Tocharian A *tkaṃ*, B *kem* 'earth, ground'; Hittite *te-(e-)kán* 'earth, ground', *da-ga-(a-)an* 'to the ground'; Luwian *ti-ya-am-mi-iš* 'earth'; Hieroglyphic Luwian *takami-* 'earth, land'. The unextended stem **d^hogh-* may be preserved in Hittite (dat.-loc.) *ta-ki-ya* as in *ta-ki-ya ... ta-ki-ya* 'in this place ... in that place', literally, 'this one here ... that one there' (not, then, connected with *da-* 'two' as suggested by Kronasser 1966.I:210). Pokorny 1959:414—416

**ghōem-*, **ghōom-* ‘earth, ground’; Walde 1927—1932.I:662—664
 ghōem-*, **ghōom-*; Mann 1984—1987:414 **ghem-* (ghəm-*, **ghm-*)
 ‘ground, earth; on the ground, on (to, in) the ground, down’; Watkins
 1984:14 **dhghōm-* ‘earth’, *(*dh*)*ghm-on-* ‘earthling’ and 2000:20
 **dhghem-* ‘earth’; Gamkrelidze—Ivanov 1984.II:475 **d[h]eġ[h]om-*,
 II:877, and 1995.I:396, I:720 **dh(e)ġhom-* ‘earth; human, person’; Burrow
 1973:82 **dheġhom-*, **dhġhom-*; Mallory—Adams 1997:174 **dhéghōm*
 ‘earth’; Mayrhofer 1956—1980.I:288—289; Sturtevant 1951:59, §81, and
 62, §84, Indo-Hittite **d’eg-*; Frisk 1970—1973.II:1071 and II:1098—
 1099 **dheghōm-*; Boisacq 1950:1049—1050 and 1060 **gdhōm-*; Hofmann
 1966:412 Greek χαμαί < **gh_emaí*, **gdhēm-*, **gdhōm-*, **gdhm-* and 419
 **dheghóm-*; Chantraine 1968—1980.II:1245 **gh^om-* and II:1258—1259
 **dheghom-*, *(*dh*)*ghom-*; Beekes 2010.II:1612—1613 **dhġhem-* and
 II:1632—1633 **dhġhem-* : **dhēġh-m-*, **dhġhom-*; De Vaan 2008:287—288
 and 292; Walde—Hofmann 1965—1972.I:654—655 and I:664—665
 **ghđem-*, **ghem-*; Ernout—Meillet 1979:297—298 and 302; Smoczyński
 2007.1:790—791; Fraenkel 1962—1965.II:1320; Kroonen 2013:195
 Proto-Germanic **guman-* ‘man’ (< **dhġhm-on-*); Orël 1998:80—81 and
 2003:146 Proto-Germanic **zumōn*; Lehmann 1986:163 **dh(e)ġh-em-*;
 Feist 1939:225—226 **ghdhem-* or **dh(e)ġhom-*; De Vries 1977:194;
 Onions 1966:117; Klein 1971:94—95 and 324; Kluge—Mitzka 1967:97—
 98 **gh(ə)mon*; Kluge—Seebold 1989:103—104; Van Windekens 1976—
 1982.I:506—507 **dheghōm-*, **dhghōm-*; Adams 1999:192 **dh(e)ġhom-*
 ‘earth, ground’; Kloekhorst 2008b:858—862 **dhēġh-m-*; Derksen 2008:
 542 **dhġh-em-* and 2015:521—522 **dhġh-m-on-*; Wodtko—Irslinger—
 Schneider 2008:86—99 **dhēġh-om-*, **dhġh-ém-*, **dhġh-m-’-*, **gh-ṡm-*.
 Semantic development from ‘place, site’ > ‘earth, land, ground’ as in
 Hungarian *táj*, cited below. According to Klimov (1991:332), the
 following Kartvelian forms represent early borrowings from Indo-
 European: Proto-Kartvelian **diγwam* ~ **diγom* ‘black earth’ > Georgian
 (dial.) *dil(l)γvam* ‘black earth’, (toponym) *Diγom* a region inside Tbilisi,
 occupying the so-called “Diγomian Field”, Svan *diγwam* ‘black earth’. See
 also Fähnrich 2007:134 **diγwam-*.

- E. Uralic: Proto-Ugrian **taγ3* (**tak3*) ‘place, site’ > (?) Ostyak / Xanty (Vah)
tāγj, (Upper Demyanka) *tāχə*, (Obdorsk) *tāχα* ‘place, site’; (?) Hungarian
táj ‘region, tract, country, land’. Rédei 1986—1988:892 **taγ3* (**tak3*).

Sumerian *dag* ‘residence, dwelling place’.

Buck 1949:1.21 earth, land; 7.11 dwell; 9.44 build; 12.11 place (sb.); 12.12 put
 (place, set, lay); 12.15 stand (vb., intr.); 12.16 remain, stay, wait. Bomhard
 1996a:209—210, no. 608; Blažek 1992b:131—132, no. 5.

157. Proto-Nostratic root **dag-* (~ **dæg-*):(vb.) **dag-* ‘to glitter, to shine, to burn’;(n.) **dag-a* ‘day’

- A. Afrasian: Proto-Semitic (reduplicated) **dag-dag-* ‘early morning’ > Geez / Ethiopic *dagdaga* [ጰጰጰጰ] ‘to be early in the morning, to get up early in the morning’, *dagadag* [ጰጰጰጰ], *dagdag* [ጰጰጰጰ], *dagdāg* [ጰጰጰጰ], *dagdig* [ጰጰጰጰ] ‘early morning’; Amharic *dägäddägä* ‘to get up early in the morning, to hasten off’ (Geez loan). D. Cohen 1970—:218; Leslau 1987:125.
- B. Dravidian: Tamil *taka-tak-enal*, *taka-takav-enal* onomatopoeic expression of dazzling, glowing, glittering; Kota *dag dag in- (id-)* ‘(flame) to burn brightly’, *dagdagn* ‘with a good light’; Kannada *daggane* ‘with a blaze’; Tuḷu *dagadaga*, *dagabaga* ‘brightly’, *dagga*, *daggane* ‘(to blaze) suddenly’; Telugu *dagadaga* ‘glitter’, *dagadagam-anu* ‘to glitter, to shine’; Kurux *dagnā* ‘to light, to set fire to (tr.)’, *dagrñā* ‘to catch fire, to be burned’; Malto *dagdagre* ‘to glitter, to shine’. Burrow—Emeneau 1984:259, no. 2998.
- C. Proto-Kartvelian **deg-* ‘day’: Georgian *dy-e* ‘day’, *dy-e-n-del-i* ‘today’; Mingrelian *dy-a* ‘day’; Laz *dy-a* ‘day’; Svan *la-dey* ‘day’, *an-dy-a-n-er-i* ‘today’. Schmidt 1962:105—106 **day-* or **dey-*; Klimov 1964:75—76 **dye-* and 1998:43—44 **dye-* ‘day’; Fähnrich—Sardshweladse 1995:108 **dey-*; Fähnrich 2007:131—132 **dey-*.
- D. Proto-Indo-European **dhogh-o-* ‘day’: Proto-Germanic **daǵaz* ‘day’ > Gothic *dags* ‘day’; Old Icelandic *dagr* ‘day’; Swedish *dag* ‘day’; Norwegian *dag* ‘day’; Danish *dag* ‘day’; Old English *dæg* ‘day’; Old Frisian *dei* ‘day’; Old Saxon *dag* ‘day’; Old High German *tag*, *tac* ‘day’ (New High German *Tag*). Feist 1939:113—114 **dhegh-* or **dheg^{uh}-*; Lehmann 1986:86—87 **dheg^{wh}-* ‘to burn’; Kroonen 2013:86—87 Proto-Germanic **daga-* ‘day’ (< **dhogh-o-*); Orël 2003:66 Proto-Germanic **daǵaz*; Onions 1966:246 **dhegh-* ‘to burn’; Klein 1971:192 **dheg^{wh}-*, **dhog^{wh}-* ‘to burn’; Boutkan—Siebinga 2005:71—72; Kluge—Mitzka 1967:766 **dheg^{uh}-*, **dhōg^{uh}-*; Kluge—Seebold 1989:718 **dheg^{uh}-* ‘to burn’; De Vries 1962:71—72 **dhegh-* or **dheg^{uh}-*; Falk—Torp 1903—1906.I:97—98; Torp 1919:54. Puhvel (1987:315—318) has convincingly argued that the Proto-Indo-European word for ‘yesterday’, which he reconstructs as **dhghyes-* (> Sanskrit *hyás* ‘yesterday’; Greek *χθές* ‘yesterday’), belongs here as well (see also Beekes 2010.II:1632). Puhvel reconstructs Proto-Indo-European **dhogh-o-* as the source of the Germanic words for ‘day’.

Sumerian *dadag* ‘clear, shining, bright, radiant, brilliant, luminous’, *dág* ‘shining, bright, clear’.

Buck 1949:14.41 day. Illič-Svityč 1971—1984.I:221, no. 70, **diga* ‘bright, light’; Bomhard—Kerns 1994:270—271, no. 82.

158. Proto-Nostratic root **dal-* (~ **dəl-*):

(vb.) **dal-* ‘to cut, to prick, to pierce, to gash, to notch, to gouge, to wound’;

(n.) **dal-a* ‘gash, notch, strike, split’

- A. Afrasian: Proto-Southern Cushitic **dalaaf-* ‘to gash, to notch’ > Burunge *delaʿ-* ‘to gash, to notch’; Kʼwadza *dalaʼ-* ‘to shoot (with an arrow)’. Ehret 1980:345.
- B. Dravidian: Tamil *tallu* (*talli-*) ‘to beat, to crush’; Malayalam *tallu* ‘a blow, stroke, beating’, *talluka* ‘to strike, to beat’; Telugu *talgu* ‘to strike’; Gondi *talg-* ‘to strike, to hit the mark’. Burrow—Emeneau 1984:270, no. 3105.
- C. Proto-Indo-European **dʰel-bʰ-/dʰol-bʰ-/dʰl-bʰ-* ‘to dig, to hollow out’: Old English *delfan* ‘to dig, to burrow’, *gedelf* ‘digging, trench’; Old Frisian *delva* ‘to dig’; Old Saxon (*bi*)*delban* ‘to dig’; Dutch *delven* ‘to dig’; Middle High German (*bi*)*telben* ‘to dig’; Slovenian *dléto* (< **delbt-*) ‘chisel’; Russian *dolbatʹ* [долбать], *dolbitʹ* [долбить] ‘to chisel, to hollow out’. Rix 1998a:124 **dʰelbʰ-* ‘to dig, to hollow out’; Pokorny 1959:246 **dʰelbh-* ‘to dig’; Walde 1927—1932.I:866—867 **dʰelbh-*; Mann 1984—1987:181 **dʰelbhō* ‘to dig, to gouge’, 192 **dʰl̥bh-* ‘hollow’, 196 **dʰolbh-* ‘to dig’; Watkins 1985:13 **dʰelbh-* and 2000:18 **dʰelbh-* ‘to dig, to excavate’; Mallory—Adams 1997:159 **dʰelbh-* ‘to dig’; Orël 2003:70 Proto-Germanic **delbanan*, 70 **delbaz* ~ **delban*; Kroonen 2013:92 Proto-Germanic **delban-* ‘to dig, to delve’; Onions 1966:254; Klein 1971:200. Proto-Indo-European **dʰel-gh-/dʰol-gh-/dʰl-gh-* ‘to gash, to wound’: Old Icelandic *dolg* ‘enmity’; Old English *dolg* ‘wound, scar’; Old Frisian *dolg* ‘wound’; Low German *daljen*, *dalgen* ‘to slay’; Middle Dutch *dolk* ‘wound’; Old High German *tolc*, *tolg*, *dolg* ‘wound’. Walde 1927—1932.I:866 **dʰelgh-*; Pokorny 1959:247 **dʰelgh-*, **dʰelg-* (?) ‘to hit’; Mann 1984—1987:192 **dʰl̥ghō* (? **dʰl̥guh-*) ‘to stab, to wound, to burn, to smart’; Orël 2003:67 Proto-Germanic **dal̥zōjanan*, 78 **dul̥zan*; De Vries 1977:78—79. Proto-Indo-European **dʰel-k-/dʰol-k-/dʰl-k-* ‘(vb.) to prick, to pierce; (n.) sharp object’: Old Icelandic *dálkr* ‘pin, dagger’; Old English *dalc* ‘brooch, bracelet’; New High German *Dolch* ‘dagger’; Old Irish *delg* ‘thorn, spike, pin, brooch’; Lithuanian *dal̥gis* ‘scythe’, *dil̥gùs* ‘spiky, stinging’, *dil̥gė* ‘nettle’. But not Latin *falx* ‘sickle, scythe’. Pokorny 1959:247 **dʰelg-* ‘to stab; needle’; Walde 1927—1932.I:865—866 **dʰelg-*; Mann 1984—1987:182 **dʰelg-*, **dʰolg-*, **dʰl̥g-* ‘spiky; spike, pin, brooch’, 196 **dʰolgos*, *-jos*, *-jə* ‘brooch, spit, dagger’; Mallory—Adams 1997:424 **dʰelg-* ‘to sting, to pierce’ and 428 (?) **dʰelg-* ‘pin’; Kluge—Mitzka 1967:137 **dʰelg-*; Kluge—Seebold 1989:149; De Vries 1977:72; Boutkan—Siebinga 2005:74—75; Fraenkel 1962—1965.I:81; Smoczyński 2007.1:91.

- D. Proto-Altaic **dēlp^{hi}-* ‘to split, to burst’: Proto-Tungus **delpe-* ‘to split’ > Evenki *delpe-rge-*, *delpe-m-* ‘to split’; Lamut / Even *depčerge-* ‘to split’; Solon *delpe-* ‘to split’. Proto-Mongolian **delbe-* ‘to split or crack open, to burst, to break’ > Mongolian *delbere-* ‘to burst or crack asunder, to go to pieces, to split, to break; to explode’, *delberkei* ‘split, cracked; crack, cleft, crevice, fissure, hole’; Khalkha *delbere-* ‘to burst, to break through’; Buriat *delber-*, *delbel-* ‘to burst, to break through’; Kalmyk *delwł-* ‘to burst, to break through’; Ordos *delbel-* ‘to burst, to break through’. Poppe 1960:44; Street 1974:11 **delpe* ‘asunder, to pieces’ in **delpe-le-* ‘to split, to burst’; Starostin—Dybo—Mudrak 2003:471 **dēlpⁱ-* ‘to burst, to break’. Starostin—Dybo—Mudrak also include Proto-Turkic **del-* ‘to make holes’ and Proto-Japanese **timpə-* ‘to become worn down, out’.
- E. Proto-Chukchi-Kamchatkan **tala-* ‘to beat’: Chukchi *tala-* ‘to beat (frozen meat), to pulverize (bones)’, *tala-jwə-* ‘to hit, to beat’; Kerek *ta(a)la-* ‘to pound, to beat’; Koryak *tala-* ‘to hit, to pound (with a hammer)’, *talanaŋ* ‘hammer’; Alyutor *tala-* ‘to beat, to strike’; Kamchadal / Itelmen *tala-s* ‘to beat, to strike, to crush, to forge (metal)’, *k-tala-ʔan* ‘blacksmith’, (Sedanka) *tala-* ‘to beat’, (Western) *tlez-* ‘to pulverize’, *talaan* ‘forged, shoed (horse)’, *talal(k)nan* ‘hammer’. Fortescue 2005:276.

Sumerian *dāla* ‘thorn, needle’.

Buck 1949:4.85 wound (sb.); 8.22 dig; 9.21 strike (hit, beat). Bomhard—Kerns 1994:268—269, no. 79; Dolgopolsky 2008, no. 527, **dæLbV* ‘to gouge, to dig, to cut through’.

159. Proto-Nostratic root **dal-* (~ **dəl-*):

(vb.) **dal-* ‘to stir up, to disturb, to roil (water), to agitate; to be disturbed, confused, agitated, troubled’;

(n.) **dal-a* ‘disturbance, agitation’

Note also:

(vb.) **dul-* ‘to disturb, to perplex, to bewilder, to confuse, to ruffle, to upset, to baffle, to stir up trouble, to agitate; to be disturbed, perplexed, bewildered, confused, ruffled, upset, baffled, troubled, agitated’ (> ‘to drive someone crazy, mad, insane; to be crazy, mad, insane; to be dumb, stupid’);

(n.) **dul-a* ‘confusion, disturbance, trouble, agitation, perplexity’ (> ‘madness, craziness, insanity; stupidity’)

- A. Afrasian: Proto-Semitic **dal-ax-* ‘to stir up, to disturb, to roil (water), to agitate’ > Akkadian *dalāhu* ‘to stir up, to roil (water), to blur (eyes); to disturb; to become muddied, roiled, blurred; to be or become troubled, confused, embarrassed’, *dilihtu* ‘disturbed condition, confusion, distress’, *dalhu* ‘disturbed, blurred, muddy, cloudy, confused’; Hebrew *dālah* [דָּלַח] ‘to trouble, to make turbid’; Syriac *dəlah* ‘to trouble, to disturb’; Harari

däläha ‘to sin, to err, to go astray, to miss the way’; Gurage (Masqan, Gogot) *dälla*, (Wolane, Zway) *däla* ‘to make a mistake, to be mistaken, to err, to lose the way, to miss the way’. D. Cohen 1970— :264; Murtonen 1989:150; Klein 1987:125; Leslau 1963:56 and 1979:205.

- B. Dravidian: Kannada *tallana*, *tallaṛa* ‘agitation, amazement, alarm, fear, grief’, *tallaṇisu* ‘to be or become agitated from fear or amazement, to be troubled, alarmed, anxious’, *taḷḷaṇka* ‘embarrassment, fear, etc.’; Tuḷu *tallana* ‘wavering, vexed’; Telugu *tallaḍamu* ‘agitation, commotion, anxiety, turmoil’, *tallaḍincu*, *tallaḍillu*, *tallaḍakuḍucu*, *tallaḍa-paḍu* ‘to be agitated or in a state of turmoil, commotion or anxiety’, *tallaḍapāṭu* ‘agitation, turmoil, commotion’, *tallaḍa-peṭṭu* ‘to throw into a state of turmoil, agitation, or anxiety’. Burrow—Emeneau 1984:70, no. 3104.
- C. Proto-Eskimo **tala(t)-* (‘to be confused, disturbed, disoriented’ >) ‘to be drunk, tipsy; to act crazy’: Alutiiq Alaskan Yupik *tala-*, *talatə-* ‘to be drunk, to act crazy’; Eastern Canadian Inuit *talat-* ‘to be asphyxiated (by gas vapors or when eating something intoxicating)’; Northwest Greenlandic *talakkat-* ‘to be careless, untidy’. Fortescue—Jacobson—Kaplan 1994:327.

Buck 1949:16.33 anxiety; 17.23 insane, mad, crazy. Illič-Svityč 1971—1984.I: 216—217, no. 62, **dalq/u/* ‘wave’; Dolgopolsky 2008, no. 526, **dalqa|U* ‘wave’.

160. Proto-Nostratic root **dalʷ-* (~ **dəʷ-*):

(vb.) **dalʷ-* ‘to oppress, to harass, to weaken, to tire’;

(n.) **dalʷ-a* ‘tiredness, weakness, exhaustion, weariness’; (adj.) ‘oppressed, tired, weary, weak, exhausted’

- A. Proto-Afrasian **dal-* ‘to oppress, to harass, to weaken, to tire’: Proto-Semitic **dal-al-* ‘to oppress, to weaken’, **dall-* ‘weak, small, inferior’ > Akkadian *dallu* ‘small, inferior’, *dullulu* ‘to oppress’, *dullulu* ‘wronged, oppressed’; Hebrew *dal* [דָּל] ‘low, weak, poor, thin’, **dālal* [דָּלָל] ‘to be or become small’; Phoenician *dl* ‘poor’; Jewish Palestinian Aramaic *dālal* ‘to be poor’; Ugaritic *dl* ‘poor’; Soqotri *delel* ‘to humiliate’. D. Cohen 1970— :265—266; Klein 1987:125—126; Murtonen 1989:149; Tomback 1978:72. Proto-Semitic **dal-ap-* ‘to be exhausted, weary, sleepless’ > Akkadian *dalāpu* ‘to be or stay awake, to be sleepless, to work ceaselessly, to continue (work) into the night, to drag on, to linger on; to keep someone awake, to harass’, *dalpu* ‘awake, alert; weary-eyed from watching; harassed’, *diliptu* ‘sleeplessness, trouble’, *dullupu* ‘to keep (someone) awake, to harass’, *dulpu* ‘sleeplessness (as a disease)’; Ugaritic *dlp* ‘to be exhausted’. D. Cohen 1970— :267—268. Lowland East Cushitic **dal-* ‘to be tired’ > Somali *daal-* ‘to be tired’. Omotic **dall-* ‘to become meager’ >

Kefa *dalli-* ‘to become meager’. Orël—Stolbova 1995:147, no. 637, **dal-* ‘to be weak, to be tired’.

- B. Dravidian: Tamil *taḷar* ‘to droop, to faint; to grow weary, enfeebled, infirm, or decrepit; to grow slack, to become relaxed (as a tie or grasp), to become flabby from age, to suffer, to lose one’s vitality’, *taḷar* ‘slackening’, *taḷarcci*, *taḷartti* ‘slackness, looseness, flexibility, weakness, infirmity, faintness, languor, depression, laziness, remissness’, *taḷarvu* ‘growing slack, relaxing, faintness, weakness, depression, sorrow’, *taḷarttu* (*taḷartti-*) ‘to loosen (tr.)’; *taḷataḷa* ‘to become loose (as a cloth worn upon the person)’; Malayalam *taḷaruka* ‘to relax, to slacken, to be allayed, to grow faint, to grow weary’, *taḷarcca* ‘slackness, weariness, faintness’, *taḷarkka*, *taḷarttuka* ‘to moderate, to abate’; Kota *taḷa-r-* (*taḷa-ry-*) ‘to take rest’; Koḍagu *taḷe-* (*taḷev-*, *taḷand-*) ‘to become weak’, *taḷat-* (*taḷati-*) ‘to make weak, to exhaust’; Tuḷu *taḷabaḷa*, *taḷamaḷa* ‘exhaustion, weariness’, *daḷabaḷa*, *daḷaṅkè* ‘loose’; Malto *talqro* ‘tender, delicate, weak’. Burrow—Emeneau 1984:272, no. 3127.

Buck 1949:4.82 weak; 4.91 tired, weary.

161. Proto-Nostratic (n.) **daq^h-a* ‘male of certain animals: billy-goat, ram’:

- A. Dravidian: Tamil *takar* ‘sheep, ram, goat, male of certain animals (*yāli*, elephant, shark)’; Malayalam *takaran* ‘huge, powerful (as a man, bear, etc.)’; Kannaḍa *tagar*, *ṭagaru*, *ṭagara*, *ṭegaru* ‘ram’; Tuḷu *tagaru*, *ṭagaru* ‘ram’; Telugu *tagaramu*, *tagaru* ‘ram’. Burrow—Emeneau 1984:259, no. 3000; Krishnamurti 2003:12 **tak-ar* ‘ram’.
- B. Proto-Kartvelian **daq-* ‘goat’ (> **dq-* in Georgian, Mingrelian, and Laz through syncope; final *-a* in these languages is suffixal): Mingrelian *tx-a* ‘goat’ (initial *d* > *t* through regressive voicing assimilation); Laz *tx-a* ‘goat’; Georgian *tx-a* ‘goat’; Svan *daqəl* ‘goat’. Fähnrich—Sardshweladse 1995:102 **daq-*; Klimov 1964:77 **dqa-* and 1998:80 **tqa-* ‘she-goat’; Schmidt 1962:116; Fähnrich 2007:125 **daq-*.

Buck 1949:3.25 sheep; 3.26 ram; 3.36 goat. Bomhard 1996a:227—228, no. 643.

162. Proto-Nostratic root **dar-* (~ **dər-*):

(vb.) **dar-* ‘to bend, to twist, to turn; to twist, wrap, or join together’;

(n.) **dar-a* ‘bend, turn, curve; that which bends, turns, winds, or twists: winding course or way’; (adj.) ‘bent, curved, crooked; wrapped, twisted, turned, or joined together’

- A. Proto-Afrasian **dar-* ‘to wrap, to wind, to twist; to walk’: Proto-Semitic **dar-ag-* ‘to go, to walk, to move, to proceed; to wrap, to wind, to twist’ >

Arabic *daraġa* (*durūġ*) ‘to go, to walk, to move, to proceed, to advance (slowly), to approach gradually, to follow a course; to go away, to leave, to depart; to be past, bygone, over; to have passed away, to be extinct; to circulate, to be in circulation, to have currency; to grow up (child)’, *daraġa* (*darġ*) ‘to roll up, to roll together; to wrap, to wind, to twist’; Hebrew *maḏrēyāh* [מַדְרֵיחַ] ‘step (cut in rocks), mountain path’; Akkadian *daraggu* ‘path’; Šheri / Jibbāli *dōrōg* ‘to become used to walking for the first time’, *edūrg* ‘to wrap in white cloth, to enshroud’, *edrég* ‘to lead’, *dérgét* ‘step, coil of rope, layer’; Ḥarsūsi *dārōg* ‘(small animal) to begin to walk’, *dərgēt* ‘step; layer; coil of rope’; Tigre *dārgägä* ‘to make roll down, to roll away’. Ethiopian Semitic **dar-ag-* ‘to twist, wrap, or join together’ > Geez / Ethiopic *darga* [ደርገ] ‘to be joined together, to be united’, *darraga* [ደረገ] ‘to join, to unite’; Tigre *dārga* ‘to mix’; Tigrinya *dārägä* ‘to join, to unite’; Amharic *därrägä* ‘to become one, to be united, to be combined’. Murtonen 1989:153; D. Cohen 1970— :308—309; Leslau 1987:141—142. Proto-Semitic **dar-ab-* ‘to bend, to fold’ > Tigre *därräba* ‘to fold’; Tigrinya *därräbä* ‘to fold’; Amharic *därräbä* ‘to fold’; Gurage *däräbä* ‘to double’. D. Cohen 1970— :307; Leslau 1979:218. Proto-Semitic (reduplicated) **dar-dar-* ‘to turn, to rotate’ > Mehri *adárdär* ‘to go around someone or something’. Berber: Tuareg *adəriḥ* ‘footprint on the ground’; Tawlemmet *adəriḥ* ‘footprint’; Tamazight *ddirəz* ‘to retreat, to go back, to go away’, *sddirəz* ‘to make retreat’, *addirəz* ‘withdrawal, retreat’; Ghadames *ədrəz* ‘to stomp the feet, to dance’, *dərrəz* ‘men’s dance’, *ləmdraz* ‘footprints on the ground’; Kabyle *adriz* ‘track, trail’. Central Cushitic: Awnigi / Awiya *dərdär-* ‘to turn, to rotate’. Orël—Stolbova 1995:151, no. 656, **dar-* ‘to run’, 151, no. 657, **dar-* ‘road’, 174, no. 764, **dVr-dVr-* ‘to turn, to rotate’; Ehret 1995:134, no. 151, **dir-* ‘to step’.

- B. Dravidian: Telugu *tari* ‘churning’, *tarikāḍu* ‘one who churns’, *tar(u)cu*, *tracu* ‘to churn’; Parji *terip-* (*terit-*) ‘to churn’. Burrow—Emeneau 1984:269, no. 3095. Tamil *taṛu* (*taṛuv-*, *tarr-*) ‘to wear tightly (as a cloth), to fasten’; Malayalam *taṛuka* ‘to be tucked in before and behind’, *taṛayuka* ‘to be fixed’, *tāru* ‘wearing clothes tucked in’; Kannaḍa *tari* ‘state of being joined, of being put in or down, fixed, or settled’, *taṛu* (*tatt-*) ‘to join, to approach, to engage in’; Tuḷu *tarapuni*, *tarpuni* ‘to rivet, to fasten firmly; to be riveted, fixed’; Telugu *tarupu* ‘to join together, to amass (wealth)’. Burrow—Emeneau 1984:273, no. 3142.
- C. Proto-Kartvelian **der-/dr-* ‘to bend’: **dr-ek-* ‘to bend (tr.)’, **der-k-* ‘to bend, to stoop (intr.)’: Georgian *drek’-/drik’-* ‘to bend’, *drk’u* ‘crooked, bent’; Mingrelian *dirak’-/dirik’-/dirk’-* ‘to bend’; Laz *drak’-/drik’-/druk’-* ‘to bend’. Fähnrich—Sardshweladse 1995:107 **der-/dr-*; Gamkrelidze 1967:711—712; Klimov 1964:74—75 **dreḱ-/driḱ-/derḱ-* and 1998:39—40 **der-* : **dr-* ‘to bend, to curve’, 1998:42 **dr-ek’-/dr-iḱ-/dr-ḱ-* ‘to bend, to curve, to stoop’; Schmidt 1962:105; Gamkrelidze—Mačavariani

1982:89—92; Gamkrelidze—Ivanov 1984.I:261—262 and 1995.I:227—228 **der-k*-, **dr-ek*’-; Fähnrich 2007:130—131 **der*-/**dr*-.

- D. Proto-Indo-European **dher-gh*-/**dhor-gh*-/**dh₁r-gh*-, **dhr-egh*-/**dhr-ogh*-/**dh₁r-gh*- ‘to turn’: Greek τρέχω ‘to run, to move quickly’, τροχός ‘wheel’, τροχίος ‘round’, πρόχος ‘a running course’; Armenian *darnam* (< **darjnam*) ‘to turn, to return’, *durgn* ‘a potter’s wheel’; Albanian *dredh* ‘to twist, to turn’; Old Irish *droch* ‘wheel’, *dreas* ‘turn, course’. Rix 1998a:127 **dhergh*- ‘to turn’; Pokorny 1959:258 **dheregh*- ‘to turn’, 273 **dhregh*- ‘to run’; Walde 1927—1932.I:863 **dhergh*-, **dhregh*-, I:874—875 **dhregh*-; Mann 1984—1987:203 **dhreghō* ‘to turn’, 206 **dhroghos*, -ā ‘turn, going, wheel’, 212 **dh₁gh*- ‘turn’; Watkins 1985:15 **dhregh*- ‘to run’; Mallory—Adams 1997:491 **dhregh*- ‘to run’; Orël 1998:73; Beekes 2010.II:1506—1507 **dh₁regh*-; Hofmann 1966:373 **dhregh*-; Boisacq 1950:983—984 **dhregh*-; Chantraine 1968—1980.II:1135—1136 **dhregh*-; Frisk 1970—1973.II:927—929.

Sumerian *dāra* ‘a band’, *dāra*, *dāru* ‘belt, girdle’.

Buck 1949:9.14 bend (vb. tr.); 10.12 turn (vb.); 10.13 turn around (vb.); 10.45 walk (vb.); 10.46 run; 12.22 join, unite. Bomhard—Kerns 1994:272—273, no. 84; Dolgopolsky 2008, no. 570, **doRkæ* (~ **doRgæ* ?) ‘to bend, to turn, to wrap’.

163. Proto-Nostratic root **dar*- (~ **dər*-):

(vb.) **dar*- ‘to pound, to break; to harm, to injure, to torment’;

(n.) **dar-a* ‘harm, injury’; (adj.) ‘harmful, malevolent’ (> ‘bad’ in Kartvelian and, within Indo-European, in Celtic)

- A. Proto-Afrasian **dar*- ‘to pound, to break; to harm, to injure, to torment’: Proto-Semitic **dar-as*-, **dar-aš*- ‘to pound, to break; to harm, to injure, to torment’ > Arabic *darasa* ‘to wipe out, to blot out, to obliterate, to efface, to extinguish; to thresh (grain)’, *dāris* ‘effaced, obliterated; old, dilapidated, crumbling’, *dars* ‘effacement, obliteration, extinction’; Akkadian *darāsu*, *darāšu* ‘to trample upon, to throw over or back, to press hard, to treat harshly’, *durrusu* ‘to treat oppressively’; Gurage *dārräsä* ‘to break off the edge, to destroy’; Tigre *dārasäsa* ‘to crush’. D. Cohen 1970— :316 *drs/š*; Leslau 1979:221. Egyptian *dr* ‘to subdue (enemies); to expel, to drive out (people); to remove; to repress (a wrongdoer); to destroy (a place)’. Hannig 1995:983; Faulkner 1962:314—315; Gardiner 1957:602; Erman—Grapow 1921:215 and 1926—1963.5:473—474. Berber: Tuareg *adər* ‘to squeeze something strongly to force it from the bottom to the top, to be pressed’; Ghadames *adər* ‘to squeeze, to clench, to compress’; Mzab *adər* ‘to press, to squeeze, to weigh on’; Tamazight *adər* ‘to press on, to lower, to cover, to be pressed, to bury, to drive or thrust

into the earth', *adar* 'burial, driving or thrusting in'; Kabyle *adər* 'to descend', *ssidər* 'to lower, to make descend'; Zenaga *adər*, *dər* 'to fall down, to descend, to attack', *cidər* 'to make fall down, to make descend'. Highland East Cushitic **dar-* 'to break, to tear off' > Burji *dar-* 'to break (tr.)', *dar-d-* 'to break (intr.)'; Gedeo / Darasa *dar-* 'to tear off'; Hadiyya *dareer-* 'to tear off'; Sidamo *dar-* 'to tear off'. Hudson 1989:31 and 149; Sasse 1982:53.

- B. Dravidian: Tamil *tarukku* (*tarukki-*) 'to pound, to break, to pierce, to injure, to torment'; Malayalam *tarakkuka* 'to remove the husk from rice'. Burrow—Emeneau 1984:269, no. 3099; Krishnamurti 2003:8 **tar-V-* 'to churn'.
- C. Proto-Kartvelian **dar-* 'bad, unfit': Georgian *dar-e-j*, *m-dar-e* 'bad, unfit', *u-dar-es-i* 'worse'; Svan *x-o-dr-a* 'worse', *x-o-dr-ām-d* 'worse', *dar-āl-a* 'bad, unfit', *ma-dr-ēn-e* 'worse'. Klimov 1998:37 **dar-* : **dr-* 'to be unfit, bad'; Fähnrich—Sardshweladse 1995:101 **dar-*; Fähnrich 2007:124 **dar-*. Semantic development as in Old Icelandic *váendr* 'bad, wicked' < *vá* '(vb.) to harm, to hurt, to blame; (n.) woe, calamity, danger' or Welsh *gwaeth* 'worse', *gwaethaf* 'worst'; Breton *gwaz* 'worse'; Cornish *gwêth* 'worse', which are derived from the same stem found in Old Icelandic. Note also Old Irish *droch-*, *drog-* 'bad' from Proto-Indo-European **dhr-ew-g^h-* 'to hurt, to harm', cited below.
- D. Proto-Indo-European **dhr-ew-g^h-* 'to hurt, to harm': Sanskrit *drúh-*, *dhrúk* 'injuring, hurting', *drúhyati* 'to hurt, to seek to harm, to be hostile to; to bear malice or hatred', *droha-h* 'injury, mischief, harm, perfidy, treachery, wrong, offense'; Oriya *dhokā* 'injury, doubt, fear'; Hindi *dho* 'malice, injury', *dhok(h)ā* 'deceit, fear'; Gujarati *droh* 'malice'; Sindhi *drohu* 'deceit'; Old Saxon *driogan* 'to deceive'; Old Frisian (*bi*)*driaga* 'to deceive'; Old High German *triugan* 'to deceive' (New High German *trügen*), *bitriogan* 'to deceive, to defraud' (New High German *betrügen*); New High German *Trug* 'deception, fraud; deceit'; Old Irish *droch-*, *drog-* 'bad'; Welsh *drwg* 'bad'; Breton *drouk*, *droug* 'bad'; Cornish *drog* 'bad'. Rix 1998a:137—138 **dhreugh-* 'to deceive'; Pokorny 1959:276 **dhreugh-* 'to deceive'; Walde 1927—1932.I:860 **dhereugh-*; Mann 1984—1987:207 **dhroughos* 'bad, evil, wizened; evil person or thing', 209 **dhrough-* 'evil'; Morris Jones 1913:246; Mayrhofer 1956—1980.II:79—80 and 146; Kroonen 2013:102 Proto-Germanic **dreugan-* 'to mislead'; Orël 2003:75—76 Proto-Germanic **dreuzanan*; Kluge—Mitzka 1967:794 **dhreugh-*; Kluge—Seebold 1989:743. Proto-Indo-European **dhr-u-b^h-* 'to break, to shatter': Greek θρύπτω 'to break in pieces, to break small'. Rix 1998a:137 **dhreub^h-* 'to break (in pieces), to smash, to shatter'; Pokorny 1959:274—275 **dhreu-* 'to crumble'; Chantraine 1968—1980.I:443—444 **dhru-b^h-*; Frisk 1970—1973.I:688—689 **dhrubh-iō*; Hofmann 1966:118 **dhreubh-*; Boisacq 1950:354 **dhrubh-*; Beekes 2010.I:560 **dhrub^h-ie/o-*. Proto-Indo-European **dhr-ew-s-* 'to break, to shatter': Greek θραύω 'to

break in pieces, to shatter'. Boisacq 1950:350—351; Hofmann 1966:117 **dhreus*–; Frisk 1970—1973.I:680—681 **dhreus*–; Chantraine 1968—1980.I:439; Beekes 2010.I:553. Note: The unextended stem **dher*– 'to pound, to break; to harm, to injure' is not attested.

Buck 1949:9.342 press (vb.); 16.72 bad.

164. Proto-Nostratic root **dar*– (~ **dər*–):

(vb.) **dar*– 'to be or become dark';

(n.) **dar*–*a* 'dark spot, darkness'; (adj.) 'dark, black'

- A. Proto-Afrasian **dar*– 'dark, black': Semitic: Arabic *darina* 'to be dirty, filthy', *darān* 'dirt, filth'. D. Cohen 1970— :315. Proto-East Cushitic **darʕ*– 'soot, ashes' > Burji *daar-aa* 'ashes' (this may be a loan from Galla / Oromo); Galla / Oromo *daar-aa* 'ashes'; Konso *tar-a* 'ashes'; Mashile *tarʔ-a* 'ashes'; Gidole *tard-at* 'ashes'; Dullay *tarʕ-o* 'ashes'. Sasse 1979:16 and 1982:51. For the semantics, cf. Gadba (Salur) *sirriŋ* 'soot, ashes' from the same stem found in Gadba (Ollari) *siriŋ* 'black', *siriŋat* 'black, rusty', (Salur) *siriŋgaŋi* 'black', *siriŋ* 'charcoal, cinders', all of which are related to, for example, Kolami *cirum* 'very dark', *sindi* 'soot', Parji *ciruŋ* 'charcoal', etc. (for details, cf. Burrow—Emeneau 1984:222, no. 2552); note also Sirenik *tara* 'soot', cited below.
- B. Proto-Indo-European **dher*–/**dhor*–/**dhy*– (adj.) dark, dirty; (n.) dirt, filth': Latin *fracēs* 'dregs of oil'; Macedonian *δαρδαίει* 'to soil, to defile'; Middle Irish *derg* 'red'; Old Icelandic *dregg* 'dregs, lees', *drit* 'dirt, excrement (of birds)', *dríta* 'to ease oneself'; Old English *drōsne* 'dregs, dirt', *deorc* 'dark', *dærste* 'dregs, lees', *drit* 'mud, dirt, dung'; Middle Dutch *drēte* 'dirt' (Dutch *dreet*); Old High German *tarchannen* 'to hide something (in a dark place)', *trousana* 'lees, dregs'; Middle High German *verterken*, *vertirken* 'to darken'; Lithuanian *dėrgti* 'to become dirty', *dėrkti* 'to make dirty', *dargūs* 'dirty, filthy', *dargà* 'dirt, filth'. Pokorny 1959:251—252 **dher*–, **dherə*– 'dirt', 256 **dher*–, **dhrei-d*– 'dirt'; Walde 1927—1932.I:854—856 **dher*–, **dherā*–, I:861—862 **dher*–, **dh(e)rei-d*–; Mann 1984—1987:185 **dhergos* (**dhorg*–) 'dark, discolored; grim, glum', 199 **dhorg*– 'murk, foulness; foul; to defile', 201 **dhrahbos*, –*ā*, –*om*, –*esā* 'dross, filth', 201 **dhrahbos*, –*ios*, –*iā* 'dross, filth', 202 **dhrahgh*– 'scourings, waste, grounds', 205 **dhriid*– 'dirt, excrement'; Mallory—Adams 1997:170 **dhregh*– 'dregs'; Watkins 1985:13—14 **dher*– and 2000:18 **dher*– 'to make muddy; darkness'; De Vaan 2008:238; Walde—Hofmann 1965—1972.I:538—539; Ernout—Meillet 1979:251 **dhregh*–; Orël 2003:76 Proto-Germanic **drītanān*; Kroonen 2013:103—104 Proto-Germanic **drita*– 'shit, dirt'; De Vries 1977:82 and 84; Onions 1966:244 and 271; Klein 1971:216, 229, and 230; Fraenkel 1962—1965.I:103; Smoczyński 2007.1:102.

- C. Proto-Eskimo **tarəR(-)* ‘(vb.) to be dark; (n.) darkness’: Central Alaskan Yupik (Nunivak) *taaləx* ‘darkness’; Naukan Siberian Yupik *tažur* ‘darkness’, *tažur-* ‘to get dark’; Sirenik *tara* ‘soot’; Seward Peninsula Inuit *taaq* ‘darkness’, *tarrumi* ‘in the dark’, *taaqsi-* ‘to get dark’, *tarraq* ‘shadow’; North Alaskan Inuit *taaq* ‘darkness; to be dark; (Nunamiut) to be black’, *taaqsi-* ‘to get dark’; Western Canadian Inuit *taaq* ‘darkness; to be dark’, *taaqsi-* ‘to get dark’, *tarraq* ‘shadow’; Eastern Canadian Inuit *taaq* ‘darkness; to be dark, to make a shadow, to darken, to hide’, *taarsi-* ‘to be nightfall’, *tarraq* ‘shadow’; Greenlandic Inuit *taaq* ‘darkness’, *taar-* ‘to be dark’, *taarsi-* ‘to get dark’, *taršaq*, *taršak* ‘dark spot’, *taršaq-* ‘to lie in half-darkness, to have a dark shadow above it’. Cf. Atkan Aleut *taXt-* ‘to get dark’. Fortescue—Jacobson—Kaplan 1994:333. Proto-Eskimo **tarəRnəR* ‘darkness or dark thing’: Alutiiq Alaskan Yupik *tannəq* ‘darkness’, *tannəR-* ‘to be dark’; Central Alaskan Yupik *tanyəq* ‘darkness’, *taŋəR-* ‘to be dark’; Naukan Siberian Inuit *tanyəq* ‘black thing’, *taŋnəraq* ‘shadow’; Central Siberian Yupik *taŋnəq* ‘darkness, dark thing’, *taŋnəR-* ‘to be black’; North Alaskan Inuit *taarniq* ‘darkness’; Eastern Canadian Inuit *taarniq* ‘darkness’; Greenlandic Inuit *taarniq* ‘darkness’. Fortescue—Jacobson—Kaplan 1994:333.

Sumerian *dar*, *dar-a*, *dar-dar* ‘colored; color’, *dar₄* ‘dark, obscure’, *dara₄* ‘dark, dark red’.

Buck 1949:15.88 dirty, soiled. Bomhard—Kerns 1994:266—267, no. 76.

165. Proto-Nostratic root **dar^y-* (~ **dər^y-*):

(vb.) **dar^y-* ‘to swell, to enlarge’;

(n.) **dar^y-a* ‘swelling, inflammation, blister, blotch, blemish; outgrowth, tumor’

- A. Proto-Afrasian **dar-* ‘(vb.) to swell, to enlarge; (n.) tumor, outgrowth’: Proto-Semitic **dar-an-* ‘(vb.) to swell, to enlarge; (n.) tumor, outgrowth’ > Arabic *daran* ‘tubercle; tuberculosis’, *darana* ‘tubercle; small tumor, tumor, outgrowth, excrescence, tubercle, nodule’, *daranī* ‘tubercular, tuberculosis’, *darina* ‘to suffer from tuberculosis’; Tigre *dārān* ‘cutaneous eruptions like blisters’. D. Cohen 1970— :315. Berber: Tuareg *tadrəmt* ‘psoriasis’; Tawlemmet *daram* ‘to have small cracks or scars appear on the skin (a pregnant woman or an obese person)’; Kabyle *ədrəṁ* ‘to deteriorate, to be old or wrinkled, to be chapped or cracked (skin)’, *sədrəṁ* ‘to make deteriorate, to grow old, to wrinkle’; Zenaga *ədrəṁ* ‘to spurt out, to gush forth’, *tədrəmi* ‘resurgence’. Proto-Highland East Cushitic **darš-* ‘to swell’ > Gedeo / Darasa *darš-* ‘to swell’; Hadiyya *dasš-* (< **darš-*) ‘to swell’; Kambata *darš-* ‘to swell’; Sidamo *darš-* ‘to swell (from a sting)’. Hudson 1989:147. Note: Ehret 1995:135, no. 150, reconstructs Proto-

Afrasian **dar-* ‘to enlarge, to increase’ on the basis of different forms than those cited above.

- B. Dravidian: Tamil *taṛumpu* (*taṛumpi-*) ‘to be scarred, bruised, marked; to become practiced, addicted’, *taṛumpu* ‘scar, cicatrice, bruise, weal, mark, impression, dent made in the skin, injury, blemish, stigma, defect in character’; Malayalam *taṛampu* ‘scar, callous spot (as from a writing style), wart’, *taṛampikka* ‘to grow callous’; Kota *taḷm* (oblique *taḷt-*) ‘swelling raised by a blow, weal’; Kui *dali* ‘an inflamed patch of skin, blotch’; Malto *ṭaḍa* ‘scar, spot’. Burrow—Emeneau 1984:271, no. 3118.

166. Proto-Nostratic root (?) **daw-* (~ **dəw-*):

(vb.) **daw-* ‘to sound, to resound, to make a noise’;

(n.) **daw-a* ‘sound, noise’

- A. Proto-Afrasian **dVw-* ‘to sound, to resound, to make a noise’: Proto-Semitic **daw-al-* ‘to ring a bell’ > Geez / Ethiopic *dawwala* [ደወለ] ‘to ring a bell’, *dawal* [ደወል] ‘bell’; Tigre *dāwwāla* ‘to ring a bell’, *dāwāl* ‘bell’; Tigrinya *dāwwālā* ‘to ring a bell’; Harari *dāwāl* ‘bell’; Gurage *dāwwālā* ‘to ring a bell’, *dāwāl* ‘church bell’; Amharic *dāwāl* ‘bell’. Leslau 1979:224 and 1987:145; D. Cohen 1970— :235—236. Proto-Semitic **daw-an-* ‘to ring a bell’ > Tigre *dāwwāna* ‘to ring a bell’; Gurage *donā* ‘bell attached to the neck of a small child or cow’. Leslau 1979:211. Proto-Semitic **daw-ay-* ‘to sound, to resound’ > Arabic *dawā* ‘to sound, to drone, to echo, to resound’, *dawīy* ‘sound, noise, drone, roar, echo, thunder’; Arabic (Daḡina) *dawā* ‘to make a dull noise’. D. Cohen 1970— :234. Egyptian *dīwt* (?), *dw-t* (?) ‘shriek, cry’, *dwṣ-wt* ‘outcry, roar’, *dwi*, *dwy* ‘to call, to cry out’, *ḏwy*, *ḏwi* ‘to call (someone)’. Erman—Grapow 1921:212, 219 and 1926—1963.5:428, 5:550—551; Faulkner 1962:309 and 321; Gardiner 1957:602 and 603; Hannig 1995:970, 972, and 1001. Berber: Tamazight *dawnən* ‘to talk to oneself, to speak in a monologue’; Tuareg *səddwənnət* ‘to converse with someone, to have a quiet conversation’, *ədəwənnə* ‘conversation’; Kabyle *dəwnnən*, *sdəwnnən* ‘to talk to oneself, to be delirious’.
- B. Proto-Indo-European **dhwen-/ *dhwon-/ *dhun-* ‘to sound, to resound, to make a noise’: Sanskrit *dhvānati* ‘to sound, to resound, to make a noise, to echo, to reverberate’, *dhūni-ḥ* ‘roaring, boisterous’; Old Icelandic *duna* ‘to boom, to roar’, *dynja* ‘to boom, to resound’, *dynr* ‘din, noise, clattering of hoofs’; Old English *dyne* ‘noise, loud sound’, *dynian* ‘to resound’; Old Saxon *dunian* ‘to make a loud noise’, *done* ‘loud noise’; Old High German *tuni* ‘loud noise’; Middle High German *tünen* ‘to roar, to rumble’; Lithuanian *dundėti* ‘to rumble, to roar, to thunder’. Rix 1998a:139 **dh̥en-* ‘to sound’; Pokorny 1959:277 **dh̥en-*, **dhun-* ‘to sound, to drone’; Walde 1927—1932.1:869 **dh̥en-*, **dhun-*; Mann 1984—1987:221 **dhundhro-* (**dhundhro-*) ‘rumble, roar, hum, din’, 222 **dhūnō*, *-jō* ‘to rush, to roar, to resound’, 226 **dh̥en-*, **dh̥yon-* ‘to resound’; Watkins 1985:15 **dhwen-*

and 2000:20 **dhwen-* ‘to make a noise’; Mallory—Adams 1997:533—534 **dhuen-* ‘to sound’; Mayrhofer 1956—1980.II:106—107 and II:118; Orël 2003:79 Proto-Germanic **đuniz*, 79 **đunjanan*; De Vries 1977:87 and 90; Onions 1966:269 **dhun-*; Klein 1971:214; Fraenkel 1962—1965.I:110—111.

- C. Chukchi-Kamchatkan: Proto-Chukotian (reduplicated) **tawtawat-* ‘to bark’ > Chukchi *tawtawat-* ‘to bark’, *tawtaw* ‘barking’; Koryak *tavtawat-* ‘to bark’, *tavtaw* ‘barking’ (for *tawtaw* ?); Alyutor *totawat-* (Palana *tavtawat-*) ‘to bark’, *toto* ‘barking’. Fortescue 2005:277. Note: Fortescue considers Kamchadal / Itelmen (Sedanka) *tawto-kes* ‘to bark’ to be a possible loan from Chukotian.

Sumerian *du*₁₂ ‘to play (an instrument), to sing’.

Buck 1949:18.12 sing. Bomhard—Kerns 1994:265—266, no. 75.

167. Proto-Nostratic root **daw-* (~ **dəw-*):

(vb.) **daw-* ‘to put, to place, to set; to set up, to establish; to do, to make’;

(n.) **daw-a* ‘work, labor; deed, act’

- A. Proto-Kartvelian **dew-/dw-* ‘to lay, to put, to place, to set, to lie’: Georgian *dev-/dv-/d-* (1st sg. aorist *v-dev*, 3rd sg. aorist *dv-a*) ‘to lay, to put, to place, to set, to lie’; Mingrelian *d(v)-* ‘to lay, to put, to place, to set, to lie’; Laz *d(v)-* ‘to lay, to put, to place, to set, to lie’; Svan *d-* (inf. *li-d-i*) ‘to put something, to put on something from below; to shut the door; to throw somebody down while wrestling’. Klimov 1964:72—73 **d(w)-* and 1998:39 **dew-* : **dw-* ‘to lie, to lay’; Schmidt 1962:104; Gamkrelidze—Ivanov 1984.I:260 and II:877 **dew-/dw-* and 1995.I:226, I:774, and I:801 **dew-/dw-* ‘to lie; to lay, to put’; Fähnrich—Sardshveladse 1995:106—107 **dew-/dw-*; Fähnrich 2007:130 **dew-/dw-*.
- B. Proto-Indo-European **d^hew-/d^how-/d^hu(w)-* ‘to put, to place’: Proto-Anatolian **duwa-* ‘to put, to place’ > Luwian (3rd sg. pret.) *du-ú-wa-at-ta* ‘to put, to place’, (3rd pl. pret.) *du-ú-wa-an-da*, (2nd sg. impv.) *tu-u-wa-a*; Hieroglyphic Luwian *tuwa-* ‘to put, to place’; Lycian (3rd sg. pres.) *tuwetī* ‘to put, to place’, (3rd pl. pres.) *tuwēti*, (3rd sg. pret.) *tuwete*. Melchert 1994a:194, 231, 241, 252, 262, 279 — Melchert reconstructs Proto-Anatolian **duwV-* ‘to put, to place’; Kloekhorst 2008b:809.
- C. (?) Uralic: Finno-Volgaic **tewe* ‘work, deed’ > Finnish *työ* ‘work, labor; deed, act’; Estonian *töö* ‘work’; Mordvin (Erza) *t’ev*, *t’äv*, (Moksha) *t’ev* ‘work, thing’. Rédei 1986—1988:796 **tewe* ‘work’.

Sumerian *dù* ‘to do, to make; to build; to set up, to establish’.

Buck 1949:9.11 do, make; 9.12 work, labor, toil (sb.); 9.13 work, labor, toil (vb. intr.); 12.12 put (place, set, lay); 12.24 lie.

168. Proto-Nostratic root **daw-* (~ **dəw-*):

(vb.) **daw-* ‘to become deathly sick, to be ill; to die’;

(n.) **daw-a* ‘(deadly) disease, sickness; death’

- A. Proto-Afrasian **daw-* ‘(vb.) to become sick, ill; to die; (n.) disease, sickness, death’: Proto-Semitic **daw-ay-* ‘to be ill, sick’ > Arabic *dawīya* ‘to be ill’, *dawā* ‘to treat (a patient, a disease), to be cured’, *dawan* ‘sickness, illness, disease, malady’; Hebrew *dāweh* [דָּוֵה] ‘sick’, *dəway* [דְּוַי] ‘illness’; Mandaic *dwa* ‘to be wretched, miserable; to mourn’; Ugaritic *dw* ‘sick’, *mdw* ‘illness’; Harsūsi *adēw* ‘to give medicine to someone’; Šheri / Jibbālī *edōi* ‘to give someone medicine’; Mehri *adōwi* ‘to give medicine to’; Geez / Ethiopic *dawaya* [ደወየ], *dawya* [ደወየ] ‘to be sick, ill, diseased; to fall sick; to suffer, to be sorrowful’, *dawāyi* ‘sick, ill’; Tigrinya *dāwāyā* ‘to become sick’; Amharic *dāwe* ‘disease, sickness’; Gurage *dāwi* ‘medicine, remedy’ (Arabic loan). D. Cohen 1970—:231 **dwʔy-*; Klein 1987:117; Leslau 1987:145; Murtonen 1989:145—146. Egyptian *dwʔy-t* ‘death, destruction’, *dwʔ-t* ‘netherworld’, *dwʔ-tyw* ‘dwellers in the netherworld’. Faulkner 1962:310; Erman—Grapow 1921:212; Hannig 1995:971—972. Central Chadic **daʔVw-* ‘illness’ > Higi Nkafa *dəwa* ‘illness’; Kapiski *dawa* ‘illness’; Higi Futu *dawa* ‘illness’. East Chadic **dVw-* ‘weak’ > Kera *dewe* ‘weak’. Orël—Stolbova 1995:153, no. 666, **dawaʔ-/dawaʔ-* ‘to be ill’.

Comment: Militarëv—Kogan (2000.I:280—281, no. 10) reconstruct Proto-Semitic (vb.) **dwyʔ* ‘to be ill, sick’. They do not list any non-Semitic cognates.

- B. Proto-Indo-European **dhew-/dhow-/dhu-* ‘to pass away, to die’: Gothic *daups* ‘dead’, *daupus* ‘death’; Old Icelandic *deyja* ‘to die’, *dauði* ‘death’, *dauðr* ‘dead’; Swedish *död* ‘death’, *dö* ‘to die’; Danish *død* ‘death’, *dø* ‘to die’; Norwegian *daud* ‘death’, *døya* ‘to die’; Old English *dēap* ‘death’; Old Frisian *dāth* ‘death’; Old Saxon *dōian* ‘to die’, *dōth* ‘death’; Dutch *dood* ‘death’; Old High German *touwan* ‘to die’ (Middle High German *touwen*), *tōten*, *tōden* ‘to kill’ (New High German *töten*), *tōd* ‘death’ (New High German *Tod*); Latin *fūnus* ‘funeral, burial, corpse, death’; Old Irish *dīth* ‘end, death’. Rix 1998a:128—129 **dheu-* ‘to run; to hasten, to hurry (up)’; Pokorny 1959:260—261 **dheu-*, **dheu-ēi-* ‘to pass away’; Walde 1927—1932.I:835 **dheu-*; Mann 1984—1987:201 **dhōuīō*, **dhəu-* ‘to strangle, to die’; Watkins 1985:14 **dheu-* ‘to become exhausted, to die’ and 2000:19 **dheu-* (also **dheuə-*) ‘to die’; Gamkrelidze—Ivanov 1984.II:475 **d[h]eyu-* and 1995.I:396 and I:415 **dheu-* ‘to disappear, to die’; Mallory—Adams 1997:150 **dheu-* ‘to die’; Ernout—Meillet 1979:262; Walde—Hofmann

1965—1972.I:568 *dheu- ‘to pass away, to die’; De Vaan 2008:251; Orël 2003:70 Proto-Germanic **daupaz* ~ **daubus*, 70 **dawjanan*, 72 **dewanan*; Kroonen 2013:90 Proto-Germanic **daujan-* ‘to die’ and 91 **daupu-* ‘death’; Feist 1939:118; Lehmann 1986:89—90 **dhew-* ‘to die’; De Vries 1977:74—75 and 76; Falk—Torp 1903—1906.I:126—127; Torp 1919:58; Onions 1966:247 and 266; Klein 1971:193 and 212; Boutkan—Siebinga 2005:67—68; Kluge—Mitzka 1967:780 **dhey-*, **dhoy-*; Kluge—Seebold 1989:731.

Buck 1949:4.75 die; dead; death; 4.84 sick, sickness. Bomhard—Kerns 1994:273, no. 85; Dolgopolsky 2008, no. 578, **dVw[V]yV* ‘to be ill/weak, to die’; Illič-Svityč 1971—1984.I:224—225, no. 76, **dλwλ*.

169. Proto-Nostratic root **day-* (~ **dəy-*):

(vb.) **day-* ‘to throw, to cast, to put, to place’;

(n.) **day-a* ‘act, deed’

- A. Proto-Afrasian **dVy-* (**day-* ?) ‘to throw, to cast, to put, to place’: Proto-Semitic **day-* (**wa-day-*, **na-day-*) ‘to cast, to throw, to put, to place’ > Hebrew *yāḏāh* [יָדָה] ‘to throw, to cast’; Akkadian *nadū* (Old Akkadian *nadāʾum*) ‘to cast (down), to lay (down), to throw; (stative) to lie, to be situated’; Geez / Ethiopic *wadaya* [ወደየ] ‘to put, to put in, to add, to put on (adornments), to put under, to place, to set, to throw, to cast’; Tigre *wāda* ‘to put, to make’; Tigrinya *wādäyā* ‘to put’. D. Cohen 1970— :499—501; Klein 1987:254; Leslau 1987:605; Militarev 2010:72. Egyptian *wḏi*, *wḏy* ‘to lay, to put, to place, to set, to thrust, to throw, to push, to shoot’, *ndi* ‘to overthrow, to put down’. Hannig 1995:226—227 and 446; Faulkner 1962:72; Erman—Grapow 1921:42—43 and 1926—1963.1:384—387; Gardiner 1957:563. Central Chadic: Logone *de-he* ‘to put’. Orël—Stolbova 1995:155, no. 673, **day-* ‘to put’; Takács 2011a:77 and 78.
- B. Elamo-Dravidian: Elamite *da-* ‘to put, to place, to deposit’.
- C. Proto-Indo-European (**dheyC-* >) **dheC-*, (**dheyV-* >) **dheyV-* ‘to set, to lay, to put, to place’: Sanskrit (reduplicated) *dā-dhā-ti* ‘to put, to place, to set, to lay (in or on); to appoint, to establish, to constitute’; Avestan *dadāiti* ‘to give, to put, to create, to place’; Old Persian *dā-* ‘to put, to make, to create’ (imperfect *a-dadā*); Greek (reduplicated) *τί-θη-μι* ‘to set, to put, to place’; Latin *faciō* ‘to make, to do’ (perfect *fēcī* ‘did’); Oscan *fakiiad* (= Latin *faciat*) ‘to do, to make, to perform’; Umbrian *façia* ‘to do, to perform, to sacrifice, to offer, to place’; Gothic *-dēps* ‘deed’ in: *gadēps* ‘deed’, *missadēps* ‘misdeed, transgression’, *wailadēps* ‘well-doing’; Old Icelandic *dáð* ‘deed’; Swedish *dåd* ‘deed’; Norwegian *daad* ‘deed’; Danish *daad* ‘deed’; Old English *dōn* ‘to do, to act, to make’, *dæd* ‘action, deed’; Old Frisian *dua(n)* ‘to do’, *dēd(e)* ‘act, deed’; Old Saxon *dōn* ‘to do’, *dād* ‘act, deed’; Dutch *daad* ‘act, deed’, *doen* ‘to do’; Old High German

tuo(a)n ‘to do’ (New High German *tun*), *tāt* ‘act, deed’ (New High German *Tat*); Lithuanian *dėti* ‘to lay, to put, to place’; Old Church Slavic *děti* ‘to put, to place’; Russian *det’* [дѣтъ] ‘to put, to do’; Ukrainian *dity* ‘to put’; Slovenian *děti* ‘to put’; Polish *dzieje się* ‘to occur’; Upper Sorbian *džec* ‘to put’; Lower Sorbian (1st sg.) *žēju* ‘to do’; Tocharian A *tā-*, *tās-*, *tās-*, *tas-*, *cas-*, B *tās-*, *tās-*, *tes-*, *tätt-* ‘to put, to place, to set’; Hittite (1st sg. pres.) *te-(iḫ-)ḫi*, *ti-iḫ-ḫi* ‘to put, to place’, (2nd sg. pres.) *da-it-ti*, *ta-it-ti*, (3rd sg. pres.) *da-a-i*, (1st pl. pres.) *ti-i-ya-u-e-ni*, (2nd pl. pres.) *da-a-it-te-ni*, *ta-a-it-te-ni*, (3rd pl. pres.) *ti-i-ya-an-zi*, (1st sg. pret.) *te-iḫ-ḫu-un*, (2nd sg. pret.) *da-(a-i)š*, *da-iš-ta*, (3rd sg. pret.) *da-(a-i)š*, (1st pl. pret.) *da-i-u-en*, *da-i-ú-en*, *ti-ya-u-en*, (3rd pl. pret.) *da-a-ir*, *da-(a-i)-(e)ir*; Luwian (3rd pl. pres.) *ti-ya-an-ti* ‘to put, to place’ (cf. Kronasser 1966:539 and 589–590); Lycian (3rd sg.) *tadi* ‘to put’. Rix 1998a:117–119 **d^heh₁-* ‘to set, to put, to place’; Pokorny 1959:235–239 **dhē-* ‘to set, to put, to place’; Walde 1927–1932.I:826–829 **dhē-*; Mann 1984–1987:178 **dhedhō*, *-iō* ‘to put, to set’, 180 **dhēiō*, **dhēmi* ‘to put, to lay’, 182 **dhēmi* ‘to set’, 187 **dhētis*, *-os*, *-om*, *-us* ‘setting, placing; deed, fact, fixture’, 189 **dhatos* ‘placed’, 190 **dhīdhēmi* ‘to set, to put’; Watkins 1985:13 **dhē-* (contracted from **dhe₂-*) and 2000:17 **dhē-* ‘to set, to put’ (contracted from **dhe₂-*); Gamkrelidze–Ivanov 1984.I:159 **d^h]eH₁-*, I:203 **d^h]eH- > *d^h]ē-*, I:208, I:210, I:224 **d^h]eH-/ *d^h]H₁-* and 1995.I:137 **d^heH₁-* ‘to put, to place’, I:175 **d^heH- > *d^hē-*, I:179, I:180, I:186, I:193 **d^heH-/ *d^hH₁-*, I:702, and I:710; Mallory–Adams 1997:472 **dheh₁-* ‘to put, to place’; Mayrhofer 1956–1980.II:14–15; Boisacq 1950:969–970 **dhē-*, **dhā-*, **dhō-*; Hofmann 1966:365–366 **dhē-*; Chantraine 1968–1980.II:116–117 **dhe₂-*, **dh₂-*; Beekes 2010.II:1482–1483 **d^heh₁-*; Frisk 1970–1973.II:897–898; De Vaan 2008:198–199; Ernout–Meillet 1979:209–213 **dhē-*; Walde–Hofmann 1965–1972.I:440–444 **dhē-*; Orël 2003:72 Proto-Germanic **dēdiz*, 73 **dōnan*; Kroonen 2013:92 Proto-Germanic **dēdi-* ‘deed, action’ and 98 **dōn-* ‘to do’; Feist 1939:178, 362, and 543; Lehmann 1986:136; De Vries 1977:71; Falk–Torp 1903–1906.I:95; Torp 1919:58; Onions 1966:250 and 279–280 **dhō-*, **dhē-*, **dhā-*; Klein 1971:196 **dhē-* and 223 **dhō-*; Boutkan–Siebinga 2005:68–69 and 81; Kluge–Mitzka 1967:771 and 796–797 **dhē-*, **dhō-*; Kluge–Seebold 1989:722 and 744–745; Van Windekens 1976–1982.I:494–495 **dhē-*; Adams 1999:283–286 **d^heh₁-* ‘to put, to place’; Fraenkel 1962–1965.I:91–92; Smoczyński 2007.1:104–106; Wodtko–Irslinger–Schneider 2008:99–117 **d^heh₁-* and 117–118 **d^heh₁k-*. Note that *-i/y-* appears throughout the paradigm in Hittite (cf. J. Friedrich 1960.I:101–102; Sturtevant 1951:135–136, §238a; Hoffner–Melchert 2008:223–224; Kloekhorst 2008b:806–809; Held–Schmalstieg–Gertz 1988:42–43, §§4.200–4.202).

- D. Etruscan *te-* ‘to put, to place’ (preterite *tece*).

- E. Proto-Chukchi-Kamchatkan **tæjkə-* ‘to make or do’: Chukchi *tejkə-* ‘to make, to do, to build’; Kerek *tajkə-* ‘to make, to do, to build’; Koryak *tejkə-* ‘to make, to do, to act’; Alyutor *tekə-* ‘to make, to do’; Kamchadal / Itelmen *skə-s* ‘to make, to do, to build’. Fortescue 2005:278.

Buck 1949:12.12 put (place, set, lay). Illič-Svityč 1971—1984.I:224, no. 75, **dʌʕʌ* ‘to lay’; Dolgopolsky 2008, no. 497, **diʕé* (~ **dVHU*) ‘to put, to place’; Bomhard—Kerns 1994:261—262, no. 70.

170. Proto-Nostratic root **day-* (~ **dəy-*):

- (vb.) **day-* ‘to look at, to consider, to examine’;
(n.) **day-a* ‘judgment, examination, consideration’

- A. Proto-Afrasian **day-*, **dey-* ‘to look at, to consider, to examine’: Proto-Semitic **day-an-* ‘to judge’ > Hebrew *dīn* [דִּין] ‘to judge’; Akkadian *dānu* ‘to judge, to render judgment’, *dīnu* ‘decision, verdict, judgment, punishment’, *dayyānu* ‘a judge’; Arabic *dāna* ‘to condemn, to pass judgment’, *dīn* ‘judgment, sentence’ (Aramaic loan); Qataban *dyn* ‘judgment, punishment’; Syriac *dīnā* ‘judgment’; Ugaritic *dyn* ‘to judge’; Geez / Ethiopic *dayyana* [ደሃነ] ‘to judge, to sentence, to punish, to condemn, to convict, to damn’, *dayn* [ደኔን] ‘judgment, damnation, condemnation, doom’, *dayyāni* [ደኃኒ] ‘judge’; Tigrinya *däyyänä* ‘to condemn’, (with metathesis) *danäyā* ‘to pass judgment’, *dayna*, *dañña* ‘judge’; Tigre *dayna*, *danya* ‘mediator’, (*tə*)*dana* ‘to accept a verdict’; Amharic *dañña* ‘to arbitrate, to judge’, *dañña* ‘a judge’; Harari *dañña* ‘a judge’; Gurage *dañña* ‘to judge’. D. Cohen 1970—:253—255; Klein 1987:122; Leslau 1979:216 and 1987:146; Murtonen 1989:147—148. Proto-East Cushitic **dey-/ *doy-* ‘to look at’ > Somali *day-* ‘to examine’; Boni *day-* ‘to try, to test’; Arbore *doy-* ‘to see’; Elmolo *doy-* ‘to regard’; Galla / Oromo *doy-aa* ‘observation’, *dooy-aa* ‘spy’; Konso *tooy-* ‘to see’; Hadiyya *do-* ‘to lurk, to spy’; Harso *tay-* ‘to find’; Yaaku *tey-* ‘to find, to get’. Sasse 1979:16; Hudson 1989:141. Proto-Southern Cushitic **daa-* ‘to look at’ > K’wadza *da’am-* ‘to watch, to gaze’; Ma’a *-dā’a* ‘to look for’; Dahalo *daawaṭ-* ‘to look after’. Ehret 1980:162.
- B. Proto-Indo-European **dʰey-A-/ *dʰoy-A-/ *dʰi-A-* (> **dʰī-*), **dʰyeA-* [**dʰyaA-*] (> **dʰyā-*) ‘to look at, to fix one’s eyes on’: Sanskrit *dīdheti* ‘to perceive, to think, to reflect, to wish’, *dhyāyati* ‘to think, to contemplate’, *dhyāna-h* ‘meditation, contemplation’; Pāli *jhāna-* ‘meditative absorption’; Avestan *dā(y)-* ‘to see’, *daēman-* ‘eye’; Greek σῆμα (Doric σῆμα) ‘sign, mark, token’. Rix 1998a:123 **dʰeḱH-* ‘to contemplate, to fix one’s eyes on’; Pokorny 1959:243 **dʰeḱ-*, **dʰī-*, **dʰī-* ‘to see, to look’; Walde 1927—1932.I:831—832 **dʰeḱā-*, **dʰī-*; Mann 1984—1987:190 **dʰī-* (**dʰīs-*) ‘thought, knowledge, reason’, **dʰī-*, **dʰīām-* ‘sign, mark, note’; Watkins 1985:13 **dʰeḱ-* (variant form **dʰyā-* [*< *dʰya-*]) and 2000:18

dheiə-* ‘to see, to look’ (variant [metathesized] form **dhyeə₂-*, colored to **dhyaə₂-*, contracted to **dhya-*); Mayrhofer 1956—1980.II:45 and II:115 **dhejā-*; Hofmann 1966:310—311 **dhāi-* (dhajā-*), **dhī-*; Boisacq 1950:861 Greek σῆμα < **dhjā-m̥*; Chantraine 1968—1980.II:998; Frisk 1970—1973.II:695—696; Beekes 2010.II:1323 **dhiéh₂-mn-*; Wodtko—Irslinger—Schneider 2008:120 **dhejH-*.

Buck 1949:15.52 look (vb.), look at; 17.14 think (= be of the opinion); 21.16 judge (vb.). Bomhard—Kerns 1994:264—265, no. 74; Dolgopolsky 2008, no. 507, **di[h]a* ‘to look at’.

171. Proto-Nostratic root **day-* (~ **dəy-*):

(vb.) **day-* ‘to take, to bring, to convey’;

(n.) **day-a* ‘leader, guide’

- A. Proto-Afrasian **d[a]y-* ‘to convey, to bring, to lead’: Proto-Semitic **day-* (**ha-day-*, **ʔa-day-*) ‘to convey, to bring, to lead’ > Arabic *ʔadā* ‘to convey, to take, to bring, to lead, to steer, to channel’, *hadā* ‘to lead (someone) on the right way, to guide (someone on a course)’; Akkadian *adū* ‘leader’; Hebrew *hādāh* [הָדָה] ‘to stretch out the hand’; Syriac *ʔadī* ‘to carry’, *haddī* ‘to lead, to direct’; Palmyrene *hdy* ‘guide’; Sabaean *hdy* ‘to lead, to guide’. D. Cohen 1970—:8—9 and 374—375; Klein 1987:140.
- B. Proto-Dravidian **ta-*, **tā-*, **tay-* ‘to bring’: Tamil *taru* (*tār-*; imptv. *tā*; past *tant-*) ‘to give to 1st or 2nd person’, *taruvi* ‘to cause to bring’; Malayalam *taruka*, *tarika* (*tār-*; *tā*; *tann-*) ‘to give to 1st or 2nd person’, *taruvikka* ‘to cause to give’; Kannada *tar*, *tār* (*tā*; *tand-*) ‘to lead or conduct near, to bring; to give’; Telugu *teccu* (*tē*, *tēr-*) ‘to bring, to get, to cause to produce, to create’; Konda *ta-* ‘to bring’; Pengo *ta-* (*tat-*) ‘to bring’; Manda *ta-* ‘to bring’; Kui *tapa* (*tat-*) ‘to bring; bringing’; Kuwi *taʔ-* (*tat-*) ‘to bring’; Brahui *tinig* (*tir-*) ‘to give’, *hatining*, *hatiring*, *hataring*, *hating* ‘to bring, to give birth to, to think of doing something, to attempt, to intend’. Burrow—Emeneau 1984:269, no. 3098; Zvelebil 1970:58 **ta-*, **tā-*, **tay-* ‘to bring’ (?); Krishnamurti 2003:384—385 **taH-*/**taH-r-* ‘to give to 1st or 2nd person’. Kuṛux *tainā* (*taṛyyas*), *tēynā* (*tēyyas*) ‘to send, to carry newly married girl out of village’; Malto *teye* ‘to send’. Burrow—Emeneau 1984:299, no. 3418.
- C. Yukaghir (Southern / Kolyma) *te:-* ‘to give, to show’. Nikolaeva 2006:427.

Sumerian *dé*, *de₆*, *di* ‘to bring’.

Buck 1949:10.62 bring; 10.64 lead (vb.). Bomhard—Kerns 1994:275, no. 88.

172. Proto-Nostratic root **did-* (~ **ded-*):(vb.) **did-* ‘to swell, to rise’;(n.) **did-a* ‘prominence, protuberance’; (adj.) ‘swollen, raised’

- A. Dravidian: Tamil *tiṭṭu* ‘rising ground, bank, elevation, hillock, sandbank, wall separating elephant stables’, *tiṭṭi* ‘raised ground’, *tiṭṭai* ‘rising ground, bank, elevation, raised floor’, *tiṭar*, *tiṭal* ‘rising ground, bank, elevation, island, rubbish heap, prominence, protuberance’, *tiṭaru* ‘mound’; Malayalam *tiṭṭa* ‘raised ground, hillock, shoal, raised seat (as in a veranda)’, *tiṭṭu* ‘mound, shoal’, *tiṇṭu* ‘earthen wall, bank, shoal’; Kota *tiṭ* ‘hill’; Toda *tiṭ* ‘mountain’; Kannaḍa *tiṭṭa* ‘mass, quantity, number’, *tiṭṭu*, *tiṭṭe* ‘rising ground, hillock’, *diḍḍa*, *diḍḍu* ‘eminence, elevation, hillock’, *dīṇṭu* ‘rising ground, hillock’; Tuḷu *diḍḍu* ‘elevated ground, mound’; Telugu *tiṭṭa* ‘heap, mound’. Burrow—Emeneau 1984:279, no. 3221.
- B. Proto-Kartvelian **did-* (‘swollen’ >) ‘big, large, great’: Georgian *did-i* ‘big, large’, *did-ad-i* ‘grandiose’, *did-r-o-a* ‘high tide’; Mingrelian *did-i* ‘big, large’; Laz *did-i* ‘big, large’, *did-o* ‘very’. Fähnrich—Sardshweladse 1995:109 **did-*; Klimov 1964:73 **did-* and 1998:40 **did-* ‘big, large’ Fähnrich 2007:132 **did-*.
- C. (?) Indo-European: Lithuanian *didis*, *didelis* ‘big, large, great’, *didókas* ‘quite large’, *didýbė* ‘haughtiness’, *didžiaĩ*, *didžiai* ‘very (much)’; Latvian *dižs* ‘big, large, great’. Fraenkel 1962—1965.I:93; Smoczyński 2007.1:108 **d(e)ih₂-dʰe-*.

Buck 1949:1.22 mountain; hill; 12.55 large, big (great). Illič-Svityč 1971—1984.I:219, no. 66, **didā* ‘big’; Dolgopolsky 2008, no. 501, **didV* ‘large, big’.

173. Proto-Nostratic (n.) **dig-a* ‘fish’:

- A. Afrasian: Proto-Semitic **dag-* ‘fish’ > Hebrew *dāḡ* [דָּג] ‘fish’, *dāḡāh* [דָּגָה] ‘fish’, *dawwāy* [דָּוָי] ‘fisherman’; Ugaritic *dḡ* ‘fish’, *dgy* ‘fisherman’. Klein 1987:114; D. Cohen 1970—:216; Murtonen 1989:144; Militarev 2010:69.
- B. Proto-Indo-European **dʰgʰuH-* (> **dʰgʰū-*) ‘fish’: Greek *ἰχθῦς* ‘fish’; Armenian *ju-kn* ‘fish’; Lithuanian *žuvis* ‘fish’; Latvian *zivs* ‘fish’. Pokorny 1959:416—417 **ḡhōū-* (or **ḡhīū-* ?) ‘fish’; Walde 1927—1932.I:664 **ḡhōū-*; Gamkrelidze—Ivanov 1984.I:536 **d[ʰ]ḡ[ʰ]ū-* and 1995.I:453 and I:765 **dʰḡhū-* ‘fish’; Watkins 1985:14 **dhghū-* and 2000:20 **dhghū-* ‘fish’; Mallory—Adams 1997:205 **dhghuhₓ-*; Frisk 1970—1973.I:745—746; Boisacq 1950:387; Beekes 2010.I:606—607 **dḡhuH*; Chantraine 1968—1980.I:474; Hofmann 1966:127; Prellwitz 1905:201; Smoczyński 2007.1:793—794; Fraenkel 1962—1965.II:1323; Derksen 2015:523.
- C. Proto-Altaic **ḍiagi* (~ *-i-o-*) ‘fish’: Proto-Mongolian **ḡiga-* ‘fish’ > Written Mongolian *ḡiyasu(n)* ‘fish’; Dagur *ḡayas* ‘fish’; Khalkha *ḡagas* ‘fish’;

Monguor *žagasə* ‘fish’; Buriat *zagaha(n)* ‘fish’; Ordos *žagasu* ‘fish’; Kalmyk *zayʁsn* ‘fish’. Poppe 1955:34 and 117. Starostin—Dybo—Mudrak 2003:477 **dʲagi* (~ *-jo-*) ‘fish’.

Buck 1949:3.65 fish. Dolgopolsky 1998:61—62, no. 74, **doTgiHU* ‘fish’ and 2008, no. 575, **doTgiʔu* ‘fish’; Illič-Svityč 1971—1984.I:219, no. 67, **diga* ‘fish’; Bomhard—Kerns 1994:269, no. 80; Blažek 2013:40, no. 1 (Proto-Afrasian **dag-/dug-*).

174. Proto-Nostratic root **dig-* (~ **deg-*):

(vb.) **dig-* ‘to be confused, puzzled, perplexed’;

(n.) **dig-a* ‘confusion, perplexity’

A. Afrasian: Egyptian *dgm* ‘to be unconscious; to be confused; to be speechless’. Hannig 1995:989; Faulkner 1962:317; Erman—Grapow 1926—1963.5:500.

B. Dravidian: Tamil *tikai* ‘to be taken aback, confused, perplexed, bewildered, astonished, amazed’, *tikai*, *tikaippu* ‘amazement’; Toda *tix-* (*tixθ-*) ‘to take to heels, to bolt away’, *tixf-* (*tixt-*) ‘to make (buffaloes) stand in a swamp (that is, confused and unable to run away) before they are caught and killed at a funeral’ (only used in narratives); Kannada *tikkalu* ‘state of being confused or deranged in mind’; Telugu *tikamaka* ‘intricacy, confusion, perplexity’, *tikamaka-goma*, *tikamakal-āḍu* ‘to be puzzled, perplexed, confused’, *tikka-goma* ‘to become mad’, *tikka* ‘madness, craziness; mad, crazy’, *tikkaṭamakkaṭa* ‘confusion, perplexity’. Burrow—Emeneau 1984:278, no. 3207.

C. Proto-Kartvelian (reduplicated) **didg-* (< **di-dig-*) ‘to speak in a confused manner, to murmur’: Georgian *didy-* ‘to speak in a confused manner, to murmur’; Mingrelian *dyirdy-* ‘to speak in a confused manner, to murmur’; Svan *ddy-* (*li-ddy-ən-e*) ‘to mumble, to murmur, to mutter’. Fähnrich—Sardshweladse 1995:110 **didy-*; Klimov 1998:40 **didy-in-* ‘to mumble, to mutter’; Fähnrich 2007:132—133 **didy-*.

(?) Sumerian *dig* ‘to converse, to speak’.

175. Proto-Nostratic root **dilv-* (~ **delv-*):

(vb.) **dilv-* ‘to shine, to be or become bright’;

(n.) **dilv-a* ‘daylight, morning’

A. Afrasian: Southern Cushitic: Proto-Rift **del-* ‘daylight’ > Iraqw *delo* ‘day (as opposed to night)’; K’wadza *deles-* ‘yellow’ (plural ?); Asa *dili’i* ‘red’. Ehret 1980:346.

B. Dravidian: Tamil *teḷi* ‘to become clear, limpid (as water by settling of sediment), serene (as the mind); to be bright (as the countenance), to

become white; to disappear (as famine, epidemic); to become obvious, evident; to consider, to investigate, to understand’, *teḷir* ‘to shine, to sparkle’; Malayalam *teḷi* ‘cleanness, brightness’, *teḷivu* ‘clearness, brightness, perspicuity, proof’, *teḷiyuka* ‘to become clear, to brighten up, to please, to be decided (a matter)’; Kannaḍa *tiḷi*, *taḷi* ‘to become clear, pellucid, pure, bright; to brighten up; to be exhilarated or pleased; to be calmed; to cease (as sleep, a swoon); to come to light; to be or become plain or known; to know, to perceive, to learn’; Telugu *teḷi* ‘white, pure’. Krishnamurti 2003:14 **teḷ-V-* ‘to become clear’; Burrow—Emeneau 1984:300—301, no. 3433.

- C. Proto-Kartvelian **dila* ‘morning’: Georgian *dila* ‘morning’; Svan *zinär* ‘morning’. Schmidt 1962:105.
- D. Proto-Indo-European **d^hel-* ‘to be shining, bright’: Old Icelandic *Dellingr* name of the father of the sun; Old English *deall* ‘proud (of), exulting (in), resplendent (with)’; Middle High German *ge-telle* ‘pretty’; Middle Irish *dellrad* ‘brilliance, radiance’. Pokorny 1959:246 **d^hel-* ‘to light’; Walde 1927—1932.I:865 **d^hel-*; De Vries 1977:72 and 75.

Sumerian *dil-bad* ‘(vb.) to shine, to be radiant, to gleam; (adj.) shining, bright’.

Buck 1949:14.44 morning. Illič-Svityč 1971—1984.I:219—220, no. 68, **dila* ‘sunlight’; Bomhard—Kerns 1994:273—274, no. 86; Dolgopolsky 2008, no. 521, **d[i]la* (= **d[i]la* ?) ‘sunshine, daylight, bright’.

176. Proto-Nostratic (n.) **dim-a* ‘raised or elevated place’; (adj.) ‘raised, elevated’:

- A. Proto-Afrasian **dim-* ‘(adj.) raised, elevated; (n.) raised or elevated place’: Proto-Semitic **dim-t-* ‘raised or elevated place’ > Akkadian *dimtu* (also *dintu*, *dindu*) ‘tower, siege tower, fortified area, district’ (though *dimtu* was used primarily to refer to towers of all kinds, it could also be used to denote any fortified area); Ugaritic *dmt* ‘district, borough’. D. Cohen 1970—:269—270. (Akkadian loan in Sumerian *dim* ‘tower, district’.) Egyptian *dmy* ‘town, quarter, abode, vicinity, quay’; Coptic (Sahidic) *time* [ṯṡṡ, ṯṡṡ] ‘village’. Hannig 1995:979; Faulkner 1962:318; Erman—Grapow 1921:214 and 1926—1963.5:455—456; Gardiner 1957:602; Vycichl 1983:215; Černý 1976:187. Orël—Stolbova 1995:162—163, no. 709, **dim-* ‘dwelling, place’.
- B. Dravidian: Kannaḍa *dimmi* ‘an eminence, elevated spot’, *temar* ‘rising ground, hillock’, *dimba* ‘bank of a river’; Telugu *dimma* ‘any elevation or eminence, mound’; Parji *demma* ‘elevated ground’; Kuwi *damaka* ‘flat ground on top of a mountain’. Burrow—Emeneau 1984:281, no. 3239.
- C. Proto-Indo-European **d^hmbh-* ‘burial mound, kurgan’: Greek τὰφῆ ‘burial, burial-place’, τὰφος ‘funeral, burial, the act of burying; burial mound, tomb’, τάφος ‘ditch, trench’, θάπτω ‘to honor with funeral rites, to bury,

to inter'; Armenian *damban*, *dambaran* 'grave, tomb'; Romanian *dîmb*, *dâmb* 'hillock, hill, raised ground' (< Dacian). Pokorny 1959:248—249 (**dhembh-*), **dhmbh-* 'to bury'; Mann 1984—1987:193 **dhmbh-* 'tomb'; Mallory—Adams 1997:243 **dhmbhos* 'grave'; Boisacq 1950:334 and 946; Beekes 2010.I:534 and II:1456; Chantraine 1968—1980.I:423; Hofmann 1966:111; Frisk 1970—1973.I:653—654; Meillet 1936:142.

Buck 1949:4.78 bury (the dead); 19.15 city, town.

177. Proto-Nostratic root **diq^h-* (~ **deq^h-*):

(vb.) **diq^h-* 'to crush, to pound or tamp (earth), to mold or knead (clay)';

(n.) **diq^h-a* 'earth, clay, mud'

- A. Proto-Afrasian **dik-* 'to beat, to crush, to pound or tamp (earth), to mold or knead (clay)': Proto-Semitic **dak-ak-* 'to mix, to crush, to flatten' > Arabic *dakka* 'to make flat, level, or even; to smooth, to level, to ram, to stamp, to tamp (earth, the ground, a road); to press down, to beat down, to weigh down; to demolish, to devastate, to destroy, to ruin; to mix, to mingle; to be crushed, to be leveled', *dakk* 'level ground; devastation, destruction, ruin'; Hebrew **dāḫaḫ* [דָּחַח] 'to crush, to bruise, to oppress, to depress'; Ugaritic *dk* 'to pound, to mix'; Akkadian *dakāku* 'to crush'; Šheri / Jibbāli *dekk* 'to bump (against); to bang a hole in; to pounce'; Mehri *dək* 'to pounce, to jump upon, to knock'; Harsūsi *dek* 'to spring upon someone or something'. D. Cohen 1970— :257; Klein 1987:124; Zammit 2002:176. Proto-Semitic **dak-al-* 'to knead clay; to tread, to tread down' > Arabic *dakala* 'to knead clay; to tread, to tread down', *dakala-t* 'thin clay or loam'. D. Cohen 1970— :258. Proto-Semitic **dak-aʔ-* 'to crush' > Hebrew *dāḫāʔ* [דָּחָא] 'to crush, to be crushed', *dakkāʔ* [דָּכָא] 'dust (as pulverized)'. D. Cohen 1970— :256; Murtonen 1989:148; Klein 1987:124. Hebrew **dāḫāh* [דָּחָח] 'to crush, to be crushed'. D. Cohen 1970— :257; Klein 1987:124. Proto-Semitic **da/wa/k-* 'to pound, to crush' > Arabic *dāka* 'to grind, to pound'; Hebrew *dūḫ* [דֹּחַ] 'to pound, to beat (in a mortar)'; Akkadian *dāku* 'to beat (off or down), to break, to kill'. D. Cohen 1970— :234; Klein 1987:117; Murtonen 1989:146. Proto-Chadic **dək-* 'to beat, to pound' > Karekare *duku* 'to beat'; Ngizim *təkú* 'to kill; to put out a fire; to kick (cow, donkey); to rain, to beat down, to splash down (liquids)'; Guduf *dəgə* 'to beat, to pound (in a mortar)'. North Omotic: Bench / Gimira *dekn* 'to hit'. Ehret 1995:128, no. 132, **dik-* 'to pound'. Different etymology in Orël—Stolbova 1995:146, no. 633, **dak-/duk-* 'to beat, to pound'.
- B. Dravidian: Konḍa *tig-* 'to press down hard, to lay pressure on'; Pengo *tig-* (*tikt-*) 'to push'; Maṇḍa *tig-* 'to push'. Burrow—Emeneau 1984:278, no. 3205.

- C. Proto-Kartvelian **diq-* ‘earth, clay, mud’: Old Georgian *tiq-a* (< **diq-a* through regressive voicing assimilation) ‘earth, clay, mud’ (Modern Georgian *tix-a*); Mingrelian *dix-a*, *dex-a* ‘soil, ground, earth’; Laz *dix-a* ‘earth’. Gamkrelidze—Ivanov 1984.II:877 **diqa-* and 1995.I:774 **diqa-* ‘clay’; Klimov 1964:94—95 **tiqa* and 1998:72 **tiqa* ‘soil, clay’; Fähnrich—Sardshweladse 1995:111—112 **diq-*; Fähnrich 2007:135 **diq-*.
- D. Proto-Indo-European **d^{hiq}h-* > (with progressive voicing assimilation) > **d^{hiġ}h-* (secondary full-grade forms: **d^{hey}gh-*, **d^{hoy}gh-*) ‘(vb.) to pound, to mold (clay), to knead (dough); (n.) clay’: Sanskrit *déhmi* ‘to smear, to anoint, to plaster’, *dehí* ‘mound, bank, surrounding wall’; Avestan *daēza-* ‘wall (originally made of clay or mud bricks)’; Greek *τείχος* ‘a wall, especially a wall around a city’, *τοιχος* ‘the wall of a house or court’; Latin (with nasal infix) *figō* ‘to shape, to fashion, to form, to mold’, *figūra* ‘form, shape, figure, size’, *figulus* ‘a worker in clay, a potter’; Oscan *feihúss* ‘walls’; Gothic *digan* ‘to knead, to form out of clay’, *daigs* ‘dough’; Old Icelandic *deig* ‘dough’, *deigja* ‘to make soft, to weaken’, *deigr* ‘soft (of metal)’, *digr* ‘big, stout, thick’, *digna* ‘to become moist, to lose temper (of steel), to lose heart’; Swedish *deg* ‘dough’; Norwegian *deig* ‘dough’; Danish *deig* ‘dough’; Old English *dāg* ‘dough’; Old Frisian *deeg* ‘dough’; Middle Low German *dēch* ‘dough’ (Dutch *deeg*); Old High German *teic* ‘dough’ (New High German *Teig*); Lithuanian *dýžti* ‘to beat soundly’; Old Church Slavic *zīzdō*, *zbdati* ‘to build’, *zbdъ* ‘wall’; Ukrainian *d’izá* ‘baker’s trough’; Armenian *dizanem* ‘to collect, to put together’; Tocharian A *tsek-*, B *tsik-* ‘to fashion, to shape, to build’. Rix 1998a:121—122 **d^{heig}h-* ‘to shape, to mold, to knead’; Pokorny 1959:244—245 **d^{heigh}h-* ‘to knead clay’; Walde 1927—1932.I:833—834 **d^{heigh}h-*; Mann 1984—1987:180 **d^{heigh}h-* ‘(vb.) to shape, to earth up; (n.) form, wall’, 191 **d^{high}h-*, 195 **d^{hoigh}h-*, *-om*, *-is*, *-jə* ‘shape, mold; shaper’; Watkins 1985:13 **d^{heigh}h-* and 2000:18 **d^{heigh}h-* ‘to form, to build’; Gamkrelidze—Ivanov 1984.I:412, II:702, II:884 **d^[h]jeig^[h]h-* ‘clay’, 1995.I:360, I:612, I:780 **d^{heigh}h-* ‘(vb.) to mix clay, to mold; (n.) clay structure, clay wall; clay, material for pottery making’; Mallory—Adams 1997:649 **d^{heigh}h-* ‘to work clay, to smear; to build up’; Mayrhofer 1956—1980.II:62 and II:65; Chantraine 1968—1980.II:1098—1099; Boisacq 1950:940—950 **d^{heigh}h-*; Frisk 1970—1973.II:865—866; Hofmann 1966:356; Beekes 2010.II:1458—1459 **d^{heigh}h-*; Ernout—Meillet 1979:235—236 **d^{heigh}h-*; De Vaan 2008:221—222; Walde—Hofmann 1965—1972.I:501—502 **d^{heigh}h-*; Orël 2003:66—67 Proto-Germanic **daigaz*, 72 **dīgraz*, 72 **dīganan*; Kroonen 2013:87 Proto-Germanic **daiga-* ‘dough’; Feist 1939:114 and 118; Lehmann 1986:87 and 90; Falk—Torp 1903—1906.I:100—101; De Vries 1977:74—75 and 76; Torp 1919:60; Kluge—Mitzka 1967:775—776; Kluge—Seebold 1989:725 **d^{heigh}h-*; Onions 1966:286 **d^{heigh}h-*, **d^{hoigh}h-*, **d^{high}h-* ‘to smear, to knead, to form of clay’; Klein 1971:227 **d^{heigh}h-*, **d^{hoigh}h-*, **d^{high}h-*;

Adams 1999:738—739; Van Windekens 1976—1982.I:530—531 **dhigh-*, **dheiġh-*; Fraenkel 1962—1965.I:98; Smoczyński 2007.1:117; Wodtko—Irslinger—Schneider 2008:118—119 **dheiġh-*.

Sumerian *dih* ‘(vb.) to press, to push; (n.) (stone) slab for molding clay, stone’.

Buck 1949:1.214 mud; 5.54 knead; 5.56 grind; 7.27 wall; 9.73 clay. Bomhard 1996a:209—211, no. 608; Dolgopolsky 2008, no. 551, **dEqV* ‘earth’. Fähnrich (1994:254) compares Sumerian *dih* ‘(stone) slab for molding clay, stone’ with the Kartvelian forms cited above.

178. Proto-Nostratic root **diy-* (~ **dey-*):

(vb.) **diy-* ‘to suck, to suckle’;

(n.) **diy-a* ‘breast, teat, nipple’

- A. Afrasian: Proto-Semitic **dayd-* (> **dadd-* in Hebrew and Aramaic) ‘teat, women’s breast’ > Arabic (Ḥaḍramut) *dayd* ‘(married woman’s) breast; (cow’s) udder’; Hebrew *daḏ* [דָּד] ‘breast, teat, nipple’; Aramaic *daḏ* ‘teat’; Ugaritic *ḏd* ‘breast’; Gurage (Eža, Muher) *dadda*, (Chaha, Ennemor, Gyeto) *data*, (Endegeñ) *dattä* ‘chest’. D. Cohen 1970— :222 and 252; Klein 1987:115; Murtonen 1989:145. Semantic development as in Greek θηλή ‘teat, nipple’, cited below. Perhaps also Arabic *dāda* ‘governess, dry nurse, nurse’, if from **dayd-* rather than from Proto-Afrasian **dad-* ‘mother’ as proposed by Orël—Stolbova 1995:141. Diakonoff 1992:84 **dj-dj-* (> *dayd-*, *dadd-*) ‘teat, woman’s breast’.

Comment: Militarëv—Kogan (2000.II:45, no. 47) reconstruct Proto-Semitic (n.) **dadd-*, **dayd-* ‘breast, teat’. They do not list any non-Semitic cognates. The alleged Akkadian cognate cited by Militarëv—Kogan (namely, *dadānu*, *diadānu*, *daddānu* ‘neck muscles’) is a poor match semantically. Del Olmo Lette—Sanmartín (2003:285) list the Ugaritic form as *ḏd* ‘breast, bosom’. Finally, Militarëv—Kogan convincingly note regarding the Gurage forms they cite: “According to Leslau, from Oromo *dādda*, but rather vice versa in view of the comparative data.”

- B. Proto-Indo-European **dhē(i/y)-*/**dhō(i/y)-* ‘to suck, to suckle’: Sanskrit *dháyati* ‘to suck, to drink’, (causative) *dhāpáyate* ‘to give suck, to nourish’, *dhā́yas-* ‘nourishing, refreshing’, *dhenú-h* ‘milk’, *dhātrí* ‘nurse’, *dhāyú-h* ‘voracious’, Ossetic *däin*, *däyun* ‘to suck’; Greek θήσθαι ‘to suckle’, θηλάζω ‘to suckle’, θηλή ‘teat, nipple’, θήλυς ‘female’, (Hesychius) θήνιον ‘milk’; Armenian *diem* ‘to suck’; Albanian *djathë* ‘cheese’; Latin *fēlō* (also *fellō*) ‘to suckle, to suck’, *fēmina* ‘a female, a woman’, *fīlia* ‘daughter’, *fīlius* ‘son’; Old Irish *denaid* ‘to suck’, *dith* ‘sucked’; Gothic *daddjan* ‘to suckle’; Old Swedish *dæggia* ‘to suckle’; Old High German *tāen* ‘to suckle’; Low German (Westphalian) *daiern* ‘to raise

on milk'; Old English *dēon* 'to suck', *delu* 'nipple (of breast)', *diend* 'suckling'; Old Prussian *dadān* 'milk'; Latvian *dēju*, *dēt* 'to suck', *dēls* 'son'; Old Church Slavonic *dojō*, *dojiti* 'to suckle; to milk', *děť* 'child', *děva*, *děvica* 'maiden, young girl'; Serbo-Croatian *dōjiti* 'to suckle', *dojka* 'breast'; Hittite (reduplicated) **titiya-* 'to suckle', participle (nom. sg.) *ti-ta-an-za* 'sucking', *teta(n)-*, *tita(n)-* 'breast, teat'; Luwian (dat.-loc. sg.) *ti-i-ta-ni* 'breast, teat', (nom. sg.) *ti-ta-i-(im-)me-iš* epithet of 'mother' (< 'nurturing'); Lycian *tideimi-* 'child, son' (< 'nurtured'). Rix 1998a:120 **d^heh₁(i)-* 'to suck (mother's milk)'; Pokorny 1959:241—242 **dhē(i)-* 'to suck, to suckle'; Walde 1927—1932.I:829—831 **dhēi-*; Mann 1984—1987:178 **dhedh-* 'nurse', 178 **dhēdh-* (hypocorism of a relative), 178 **dhedhlō* 'to suck', 180 **dhējō* 'to suckle, to milk; to suck at the breast', 181—182 **dhēlis*, *-jōs*, *-jō* 'sucking; suckling; teat', 187 **dhētis*, *-jō* 'suckling; suckling animal', 191 *dhin jō* 'to suckle, to nourish; to suck', 195—196 **dhoin-*, *-us* 'milch; milking cow', 196 **dhojō* (**dhojō*) 'to suckle, to milk; to suck'; Watkins 1985:13 **dhē(i)-* (contracted from **dhe₂(i)-*) and 2000:18 **dhē(i)-* 'to suck' (contracted from **dhe₂(i)-*); Mallory—Adams 1997:556 **dheh₁(i)-* 'to suck'; Gamkrelidze—Ivanov 1984.II:570 **d^h[h]eH(i)-* and 1995.I:487 **d^heH(i)-* 'to suckle, to nurse, to give milk'; Mayrhofer 1956—1980.II:93, II:99, and II:114; Boisacq 1950:344 and 345 **dhē(i)-*; Hofmann 1966:115 **dhēi-*, **dhē-*; Frisk 1970—1973.I:670, I:671, and I:673—674; Beekes 2010.I:546 **d^heh₁-*, I:546—547, and I:548 **d^heh₁-i-*; Walde—Hofmann 1965—1972.I:475—476 **dhē-*, **dhē-*, **dhēi-*, I:476—477 **dhē(i)-*, and I:496—497 **dhē-*; De Vaan 2008:210; Ernout—Meillet 1979:224 and 234; Huld 1984:52—53; Orël 1998:67 and 2003:72 Proto-Germanic **dējanan*, 72 **dōjanan*; Kroonen 2013:87 Proto-Germanic **dajjan-* 'to suckle'; Feist 1939:112—113; Lehmann 1986:86 **dhē(y)-*. Some of the Indo-European forms cited above may ultimately go back to Proto-Nostratic (n.) **da-* 'mother, sister', (reduplicated) (n.) **da-da-* 'mother, sister' (nursery words).

Buck 1949:4.41 breast (of a woman); 5.16 suck (vb.). Bomhard 1996a:205.

179. Proto-Nostratic root **dow-*, **doy-*:

- (vb.) **dow-*, **doy-* 'to slacken, to slow down; to grow weary, weak, faint';
- (n.) **dow-a*, **doy-a* 'slackness, slowness, laxity, weariness, fatigue'; (adj.) 'slow, slack, lax, weary'

- A. Afroasiatic: Proto-Semitic **daw/y-ax-* 'to be or become weak, dizzy, faint' > Arabic *dāḥa* 'to conquer, to subjugate; to resign oneself, to humble oneself; to be or become dizzy, to have a feeling of dizziness; to fall ill, to be sick, to feel nausea', *dawḥa* 'vertigo, dizziness; coma; nausea'; Mehri *dayōx* 'to be or become dizzy', *dōyax* 'dizzy'; Harsūsi *deyōx* 'to faint, to be dizzy, to be drunk'; Tigre *doḥa* 'to drop from exhaustion'. D. Cohen

1970— :233—234 *dw/yh. Proto-Semitic **daw/y-ak*- ‘to relax’ > Arabic *dāka* ‘to make rickety, to relax’. D. Cohen 1970— :238 *dw/yq. Proto-Semitic **daw/y-am*- ‘to take a long time; to be quiet, calm’ > Arabic *dāma* ‘to last, to continue, to go on, to endure, to remain; to persevere, to persist; to stagnate’, *dawm* ‘continuance, permanence, duration, ever-lasting’; Sabaeen *dwm* ‘lasting, permanent’; Šheri / Jibbāli *dēm* ‘to have lasted a long time; (rain) to come from everywhere’, *médīm* ‘always’; Mehri *adyēm* ‘to stay on in the one place’, *dōyām* ‘permanently living in the same place’; Ḥarsūsi *adīm* ‘to stay a long time in one place’; Akkadian *dāmu* ‘to be giddy, to stagger, to fumble’; Hebrew *dūmāh* [דומה] ‘silence’; Jewish Palestinian Aramaic *dūm* ‘to speak in a low voice, to be suspicious’. D. Cohen 1970— :236—237 *dw/ym; Klein 1989:118.

- B. Dravidian: Tamil *toy* ‘to languish, to pine, to grow weak, to be weary, to be fatigued, to fail in energy, to droop, to faint, to flag, to become slack; to be loose, supple, yielding; to bend through weakness or lack of support’, *toyyal* ‘fainting, languishing, despondency, affliction’, *toyvu* ‘laxity, looseness (as of a rope), faintness’, *tuyaṅku* (*tuyaṅki*-) ‘(vb.) to slacken, to relax; (n.) fatigue, loss of strength or courage, misconception, confusion, sorrow, distraction’, *tuyakkam* ‘fatigue, loss of strength or courage’, *tuyavu* ‘mental distraction, perturbation’, *tuyar* ‘(vb.) to grieve, to sorrow, to lament; (n.) affliction, grief, sorrow’, *tuyaraṭi* ‘fatigue, fainting, drooping, grief’, *tuyaram* ‘sorrow, grief, calamity, trouble, pity’; Malayalam *tuyar*, *tuyaram* ‘calamity, grief, pity’, *tuyaruka* ‘to grieve’, *tuyarkka* ‘to afflict’; Telugu *dosāgu*, *dosavu* ‘calamity’; Brahui *tusing*, *tusēnging* ‘to faint, to become unconscious’. Burrow—Emeneau 1984:308, no. 3513.
- C. Proto-Kartvelian **dowr*- ‘slow, calm, serene, leisurely flowing’: Georgian *m-dovr-e*, *m-dovr-i*, *m-dor-e* ‘slow, calm, serene, leisurely flowing’; Svan *dwer-i* (< **dwer*- < **dwewr*- < **dōwr*- < **dowr*-) ‘slow, calm, serene, leisurely flowing’. Fähnrich 2007:236 **dowr*-.
- D. Proto-Indo-European **d^how-ks-/d^hu-ks*- ‘to be weary’: Sanskrit *dhukṣate* (only attested with *sam*-: *saṁdhukṣate*) ‘to be weary’ (also ‘to kindle; to live’); Bengali *dhokhā*, *dhōkā* ‘to pant, to be weary’; Middle High German *tuschen* ‘to be quiet’. Mann 1984—1987:217 **dhuksos* ‘blow, breath, sigh, groan’; Mayrhofer 1956—1980.II:106; Turner 1966.I:390, no. 6821.

Buck 1949:4.82 weak; 14.22 slow (adj.).

180. Proto-Nostratic (n.) **dub-a* ‘back, hind part’:

- A. Proto-Afrasian **dub*- ‘back, hind part’: Proto-Semitic **dub-ur*- ‘back, hind part’ > Arabic *dubr*, *dubur* ‘rump, backside, buttocks, posterior; rear part, rear, hind part; back; last part, end, tail’, (denominative) *dabara* ‘to turn one’s back’; Ḥarsūsi *adēber* ‘to turn away (from)’; Mehri *adōbər* ‘to turn the back’; Neo-Aramaic (Mandaic) *dibra* ‘back, tail’; Hebrew (inf.) *dabber*

[נָבַר] ‘to turn the back, to turn away’, *dəβār* [דְּבִיר] ‘hinder or western part of the Temple, sanctuary, the Holy of Holies’; Geez / Ethiopic *tadabara* [ተደበረ] ‘to lie on one’s back’; Tigrinya (*tä*)*däbärä* ‘to be inclined’; Tigre (*tə*)*däbära* ‘to be placed on the side (in order to be killed)’; (?) Amharic *žəbär* ‘backbone’. D. Cohen 1970—:212; Murtonen 1989:143—144; Klein 1987:113—114; Leslau 1987:121. Proto-East Cushitic **dab-/dib-/dub-* (also **dibb-/dubb-*) ‘back, tail’ > Somali *dib* ‘short tail of goat, etc.’, *dab-o* ‘tail’; Bayso *deb-e* ‘tail’; Rendille *dub* ‘tail’; Boni *tib* ‘tail’; Elmolo *dup* ‘bushy end of animal’s tail’; Dasenech *dum* ‘bushy end of animal’s tail’; Galla / Oromo *dub-a* and *duub-a* (depending on the dialect) ‘behind’; Gawwada *tup-* ‘behind, after’; Alaba *dubb-o* ‘tail’; Konso *tup-a* ‘behind’, *tup-p-aa* ‘upper back’; Harso *tup-* ‘behind, after’; Gollango *tup-* ‘behind, after’. Proto-Highland East Cushitic **dubb-* ‘tail; after, behind’ > Burji *dubbá-kka* ‘younger brother’, literally, ‘he who is behind’; Gedeo / Darasa *duba* ‘tail of sheep’; Hadiyya *dubb-o* ‘behind’. Hudson 1989:237; Sasse 1979:16 and 1982:57. Central Chadic: Matakan *dəba* ‘back’; Mofu *dúbá* ‘back’; Gisiga *duba* ‘back’; Gidar *debokó* ‘back’; Musgoy *dúwəŋ* ‘back’; Musgu *dəba* ‘back’. Jungraithmayr—Ibriszimow 1994.II:6—7. Orël—Stolbova 1995: 167, no. 731, **dub-* ‘back, tail’; Ehret 1995:125, no. 119, **dab-/dib-* ‘back; to come or be behind’ and 134, no. 146, **dup-* ‘lower back’.

Comment: Militarëv—Kogan (2000.I:44—45, no. 46) reconstruct Proto-Semitic (n.) **dVb(V)r-* ‘back, hind part’. They do not list any non-Semitic cognates but note: “As an anatomic term has a scarce attestation.”

- B. Uralic: Proto-Finno-Ugrian **tupp3* ‘back, backbone’ > (?) Cheremis / Mari *tup* ‘back’; (?) Votyak / Udmurt (Sarapul) *tībīr*, (Kazan) *tābār* ‘back, backbone’; (?) Hungarian (dial.) *top* ‘the thick part of a pig’s leg or ham’, (dial.) *tomp* ‘the outer skin of cattle’, *tompor* ‘buttock, haunch’ (the *-m-* is secondary). Rédei 1986—1988:538.
- C. Altaic: Manchu-Tungus: Evenki *duwukī* ‘pelvis, pelvic bone, lower back, rump (of a horse or a reindeer)’; Udihe *deuxi* ‘pelvis, pelvic bone’; Written Manchu *du* ‘thigh, thighbone, femur’.

Buck 1949:4.18 tail; 4.19 back. Dolgopolsky 2008, no. 499, **dub[?]V* ‘back, hinder part, tail’.

181. Proto-Nostratic (n.) **dud-a* ‘tip, point’:

- A. Dravidian: Tamil *tuṭi* ‘lip’; Malayalam *coṭi* ‘lip’; Kota *tuc* ‘lip’; Kannada *tuṭi*, *toḍi* ‘lip’; Tuḷu *duḍi* ‘lip, snout of an animal’; Koraga *tonḍi* ‘lip’; Gondi *toṭi* ‘lip’, *toḍḍi* ‘mouth, face’; Kui *ṭōḍa* ‘lip’; Malto *toro* ‘mouth’, *toto* ‘beak’. Burrow—Emeneau 1984:288, no. 3296. Semantic development from ‘tip, point’ to ‘beak, snout’ to ‘mouth’ to ‘lip’ as in

Czech *ret* ‘lip’ in view of Russian *rot* [pot] ‘mouth’, Serbo-Croatian *rt* ‘promontory’, and Old Church Slavic *рътъ* ‘peak’. Malayalam *tottu* ‘nipple’; Kannaḍa *toṭṭu* ‘nipple, point’; Tuḷu *toṭṭu* ‘nipple of a breast’. Burrow—Emeneau 1984:307, no. 3488. Semantic development as in Svan *dudūl* ‘breast, nipple’. Note also Proto-Dravidian **tut-* ‘tip, point, end’ (assuming progressive assimilation from earlier **tuṭ-*, which is partially preserved in the reduplicated form **tuṭṭa-tut-* found in Kannaḍa and Telugu): Tamil *tuti* ‘point, sharp edge’; Kannaḍa *tudi* ‘end, point, top, tip, extremity’, (reduplicated) *tuṭṭatudi*, *tuttatudi* ‘the very point or end’; Tuḷu *tudi* ‘point, end, extremity, top’; Telugu *tuda* ‘end, extremity, tip’, *tudi* ‘termination, end’, (reduplicated) *tuṭṭatuda* ‘the very end or extremity’; Malto *tota* ‘point, pointed’. Burrow—Emeneau 1984:290, no. 3314.

- B. Proto-Kartvelian **dud-* ‘tip point’: Georgian *dud-* ‘tip, point; comb, crest (of a bird)’ (Zan loan); Mingrelian *dud-i* ‘head’; Laz *dud-i* ‘crown, top of head; top, summit, peak; tip, point’; Svan *dudūl* ‘breast, nipple’. Klimov 1964:75 **dud-* and 1998:42—43 **dud-* ‘tip’; Fähnrich—Sardshweladse 1995:113 **dud-*; Fähnrich 2007:137 **dud-*.

(?) Sumerian *du-du-ru* ‘high (mountain)’.

Buck 1949:4.24 mouth; 4.25 lip. Bomhard 1996a:227, no. 642.

182. Proto-Nostratic root **dul-* (~ **dol-*):

- (vb.) **dul-* ‘to burn, to be bright, to warm, to heat up’;
(n.) **dul-a* ‘heat, warmth, fire’

- A. Proto-Dravidian (**tuly-* >) **tuḷ-* ‘to shine, to sparkle, to glitter, to be bright’: Tamil *tuḷaṅku* (*tuḷaṅki-*) ‘to shine; to be bright, luminous; to radiate’, *tuḷumpu* (*tuḷumpi-*) ‘to sparkle, to glitter, to shine’; Malayalam *tuḷaṅṅuka* ‘to glitter’; Kannaḍa *toḷagu* ‘to shine, to be full of splendor’; Telugu *tulakincu* ‘to shine, to rejoice’. Burrow—Emeneau 1984:293, no. 3360.
- B. Proto-Uralic **tuli* ‘fire’: Finnish *tuli* ‘fire’; Lapp / Saami *dollâ/dolâ-* ‘fire’; Mordvin *tol* ‘fire’; Cheremis / Mari *töl, tul* ‘fire’; Votyak / Udmurt *tyl* ‘fire’; Zyrian / Komi *tyl-kört* ‘iron for striking fire’; Yurak Samoyed / Nenets *tuu* ‘fire’; Tavgi Samoyed / Nganasan *tuj* ‘fire’; Yenisei Samoyed / Enets *tuu* ‘fire’; Selkup Samoyed *tüü* ‘fire’; Motor *tuj* ‘fire’. Collinder 1955:63 and 1977:80; Rédei 1986—1988:535 **tule*; Décsy 1990:109 **tula* ‘fire’; Sammallahti 1988:540 **tuli* ‘fire’; Janhunen 1977b:166 **tuj*; Zhivlov 2023:165 Proto-Uralic **tuli* ‘fire’, Proto-Finnic **tulę-*.
- C. Proto-Altaic **dīūlu* ‘warm’: Proto-Tungus **dūl-* ‘to warm’ > Evenki *dūl-* ‘to warm, to heat up’; Lamut / Even *dūl-* ‘to warm’. Proto-Mongolian **dulayan* ‘warm’ > Written Mongolian *dulayan* ‘warm’; Khalkha *dulān* ‘warm’; Buriat *dulān* ‘warm’; Ordos *dulān* ‘warm’; Dagur *dulān* ‘warm’;

Kalmyk *dulān* ‘warm’. Poppe 1955:31. Proto-Turkic **yili-g* ‘warm’ > Old Turkic *yiliy* ‘warm’; Turkish *ılık* ‘tepid, lukewarm’; Gagauz *ili* ‘warm’; Azerbaijani *ilig* ‘warmish’; Uzbek *iliq* ‘warm’; Turkmenian *yili* ‘warm’; Uighur *ilman* ‘warm’; Karaim *yili* ‘warm’; Tatar *žili* ‘warm’; Bashkir *yili* ‘warm’; Kirghiz *žiluu* ‘warm’; Kazakh *žili* ‘warm’; Noghay *yili* ‘warm’; Tuva *čiliy* ‘warm’; Yakut *silās* ‘warm’. Starostin—Dybo—Mudrak 2003:480—481 **dūlu* ‘warm’; Poppe 1960:23 and 75; Street 1974:12 **dul-* ‘to warm’.

- D. Proto-Gilyak / Nivkh **dlə* ‘sky’: Amur *tlə* ‘sky’; North Sakhalin *tlə* ‘sky’; East Sakhalin *tlə* ‘sky’ (also *klə*); South Sakhalin *tlə/klə* ‘sky’. Fortescue 2016:43.

Buck 1949:1.51 sky, heavens; 1.81 fire; 1.85 burn (vb.); 15.85 hot, warm. Bomhard—Kerns 1994:274—275, no. 87; Illič-Svityč 1971—1984.I:221—222, no. 71, **duli*; Dolgopolsky 2008, no. 2273, **tul||V* ‘to be bright/light’.

183. Proto-Nostratic root **dul-* (~ **dol-*):

- (vb.) **dul-* ‘to disturb, to perplex, to bewilder, to confuse, to ruffle, to upset, to baffle, to stir up trouble, to agitate; to be disturbed, perplexed, bewildered, confused, ruffled, upset, baffled, troubled, agitated’ (> ‘to drive someone crazy, mad, insane; to be crazy, mad, insane; to be dumb, stupid’);
 (n.) **dul-a* ‘confusion, disturbance, trouble, agitation, perplexity’ (> ‘madness, craziness, insanity; stupidity’)

Note also:

- (vb.) **dal-* ‘to stir up, to disturb, to roil (water), to agitate; to be disturbed, confused, agitated, troubled’;
 (n.) **dal-a* ‘disturbance, agitation’

- A. Afrasian: Semitic: Arabic *daliha* ‘to rob someone of his senses, to drive someone crazy (love); to go out of one’s mind, to go crazy (with love); to be stunned, perplexed’, *mudallah* ‘madly in love’; Ḥarsūsi *déleh* ‘foolish, silly’. D. Cohen 1970— :262. Arabic *daliya* ‘to be stunned, perplexed, bewildered’; Arabic (Eastern) (?) *dālī* ‘crazy’; Arabic (Maghrebi) *būdālī* ‘insane, stupid; to relapse to second childhood’. D. Cohen 1970— :264. Arabic *daliʿ* ‘stupid, insipid, flat (of taste)’. D. Cohen 1970— :267.
 B. (?) Dravidian: Tamil *tollai* ‘trouble, perplexity, difficulty, work’; Malayalam *tolla* ‘trouble, vexation, danger’. Burrow—Emeneau 1984: 309, no. 3521.
 C. Proto-Indo-European **dhul-* ‘(vb.) to be disturbed, confused, perplexed, troubled; (adj.) mad, raving, crazy, insane’ (secondary full-grade forms: **dhwel-/dhwol-*): Gothic *dwals* ‘foolish’; Old Icelandic *dulinn*, *dularfullr*, *dulsamr* ‘self-conceited’, *dulnaðr*, *dulremmi* ‘conceit, self-conceit’; Old English *dol* ‘(adj.) foolish, presumptuous; dim-witted, stupid; (n.) folly, conceit’, *dwelian* ‘to lead astray, to lead into error, to lead into wrong-

doing; to deceive, to prevent, to thwart, to afflict', *dwellan* 'to lead astray, to deceive', *dwolung* 'insanity', *dwolma* 'chaos, confusion', *gedwolen* 'perverse, wrong', *gedwol* 'heretical', *dwolian* 'to stray, to err', *gedwield*, *dwild* 'error, heresy'; Old Saxon *dol* 'mad, raving, crazy', *fardwolan* 'confused'; Old High German *tol* 'mad, furious' (New High German *toll* 'mad, raving, crazy, insane'), *gitwelan* 'to be perplexed', *twalm* 'confusion'. As noted by Kluge—Seebold (1989:731), this particular range of meanings seems only to occur in the Germanic languages, and further cognates are uncertain. Consequently, the suggestion that **dhwel-* is an extended form of the Proto-Indo-European root **dhew-* 'to rise in a cloud (dust, vapor, smoke, etc.)' needs to be seriously re-evaluated and even abandoned in light of the cognates adduced here from other Nostratic languages. Pokorny 1959:265—266 **dh(e)uel-* 'to whirl about; to be disturbed'; Walde 1927—1932.I:842—843 **dh(e)uel-*; Mann 1984—1987:218 **dhulos* (**dhul-*) 'dull, dim, numbstruck' — "A variant: a true z-gde of type **dhuel-*, **dhul-* occurs in OE *dwol* 'heretical'", 229 (**dhul-*) "O-gde forms only in Gmc."; Watkins 1985:14 **dhwel-* and 2000:19 **dhwel-*; Orël 2003:81 Proto-Germanic **đwalaz*, 81 **đwaljanan*, 81 **đwalō(n)*, 81 **đwalanan*, 81 **đwulaz*; Feist 1939:130 **dhuel-* 'confused, perplexed, bewildered; to be disturbed, ruffled, upset, troubled'; Lehmann 1986:98; Kroonen 2013:108 Proto-Germanic **dula-* 'foolish, crazy', 110—111 **dwaljan-* 'to delay, to hinder', and 112 **dwelan-* 'to err'; Klein 1971:231 **dhwel-* 'muddy, gloomy, dim, dull'; Barnhart 1995:225 Proto-Germanic **dulaz*; Onions 1966:293; Kluge—Mitzka 1967:780—781 **dh(e)uel-* 'disturbed, ruffled, upset, troubled'; Kluge—Seebold 1989:731 Proto-Germanic **dwel-a-* 'to be disturbed, ruffled, upset, troubled'.

- D. Uralic: Ob-Ugric: Ostyak / Xanty (Vah, Vasyugan, Tremyugan) *tul'*, (Yugan) *tul*, (Demyanka) *tül*, (Nizyam) *tül* 'mad'.
- E. Proto-Altaic **dūli* 'mad, crazy': Proto-Tungus **dulbu-* 'stupid, dumb; deaf' > Evenki *dulbu-n* 'stupid, dumb'; Lamut / Even *dulbur* 'stupid, dumb'; Manchu *dulba* 'careless, inexperienced, foolish (because of lack of experience)'; Nanay / Gold *dulbi* 'deaf'; Oroch *dul-dul* 'stupid, dumb'. Proto-Mongolian **dülei* 'deaf' > Written Mongolian *dülei* 'deaf; dull, lusterless, not transparent, clouded', *dülei balai* 'dunce, blockhead, numbskull'; Khalkha *düliy* 'dull, dim'; Buriat *düliy* 'deaf'; Kalmyk *dülē* 'deaf'; Ordos *düli* 'deaf'; Dagur *dulī* 'deaf'; Dongxiang *dulei* 'deaf'; Shira-Yughur *deli-* 'deaf'; Monguor *dulī* 'deaf'. Proto-Turkic **yül-* 'to be mad, crazy' > Oyrot (Mountain Altai) *d'ül-* 'to be mad, crazy'; Chuvash *šilə* 'anger'; Yakut *sül-* 'to be sexually excited'. Starostin—Dybo—Mudrak 2003:485 **dūli* 'mad, crazy'.

Buck 1949:4.95 deaf; 4.96 dumb; 16.43 rage, fury; 17.22 foolish, stupid; 17.23 insane, mad, crazy. Dolgopolsky 2008, no. 525, **dülUhV* 'to be mad, to be

stupid' (Dolgopolsky does not include the Dravidian and Indo-European cognates).

184. Proto-Nostratic root **dul^y-* (~ **dol^y-*):

(vb.) **dul^y-* 'to dangle, to hang, to swing back and forth';

(n.) **dul^y-a* 'hanging, swinging; shaking, agitation, disturbance'

- A. Proto-Afrasian **dul-* 'to dangle, to hang': Proto-Semitic **dal-aw-* 'to hang, to suspend; to be hanging, suspended' > Hebrew *dālāh* [דָּלָה] 'to draw (water)'; Akkadian *dalū* 'to draw water from a well'; Arabic *dalā* 'to let hang, to dangle, to hang, to suspend'; Sabaeen *dlw* 'weight'; Ḥarsūsi *adē(ye)l* 'to pull up by a rope'; *dōlew* 'well-bucket'; Šheri / Jibbāli *délé* 'to pull up by a rope'; Mehri *dālō* 'to pull up by a rope'; Geez / Ethiopic *dalawa*, *dallawa* [ደለወ] 'to weigh'; Tigrinya *dälāwä* 'to weigh'; Amharic *dälla* 'to be measured out, to be weighed'. D. Cohen 1970— :262—263; Klein 1987:125; Leslau 1987:132; Murtonen 1989:149. Proto-Semitic **dal-aḳ-* 'to shake, to tremble; to be shaken' > Geez / Ethiopic *dalaka* [ደለቀ] 'to be agitated, to be shaken, to be turbulent, to move quickly', *?adlaklaka* [አደለቀለቀ] 'to shake (intr.), to be shaken, to quake, to tremble, to cause to quake, to cause to tremble', *dələklək* [ደለቀለቀ] 'shaking, violent agitation, rattling, trembling, quaking, tumult, uproar, commotion, tempest, earthquake'; Tigre *däläkläka* 'to shake, to tremble', *dələklək* 'earthquake'; Tigrinya *dələklək* 'earthquake'; Amharic (*a-*)*dläkälläkä* 'to shake'; Harari *dillik āša* 'to hit violently and produce a sound'. D. Cohen 1970— :268—269; Leslau 1987:131. Proto-Semitic **dal-al-* 'to hang down, to dangle' > Hebrew *dālal* [דָּלַל] 'to hang down, to dangle'; Geez / Ethiopic *dalala*, *dallala* [ደለለ] 'to comb the hair, to braid the hair, to trim the hair neatly'. Klein 1987:126; Leslau 1987:131; Murtonen 1989:149. Proto-Semitic (reduplicated) **dal-dal-* 'to set into a swinging motion, to dangle' > Arabic *daldala* 'to set into a swinging motion, to dangle', *tadaldala* 'to hang loosely, to dangle'; Mehri *əndəldöl* 'to hang swinging'; Šheri / Jibbāli *əndəldél* '(clothes, tail) to drag, to sweep the ground'. D. Cohen 1970— :261—262. Ehret 1995:130, no. 137, **dul-* 'to raise, to pull above'.
- B. Dravidian: Tamil *tuḷaṅku* (*tuḷaṅki-*) 'to move, to sway from side to side (as an elephant), to shake, to be perturbed, to be uprooted, to droop', *tuḷakku* (*tuḷakki-*) 'to move, to shake, to bow, to nod', *tuḷakkam* 'shaking, waving, motion, agitation of mind, fear, dread, diminishing, dwindling', *tuḷaṅku* (*tuḷaṅki-*) 'to hang, to swing, to be agitated, to be disturbed', *tuḷuṅku* (*tuḷuṅki-*) 'to shake, to toss'; Malayalam *tuḷaṅṅuka* 'to move tremulously', *tuḷakkam* 'shaking'; Kannaḍa *tuḷaku*, *tuḷiku*, *tuḷuku*, *tuḷuṅku* 'to be agitated, to shake'; Telugu *dulupu* 'to shake so as to remove dust, etc.; to shake off, to get rid of'; Kui *tlānga* (*tlāngi-*) 'to be rocked to and fro, to pitch, to

sway, to be tossed violently backwards and forwards and up and down'. Burrow—Emeneau 1984:293, no. 3359.

- C. Proto-Indo-European **dʰol-/dʰl-* (secondary *e*-grade form: **dʰel-*) 'to swing, to dangle': Armenian *dolam* 'to tremble, to shake, to quiver'; Swedish (dial.) *dilla* 'to swing, to dangle'; Low German *dallen* 'to dangle'. Pokorny 1959:246 **dʰel-* 'to tremble'; Walde 1927—1932.I:865 **dʰel-*.

185. Proto-Nostratic root **dum-* (~ **dom-*):

(vb.) **dum-* 'to cut (off), to sever';

(n.) **dum-a* 'cut, severance; piece cut off, bit, fragment'

- A. Proto-Afrasian **dum-* 'to split, to pierce': Proto-Semitic **dam-ay-* 'to destroy' > Hebrew *dāmāh* [דָּמָה] 'to cut off, to destroy'; Akkadian *damtu* 'destruction'. D. Cohen 1970— :272. Egyptian *dm* 'to be sharp, to sharpen, to pierce', *dmt* 'knife', *dm* 'to cut off (heads)'. Hannig 1995:978; Faulkner 1962:312 and 313; Erman—Grapow 1921:214 and 1926—1963.5:448, 5:449; Gardiner 1957:602. Berber: Riff *əddəm* 'to split'. Perhaps also: Tamazight *dəmməc* 'to give someone a slap in the face'; Nefusa *dummict* 'fist, strike, blow'; Mzab *tdummict*, *əddumict* 'strike, blow'. Lowland East Cushitic **dum-* 'to be destroyed' > Somali *dum-* 'to be destroyed'. Berber: Riff *əddəm* 'to split'. West Chadic **dum-* 'to plunge a weapon (into a person)' > Hausa *duma* 'to strike someone with something'. Orël—Stolbova 1995:169, no. 740, **dum-* 'to destroy', 170, no. 743, **dum-* 'to split, to pierce'.
- B. Dravidian: Tamil *tumi* (-v-, -nt-) 'to be cut off, severed; to perish, to be crushed', *tumi* (-pp-, -tt-) 'to cut off, to saw, to keep off, to obstruct', *tumi* 'cut, severance'; Telugu *tumuru* 'a small piece or bit', *tuttumuru* 'small bits or fragments, powder, dust'. Burrow—Emeneau 1984:290, no. 3325.

Buck 1949:11.27 destroy.

186. Proto-Nostratic root **dum-* (~ **dom-*):

(vb.) **dum-* 'to be silent';

(n.) **dum-a* 'silence'

- A. Afrasian: Proto-Semitic **dam-am-* 'to be quiet, silent, still' > Hebrew *dāmam* [דָּמַם] 'to be or grow dumb, silent, still'; Ugaritic *dm* 'to be still, quiet'; Mandaic *dndm* (< **dmdm*) 'to be deprived of speech or movement by emotion, to be stupefied', *dmm* 'to come to a stop'; Geez / Ethiopic *tadamma* [ተደመ], *tadamama* [ተደመመ] 'to be silent, to stop, to be immobile, to be stupefied, to be astonished, to be amazed, to marvel, to wonder, to be dumbfounded, to be confused', *dəmām* [ደሜም] 'satisfaction, astonishment, marvel, wonder, silence'; Gurage (Endegeñ) *dəmm barä* 'to be quiet, to be silent'. D. Cohen 1970— :274; Leslau 1979:207 and

1987:134; Klein 1987:127; Murtonen 1989:151. According to Leslau (1987:134), the original meaning was ‘to be silent’ > ‘to be deprived of speech’ > ‘to be stupefied, to marvel’. Proto-Semitic **da/wa/m-* ‘to be silent’ > Hebrew *dūmām* [דומם] ‘stillness, silence’. Klein 1987:118; D. Cohen 1970— :236—237. Proto-Semitic **dam-ay-* ‘to be silent’ > Hebrew *dāmī* [דָּמִי] ‘silence, quiet, rest’. D. Cohen 1970— :272; Klein 1987:127.

- B. Proto-Kartvelian **dum-* ‘to keep silent about, to hold one’s tongue’: Georgian *dum-* ‘to keep silent about, to hold one’s tongue’, *dum-il-i* ‘silence’; Svan *dwm-*, *dwim-* ‘to hide, to conceal, to keep secret’. Fähnrich—Sardshweladse 1995:114 **dum-*; Klimov 1998:43 **dum-* ‘to be(come) silent’; Fähnrich 2007:139 **dum-*.
- C. Proto-Indo-European **dʰm̥bh-* (‘to be silent’ > ‘to be deprived of speech’ >) ‘to be dumb, mute’: Gothic *dumbs* ‘dumb’; Old Icelandic *dumbr* ‘dumb, mute’; Danish *dum* ‘dull, stupid’; Swedish *dum* ‘dull, stupid’; Old English *dumb* ‘dumb, silent’; Old Frisian *dumb* ‘dumb, stupid’; Old Saxon *dumb* ‘simple’; Dutch *dom* ‘stupid, dull, foolish’; Old High German *tumb*, *tump* ‘mute, dumb, unintelligible’ (New High German *dumm*). Mann 1984—1987:193 **dʰm̥bh-* ‘stupefied; stupor’; Kroonen 2013:108 Proto-Germanic **dumba-* ‘dumb’; Orël 2003:79 Proto-Germanic **dumbaz*; Feist 1939:129; Lehmann 1986:97—98; De Vries 1977:87; Onions 1966:293; Hoad 1986:137; Klein 1971:231; Skeat 1898:182; Kluge—Mitzka 1967:147 **dhumbhos*; Kluge—Seebold 1989:159.

Buck 1949:12.19 quiet (adj.); 12.27 hide, conceal; 17.36 secret (adj.); 18.23 be silent. Dolgopolsky 2008, no. 537, **dūmV* ‘to be motionless, to be silent, to be quiet’.

187. Proto-Nostratic root **dum-* (~ **dom-*):

(vb.) **dum-* ‘to cover over, to obscure; to cloud over; to become dark, to make dark, to darken’;

(n.) **dum-a* ‘darkness, cloud, fog’; (adj.) ‘dark, cloudy’

Derivative:

(n.) (**dum-k*’*w-a* >) **dun-k*’*w-a* ‘darkness, cloud’; (adj.) ‘dark, cloudy’

- A. Proto-Afrasian **dum-* (vb.) to become dark, to make dark, to darken; to cloud over; (adj.) dark, cloudy; (n.) darkness, cloud, fog’: Proto-Semitic **dam-an-* ‘to cloud over, to become dark’ > Geez / Ethiopic *dammana* [ደመነ] ‘to cloud over, to obscure, to become cloudy’, *dammun* ‘cloudy’; Tigre *dāmāna* ‘cloud’; Tigrinya *dämmāna* ‘cloud’; Gurage *dämmāna* ‘cloud’; Argobba *dammāna* ‘cloud’; Gafat *dämmänä* ‘cloud’; Amharic *dammāna*, *dämmāna* ‘cloud’; Harari *dāna* ‘cloud’. Leslau 1963:57, 1979:209, and 1987:134—135; D. Cohen 1970— :274—275. Proto-Semitic **dam-am-* ‘to close, to cover’ > Arabic *damma* ‘to stop up (a hole), to

level'; Geez / Ethiopic *dammama* [ፈመመ] 'to close, to cover, to fill up, to heap up, to level'; Tigre *damāma* 'to close the udder'; Gurage *dāmāddāmā* 'to block the mouth of someone, to finish thatching a house'. D. Cohen 1970—:274; Leslau 1987:134. Proto-East Cushitic **dum-* 'to become dark' > Koyra *duuma* 'cloud'; Galla / Oromo *dum-eesa* 'cloud, fog'; Somali *dum-* 'cloud, fog'. Sasse 1982:58. Chadic: Ngizim *dāmán* 'rainy season'. Ehret 1995:133, no. 143, **dumn-* 'cloud'. Ehret also reconstructs a Proto-Cushitic variant **damn-*. However, the Cushitic forms with *a*, such as Awngi / Awiya *dammānā* 'cloud' and Kemant *dāmāna* 'cloud', for example, may be loans from Ethiopian Semitic. Orël—Stolbova 1995:149, no. 645, reconstruct Proto-Afrasian **dam-* 'cloud'.

- B. Proto-Indo-European **dh̥m-* (secondary full-grade forms: **dhem-/dʰom-*) '(vb.) to become dark, to make dark, to darken; (adj.) dark, cloudy; (n.) darkness, cloud': Old Icelandic *dimmr* 'dim, dark', *dimma* 'to make dark, to darken'; Old Swedish *dimber* 'dim, dark'; Norwegian *dimm* 'dark'; Danish *dim* 'dark'; Old English *dimm* 'dark'; Old Frisian *dimm* 'dark'; Old High German *timber* 'dark, gloomy' (New High German [dial.] *timmer*), *(be)timberēn* 'to become dark', *petimberen* 'to darken', *timberī* 'darkness'; Old Irish *dem* 'black, dark'. Pokorny 1959:247—248 **dhem-*, **dhemā-* 'to fly about like dust'; Walde 1927—1932.I:851—852 **dhem-*, **dhemā^x-*; Mann 1984—1987:182 **dhēmāros* 'gloomy, grim', 182—183 **dhemjō* (**dhembh-*) 'to darken', 183 **dhēmno* (**dh̥mno-*) 'obscure, dim, strange, sinister'; Orël 2003:70 Proto-Germanic **demmaz*, 70 **demmojanan*; Kroonen 2013:96 Proto-Germanic **dimma-* 'dark'; De Vries 1977:77; Torp 1919:63; Onions 1966:268; Klein 1967:213. In the standard Indo-European etymological dictionaries, what were originally two separate stems are usually mistakenly lumped together: (1) **dhem-* 'to blow' and (2) **dh̥m-* '(vb.) to become dark, to make dark, to darken; (adj.) dark, cloudy; (n.) darkness, cloud'.

Buck 1949:1.62 darkness; 1.73 cloud; 15.63 dark (in color). Bomhard—Kerns 1984:267, no. 77; Dolgopolsky 2008, no. 539, **d[ū]hmV ~ *d[ū]mhV* '(to be) dark'.

188. Proto-Nostratic (n.) (**dum-k^w-a* >) **dun-k^w-a* 'darkness, cloud'; (adj.) 'dark, cloudy':
 Derivative of:
 (vb.) **dum-* 'to cover over, to obscure; to cloud over; to become dark, to make dark, to darken';
 (n.) **dum-a* 'darkness, cloud, fog'; (adj.) 'dark, cloudy'
- A. Proto-Indo-European **dh̥nk^w-* (secondary full-grade forms: **dhenk^w-/dʰonk^w-*) '(vb.) to cover over, to obscure, to be or become dark; (adj.) dark': Hittite *da-an-ku-i-iš* 'black, dark', (3rd sg. pres.) *da-an-ku-e-eš-zi* 'to

become dark, to become black', (3rd pl. pret.) *da-an-ku-ni-eš-kir* 'to make dark, to make black'; Luwian (nom. sg.) *da-ak-ku-ú-i-iš* 'dark'; Welsh *dew* (< **dhenk*^{wo-s}) 'fog, gloom, dusk'; Old Icelandic *dökkva* 'to make dark, to darken', *dökk* 'dark'; Old Frisian *diunk* (< Proto-Germanic **denkwa-z*) 'dark'; Old Saxon *dunkar* 'dark'; Old High German *tunchar*, *dunkal*, *tunchal*, *tunkal* 'dark' (New High German *dunkel*); Latvian *danga* (< **dʰonk*^{weA}) 'morass, mire'; Lithuanian *dengiù*, *deñgti* 'to cover', *dingsiù*, *dingsėti* 'to be hidden', *dangà* 'cover, roof, garment', *dangùs* 'sky'. Pokorny 1959:248 **dheng*^{uo-}, **dheng*^{uĩ-} 'foggy, misty'; Walde 1927—1932.I:851; Mann 1984—1987:184 **dhenguhō*, *-jō* 'to cover, to protect', 193—194 **dhnguhos* 'dark, hidden; hiding place, cover', **dhnguhō* 'to hide', 198 **dhonguhos*, *-ā*, *-us* 'covering, cover, arch'; Gamkrelidze—Ivanov 1984.I:200 **d[h]ŋk*⁻ and 1995.I:173 **dʰŋ-k*⁻ 'dark'; Mallory—Adams 1997:147 **dh(o)ngu-* 'dark'; Puhvel 1974:294; Benveniste 1962:70 **dhngw-*; Orël 2003:68 Proto-Germanic **dankwaz* ~ **denkwaz*; Kroonen 2013:96 Proto-Germanic **dinkwa-* 'dark'; De Vries 1977:92; Kluge—Seebold 1989:160 Proto-Germanic **denkw-*; Kluge—Mitzka 1967:147—148 **dhengwos*; Bomhard 1984:115; Kloekhorst 2008b:829; Smoczyński 2007.1:100—101; Derksen 2015:114, 115, 121—122 **dʰengh-*, and 130—131; Fraenkel 1962—1965.I:88—89.

- B. Proto-Eskimo **tuju-* 'to be dark blue (as ripe berry)': Alutiiq Alaskan Yupik (Alaska Peninsula) *tuju(tə)-* 'to become tanned (by sun)'; Central Alaskan Yupik *tuju-* 'to be black'; Seward Peninsula Inuit *tujuq-* 'to be bluish, dark'; North Alaskan Inuit *tuju-* 'to be blue in the face', *tujuq-* 'to be blue (also of bruise)'; Western Canadian Inuit *tuju-* 'to be blue, dark (of cloud)'; Eastern Canadian Inuit *tujuq-* 'to be blue, dark', *tujuniq* 'black cloud, blue-black ice'. Fortescue—Jacobson—Kaplan 1994:352. Proto-Eskimo **tuɲvar-* or **tuɲvay-* 'to store away or bury': Alutiiq Alaskan Yupik *tuɲmaXtə-* 'to get closer to finishing'; Central Alaskan Yupik *tuɲmaxtə-* 'to bury (the dead)'; Naukan Siberian Yupik *tumvaXtə-* 'to bury, to acquire'; Central Siberian Yupik *tuɲmaxtə-* 'to store away for later use, to murder'; Sirenik *tuɲmaxtə-* 'to store away for later use'; North Alaskan Inuit *tuyvaq-* 'to put away'. Fortescue—Jacobson—Kaplan 1994:352—353.

Sumerian *dungu* 'cloud'.

Buck 1949:1.62 darkness; 1.73 cloud; 15.63 dark (in color). Bomhard—Kerns 1994:267—268, no. 78.

189. Proto-Nostratic root **dun-* (~ **don-*):
 (vb.) **dun-* 'to run, to flow (out), to leak';
 (n.) **dun-a* 'flow, spill, leak'

- A. Afrasian: Proto-Highland East Cushitic **dun-* ‘to leak (for example, bag, roof)’, **dun-am-* ‘to leak (for example, water)’ > Gedeo / Darasa *dun-* ‘to leak (for example, bag, roof)’, *dun-em-* ‘to leak (for example, water)’; Hadiyya *dun-* ‘to leak (for example, bag, roof), to sprinkle (water), to pour’, *dun-am-* ‘to leak (for example, water)’; Kambata *dun-* ‘to leak (for example, bag, roof)’, *dun-am-* ‘(of liquid) to leak’; Sidamo *du’n-am-* ‘to leak (for example, water)’. Hudson 1989:89.
- B. Dravidian: Kuṛux *tundnā* ‘to be poured out, to spill, to pour into’, *tundrnā* ‘to be poured out, spilt’; Malto *tunde* ‘to spill, to shed, to throw out (as water)’, *tundgre* ‘to be spilt, to be shed’. Burrow—Emeneau 1984:290, no. 3321.
- C. Proto-Kartvelian **dn-* ‘to run, to flow; to melt’: Georgian *da-dn-ob-a* ‘to melt’; Mingrelian (**dn- >*) *din-*, *dən-* ‘to disappear; to lose, to get lost’; Laz (**dn- >*) *ndin-*, *ndun-*, *dun-* ‘to lose, to get lost; to disappear’; Svan (**li-dn-e >*) *lī-n-e* ‘to melt’. Gamkrelidze—Ivanov 1984.II:878 and 1995.I:774 **den-/ *din-* ‘to flow’, **dṇ-* ‘to melt’; Klimov 1964:74 **dn-* and 1998:41—42 **dn-* ‘to melt, to thaw’; Fähnrich—Sardshweladse 1995: 112—113 **dn-*; Schmidt 1962:105; Fähnrich 2007:135—136 **dn-*.
- D. Proto-Indo-European **d^hṇ-* (secondary full-grade forms: **d^hen-/ *d^hon-*) ‘to run, to flow’: Sanskrit *dhānvati* ‘to run, to flow’, *dhanáyati* ‘to set in motion, to run’; Old Persian *dan-* ‘to flow’; Tocharian A *tsän-* ‘to flow’, B *tseñe* ‘river, stream, current’; (?) Latin *fōns, -tis* ‘spring, fountain’. Rix 1998a:125—126 **d^henh₂-* ‘to be set in motion, to run off or away’; Pokorny 1959:249 **dhen-* ‘to run, to flow’; Walde 1927—1932.I:852 **dhen-*; Mann 1984—1987:184 **dhenyō* ‘to flow’; Watkins 1985:13 **dhen-* and 2000:18 **dhen-* ‘to run, to flow’; Gamkrelidze—Ivanov 1984.II:671, II:878 **d^hen-* and 1995.I:578, I:774 **d^hen-* ‘to run, to flow’; Mallory—Adams 1997:491 **dhen-* ‘to run, to flow’; Mayrhofer 1956—1980.II:90 **dhen-* and II:91—92; De Vaan 2008:230—231; Walde—Hofmann 1965—1972.I:525; Ernout—Meillet 1979:244—245; Adams 1999:741 **d^hen-*; Van Windekens 1976—1982.I:527 **dhen-*.

Buck 1949:10.32 flow (vb.); 10.46 run (vb.). Bomhard—Kerns 1994:271—272, no. 83. Dolgopolsky 2008, no. 543, **duñV* (or **dünV*) ‘to stream, to flow’.

190. Proto-Nostratic root **dun^v-* (~ **don^v-*):

(vb.) **dun^v-* ‘to cut off, to cleave, to split’;

(n.) **dun^v-a* ‘part, share; piece cut off, bit, fragment’

- A. Proto-Afrasian **d[u]n-* ‘to cut, to cut off, to cleave’: Semitic: Tigre *dänna* ‘to cut off’. D. Cohen 1970— :283—284. Egyptian *dn* ‘to cut, to cut off, to cleave, to split, to wound’, *dndn* ‘to attack, to do violence’, *dni* ‘to cut, to divide, to distribute’, *dnd* ‘to slaughter, to kill’, *dnn* ‘to cut, to split’, *dnnw* ‘share, part, division’. Faulkner 1962:313 and 314; Hannig 1995:981

and 983; Erman—Grapow 1921:214, 215 and 1926—1963.5:463, 5:466, 5:472; Gardiner 1957:602. Orël—Stolbova 1995:173, no. 762, **dVn-* ‘to cut off’.

- B. Dravidian: Tamil *tunī* ‘to be sundered, cut, severed; to be removed; to be torn; to become clear; to resolve; to determine, to ascertain, to conclude; to commence; to cut, to sever, to chop off’; Malayalam *tunī* ‘piece’; Kannaḍa *tunaka*, *tunaku*, *tunuku*, *tuḷaku* ‘fragment, piece, bit’; Telugu *tuniya* ‘piece, bit, fragment’, *tuniyu*, *tunūgu* ‘to be cut or broken to pieces’, *tun(u)mu* ‘to cut’; Naikṛī *tunke* ‘half portion (of bread)’; Gondi *tunkī* ‘a piece’. Burrow—Emeneau 1984:289, no. 3305. Tamil *tunṭam* ‘piece, fragment, bit’, *tunṭi* ‘to cut, to sever, to tear up, to divide, to separate’, *tunṭu* ‘piece, bit, fragment, slice, section, division’; Malayalam *tunṭam* ‘piece, bit, slice’, *tunṭikka* ‘to cut to pieces, to cut off (as the throat)’; Kota *tunḍ* ‘piece’; Kannaḍa *tunḍisu* ‘to cut or break into pieces, to make piecemeal’, *tunḍu* ‘fragment, piece, bit’; Koḍagu *tunḍ-* (*tunḍi-*) ‘to break’; Tuḷu *tunḍu* ‘piece, slice’; Telugu *tunḍa*, *tunḍamu* ‘piece, fragment’, *tunḍincu* ‘to cut, to sever’. Burrow—Emeneau 1984:289, no. 3310.
- C. Proto-Indo-European **dʰn̥-* (secondary full-grade forms: **dʰen-*/**dʰon-*) ‘to cut, to cut off, to cleave’: Old Icelandic *denja* ‘to hammer, to whet a scythe’, *dyntr*, *dyttr* ‘stroke, blow, dint’; Old English *dynt* ‘stroke, blow, bruise’, *dengan* ‘to beat, to strike’; Albanian (Gheg) *dhend*, *dhên* ‘to lop off, to cut down’. Pokorny 1959:249—250 **dhen-* ‘to hit, to thrust’; Walde 1927—1932.I:853—854 **dhen-* ‘to hit, to thrust’; Mann 1984—1987:184 **dhenguhō* ‘to bang, to beat, to force, to thrust’ (variant **dhengh-*); Orël 2003:79 Proto-Germanic **ḍuntiz*; De Vries 1977:75 and 90; Onions 1966:269; Klein 1971:214.

Sumerian *dun* ‘to dig (with a hoe)’.

Buck 1949:8.22 dig; 9.21 strike (hit, beat). Bomhard—Kerns 1994:263—264, no. 73; Dolgopolsky 2008, no. 542, **dōnV* ‘to cut’.

191. Proto-Nostratic root **dur-* (~ **dor-*):

- (vb.) **dur-* ‘to bore, to drill, to make a hole’;
(n.) **dur-a* ‘hole, opening’

- A. Dravidian: Tamil *tura* ‘to tunnel, to bore’, *turappu* ‘tunnel’, *turappaṇam* ‘auger, drill, tool for boring holes’; *turuvu* (*turuvi-*) ‘(vb.) to bore, to drill, to perforate, to scrape out (as the pulp of a coconut); (n.) hole, scraping, scooping’, *turuval* ‘scrapings (as of coconut pulp), boring, drilling’; Malayalam *turakka* ‘to bury, to undermine’, *turappaṇam* ‘carpenter’s drill, gimlet’, *turavu* ‘burrowing, mine, hole’, *tura* ‘hole, burrow’; Kannaḍa *turi*, *turuvu* ‘(vb.) to hollow, to bore, to drill, to make a hole, to grate, to scrape (as fruits), to scrape out (as a kernel out of its shell); (n.) grating, scraping

out'; Tuḷu *turipini*, *turipuni*, *turupuni* 'to bore, to perforate, to string (as beads)', *turiyuni*, *turuvuni* 'to be bored, perforated, strung'; Telugu *turumu* 'to scrape with a toothed instrument (as the kernel of a coconut)'; Parji *туру* 'soil dug out in a heap by rats'; Konda *truk-* '(pig) to root up earth with snout'; Kui *trupka* (< **truk-p-*; *trukt-*) 'to bore, to pierce', *truspa* (*trust-*) 'to be pierced, holed', *trunga* (*trungi-*) 'to become a hole, to be pierced'; Kuṛux *tūrnā* 'to pierce through, to perforate'; Malto *türe* 'to scratch out'. Burrow—Emeneau 1984:291—292, no. 3339. Kannaḍa *toralu*, *torale* 'hole', *tore*, *ḍore* 'hollow, hole'; Telugu *tora*, *torāṭa*, *torra* 'hole, cavity (in a tree)'; Gondi *dora* 'hole (in a tree)'. Burrow—Emeneau 1984:310, no. 3533.

- B. Proto-Kartvelian **duro* 'hole, hollow': Georgian *duro* 'loop-hole'; Mingrelian *duru* 'hollow, depression, hole, pit'.
- C. Proto-Indo-European **dhur-* '(vb.) to pierce, to penetrate; (n.) any pointed object: spike, prong, dagger, fork, pole, etc.': Sanskrit *dhúr* 'yoke, pole or shaft of a carriage, peg, pin,' *dhúra-h* 'yoke, pole, peg of the axle'; Greek *τύρη* 'a (two-pronged) fork'; Armenian *durk* 'dagger', *dur* 'tool, gimlet'; Lithuanian *dūrklas* 'spit, dagger, bayonet', *dūris* 'prick, stitch', *duriù*, *dūrti* 'to thrust, to stab'; Russian *дыра* [дыра] 'hole'. Mann 1984—1987:223 **dhurkos*, *-ā* 'stab; spike, prong', 223 **dhurō*, *-iō* 'to pierce, to penetrate', 223 **dhūros*, *-ā* 'piercing, pierce; stab, hole'; Mallory—Adams 1997:424 **dhuer-* 'to pierce'; Mayrhofer 1956—1980.II:111 **dhur-*; Smoczyński 2007.1:136—137; Fraenkel 1962—1965.I:113.

Buck 1949:12.85 hole. Blažek 1992a:115, no. 7, and 1992b:130; Bomhard 1996a:214, no. 615; Dolgopolsky 2008, no. 556, **durV* (or **dūrV*) 'hole, hollow'.

192. Proto-Nostratic (n.) **dur-a* 'goat, sheep, ram' (perhaps originally 'horned animal'):

- A. Proto-Afrasian **dur-* 'goat, sheep, ram': Omotic: Wolaita (Beke) *dūrsa*, *dorsa* 'sheep'; Oyda *duro*, *dorsa* 'sheep'; Basketo *doori* 'sheep'; Doko *dori* 'sheep'; Zayse *doroo* 'sheep'; Koyra *doroo* 'sheep'; She *dor*, *doy* 'ram'. Chadic: Hina *duru(p)* 'a calf'; Mafa *ḍrōk* 'ram'; Pa'a *tóri* 'goat'; Guruntum *dòoro* 'goat'. Jungraithmayr—Ibriszimow 1994.II:166—167. Militarev—Nikolaev (2020:206) reconstruct Proto-Afrasian **(?a-)dury-* 'a kind of bovid' on the basis of the following evidence: Semitic **(?a-)dury-* > Akkadian *dudrū* 'sorte de mouton' ('a kind of sheep') (redupl.); Arabic *ḍiry-ān-at-* 'espèce de taureau pourvu d'une bosse' ('a kind of humped bull'); Tigre (pl.) *?addari-t* 'dwarf-antelope' [*Neotragini* sp.]. (?) Egyptian (OK) *idr* 'Herde (von Vieh und Geflügel)' ('herd [of cattle and poultry]'). South Berber **-dVray-* 'oryx' [*Oryx* sp.] > Ahaggar, Ayt, East Tawllemet *e-dəri* (pl. *i-dāra-n*). Chadic **(?an-)dVry-* '*Damaliscus* sp.

etc.; small cattle': West Chadic **(ʔan-)dur-* > Hausa *dari* 'hartebeest' [*Damaliscus lunatus*]; Guruntum *dor-o*, *door-o* 'goat'; Bokokos *ʔan-dūr*; Sha *n-dur* 'ram'; etc. Central Chadic **ʔu-dVr-* > Musgu *u-deri*. East Chadic **dar-* > Dangla *dar-o* 'gazelle sp.' Cushitic **(ʔa-)dury-* '*Tragelaphus* sp., etc.': East Cushitic: Saho-Afar **wadar-* (met.) > Afar *wadār* 'Ziegen, Kleinvieh' ('goats, small cattle'). Lowland East Cushitic **ʔa-dVry-* > Somali *a-deri-o* 'male kudu antelope' [*Tragelaphus* sp.]. Southern Cushitic **(da)dury-* > Burunge *dor-o* 'zebra' [*Hippotigrus* sp.]; Dahalo *dādīiri* 'lesser kudu' [*Tragelaphus imberbis*]. Omotic **dury-* 'sheep': North Omotic **dur-* > Koyra, Zayse *dor-ō*; Basketo, Doko *dori*; Oida *dur-o* 'sheep'; Gimira (She) *dor* 'ram'. South Omotic **dayr-* (met.) > Ari *der-ti* 'sheep'; Dime *dēr* 'goat'.

B. Kartvelian: Georgian *dur-aq* 'yearly capricorn'.

(?) Sumerian *dūr* 'young animal'.

Buck 1949:3.25 sheep; 3.26 ram; 3.36 goat. Blažek 1992a:115, no. 6; Bomhard 1996a:214, no. 614; Dolgopolsky 2008, no. 572, **dû[r̥]V[g|qV]* 'lamb, kid (of wild ram, etc.)'.

193. Proto-Nostratic root **duw-* (~ **dow-*):

(vb.) **duw-* 'to blow about, to fly about, to scatter; to be blown, strewn, or scattered about';

(n.) **duw-a* 'anything blown, sprinkled, scattered, or strewn about: smoke, steam, vapor; rain, shower, drizzle, raindrops; dust'; (adj.) 'blown about, sprinkled, scattered, strewn'

A. Proto-Dravidian **tūC-*, **tūvV-* 'to blow about, to fly about, to scatter; to be blown, strewn, or scattered about': Tamil *tūvu* (*tūvi-*) 'to sprinkle, to strew, to scatter, to spread out as grain for fowls, to show forth (as arrows), to put loosely in a measure (as flour while measuring), to strew or offer flowers in worship, to rain', *tūval* 'sprinkling, spilling, drizzling, little drops of water, raindrops, rain, drizzle', *tūvāṇam* 'drizzle, rain driven in or scattered about in fine drops by the wind, place where cascade falls'; Malayalam *tūkuka* 'to strew, to spill, to shower', *tūvuka* 'to be spilled, to scatter (tr.)', *tūvāṇam* 'rain driven by the wind', *tūkkuka* 'to spill, to scatter'; Toda *tu:f-* (*tu:fy-*) 'to spread (grain in sun to dry, husks for buffalo to eat)'; Tuḷu *dūsuni* 'to sprinkle'. Burrow—Emeneau 1984:297, no. 3394. Tamil *tūru* (*tūri-*) 'to drizzle', *tūral*, *tūr̥ral* 'drizzling', *tuvar̥ru* (*tuvarri-*) 'to scatter drops, to sprinkle', *tuvaral* 'raining, drizzling, sprinkling', *tuval* (*tuvalv-*, *tuvaṇr-*) 'to drip (as water), to sprinkle, to drizzle', *tuvalal* 'water particle, drop, spray, drizzle', *tivalai* 'small drop, spray, rain drop, rain', (?) *tumi* '(vb.) to drizzle, to sprinkle; (n.) raindrops, light drizzling rain, drop of water, spray', *tumitam* 'raindrops'; Malayalam *tūr̥ral* 'drizzling, rain';

Kannada *tūru* ‘(vb.) to fall in fine particles, to drizzle, to cause to drizzle or drop; (n.) falling in fine particles, drizzling’, *tūralu* ‘to drizzle’, *tuntur*, *tunturi* ‘drizzling, spray, a drop’, *tūparu* ‘to drizzle’; Koraga *durmbu* ‘to drizzle’; Telugu *tūru* ‘to drizzle’, *tūra*, *tuvara* ‘raindrop, drizzling rain’, *tuppara* ‘a particle or drop of water, a particle of spray (especially spittle accidentally ejected from the mouth in speaking)’, *tumpiḷḷu* ‘thin or drizzling rain, drizzle, spray, rain driven by wind’; Konḍa *tūl-* (*tūr-*) ‘(water, etc.) to be splashed, to scatter away in particles’; Kuwī *tūth’nai* ‘to speckle, to intersperse, to powder’. Burrow—Emeneau 1984:297—298, no. 3398; Krishnamurti 2003:13 **tuw-t-* ‘to drizzle’. Tamil *tūrru* (*tūrri-*) ‘(vb.) to scatter, to winnow, to throw up (as dust in the air); (n.) winnowing’; Malayalam *tūrruka* ‘to winnow, (wind) to scatter’; Kannada *tūru* ‘to winnow, to drive chaff from grain by means of the wind’; Tuḷu *tūru* ‘husks of grain’, *tūr(u)pettu*, *tūran-ettu*, *tūru-paṭṭu* ‘to winnow’, *tūrpīḍi* ‘winnowing’; Kolami *tūrpēt-* (*tūrpēt-*) ‘to winnow’; Gondi *tūrānā* ‘to fly away in the wind (as dust, clothes)’, *turehtānā* ‘to winnow’; Pengo *tūt-* ‘to winnow with wind’; Manda *tūt-* ‘to sprinkle (for example, salt on food)’; Kuwī *tūt-* ‘to sprinkle (for example, salt on food)’. Burrow—Emeneau 1984:298, no. 3402.

- B. Proto-Indo-European **dʰew-/dʰow-/dʰu-*, **dʰewH-/dʰowH-/dʰuH-* (> **dʰū-*), **dʰweE-/dʰwoE-/dʰuE-* (> **dʰwē-/dʰwō-/dʰū-*), **dʰwes-/dʰwos-/dʰus-* ‘to blow about, to fly about; to be blown, strewn, or scattered about’, **dʰuH-mo-s* (> **dʰū-mo-s*) ‘smoke, vapor, mist’: Sanskrit *dhūka-h* ‘wind’, *dhūmā-h* ‘smoke, vapor, mist’, *dhvasirā-h* ‘sprinkled, spattered, covered’, *dhūli-h*, *dhūlī* ‘dust, powder, pollen’, *dhūnóti* ‘to shake, to agitate’, *dhvāmsati* ‘to fall to pieces or to dust’, *dhvasmán-* ‘polluting, darkening’, *dhūpa-h* ‘incense’; Greek *θύω* ‘to rush, to dart along’, *τύφω* ‘to raise a smoke, to smoke, to smolder’, *θύω* ‘to rush on or along, to storm, to rage’, *θύος* ‘incense’, *θυμός* ‘soul, breath, life’; Latin *fūmus* ‘smoke, steam, vapor’, *bēstia* ‘animal without reason (as opposed to man), beast’; Gothic *dauns* ‘smell, fragrance’, *dius* ‘wild animal’; Old Icelandic *dýja* ‘to shake’, *dýr* ‘animal, beast’, *dust* ‘dust’, *daunn* ‘bad smell’; Old English *dūst* ‘dust’, *dēor* ‘(wild) animal, deer, reindeer’, **dēan* ‘steam, vapor’; Old Frisian *diar*, *dier* ‘wild animal’, *dūst* ‘dust’; Old Saxon *dior* ‘wild animal’, *dōmian* ‘to give off steam’; Middle Dutch *doom* ‘steam, vapor’; Old High German *toum* ‘steam, vapor’, *tior* ‘wild animal’ (New High German *Tier*), *tunist* ‘wind, breeze’ (New High German *Dunst*); Old Irish *dumacha* ‘fog’, *dásacht* ‘fury’; Lithuanian *dūmai* ‘smoke’, *dūsauju*, *dūsauti* ‘to sigh’, *dujā* ‘drizzle, dust; (pl.) gas’, *dvasià* ‘breath, spirit’; Old Prussian *dumis* ‘smoke’; Old Church Slavonic *дымъ* ‘smoke’, *duxъ* ‘breath, spirit, soul’; *dušō*, *duxati* ‘to breathe’; Tocharian A *twe*, B *tweye* ‘dust, vapor’; Hittite *tūh-ḫu-iš* ‘smoke, vapor’. Rix 1998a:130 **dʰeyH-* ‘to fly about hither and thither’, 140—141 **dʰyes-* ‘to breathe’; Pokorny 1959:261—267 **dheu-*, **dheuə-* (**dhyē-*) ‘to fly about (like

dust)', 268—271 **dh̥ues-*, **dh̥uēs-*, **dheus-*, **dhūs-* 'to fly about (like dust)'; Walde 1927—1932.I:835—843 **dheu-*, **dheuā^x-* (**dheuē-*), I:843—847 **dh̥ues-*, **dh̥uēs-*, **dheus-*, **dhūs-*; Mann 1984—1987:178 **dhaunos* (**dhausno-* ?) 'wild animal, woodland animal', 188 (**dheus-*), 188 **dheusros* (**dhousros*) 'inspired, dashing; dash, fury', 200 **dhoksejō* 'to breathe, to blow', 188 **dhoksos*, -*ā*, 188 **dhoun-* 'to blow, to stink', 188 **dhousos*, -*ios*, -*ī* 'spirit, breath, creature', 201 **dhousro-*, **dhousrjō* (?) 'to rouse, to incite, to excite', 215 **dhūbhos* 'smoky, dim, dark, gray, black, obscure; darkness', 216—217 **dhūjō* 'to shake, to stir, to dash, to rouse', 217 **dhūjō* 'to vaporize, to smoke', 217 **dhujos* 'vapor, dust, smoke, fragrance', 217 **dhūkō*, -*ī* 'to bluster, to blow, to puff', 217 **dhūkos*, -*ā* 'blowing, puffing, bluster', 217 **dhuksos* 'blow, breath, sigh, groan', 218—219 **dhūlos*, -*is* 'smoky, steamy; smoke, vapor, dust', 219 **dhūmājō*, -*ejō* (-*ī*) 'to smoke, to steam, to breathe, to blow', 221 **dhūmakā* 'smoke, billow, cloud, puff', 220 **dhūmālos* (**dhūmlos*, **dhūmros*) 'smoky, gray, dun', 220 **dhumō* 'to breathe, to smoke', 220 **dhūmos* 'smoke, vapor, fog, spirit, breath', 220 **dhumsos*, -*om*, -*ā* (**dhusmos*) 'swell, vapor, enthusiasm, animus', 220 **dhumtos* 'blown-up, vaporized', 221—222 **dhunmn-*, **dhunno-* 'smoke-colored, murky, dun, dim', 222 **dhūnos*, -*ā*, -*ī* 'swelling, bulge, puff', 224 **dhūs-* 'to whirr, to buzz; whirring object, spindle', 224 **dhusālos* (**dhuslos*), -*is*, -*ī* 'blow; breath; vapor, smell', 224 **dhusāros* 'wild; rage; demon', 224 (**dhūsālos*, **dhūsāros*), 224—225 **dhuskos* 'dark', 225 **dhusmos* 'vapor, breath; anger', 225 **dhūsō*, -*ī* 'to blow, to breathe, to steam, to smoke', 225 **dhūsos*, -*ā*, -*ī* 'roaring, raging; fury, demon', 225—226 **dhūsos*, -*ā*, -*ī* 'breathing; breath, fragrance', 227 **dh̥uēsimos* (**dh̥uesmos*) 'breathing; breath, gasp', 227 **dh̥uēsō*, -*ī* 'to blow, to breathe, to expire, to evaporate, to turn to spirit', 227—228 **dh̥uēsos*, -*is*, -*īom*, -*ios*, -*ī* 'breath, vapor, spirit; inspired, mad', 230 **dh̥uos-* 'drooping, ailing; spirit, exhalation, expiry'; Watkins 1985:14 **dheu-*, **dheuā-* and 2000:19 **dheu-* (also **dheuā-*) 'to rise in a cloud (as dust, vapor, or smoke)'; Gamkrelidze—Ivanov 1984.I:206 **d[h̥]euH-*, **d[h̥]uH-* > **d[h̥]ū-*, I:237, I:241, **d[h̥]eu-s-*, **d[h̥]u-es-* and 1995.I:177 **d̥heuH-*, **d̥huH-* > **d̥hū-* 'to blow; to exhale, to breathe; to gasp', I:206, I:210 **d̥heu-s-*, **d̥hw-es-* 'animal, soul'; Gray 1939:253—255; Mallory—Adams 1997:82 **dh̥uēsmi* 'to breathe, to be full of (wild) spirits', 388 **dheu(h_x)-* 'to be in (com)motion, to rise (as dust or smoke)', 529 **dhuh₂mós* 'smoke', and 538 (?) **dh̥ues-* 'spirit'; Mayrhofer 1956—1980.II:107—108, II:108, II:109, II:110, and II:117—118 **dheu-*; Boisacq 1950:356—357 **dhū-* (**dheuā^x-*) 'to be in rapid motion, to fly about (like smoke or dust)', **dhū-mó-s* 'smoke', **dhū-li-s*, **dh̥u-ijō*, **dheu-*, **dheues-*, 360 **dhus-*, and 995 **dhubh-*, perhaps from **dhū-* 'to be in rapid motion'; Hofmann 1966:119 **dhū-mós*, **dheu-* 'to fly about (like dust)', 120 **dhus-*, and 380; Frisk 1970—1973.I:693—694 **dhū-mo-s*, I:697—699, and II:950—951; Chantraine 1968—1980.I:446, I:448—449,

and II:1147—1148; Ernout—Meillet 1979:69 and 260 **dhūmo-*; Walde—Hofmann 1965—1972.I:102 **dheŷēs-* and I:561—562 **dheu-*, **dheŷē-*; Beekes 2010.II:564 **d^huH-mo-*, II:565 **d^heuH-*, II:567; De Vaan 2008:71 Latin *bēstia* “uncertain etymology” and 249; Orël 2003:69 Proto-Germanic **dauniz*, 71—72 **deuzan*; Kroonen 2013:90 Proto-Germanic **dauma-* ‘vapor’ and 111 **du(w)ēn-* ‘to be misty (?)’, windy (?)’; Feist 1939:116—119 **dheŷ-* and 121—122 **dheŷes-*; Lehmann 1986:88—89 **dhew-*, **dhew?* ‘to fly about, to whirl’ and 92—93 **dhews-*, **dhew-*, **dhwes-*; De Vries 1977:74 **dheu-*, 88, 89 **dheu-*, and 90 **dheŷes-*; Onions 1966:250 **dheusóm* and 295 **dhwŷs-*, **dhwens-*; Klein 1971:196 **dheus-*, **dhous-*, **dhwos-*, **dhewēs-*, **dhwēs-* ‘to breathe’, which are enlargements of **dheu-* ‘to fly about like dust, to smoke’ and 233 **dhewēs-*, **dhwens-*, **dhūs-* ‘to fly about like dust’; Kluge—Mitzka 1967:148 **dhwens-* and 778 **dheŷes-*; Kluge—Seebold 1989:160—161 **dhwen-s-*, **dhwes-* and 729 **dheus-*; Adams 1999:323 **d^heu(h_x)-* ‘to rise in the air (like dust)’; Van Windekens 1976—1982.I:519 **dheu-*; Kloekhorst 2008b:895; Fraenkel 1962—1965.I:110; Smoczyński 2007.1:132; Derksen 2008:132 and 2015:145 **d^huH-mó-*.

- C. Yukaghir (Southern / Kolyma) *tibo* (< **tywo*) ‘rain’, *tibo-* ‘to rain’, *tiba-* ‘to start raining’, (Northern / Tundra) *tiwe* ‘rain’, *tiwerej-* ‘to start raining’. Nikolaeva 2006:440.
- D. Proto-Gilyak / Nivkh **duj-* ‘dust; dusty’: Amur *tui-dv* ‘(to be) dusty’; North Sakhalin *tuju-d* ‘dusty’; East Sakhalin *tujud* / *tujur* ‘dust’, *tuja-d* ‘to be dusty’. Fortescue 2016:46.

Buck 1949:1.83 smoke (sb.); 3.11 animal; 4.51 breathe; breath; 10.26 shake (vb. tr.); 10.38 blow (vb. intr.); 16.11 soul, spirit; 16.43 rage, fury.

22.7. PROTO-NOSTRATIC *t^h

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
t ^h -	t-	t-	t-	t ^h -	t-	t ^h -	t-
-t ^h -	-t-	-t(t)-	-t-	-t ^h -	-t(t)-	-t ^h -	-t(t)-

194. Proto-Nostratic demonstrative stems:

- Proximate: *t^ha- (~ *t^hə-) ‘this’;
Intermediate: *t^hi- (~ *t^he-) ‘that’;
Distant: *t^hu- (~ *t^ho-) ‘that yonder’

- A. Proto-Afrasian *ta- demonstrative stem: Proto-Semitic *tā-/tā^ʔ- demonstrative stem > Arabic (m.) tī, (f.) tā ‘this’; Tigre (m.) tū, (f.) tā ‘this’. Egyptian (fem. sg. demonstrative and definite article) t’ ‘this, the’, (fem. sg. demonstrative adj.) tn ‘this’; Coptic t- [τ-], te- [te-] fem. sg. definite article, tai [tai] (fem. sg. of demonstrative pronoun) ‘this’. Hannig 1995:912 and 934; Faulkner 1962:292 and 299; Gardiner 1957:598 and 600; Erman—Grapow 1921:200, 206, and 1926—1963.5:211—212, 5:309; Vycichl 1983:208; Černý 1976:176 and 177. Berber: Tuareg demonstrative stem (f. sg.) ta ‘this’, (pl. ti); Ghadames (f. sg.) tu ‘this’ (pl. ti); Mzab (f. sg.) ta ‘this’, (pl. ti); Tamazight (f. sg.) ta, ti ‘this’, (pl. ti); Kabyle (f. sg.) ta ‘this’, (pl. ti). Also used as 3rd person verbal suffix: Tuareg (m. sg.) -t, (f. sg.) -tət, (m. pl.) -tən, (f. pl.) -tənət; Ghadames (m. sg.) -ət, -ətt, -itt, (f. sg.) -tət, -əttət, -ittət, (m. pl.) -tən, -əttən, -ittən, (f. pl.) -tənət, -əttənət, -ittənət. Beja / Bedawye (f. article) (sg.) tū (acc. sg. tō), (pl.) tā (acc. pl. tē). Reinisch 1895:220. Proto-East Cushitic *ta, (subj.) *tu/*ti fem. demonstrative pronoun stem > Burji (dem. f.) ta, (subj.) ci ‘this’; Somali (dem. f.) ta, (subj.) tu; Rendille ti fem. gender marker and connector; Galla / Oromo ta-, (subj.) tu-; Sidamo -ta, (subj.) -ti fem. article; Kambata (f. acc. sg. demon. det.) ta ‘this’; Hadiyya (f. acc. sg. demon. det.) ta ‘this’. Hudson 1989:151; Sasse 1982:175. Proto-Southern Cushitic (fem. bound demonstrative stem) *ta ‘this, that’ > Iraqw ti ‘this’; Burunge ti ‘this’, ta^ʔa (f.) ‘that’; K’wadza -(i)to, -(e)to fem. gender marker; Asa -(i)t(o), -(e)t(o) fem. gender marker; Ma’a -eta suffix on fem. nouns; Dahalo tá- in tá^ʔini (f.) ‘they’. Ehret 1980:289. Chadic: Hausa taa ‘she, her’. North Bauchi Chadic (Bu: / Zaranda) tí: (3rd sg. indep. pron.) ‘he’ (cf. Caron 2008:108).
- B. Proto-Dravidian reflexive pronoun: (sg.) *tān ‘self, oneself’, (pl.) *tām ‘they, themselves’: Tamil tān (obl. tan-; before vowels tann-) ‘oneself’, tānē ‘himself, only, just’; Malayalam tān (obl. tān-) ‘self, oneself’; Kota ta-n (obl. tan-/ta-) ‘oneself’; Toda to-n (obl. tan-) ‘oneself’; Kannada tān (obl. tan-) ‘he, she, it (in the reciprocal or reflexive sense)’; Koḍagu ta-ni

(obl. *tan-*) ‘oneself’; Telugu *tān* (obl. *tan-*) ‘one’s self, he or himself, she or herself’; Parji *tān* (obl. *tan-*) ‘self, oneself’; Gadba (Ollari) *tān* (obl. *tan-*) ‘self’ oneself’; Kuṛux *tān-* (obl. *taṅg-*) reflexive pronoun of the third person: ‘himself’. Burrow—Emeneau 1984:278, no. 3196. Tamil *tām* (obl. *tam-*; before vowels *tamm-*) ‘they, themselves; you’; Malayalam *tām* (obl. *tam-*, *tamm-*) ‘they, themselves; you’; Kota *ta-m* (obl. *tam-*) ‘themselves’; Toda *tam* (obl. *tam-*) ‘themselves’; Koḍagu *taṅga* (obl. *taṅga-*) ‘themselves’; Kannaḍa *tām* (obl. *tam-*), *tāvu* (obl. *tav-*) ‘they, themselves; you’; Telugu *tāmu* (obl. *tam-*, *tamm-*), *tamaru*, *tāru* ‘they, themselves; you’; Naikṛi *tām* ‘they, themselves’; Gadba (Ollari) *tām* (obl. *tam-*) ‘they, themselves’; Parji *tām* (obl. *tam-*) ‘they, themselves’; Kuṛux *tām-* (obl. *tam-*) ‘they, themselves’; Malto *tām*, *tāmi* (obl. *tam-*) ‘they, themselves’. Burrow—Emeneau 1984:275, no. 3162; Krishnamurti 2003:252—253 reflexive pronoun: (sg.) **tān*, (pl.) **tām*.

- C. Proto-Indo-European **tho-* demonstrative pronoun stem: Sanskrit *tād* ‘this, that’; Greek τό ‘this, that’; Latin (dem. pronoun or adj.) *is-te*, *is-ta*, *is-tud* ‘that of yours, that beside you’; Gothic *þata* ‘that’; Old Icelandic (n.) *þat* ‘that, it’; Norwegian *det* ‘that’; Swedish (m. and f.) *den*, (n.) *det* ‘the’; Danish *den*, *det* ‘that’; Old English *þæt* ‘that’; Old Frisian *thet* ‘that’; Old Saxon *that* ‘that’; Old High German (demonstrative pronoun) *dēr*, *diu*, *daz* ‘that’ (also used as a definite article and relative pronoun) (New High German *der*, *die*, *das* [definite article] ‘the’, [demonstrative pronoun] ‘that’, [relative pronoun] ‘who’); Lithuanian *tās* ‘this, that’; Tocharian A *tām* ‘this’, B *te* ‘this one, it’; Hittite *ta* sentence connective; Hieroglyphic Luwian *tas* ‘this’. Walde 1927—1932.I:742—743 **to-*, **tā-*; Pokorny 1959:1086—1087 **to-*, **tā-*, **tjo-* demonstrative pronoun stem; Mann 1984—1987:1406 **tod* neut. sg. of type **tos*, 1416 **tos*, **tā*, **tod* demonstrative pronoun; Watkins 1985:71 **to-* and 2000:92—93 **to-* demonstrative pronoun; Mallory—Adams 1997:457 (neuter) **tód* ‘that (one)’; Gamkrelidze—Ivanov 1984.I:384 **t[h]o-* and 1995.I:188, I:336 **tho-* demonstrative pronoun; Mayrhofer 1956—1980.I:465; Frisk 1970—1973.II:907 **to-*, **tā-*; Boisacq 1950:974 **to-*, **tā-*; Hofmann 1966:368—389 **to-*, **tā-*; Chantraine 1968—1980.II:1123; Beekes 2010.II:1491 **to-*, **teh₂-*; De Vaan 2008:310—311; Ernout—Meillet 1979:324; Walde—Hofmann 1965—1972.I:721—722 **to-*, **tā-*; Orël 2003:417—418 Proto-Germanic **þat*; Kroonen 2013:530 Proto-Germanic **þa-* ‘that, those’ (< **to-*); Feist 1939:490—491 **tod*; Lehmann 1986:356 (discourse particle) **to-*; De Vries 1977:606; Falk—Torp 1903—1906.I:101; Torp 1919:60—61; Onions 1966:914; Klein 1971:758; Boutkan—Siebinga 2005:392—393; Kluge—Mitzka 1967:122; Kluge—Seebold 1989:135—136; Adams 1999:303 **tod*; Van Windekens 1976—1982.I:421—422 **to-*; Fraenkel 1962—1965.II:1064—1065; Smoczyński 2007.1:661; Derksen 2015:459 Balto-Slavic **tos*.

- D. Proto-Uralic (demonstrative pronoun stem) *ta/*tä ‘this’: Finnish *tämä/tä-* ‘this’; (?) Estonian *tema, temä* ‘he, she, it’; Lapp / Saami *dat/da-* ‘this’, *deikē* (< *dekki) ‘hither’; Mordvin (Erza) *te*, (Moksha) *tē* ‘this’, (Erza) *tesē*, (Moksha) *t’asa* ‘here’, (Erza) *tite, teke*, (Moksha) *tite, t’aka* ‘(just) this’; Cheremis / Mari (West) *ti*, (East) *tə, tō* ‘this’; (?) Votyak / Udmurt *ta* ‘this’; (?) Zyrian / Komi *ta* ‘this’; Vogul / Mansi *te, ti, tə* ‘this’, *tet, tit, tət* ‘here’; Ostyak / Xanty *temi, tə-* ‘this’; Yurak Samoyed / Nenets *təm?* ‘this’, (pl.) *teew?* ‘these’; Selkup Samoyed *tam, tau, tap* ‘this’, *tēda?* ‘now’, *tii, teŋa, teka* ‘hither’; Kamassian *teeji* ‘hither’. Collinder 1955:62 and 1977:79; Rédei 1986—1988:505 *ta; Janhunen 1977b:144—145 *tā(-), 150 *tā-, 160—161 *ti(-), and 167 *tü(-); Décsy 1990:108 *ta/*tä ‘that, this’. Yukaghir (Southern / Kolyma) *taŋ* ‘that’, *ta:* ‘there, thence’, *ta:t* ‘so; then, thus’, *ten-di* ‘here it is; here’, *tēda* ‘there’, *tiŋ* ‘this’, *ti:* ‘here’, *tine* ‘recently, lately; earlier’, (Northern / Tundra) *taŋ* ‘that’, *tadaa* ‘there’, *ten* ‘this’, *teŋi* ‘here’, *tiŋ-, tieŋ* ‘this’. Nikolaeva 2006:424, 428, and 429—430.
- Proto-Uralic (demonstrative pronoun stem) *to- ‘that’: Finnish *tuo* ‘that, yonder’; Lapp / Saami *duot-/duo-* ‘that (one) over there, that ... over there, that’; Mordvin *tona, to-* ‘that’; Cheremis / Mari (East) *tu* ‘that’; Votyak / Udmurt *tu* ‘that’; Zyrian / Komi *ty* ‘that’; Vogul / Mansi *ton, to-* ‘that’; Ostyak / Xanty *tōmi, tomi, tōm, tō-* ‘that’; Hungarian *tova* ‘away’, *túl* ‘beyond, on the further side; exceedingly, too’; Yurak Samoyed / Nenets *taaky* ‘that, yonder’, *taaj* ‘there’; Yenisei Samoyed / Enets *tohonoo* ‘that (one) there’; Selkup Samoyed *to* ‘this’. Collinder 1955:64, 1965:146, and 1977:81; Joki 1973:330—331; Rédei 1986—1988:526—528 *to; Décsy 1990:109 *to ‘those’. Yukaghir (Northern / Tundra) *tuŋ* ‘this’, *tuŋun, tuŋut* ‘this’. Nikolaeva 2006:437.
- E. Proto-Altaic *t^ha (*t^he) ‘that’: Proto-Tungus *ta- ‘that’ > Manchu *tere* ‘that’; Spoken Manchu (Sibo) *terə* ‘that’; Evenki *tar, tari* ‘that’; Lamut / Even *tar* ‘that’; Negidal *tay* ‘that’; Oroch *tari* ‘that’; Nanay / Gold *taya* ‘that’; Udihe *tāwū, tī* ‘that’; Oroch *tī, tei* ‘that’; Solon *tayā, tari* ‘that’. Common Mongolian (sg.) *te, *te-r-e ‘that’ > Written Mongolian (sg.) *tere* ‘that’, (pl.) *tede* ‘those’; Dagur (sg.) *tere* ‘that’, (pl.) *tede* ‘those’; Moghol (sg.) *tē* ‘that’; Ordos (sg.) *tere* ‘that’, (pl.) *tede* ‘those’; Khalkha (sg.) *ter* ‘that’; Monguor (sg.) *te* ‘that’; Buriat (sg.) *tere* ‘that’, (pl.) *tede* ‘those’; Kalmyk (sg.) *terə* ‘that’. Poppe 1955:225, 226, 227, and 228. Proto-Turkic *ti(kü)- ‘that’ > Gagauz *te bu* ‘this here’, *te o* ‘that there’; Tatar *tēgē* ‘that’; Bashkir *tege* ‘that’; Kirghiz *tigi* ‘that’; Kazakh (dial.) *tigi* ‘that’; Tuva *dō* ‘that’; Yakut *i-ti* ‘that’ (pl. *itiler* ‘those’); Dolgan *i-ti* ‘this’. Starostin—Dybo—Mudrak 2003:1389 *t’a (*t’e) ‘that’.
- F. (?) Proto-Gilyak / Nivkh *ta- ‘where’: Amur *řa-r / řa-n* ‘where’; East Sakhalin *taŋx* ‘where’; South Sakhalin *řak- / tak-* ‘where’. Fortescue 2016: 144. (?) Proto-Gilyak / Nivkh *tant ‘which’: Amur *řad* ‘which (of them)’; East Sakhalin *t^had* ‘which’; (?) South Sakhalin *tan / tand* ‘that’. Fortescue 2016:146. (?) Proto-Gilyak / Nivkh *taŋz or *taŋr ‘how much’: Amur *řaŋs*

‘how much’, *řaŋslu* / *řaŋzlu* ‘some’ (West Sakhalin Amur *řaŋzlu* / *thāŋzlu* ‘some’); North Sakhalin *řaŋspaklu* ‘some’; East Sakhalin *thāŋs* ‘how much’, *thāŋzlu* / *thāgzlu* / *thāŋřak* ‘some’. Fortescue 2016:146. (?) Proto-Gilyak / Nivkh **tunt* ‘what’: North Sakhalin *ru-t* / *řu-d* ‘what’; East Sakhalin *ru-(n)t* ‘what’; South Sakhalin *ru-nt* / *lu-nt* ‘what’. Fortescue 2016:152. Assuming semantic development as in Old High German (demonstrative pronoun) *dēr*, *diu*, *daz* ‘that’ (also used as a definite article and relative pronoun) (New High German *der*, *die*, *das* [definite article] ‘the’, [demonstrative pronoun] ‘that’, [relative pronoun] ‘who’), cited above.

G. Etruscan *ita*, *eta*, *ta* (*tal*, *tl*, *tei*) ‘this’; *θar* ‘there’; *θui* ‘here, now’.

Greenberg 2000:94—99; Möller 1911:242; Bomhard—Kerns 1994:287—289, no. 103; Dolgopolsky 2008, no. 2310, **tā* demonstrative pronoun of non-active (animate) objects (without distance opposition [proximate ↔ intermediate ↔ distal]); Fortescue 1998:158.

195. Proto-Nostratic root **thāh-* (~ **thəh-*):

(vb.) **thāh-* ‘to reduce, to diminish, to wear away, to lessen; to waste away, to grow thin’;

(n.) **thāh-a* ‘wear, decay, dissipation, maceration’

A. Afrasian: Egyptian *thš* ‘to grind (grain)’. Hannig 1995:938; Erman—Grapow 1926—1963.5:323.

B. Dravidian: Tamil *tēy* (-v-, -nt-) ‘to wear away by friction, to be rubbed, to wane (as the moon), to waste away (as oil in a lamp), to be emaciated, to grow thin, to become weakened, to pass away (time), to be effaced, to be erased, to be obliterated, to be destroyed, to die’, *tēy* (-pp-, -tt-) ‘to rub, to rub away, to waste by rubbing, to reduce, to destroy, to pare, to shave, to rub in (ointment)’, *tēyṟu* ‘wearing away, lessening, abrasion, diminution, emaciation, decay, decline’; Malayalam *tēyuka* ‘to be rubbed off, to be worn out, to waste’, *tēkkuka* (*tēcc-*) ‘to rub, to smear, to clean, to polish, to sharpen’; Kota *te-y-* (*te-c-*) ‘to become worn down, lean; to rub, to wear down (tr.)’, *te-v-* ‘leanness’; Kannada *tē*, *tēy(u)* ‘to grind, to triturate or macerate in water on a slab, to waste by use, to wear away (as a metal vessel), to be chafed or galled (as the foot)’; Koḍagu *te-y-* (*te-yuv-*, *te-ñj-*) ‘to wear off (intr.)’; Tuḷu *tēpuni* ‘to rub, to polish’, *tēpu* ‘rubbing, whetting, polishing (as a precious stone)’, *tēduni* ‘to grind, to macerate’; Telugu *tēgaḍa* ‘worn out, wasted’, *tēyṟu* ‘to be worn, wasted; (n.) wear by use, handling, or rubbing’. Burrow—Emeneau 1984:303, no. 3458. Tamil *tēmpu* (*tēmpi-*) ‘to fade, to wither, to droop, to be tired, to faint, to grow thin, to be emaciated, to be in trouble, to suffer, to perish’, *tēmpal* ‘fading, being faded, reduced or diminished state, difficulty, faded flower’;

Malayalam *tēmpuka* ‘to waste, to grow thin’. Burrow—Emeneau 1984:303, no. 3457.

- C. Proto-Kartvelian **du-tx*- ‘thin’ (according to Schmidt [1962:116], **du-* is a prefix): Georgian *txeli* (< **ttxeli* < **du-tx-eli*) ‘thin, diluted’; Mingrelian *txitxu* (assimilated from **ti-txu* < **tu-txu* < **du-txu*) ‘thin, diluted’; Laz *tutxu* ‘thin, diluted’; Svan *dətxel* (< **dtx-el-*) ‘thin; rare, scarce’. Fähnrich—Sardshweladse 1995:108—109 **dtx-*; Klimov 1964:93—94 **ttxel-* and 1998:70 **ttx-* ‘to be thin’, 1998:71 **ttx-el-* ‘thin, sparse’; Schmidt 1962:116; Fähnrich 2007:138—139 **dutx-*.
- D. Proto-Indo-European **t^he^hh-* [**t^ha^hh-*] > **t^hā-* (**t^hā-y-*, **t^hā-w-*) ‘to melt, to dissolve’: Greek τίκω (Doric τᾰκω) ‘to melt, to melt down, to dissipate; (metaph.) to cause to waste or pine away’; Latin *tābēs* ‘wasting away, decay, melting’, *tābum* ‘corrupt moisture, matter’, *tābeō* ‘to waste away, to be consumed’, *tābescō* ‘to melt, to waste away, to be consumed’; Armenian *t^hanam* ‘to moisten’; Welsh *tawdd* ‘melting, molten’; Old Icelandic *pána* ‘to thaw’, *pá* ‘thawed ground’, *þeyja* ‘to thaw; (metaph.) to cease’, *þeyr* ‘thaw’, *þíða* ‘to melt, to thaw’, *þíðr* ‘not ice-bound, thawed’, *þípinn* ‘thawed, free from ice’, *þiðna* ‘to thaw, to melt away’; Norwegian *tøya* ‘to thaw’, *tøyr* ‘thaw’, *tidna*, *tina* ‘to thaw out’; Swedish *töa* ‘to thaw’, *tö* ‘thaw’, *tina* ‘to thaw out’; Danish *tø* ‘to thaw’, *tø* ‘thaw’, *tine* ‘to thaw out’; Old English *pān* ‘moist, irrigated’, *pānan* ‘to moisten’, *pānian*, *pānian* ‘to be or become moist’, *pāesma* ‘leaven, yeast’, *pāwian* ‘to thaw’, *pawenian* ‘to moisten’, *pīnan* ‘to become moist’, *þwīnan* ‘to dwindle’, *þwēnan* ‘to moisten, to soften’; Middle Low German *dōien*, *douwen* ‘to thaw’; Dutch *dooien* ‘to thaw’, *dooi* ‘thaw’; Old High German *douwen*, *dōan*, *dewen* ‘to thaw’ (New High German *tauen*); Old Church Slavic *tajō*, *tajati* ‘to thaw, to melt’; Russian *tályj* [талый] ‘thawed, melted’. Rix 1998a:560 **teh₂-* ‘to thaw, to melt’; Pokorny 1959:1053—1054 **tā-*, **tə-*; **tāi-*, **təi-*, **tī-*; [**tāu-*], **təu-*, **tū-* ‘to melt’; Walde 1927—1932.I:701—703 **tā-*, **tə-*; **tāi-*, **təi-*, **tī-*; [**tāu-*], **təu-*, **tu-*; Mann 1984—1987:1365 **tābh-* (?) ‘rot, corruption, stench’, 1366 **tājō* ‘to thaw, to melt, to liquefy’, 1367 **tāl-* ‘to ooze, to flow’, **tāləyos* ‘seepage, pus, matter’, 1369 **tāt-* ‘molten; melting, liquescence’, 1370 **tāūjō* ‘to melt, to dissolve’; Watkins 1985:69 **tā-* (extended form **tāw-* in Germanic) and 2000:89 **tā-* ‘to melt, to dissolve’ (oldest form **te₂-*, colored to **ta₂-*, contracted to **tā-*) (extended form **tāw-*); Mallory—Adams 1997:378 **teha-* ‘to melt’; Hofmann 1966:363—364 **tā-*, **tāi-* (**təi-*, **tī-*; cf. also **tāu-* in Old High German *douwen*); Boisacq 1950:965—966 **tā(i)-*, **təi-*, **tī-* beside **tā(u)-*, **təu-*, **tū-*; Frisk 1970—1973.II:891; Chantraine 1968—1980.II:1113 **te₂-*/**tā₂-*; Beekes 2010.II:1477 **teh₂-*; Walde—Hofmann 1965—1972.II:639—640 **tā-* : **tāi-*, **təi-*, **tī-* : **tāu-*, **təu-*, **tū-*; De Vaan 2008:603—604 **teh₂-b^h-eh₁-* ‘to be melting’; Ernout—Meillet 1979:672 **tā-*; Orël 2003:418 Proto-Germanic **pawanōjanan*, 418 **pawiz*, 418 **pawjanan*, 432 **þwīnanan*; Kroonen 2013:556 Proto-

Germanic **pwīnan-* ‘to abate, to disappear’; De Vries 1977:605, 609—610, and 610; Falk—Torp 1903—1906.II:365 and II:399—400; Torp 1919:831; Onions 1966:914; Klein 1971:758 **tā-*, **tu-*; Kluge—Mitzka 1967:773 **tā-*; Kluge—Seebold 1989:723 **tā-*; Derksen 2008:489 **teh₂-*.

Buck 1949:12.65 thin (in dimension); 12.66 thin (in density). Bomhard—Kerns 1994:295—297, no. 111. Different (false) etymology in Dolgopolsky 2008, no. 2408, **tVqa* ‘to melt, to decay, to get spoiled’.

196. Proto-Nostratic root **thakh-* (~ **thəkh-*):

(vb.) **thakh-* ‘to twist, to bend; to fasten, twist, bend, join, or hook together; to be twisted, bent’;

(n.) **thakh-a* ‘hook, peg’

- A. Afrasian: Proto-Semitic **tak-al-* ‘to fix, to fasten; to drive in, to plant’ > Geez / Ethiopic *takala* [ጥሐል] ‘to fix, to fasten, to implant, to drive in, to set up, to establish, to pitch (a tent), to drive a stake into the ground’, *təklāt* [ጥሐላት] ‘planting, fastening, pitching a tent’, *matkal* [መጥሐል], *matkāl* [መጥሐል] ‘peg, stake, nail, hook, pin, post’; Tigre *tākla* ‘to plant, to pitch (a tent)’; Tigrinya *täkkälä* ‘to plant’; Amharic *täkkälä* ‘to plant’, *čäkkälä* ‘to drive a peg into the ground’; Gurage *täkkälä* ‘to plant, to found’, *čäkkälä* ‘to drive a peg into the ground’, *čəkal* ‘peg’; Argobba *tekkäla* ‘to plant’, *čəkal* ‘peg’; Gafat *täkkälä* ‘to plant, to set up, to establish’; Harari *čəxäla* ‘to build’, *čuxul* ‘built, style of building’, *čəxäl* ‘peg’. Leslau 1956:241, 1963:49—50, 1979:172 and 594, and 1987:573. North Bauchi Chadic (Bu: / Zaranda) *tákäl* (n.) ‘plait’ (cf. Caron 2008:107).
- B. Dravidian: Tamil *takai* (-v-, -nt-) ‘to stop, to resist, to check, to deter, to obstruct, to forbid by oath, to seize, to take hold of, to overpower, to subdue, to shut in, to enclose, to include, to bind, to fasten, to yoke’, *takai* (-pp-, -tt-) ‘to check, to resist, to stop, to deter, to bind, to fasten’, *takai* ‘binding, fastening, garland, obstruction, check, hindrance, coat of mail’, *takaippu* ‘surrounding wall, fortress, palatial building, section of house, apartment, battle array of an army’; Kannada *taga*, *tagave*, *tagahu*, *tage* ‘delay, obstacle, hindrance, impediment’, *tage* ‘to stop, to arrest, to obstruct, to impede, to stun’, *tagar* ‘to be stopped or impeded, to impede’. Burrow—Emeneau 1984:260, no. 3006.
- C. Proto-Indo-European **thekh(s)-*/**thokh(s)-* ‘to form, to fashion, to make, to create, either by using a sharp tool or by bending, weaving, joining, braiding, or plaiting together’: Sanskrit *tákṣati* ‘to form by cutting, to plane, to chisel, to chop, to fashion, to make, to create’, *tákṣan-* ‘a wood-cutter, carpenter’; Pāli *tacchati* ‘to build’, *tacchēti* ‘to do woodwork, to chip’, *tacchanī-* ‘hatchet’, *tacchaka-* ‘carpenter’; Prakrit *takkhaī*, *tacchāī* ‘to cut, to scrape, to peel’; Avestan *tašaiti* ‘to produce, (carpenter) to make’, *taša-* ‘axe’; Ossetic *taxun* ‘to weave’; Latin *texō* ‘to weave, to

build'; Greek τέκτων (< *τέκστων) 'carpenter', τέχνη (< *τέκσνᾱ) 'art, craft'; Armenian *tʰekʰem* 'to bend, to shape'; Old Irish *tál* (< *tōks-lo-) 'axe'; Old Icelandic *þexla* 'adze'; Old High German *dehsa*, *dehsala* 'axe, poleaxe' (New High German *Dechsel*); Lithuanian *tašaũ*, *tašyti* 'to hew'; Old Church Slavic *tešq*, *tesati* 'to hew'; Russian Church Slavic *tesla* 'carpenter's tool, adze'; Hittite (3rd sg. pres.) *ták-ki-(e)-eš-zi* 'to join, to build'. Rix 1998a:562—563 *tek- 'to weave, to plait'; Pokorny 1959:1058 *tek- 'to weave, to plait', 1058—1059 *teḱp- 'to plait'; Walde 1927—1932.I:716 *teq-, I:717 *teḱp-; Mann 1984—1987:1374 *teḱslos, -ā, -is (*teḱsəl-) 'shape; carving; shaper, adze', 1374 *teḱsmn-, *teḱsmō(n), (*teḱsm-) 'shaped object', 1374 *teḱsō, -iō (*tōks-) 'to shape, to carve, to form, to model, to make', 1374 *teḱsos, -ā 'shaped material, carving; carver, shaper, carpenter', 1374—1375 *teḱstos, -ā, -om 'shaped; shaped object, carving'; *teḱstis 'act of shaping', 1409 *tōksejō 'to work, to shape, to cultivate', 1409 *tōksos 'gear, tackle, tool, tools, model', 1409 *tōksilā (*tōkslā, *tōksul-) 'shaping, shape, carving, composition', 1409 *tōkstos 'shaped, carved; carving, shape, model'; Watkins 1985:69 *teks- and 2000:89—90 *teks- 'to weave, to fabricate, especially with an ax'; Gamkrelidze—Ivanov 1984.II:705—706 *t[^h]eḱ[^h]s- and 1995.I:611, I:734, I:780 *tʰeḱʰs- 'to manufacture, to prepare, to produce; to weave, to braid; to work (something) (primarily wood with a sharp tool or adze); to mold, to model (in clay)'; Mallory—Adams 1997:37—38 (?) *teḱso/eha-, *teḱsleh-a- 'ax, adze', *teḱs- 'to fabricate', 139 *teḱs-(t)or/n- 'one who fabricates', 443 *teḱsteh-a- 'plate, bowl'; Burrow 1973:83 *teks-tōn (> Greek τέκτων); Mayrhofer 1956—1980.I:468; Boisacq 1950:950—951 *teḱp-; Hofmann 1966:357 *teḱp-; Frisk 1970—1973.II:867—868 and II:889—890; Chantraine 1968—1980.II:1100 *teks- and II:1112; Beekes 2010.II:1460 *te-tḱ-n- and II:1476 *teḱ-, *te-tḱ-; De Vaan 2008:619; Walde—Hofmann 1965—1972.II:678—679; Ernout—Meillet 1979:690; Orël 2003:419 Proto-Germanic *þexsanān, 419 *þexs(a)lōn; De Vries 1977:609; Kluge—Mitzka 1967:124; Kluge—Seebold 1989:130 *teks-; Fraenkel 1962—1965.II:1065 *teḱs-; Smoczyński 2007.1:661 *tetḱ-; Derksen 2008:491 *tetḱ- and 2015:459 *tetḱ-; Kloekhorst 2008b:813—814. Note: Two separate Proto-Nostratic roots have fallen together in Proto-Indo-European: (1) *tʰiḱʰ- (~ *tʰeḱʰ-) 'to form, to fashion, to make, to create' and (2) *tʰaḱʰ- (~ *tʰəḱʰ-) '(vb.) to twist, to bend; to fasten, twist, bend, join, or hook together; to be twisted, bent; (n.) hook, peg'.

- D. Proto-Uralic *takka- 'to fasten, hook, or stick together; to be or become stuck': Finnish *takkala* 'adhesive state of the snow, so that it "cakes" and sticks to the skis or the runners', *takero* 'sticky, thick mass', *takalta*-, *takelta*-, *takerta*- 'to stick to something (of snow)', *takistele*- 'to cling, to hang on, to catch at something; to fasten a quarrel on to somebody', *takeltu*-, *takertu*-, *takistu*- 'to get stuck, to stick, to fasten'; Lapp / Saami *dakkstállâ*- 'to stick to something' (Finnish loan); Zyrian / Komi *takal*- 'to

sink down, to stick, to get stuck'; Vogul / Mansi *tah-* 'to get stuck'; Ostyak / Xanty *tāhərt-* 'to hook, to hitch, to button; to hang, to hang up; to stick (fast), to get stuck'; Selkup Samoyed *tokuat-*, *t'okuat-* 'to get stuck'. Collinder 1955:61 and 1977:78; Rédei 1986—1988:507 **takka-* and 507—508 Proto-Finno-Ugrian **takk3(-r3-)*; Décsy 1990:109 **taka* 'to hang, to stick to, to get stuck'.

- E. Eskimo: Proto-Yupik **taquq* 'braid' > Alutiiq Alaskan Yupik *taquṭquq* 'cheek'; Central Alaskan Yupik *taquq* 'braid'; Naukan Siberian Yupik *taqu* 'braid'; Sirenik *taquXta* 'braid'; Central Siberian Yupik *taquq* 'side of face', *taquXtə-* 'to braid hair'. Fortescue—Jacobsen—Kaplan 1994:332.

Buck 1949:6.33 weave; 9.14 bend (vb. tr.); 9.44 build; 9.75 plait; 12.75 hook. Hakola 1997:85, no. 331, and 2000:184, no. 822.

197. Proto-Nostratic root **thak'-* (~ **thək'-*):

(vb.) **thak'-* 'to touch, to push, to strike';

(n.) **thak'-a* 'touch, stroke'

- A. Afrasian: Proto-East Cushitic **-tak'-*/**-tuk'-* 'to touch, to push, to strike' > Rendille *tax-* 'to push'; Dasenech *taʔ-* 'to push'; Galla / Oromo *tuk'-* 'to touch'; Burji *tayk'-* 'to break (of a rope, string, or thread)'; Sidamo (causative) *taʔ-is-* 'to break'; Afar *-ootok-* 'to strike'. Sasse 1979:48 and 1982:177, 181. Appleyard (2006:84) also compares the following: Bilin *ṭāʕamb-* 'to hit, to strike'; Xamir *taz-/ṭaz-* 'to hit, to strike'; Kemant *tay-* 'to hit, to strike'; Awngi / Awiya *tas-* 'to hit, to strike'. Reinisch 1887:346.
- B. Dravidian: Kannada *tagalu*, *tagilu*, *tagulu* 'to come into contact with, to touch, to hit, to have sexual intercourse with'; Tuḷu *tagaruni* 'to draw near'; Telugu *tagulu*, *tavulu* 'to touch, to come into contact with; to strike against; to follow; to pursue; to be entangled, ensnared, or caught'; Konḍa *tagli* 'to touch, to hit'; Malto *take* 'to touch, to hurt'; Kuṛux *taknā* 'to rub or graze in passing, to give a very slight knock'. Burrow—Emeneau 1984:259—260, no. 3004.
- C. Proto-Indo-European **thak'-* 'to touch, to strike, to push, to stroke': Latin *tangō* 'to touch, to strike, to push, to hit' (Old Latin *tagō* 'to touch'); Greek *τεταγών* 'having seized'; Old English *þaccian* 'to pat, to stroke'. Rix 1998a:560 **teh₂g-* 'to touch'; Pokorny 1959:1054—1055 **tag-* 'to touch, to seize'; Walde 1927—1932.I:703—704 **tag-*; Mann 1984—1987:1365 **tāgō*, *-ejō*, *-jō* 'to touch, to caress'; Gamkrelidze—Ivanov 1984.I:424 and 1995.I:371; Watkins 1985:69 **tag-* and 2000:89 **tag-* 'to touch, to handle'; Mallory—Adams 1997:595 **tag-* 'to touch'; Boisacq 1950:961; Frisk 1970—1973.II:884; Hofmann 1966:361 **tag-*; Chantraine 1968—1980.II:1109; Beekes 2010.II:1472 **teh₂g-*; Walde—Hofmann 1965—1972.II:647—648; Ernout—Meillet 1979:676 **tēg-*, **təg-*; De Vaan 2008: 606—607.

Sumerian *tag* ‘to touch’.

Buck 1949:15.71 touch (vb.). Bomhard—Kerns 1994:283—284, no. 100. Different etymology in Dolgopolsky 2008, no. 2335, **taka|æ* (or **toka* ?) ‘to touch’.

198. Proto-Nostratic (n.) **t^hal-a* ‘head, top, end’:

- A. Afrasian: Central Chadic: Musgoy *tálq* ‘head’; Daba *tala* / *tàlân* ‘head’; Kola *tálân* ‘head’. Jungrathamyr—Ibrizimow 1994.II:182—183.
- B. Dravidian: Tamil *talai* ‘head, top, end, tip, hair’, *talaimai* ‘leadership, pre-eminence’, *talaivan* ‘chief, headman, lord’; Malayalam *tala* ‘head, top, point, extremity’; Kota *tal* ‘head, top, above, superior’, *talp* ‘end’; Toda *tal* ‘head, end, edge’; Kannada *tale*, *tala* ‘head, being uppermost or principal’; Kodagu *tale* ‘end’; Telugu *tala* ‘head, hair of the head, top, end, front, place, side, quarter’; Kolami *tal* ‘head’; Naikri *tal* ‘head’; Parji *tel* ‘head’; Gadba (Ollari) *tal* ‘head’; Konḍa *tala* ‘head’; Kui *tlau* ‘head, hair of head’; Malto *tali* ‘hair of head’. Burrow—Emeneau 1984:269—270, no. 3103; Krishnamurti 2003:121 **tal-ay* ‘head, hair, top’.
- C. Proto-Indo-European **t^hlH-* ‘head, top, end; headman, chief’: Old Irish *taul* (stem **talū-*) ‘forehead; boss’, *taulach*, *taulaig* ‘hill’; Welsh *tal* (< **talos*) ‘forefront, front, end’; Old Breton *tal* ‘forehead’; Gaulish *-talos* in the personal name *Cassi-talos* and *Argio-talus*. Mann 1984—1987:1394 **təl-* ‘height, peak, point’; Patrizia de Bernardo Stempel 1987:146 **t^hlH-o-*; Thurneysen 1946: 52; Matasović 2009:367 Proto-Celtic **talū-* ‘front, forehead’; Falileyev 2000:144 Proto-Indo-European **tel(u)-*.

Buck 1949:4.20 head; 4.205 forehead; 12.35 end. Burrow 1946:72; Caldwell 1913:620; Bomhard—Kerns 1994:294, no. 109; Dolgopolsky 2008, no. 2357, **tol̥A(-kV)* or **tal̥V(-kV)* ‘head, top, upper part, end, tip’.

199. Proto-Nostratic root **t^halv-* (~ **t^həlv-*):

- (vb.) **t^halv-* (primary meaning) ‘to stretch, to spread, to extend’, (secondary meaning) ‘to endure, to suffer, to bear’;
- (n.) **t^halv-a* ‘stretch, spread, thinness, breadth; pain, suffering, endurance’; (adj.) ‘stretched, spread out, extended’ (> ‘broad, wide, thin, flat, etc.’)
- A. Dravidian: Tamil *tālu* (*tāli-*) ‘to bear, to suffer, to tolerate, to be worth, to be possible, to be practicable’; Kannada *tāl*, *tālu* (*tāld-*) ‘to hold, to take, to obtain, to get, to assume, to receive, to have or possess, to undergo, to experience, to suffer patiently or quietly, to be patient, to endure, to wait, to last, to continue unimpaired, to wear well, to bear with’, *taḷe* ‘to hold, to bear, to carry; to put on (clothes)’; Tuḷu *tāluni* ‘to bear, to endure, to suffer, to forbear, to have patience’, *tālmè* ‘patience, forbearance, endurance’;

Telugu *tālu* ‘to bear, to suffer, to endure, to be patient, to refrain, to pause, to wait, to last, to wear, to be durable’, *tālimi*, *tāḷimi*, *tāḷika* ‘patience, endurance’. Burrow—Emeneau 1984:277, no. 3188. (?) Kannada *teḷ*, *teḷu* ‘thinness, fineness, delicateness, smallness’, *teḷḷage*, *teḷḷane*, *teḷḷanna*, *teḷḷāna*, *teḷḷāne* ‘thin, delicate; thinly; thinness, diluted state’, *teḷupu*, *teḷpu*, *teḷuvu* ‘thinness, delicateness, fineness; diluted, watery state’, *teḷḷitu*, *teḷḷittu* ‘that is thin’, *teḷḷida* ‘thin or delicate man’; Koḍagu *teḷḷane* ‘thin (of a person or thing)’; Tuḷu *teḷpu* ‘thinness; thin, lean; few, a little’, *tellena* ‘thinnish’, *tellavu*, *tellāvu* ‘thin flat cake’, *teḷuṇṭuni*, *teḷuṇṭuni*, *teḷuṇṭuni* ‘to contact, to shrivel, to wither, to grow thin’. Burrow—Emeneau 1984:301, no. 3434.

- B. Proto-Indo-European **^hel-/^hol-/^hl-* ‘to stretch, to extend; to bear, to endure, to suffer’: Greek *τλῆναι* ‘to suffer, to endure, to bear’; Latin *tolerō* ‘to bear, to tolerate, to endure, to sustain’, *lātus* (< **tlā-*) ‘broad, wide’; Middle Irish *tláith* ‘tender, weak’; Welsh *tlawd* ‘poor’; Gothic *þulan* ‘to tolerate, to suffer, to endure’; Old Icelandic *þola* ‘to bear, to endure, to suffer’; Old English *þolian* ‘to endure, to suffer’, *geþyld* ‘patience’, *geþyld(i)gian*, *geþyldian* ‘to bear (patiently), to endure’; Old Frisian *tholia* ‘to endure, to bear, to suffer’, *thelda* ‘to endure, to bear, to suffer’; Old Saxon *tholōn*, *tholian* ‘to endure, to bear, to suffer’; Old High German *dolēn*, *t(h)olēn*, *tholōn* ‘to endure, to bear, to suffer’, *thulten*, *dulten* ‘to endure, to bear, to suffer’ (New High German *dulden*). Rix 1998a:565—566 **telh₂-* ‘to lift, to raise, to be picked up’; Pokorny 1959:1060—1061 **tel-*, **telā-*, **tlē(i)-*, **tlā-* ‘to lift up, to weigh, to balance’; Walde 1927—1932.I:738—740 **tel-*; Mann 1984—1987:1375 **tel-* (**telō*, *-iō*) ‘to stretch, to extend, to expand’, 1401 **tlātos* (**tltos*, *-is*) ‘suffered, borne; suffering’, 1401 **tltō* (**tltō*; **tālō*, *-iō*) ‘to lift, to raise, to bear, to suffer’, 1402 **tltnō*, 1402 **tltos*, *-is*, *-ios* ‘extended, stretched; extent, tract, roadway, passage’; Watkins 1985:69 **telā-* and 2000:90 **telā-* ‘to lift, to support, to weigh’; Gamkrelidze—Ivanov 1984.I:176 **t^hel-*, **t^hl-* and 1995.I:152 **^hel-*, **^hl-* ‘to bear, to carry’; Mallory—Adams 1997:352 **telh₂-* ‘to lift, to raise’; Boisacq 1950:938—939 **telā-*; Chantraine 1968—1980.II:1088—1090 **tel₂-*; Beekes 2010.II:1445—1556 **telh₂-*, II:1445, and II:1446—1447 **telh₂-*; Frisk 1970—1973.II:848—849; Hofmann 1966:350—351 **tel-*; Ernout—Meillet 1979:693 and 694 **telā-*; Walde—Hofmann 1965—1972.II:688—689; De Vaan 2008:329—300 and 621—622 **telh₂-*; Orël 2003:428 Proto-Germanic **pulēnan*; De Vries 1977:615; Feist 1939:504—505 **telā-*; Lehmann 1986:367; Onions 1966:918 **tol-*, **tel-*, **tlt-*; Klein 1971:762 **tel-*, **tol-*, **tlt-*; Boutkan—Siebinga 2005:402—403; Kluge—Mitzka 1967:146 **tel-*, **tlt-*; Kluge—Seebold 1989:159. Note: Two separate Proto-Nostratic stems have been confused in Proto-Indo-European: (A) Proto-Nostratic **^halv-* (~ **^həlv-*) (primary meaning) ‘to stretch, to spread, to extend’, then (secondarily) ‘to endure, to

suffer, to bear' and (B) Proto-Nostratic *t^hul- (~ *t^hol-) '(vb.) to lift, to raise; to pile up, to stack (in a heap); (n.) hill, mound; stack, heap'.

- C. Proto-Altaic *t^hālV 'any flat, level, or open surface or space': Proto-Mongolian *tala-, *tal-b- 'plain, steppe, open space' > Mongolian *tal-a* 'plain, level space, steppe', *talarqay* 'flat, level (of terrain)', *talbiyu(n)* 'broad, wide, vast; gentle, calm'; Khalkha *tal* 'steppe, open place', *talbiu(n)* 'quiet, peaceful', *talbay* 'square'; Buriat *tala* 'steppe, open place', *talān* 'meadow, small lake', *talma* 'meadow, square'; Kalmyk *talə* 'steppe, open place'; Ordos *tala* 'steppe, open place'; Dagur *tal* 'steppe, open place'; Monguor *talā* 'steppe, open place'. Proto-Tungus *tālgi- 'flat surface, open space' > Manchu *talgan* 'the surface of a flat, round, or square object', *talgar* 'the surface of a table'; Nanay / Gold *talgia* 'far from the shore, open sea'. Turkish *taşı-* 'to carry, to transport, to bear', *taşın-* 'to be carried'. Starostin—Dybo—Mudrak 2003:1396—1397 *t'ālV (or *t'ālV) 'open place, open sea' (the Turkish form cited above is not in Starostin—Dybo—Mudrak).
- D. Proto-Gilyak / Nivkh *təl(v)- 'far': Amur t^hə-dv / t^həlf 'far'; North Sakhalin t^həlf 'far'; East Sakhalin t^həla-d / t^həlf 'far'; South Sakhalin tu-nt / təlf 'far'. Fortescue 2016:154.

Sumerian *tāl* 'to be or make wide, broad; to spread wide'.

Buck 1949:10.22 raise, lift; 12.44 far (adv.); 12.61 wide, broad' 12.65 thin (in dimension); 12.71 flat. Bomhard—Kerns 1994:282—283, no. 98; Dolgopolsky 2008, no. 2360, *tālV 'flat' and, no. 2370, *tāl[h]a 'to lift up, to carry'.

200. Proto-Nostratic root *t^halV- (~ *t^həlv-):

(vb.) *t^halV- 'to press, to thrust, to force, to push';

(n.) *t^halV-a 'pressure, thrust, force, push'

- A. Dravidian: Tamil *tallu* (*talli-*) 'to push, to force forward, to shove away, to expel, to reject, to dismiss, to be removed, to be lost, to fall'; Malayalam *talluka* 'to push, to thrust, to reject, to cast off', *tallal* 'pushing, rejection', *tallu* 'thrust, push'; Kota *tal-* (*tayl-*) 'to push'; Toda *tol-* (*tohy-*) 'to push'; Kannaḍa *tallu* 'to push, to shove away, to thrust, to drive, to throw, to reject, to dismiss, to heave'; Tuḷu *talluni*, *talluni* 'to push in, to press through'; Telugu *talāgu*, *talgu*, *talūgu* 'to be lost or removed'. Burrow—Emeneau 1984:272—273, no. 3135.
- B. Proto-Kartvelian *tel- 'to press': Georgian *tel-* 'to press, to tread down, to crush'; Mingrelian *tal-* 'to press, to tread down, to crush'; Svan *tel-/tl-* 'to press, to touch'. Fähnrich 2007:191—192 *tel-; Fähnrich—Sardshweladse 1995:159 *tel-; Klimov 1984:92 *tel- and 1998:68 *tel- : *tl- 'to trample, to tighten'.

- C. Proto-Indo-European **thel-kh-/thol-kh-/thl-kh-* ‘to push, to thrust, to knock, to strike’: Welsh *talch* ‘fragment, flake’; Old Irish *tolc, tulc* ‘blow, strike’; Old Church Slavonic *tlъkъ, tlěšti* ‘to knock’; Russian *tolkat’* [толкать] ‘to push, to shove’, *tolkač* [толкач] ‘stamp; pusher’; Czech *tlak* ‘pressure’. Rix 1998a:566 **telk-* ‘to strike’; Pokorny 1959:1062 **telek-* ‘to push’; Walde 1927—1932.I:741 **teleq-*; Mann 1984—1987:1376 **telk-* ‘to flatten, to compress, to batten down’, 1402 **tlk-* ‘to strike, to force, to crash’, 1410 **tolk-* ‘pressure, thrust, force’; Mallory—Adams 1997:471 **telk-* ‘to push, to thrust’.
- D. Uralic: Proto-Finno-Permian **talva-* ‘to trample, to tread (on, upon), to tread down’ > (?) Finnish *tallaa-* ‘to trample, to tread (on, upon), to tread down’; (?) Estonian *talla-* ‘to tread, to press’; Zyrian / Komi *tal’-* ‘to trample down, to stamp, to crush’. Rédei 1986—1988:791 **tal’a-*.

Buck 1949:9.342 *press* (vb.); 10.67 *push, shove* (vb.). Bomhard—Kerns 1994:293—294, no. 108; Dolgopolsky 2008, no. 2272, **tAlV* ‘to tread, to pound’ ([in descendant languages] → ‘to thresh’).

201. Proto-Nostratic root **than^y-* (~ **thən^y-*):

- (vb.) **than^y-* ‘to extend, to spread, to stretch; to endure, to be long-lasting’;
 (n.) **than^y-a* ‘extension, width, length, breadth’; (adj.) ‘stretched, extended, wide, broad, long-lasting’
 Derivative:
 (vb.) **than^y-* ‘to grow weary, exhausted, tired, old’;
 (n.) **than^y-a* ‘exhaustion, weariness, fatigue, old age’; (adj.) ‘tired, weary, exhausted, old’

- A. Proto-Afrasian **tan-* (vb.) ‘to extend, spread, or stretch out; to endure, to be long-lasting’; (n.) ‘duration; extension’: Proto-Semitic **wa-tan-* ‘to endure; to be continuous, perpetual, steadfast, long-lasting’ > Hebrew *ʔēṯān* [תָּנָה, תָּנָה] ‘strong, firm, steadfast, stable; ever-flowing’, *wāṯin* [תָּנָה] ‘(water) flowing in a stream; steadfast, permanent’; Arabic *watana* ‘to endure, (water) to flow continuously; to stay long in a place’, *watun* ‘duration, continuous flow’; Sabaeen *mhtn* ‘perpetually flowing water’. Klein 1987:26 and 267; Murtonen 1989:225; D. Cohen 1970—:652. Geez / Ethiopic *tēn* [ተን], *tīn* [ተን], *tən* [ተን], *tēnā* [ተና] ‘extension, length, width, thickness’. Leslau 1987:576. Egyptian *tni* ‘*stretching beyond, *surpassing; great and strong (king), large and solidly-built (wall)’. Hannig 1995:934; Erman—Grapow 1926—1963.5:310—311.
- B. Dravidian: Tamil *taṇi* ‘to abound, to be profuse, to increase in size, to grow fat’; Kannaḍa *tani* (vb.) ‘to thrive, to develop, to become full-grown’; (n.) ‘state of having thrived, full, strong, fully developed, complete, matured, abounding in agreeable qualities, rich’; Telugu *tanaru, tanarāru, tanar(u)cu* ‘to increase, to rise, to shine, to be well, to be good or

excellent', *tanar(u)pu* 'increase, progress, advancement, height, width, breadth', *taniyu* 'to thrive, to flourish'; Malto *tanyare* 'to become rich'. Burrow—Emeneau 1984:265, no. 3047.

- C. Proto-Indo-European *t^hen-/ *t^hon-/ *t^hη- 'to extend, to spread, to stretch': Sanskrit *tanóti* 'to extend, to spread, to stretch; to be protracted, to continue, to endure; to put forth; (passive) to be put forth or extended, to increase', *tatá-h* 'extended, stretched, spread, diffused, expanded'; Greek τανύω 'to stretch, to stretch out', τείνω 'to stretch, to spread, to extend, to stretch out, to reach'; Latin *tendō* 'to stretch, to stretch out, to extend, to spread', *teneō* 'to hold'; Old Icelandic *þenja* 'to stretch, to extend'; Gothic *uf-þanjan* 'to stretch out, to strive for'; Old English *þennan*, *þenian* 'to stretch out, to extend; to prostrate'; Old Saxon *thennian* 'to stretch, to extend'; Old High German *denen*, *dennen* 'to stretch' (New High German *dehnen*); Lithuanian *tinstu*, *tinti* 'to swell'. Rix 1998a:569—570 *ten- 'to stretch'; Pokorny 1959:1065—1066 *ten- 'to stretch'; Walde 1927—1932.I:722—724 *ten-; Mann 1984—1987:1379 *ten- 'to stretch, to spread', 1381 *tenō, -jō 'to stretch, to pull, to extend'; Watkins 1985:70 *ten- and 2000:90 *ten- 'to stretch'; Gamkrelidze—Ivanov 1984.I:38 *t^h[en]- and 1995.I:33, I:684 *t^hen-; Mallory—Adams 1997:187 *ten- 'to stretch', *t^hη-tó-s 'stretched'; Mayrhofer 1956—1980.I:475; Chantraine 1968—1980.II:1091—1093 *ten-; Boisacq 1950:941 *ten- and 947—948 *ten-; Frisk 1970—1973.II:853 and II:863—865; Beekes 2010.II:1450 *tenh₂- and II:1457—1458 *ten(h₂)-; Hofmann 1966:352 and 355—356 *ten-; Walde—Hofmann 1965—1972.II:662—664 *ten- and II:664—665; Ernout—Meillet 1979:682—683 *ten- and 683—684; De Vaan 2008:612; Orël 2003:416 Proto-Germanic *þanjanan; Kroonen 2013:533 Proto-Germanic *þanjan- 'to stretch, to extend'; Lehmann 1986:374 *ten-; Feist 1939:513—514 *ten-; De Vries 1977:609 *ten-; Kluge—Mitzka 1967:125 *ten-; Kluge—Seebold 1989:131 *ten-; Wodtko—Irslinger—Schneider 2008:690—694 *ten-. Proto-Indo-European *t^hən-ú-s 'stretched, thin': Sanskrit *tanú-h* 'thin, small, slender'; Greek τανυ- 'stretched, thin' (only in compounds); Latin *tenuis* 'thin, fine, slight, slender'; Old Icelandic *þunnr* 'thin'; Old English *þynne* 'thin'; Old Frisian *thenne* 'thin'; Old Saxon *thunni* 'thin'; Old High German *dunni* 'thin' (New High German *dünn*). Pokorny 1959:1069 *tenu-s, *tenu-s 'thin'; Walde 1927—1932.I:724 *tenu-s; Mann 1984—1987:1405 *t^hηuis (*t^hənūis, -os, -jos; *t^hənus) 'stretched, taut, thin'; Watkins 1984:70 *ten- 'to stretch': *t^hη-u-, *ten-u- 'thin'; Gamkrelidze—Ivanov 1984.I:782 *t^h[en]- and 1995.I:684 *t^hen- 'thin'; Mallory—Adams 1997:574 *t^hénus (gen. *t^hηnous) 'thin, long'; Mayrhofer 1956—1980.I:474—475; Boisacq 1950:941; Frisk 1970—1973.II:852—853 *t^hηnú-; Chantraine 1968—1980.II:1091—1093; Hofmann 1966:352 *t^hénús; Beekes 2010.II:1448 *tnh₂-eu-; De Vaan 2008:613—614 *tnh₂-(e)u-; Ernout—Meillet 1979:684—685; Walde—Hofmann 1965—1972.II:666 *ten-; Kroonen 2013:551—552 Proto-

Germanic **punnu-* ‘thin’; Orël 2003:429 Proto-Germanic **punnjanan*, 429 **punnuz*; De Vries 1977:627; Onions 1966:917 **ten-*, **ton-*, **tŋ-*; Klein 1971:761 **ten-*; Kluge—Mitzka 1967:148 **tenú-s*; Kluge—Seebold 1989:160 **tenu-*; Wodtko—Irslinger—Schneider 2008:694—698 **tenh₂-*. Proto-Indo-European **then-kh-* ‘to stretch, to extend’: Gothic *þeihs* ‘time’; Old English *þingan* ‘to flourish, to prosper’. Pokorny 1959:1067 **tenk-* ‘to pull’; Walde 1927—1932.I:724—725 **tenq-*; Watkins 1985:70 **tenk-* and 2000:90 **tenk-* ‘to stretch’; Orël 2003:420 Proto-Germanic **þenzaz* ~ **þenzaz*; Kroonen 2013:542 Proto-Germanic **þinhan-* ‘to thrive, to prosper’ (< **ténk-e-*); Lehmann 1986:360 **ten-*, **tenk-*; Feist 1939:494—495 **tengho-*. Proto-Indo-European **then-ph-* > (through assimilation) **them-ph-* ‘to stretch’: Latin *tempus* ‘period of time’; Old Icelandic *þömb* ‘gut; bow-string’; Lithuanian *tempiù*, *tempti* ‘to stretch’. Rix 1998a:569 **temp-* ‘to stretch’; Pokorny 1959:1064—1065 **temp-* ‘to stretch’; Walde 1927—1932.I:721—722 **temp-*; Mann 1984—1987:1378 **tempō*, *-iō* ‘to stretch, to pull’; Watkins 1985:69—70 **temp-* and 2000:90 **temp-* ‘to stretch’ (extension of **ten-*, assimilated from **tenp-*); Mallory—Adams 1997:187 **temp-* (< **ten-p-*) ‘to stretch’; De Vaan 2008:611; Ernout—Meillet 1979:681—682; Walde—Hofmann 1965—1972.II:660—661; De Vries 1977:631; Smoczyński 2007.1:669; Derksen 2015:463; Fraenkel 1962—1965.II:1079—1080.

- D. Proto-Altaic **thāno-* ‘to stretch, to pull’: Proto-Tungus **tān-* ‘to stretch, to pull’ > Evenki *tān-* ‘to stretch, to pull’; Lamut / Even *tān-* ‘to stretch, to pull’; Manchu *taŋgiqū* ‘a bamboo device placed in a relaxed bow to preserve its shape’, *taŋgila-* ‘to fire a crossbow’, *taŋgilakū* ‘crossbow’, *taŋgimeliyan* ‘bent backwards, arched, bow-shaped’; Oroch *tōn-* ‘to stretch, to pull’; Nanay / Gold *toan-* ‘to stretch, to pull’; Ulch *tuan-* ‘to stretch, to pull’; Oroch *tāna-* ‘to stretch, to pull’; Udihe *tana-* ‘to stretch, to pull’; Solon *tan-* ‘to stretch, to pull’. Proto-Mongolian **teneyi-* ‘to stretch (oneself), to be stretched’ > Written Mongolian *teneyi-*, *teniyi-* ‘to unbend, to become straight, to stretch, to extend’; Khalkha *tenī-* ‘to stretch (oneself), to be stretched’; Buriat *tenī-* ‘to stretch (oneself), to be stretched’; Kalmyk *tenī-* ‘to stretch (oneself), to be stretched’; Ordos *tenere-*, *tenī-* ‘to stretch (oneself), to be stretched’. Starostin—Dybo—Mudrak 2003:1400 **t’āno* ‘to stretch, to pull’.
- E. Chukchi-Kamchatkan: Proto-Chukuotian **tanut-* ‘to swell’ > Chukchi *tanut-* ‘to swell’, *tənot-ʔəjʔən* ‘swelling’; Kerek *tanut-* ‘to swell’; Alyutor *tanut-* ‘to swell’. Fortescue 2005:299.

Buck 1949:9.32 stretch; 12.65 thin (in dimension); 12.53 grow (= increase in size). Dolgopolsky 2008, no. 2380, **tañV* (= **tañū* ??) ‘to draw, to stretch, to extend’, no. 2384, **tañXū* – **tañXu* (or **tañXū* ?) ‘thin, short’, and, no. 2390, **taŋga|o* ‘to draw, to stretch’; Bomhard—Kerns 1994:290—292, no. 10.

202. Proto-Nostratic root **than*^y- (~ **thən*^y-):
 (vb.) **than*^y- ‘to grow weary, exhausted, tired, old’;
 (n.) **than*^y-*a* ‘exhaustion, weariness, fatigue, old age’; (adj.) ‘tired, weary, exhausted, old’
 Derivative of:
 (vb.) **than*^y- ‘to extend, to spread, to stretch; to endure, to be long-lasting’;
 (n.) **than*^y-*a* ‘extension, width, length, breadth’; (adj.) ‘stretched, extended, wide, broad, long-lasting’
- A. Afrasian: Egyptian *tni* ‘(vb.) to grow old; (n.) old age; (adj.) old, decrepit’, *tni* ‘old man, elder’. Hannig 1995:934; Faulkner 1962:299; Erman—Grapow 1921:206 and 1926—1963.5:310; Gardiner 1957:600.
 B. Proto-Kartvelian **tent*- ‘to grow tired, weary, exhausted’: Georgian *tent*- in *mo-tent-v-a* ‘to grow tired, weary, exhausted’; Mingrelian *tant*-, *tart*- in *mo-tant-u-a*, *mo-tart-u-a* ‘to grow tired, weary, exhausted’. Fähnrich 2007:193 **tent*-.
 C. Proto-Indo-European **thən-ú-s* ‘stretched, thin; tired, weak, feeble’: Latin *tenuis* ‘thin, fine, slight, slender; (of persons, physically) weak, feeble’; Old English *þynne* ‘thin; weak, poor’, *þynnes* ‘thinness; weakness’; etc. See above for full etymology and references.
 D. Yukaghir (Southern / Kolyma) *tañej*- ‘to fall down’. Nikolaeva 2006:426.
- Buck 1949:4.82 weak; 4.91 tired, weary; 14.15 old.
203. Proto-Nostratic root **thap*^h- (~ **thəp*^h-):
 (vb.) **thap*^h- ‘to strike, to knock, to hit, to beat, to pound; to trample’;
 (n.) **thap*^h-*a* ‘stroke, slap, blow, hit’
 Note also:
 (vb.) **t’ap*^h- ‘to strike, to beat, to pound’;
 (n.) **t’ap*^h-*a* ‘stroke, blow’
- A. Dravidian: Tamil *tappu* (*tappi*-) ‘to strike, to beat, to kill’, *tappai* ‘a blow’; Kannaḍa *dabbe*, *debbe*, *ḍabbe*, *ḍebbe* ‘a blow, stroke’; Telugu *dabbaḍincu* ‘to slap’, *debba* ‘blow, stroke, attack’; Parji *tapp*- ‘to strike, to kill’, *tapor* ‘slap’; Gadba (Salur) *debba* ‘cut, blow’ (< Telugu); Gondi *tapri* ‘a slap’; Konda *tap*- ‘to strike, to hit’; Kuwi *tapūr vecali* ‘to slap’. Note: Parji *tapor*, Gondi *tapri*, and Kuwi *tapūr* are Indo-Aryan loans. Burrow—Emeneau 1984:267, no. 3075.
 B. Proto-Indo-European **thap*^h- ‘to press, to tread, to trample’: Sanskrit *sam-tāpati* ‘to oppress, to torment, to torture’, *sām-tapyate* ‘to be oppressed, afflicted’; Pāli *tapo* ‘torment, punishment, penance’, *tapana* ‘torment, torture’; Greek *ταπεινός* ‘lowly, humble’ (literally, ‘downtrodden’); Old Icelandic *þefja* ‘to stamp’, *þóf* ‘crowding, thronging, pressing’ East Frisian *dafen* ‘to hit, to pound’; Old High German *bi-debben* ‘to suppress’;

Russian *tópat'* [топать], *tópnut'* [топнуть] 'to stamp, to stamp one's foot'. Pokorny 1959:1056 **tap-* 'to press down, to trample'; Walde 1927—1932.I:705 **tap-*; Mann 1984—1987:1368—1369 **tap-* 'to press, to tread, to trample'; Boisacq 1950:941 **tap-*; Frisk 1970—1973.II:854; Beekes 2010.II:1450; Hofmann 1966:352 **tap-*; Chantraine 1968—1980.II:1093; Orël 2003:415 Proto-Germanic **paſſanan*; De Vries 1977:606—607.

- C. Proto-Uralic **tappa-* 'to hit, to beat, to strike': Finnish *tappa-* 'to slay, to kill, to put to death'; Estonian *tapa-* 'to slay, to kill'; Mordvin (Moksha) *tapa-* 'to strike, to beat'; Zyrian / Komi *tap-tap* in *tap-tap kar* 'to beat a few times' (*kar* = 'to do, to make'); Hungarian *toppant-* 'to stamp (one's foot on the ground)', *tapos-* 'to tread (on or down), to trample (on)', *tapsol-* 'to clap (hands), to applaud'; Yurak Samoyed / Nenets *tapar-* 'to trample under foot'; Selkup Samoyed *tapiṛ-* 'to kick (with the foot)', *tappol-* 'to kick'. Rédei 1986—1988:509—510 **tappa-* 'to trample under foot, to strike, to kill'; Décsy 1990:109 **tapa* 'to hit, to beat'.

Buck 1949:9.21 strike (hit, beat). Different etymology in Dolgopolsky 2008, no. 2327a, **tab[V]qa* 'to hit, to strike' ([in descendant languages] → 'to kill').

204. Proto-Nostratic root **thar-* (~ **thər-*):

(vb.) **thar-* 'to draw, to drag, to pull';

(n.) **thar-a* 'drag, pull; something dragged or pulled along'

Possible derivative:

(vb.) **thar-* 'to spread, to spread out or about, to expand, to extend; to stretch, to stretch out; to scatter, to strew';

(n.) **thar-a* 'stretch, spread, expanse'; (adj.) 'stretched, tight, taut; spread, scattered, dispersed'

- A. Proto-Afrasian **tar-* 'to draw, to drag, to pull': Proto-Semitic **tar-ar-*, (reduplicated) **tar-tar-* 'to draw, to drag, to pull' > Šheri / Jibbāli *terr* 'to drag, to lead away', (reduplicated) *ettértér* 'to lead roughly, to drag (a child) by the hand'; Soqotri *ter* 'to push gently', (reduplicated) *tártər* 'to throw'; Ḥarsūsi *ter* 'to lead, to drag away'; Mehri *ter* 'to drag, to lead away'. Central Chadic **tyar-* (< **tari-*) 'to draw' > Buduma *teri* 'to draw'. Orël—Stolbova 1995:499, no. 2373, **tar-* 'to pull, to draw'.
- B. Dravidian: Kota (reduplicated) *dardarn* 'noise of dragging something along the ground'; Kannaḍa (reduplicated) *dara dara, jara jara* 'noise of dragging anything on the ground'; Tuḷu (reduplicated) *daradara* 'noise of dragging'. Burrow—Emeneau 1984:269, no. 3093.
- C. Proto-Kartvelian **tar-/tr-* 'to drag': Georgian *trev-/tri(v)-/ter-/tr-* 'to drag'; Mingrelian (*n*)*tir-* 'to drag'; Laz *tor-, tur-, tir-* 'to drag'; Svan *tr-* (inf. *li-tr-in-e*) 'to drag something'. Klimov 1964:95 **tr-* and 1998:68—69 **ter-* : **tr-* 'to drag, to pull'; Jahukyan 1967:75; Fähnrich—Sardshweladse 1995:156 **tar-/tr-*; Fähnrich 2007:188—189 **tar-/tr-*.

- D. Proto-Indo-European **thr-eA-gʰ-/thr-oA-gʰ-* (> **thrāgh-/thrōgh-*) ‘to draw, to drag, to pull’: Latin *trahō* ‘to draw, to drag, to pull along’, *tractō* ‘to draw vigorously, to drag, to tug, to haul’; Old Irish *traig* ‘foot’; Old Cornish *truit* ‘foot’; Breton *troad* ‘foot’; Welsh *troed* (< **troget-*) ‘foot’; Gothic *pragian* ‘to run’; Old Icelandic *þræll* (< Proto-Germanic **þraxilaz*) ‘slave, servant’ (< ‘runner’); Old English *prægan* ‘to run’, *præg* ‘(period of) time’; Old High German *drigil* ‘servant’. Pokorny 1959:1089 **trāgh-*, **trōgh-*, and **trēgh-* ‘to pull’; Walde 1927–1932.I:752–753 **trāgh-*; Mann 1984–1987:1419–1420 **trāghō*, *-jō* ‘to run’, 1443–1444 **tṛgh-* (**trāgh-*) ‘to draw, to drag, to pull’; Watkins 1985:71 **tragh-* and 2000:93 **tragh-* ‘to draw, to drag, to move’; Ernout–Meillet 1979:698–699; Walde–Hofmann 1965–1972.II:697 and II:698–699 **trāgh-*; De Vaan 2008:626–627; Orël 2003:424 Proto-Germanic **praǵjanan*, 424 **praǵō*, 424 **praxilaz* ~ **praǵilaz*; Kroonen 2013:544 Proto-Germanic **pragian-* ‘to run’; Lehmann 1986:364 (according to Lehmann, the etymology of the Germanic forms is uncertain, but they may be from **trāgh-* ‘to run, to move’); Feist 1939:500–501; De Vries 1977:625 **tragh-*, **treg-*; Onions 1966:919; Klein 1971:763; Skeat 1898:638–639; Kluge–Lutz 1898:211. Proto-Indo-European **thr-ekʰ-/thr-kʰ-* ‘to pull’: Middle Irish *tricc* ‘nimble, quick’; Old Church Slavonic *trъkъ* ‘course, flight’; Bulgarian *trъkalo* ‘wheel, circle’. Pokorny 1959:1092 **trek-* ‘to pull’; Walde 1927–1932.I:755 **treq-*; Mann 1984–1987:1444–1445 **tṛk-*; Walde–Hofmann 1965–1972.II:699 **trēq-*.

Buck 1949:9.33 draw, pull; 10.46 run (vb.). Bomhard–Kerns 1994:297–298, no. 112; Dolgopolsky 2008, no. 2413, **taRV*, **taRV-HVgV*, **taRV-ṭV* ‘to drag, to pull’.

205. Proto-Nostratic root **thar-* (~ **thar-*):
 (vb.) **thar-* ‘to spread, to spread out or about, to expand, to extend; to stretch, to stretch out; to scatter, to strew’;
 (n.) **thar-a* ‘stretch, spread, expanse’; (adj.) ‘stretched, tight, taut; spread, scattered, dispersed’
 Perhaps derived from:
 (vb.) **thar-* ‘to draw, to drag, to pull’, in the sense ‘to stretch by pulling’;
 (n.) **thar-a* ‘drag, pull; something dragged or pulled along’
- A. Proto-Afrasian **tar-* ‘to spread, to spread out, to expand, to extend; to stretch, to stretch out’: Proto-Semitic **wa-tar-* ‘to stretch, to extend’ > Arabic *watara* ‘to string, to provide with a string (a bow); to stretch, to strain, to draw tight, to tighten, to pull taut’, *watar* ‘string (of a bow, of a musical instrument); sinew, tendon’, *mutawattir* ‘stretched, strained, taut, tense, rigid, firm, tight’; Hebrew *yeθer* [יֶתֶר] ‘cord’; Syriac *yaθrā* ‘string of a bow’; Geez / Ethiopic *watara*, *wattara* [ወተረ] ‘to bend, to stretch tight, to

tighten (strings), to straighten up’, *ʔawtara* [አውተረ] ‘to spread out, to stretch out’, *watr* [ወተር] ‘cord, string (of a musical instrument), web (of a spider)’; Tigre *wättära* ‘to stretch a bow, to stretch by pulling, to pull tight’; Tigrinya *wättärä* ‘to stretch (a string, hide), to make taut, to distend, to strain at (chains)’, *wätär* ‘bow string’; Gurage *wätärä* ‘to stretch by pulling, to stretch hide, to distend hide’, *wätär* ‘nerve, sinew, tendon, gut’; Harari *wätär* ‘nerve, gut, sinew’. D. Cohen 1970—:653—655; Klein 1987:267; Murtonen 1989:225; Leslau 1987:622. According to Murtonen, “[t]he basic sense appears to be expansibility.” Murtonen also compares Egyptian *itrw* ‘river’. East Chadic **tar-* ‘to be stretched’ > Tobanga *taaree* ‘to be stretched’. Orël—Stolbova 1995:499, no. 2373, **tar-* ‘to pull, to draw’.

- B. Dravidian: Tamil *tārru* (*tārri-*) ‘to sift, to winnow’, *tari* ‘to sift by a winnowing fan’; Telugu *tāl(u)cu* ‘to sift or separate larger particles from flour in a winnowing basket’; (?) Brahui *dranzing*, *drāzing* ‘to throw in the air, to winnow’. Burrow—Emeneau 1984:277, no. 3195. Semantics as in Semitic: Akkadian *zarū* ‘to sow seed; to scatter (small objects), to sprinkle (dry matter), to winnow’; Hebrew *zārāh* [זָרָה] ‘to scatter, to winnow’; Arabic *ḍarā* ‘to disperse, to scatter; to carry off, to blow away; to winnow’; Ugaritic *dry* ‘to winnow, to scatter’; Amharic (*a*)*zārrä* ‘to scatter’; etc.; and, within Dravidian itself, Tamil *tūrru* (*tūrri-*) ‘to scatter, to winnow, to throw upward (as dust in the air)’; Malayalam *tūrruka* ‘to winnow, (wind) to scatter’; etc.
- C. Proto-Indo-European **sther-* ‘to spread, to spread out or about, to scatter, to strew’: Sanskrit *stṛṇāti*, *stṛṇóti* ‘to spread, to spread out or about, to strew, to scatter; to lay over, to cover’, *stīrṇá-ḥ* ‘spread, strewn, scattered’, *stīrṇá-ḥ* ‘bestrewn, covered’; Avestan *stərənāti* ‘to stretch, to spread, to extend’; Greek *στορέννυμι*, *στόρνυμι* ‘to spread, to strew’; Albanian *shtrij* ‘to spread out’; Latin *sternō* ‘to stretch out, to spread out’, *struō* ‘to pile up, to put together’, *struēs* ‘a heap’; Old Breton *strovis* ‘I have spread out’; Gothic *straujan* ‘to spread out’; Old Icelandic *strá* ‘to strew, to cover with straw’, *strá* ‘straw’; Old English *strēowian*, *strēwian* ‘to strew, to scatter’, *strēaw* ‘straw’; Old Frisian *strēwa* ‘to strew’, *strē* ‘straw’; Old Saxon *strōian* ‘to strew’, *strō* ‘straw’; Dutch *strooien* ‘to strew’, *stroo* ‘straw’; Old High German *streuwen*, *strouwen* ‘to strew’ (New High German *streuen*), *strō* ‘straw’ (New High German *Stroh*); Old Church Slavonic *pro-stŕŕŏq*, *pro-strěti* ‘to stretch’. Rix 1998a:543 **ster-* ‘to stretch or spread out’; Pokorny 1959:1029—1031 **ster-*, **sterə-*: **strē-*, **steru-*, **streu-* ‘to spread out, to strew, to scatter’; Walde 1927—1932.II:638—640 **ster-* (also **sterē-*); Mann 1984—1987:1286 **stern-* ‘spread, extended; spread, layout’, 1286—1287 **sterō* (**sternō*), (pp.) **stŕtós*, ‘to strew, to extend, to spread, to scatter’, 1293—1294 **storos*, 1295 **strāijō* ‘to extend, to expand, to lay out, to spread, to scatter’, 1297 **strēlos* ‘litter, spread’, 1298—1299 **strauō*, **strāu-*, **strōu-*, **struū-*, 1301 (**strōt-*), 1303—1304

- *st^htos, -ā ‘spread, strewn, scattered’, 1301 *strōu-, 1307 *st^h- ‘to strew’; Watkins 1985:66 *ster- (also *sterə-) and 2000:86 *sterə- (also *ster-) ‘to spread’; Mallory—Adams 1997:539 *ster- ‘to spread out’; Boisacq 1950:916 *sterā(u)-; Frisk 1970—1973.II:802—803 *streu- (> Gothic *straujan*, etc.); Beekes 2010.II:1409—1410 *sterh₂-; Chantraine 1968—1980.II:1059—1060 *strə-; Hofmann 1966:339 *ster-, *streu- (> Latin *struō*, etc.); Ernout—Meillet 1979:657—658; Walde—Hofmann 1965—1972.II:607—608 *streu-, *strou- (> Old Church Slavic *struna* ‘string’, etc.); De Vaan 2008:586 and 592—593; Huld 1984:115—116; Orël 1998:442 and 2003:381 Proto-Germanic *strawjanan; Kroonen 2013:583 Proto-Germanic *straujan- ‘to strew’; Feist 1939:456 *strāu-; Lehmann 1986:327 *ster-, *sterə-, *strew- ‘to spread out, to scatter’; De Vries 1977:552 *ster-; Skeat 1898:602; Klein 1971:721 *ster-, *stor-, *st^h-; Onions 1966:874 and 875 *ster-; Boutkan—Siebinga 2005:380; Kluge—Mitzka 1967:757 *streu- and 758; Kluge—Seebold 1989:708 and 709; Walshe 1951:221; Derksen 2008:421 *pro-sterh₃- and 469 *sterh₃-.
- D. Uralic: Proto-Finno-Ugrian *tara- ‘to spread or stretch out, to separate, to open’ > Cheremis / Mari (Yaransk) *tara*, (Birsk, Uržum) *tora* ‘wide, far; remote, distant, far off’, (Birsk) *tore*- ‘to remove, to separate, to scatter’; Hungarian *tár*- ‘to open, to open up (wide)’. Rédei 1986—1988:510 Proto-Finno-Ugrian *tara ‘(vb.) to open; (adj.) open’. Proto-Ugric *tar₃- ‘to spread, to stretch (out), to extend’ > Ostyak / Xanty *tir* ‘fixed width’, *tärimt*- ‘to spread or stretch (out)’; Hungarian *tér* ‘space, room’ (Old Hungarian and dial. ‘wide, roomy’), *terít*- ‘to spread, to stretch out, to extend’, *terül*- ‘to spread or stretch (out)’. Rédei 1986—1988:894 Proto-Ugric *tar₃ ‘room’.
- E. Proto-Altaic *t^harV- ‘to spread, to scatter, to disperse’: Proto-Mongolian *tara-, *tarka- ‘to spread, to scatter, to disperse’ > Mongolian *tara*- ‘to disperse, to scatter; to be separated, to part’, (causative) *taraya*- ‘to disperse (as a crowd), to dismiss; to scatter, to spread, to spread around’, *tarayuu* ‘scattered, dispersed; sparse(ly)’, *taraqai* ‘scattered, dispersed, spread, disseminated’, *tarqa*- ‘to scatter, to spread, to be dispersed’; Khalkha *tara*- ‘to disperse, to scatter’; Buriat *tara*- ‘to disperse, to scatter’; Kalmyk *tarā*- ‘to disperse, to scatter’; Ordos *tarā*- ‘to disperse, to scatter’; Dagur *tare*-, *tarā*- ‘to disperse, to scatter’. Poppe 1960:138; Street 1974:27 Proto-Altaic *tara- ‘to disperse, to scatter’. Starostin—Dybo—Mudrak (2003:1392) reconstruct Proto-Altaic *t^hajri ‘to scatter, to disperse’.
- F. Proto-Eskimo *tarpar- ‘to open out or flare’: Central Siberian Yupik *taXpar*- ‘to open, to enlarge’; North Alaskan Inuit *taqpaq*- ‘open, wide’; Greenlandic Inuit *tarpar*- ‘to widen into a funnel shape’. Fortescue—Jacobson—Kaplan 1994:334.

Sumerian *tar* ‘to disperse, to scatter’, *tar* ‘to loosen, to untie, to open’.

Buck 1949:9.32 stretch; 9.34 spread out, strew; 12.24 open (vb.). Bomhard—Kerns 1994:298—300, no. 113; Dolgopolsky 2008, no. 2443, **tarʾXV* ‘to throw, to disperse, to scatter’.

206. Proto-Nostratic root **thar-* (~ **thər-*):

(vb.) **thar-* ‘to tear, to break, to split, to pierce’;

(n.) **thar-a* ‘cut, tear, split, incision; wound, injury; spear’

- A. Proto-Afrasian **tar-* ‘to tear, to break, to split’: Proto-Semitic **tar-ar-* ‘to tear, to break, to split’ > Arabic *tarra* ‘to be cut off, to be cut out’; Tigrinya *tārār bālā* ‘to be split’, (reduplicated) *tärtärä* ‘to break to small pieces’; Tigre (reduplicated) *tärtära* ‘to split, to tear up’; Gurage *tärrärä* ‘to tear a piece of cloth or paper, to cut in small pieces, to separate’; Amharic (reduplicated) *tärättärä* ‘to tear to pieces’; Harari (reduplicated) *(a)trätära* ‘to shake the grain on the *afuflu-* plate to separate it from sand or to separate the finely-ground flour from the unground’; Post-Biblical Hebrew (reduplicated) *tirtēr* [תִּרְתֵּר] ‘to scatter, to cast loose (earth)’ (Aramaic loan); Jewish Palestinian Aramaic *tartar* ‘to crumble, to cast loose’. Klein 1987:719; Leslau 1979:602 and 603. Amharic *täräkkäkä* ‘to split’; Gurage *tärräxä* ‘to break off a piece, to make incisions, to tear off a leaf of the *äsät*’. Leslau 1979:602. Lowland East Cushitic **tarar-* ‘to cut, to scratch’ > Galla / Oromo *tarara* ‘to cut, to scratch’. Proto-Southern Cushitic **taar-* ‘to spear, to pierce with a weapon’ > K’wadza *talangayo* ‘bleeding arrow’; Ma’a *ito*, *itoró* ‘spear’; Dahalo *taar-* ‘to spear, to pierce with a weapon’. Ehret 1980:169. West Chadic **tar-/tur-* ‘to tear, to break’ > Galambu *tar-* ‘to tear’; Kulere *tur-* ‘to break’; Dafo-Butura *tar-* ‘to break’. Orël—Stolbova 1995:499, no. 2372, **tar-* ‘to tear, to cut’ and 499, no. 2376, **tarVc-* ‘to break, to tear’ (derived from **tar-* ‘to tear, to cut’); Ehret 1995:143, no. 177, **taar-* ‘to cut into’.
- B. Dravidian: Tamil *tarukku* (*tarukki-*) ‘to pound, to break, to pierce, to injure, to torment’; Malayalam *tarukkuka* ‘to deprive rice of its husk’. Burrow—Emeneau 1984:269, no. 3099.
- C. Chukchi-Kamchatkan: Proto-Chukotian **tærræŋ-* ‘to break into pieces’ > Chukchi *teræŋ-* ‘to break into pieces’ (following Bogoraz, Fortescue writes *tærræŋ-*); Koryak *tacran(ə)-* ‘to cut fish into pieces’; Alyutor *tarʼaŋ-* ‘to break or cut to pieces’. Fortescue 2005:282.

Buck 1949:9.26 break (vb. tr.); 9.27 split (vb. tr.); 9.28 tear (vb. tr.). Different etymology in Dolgopolsky 2008, no. 2289, **terV* ‘to tear, to burst’.

207. Proto-Nostratic root **thar-* (~ **thər-*):

(vb.) **thar-* ‘to rub, to wear down’;

(n.) **thar-a* ‘wear’; (adj.) ‘worn out, rubbed, abraded’

Possible Derivatives:

- (vb.) *t^har- ‘to wither, to wane, to dry up’;
 (n.) *t^har-a ‘dryness’; (adj.) ‘withered, dry, dried up, arid’
 (vb.) *t^har- ‘to scratch, to scrape, to plane’;
 (n.) *t^har-a ‘scratching, scraping, raking; rake, comb’

- A. Dravidian: Malayalam *taṛayuka* ‘to be worn out, rubbed (as a rope), ground (as a knife); to be habituated, practiced’, *taṛekka* ‘to rub down, to grind (as sandal)’; Kannaḍa *taḷe* ‘to be worn out, rubbed; to rub (tr.)’; Tuḷu *taṛepuni* ‘to grind, to try, to rub, to assay (metal)’, *taṛeyuni*, *taṛevuni* ‘to be rubbed off, to abrade, to wear away, to become thin, to become wasted’, *taṛely* ‘worn out’, *taḷepuna* ‘to rub’. Burrow—Emeneau 1984:270, no. 3114. Kota *tarv-* (*tard-*) ‘to become abraded by moving over rough surface or by having something rubbed over it’; Kannaḍa *tari* ‘to be chafed, abraded, or grazed’. Burrow—Emeneau 1984:273, no. 3141.
- B. Proto-Indo-European *t^her-/t^hor-/t^hr- ‘to rub, to wear down’: Greek τείρω ‘to rub hard, to wear away, to wear out, to distress’, τέρην ‘rubbed, smooth’, τρῶω ‘to rub down, to wear out’, τρῶχω ‘to wear out, to waste, to consume’; Sabinian *terenum ‘soft’; Latin *terō* ‘to rub, to wear away’, *tergeō*, *tergō* ‘to wipe, to scour, to dry off, to clean’; Old Church Slavic *trǫq*, *trěti* ‘to rub, to wear down’; Lithuanian *trinù*, *trinti* ‘to rub’. Rix 1998a:575 *terh₂- ‘to bore, to rub’; Pokorny 1959:1071—1074 *ter-, *terā- ‘to rub, to bore’; Walde 1927—1932.I:728—732 *ter-; Mann 1984—1987:1384 *ter- (*terō, -jō) ‘to rub, to wear’, 1385 *terġ- ‘to wipe, to dry, to clean; pure’, 1428 *trīn- ‘to wear, to rub’, 1438 *trūjō ‘to rub, to wear, to bore, to weary, to worry’, 1442 *trūjō, 1448 *tr̥tos ‘rubbed, crushed, milled’; Watkins 1985:70 *ter- and 2000:91 *terā- ‘to rub, to turn’ (oldest form *terā₁-, with variant [metathesized] *treā₁-, contracted to *trē-; various extended forms: *trī- [< *tri₂-], *trō-, *trau-, *trīb-, *trōg-, *trag-, *trup-, *trūg-); Gamkrelidze—Ivanov 1984.I:231 *t^her-, II:706—707 and 1995.I:200, I:612, I:780 *t^her- ‘to rub, to polish, to abrade; to drill, to bore a hole’, I:152 *t^her-H-; Mallory—Adams 1997:400 *ter(i)- ‘to rub, to turn’; Boisacq 1950:948—949 *ter-, *tere-, *terē-, *terā-, 956, and 988; Frisk 1970—1973.II:865, II:879, and II:938; Chantraine 1968—1980.II:1098 *ter-, II:1106—1107, II:1141 *ter-ā₁-u-; Hofmann 1966:356 *ter-, 359 *ter-, 376 *treu-gh-, also *treu-q- (in Lithuanian *trūkstu*, *trūkti* ‘to break, to split, to burst’, *trūkis* ‘rupture, hernia’), and 376 *tere-; Beekes 2010.II:1458 *ter(H)-; Ernout—Meillet 1979:685—686 and 686—687; Walde—Hofmann 1965—1972.II:670 and II:672—673 *tēri-; De Vaan 2008:616 *terh₁-/*trh₁-; Fraenkel 1962—1965.II:1124—1125 *ter-; Smoczyński 2007.1:689; Derksen 2015:471 *terh₁-.

Sumerian *tar* ‘to be distressed, troubled’.

Buck 1949:9.31 rub. Bomhard—Kerns 1994:279—280, no. 95; Dolgopolsky 2008, no. 2428, **tar[V]yi* ‘to rub’.

208. Proto-Nostratic root **thar-* (~ **thər-*):

(vb.) **thar-* ‘to wither, to wane, to dry up’;

(n.) **thar-a* ‘dryness’; (adj.) ‘withered, dry, dried up, arid’

Perhaps derived from:

(vb.) **thar-* ‘to rub, to wear down’;

(n.) **thar-a* ‘wear’; (adj.) ‘worn out, rubbed, abraded’

- A. Afrasian: Proto-Semitic **tar-aṣ-* ‘to be hard, dry, arid; to wither, to die’ > Arabic *taraza* ‘to be hard, dry, arid; to wither, to die; to be hungry’, *tarz* ‘hunger, colic’.
- B. Dravidian: Malayalam *tāruka* ‘to become thin, to droop’; Kannaḍa *tār*, *tāru* ‘to become dry, to dry up, to wither, to wane, to become emaciated’, *tāriga* ‘a dry, sapless man’, *taragu* ‘that which is dried or to be dried; dry, fallen, or dead leaves, a cake fried in oil and dried’, *tarale* ‘state of being dry, useless, vain’, *taraḷu*, *tarḷu*, *taḷḷu*, *taral* ‘a ripe fruit that has become dry, especially a coconut’; Kota *targ ar-* (*aṭ-*) ‘to become lean’; Toda *to-x-* (*to-xy-*) ‘to become lean, slender’; Tuḷu *tarṇṇuni*, *taruṇṇu* ‘to shrivel’, *targodē* ‘leanness’; Koraga *darla* ‘dried leaves’; Telugu *tāru*, *tāru* ‘to fall away in flesh, to become lean, to diminish, to be reduced’, *trāḍuvaḍu* ‘to become lean’. Burrow—Emeneau 1984:277, no. 3192.
- C. Proto-Indo-European **thers-/thors-/thys-* ‘to dry up, to wither; to become thirsty’: Sanskrit *tṛṣyati* ‘to be dry, to be thirsty’, *tṛṣā*, *tṛṣṇā* ‘thirst’; Avestan *taršu-* ‘dried up, parched, arid’; Greek τέρσομαι ‘to be or become dry’; Armenian *tharāmim*, *tharšamim* ‘to wither’; Latin *torreō* ‘to burn, parch, or dry up with heat or thirst’, *torridus* ‘parched, burnt, dry’, *torror* ‘a drying up, parching, scorching’, *terra* (< **tersā*) ‘earth, ground’ (< ‘dry land’); Oscan *terún*, *teerún* ‘earth’; Old Irish *tur* ‘dry, dried out’; Gothic *þaursjan* ‘to be thirsty’, **þaurstei* ‘thirst’, *þaursus* ‘dried up, withered’, *gaþairsan* ‘to wither’; Old Icelandic *þyrstr* ‘thirsty’, *þorsti* ‘thirst’, *þerra* ‘to dry, to make dry’; Danish *tørst* ‘thirst’; Swedish *törst* ‘thirst, drought’; Old English *þyrstan* ‘to be thirsty, to thirst for’, *þyrstig*, *þurstig* ‘thirsty’, *þurst* ‘thirst’, *þyrre* ‘dry, withered’, *ā-pierran* ‘to wipe dry’, *þærran* ‘to dry’; Old Saxon *thurri* ‘dry, arid’, *thurstian* ‘to be thirsty’, *thurst* ‘thirst’; Old High German *durri*, *thurri* ‘dry, arid’ (New High German *dürr*), *durst* ‘thirst’ (New High German *Durst*), *derren* ‘to parch’. Rix 1998a:579—580 **ters-* ‘to dry up, to wither; to become thirsty’; Pokorny 1959:1078—1079 **ters-* ‘to dry up, to wither; to become thirsty’; Walde 1927—1932.I:737—738 **ters-*; Mann 1984—1987:1387 **ters-* (**tersō*) ‘to rub, to dry’, 1416 **tors-* ‘dry; thirsty; parched; dryness, drought, kiln’, 1447 **tys-* ‘dry; parched; dryness, drought’, 1448 **tystos* ‘dry, parched; dryness, drought’; Watkins 1985:70—71 **ters-* and 2000:91—92 **ters-* ‘to dry’;

Gamkrelidze—Ivanov 1984.I:44, I:217, I:419 *t^h/ers- and 1995.I:39, I:187, I:367 *t^her-s- ‘to dry out’; Mallory—Adams 1997:170 *ters- ‘dry’; Mayrhofer 1956—1980.I:525; Boisacq 1950:959 *ters-; Frisk 1970—1973.II:882; Chantraine 1968—1980.II:1108 *ters-; Hofmann 1966:360 *ters-; Beekes 2010.II:1470—1471 *ters-; Ernout—Meillet 1979:696—697; Walde—Hofmann 1965—1972.II:694; De Vaan 2008:624—625 *tors-eje-; Kroonen 2013:539 Proto-Germanic *þersan- ‘to be dry’, 553 *þurstu- ‘thirst’, 553 *þurzēn- ‘to be dry’, 554 *þurzjan- ‘to be thirsty’, and 554 *þurzu- ‘dry’; Orël 2003:421—422 Proto-Germanic *þersanan, 430 *þursjanan ~ *þurzjanan, 430 *þurstīn, 430 *þurstuz ~ *þurstuiz, 430 *þurstjanan, 430 *þurznōjanan, 430 *þuruz; Feist 1939:206 *ters- and 493; Lehmann 1986:151 *ters- ‘thirst’ and 358 *ters-+ye/o-, -e/o-; De Vries 1977:609, 618, and 630; Falk—Torp 1903—1906.II:403; Onions 1966:917 *t̥s-, *tors-; Klein 1971:762 *t̥s-; Skeat 1898:637; Kluge—Mitzka 1967:149 *t̥s-; Kluge—Seebold 1989:162; Wodtko—Irslinger—Schneider 2008:701—704 *ters-.

Buck 1949:4.82 weak; 5.15 thirst (sb.); 15.75 soft. Bomhard—Kerns 1994:283, no. 99; Möller 1911:253; Dolgopolsky 2008, no. 2438, *t[u]Rʒ|ʒV ‘dry, arid, hard’.

209. Proto-Nostratic root *t^har- (~ *t^har-):

(vb.) *t^har- ‘to scratch, to scrape, to plane’;

(n.) *t^har-a ‘scratching, scraping, raking; rake, comb’

Perhaps derived from:

(vb.) *t^har- ‘to rub, to wear down’;

(n.) *t^har-a ‘wear’; (adj.) ‘worn out, rubbed, abraded’

A. Dravidian: Gondi *tarcānā*, *tar̥c-* ‘to scrape’, *tarsk-* ‘to scrape, to plane’, *task-*, *tarsk-/tarisk-* ‘to level, to scrape’; Konda *taṛh-* (that is, *tar-*) ‘to scrape’; Pengo *treh-* (*trest-*) ‘to scrape, to plane, to cut with an adze’; Maṇḍa *teh-* ‘to shave’; Kui *tahpa* (*taht-*) ‘to smooth off, to level down, to chip, to scrape’; Kui *tah-* (*tast-*) ‘to scrape, to plane’, *tah’nai* ‘to engrave’. Burrow—Emeneau 1984:273—274, no. 3146.

B. Proto-Altaic *t^hiora- ‘to cultivate (soil), to till (land)’: Proto-Mongolian *tari- ‘to sow, to plant’, *tariya-n ‘crops’ > Mongolian *tari-* ‘to sow, to plant, to plow’, *tariyala-* ‘to cultivate the soil’, *tariyalaŋ* ‘arable land, plow land; field; plantation; agriculture’, *tariy-a(n)* ‘sowing, planting, plowing’, *tarmu-* ‘to rake (as hay)’, *tariya(n)* ‘wheat, crop; field, farm’; Khalkha *taria* ‘crops’; Buriat *tarā(n)* ‘crops’; Kalmyk *tarān* ‘crops’; Ordos *tarā* ‘crops’; Dagur *tarē* ‘crops’; Monguor *tarā* ‘crops’. Proto-Turkic *tari- ‘to cultivate (ground)’, *tarya- ‘to comb, to cultivate (land)’ > Turkish *tarım* ‘agriculture’, *tarak* ‘comb, rake, harrow, weaver’s reed, crest (of a bird)’, *tara-* ‘to comb, to rake, to harrow; to dredge; to search minutely’, *taraz*

‘combings, fibers combed out’; Uighur (dial.) *teri-* ‘to cultivate (ground)’; Sary-Uighur *tari-* ‘to cultivate (ground)’; Tuva *tari-* ‘to cultivate (ground)’. Poppe 1960:62; Street 1974:27 Proto-Altaic **tari-* ‘to till (land); to sow, to harvest’; Starostin—Dybo—Mudrak 2003:1438 **tʲora* ‘to cultivate (earth)’.

Buck 1949:8.15 cultivate, till; 8.21 plow (vb.; sb.). Bomhard—Kerns 1994:300, no. 114.

210. Proto-Nostratic root **thar-* (~ **thər-*):

(vb.) **thar-* ‘to drink’;

(n.) **thar-a* ‘a drink; the act of drinking’; (adj.) ‘drunk, tipsy, intoxicated’

A. Dravidian: Telugu *trāgu*, *trāvu* ‘to drink, to swallow, to eat, to smoke’, *trāguḍu*, *trāvuḍu* ‘drinking’; Parji *tar-* ‘to swallow’; Gadba (Ollari) *tārg-* ‘to swallow’, (?) (Salur) *sark-* ‘to drink (as ox in tank)’. Burrow—Emeneau 1984:275, no. 3174.

B. Proto-Kartvelian **ter-/tr-* ‘to drink (wine)’; Georgian *tr-/tver-* (metathesis from **ter-w-*): *tvr-oba* ‘to drink; to become drunk, intoxicated, inebriated’, *simtrvale-* ‘intoxication’, *mtrval-* ‘drunk, tipsy, intoxicated’; Svan *li-tr-e* ‘to drink something, to smoke something’, *təräj* ‘drunkard’. Fähnrich—Sardshweladse 1995:162 **twer-*; Schmidt 1962:114; Klimov 1964:95—96 **tr-* and 1998:69 **ter-* : **tr-* ‘to drink (wine)’; Fähnrich 2007:195 **twer-*.

Buck 1949:4.98 drunk; 5.13 drink (vb.). Bomhard—Kerns 1994:300, no. 115; Dolgopolsky 2008, no. 2294, **tarH₂V* ‘to drink’.

211. Proto-Nostratic root **thar-* (~ **thər-*):

(vb.) **thar-* ‘to tremble, to shake’;

(n.) **thar-a* ‘trembling, shaking (from fear, fright)’

A. Proto-Afrasian **tar-* ‘to tremble, to shake’: Semitic: Akkadian **tarāru* (pres. *itarrur*) ‘to shake’; Arabic (reduplicated) *tartara* ‘to shake, to be shaken, to tremble’. Egyptian (Demotic) *tryʃ* ‘to fear, to tremble’; Coptic *trre* [ṛṛṛṛ] ‘to become afraid, to tremble’, *strtr* (< **satirtir*) ‘trembling’. Vycichl 1983:199 and 221; Černý 1976:195. Proto-Southern Cushitic **tarar-* ‘to tremble, to shake’ > Ma’a *-taráʔa* ‘to shake (something)’; Dahalo *tarar-* ‘to tremble, to shake’. Ehret 1980:169. Highland East Cushitic: Hadiyya (reduplicated) *tartar-* ‘to stagger, to stumble’; Kambata (reduplicated) *tartar-* ‘to stagger, to stumble’. Hudson 1989:142. Ehret 1995:143, no. 176, **tar-* ‘to shake’.

B. Proto-Kartvelian **tʰt-* ‘to tremble’: Georgian *trt-* ‘to tremble’; Mingrelian *tirt-ol-* ‘to tremble’; Laz *tirt-in-* ‘to tremble’. Fähnrich—Sardshweladse

1995:165 *trt-; Klimov 1964:96 *trt- ‘to tremble’ and 1998:74 *trt- ‘to tremble’; Fähnrich 2007:199 *trt-.

- C. Proto-Indo-European *ther-s-, *thr-es- ‘to tremble, to shake’: Sanskrit *trāsati* ‘to tremble, to quiver’; Avestan *tərəs-* ‘to be afraid’; Greek *τρέω* ‘to tremble, to quiver’; Latin *terreō* ‘to frighten, to terrify’, *terror* ‘fright, fear, terror, alarm, dread’. Rix 1998a:591—592 *tres- ‘to shake, to tremble’; Pokorny 1959:1095 *tres-, *ters- ‘to quiver’; Walde 1927—1932.I:760 *tres-, *ters-; Mann 1984—1987:1387—1388 *ters- (*tersō) ‘to tremble’, 1425 *tresō ‘to rush, to sway, to tremble, to shake’; Watkins 1985:72 *tres- and 2000:93 *tres- ‘to tremble’; Gamkrelidze—Ivanov 1984.I:237 *t^h[h]ers-, *t^h[h]res- and 1995.I:207 *thers-, *thres- ‘to tremble’; Mallory—Adams 1997:509 *tres- ‘to tremble, to shake with fear’; Mayrhofer 1956—1980.I:531—532; Beekes 2010.II:1507—1508 *tres-; Boisacq 1950:984 *teres- (*tres-, *ters-); Chantraine 1968—1980.II:1131—1132 *tr-es-; Frisk 1970—1973.II:929—930; Hofmann 1966:373—374 *tresō; De Vaan 2008:617; Ernout—Meillet 1979:688; Walde—Hofmann 1965—1972.II:674—675 *teres- (*ters-, *tres-). Proto-Indo-European *thr-em-/ *thr-om-/ *thr-m- ‘to tremble, to shake’: Greek *τρέμω* ‘to tremble, to quiver’, *τρόμος* ‘a trembling, quaking, quivering (especially with fear)’; Latin *tremō* ‘to tremble, to quake’; Tocharian A *trām-* ‘to be furious’, B *tremi* ‘anger’; Old Church Slavic *tręsq*, *tręsti* ‘to shake’. Rix 1998a:589—590 *trem- ‘to tremble or shake (from fear)’; Pokorny 1959:1092—1093 *trem-, *trem-s- ‘to tremble, to quiver, to shake’; Walde 1927—1932.I:758 *trem-; Mann 1984—1987:1423 *trem- (*tremō) ‘to scare; to be scared, to tremble’; Watkins 1985:72 *trem- and 2000:93 *trem- ‘to tremble’; Gamkrelidze—Ivanov 1984.I:217 *t^h[h]rem- and 1995.I:187 *threm- ‘to shake’; Mallory—Adams 1997:509 *trem- ‘to shake, to tremble (in fear)’, *ter- ‘to shake, to tremble’; Frisk 1970—1973.II:922—923; Chantraine 1968—1980.II:1131—1132 *tr-em-; Beekes 2010.II:1502—1503 *trem-; Boisacq 1950:982 *t(e)rem-; Hofmann 1966:372—373 *tre-m-; De Vaan 2008:628; Ernout—Meillet 1979:700 *trem-; Walde—Hofmann 1965—1972.II:701 *t(e)rem-; Adams 1999:319 *trem- ‘to tremble’.

Buck 1949:10.26 shake (vb. tr.); 16.53 fear, fright. Bomhard—Kerns 1994: 280—281, no. 97.

212. Proto-Nostratic root *t^haw- (~ *t^həw-):

(vb.) *t^haw- ‘to swell’;

(n.) *t^haw-a ‘swelling, protuberance, bulge, lump, hump’; (adj.) ‘swollen, full, fat’

- A. Proto-Afrasian *taw- ‘to swell’: Semitic: Arabic *tāḥa* (*twḥ*) ‘to be broad’. Egyptian *twḥ-w* ‘pustules, swellings’. Erman—Grapow 1926—1963.5:251; Hannig 1995:920.

- B. Dravidian: Tamil *tava* ‘much, intensely’; Kannaḍa *tave* ‘abundantly, greatly, wholly, completely, exceedingly’. Burrow—Emeneau 1984:270, no. 3106.
- C. Proto-Kartvelian **tew-/tiw-* ‘to arise, to come into being, to come forth; to bring forth, to give rise to’: Georgian *tev-a* ‘to be wide-awake, alert’, *m-ti-eb-i* ‘star’, *m-tov-ar-e* ‘moon’, *gan-ti-ad-i* ‘sunrise’; Svan *an-taw-e* ‘to bring forth, to give rise to’, *tw-e-tn-e*, *tw-e-twn-e* ‘white’. Fähnrich—Sardshweladse 1995:158 **tew-*; Fähnrich 2007:190—191 **tew-/tiw-*.
- D. Proto-Indo-European **thew-/thow-/thu-*, **thewH-/thowH-/thuH-* (> **thū-*) ‘to swell; to be swollen, fat’: Sanskrit *tavas-* ‘strong’; Latin *tumeō* ‘to swell, to be swollen, to be puffed up’, *tūber* ‘swelling, protuberance’; Russian Church Slavic *tyju*, *tyti* ‘to become fat’; Lithuanian *tumėti* ‘to become thick’, *taukai* ‘(animal) fat’. Rix 1998a:581—582 **teu_{h2}-* ‘to swell’; Pokorny 1959:1080—1085 **tēu-*, **təu-*, **teuə-*, **tūō-*, **tū-* ‘to swell’; Walde 1927—1932.I:706—713 **tēu-*, **təu-*, **tū-*; Mann 1984—1987:1389—1390 **teugos* ‘fat, thick’, 1390 **teuk-* (**touk-*, **tuk-*) ‘fat; fat part, buttock’, 1456 **tuməlos* (**tumulos*) ‘swell, surge, lump, hump, hillock’, 1456 **tumō*, *-ējō* ‘to swell’, 1456—1457 **tumos*, *-ā*, *-ō(n)*, *-jə* ‘swell, lump, mass, myriad, crowd’; Mallory—Adams 1997:560—561 **teuh_a-* ‘to swell (with power), to grow fat’; Watkins 1985:71 **teuə-* (also **teu-*) and 2000:92 **teuə-* (also **teu-*) ‘to swell’; Mayrhofer 1956—1980.I:490; Ernout—Meillet 1979:705 **tūbh-* (?) and 706—707; Walde—Hofmann 1965—1972.II:712—713 **tūbh-* and II:715—716 **tēu-* (**teuā**); De Vaan 2008:632 and 633. This stem (**thuH-s* > **thū-s*) is also found in the Germanic, Baltic, and Slavic words for ‘thousand’: Proto-Germanic **þūs-χundi-* ‘thousand’ > Gothic *þūsundi* ‘thousand’; Old Icelandic *þúsund* ‘thousand’ (also *þús-hundrað*); Faroese *túsund* ‘thousand’; Norwegian *tusund* ‘thousand’; Swedish *tusen* ‘thousand’; Danish *tusen* ‘thousand’; Old English *þūsend* ‘thousand’; Old Frisian *thūsend* ‘thousand’; Old Saxon *thūsend*, *thūsendig* ‘thousand’; Dutch *duizend* ‘thousand’ Old High German *thūsunt*, *dūsunt* ‘thousand’ (New High German *tausend*). Baltic: Lithuanian *tūkstantis* ‘thousand’; Latvian *tūkstuōt(i)s* ‘thousand’; Old Prussian (acc. pl.) *tūsintons* ‘thousand’. Slavic: Old Church Slavic *tysqšti*, *tysęšti* ‘thousand’; Russian *tyśjača* [тысяча] ‘thousand’; Ukrainian *tyśjača* [тисяча] ‘thousand’ (older *tyśjača* [тысяча]; dial. *tyśjaca* [тысяца], *tyśuča* [тысуча]); Belorussian *tyśjača* [тысяча] ‘thousand’; Polish *tyśiac* ‘thousand’; Upper Sorbian *tyśac* ‘thousand’; Czech *tisíc* ‘thousand’; Bulgarian *tisešča* [тисеца] ‘thousand’; Slovenian *tisóča* ‘thousand’; Serbo-Croatian (dial.) *tīśuča* ‘thousand’. Orël 2003:431 Proto-Germanic **þūs-(x)undī-*; Kroonen 2013:554 Proto-Germanic **þūshundī-* ‘thousand’; Feist 1939:505—506; Lehmann 1986:367—369; De Vries 1977:628; Falk—Torp 1903—1906.II:391; Torp 1919:819; Onions 1966:919; Klein 1971:763; Skeat 1898:638; Kluge—Lutz 1898:210—211; Kluge—Mitzka 1967:774; Kluge—Seebold 1989:724; Derksen 2008:503 **tuH-s-ont-*,

*tuH-s-ent-; Shevelov 1964:181; Fraenkel 1962—1965.II:1135—1136
 *teya-, *tũ-; Smoczyński 2007.1:693—694 *tuk-, *teyk-. For discussion,
 cf. Blažek 1999b:315—316; Gamkrelidze—Ivanov 1995.I:746; Mallory—
 Adams 1997:405 and 560; Szemerényi 1996:221.

- E. Uralic: Proto-Finno-Ugrian *täwðe ‘full’ > Finnish *täysi/täyte-* ‘full’; Lapp / Saami (Kola) *diwdas* ‘full’; Cheremis / Mari *tić, cic* ‘full’; Votyak / Udmurt *dol-dol* ‘full’; Zyrian / Komi *dõla* ‘entirely’; Vogul / Mansi *təwl*, (Northern) *taagl* ‘full’; Ostyak / Xanty *tel*, (Southern) *tet* ‘full’; Hungarian *tel-* ‘to be filled, to become full’. Collinder 1955:119 and 1977:132; Rédei 1986—1988:518 *täwðe (*tälkə); Sammallahti 1988:550—551 *täwdä- ‘to fill’, *täwi- ‘full’.
- F. Proto-Gilyak / Nivkh *təw- ‘to swell’: Amur *t^hə-dv* ‘to swell’ (West Sakhalin Amur also *t^həw-dv*); North Sakhalin *t^hə-t* ‘to swell’; East Sakhalin *t^hə-d* / *t^hə(j)v-d* ‘to swell’; South Sakhalin *tu-nt* ‘to swell’. Fortescue 2016: 154.

Sumerian *tuh* ‘to be stretched out’, *tuh* ‘more than’, *tuh* ‘to produce abundantly, in profusion’.

Buck 1949:12.63 thick (in dimension). Bomhard—Kerns 1994:289, no. 104.

213. Proto-Nostratic *t^hek^h-:

(vb.) *t^hek^h- ‘to take (away), to grasp, to seize, to remove’;

(n.) *t^hek^h-a ‘the act of taking, grasping, seizing, removing’

- A. Proto-Afrasian *tek- ‘to take’: Egyptian *tk, tkk, tktk* ‘to seize, to grasp; to violate (frontier), to attack’. Hannig 1995:940 and 941; Faulkner 1962:302; Erman—Grapow 1921:207 and 1926—1963.5:331, 5:336; Gardiner 1957:601. West Chadic *tyak- ‘to take’ > Sha *tək* ‘to take’; Dafo-Butura *tyek* ‘to take’. Central Chadic *tyak- ‘to take’ > Musgu *taka, tega* ‘to take’. Orël—Stolbova 1995:501, no. 2388, *tek- ‘to take’.
- B. Dravidian: Tamil *tekku (tekki-)* ‘to receive, to take’; Kannaḍa *tege, tegu, tegi* ‘to pull, to draw towards oneself, to take, to take away, to remove; to be taken away, removed; to become less, to diminish, to disappear’, *tege* ‘taking’; Tulu *teguni* ‘to take’; Telugu *tigyu, tigucu* ‘to pull, to draw, to drag, to attract, to take’; Kuṛux *tīgaba?ānā* ‘to take’. Burrow—Emeneau 1984:299, no. 3407.

Buck 1949:11.13 take; 11.14 seize, grasp, take hold of. Dolgopolsky 2008, no. 2246, *t[e]Kæ ‘to take, to carry’ ([in descendant languages] → ‘to get, to possess’).

214. Proto-Nostratic root (Eurasianic only) **tʰepʰ-*:(vb.) **tʰepʰ-* ‘to warm, to burn’;(n.) **tʰepʰ-a* ‘heat, warmth’

Note also:

(vb.) **tʰab-* ‘to be or become warm; to make warm, to heat up; to cook’;(n.) **tʰab-a* ‘heat, warmth’; (adj.) ‘hot, warm; cooked, baked’

- A. Proto-Indo-European **tʰepʰ-* ‘to warm, to burn; to be warm’ (secondary *o*-grade form: **tʰopʰ-*): Sanskrit *tápati* ‘to be hot; to make hot or warm, to heat’, *tápas-* ‘heat, warmth’, *tápant-* ‘hot’; Avestan *tāpaiti* ‘to burn, to glow, to warm’, *tafnō* ‘heat’, *tafnah-* ‘heat, fever’; Sogdian *tph* ‘fever’; Latin *tepeō* ‘to be lukewarm, to be tepid’, *tepidus* ‘lukewarm, tepid’, *tepor* ‘moderate heat’; Old Irish *té* ‘hot’, *tess* ‘heat’, *tene* ‘fire’; Welsh *twym* ‘hot’; (?) Old English *of-beſian* ‘to dry up’; Old Church Slavonic *toplŭ* ‘warm’; Russian *tepló* [тепло] ‘heat’, *teplyj* [теплый] ‘warm’, *topít* [топить] ‘to heat’, *topít’sya* [топиться] ‘to burn’, *tópka* [топка] ‘heating’; Hittite *tapašša-* ‘heat, fever’; Luwian (nom. sg.) *ta-pa-aš-ša-aš* ‘fever’. Rix 1998a:572—573 **tep-* ‘to be warm, to be hot’; Pokorny 1959:1069—1070 **tep-* ‘to be warm’; Walde 1927—1932.I:718—719 **tep-*; Mann 1984—1987:1382—1383 **tep-* ‘to be warm’, **tepos, -es-* ‘heat’, 1383 **tepant-* (**tepn̥t-*) ‘(being) hot, (being) warm’, 1383 **tepn-*, 1383 **tepskō* ‘to grow warm, to be warm’, 1383 **tepst-* ‘heat, warmth’, 1384 **tept-* ‘hot; heat’, 1413 **toptis, -os-* (**topn̥t-*) ‘hot; heat’; Watkins 1985:70 **tep-* and 2000:90 **tep-* ‘to be hot’; Gamkrelidze—Ivanov 1984.I:153, II:683, II:879 **t[h]ep[h]-* and 1995.I:132, I:589—590, I:776 **tʰepʰ-* (vb.) ‘to warm; (n.) heat, warmth’; Mallory—Adams 1997:263—264 **tep-* ‘hot’; Wodtko—Irslinger—Schneider 2008:698—700 **tep-*; Mayrhofer 1956—1980.I:477; Ernout—Meillet 1979:685 **tep-*; De Vaan 2008:614 **t(e)p-eh₁-*, **tep-os-*; Walde—Hofmann 1965—1972.II:667—668.
- B. Proto-Altaic **tʰepʰV-* ‘to warm, to burn’: Proto-Tungus **tepe-* ‘to catch fire, to burn’ > Manchu *tefe-* ‘to burn up’; Spoken Manchu (Sibo) *tiavə-* ‘to catch fire, to burn’; Nanay / Gold *tepe-* ‘to catch fire, to burn’. Proto-Turkic **tepi-* ‘to dry, to become dry; to suffer from heat’ > Azerbaijani *tāpi-* ‘to dry, to become dry’; Turkmenian *tebi-* ‘to dry, to become dry’; Chuvash *tip-* ‘to dry, to become dry; to suffer from heat’. Starostin—Dybo—Mudrak 2003:1421 **tʰepV* ‘to warm, to burn’.

Buck 1949:15.84 dry; 15.85 hot, warm. Slightly different etymology in Dolgopolsky 2008, no. 2398, **tæ[p]V* ‘to warm, to be warm’.

215. Proto-Nostratic second person pronoun stem: **tʰi-* (~ **tʰe-*) ‘you’; (oblique form) **tʰa-* (~ **tʰə-*):

- A. Proto-Afrasian **ti/*ta* ‘you’: Proto-Semitic (prefix forms) **ti-/*ta-*, (suffix forms) **-tī/*-tā* ‘you’ > Arabic (m.) *ʔan-ta*, (f.) *ʔan-ti* ‘you’, perfect 2nd sg. endings (m.) *-ta*, (f.) *-ti*, imperfect 2nd sg./du./pl. prefix *ta-*; Akkadian (m.) *an-tā*, (f.) *an-tī* ‘you’, permansive 2nd sg. endings (m.) *-āt(a)*, (f.) *-ātī*, prefix conjugation 2nd sg./pl. prefix *ta-*; Hebrew (m.) *ʔat-tāh* [תַּתָּה] (f.) *ʔat-t(ī)* [תַּתִּי] ‘you’, perfect 2nd sg. endings (m.) *-tā*, (f.) *-t(i)*, imperfect 2nd sg./pl. prefix *ti-*; Ugaritic *āt* ‘you’ (m. **ʔatta*, f. **ʔatti*), perfect 2nd sg. ending *-t* (m. **-ta*, f. **-ti*), imperfect 2nd sg./du./pl. prefix *t-*; Šheri / Jibbālī *tēn* ‘you’; Geez / Ethiopic (m.) *ʔan-ta* [አንተ], (f.) *ʔan-tī* [አንተ] ‘you’, prefix conjugation 2nd sg./pl. prefix *tə-* [ት-]. Central Cushitic: Bilin (sg.) *ʔen-tī*, *ʔin-tī* ‘you’, (pl.) *ʔen-tin*, *ʔin-tin*. Reinisch 1887:43; Appleyard 2006:150—151. Proto-East Cushitic (2nd sg. subj.) **ʔat-i/u* ‘you’ > Gedeo / Darasa *at-i* ‘you’; Hadiyya *at-i* ‘you’; Kambata *at-i* ‘you’; Sidamo *at-e/i* ‘you’; Burji *ási* ‘you’; Saho-Afar *at-u* ‘you’; Somali *ad-i-* ‘you’; Rendille *at-i* ‘you’; Galla / Oromo *at-i* ‘you’; Bayso *at-i* ‘you’; Konso *at-ti* ‘you’; Gidole *at-te* ‘you’. Sasse 1982:29; Hudson 1989:172. Proto-East Cushitic (2nd pl. subj.) **ʔatin-* ‘you’ > Saho-Afar *atin* ‘you’; Burji *ašinu* ‘you’; Somali *idin-* ‘you’; Rendille *atin-* ‘you’; Dasenech *itti(ni)* ‘you’; Kambata *aʔn-aʔooti* ‘you’; Tsamay *atun-i* ‘you’. Sasse 1982:29. Proto-Highland East Cushitic (2nd sg. voc. fem.) **tee* ‘you’ > Gedeo / Darasa (f.) *tee* ‘you’; Hadiyya (f.) *ta* ‘you’; Kambata (f.) *te* ‘you’; Sidamo (f.) *tee* ‘you’. Hudson 1989:172. Proto-Southern Cushitic (pl.) **ʔata-* ‘you’, (sg.) **ʔaata-* ‘you’ > Iraqw *aten* ‘you’; Dahalo (pl.) *ʔàtta* ‘you’, (sg.) *ʔááta* ‘you’. Ehret 1980:282—283. Ehret (1995:363, no. 727) reconstructs a Proto-Afrasian independent 2nd sg. pronoun **ʔant-/*ʔint-* ‘you’.
- B. Elamo-Dravidian: Elamite (2nd sg. verb ending) *-t*, (2nd pl. verb ending) *-ht* (*h+t*; in Royal Achaemenid Elamite, this becomes *-t* due to loss of *h*), allocutive (that is, person addressed or “second person”) gender suffix *-t*. Dravidian: Parji *-t* appositional marker of 2nd sg. in pronominalized nouns and verb suffix of 2nd sg.
- C. Proto-Indo-European (nom. sg.) **t^hū* ‘you’, (acc. sg.) **t^hwē/*t^hē, *t^hwēm/*t^hēm*, (gen. sg.) **t^heue, *t^hewo*, (enclitic) **t^h(w)ey/*t^h(w)oy*: Sanskrit (nom. sg.) *tvám* ‘you’, (acc. sg.) *tvám*, *tvā*, (instr. sg.) *tváyā*, (dat. sg.) *túbhyam*, *te*, (abl. sg.) *tvát*, (gen. sg.) *táva*, *te*, (loc. sg.) *tváyi*; Avestan (nom. sg.) *tūm*, *tū* ‘you’; Greek (Doric) (nom. sg.) *τῷ* ‘you’, (gen. sg.) *τέος*, (dat. sg.) *τοί*, *τοί*, (acc. sg.) *τέ*; Armenian (nom. sg.) *du* ‘you’; Albanian (nom. sg.) *ti* ‘you’, (dat. sg.) *ty*, *të*, (acc. sg.) *ty*, *të*, (abl. sg.) *teje*; Latin (nom. sg.) *tū* ‘you’, (gen. sg.) *tui*, (dat. sg.) *tibi*, (acc. sg.) *tē*, (abl. sg.) *tē* (Old Latin *tēd*); Old Irish (nom. sg.) *tú* ‘you’, (gen. sg.) *taí*; Gothic (nom. sg.) *þu* ‘you’, (gen. sg.) *þeina*, (dat. sg.) *þus*, (acc. sg.) *þuk*; Lithuanian (nom. sg.) *tù* ‘you’, (acc. sg.) *tavè*, (gen. sg.) *tavēs*, (loc. sg.) *tavyjè*, (dat. sg.) *táv*, (instr. sg.) *tavimi*; Old Church Slavonic (nom. sg.) *ty* ‘you’, (acc. sg.) *tę*, *tebe*, (gen. sg.) *tebe*, (loc. sg.) *tebě*, (dat. sg.) *tebě*, *ti*, (instr. sg.) *tobojo*; Palaic (nom. sg.) *ti-i* ‘you’, (dat.-acc. sg.) *tu-ú*; Hittite (nom. sg.) *zi-ik*, *zi-*

ga ‘you’, (acc.-dat. sg.) *tu-uk*, *tu-ga*, (gen. sg.) *tu-(e-)el*, (abl. sg.) *tu-e-da-az*, *tu-e-ta-za*; (encl. poss. nom. sg.) *-ti-iš*, (encl. poss. acc. sg.) *-ti-in*, (encl. poss. neut. sg.) *-te-it*, (encl. poss. gen. sg.) *-ta-aš*, (encl. poss. dat. sg.) *-ti*, (encl. poss. instr. sg.) *-te-it*; (encl. oblique sg.) *-ta* (*-du* before *-za*); Luwian (nom. sg.) *ti-i* ‘you’. Note: the Proto-Indo-European reconstructions given above represent later, post-Anatolian forms (Sturtevant 1951:102–103, §169, reconstructs Indo-Hittite [2nd sg. nom.] **tē* ‘you’, [2nd sg. oblique] **twē*, **tw*). Pokorny 1959:1097–1098 **tū* ‘you’; Walde 1927–1932.I:745 **tū* ‘you’; Mann 1984–1987:1370 **tē* ‘thee’, 1371 **tebhe*, **tebhei* ‘to thee’, 1393 **teye*, **teyi*, **tey* ‘thee, to thee’, 1393–1394 **teyos* ‘thy, thine’, 1407 **toi* ‘to thee’, 1449 **tu*, **tū* ‘thou’, 1465 **tue* ‘thee’; Watkins 1985:72 **tu-* and 2000:93 **tu-* second person sg. pronoun: ‘you, thou’ (lengthened-grade form **tū*, [acc. sg.] **te*, **tege*); Mallory–Adams 1997:455 **tūh_x* ‘thou’; Brugmann 1904:410–413 (nom. sg.) **tū*; Meillet 1964:333–335; Gamkrelidze–Ivanov 1984.I:225 **t^[h]ue-/t^[h]u* and 1995.I:194 **t^hwe-/t^hu*; Szemerényi 1990:224–234 and 1996:216; Beekes 1995:209; Orël 1998:455–456 and 2003:428 Proto-Germanic **pū*; Kroonen 2013:541 Proto-Germanic **pīna* ‘your’ and 549 **pū* ‘you’. Proto-Indo-European (2nd pl. verb ending) **-the*: Sanskrit (2nd pl. primary verb ending) *-tha*, (2nd pl. secondary verb ending) *-ta*; Greek *-τε*; Latin (imptv.) *-te*; Old Irish *-the*, *-de*; Gothic *-þ*; Lithuanian *-te*; Old Church Slavonic *-te*. Brugmann 1904:591–592 **-te*; Fortson 2004:84 **-te(-)*; Szemerényi 1996:233–235 (primary) **-te(s)*, (secondary) **-te*; Clackson 2007:124–125 and 127; Meier-Brügger 2003:178 **-te*; Gamkrelidze–Ivanov 1984.I:293 **-t^[h]e* and 1995.I:264 **-the*.

- D. Proto-Uralic (sg.) **ti-nä* ‘you’: Finnish *sinä/sinu-* ‘you’; Lapp / Saami *don/dú-* ‘you’; Mordvin *ton* ‘you’; Cheremis / Mari *təñ* ‘you’; Votyak / Udmurt *ton* ‘you’; Zyrian / Komi *te* (acc. *tenō*) ‘you’; Hungarian *tē* ‘you’; Tavgi Samoyed / Nganasan *tannaŋ* ‘you’; Yenisei Samoyed / Enets *tod’i* ‘you’; Selkup Samoyed *taŋ*, *tat* ‘you’; Kamassian *tan* ‘you’. Collinder 1955:57 and 1977:74; Décsy 1990:109 **te*; Zhivlov 2023:154–158; Rédei 1986–1988:539 **tš*. Yukaghir (Southern / Kolyma) *tət* ‘you’, (Northern / Tundra) *tet* ‘you’. Nikolaeva 2006:429–430. Proto-Uralic (pl.) **te* ‘you’: Finnish *te* ‘you’; Lapp / Saami *dí* ‘you’; Mordvin (Erza) *tiñ*, *tiñ* ‘you’; Cheremis / Mari *tä*, *te* ‘you’; Votyak / Udmurt *ti* ‘you’; Zyrian / Komi *ti* ‘you’; Hungarian *ti* ‘you’; Tavgi Samoyed / Nganasan *teenŋ* ‘you’; Yenisei Samoyed / Enets *tod’i?* ‘you’; Selkup Samoyed *tee*, *tii* ‘you’; Kamassian *šī?* ‘you’. Collinder 1955:62 and 1977:79; Rédei 1986–1988:539–540 **tš*; Décsy 1990:109 **te* ‘you’; Janhunen 1977b:156 **te(-)*. Yukaghir (Southern / Kolyma) *tit* ‘you’, (Northern / Tundra) *tit* ‘you’. Nikolaeva 2006:431.
- E. Proto-Altaic (nom. sg.) **thi* ‘thou, you’: Proto-Mongolian (nom. sg.) (**thi* > **vi* >) *či* ‘you’, (nom. pl.) **ta* ‘you’ > Written Mongolian (nom. sg.) *či* ‘you’ (gen. *činu*), (nom. pl.) *ta*; Dagur (nom. sg.) *šī* ‘you’, (nom. pl.) *tā*;

Monguor (nom. sg.) *či* ‘you’, (nom. pl.) *ta*; Ordos (nom. sg.) *či* ‘you’, (nom. pl.) *ta*; Khalkha (nom. sg.) *či* ‘you’, (nom. pl.) *ta*; Buriat (nom. sg.) *ši* ‘you’, (nom. pl.) *tā*; Moghol (nom. sg.) *či* ‘you’, (nom. pl.) *to*; Kalmyk (nom. sg.) *či* ‘you’, (nom. pl.) *ta*. Poppe 1955:35, 104, 112, 213, and 218; Starostin—Dybo—Mudrak 2003:1424 *t^hi ‘thou’. Starostin—Dybo—Mudrak note: “Mongolian has alone preserved the Nostratic 2nd p[erson personal pronoun] stem *t^hi; other Altaic languages have retained only the other stem *si (*sja), with the oblique stem *nV.”

- F. Etruscan: In Etruscan, there is a pronoun *θi* of unknown meaning. However, in view of the fact that the verbal imperative endings for the 2nd person are *-ti*, *-θ*, *-θi* (cf. Bonfante—Bonfante 1983:86), *θi* may be a form of the pronoun of the 2nd person singular.
- G. Proto-Chukchi-Kamchatkan **tur(i)* ‘you’: Chukchi *turi* ‘you’, *tury-in* ‘your’; Kerek (pl.) *təjəkku* ‘you’, (dual) *təj* ‘you’, *təjəj* ‘your’; Koryak (pl.) *tujū* ‘you’, (dual) *tujū* ‘you’, *tucy-in* ‘your’; Alyutor (pl.) *turuwwi* ‘you’; Kamchadal / Itelmen *tuzaʔn* ‘you’, *tizvin* ‘your’. Mudrak 1989b:107 **tur-*, **turx-* ‘you’; Fortescue 2005:291. Proto-Chukchi-Kamchatkan *-*ǵ* in **kǵǵ* ‘you’: Chukchi *ǵət* (Southern *ǵəto*) ‘you’; Kerek *həŋŋu* ‘you’; Koryak *ǵəcci* ‘you’; Alyutor *ǵətta*, *ǵəttə* (Palana *ǵətte*) ‘you’; Kamchadal / Itelmen *kəz(z)a* (Sedanka *kza*) ‘you’. Fortescue 2005:142—143.
- H. Proto-Gilyak / Nivkh (**t^hi* > **t^vi* >) **či* (sg.) ‘you’: Amur *č^hi* ‘you’; North Sakhalin *č^hi* ‘you’; East Sakhalin *č^hi* ‘you’; South Sakhalin *či* ‘you’. Fortescue 2016:32. Proto-Gilyak / Nivkh **čin(γun)* (pl.) ‘you’: North Sakhalin *č^hiŋ* (pl.) ‘you’; Amur *č^həŋ* (pl.) ‘you’; East Sakhalin *č^hiŋ(γun)* (pl.) ‘you’; South Sakhalin *čin* (pl.) ‘you’. Fortescue 2016:33.
- I. Eskimo: West Greenlandic (2nd sg. absolutive possessive suffix) *-(i)t*.

Sumerian *za-e* ‘you’, (2nd sg. possessive suffix) *-zu* ‘your’.

Greenberg 2000:71—74; Dolgopolsky 1984:87—89 Proto-Nostratic **t(ü)* and 2008, no. 2312, **t[ü]* (> **tⁱ*) ‘thou’; Bomhard—Kerns 1994:285—287, no. 102; Möller 1911:242.

216. Proto-Nostratic root **t^hikh-* (~ **t^hek^h-*):

- (vb.) **t^hikh-* ‘to form, to fashion, to make, to create’;
- (n.) **t^hikh-a* ‘tool used to form, fashion, make, or create something: axe, adze, chisel, etc.; the act of forming, fashioning, making, or creating something: action, deed, etc.’
- A. Proto-Kartvelian **tik-* ‘small tool or implement: a stick, a pick’: Georgian *tk-* in *na-tk-is-el-a-i* ‘a small stick, a toothpick’; Svan *šdik*, *štik* ‘tooth’. Fähnrich 2007:196—197 **tik-*.
- B. Proto-Indo-European **t^hek^h(s)-* (secondary *o*-grade form: **t^hok^h(s)-*) ‘to form, to fashion, to make, to create, either by using a sharp tool or by

bending, weaving, joining, braiding, or plaiting together’: Sanskrit *tákṣati* ‘to form by cutting, to plane, to chisel, to chop, to fashion, to make, to create’, *tákṣan-* ‘a wood-cutter, carpenter’; Pāli *tacchati* ‘to build’, *tacchēti* ‘to do woodwork, to chip’, *tacchanī-* ‘hatchet’, *tacchaka-* ‘carpenter’; Prakrit *takkhaī*, *tacchāī* ‘to cut, to scrape, to peel’; Kalasha *tēčīn* ‘a chip’; Avestan *tašaiti* ‘to produce, (carpenter) to make’, *taša-* ‘axe’; Ossetic *taxun* ‘to weave’; Latin *texō* ‘to weave, to build’; Greek τέκτων (< *τέκστων) ‘carpenter’, τέχνη (< *τέκσνā) ‘art, craft’; Armenian *thek^hem* ‘to bend, to shape’; Old Irish *tál* (< *tōks-lo-) ‘axe’; Old Icelandic *þexla* ‘adze’; Old High German *dehsa*, *dehsala* ‘axe, poleaxe’ (New High German *Dechsel*); Lithuanian *tašai*, *tašyti* ‘to hew’; Old Church Slavic *tešō*, *tesati* ‘to hew’; Russian Church Slavic *tesla* ‘carpenter’s tool, adze’; Hittite (3rd sg. pres.) *ták-ki-(e)-eš-zi* ‘to join, to build’. Rix 1998a:562—563 *tek- ‘to weave, to plait’; Pokorny 1959:1058 *tek- ‘to weave, to plait’, 1058—1059 *teḱp- ‘to plait’; Walde 1927—1932.I:716 *teq-, I:717 *teḱp-; Mann 1984—1987:1374 *teḱslos, -ā, -is (*teḱsāl-) ‘shape; carving; shaper, adze’, 1374 *teḱsmn-, *teḱsmō(n), (*teḱsm-) ‘shaped object’, 1374 *teḱsō, -iō (*tōks-) ‘to shape, to carve, to form, to model, to make’, 1374 *teḱsos, -ā ‘shaped material, carving; carver, shaper, carpenter’, 1374—1375 *teḱstos, -ā, -om ‘shaped; shaped object, carving’; *teḱstis ‘act of shaping’, 1409 *tōksejō ‘to work, to shape, to cultivate’, 1409 *tōksos ‘gear, tackle, tool, tools, model’, 1409 *tōksilā (*tōkslā, *tōksul-) ‘shaping, shape, carving, composition’, 1409 *tōkstos ‘shaped, carved; carving, shape, model’; Watkins 1985:69 *teks- and 2000:89—90 *teks- ‘to weave, to fabricate, especially with an ax’; Gamkrelidze—Ivanov 1984.II:705—706 *t[h]ek[h]s- and 1995.I:611, I:734, I:780 *thek^hs- ‘to manufacture, to prepare, to produce; to weave, to braid; to work (something) (primarily wood with a sharp tool or adze); to mold, to model (in clay)’; Mallory—Adams 1997:37—38 (?) *teḱso/eh_a-, *teḱsleh_a- ‘ax, adze’, *teḱs- ‘to fabricate’, 139 *teḱs-(t)or/n- ‘one who fabricates’, 443 *teḱsteh_a- ‘plate, bowl’; Burrow 1973:83 *teks-tōn (> Greek τέκτων); Mayrhofer 1956—1980.I:468; Boisacq 1950:950—951 *teḱp-; Hofmann 1966:357 *teḱp-; Frisk 1970—1973.II:867—868 and II:889—890; Chantraine 1968—1980.II:1100 *tek^s- and II:1112; Beekes 2010.II:1460 *te-tḱ-n- and II:1476 *teḱ-, *te-tḱ-; De Vaan 2008:619; Walde—Hofmann 1965—1972.II:678—679; Ernout—Meillet 1979:690; Orël 2003:419 Proto-Germanic *þexsanān, 419 *þexs(a)lōn; De Vries 1977:609; Kluge—Mitzka 1967:124; Kluge—Seebold 1989:130 *teks-; Fraenkel 1962—1965.II:1065 *teḱs-; Smoczyński 2007.1:661 *tetḱ-; Derksen 2008:491 *tetḱ- and 2015:459 *tetḱ-; Kloekhorst 2008b:813—814. Note: Two separate Proto-Nostratic roots have fallen together in Proto-Indo-European: (1) *thik^h- (~ *thek^h-) ‘to form, to fashion, to make, to create’ and (2) *thak^h- (~ *thak^h-) ‘(vb.) to twist, to bend; to fasten, twist, bend, join, or hook together; to be twisted, bent; (n.) hook, peg’.

- C. Uralic: Proto-Finno-Ugrian *teke-* ‘to do, to make’ > Finnish *teke-* ‘to do, to make’, *teko* ‘deed, act’; Lapp / Saami *dákkâ-/dâgâ-* ‘to do, to make’; Mordvin (Erza) *teje-*, (Moksha) *tijə-* ‘to do, to make’; Hungarian *tév-* ‘to do, to make’, *tevés* ‘doing, making, action’, *tett* ‘action, act, deed’. Sammallahiti 1988:550 **teki-* ‘to do’; Collinder 1955:119, 1960:414 **teke-*, 1965:146, and 1977:132; Rédei 1986—1988:519 **teke-* ‘to do, to make’; Joki 1973:327—328.

Buck 1949:6.33 weave; 9.11 do, make; 9.44 build; 9.75 plait; 9.81 carve; 9.84 chisel. Koskinen 1980:52, no. 178.

217. Proto-Nostratic root **t^hik’*- (~ **t^hek’*-):

(vb.) **t^hik’*- ‘to press or squeeze together’;

(n.) **t^hik’-a* ‘pressure, solidity, hardness, massiveness, firmness’; (adj.) ‘compact, thick, massive, solid, firm’

- A. Afrasian: Proto-Southern Cushitic **tiik’*- ‘to press’ > Alagwa *tiŋq-* ‘to squeeze out’. Ehret 1980:325, no. 52.
- B. Dravidian: Konda *tig-* (-*it-*) ‘to press down hard, to lay pressure on’; Pengo *tig-* (*tikt-*) ‘to push’; Manda *tig-* ‘to push’. Burrow—Emeneau 1984:278, no. 3205.
- C. Proto-Indo-European **t^hek’-u-* ‘firm, solid, thick’: Old Irish *tiug* ‘thick’; Welsh *tew* ‘thick, fat’; Old Icelandic *þjokkr*, *þykkir* ‘thick, dense’; Swedish *tjock* ‘thick’; Danish *tyk* ‘thick’; Norwegian *tjukk* ‘thick’; Old English *þicce* ‘solid, thick, dense, viscous’, *þicnes* ‘denseness, viscosity, thickness, solidity, hardness, depth’, *þiccol*, *þiccul* ‘fat, corpulent’; Old Frisian *thikke* ‘thick’; Old Saxon *thikki* ‘thick’; Dutch *dik* ‘thick’; Middle High German *dic* (*dicke*) ‘thick, close together’ (New High German *dick*). Pokorny 1959:1057 **tegu-* ‘fat, thick’; Walde 1927—1932.I:718 **tegu-*; Mann 1984—1987:1397 **tig-* (**tigus*) ‘thick’; Watkins 1985:69 **tegu-* and 2000:89 **tegu-* ‘thick’; Mallory—Adams 1997:574 **tegu-* ‘thick, fat’; Orël 2003:419 Proto-Germanic **þekwipō*, 419 **þekwōjanan*, 419 **þekwuz*; Kroonen 2013:537 Proto-Germanic **þeku-* ‘fat’; Torp 1919:791; Falk—Torp 1903—1906.II:395—396; De Vries 1977:614 **tegu-*; Klein 1971:761 **tegu-*; Onions 1966:916 Common Germanic **þeku-*, **þekwia-*; Kluge—Mitzka 1967:131 **tegu-*; Kluge—Seebold 1989:142 **tegu-*.
- D. (?) Yukaghir (Southern / Kolyma) *toγo:-* ‘dense, thick; low (of voice); deep (of sleep)’, *togod’e-* ‘to make thick’, (Northern / Kolyma) *toγore-* ‘to thicken (of reindeer milk)’, *toγuo-* ‘dense, thick; low (of voice); deep (of sleep)’, *toγumu-* ‘to grow thick’, *toγuruol* ‘clot’. Nikolaeva 2006:432—433.
- E. Proto-Altaic **t^hiku-* ‘to stuff into, to press into’: Proto-Tungus **tiki-* ‘to fit, to be placed into’ > Manchu *čiki-* ‘to insert or attach snugly, to fit exactly’; Ulch *tiki-* ‘to fit, to be placed into’; Oroch *tiki-* ‘to fit, to be placed into’;

Nanay / Gold *čiqi-* ‘to fit, to be placed into’; Udihe *tiχi-* ‘to fit, to be placed into’. Proto-Mongolian **čiki-* ‘to stuff into, to press into’ > Mongolian *čiki-* ‘to jam, to stuff, to press, to push, to shove’, *čikiče-* ‘to be crowded or cramped, to be confined to a small place, to fit in with difficulty’, *čikilče-* ‘to crowd, to throng, to push each other, to be cramped’, *čikildü-* ‘to push each other, to crowd, to be cramped’; Khalkha *čiχe-* ‘to stuff into, to press into’; Buriat *šeχe-* ‘to stuff into, to press into’; Kalmyk *čikə-* ‘to stuff into, to press into’; Ordos *žike-* ‘to stuff into, to press into’; Moghol *čikānā* ‘packed full’; Dagur *čike-* ‘to stuff into, to press into’; Monguor *čigi-* ‘to stuff into, to press into’. Proto-Turkic **tiki-* ‘to stuff into, to press into’ > Old Turkic *tīq-* ‘to stuff into, to press into’; Turkish *tık-* ‘to thrust, squeeze, or cram into’, *tıka* ‘crammed full’, *tıkış-* ‘to be cramped or squeezed together’, *tıkın-* ‘to stuff oneself, to eat in haste, to gulp down one’s food’, *tıkanık* ‘stopped up, choked’, *tıkız* ‘fleshy, hard’, *tık naz* ‘plumpish, stout’; Gagauz *tīqa-* ‘to stuff into, to press into’; Azerbaijani *tīχ-* ‘to stuff into, to press into’; Turkmenian *dīq-* ‘to stuff into, to press into’; Uzbek *tiq-* ‘to stuff into, to press into’; Uighur *tiq-* ‘to stuff into, to press into’; Karaim *tīq-* ‘to stuff into, to press into’; Tatar *tīq-* ‘to stuff into, to press into’; Bashkir *tīq-* ‘to stuff into, to press into’; Kirghiz *tīq-* ‘to stuff into, to press into’; Kazakh *tīq-* ‘to stuff into, to press into’; Noghay *tīq-* ‘to stuff into, to press into’; Tuva *tīyi-* ‘to stuff into, to press into’; Chuvash *čiχ-* ‘to stuff into, to press into’. Starostin—Dybo—Mudrak 2003:1425—1426 **tʲi/kʲu* ‘to stuff into, to press into’; Poppe 1960:16 and 134; Street 1974:27 **tiki-* ‘to jam in; to overeat’.

Buck 1949:9.342 press (vb.); 10.67 push, shove (vb.); 12.63 thick (in dimension); 12.64 thick (in density). Bomhard—Kerns 1994:290, no. 105.

218. Proto-Nostratic root **thir-* (~ **ther-*):

(vb.) **thir-* ‘to have enough or more than enough, to have all needs fulfilled, to be satisfied, to have plenty’;

(n.) **thir-a* ‘abundance, fullness’; (adj.) ‘enough, abundant, full’

Extended form:

(vb.) **thir-V-ph-* ‘to have enough, to have all needs fulfilled, to be satisfied, to have plenty’;

(n.) **thir-ph-a* ‘abundance, excess, surplus, plenty’

A. Afrasian: Semitic: Arabic *tariʿa* ‘to be or become full (vessel); to fill (something, especially a vessel)’, *taraʿ*, *tariʿ* ‘full’.

B. Proto-Uralic **tirä-* ‘to fill, to become full, to become satisfied’: Finnish *tyrty-* ‘to be surfeited, to be more than satisfied’; Votyak / Udmurt *tyr* ‘full; fullness; abundant, enough, much’, *tyr-* ‘to fill, to become full, to become satisfied, to be surfeited, to be fed up with something’; Zyrian / Komi *tyr* ‘full’, *tyrl-* ‘to become full’; Ostyak / Xanty *təram-* ‘to suffice, to

come to an end, to become full (of the moon), to become satisfied, to accomplish, to get through with'; Selkup Samoyed *tiir* 'full, filled', *tiira-*, *tirra-* 'to fill'. Collinder 1955:64 and 1977:81; Rédei 1986—1988:524—525 **tire* (**türe*) 'full'; Décsy 1990:109 **tirä* 'full'.

- C. (?) Proto-Chukchi-Kamchatkan **təɾæt-* 'to be satisfied': Kerek *təret-ev-* 'to be sick (of food)', *tərat-γəjɣən* 'overabundance, overeating', *t(ə)ret-* 'to be full, to be sick of eating'; Alyutor *trat-* 'to be full, to be sick of eating'. Fortescue 1995:302.

Buck 1949:13.21 full. Bomhard—Kerns 1994:278, no. 93.

219. Proto-Nostratic root **t^hir-* (~ **t^her-*):

Extended form:

(vb.) **t^hir-V-ph-* 'to have enough, to have all needs fulfilled, to be satisfied, to have plenty';

(n.) **t^hir-ph-a* 'abundance, excess, surplus, plenty'

Derivative of:

(vb.) **t^hir-* 'to have enough or more than enough, to have all needs fulfilled, to be satisfied, to have plenty';

(n.) **t^hir-a* 'abundance, fullness'; (adj.) 'enough, abundant, full'

- A. Afrasian: Proto-Semitic **tar-ap-* 'to have all needs fulfilled, to have abundance' > Arabic *tarifa* 'to live in abundance, opulence, luxury', *taraf* 'opulence, luxury, affluence'; Sabaeen *trf* 'to remain'; Soqotri *terof* 'to be in good health'; Geez / Ethiopic *tarfa* [ተርፋ], *tarafa* [ተረፋ] 'to be left, to be left over, to be abandoned, to remain, to survive, to be spared, to be in plenty, to abound, to be in excess, to be superfluous, to be excellent, to be distinguished', *taraf* [ተርፍ], *tarf* [ተርፍ] 'remainder, remnant, abundance, surplus; abundant, superfluous, uttermost', *təṛāf* [ተረፍ] 'remainder, residue, overflow, abundance'; Tigrinya *täräfä* 'to remain, to be profitable'; Tigre *tärfa* 'to be left over, to remain'; Harari *täräfa* 'to be in excess'; Amharic *tärräfa* 'to be left over, to remain, to be in excess, to be superfluous', *tərf* 'profit, gain, excess'; Argobba *tärräfa* 'to be left over, to remain'; Gurage *täräfä* 'to remain, to be left over, to be saved, to be profitable, to heal, to recover from illness, to be delivered of child', *tərf* 'advantage, profit, excess'. Leslau 1979:601 and 1987:579.

- B. Proto-Indo-European **t^herph-/t^horph-/t^hṛph-*, **t^hrep^h-/t^hrop^h-/t^hṛph-* 'to have enough, to be satisfied': Sanskrit *tṛpyati* 'to satisfy oneself, to become satiated or satisfied, to be pleased with; to enjoy, to satisfy, to please'; Greek τέρω 'to satisfy, to delight, to please, to be delighted, to have enough of'; (?) Gothic *þrafstjan* 'to console, to comfort'; Lithuanian *tarptūti*, *tarpti* 'to thrive, to grow luxuriantly'. Rix 1998a:578 **terp-* 'to be satisfied'; Pokorny 1959:1077—1078 **terp-*, **trep-* 'to satisfy oneself, to enjoy'; Walde 1923—1932.I:736—737 **terp-* 'to satisfy oneself, to enjoy';

Mann 1984—1987:1387 **terp-* (**t̥p-*) ‘to rejoice’, 1415 **torp-* ‘thriving, fit, good’, 1446 **t̥p-* (**t̥pō-*, *-iō-*) ‘to endure, to experience, to need, to want, to enjoy’; Watkins 1985:70 **terp-* ‘to satisfy oneself’ and 2000:91 **terp-* ‘to take pleasure’; Mallory—Adams 1997:500 **terp-* ‘to take (to oneself), to satisfy oneself, to enjoy’; Mayrhofer 1956—1980.I:524; Beekes 2010.II:1470 **terp-*; Boisacq 1950:958—959 **terep-*; Chantraine 1968—1980.II:1107—1108; Frisk 1970—1973.II:881—882; Hofmann 1966:360 **terp-*; Feist 1939:500 Proto-Germanic **praf-sti-* or **praf-st-a-* (< **tróp-st(h)o-*); Lehmann 1986:364; Smoczyński 2007.1:660; Fraenkel 1962—1965.II:1062—1063; Derksen 2015:459 **torp-*.

Buck 1949:11.42 wealth, riches; 11.51 rich; 11.73 profit; 12.18 enough (adj. or adv.); 13.21 full. Bomhard—Kerns 1994:278—279, no. 94; Möller 1911:253.

220. Proto-Nostratic (n.) **thorʷ-a* ‘dust, soil, earth’:

- A. Proto-Afrasian **t[o]r-* (vb.) to be or become dusty; (n.) dust, soil, earth’: Proto-Semitic **tar-ab-* ‘to be or become dusty, to be covered with dust; to cover with dust or earth’, **turb-* ‘dust; earth, dirt; ground; soil’ > Akkadian *turbuʷtu* ‘earth, sand’; Arabic *tariba* ‘to be or become dusty, to be covered with dust; to cover with dust or earth’, *turba* ‘dust; earth, dirt; ground; soil’, *turāb* ‘dust, powdery earth, remains, ashes’, *turib* ‘dusty, dust-covered’; Ḥarsūsi *terōb* ‘to do the ritual ablutions with sand; to wash the hands with sand before milking a camel, to wash with sand’; Mehri *tərūb* ‘to make ritual ablutions with sand’. Zammit 2002:106—107. Arabic loans in Geez / Ethiopic *turāb* [ጥራብ] ‘remains of burnt incense’; Amharic *turab* ‘dust, ashes of burnt incense’. Leslau 1987:579. Egyptian *tʃ* (< **tr*) ‘earth, land, ground’; Coptic *to* [Ἦ] ‘land, earth’. Hannig 1995:912—913; Erman—Grapow 1921:201—202 and 1926—1963.5:212—216; Faulkner 1962:292; Gardiner 1957:599; Vycichl 1983:209—210; Černý 1976:179. Proto-Southern Cushitic **teri-* ‘dust’ (vocalic assimilation ?) > Iraqw *teri-* ‘dust’; Ma’a *itéri* ‘dust’. Ehret 1980:170. (?) North Omotic **tor-* ‘earth’ > Bench / Gimira *torʷ* ‘down’. West Chadic **turVb-* ‘sandy soil’ > Hausa *tùrbaayaa* ‘fine, sandy soil’ (secondary implosive). Orël—Stolbova 1995:509, no. 2426, **turVb-* ‘earth, sand’; Ehret 1995:144, no. 178, **ter-* / **tor-* ‘earth’.
- B. (?) Yukaghir (Northern / Tundra) *toroñe-* ‘black, dark; gloomy’, *toričeñ-* ‘black’, *toroje* ‘birthmark, patch of a black skin used for an ornament’, *torote-*, *torete-* ‘to blacken’, *tororej-* ‘to blacken’, *tore* ‘blackness, black spot’. Nikolaeva 2006:436.
- C. Proto-Altaic **thorʷe* ‘soil, dust’: Proto-Tungus **turV* ‘earth’ > Evenki (dial.) *tur* ‘earth’; Lamut / Even *tōr* ‘earth’; Negidal *tūy* ‘earth’; Nanay / Gold *tur-qa* ‘lump of earth’. Tsintsius 1975—1977.II:217—218. Proto-Mongolian **tor-* ‘soot, lampblack; flying dust’ > Written Mongolian *tortuy*

‘soot, lampblack’, *tortuyla-* ‘to blacken with smoke, to be covered with soot’, *toru* ‘flying dust; spray (water); black and blue spot’; Khalkha *tortog* ‘soot, lampblack’; Buriat *tortog* ‘soot, lampblack’; Kalmyk *tortəg* ‘soot, lampblack’. Proto-Turkic **tor*^y ‘dust’ > Old Turkic (Old Uighur) *toz* ‘dust’; Karakhanide Turkic *toz* ‘dust’; Turkish *toz* ‘dust, powder’, *toza-* ‘to raise dust’; Gagauz *tōz* ‘dust’; Azerbaijani *toz* ‘dust’; Turkmenian *tōz*, *tozan* ‘dust’, *toza-* ‘to become dusty’; Uzbek *toʻzon* ‘dust’; Uighur *toz* ‘dust’; Karaim *toz* ‘dust’; Tatar *tuzan* ‘dust’; Bashkir *tuḡan* ‘dust’; Kirghiz *toz* ‘dust’; Kazakh *toz* ‘dust’; Noghay *tozan* ‘dust’; Oyrot (Mountain Altai) *toziñ* ‘dust’. Tenishev—Dybo 2001—2006.I:99—100 **to:ɾ* > **to:z* ‘dust’; Clauson 1972:570—571. Starostin—Dybo—Mudrak 2003:1465 **tʰōʾe* ‘soil, dust’.

Buck 1949:1.21 earth, land; 1.213 dust.

221. Proto-Nostratic root **t^how-*:

(vb.) **t^how-* ‘to snow’;

(n.) **t^how-a* ‘snow-storm; snow, (hoar)frost’

- A. Proto-Kartvelian **tow-* ‘snow’: Georgian *tov-* ‘to snow’, *tov-li* ‘snow’; Mingrelian *tu-al-a* ‘to snow’, *ti-r-i* ‘snow’; Laz *o-mt-u* ‘to snow’, *mtu-r-i*, *mtvi-r-i* ‘snow’; Svan *li-šduw-e* ‘to snow’, *šduw-a* ‘snow-fall’. Klimov 1964:175—176 *(*s₁*)*to-*, *(*s₁*)*towl-* and 1998:73 **to(w)-* ‘to snow’, **tow-l-* ‘snow’; Schmidt 1962:115; Fähnrich 2007:197—198 **tow-*; Fähnrich—Sardshweladse 1995:163—164 **tow-*.
- B. Proto-Indo-European **t^how-gh-*/**t^hu-gh-* ‘(hoar)frost, snow’: Sanskrit *túhinam* ‘cold, (hoar)frost, snow; dew, mist’; Avestan *taožyō* ‘hoarfrost’. Mann 1984—1987:1417 **tough-* (**toughino-*, **tughino-*) (?) ‘a hard substance, crystal, glass’, 1451—1452 **tughinos*, **tughnos* ‘stiff, tight, compact’; Mayrhofer 1956—1980.I:518; Ulhenbeck 1898—1899.I.114.
- C. Proto-Eskimo **tuvar* ‘(lumpy) shore ice’: Central Alaskan Yupik (Nuni-vak) *tuvaX* ‘(stranded) ice-cake one or more years old’, *tuva-* ‘to cake up, to become lumpy’, *tuvlak* ‘lump of caked matter (for example, snow)’; Naukan Siberian Yupik *tuvaq* ‘shore ice, mooring place’; Central Siberian Yupik *tuvaq* ‘large stretch of shore ice’; Sirenik *tuvaX* ‘shore ice’; Seward Peninsula Inuit *tuvaq* ‘shore ice’; North Alaskan Inuit *tuvaq** ‘shore ice’; Western Canadian Inuit *tuvaq* ‘thick, old land-locked ice’; Eastern Canadian Inuit *tuvaq* ‘ice of frozen sea or lake’; Greenlandic Inuit *tuvaq* ‘lump of old ice frozen ice into new ice’, (East Greenlandic) *tuvaq* ‘(sea) ice, landfast ice’. Fortescue—Jacobson—Kaplan 1994:356—357.

Sumerian *tu₁₅* ‘wind, breeze’, *tu₁₅-a* ‘a strong gale’, *tu₁₅/im-hul* ‘a powerful thunder-storm’, *tu₁₅-hul* ‘a bad storm’, *tu₁₅-mer* ‘north wind; storm wind’.

Buck 1949:1.76 snow (vb.); 15.86 cold.

222. Proto-Nostratic root **thukh-* (~ **thokh-*):

(vb.) **thukh-* ‘to burn, to blaze’;

(n.) **thukh-a* ‘ash(es), soot’

- A. Proto-Afrasian **tuk-* ‘(vb.) to burn, to blaze; (n.) ash(es)’: Semitic: Geez / Ethiopic *takk^wasa* [ጥክሱ] ‘to ignite, to set on fire, to burn’ (probably from Amharic), *tark^wasa* [ጥርክሱ] ‘to burn, to set on fire’ (according to Leslau [1987:580], this is from *takk^wasa* with augmented *r*); Tigre *täksa* ‘to cauterize’; Tigrinya *täkk^wäsä* ‘to burn, to brand cattle’; Amharic *täkk^wäsä* ‘to burn, to cauterize, to brand (animals)’, *täkkus* ‘warm (roast), fresh (eggs, meat, news)’, *atäkk^wäsä(w)* ‘to have fever, to run a fever’, *täkkusat* ‘fever, temperature (fever)’; Gurage *täkäsä* ‘to light a fire, to set fire, to light, to kindle, to burn (tr.)’, *täkkus* ‘warm, fresh’, *täkkusat* ‘fever’, (reduplicated) *täkäkkäsä* ‘to burn the surface (of wood or grass)’. Leslau 1979:594, 595 and 1987:573. Egyptian *tk* ‘to burn, to kindle’, *tkʿ* ‘torch, candle, flame; to illumine’, *tkʿw* ‘rite of torch burning’; Coptic *tōk* [Ἦ᠎᠎], *tōč* [Ἦ᠎᠎] ‘to kindle (fire), to bake’, *tik* [Ἦ᠎] ‘spark’, *intōk* [Ἦ᠎᠎᠎] ‘oven, furnace’. Faulkner 1962:301—302; Erman—Grapow 1921:207 and 1926—1963.5:331—332, 332—333; Hannig 1995:940; Gardiner 1957:600; Černý 1976:184; Vycichl 1983:212. Chadic: Hausa *tòòkáá* ‘ashes’; Kulere *madúk* ‘ashes’; Tangale *dúka* ‘ashes’; Nzangi *təḍáqə* ‘ashes’; Mokulu *ʔoddàgé* ‘ashes’. Jungraithmayr—Ibriszimow 1994.I:2 *t(w)k* and II:4—5. Orël—Stolbova 1995:507, no. 2417, **tukaʔ-* ‘to burn; ash’. Ehret 1995:140, no. 170, reconstructs Proto-Afrasian **tikw-/takw-* ‘to light’ primarily on the basis of Cushitic evidence. However, according to Leslau (1987:573), the Cushitic forms are loans from Ethiopian Semitic.
- B. Dravidian: Tamil *tukaḷ* ‘dust, particle of dust, pollen; fault, moral defect’; Telugu *dūgāra* ‘dust, dirt, soot’; Kolami *tu·k* ‘dust; earth, clay’; Naikri *tūk* ‘earth, clay’; Parji *tūk* ‘earth, clay, soil’; Gadba (Ollari) *tūkuṛ* ‘earth, clay’. Burrow—Emeneau 1984:287, no. 3283. Semantic development from ‘ash(es), soot’ to ‘dust’. Both form and meaning have been influenced by Sanskrit *dhūli-h* ‘dust, powder, pollen’. Burrow—Emeneau (1984:287, no. 3283) also list a number of direct loans from Sanskrit.
- C. Proto-Kartvelian (reduplicated **tu-tuk-* >) **tutk-* ‘to burn, to scald’: Georgian *tutk-* ‘to burn, to scald, to scald oneself’, *tutk-i* ‘hot ashes’; Mingrelian *tkutk-* ‘to burn, to scald, to scald oneself’. Fähnrich—Sardshweladse 1995:165 **tutk-*; Klimov 1998:74 **tutk-* ‘to scald, to scald oneself’; Fähnrich 2007:199—200 **tutk-*.

Buck 1949:1.213 dust; 1.82 flame (sb.); 1.84 ashes; 1.85 burn (vb.); 1.86 light (vb.), kindle; 5.24 bake; 5.25 oven.

223. Proto-Nostratic root *t^hul- (~ *t^hol-):(vb.) *t^hul- ‘to lift, to raise; to pile up, to stack (in a heap)’;(n.) *t^hul-a ‘hill, mound; stack, heap’

- A. Proto-Afrasian *tul- ‘(vb.) to lift, to raise; to pile up, to stack (in a heap); (n.) hill, mound; stack, heap’: Proto-Semitic *tal- (*tal-al-, *tal-aw/y-, *tal-aʕ-) ‘(vb.) to lift, to raise; (n.) hill, mound’ > Hebrew *tālāʕ* [תָּלַעַ], *tālāh* [תָּלַח] ‘to hang’, *tēl* [תֵּל] ‘mound’, *tālūl* [תָּלַל] ‘exalted, lofty’; Aramaic *tillā* ‘mound’; Arabic *tall* ‘hill, elevation’, *talaʕa* ‘to rise, to spread’, *talīʕ* ‘long, outstretched, extended; high, tall’; Akkadian *tillu* ‘ruin’, *talālu* ‘to suspend’; Šheri / Jibbāli *etlél* ‘to go up on to a hill’, *tellét* ‘hill’. Geez / Ethiopic *tallāʕ* [ተለሐ], *tallāʕ* [ተለአ] ‘breast’; Akkadian *tulū* ‘breast’. Klein 1987:703; Leslau 1987:574. Egyptian *tn* ‘to raise, to elevate’; Coptic *tal* [ⲧⲁⲗ] ‘hill’ (this may be a Semitic loan). Vycichl 1983:213; Černý 1976:185. Proto-East Cushitic *tuul- ‘to pile up, to stack’ > Somali *tuul-* ‘to pile up’, *tuulo* ‘hunch’; Burji *tuul-* ‘to pile up, to stack (grain)’, *tuulá* ‘pile, stack (grain)’; Gedeo / Darasa *tuul-* ‘to pile up, to stack (grain)’, *tuula*, *tuulo* ‘pile, stack (grain)’; Sidamo *tuul-* ‘to pile up, to stack’, *tullo* ‘hill’; Bayso *tuul-e-* ‘to pile up’; Galla / Oromo *tuul-* ‘to pile up’, *tulhuu* ‘hill, hunch’; Konso *tuul-* ‘to pile up’. Sasse 1982:179—180; Hudson 1989:79, 113, and 396. Omotic: Mocha *tuullo* ‘heap’; Yemsa / Janjero *tuul-* ‘to heap up’. East Chadic *tul- ‘to hang’ > Ndam *tula* ‘to hang’; Lele *tuul* ‘to hang’. Diakonoff 1992:13 *tVl (> *t_{yl}, *t_{lw}) ‘hill, heap’; Orël—Stolbova 1995:508, no. 2420, *tul- ‘to hang’ and, no. 2429, *tūl- ‘hill, heap’; Ehret 1995:142, no. 172, *tuul- ‘to rise; to form a heap, mound’.

Comment: Militarëv—Kogan (2000.I:247, no. 276) reconstruct Proto-Semitic (n.) *tVlāʕ- ‘breast, nipple’. They note: “Scarcely but reliably attested; vocalism difficult to recover”. They do not list any non-Semitic cognates. However, they explicitly note that the above forms have been compared with Proto-Semitic *tall-/till- ‘hill, elevation’. Indeed, this is the very comparison I have made above.

- B. Proto-Indo-European *t^hul-/t^hl- (secondary full-grade forms: *t^hel-/t^hol-) ‘to lift, to raise’: Sanskrit *tulā* ‘balance, scale’, *tulayati* ‘to lift up, to raise, to weigh’; Kashmiri *tulun* ‘to lift’, *tul* ‘weight, balance’; Bengali *tulā* ‘to raise, to weigh’, *tul* ‘scales’; Greek *τάλαντον* ‘balance, scale’, (?) *τύλη* ‘any callous lump’, (?) *τύλος* ‘a knob or knot’; Latin *tollō* ‘to lift up, to raise, to elevate; to take up, to take away, to remove, to bear or carry away’ (Old Latin *tulō* ‘to bear, to carry’); Middle Irish *tlenaim* ‘to take away, to remove, to carry off, to steal’, *tulach* ‘hill’; Tocharian A *tāl-* ‘to lift, to raise’, B *tāl-* ‘to lift, to raise; to acquire’, *talle* ‘load, burden’. Rix 1998a:565—566 *telh₂- ‘to lift, to raise, to be picked up’; Pokorny 1959:1060—1061 *tel-, *telə-, *tlē(i)-, *tlā- ‘to lift up, to weigh, to

balance'; Walde 1927—1932.I:738—740 **tel-*; Mallory—Adams 1997: 352 **telh₂-* 'to lift, to raise'; Mann 1984—1987:1375 **tel-* (**telō*, *-iō*) 'to stretch, to extend, to expand', 1401 **tlātos* (**tltos*, *-is*) 'suffered, borne; suffering', 1401 **tl-* (**tlō*; **təlō*, *-iō*) 'to lift, to raise, to bear, to suffer', 1402 **tlnō*, 1402 **tltos*, *-is*, *-ios* 'extended, stretched; extent, tract, roadway, passage', 1454 **tūl-* 'to lift, to take, to remove', 1454—1455 **tūl-* (**tūlos*, *-ā*, *-is*) 'lump, mass'; Watkins 1985:69 **telā-* and 2000:90 **telā-* 'to lift, to support, to weigh'; Gamkrelidze—Ivanov 1984.I:176 **t[h]el-*, **t[h]l-* and 1995.I:152 **thel-*, **thl-* 'to bear, to carry'; Mayrhofer 1956—1980.I:516; Frisk 1970—1973.II:848—849; Chantraine 1968—1980.II:1088—1090 **tel₂-*; Boisacq 1950:938—939 **telā-*; Hofmann 1966:350—351 **tel-*; Beekes 2010.II:1445 **telh₂-* and II:1517; Ernout—Meillet 1979:693 and 694 **telā-*; Walde—Hofmann 1965—1972.II:688—689; De Vaan 2008:621—622 Proto-Italic **tolna/o-*. Two separate Proto-Nostratic stems have been confused in Proto-Indo-European: (A) Proto-Nostratic **thalv-* (*~ *thəlv-*) (primary meaning) 'to stretch, to spread, to extend', then (secondarily) 'to endure, to suffer, to bear' and (B) Proto-Nostratic **thul-* (*~ *thol-*) '(vb.) to lift, to raise; to pile up, to stack (in a heap); (n.) hill, mound; stack, heap'.

- C. Proto-Chukchi-Kamchatkan **tulræt-* 'to steal': Chukchi *tulʔet-* 'to steal'; Kerek *tu(u)lraat-* 'to steal'; Koryak *tulʔat-* 'to steal'. Fortescue 2005:288. Semantic development as in Middle Irish *tlenaim* 'to take away, to remove, to carry off, to steal', cited above.

Buck 1949:10.22 raise, lift; 11.56 steal; 11.57 thief. Bomhard—Kerns 1994: 282—283, no. 98; Dolgopolsky 2008, no. 2268a, **tulʔ* 'tip, sprout, something protruding, summit'.

224. Proto-Nostratic root **thum-* (*~ *thom-*):

- (vb.) **thum-* 'to cover over, to hide; to become dark';
(n.) **thum-a* 'darkness'; (adj.) 'dark'

- A. Proto-Afrasian **tums-* '(vb.) to cover over, to hide; to become dark; (adj.) dark; (n.) darkness': Egyptian *tms* 'to hide, to cover over, to bury'; Coptic *tōms* [ⲧⲟⲙⲥ] 'to bury'. Hannig 1995:933; Vycichl 1983:215; Černý 1976:188. Proto-Highland East Cushitic (**tums-* >) **tuns-* 'to become dark', (**tumso* >) **tunso* 'darkness' > Hadiyya *tuns-* 'to become dark', *tunso* 'darkness'; Kambata *tuns-* 'to become dark', *tunsu-ta* 'darkness'; Sidamo *tuns-* 'to become dark', *tunso* 'darkness'. Hudson 1989:47. Central Cushitic: Xamir *təma* 'darkness'; Kemant *təm-* 'to become dark', *təma* 'darkness'. Appleyard 2006:52.
- B. Proto-Indo-European **thum-/ *thm-* (secondary full-grade forms: **them-/ *thom-*) 'dark; darkness': Sanskrit *tāmas-* 'darkness, gloom', *tāmisrā* 'a dark night'; Avestan *təmah-* 'darkness'; Latin *tenebrae* (< Pre-Latin

**temes-rā* ‘darkness’; Old Irish *temel* ‘darkness’; Old High German *dinstar* ‘dark’; Old Saxon *thimm* ‘dark’; Low German *dumper* ‘gloomy’; Lithuanian *tamsà* ‘darkness’, *tamsùs* ‘dark’, *témsta*, *témti* ‘to grow dark’; Latvian *tumsa* ‘darkness’; Old Church Slavic *тъма* ‘darkness’. Rix 1998a:567 **temH-* ‘to be dark’; Pokorny 1959:1063–1064 **tem(ə)-*, **temes-* ‘dark’; Walde 1927–1932.I:720–721 **tem(ə)-*; Mann 1984–1987:1377 **tem-* ‘dark’, 1377 **teməsros*, *-ā*, *-om*; **temos*, *-es-* ‘darkness’, 1378 **temos*, *-es-* ‘darkness’; **teminos*, *-ā* ‘darkness; dark’, 1457 **tums-* ‘dark’; Mayrhofer 1956–1980.I:478 and I:479; Watkins 1985:69 **temə-* and 2000:90 **temə-* ‘dark’; Mallory–Adams 1997:147 **tómh₂es-* ‘dark’; Ernout–Meillet 1979:683; Walde–Hofmann 1965–1972.II:664; De Vaan 2008:612; Orël 2003:420 Proto-Germanic **bemstraz*, 420 **bemzaz*; Kroonen 2013:537 Proto-Germanic **bemestra-* ‘dark, dusky’ (< **temh₁-es-ro-*) and 537–538 **bemra-* ‘darkness’ (< **temh₁-ro-*); Fraenkel 1962–1965.II:1055–1056 and I:1080; Smoczyński 2007.1:669–670.

Buck 1949:1.62 darkness; 4.78 bury (the dead); 12.26 cover (vb.); 12.27 hide, conceal. Bomhard–Kerns 1994:284–285, no. 101; Dolgopolsky 2008, no. 2376, **tum[V]qV* ‘dark’.

225. Proto-Nostratic root **thup^h-*:

(vb.) **thup^h-* ‘to spit’;

(n.) **thup^h-a* ‘spittle, saliva’

- A. Proto-Afrasian **tuf-* ‘to spit’: Proto-Semitic **tap-* (**tap-ap-*, **tap-al-*, **tap-aʔ-*, **tap-aʕ-*) ‘to spit’ > Hebrew *tōqēθ* [תֹּקֶף] ‘spitting’; Aramaic *təqəp*, *təqē* ‘to spit’, *tūp* ‘spittle’; Arabic *taffa* ‘to spit’; Harsūsi *tefōl* ‘to spit’, *tefēl* ‘spittle, saliva’; Šheri / Jibbāli *tfəl* ‘to spit’; Geez / Ethiopic *taʔa* [ተፍአ], *taʔa* [ተፍዐ] ‘to spit, to spit out’, *təffāʔ* [ተፋአ] ‘spittle’, *taʔat* [ተፍአት] ‘spittle, saliva’; Tigre *täʔa* ‘to spit’; Tigrinya *täʔe*, *tuff bälä* ‘to spit’; Amharic *täffa*, *əttəf bälä* ‘to spit’; Gafat *täffa* ‘to spit’; Harari *tuf bāya* ‘to spit’; Argobba *əntəf ala* ‘to spit’; Gurage *täfa* ‘to spit’. Leslau 1963:148, 1979:592, and 1987:570–571. Egyptian *tf* ‘to spit, to spit out’, *tf* ‘spittle, saliva’. Erman–Grapow 1921:205 and 1926–1963.5:297; Hannig 1995:931. Egyptian also has *tp* ‘to spit, to vomit’. Hannig 1995:923. Proto-East Cushitic **tuf-* ‘to spit’ > Saho-Afar *tuf-* ‘to spit’; Somali *tuf* ‘to spit’; Boni *tuf* ‘to spit’; Arbore *tuf-* ‘to spit’; Galla / Oromo *tufe* ‘to spit’; Konso *tuf-* ‘to spit’; Sidamo *tufi* ‘to spit, to vomit’; Burji *tuf-* ‘to spit’; Gedeo / Darasa *tuf-* ‘to spit’; Hadiyya *tuf-* ‘to spit’; Kambata *tuf-* ‘to spit’; Gawwada *tuf-* ‘to spit’; Gollango *tuf-* ‘to spit’; Dullay *tuf-*, *cuf-* ‘to spit’. Sasse 1979:10 and 1982:179; Hudson 1989:140; Heine 1978:74. North Cushitic: Beja / Beɖawye *tūf-* ‘to spit’. Reinisch 1895:223. Central Cushitic: Bilin *tif-*, *tiŋ y-/tif y-* ‘to spit’; Xamir *taf y-* ‘to spit’; Awngi / Awiya *ətəf y-* ‘to spit’. Reinisch 1887:347; Appleyard 2006:128. Proto-

Chadic **tuf-* ‘to spit’ > Hausa *tóófàà* ‘to spit’; Fyer *tùf* ‘to spit’; Karekare *təf-* ‘to spit’; Dafo-Butura *túf* ‘to spit’; Bole *tuf-* ‘to spit’; Bachama *túfə* ‘to spit’; Glavda *taf-* ‘to spit’; Daba *tíf* ‘to spit’; Masa *túfnā* ‘to spit’; Kotoko-Logone *tufu* ‘to spit’; Mubi *tuffa, tàffā* ‘to spit’. Newman 1977:32, no. 121, **təfə/*tufə* ‘to spit’; Jungraithmayr—Ibrizimow 1994.II:302—303. Orël—Stolbova 1995:506, no. 2413, **tuf-* ‘to spit’; Ehret 1995:139, no. 162, **tuf-* ‘to spit’.

Comment: Militarëv—Kogan (2000.I:328—329, no. 72) reconstruct Proto-Semitic (vb.) **tpp* ‘to spit’ and (2000.I:329, no. 73) Proto-Semitic (vb.) **tpl* ‘to spit’. They do not list any non-Semitic cognates.

- B. Dravidian: Tamil *tuppu* (*tuppi-*) ‘(vb.) to spit; (n.) spittle’, *tuppal* ‘saliva, spittle’; Malayalam *tuppuka* ‘to spit’, *tuppu, tuppal* ‘spittle’; Toda *tüf in- (ĩd-)* ‘to spit’; Kannaḍa *tū* imitative sound of spitting and puffing away with the breath, *tūntiri* ‘to spit’, *tūpu* ‘to spit, to blow, to puff away’; Koḍagu *tupp-* (*tuppi-*) ‘to spit’; Telugu *tupukku, tuppu* the sound made in spitting suddenly, *tuppuna* with the sound *tuppu, tūpoḍucu* ‘to spit’; Gondi *tuhkul* ‘spit, saliva; expectoration’; Kuṛux *tuppnā* ‘to spit’, *tuppalxō* ‘saliva, spittle’; Malto *tupe* ‘to spit’, *tupgle, tulgpe* ‘spittle’. Burrow—Emeneau 1984:290, no. 3323.
- C. Proto-Altaic **thūp^{hi}-* ‘(vb.) to spit; (n.) spittle, saliva’: Proto-Tungus **tupi-* ‘(vb.) to spit; (n.) spittle, saliva’ > Manchu *čife-le-* ‘to spit’, *čifengu* ‘spit, saliva’; Spoken Manchu (Sibo) *čivəla-* ‘to spit’; Ulch *tīpu(n)* ‘spittle, saliva’; Orok *tupin* ‘spittle, saliva’; Nanay / Gold *topin-* ‘spittle, saliva’; Oroch *tupin-* ‘spittle, saliva’. Proto-Turkic **tüpkür-* ‘to spit’ > Turkish *tükür-* ‘to spit’, *tükürük, tükrük* ‘spittle, saliva’; Azerbaijani *tüüpür-* ‘to spit’; Turkmenian *tüykür-* ‘to spit’; Uzbek *tupur-, tup-la-* ‘to spit’; Uighur *tükür-, tükär-* ‘to spit’; Tatar *töker-* ‘to spit’; Bashkir *tökör-* ‘to spit’; Kirghiz *tükür-* ‘to spit’; Kazakh *tükir-* ‘to spit’; Noghay *tükir-* ‘to spit’; Tuva *dükpür-* ‘to spit’. Starostin—Dybo—Mudrak 2003:1477—1478 **tūpⁱ* ‘(vb.) to spit; (n.) spittle’.

Buck 1949:4.56 spit (vb.). Dolgopolsky 2008, no. 2399, **tūpV* ‘to spit, to drip’.

226. Proto-Nostratic root **thur-* (~ **thor-*):

- (vb.) **thur-* ‘to cram, to push in, to stuff, to thrust in, to press in’;
(n.) **thur-a* ‘pressure, force, thrust’

- A. Dravidian: Tamil *туру* (*turuv-, turr-*) ‘to be thick, crowded, full; to be closed’, *туру* (*-pp-, -tt-*) ‘to cram (as food into the mouth), to stuff, to press or crowd into a bag or a box’, *turumpu* (*turumpi-*), *turumu* (*turumi-*) ‘to be close, crowded’; Malayalam *turuka* ‘to be thronged, stuffed; to cram, to push in’, *turuttuka* ‘to force in, to cram, to stuff’; Kannaḍa *turuku, turaku* ‘to force or crowd things into; to cram, to stuff; to cause to enter’; Tuḷu

turkalyuni ‘to be distended (as an overloaded stomach)’; Telugu *turugu*, *turugu* ‘to insert, to stick in (as flowers), to cram in, to gag by thrusting a cloth in the mouth’, *turumu*, *turumu* ‘to cram or stick, to thrust in, to deck the head with flowers’; Konda *turbi-* ‘to insert, to thrust in’. Burrow—Emeneau 1984:294—295, no. 3367.

- B. Proto-Indo-European *t^hr- (*t^hr-ew-dh-/ *t^hr-ow-dh-/ *t^hr-u-dh-; *t^hr-en-kh-, etc.), *t^hr- ‘to cram, to push in, to stuff, to thrust in, to press in’: Latin *trūdō* ‘to push, to press, to thrust’; Gothic *þreihan* ‘to press upon, to throng, to crowd’, *us-þriutan* ‘to threaten, to trouble’; Old Icelandic *þrúga* ‘to press’, *þryngva* ‘to press, to thrust’, *þröng* ‘throng, crowd’, *þrýsta* ‘to thrust, to press’, *þröngva* ‘to press on one’, *þraut* ‘hard struggle, great exertion, labor, hard task’; Old English *þringan* ‘to press, to crowd’, *þrang* ‘crowd’, *þrēat* ‘crowd, troop; violence, ill-treatment, punishment, threat’, *þrēotan* ‘to weary’, *þrīetan* ‘to weary, to urge, to force’, *þrūtian* ‘to swell with pride or anger; to threaten’; Old Frisian *þringa* ‘to press’; Old Saxon *þringan* ‘to press’; Dutch *verdrieten* ‘to vex’, *drang* ‘crowd’, *dringen* ‘to push’; Old High German *ar-driozan*, *bi-driozan* ‘to oppress, to trouble’, *dringan* ‘to press, to throng’ (New High German *dringen*); Middle High German *dranc* ‘pressure; crowd’ (New High German *Drang*), *verdriezen* ‘to vex, to annoy, to displease’ (New High German *verdrießen*), *drōz* ‘displeasure, dismay, annoyance’ (New High German *-druß* in *Verdruß*); Old Church Slavonic *trudъ* ‘effort’, *truždō*, *truditi* ‘to trouble, to toil’; Czech *trk* ‘thrust’; Lithuanian *trėškiu*, *trėkšti* ‘to squeeze, to press’; Avestan *θraxta-* ‘crowded together’. Rix 1998a:590 *trank- ‘to thrust’, 592—593 *treud- ‘to push, to thrust’; Pokorny 1959:1093 *trenk- ‘to thrust, to press together’, 1095—1096 *tr-eu-d- ‘to squash’; Walde 1927—1932.I:755 *treud-, I:758—759 *trenq-; Mann 1984—1987:1422 *treik- ‘to force, to crush’, 1423 *trenkō, -jō ‘to force, to browbeat, to bully’, 1423 *trėkstō, -jō (*trėkskō, -jō) ‘to squeeze, to crush, to press, to oppress’, 1424—1425 *tresk- ‘to press, to tread, to trample, to urge, to egg on’, 1426 *treudō, -jō ‘to force, to press’, 1428—1429 *trīp- (*trīpō, -jō; *trīpos) ‘to tread, to press, to push, to force, to beat’, 1430—1431 *troikō, -jō ‘to oppress, to squeeze, to strain’, 1432—1433 *tropejō ‘to press, to urge, to force, to constrain’, 1435 *troud- ‘toil, labor; pressure, force, thrust’, 1436—1437 *trūd- (*trūdō) ‘to thrust, to force, to compress, to break out’, 1437 *trug- ‘to press; pressure’, 1439 *truks- ‘to press, to squeeze’, 1441 *trūs- ‘hardship, toil’, 1444 *tṛk- ‘to thrust, to poke, to pierce’; Watkins 1985:72 *treud- and 2000:93 *treud- ‘to squeeze’; Mallory—Adams 1997:451 *treud- ‘to thrust, to press’; Ernout—Meillet 1979:704; Walde—Hofmann 1965—1972.II:710 *tr-eu-d-; De Vaan 2008:630 *treud-(e/o-) ‘to push, to thrust’; Feist 1939:501—502 *trenkō and 535—536; Lehmann 1986:365 *trenk- ‘to push, to press on’ and 383—384 *tr-ew-d- ‘to thrust, to press’; Orël 2003:424 Proto-Germanic *þranǵwjanan, 424 *þranǵwō ~ *þranǵwan, 426 *þrenǵwanan ~ *þrenxwanan, 426 *þreutanan, 427

**prūžanan*; Kroonen 2013:544 Proto-Germanic **prangwjan-* ‘to press’; De Vries 1977:620, 624, and 625; Onions 1966:919 and 920; Klein 1971:763 **treud-* and 764; Kluge—Mitzka 1967:143 and 812; Kluge—Seebold 1989:153, 155, and 758 **trend-*; Fraenkel 1962—1965.II:1116; Smoczyński 2007.1:684.

- C. Yukaghir (Northern / Tundra) *turie-* ‘to offend, to persecute’. Nikolaeva 2006:439.

Buck 1949:9.342 press (vb.); 10.67 push, shove (vb.); 13.19 multitude, crowd.
Bomhard—Kerns 1994:294—295, no. 110.

22.8. PROTO-NOSTRATIC *t'

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
t'-	t'-	t-	t'-	t'-	t-	t-	t-
-t'-	-t'-	-t(t)-	-t'-	-t'-	-t-	-t-	-t-

227. Proto-Nostratic root *t'ab- (~ *t'əb-):

(vb.) *t'ab- 'to be or become warm; to make warm, to heat up; to cook';

(n.) *t'ab-a 'heat, warmth'; (adj.) 'hot, warm; cooked, baked'

Note also:

(vb.) *t^hep^h- 'to warm, to burn';

(n.) *t^hep^h-a 'heat, warmth'

- A. Proto-Afrasian *t'ab- 'to be or become warm; to make warm, to heat up': Proto-Semitic *t'ab-ax- 'to cook, to bake' > Arabic *ṭabaḥa* 'to cook; to be or get cooked'; Hebrew *ṭabbāḥ* [ṭḇḇ] 'a cook'; Syriac *ṭəḇaḥ* 'to be parched, broiled; to roast, to bake, to scorch'; Phoenician *ṭbḥ* 'to cook'; Ugaritic *ṭbḥ* 'to cook'; Epigraphic South Arabian *ṭbḥ* 'meat (that which is cooked)'; Mehri (rare) *ṭāwbəx* 'to cook'; Šheri / Jibbāli *ṭəbxún* 'baked', *ṭəx* 'to wrap *bəḍəḥ* (edible corms) in cow pats and bake'; Ḥarsūsi *ṭebōx* 'to cook, to boil'. Klein 1987:239; Murtonen 1989:202—203. In Semitic, this stem has fallen together with *t'ab-ax- 'to slay, to kill, to slaughter, to sacrifice'. Proto-Semitic *t'ab-as- 'to roast, to fry, to broil' > Geez / Ethiopic *ṭabasa* [ṭḇḇ], *ṭabsa* [ṭḇḇ] 'to roast, to parch, to broil'; Tigrinya *ṭābāsā* 'to fry'; Tigre *ṭābsa* 'to roast'; Amharic *ṭābbāsā* 'to fry, to roast (meat, corn), to toast, to scorch, to broil, to bake (clay), to fire (clay)'; Gurage *ṭābāsā* 'to fry, to roast'. Leslau 1979:611 and 1987:586.
- B. Proto-Kartvelian *t'eb-/*t'b- 'to warm, to heat; to warm oneself': Georgian *tb-* 'to warm, to heat; to warm oneself' (Old Georgian *t'ep-/t'p-* < *t'eb-/*t'b-); Svan *li-t'b-ide* 'to heat somebody or something; to be heated, to heat up', *t'ebid*, *t'ebedi*, *t'ebdi* 'warm'; Mingrelian *t'ib-*, *t'ub-*, *t'əb-* 'to warm, to heat; to warm oneself'; Laz *t'ub-*, *t'ib-* 'to warm, to heat; to warm oneself'. According to Klimov (1998:192), the Svan forms may have been borrowed from Ossetic. Schmidt 1962:112—113 *t'ep-; Klimov 1964:179 (*t'ab-/*t'b- and 1998:186 *t'ep-/*t'p- (Klimov suggests that the Kartvelian forms may have been borrowed from Indo-European); Fähnrich 2007:396—397 *t'ep-/*t'p-; Gamkrelidze—Ivanov 1984.II:879 *t'ep-/*t'p- and 1995.I:226 *t'ep-/*t'p- 'to get warm'; Fähnrich—Sardshweladse 1995:326—327 *t'ep-/*t'p-. Proto-Kartvelian *t'b-il- 'warm': Georgian *tbil-* (Old Georgian *t'pil-* < *t'epil- < *t'ebil-) 'warm'; Mingrelian *t'ibu-*, *t'əbu-* 'warm'; Laz *t'ibu-*, *t'ubu-* 'warm'. Klimov 1964:180 *t'bid- and 1998:192 *t'p-il-. Comparison with Afrasian supports the older Proto-Kartvelian

reconstruction **t'eb-/t'b-* 'to warm, to heat; to warm oneself' (as in Klimov 1964:179) as opposed to **t'ep-/t'p-*.

(?) Sumerian *tab* 'to burn, to blaze; fever'.

Buck 1949:5.21 cook (vb.); 5.22 boil; 5.23 roast, fry; 5.24 bake; 15.85 hot, warm. Bomhard—Kerns 1994:314—315, no. 134. Slightly different etymology in Dolgopolsky 2008, no. 2398, **tæ[p]V* 'to warm, to be warm'.

228. Proto-Nostratic root **t'ad-* (**t'əd-*):

(vb.) **t'ad-* 'to hinder, to stop, to obstruct';

(n.) **t'ad-a* 'hindrance, obstacle, impediment, obstruction'

A. (?) Afrasian: Egyptian *ḏdh* 'to shut up, to lock up, to imprison', *ḏdhw* 'prison, jail'. Hannig 1995:1019; Faulkner 1962:326; Erman—Grapow 1921:223 and 1926—1963.5:635; Gardiner 1957:604.

B. Dravidian: Tamil *taṭu* '(vb.) to hinder, to stop, to obstruct, to forbid, to prohibit, to resist, to dam, to block up, to partition off, to curb, to check, to restrain, to control, to ward off, to avert; (n.) hindering, checking, resisting', *taṭuppu* 'hindering, obstructing, resisting, restraint', *taṭakku* (*taṭakki-*) '(vb.) to be obstructed, impeded, detained; to obstruct, to hinder, to detain; (n.) obstacle, hindrance, impediment, obstruction', *taṭaṅku* (*taṭaṅki-*) 'to be obstructed', *taṭavu* 'prison', *taṭukkal* 'stumbling block, impediment', *taṭukku* (*taṭukki-*) '(vb.) to obstruct, to impede; (n.) impediment', *taṭai* '(vb.) to hinder, to stop; (n.) resisting, obstructing, hindrance, obstacle, impediment, objection, coat of mail, guard, watch, door, gate, bund, embankment', *taṭṭu* (*taṭṭi-*) '(vb.) to obstruct, to hinder, to ward off, to oppose, to frustrate; (n.) warding off, averting, impediment, frustration'; Malayalam *taṭa* 'resistance, warding off (as with a shield); what impedes, resists, stays, or stops; prop', *taṭa-kūṭuka* 'to hinder', *taṭaṇṇal* 'hindrance, stoppage', *taṭaccal* 'impeding, stop, stumbling', *taṭayuka* 'to be obstructed, to stop between, to stop', *taṭavu* 'what resists, wards off; a prison', *taṭassu* 'obstruction, hindrance', *taṭukkuka* 'to stop, to hinder', *taṭekka* 'to stop', *taṭṭuka* 'to ward off, to beat off, to oppose'; Kota *tarv-* (*tart-*) 'to obstruct, to stop', *tar*, *tarv* 'obstruction'; Toda *tarf-* (*tart-*) 'to delay, to prevent, to screen', *tar* 'prevention, screen', *taḍgīl* 'hindrance, obstruction, delay'; Kannaḍa *taḍa* 'impeding, check, impediment, obstacle, delay', *taḍata* 'act of restraining, state of being stopped (as water), wearing well (cloth)', *taḍapa* 'delay, slowness', *taḍapu* 'hindrance, impediment', *taḍavu* '(vb.) to stop; (n.) delay', *taḍasu* 'to stay, to wait; to stop, to hinder, to impede, to cause to halt or stop', *taḍahu* 'stop, cessation', *taḍissu* 'to stop, to detain, to hinder, to keep off', *taḍe* '(vb.) to delay, to wait, to stop, to detain, to restrain, to check, to keep down, to endure, to bear patiently, to last, to wear well (cloth, etc.); (n.) check, impediment, obstacle,

restraint'; Kodagu *taḍe-* (*taḍev-*, *taḍand-*) 'to be obstructed (by person or thing)', *taḍi-* (*taḍip-*, *taḍit-*) 'to stop, to obstruct, to endure', *taḍu* 'lateness, delay'; Tuḷu *taḍavu* 'delay, hindrance, impediment', *taḍè* 'hindrance, obstacle, a charm for serpents', *taḍepāvuni* 'to hinder, to impede, to obstruct', *taḍepini*, *taḍepuni* 'to hold off, to hinder, to keep back, to prevent, to stop, to oppose', *taḍeppu* 'stoppage, resistance, anything put up to stop a passage', *taḍeyuni*, *taḍevuni* 'to halt, to stop, to tarry, to bear, to endure', *taḍevu* 'a halt, stopping, tarrying, impediment, hindrance', *taḍevonuni* 'to bear, to suffer, to be patient', *daḍè* 'an obstacle, hindrance', *taṭṭaṅku* 'an obstacle, hindrance'; Telugu *taḍayu* 'to delay', *taḍa* 'hindrance, prevention', *taḍavu* 'delay, loss of time', *taṭṭāyincu* 'to hinder, to prevent'; Gondi *taṭṭi* 'bund, dam'; Kuṛux *taṇḍnā* 'to prevent, to hinder, to impede'; Brahui *taḍ* 'power to resist'. Burrow—Emeneau 1984:262—263, no. 3031.

- C. Yukaghir (Southern / Kolyma) *tatti*: 'dam used with a fish trap'. Nikolaeva 2006:427.
- D. Proto-Altaic **tāde-* '(vb.) to obstruct; (n.) trap': Proto-Tungus **dad-* 'ferret trap' > Manchu *dadari* 'a trap for weasels and marmots'. Proto-Mongolian **čidör* 'hobbles, shackles' > Mongolian *čidür* 'hobbles for horses, shackles for the feet', *čidürle-* 'to hobble a horse, to shackle the feet, to handicap or hinder'; Khalkha *čödör* 'hobbles, shackles'; Buriat *šüder* 'hobbles, shackles'; Kalmyk *čödr* 'hobbles, shackles'; Ordos *čödör* 'hobbles, shackles'; Dagur *šider* 'hobbles, shackles'; Monguor *čudor* 'hobbles, shackles'. Proto-Turkic **dīd-* 'to hinder, to obstruct' > Old Turkic *tīd-* 'to hinder, to obstruct'; Karakhanide Turkic *tīd-* 'to hinder, to obstruct'; Turkmenian *dīy-*, *dī-γi* 'to stop'; Uzbek *tīy-* 'to hinder, to obstruct'; Karaim *tīy-* 'to hinder, to obstruct'; Tatar *tīy-* 'to hinder, to obstruct'; Bashkir *tīy-* 'to hinder, to obstruct'; Kirghiz *tīy-* 'to hinder, to obstruct'; Kazakh *tīy-* 'to hinder, to obstruct'; Noghay *tīy-* 'to hinder, to obstruct'; Chuvash *čar-* 'to hinder, to obstruct'; Yakut *tīt-* 'to touch'; Dolgan *tīt-* 'to touch'. Starostin—Dybo—Mudrak 2003:1346—1347 **tāde* 'to obstruct; trap'.

Buck 1949:19.59 hinder, prevent.

229. Proto-Nostratic root **t'aḥ-* (~ **t'əḥ-*):

- (vb.) **t'aḥ-* 'to break, to split; to crush, to grind, to pound';
 (n.) **t'aḥ-a* 'break, split, division; anything ground or pulverized'

- A. Proto-Afrasian **t'aḥ-* 'to break, to split; to crush, to grind, to pound': Proto-Semitic **t'aḥ-an-* 'to grind, to mill, to crush' > Hebrew *ṭāḥan* [ṭṭṭṭ] 'to grind, to mill, to crush'; Aramaic *ṭəḥan* 'to mill, to grind'; Ugaritic *ṭhn* 'to grind'; Akkadian *ṭēnu* 'to grind, to mill'; Arabic *ṭaḥana* 'to grind, to mill, to pulverize (something, especially grain); to crush, to ruin, to destroy', *ṭiḥn* 'flour, meal'; Sabaeen *ṭhn* 'flour, meal'; Šheri / Jibbāli *ṭaḥán*

‘to grind, to mill’; Harsūsi *teḥān* ‘to grind, to mill’; Soqotri *tāḥan* ‘to grind, to mill’; Mehri *ṭəḥān* ‘to grind, to mill’, *məṭḥənēt* ‘grindstone, quern’; Geez / Ethiopic *taḥana* [ጠሐነ], *ṭəḥna* [ጥሐነ] ‘to grind flour, to grind fine’, *tāḥn* [ጣሕን] ‘grindstone, fine flour’; Tigrinya *tāḥanä* ‘to grind’; Tigre *tāḥana* ‘to grind’, *māṭḥān* ‘mill, lower millstone’; Harari *tāḥana* ‘to to be finely ground (flour), to be clever’. Klein 1987:242; Leslau 1987:590; Murtonen 1989:205. Proto-Semitic (reduplicated) **t’ah-t’ah-* ‘to break, to shatter, to smash’ > Arabic *ṭaḥṭaḥa* ‘to break, to shatter, to smash (something)’. Proto-Semitic **t’ah-am-* ‘to split’ > Geez / Ethiopic *taḥama* [ጠሐመ] ‘to split in half, to thin out plants’. Leslau 1987:590. Proto-Southern Cushitic **daḥ-* ‘to knock’ > Iraqw *daḥ-* ‘to knock over, to knock down’; Alagwa *daḥit-* ‘to faint’; Dahalo *daḥ-* ‘to pound’, *daḥaniṭe* ‘pestle’. Ehret 1980:189. West Chadic **t’aHan-* ‘to press down, to forge’ > Angas *ten* ‘to press down’; Tangale *toni* ‘to forge’. Orël—Stolbova 1995:515, no. 2455, **taḥan-* ‘to grind, to forge’.

- B. Proto-Kartvelian **t’ex-* ‘to break’: Georgian *t’ex-* ‘to break’, *t’exa-* ‘breaking’, *t’exil-* ‘broken’; Mingrelian *t’ax-* ‘to break’, *t’axa-* ‘breaking, ache’, *t’axil-* ‘broken’; Laz *t’ax* ‘to break’, *t’axa-* ‘breaking’, *mo-t’axer-* ‘broken’; Svan *la-t’x-i* ‘chisel’. Schmidt 1962:134; Klimov 1964:180—181 **t’ex-* and 1998:187 **t’ex-* : **t’x-* ‘to break’; Fähnrich—Sardshweladse 1995:327—328 **t’ex-*; Fähnrich 2007:397—398 **t’ex-*.
- C. Proto-Indo-European **t’ehh-* [**t’ahh-*] > **t’ā-* ‘to cleave, to split, to divide’; (extended form) **t’ehh-y/i-* [**t’ahh-y/i-*]: Sanskrit *dāti*, *dṛāti* ‘to cut, to divide, to reap, to mow’, *dāyati* ‘to divide, to destroy, to divide asunder’; Greek δαίζω ‘to cleave asunder, to cleave, to slay, to smite, to rend, to tear, to divide’; Old Icelandic *tíð* ‘time’, *tími* ‘time, proper time; good luck, prosperity’; Faroese *tíð* ‘time’, *tími* ‘hour’; Norwegian *tíð* ‘time’, *time* ‘time, proper time’; Swedish *tíd* ‘time, season’, *timme* ‘hour’; Danish *tíd* ‘time’, *time* ‘time, proper time’; Old English *tīd* ‘time, date, period’, *tīma* ‘time, date’; Old Saxon *tīd* ‘time’; Dutch *tijd* ‘time’; Old High German *zīt* ‘time’ (New High German *Zeit*). Rix 1998a:87 **deh₂-* ‘to divide’; Pokorny 1959:174—179 **dā-* : **dā-*, **dāi-*, **dāi-*, **dāi-* ‘to divide’; Walde 1927—1932.I:763—767 **dā(i)-*, **dāi-*, **dāi-*; Mann 1984—1987:131 **dāiō* (**dāiō*) ‘to divide’; Watkins 1985:10 **dā-* ‘to divide’ (contracted from **da₂-*; variant form **dai-* from extended root **da₂i-*) and 2000:14 **dā-* ‘to divide’ (oldest form **de₂-*, colored to **da₂-*, contracted to **dā-*; variant form **dai-*, contracted from **de₂i-*, colored to **da₂i-*); Mallory—Adams 1997:160—161 **deha(i)-* ‘to cut up, to divide’; Mayrhofer 1956—1980.II:10—21 and II:31; Boisacq 1950:162 **dā(i)-*, **dā(i)-*, **dāi-*; Frisk 1970—1973.I:340; Beekes 2010.I:297 and I:297—298 **deh₂-*, **deh₂i-*; Chantraine 1968—1980.I:247—248; Hofmann 1966:50 **dā(i)-*, **dāi-*, **dāi-*; Orël 2003:407 Proto-Germanic **tīdiz*, 408 **tīmōn*; Kroonen 2013:516 Proto-Germanic **tīdi-* ‘time’ and 517 **tīman-* ‘time’; De Vries 1977:587 and 588—589; Falk—Torp 1903—1906.II:360 and II:364; Torp 1919:782;

Skeat 1898:642 and 644; Onions 1966:923 **dī-*, **dāi-* and 924; Klein 1971:765—766 and 767; Kluge—Mitzka 1967:878 **dī-* : **dā(i)-*; Kluge—Seebold 1989:808 **dāi-*.

- D. Proto-Gilyak / Nivkh **ta-* ‘to chop’: Amur *řa-dʷ* ‘to chop (wood)’; East Sakhalin *tʰa-d* ‘to chop’. Fortescue 2016:144.

Buck 1949:9.26 break (vb. tr.); 12.23 separate (vb.); 12.232 divide. Bomhard—Kerns 1994:312, no. 130.

230. Proto-Nostratic root **t'akʰ-* (~ **t'əkh-*):

(vb.) **t'akʰ-* ‘to be fit, appropriate, suitable, proper’;

(n.) **t'akʰ-a* ‘fitness, appropriateness, suitability, propriety’; (adj.) ‘fit, appropriate, suitable, proper’

- A. Dravidian: Tamil *taku* (*takuv-*, *takk-/takunt-*) ‘to be fit, appropriate, suitable, proper, worthy, adequate, proportionate, excellent; to begin; to get ready; to be obtained; to be deserved; to resemble’; Kannada *tagu* (*takk-*) ‘to be fit or proper, to suit’; Tuḷu *takka* ‘fit, suitable, proper, deserving, worthy’; Malayalam *taku* ‘to be fit, to suit’; Telugu *tagu* ‘to be proper, becoming, fit, suitable, decent, worthy, competent’. Burrow—Emeneau 1984:260, no. 3005.

- B. Proto-Indo-European **t'ekʰ(s)-*/**t'okʰ(s)-* ‘to do what is fit, appropriate, suitable, proper’: Sanskrit *daśasyāti* ‘to serve, to oblige, to honor, to worship,’ *daśā* ‘condition, circumstance, fate’, *dākṣati* ‘to act to the satisfaction of; to be able or strong’, *dākṣa-h* ‘able, fit, adroit, clever, dexterous, industrious, intelligent’; Latin *decus* ‘distinction, honor, glory, grace’, *decet* ‘it is fitting, proper, seemly’; Old Irish *dech*, *deg* ‘best’; Greek δεκτός ‘acceptable’; Old High German *gi-zehōn* ‘to arrange’. Rix 1998a:93—95 **dek-* ‘to take, to take up’; Pokorny 1959:189—191 **dek-* ‘to take’; Walde 1927—1932.I:782—785 **dek-*; Mann 1984—1987:136—137 **dekər-* (**dekos*) ‘accepted, decency, acceptable’, 137 **dekō*, -*īō* ‘to find, to get, to deem, to judge’, 137—138 **dekos* ‘fit, fitting, fitness’, 138 **deksos*, -*ios* ‘fit, fitting, right, proper’; Watkins 1985:10—11 **dek-* and 2000:15 **dek-* ‘to take, to accept’; Gamkrelidze—Ivanov 1984.I:110 **t'ek[h]-*/**t'ek[h]-s-* and 1995.I:95 **t'ekʰ-*/**t'ekʰ-s-* ‘to serve, to worship’; Mallory—Adams 1997:271 **dekes-* ‘to honor’; Beekes 2010.I:320—321 **dek-*; Chantraine 1968—1980.I:267—269; Frisk 1970—1973.I:373—374 **dek-*, **dok-*; Hofmann 1966:54 **dek-*; Boisacq 1950:172—173; De Vaan 2008:164; Ernout—Meillet 1979:166—167; Walde—Hofmann 1965—1972.I:330—331 **dek-*; Mayrhofer 1956—1980.II:10 and II:27.

Buck 1949:9.943 fitting, suitable; 16.73 right (adj., in a moral sense, vs. wrong). Bomhard—Kerns 1994:312—313, no. 131; Dolgopolsky 2008, no. 2255, **tAKæ* ‘to suit, to be appropriate, to fit’.

231. Proto-Nostratic root **t'al-* (~ **t'al-*):(vb.) **t'al-* 'to lick';(n.) **t'al-a* 'licking'

- A. Proto-Kartvelian **t'lek'-/*t'lik'-* 'to lick, to lick oneself': Georgian *t'lek'-/t'lik'-* 'to lick, to lick oneself'; Mingrelian *t'irk'-* (< **t'rik'-* < **t'lik'-*) 'to lick, to lick oneself'. Klimov 1998:190 **t'lek-* : **t'rk-* 'to lick, to lick oneself'; Fähnrich—Sardshweladse 1995:333 **t'lek-*/**t'lik-*; Fähnrich 2007:406 **t'lek-*/**t'lik-*.
- B. Proto-Altaic **tālV-* 'to lick': Proto-Tungus **dala-* 'to lap, to swill; to feed (animals)' > Evenki *dala-* 'to lap, to swill'; Lamut / Even *dal-* 'to lap, to swill'; Negidal *dala-* 'to lap, to swill'; Ulch *dala-n-* 'to feed (animals)'; Nanay / Gold *dalo-* 'to feed (animals)'; Oroch *dalau-* 'to feed animals'; Udihe *dala-* 'to lap, to swill'. Proto-Mongolian **dol[u]γa-* 'to lick' > Mongolian *doliya-*, *doluyā-* 'to lick'; Khalkha *dolō-* 'to lick'; Buriat *dolō-* 'to lick'; Kalmyk *dolā-* 'to lick'; Ordos *dolō-* 'to lick'; Moghol *dōl-* 'to lick'; Dagur *dolō-* 'to lick'; Monguor *dōli-* 'to lick'. Proto-Turkic **dāla-* 'to bite' > Turkish *dala-* 'to bite'; Azerbaijani *dala-* 'to bite'; Turkmenian *dāla-* 'to bite'; Tatar *tala-* 'to bite'; Chuvash *tula-* 'to bite'. Starostin—Dybo—Mudrak 2003:1352 **tālV* 'to lick'.

Buck 1949:4.59 lick (vb.).

232. Proto-Nostratic root **t'al-* (~ **t'al-*):(vb.) **t'al-* 'to plunge, sink, dive, dip, or fall into; to immerse';(n.) **t'al-a* 'immersion; depth'

- A. Afrasian: Semitic: Geez / Ethiopic *ṭalāka* [ṢḌḌ] 'to be deep, to be soaked, to be drenched'; Amharic *ṭälläkä* 'to dip, to sink (sun), to be deep', *äṭälläkä* 'to drench'; Tigrinya *ṭäläkä* 'to immerse', *ṭälki* 'depth', *ṭälkäyā* 'to be drenched'; Harari *ṭäläka* 'to dip, to plunge (tr.)'; Gurage *ṭäläkä* 'to dip into a dish, to sink, to drown, to set (sun)'. Leslau 1963:154, 1979:618, and 1987:592.
- B. Proto-Kartvelian **t'el-* 'to fall into the mud': Georgian *t'l-ek'v-a* 'to fall into the mud'; Mingrelian *t'al-ik'-u-a* 'to be covered with mud'. Fähnrich 2007:394 **t'el-*.
- C. Proto-Chukchi-Kamchatkan (reduplicated) **tæltæ* 'merganser' [a diving bird]: Alyutor *taltal*, (Palana) *teltel* 'merganser'; Kamchadal / Itelmen (Eastern) *tiltil* 'merganser', (Southern) *tidel* 'greater merganser' [note also (Eastern) *tilkozik* 'to take a bath', *tiltezik* 'bath']. Fortescue 2005:280.

Buck 1949:1.214 mud; 9.36 wash; 10.33 sink (vb.).

233. Proto-Nostratic root *t'al- (~ *t'al-):
 (vb.) *t'al- 'to stretch out, to extend';
 (n.) *t'al-a 'length; height'; (adj.) 'long, tall; high'
- A. Afrasian: Proto-Semitic *t'a/wa/- 'to stretch out, to extend' > Hebrew *tūl* [טוּל] 'to hurl, to cast'; Arabic *tāla* 'to be or become long; to last long; to lengthen, to grow longer, to extend, to be protracted, to become drawn out; to surpass, to excel', *tūl* 'length; size, height, tallness'; Sabaeen *ṭwl* 'to extend, to lengthen'; Ḥarsūsi *aṭwáy* 'to lengthen, to prolong'; Šheri / Jibbāli *ṭol* 'length'; Mehri *aṭwīl* 'to prolong someone's life', *ṭōl* 'length', *ṭawáy* 'long'. Klein 1987:241; Murtonen 1989:294; Militarev 2008a:206 and 2011:85; Zammit 2002:274. Proto-Semitic (reduplicated) *t'al-t'al- 'to throw' > Hebrew *ṭiltēl* [טִלְטֵל] 'to throw, to fling, to hurl', *ṭaltēlāh* [טִלְטֵלָה] 'throwing (to) a great distance'; Arabic *ṭaltala* 'to move'. Proto-Semitic *na-t'al- 'to lift' > Hebrew *nāṭal* [נָטַל] 'to lift, to bear'; Biblical Aramaic *nəṭal* 'to take, to lift up, to raise, to carry (away)'. Murtonen 1989:280; Klein 1987:413.
- B. Proto-Indo-European (*t'el-/t'ol-/t'l'- 'to stretch, to extend, to lengthen':) (extended forms) *t'l'-E-g^{ho}- 'long', *t'l'-e-Egh- > *t'lēgh- '(vb.) to stretch, to extend, to lengthen; (n.) length': Sanskrit *dirghá-h* 'long, tall, deep' (comp. *drāghīyān* 'longer'), *drāghmán-*, *drāghimán-* 'length', *drāghate* 'to lengthen, to stretch' (causative *drāghayati* 'to lengthen, to extend, to stretch'); Greek *δολγός* 'long', *ἐνδελεχής* 'continuous, perpetual'; Gothic *tulgus* 'firm, steady'; Old English (adv. comp.) *tulge*, *tylg*, (superl.) *tylgest* 'strongly, firmly, well'; Old Saxon (adv.) *tulgo* 'very'; Old Church Slavic *dlъgъ* 'long', *dlъžq*, *dlъžiti* 'to extend'; Hittite (nom. pl.) *da-lu-ga-e-eš* 'long', *da-lu-ga-aš-ti* 'length', (3rd sg. pres.) *ta-lu-kiš-zi*, *ta-lu-ki-iš-zi* 'to become long'. Walde 1927—1932.I:812—813 *del-; *delēgh-; *dēlāghó- (*dīlghó-); *(d)longho-s; Pokorny 1959:196—198 *del-; *delēgh-; *dīlghó-; *(d)longho-s 'long'; Gamkrelidze—Ivanov 1984.I:230 *t'el-, *t'l'-H-g^h]- and 1995.I:177, I:180, I:199 *t'el- 'long', *t'elHgh-, *t'l'-H-g^h-; Mann 1984—1987:150 *dīlghis, -iə 'length, distance', 151 *dīlghos (*dēlāghos with variants) 'long, lasting, durable', 153 *dolīgh-; Watkins 1985:11 *del- and 2000:15 *del- 'long'; Mallory—Adams 1997:357 *dīlghós 'long', *dlonghos 'long'; Mayrhofer 1956—1980.II:47; Boisacq 1950:194—195 *delāgh-; Beekes 2010.I:345—346 *d(o)lgh^hó-; Chantraine 1968—1980.I:291—292; Frisk 1970—1973.I:406—407; Hofmann 1966:62 *delēgh-; Orël 2003:411 Proto-Germanic *tulzuz; Kroonen 2013:525 Proto-Germanic *tulgu- 'firm'; Lehmann 2008:349 *dīgh-, *delēgh-; Feist 1939:482—483 *dīghu-, *delēgh-; Derksen 2008:133 *dlh^hó-; Kloekhorst 2008b:819—821 *dólugh-i-.

Sumerian *dalla* 'to widen, to stretch, to extend, to enlarge'.

Buck 1949:9.32 stretch; 10.25 throw (vb.); 12.57 long. Dolgopolsky 2008, no. 2268, **tæLŹE(-ga)* ‘to be long’; Bomhard—Kerns 1994:306—307, no. 123.

234. Proto-Nostratic root **t'alʷ-* (~ **t'əʷ-*):

(vb.) **t'alʷ-* ‘to drip, to fall in drops, to sprinkle, to wet, to moisten’;

(n.) **t'alʷ-a* ‘dew, (rain) drop, drizzle’

- A. Proto-Afrasian **t'al-* (vb.) ‘to drip, to fall in drops, to sprinkle, to wet, to moisten’, (n.) **t'al-* ‘dew, drop’: Proto-Semitic **t'al-al-* (vb.) ‘to bedew, to wet, to moisten’, (n.) **t'all-* ‘dew, drop’ > Hebrew *ṭal* [טַל] ‘dew’; Ugaritic *ṭl* ‘dew’; Arabic *ṭalla* ‘to bedew’, *ṭall* ‘dew’; Ḥarsūsi *ṭel* ‘dew’; Šheri / Jibbāli *ṭel* ‘dew’; Mehri *ṭal* ‘dew’; Geez / Ethiopic *ṭall* [ṡḌ] ‘dew, moisture, humidity’, *ṭalla* [ṡḌ], *ṭalala* [ṡḌḌ] ‘to be moist, wet, humid; to be covered with dew; to be soft, fertile, verdant, fat’; Tigrinya *ṭālālā* ‘to be fresh, verdant’, *ṭalli* ‘dew’; Tigre *ṭälla* ‘to be wet’, *ṭālṭāl* ‘moisture’, *ṭäll* ‘dew’; Amharic *ṭäll* ‘dew’. Klein 1987:244 and 245; Leslau 1987:591; Murtonen 1989:206; Zammit 2002:271—272. Geez / Ethiopic *ṭalaya* [ṡḌṡ] ‘to be soft, tender, humid, fresh’. Leslau 1987:592. Central Chadic **t'Vl-* ‘drop’ > Buduma *tolo* ‘drop’. West Chadic **t'al-* ‘to flow’ > Bokkos *tal-* ‘to flow’. Orël—Stolbova 1995:515, no. 2459, **ṭal-* ‘dew, drop’ and 516, no. 2460, **ṭal-/ṭul-* ‘to flow, to pour’.
- B. Dravidian: Tamil *teḷi* (vb.) ‘to strew, to scatter, to sprinkle, to sow (as seed), to cast up in sifting; (n.) sowing (as of seeds in a field)’, *teḷippu* ‘winnowing, sprinkling, scattering, sowing’, *teḷlu* (*teḷli-*) ‘to winnow, to waft (as the sea), to cast upon the floor’, *taḷi* (vb.) ‘to drip (as rain); to sprinkle (tr.); (n.) drop of water, raindrop, first shower of rain’; Malayalam *teḷḷuka* ‘to sift or winnow by casting up gently in a fan’, *teḷḷi* ‘sifted powder’, *teḷḷal* ‘winnowing’, *taḷi* ‘sprinkling water’, *taḷikka* ‘to sprinkle’; Kota *teḷ* (*teyḷ-*) ‘to winnow (flour) gently’, *teyḷ-/teḷc-* (*teḷc-*) ‘to sprinkle (tr.)’; Kannada *taḷi* (vb.) ‘to spread by scattering, to strew, to sprinkle; to be scattered about; (n.) scattering, sprinkling’, *taḷisu* ‘to sprinkle, to cause to sprinkle’, *teṇṇu* ‘to winnow corn’; Koḍagu *taḷi-* (*taḷip-*, *taḷic-*) ‘to sprinkle (liquid)’; Tuḷu *talipu* ‘sprinkling’, *talipuni*, *talipu* ‘to sprinkle’, *telluni* ‘to winnow, to sift’; Koraga *talpi* ‘to sprinkle’; Gondi *tehc-*, *tahcānā*, *tahcītānā* ‘to winnow’; Kuṛux *tehnā* ‘to winnow flour so as to separate it from stones or unground grain’; Malto *téle* ‘to sift’. Burrow—Emeneau 1964:301, no. 3435. Note: Two separate stems may be involved here.
- C. Proto-Indo-European **t'el-/t'ol-* ‘to drip, to fall in drops, to sprinkle, to wet, to moisten’: Middle Irish *delt* ‘dew’; Armenian *teḷ* ‘heavy rain’; Swedish *talg* ‘tallow’; Danish *talg* ‘tallow’; Middle English *talȝ*, *talȝen*, *talug* ‘tallow’; Middle Low German *talg*, *talch* ‘tallow’; Dutch *talk* ‘tallow’; New High German *Talg* ‘tallow, grease, suet’. Pokorny 1959:196 **del-* ‘to dribble’; Watkins 1985:11 **del-* ‘to drip’; Mallory—Adams

1997:207 *del- 'to flow'; Orël 2003:400 Proto-Germanic *talǵō ~ *talǵan; Kroonen 2013:508 Proto-Germanic *talga/ō- 'tallow'; Falk—Torp 1903—1906.II:351; Onions 1966:901; Klein 1971:743; Kluge—Mitzka 1967:768; Kluge—Seebold 1989:719.

Bomhard—Kerns 1994:302—303, no. 118. Different (false) etymology in Dolgopolsky 2008, no. 2366, *t'UŭV (= *t'ūŭV ?) 'to drip; drops of water, dew'.

235. Proto-Nostratic root *t'am-:

(vb.) *t'am- 'to make or construct (something) in a skillful manner' (> 'to build');

(n.) *t'am-a 'the act of making or constructing (something) in a skillful manner' (> 'craft, skill'); 'that which is made or constructed in a skillful manner' (> 'building, structure'); 'one who makes or constructs (something) in a skillful manner' (> 'craftsman, carpenter')

A. Dravidian: Tamil *tamukkam* 'place where elephants are sent together to battle; summer house; royal pavilion, as the Nāyak building at Madura'; Malayalam *tamukkam* 'place where elephants fight'; Kannada *tamaṅga*, *tavaga*, *tavaṅga* 'platform, stage'; Telugu *tamagamu* 'platform; tabernacle or summer house, having no walls but a roof on pillars'. Burrow—Emeneau 1984:268, no. 3081.

B. Proto-Indo-European *t'em-/t'om-/t'ṃ- (vb.) 'to build, to construct', (n.) *t'om-o-s, *t'om-u-s 'house, building, structure': Sanskrit *dāma-h* 'house, home'; Avestan *dāman-* 'dwelling'; Greek δέμω 'to build, to construct', δόμος 'house; house of a god, temple; abode (of animals)', δέμνιον 'bedspread, mattress', δέμας 'body, stature, form', δῶ 'house', δῶμα 'house, home, temple', δεσπότης 'master (of the house), lord'; Armenian *tamal* 'roof, house-top; building', *tun* 'house; family, tribe'; Latin *domus* 'house, home; building, townhouse; dwelling-place of a bird or animal'; Old Irish *dám* 'tribe, family, kindred, relationship; church, house', *damna* 'the stuff or matter from which anything is produced'; Old Welsh *daum*, *dauu* 'son-in-law, member of a retinue, guest'; Gothic *gatiman* 'to suit', *timrjan 'to build (up), to strengthen, to benefit, to edify', *ga-timrjō 'building', *timrja* 'carpenter', *ga-timrjan 'to build up', *ana-timrjan 'to build upon', *timreins, *ga-timreins 'edification'; Old Icelandic *timbr* 'timber, wood felled for building', *timbra* 'to build with timber', *timbran* 'building'; Faroese *timbur* 'timber'; Norwegian *timber* '(standing) timber, (cut) logs, (trimmed) lumber'; Swedish *timmer* 'timber', *timra* 'to build with timber', *timmerman* 'carpenter'; Danish *tømmer* 'timber'; Old English *timber* 'timber, building material; act of building; building, structure', *timbran*, *timbrian* 'to build, to construct, to erect', *timbre* 'building, structure'; Old Frisian *-timbria* 'to build', *timber* 'building'; Old Saxon *giteman* 'to befit, to suit; to be fitting, suitable, proper', *timbar*

‘construction material’, *timbrian* ‘to build’, *timbrio* ‘carpenter’; Middle Dutch *timmer*, *timber*, *temmer* ‘building’; Old High German *zeman* ‘to befit, to suit; to be fitting, suitable, proper’, *zimbar* ‘dwellings, room’ (New High German *Zimmer* ‘room, chamber’); Old Church Slavic *domъ* ‘house’, *doma* ‘at home’; Russian *dom* [дом] ‘house, home’, *dóma* [дома] ‘at home’; Hieroglyphic Luwian *tama-* ‘to build’. Pokorny 1959:198—199 **dem-*, **demā-* ‘to build’, **domo-s*, **domu-s* ‘house’; Walde 1927—1932.I:786—788 **dem-*, **demā-*; **dēm-*, **dōm-*, **dm-*, **dṃ-*; **domo-s*, **domu-s*; Mann 1984—1987:140 **demō* ‘to fit, to form, to build’, 154 **domos*, -*ūs* ‘building, house’, 154 **dōmn-* ‘dwelling’; Watkins 1985:11 **demā-*, **dem-* ‘house, household’, **dom-o-*, **dom-u-* ‘house’, **dem(ə)-* ‘to build’ and 2000:16 **dem-* ‘house, household’ (suffixes *o*-grade form **dom-o-*, **dom-u-* ‘house’); Gamkrelidze—Ivanov 1995.I:645—646 **t’om-* ‘house, building’, (fn. 7) **t’em-* ‘to build, to erect’; Mallory—Adams 1997:87 **dem(h_a)-* ‘to build (up)’ and 281 **dōm* (gen. **déms*) ‘house; **dóm(h_a)os* ‘house’; Rix 2001:115—116 **demh₂-* ‘to fit or join (together), to build’; Frisk 1970—1973.I:364 and I:408—409; Boisacq 1950:176 and 195—196 **dēm-*, **dōm-*, **dm-*, **dṃ-*; **domo-*, **domu-*; **demā-* ‘to build’; Chantraine 1968—1980.I:261—262 and I:292—293 **domo-*; Hofmann 1966:55 **dem-* and 62 **domos* (**domos*); Beekes 2010.I:314—315, I:319 **dems-pot-*, I:343, I:346—347 **dōm*, **domo-*, I:362 **dōm*, and I:362—363 **dem-*; Martirosyan 2008:599—600 and 618 **dom-o-*; Ernout—Meillet 1979:182—183 **domu-*, **domo-*; **dem-*; De Vaan 2008:178—179 **dom-o-*, **dom-u-*; **dōm*; Walde—Hofmann 1965—1972.I:369—370 **dēm-*, **dōm-*, **dm-*, **dṃ-*; Matasović 2009:88—89 **demh₂-*; Falileyev 2000:40 Brittonic **dāmo-* < Proto-Indo-European **domos* ‘house(hold)’; Orël 2003:404 Proto-Germanic **temanan* and 404 Proto-Germanic **temran*; Kroonen 2013:517 Proto-Germanic **timbra-* ‘timber, lumber’ (< Proto-Indo-European **dem(H)-ro-*); Feist 1939:478 **dem-ro-*, **dem-*; Lehmann 1989:150—151 and 345—346 **dem-*, **demH-* ‘to join, to construct’; De Vries 1977:588; Torp 1919:785; Falk—Torp 1910—1911.II:1217 Proto-Germanic **temra-* (< Proto-Indo-European **demro-*); Onions 1966:924 **demron*; **dēm-*, **dōm-*, **dṃ-*; Klein 1971:767 **dem-*, **demā-*; Boutkan—Siebinga 2005:409 **demH-ro-* and 410; Walshe 1951:258; Kluge—Mitzka 1967:884 Proto-Germanic **timbra-* (< **temra-* < Proto-Indo-European **dem-ro-*); Kluge—Seebold 1989:813 Proto-Germanic **temra-*; Derksen 2008:112 and 113 **dom-u-*; Benveniste 1935: 65—68.

- C. Etruscan *tmia* ‘place, sacred building, temple (?)’. Bonfante—Bonfante 2002:219.
- D. Chukchi-Kamchatkan: Proto-Chukotian **təminjə* ‘to be skilled’ > Chukchi *teminjə-lʔən* ‘master craftsman’, *nə-teminjə-qin* ‘skilled’, *teminj-inej* ‘tool’, *tamenjə-ran* ‘workshop’; Kerek *taminʹnʹ-aat-* ‘to be skilled’, *taminʹnʹi-lran-* ‘skilled person’; Koryak *tamenjə-jav-enaj* ‘tool’, *tamenjə-*

jan ‘workshop’; Alutor (Palana) *teminŋ-et-* ‘to be skilled, to fix a sled’, *teminŋ-inaŋ* ‘tool’. Fortescue 2005:280.

Buck 1949:7.12 house; 9.41 craft, trade; 9.42 artisan, craftsman; 9.422 tool; 9.43 carpenter; 9.44 build.

236. Proto-Nostratic root *t'an- (~ *t'an-):

(vb.) *t'an- ‘to fill, to stuff, to pack or load tightly together’;

(n.) *t'an-a ‘closeness, thickness, density; load, burden’; (adj.) ‘tightly packed or pressed together; close, thick, dense’

A. Afrasian: Egyptian *dns* ‘to be loaded heavily’, *dns* ‘weight, load, burden; heavy’, *dnsw* ‘weights’. Hannig 1995:982; Faulkner 1962:314; Gardiner 1957:602; Erman—Grapow 1921:215 and 1926—1963.5:468—469.

B. Proto-Kartvelian *t'en- ‘to fill, to stuff, to pack (tight) with’: Georgian *t'en-* ‘to fill, to stuff, to pack (tight) with’; Mingrelian *t'in-* ‘to fill, to stuff, to pack (tight) with’. Klimov 1964:183 **tten-* and 1998:186 **tten-* ‘to fill, to stuff, to pack (tight) with’; Fähnrich—Sardshweladse 1995:325—326 **tten-*; Fähnrich 2007:394—395 **tten-*. Common Kartvelian (reduplication of the simple verbal stem *t'en-) *t'it'in- ‘to stuff, to fill tight’: Mingrelian *t'it'in-* ‘to fill, to stuff (tight)’; Svan *t'at'an-*, *t't'an-* ‘to fill to the brim’. Klimov 1998:188 **t'it'in-*.

C. Proto-Indo-European *t'ns-u- ‘closely packed or pressed together; thick, dense’: Greek *δαρός* ‘thick with hair, hairy, shaggy, rough’; Latin *dēnsus* ‘thick, dense, close, compact, set close together’, *dēnsēō* ‘to make thick, to press together, to thicken’; (?) Hittite *daššuš* ‘massive, mighty’ (according to Melchert 1994a:163, Proto-Anatolian *-VnsV- > Hittite -VssV-). Pokorny 1959:202—203 **dens-* ‘thick’; Walde 1927—1932.I:793—794 **dens-*; Mann 1984—1987:151—152 **dns-*, **dnt-* ‘close, thick’; Watkins 1985:11 **dens-* and 2000:16 **dens-* ‘dense, thick’; Mallory—Adams 1997:574 (?) **dēnsus*, **dēsós* ‘thick’; Gamkrelidze—Ivanov 1984.I:175 **t'ens-*, (zero-grade) **t'ns-* and 1995.I:150 **t'ens-* ‘dense, solid’, (zero-grade) **t'ns-*, I:173 **t'ns-u-*; Hofmann 1966:52 **dnsús*; Chantraine 1968—1980.I:253 **dns-*; Frisk 1970—1973.I:351 **dens-os*, **dns-os*, **densuos*, **dnt-tos* (?); Boisacq 1950:167 **den-*: **den-t-*, **den-s-*; Beekes 2010.I:305; Walde—Hofmann 1965—1972.I:341—342 **dnsús*, **dens-os*, **dns-os*; Ernout—Meillet 1979:169—170; De Vaan 2008:167 **d(ē)ns-o-* ‘thick’. Note: This etymology is rejected by Kloekhorst (2008b:853—855) — Kloekhorst compares Hittite *daššu-*, *daššau-* (adj.) ‘strong, powerful, heavy; well-fed; difficult, important’ with Sanskrit *dāmsas-* ‘miraculous power’, *dams-* ‘to have miraculous power’ and Greek *διδάσκω* ‘to learn’ instead.

Buck 1949:12.63 thick (in dimension); 12.64 thick (in density). Bomhard—Kerns 1994:308, no. 126.

237. Proto-Nostratic root **t'an-* (~ **t'an-*):

(vb.) **t'an-* 'to tie, to bind, to plait, to weave';

(n.) **t'an-a* 'anything woven or plaited'

- A. Proto-Afrasian **t'an-* 'to tie, to bind, to plait, to weave': Proto-Semitic **t'an-aʔ-* 'to plait, to weave' > Akkadian *tenū* 'to weave'; Hebrew *ṭeneʔ* [טֶנֶׁׁ] 'wicker basket'. Murtonen 1989:207 (Murtonen considers Hebrew *ṭeneʔ* to be original and not a loan); Klein 1987:246 (Klein considers Hebrew *ṭeneʔ* to be an Egyptian loan). Egyptian *dnūt* 'basket'. Hannig 1995:982; Faulkner 1962:314; Erman—Grapow 1921:215 (borrowed from Hebrew) and 1926—1963.5:467. West Chadic **t'aʔan-* (metathesis from **t'anaʔ-*) 'to sew', **t'yan-H-* 'rope' > Sura *taan-* 'to sew', *teŋ* 'rope'; Mupun *taan-* 'to sew', *teŋ* 'rope'; Angas *ten-* 'to sew', *tang* 'rope'; Montol *tan-* 'to sew', *teng* 'rope'; Ankwe *tan-* 'to sew', *tieng* 'rope'. Orël—Stolbova 1995:516, no. 2461, **tanaʔ-* 'to weave, to sew'.
- B. Proto-Altaic **tanŋu-* '(vb.) to bind; (n.) rope': Proto-Tungus **daŋ-* 'tight, bound tight, stuffed tightly' > Evenki *daŋama* 'tight, bound tight, stuffed tightly'; Manchu *dan* 'trap, snare (for wild fowl, wolves, and foxes)'. Proto-Turkic **daŋ-* 'to bind together' > Karakhanide Turkic *taŋ-* 'to bind together'; Turkmenian *daŋ-* 'to bind together'; Kirghiz *taŋ-* 'to bind together'; Kazakh *taŋ-* 'to bind together'; Sary-Uighur *taŋ-* 'to bind together'; Tuva *doŋ-na-* 'to bind together'; Yakut *taŋ-* 'to bind together'; Dolgan *taŋ-* 'to put on'. Starostin—Dybo—Mudrak 2003:1354 **tanŋu* 'to bind; rope'.
- C. Proto-Chukchi-Kamchatkan **təni-* 'to sew': Chukchi *təni-*, *rəni-* 'to sew, to sew up, to darn'; Kerek *-nni-* 'to sew' as in *Xattu-nni-* 'to sew skin of boat'; Koryak *təni-* 'to sew'; Alyutor *təni-* 'to sew'; Kamchadal / Itelmen *ceʔnŋete-s*, *ceʔnŋete-4-kas* 'to sew'. Fortescue 2005:299.

Buck 1949:6.35 sew; 9.19 rope, cord; 9.75 plait (vb.); 9.76 basket.

238. Proto-Nostratic root **t'aph-* (~ **t'əpʰ-*):

(vb.) **t'aph-* 'to strike, to beat, to pound';

(n.) **t'aph-a* 'stroke, blow'

Note also:

(vb.) **tʰaph-* 'to strike, to knock, to hit, to beat, to pound; to trample';

(n.) **tʰaph-a* 'stroke, slap, blow, hit'

- A. Proto-Afrasian **t'ap-* 'to strike, to hit': Proto-Semitic **t'ap-aḥ-* 'to strike (with the hand), to hit' > Hebrew *ṭāḫaḥ* [טָחַח] 'to extend, to spread out' (perhaps by striking); Post-Biblical Hebrew *ṭāḫaḥ* [טָחַח] 'to strike (with

the hand), to knock, to clap'; Aramaic *təḳaḥ* 'to hit, to strike'; Arabic *ṭalfaha* (with augmented *l*) 'to make thin (by spreading, hitting)'; Geez / Ethiopic *ṭafha* [ጠፋሐ] 'to clap (the hands), to make flat by patting with the hand, to make bricks'; Tigre *ṭāfha*, *ṭālfāha* (with augmented *l*) 'to be even, to be flat (from being patted by the hand)'; Tigrinya *ṭāfhe*, *ṭālfəhe* (with augmented *l*) 'to flatten'; Amharic (reduplicated) *ṭāfātṭāfā* 'to make flat, to slap repeatedly'; Gurage (reduplicated) *ṭāfātāfā* 'to flatten, to flatten dough', *ṭāfṭāffā* 'flat', *ṭifātāfā* 'to clap hands'. Murtonen 1989:208; Klein 1987:247; Leslau 1979:614, 615 and 1987:588.

- B. Proto-Indo-European **t'eph-/t'oph-* 'to pound, to trample': Greek δέφω 'to soften by working with the hand', δέψω 'to work or knead a thing until it is soft' (> Latin *depsō* 'to knead'); Armenian *tophem* 'to trample, to beat'; Polish *deptać* 'to trample down'; Serbo-Croatian *děpiti* 'to hit'. Pokorny 1959:203 **deph-* 'to stamp, to thrust'; Walde 1927—1932.I:786 **deph-*; Mann 1984—1987:140—141 **dēpsō*, *-iō* 'to pound, to trample', 155 **dops-* 'to trample, to tramp'; Watkins 1985:11—12 **deph-* and 2000:16 **deph-* 'to stamp'; Mallory—Adams 1997:550 (?) **deph_x-* 'to strike'; Boisacq 1950:180; Chantraine 1968—1980.I:267; Frisk 1970—1973.I:372—373; Hofmann 1966:56; Beekes 2010.I:320.
- C. Proto-Altaic **tāp^hV-* 'to strike, to press': Proto-Tungus **dap-* 'to flatten, to press' > Evenki *dapča-* 'to flatten, to press'; Oroch *dapāw-* 'to flatten, to press'. Proto-Mongolian **dabta-* 'to forge, to hammer' > Middle Mongolian *dabta-* 'to forge, to hammer', *dabši-* 'to knock, to hit'; Written Mongolian *dabta-* 'to knock, to hit'; Khalkha *davta-* 'to forge, to hammer'; Buriat *dabta-* 'to forge, to hammer'; Kalmyk *dawt-* 'to forge, to hammer'; Ordos *dabta-* 'to forge, to hammer'; Dagur *dabete-* 'to forge, to hammer'; Shira-Yughur *dapta-* 'to forge, to hammer'. Proto-Turkic **dāp-* 'to trample' > Karakhanide Turkic *tabrī-* 'to jump about (of a camel)'; Turkmenian *dābala-* 'to trample (of a camel)', *dābira-* 'to ride, to stamp'; Tatar (dial.) *tapa-* 'to trample'; Bashkir *tapa-* 'to trample'; Kazakh *tapa-* 'to trample'; Yakut *tabiŷ-* 'to hit with front hooves (of a horse)'; Dolgan *tabiŷ-* 'to scratch with a hoof'. Poppe 1960:104; Street 1974:27 **tepē-* 'to strike with the feet, to paw at', **tepē-k-*; Starostin—Dybo—Mudrak 2003:1355—1356 **tāp^hV* 'to stamp, to press'.

Buck 1949:9.21 strike (hit, beat).

239. Proto-Nostratic root **t'aq'-* (~ **t'əq'-*):

(vb.) **t'aq'-* 'to cover, to protect';

(n.) **t'aq'-a* 'covering'

- A. Proto-Kartvelian **t'q'aw-* 'skin, hide': Georgian *t'q'avi* 'skin, hide'; Mingrelian *t'q'ebi* 'skin, hide'; Laz *t'k'ebi* 'skin, hide'. Klimov 1964:183—184 **tqaw-* and 1998:192 **tqaw-* 'hide'; Schmidt 1962:134;

Fähnrich 2007:410 **tqaw-*. Proto-Kartvelian *ma-t'q'ľ-* 'wool': Georgian *mat'q'li* 'wool'; Mingrelian *mont'q'ori* 'wool'; Laz *mont'k'ori* 'wool'; Svan *mät'q'* 'wool, yarn'. Klimov 1964:129 **matqľ-* and 1998:117 **matqľ-* 'wool (of sheep), fleece'; Fähnrich—Sardshweladse 1995:231—232 **matqľ-*; Fähnrich 2007:281 **matqľ-*; Schmidt 1962:123. The relationship of **t'q'aw-* 'skin, hide' to *ma-t'q'ľ-* 'wool' was first proposed by Deeters (cf. Klimov 1998:117). Semantic development as in Old Icelandic *staka* 'skin, hide', cited below.

- B. Proto-Indo-European **(s)t'ek'-/*(s)t'ok'-* > (with regressive deglottalization) **(s)thek'-/*(s)thok'-* 'to cover': Sanskrit *sthaḡati* 'to cover, to veil, to make invisible, to cause to disappear', *sthaḡita-h* 'covered, concealed, hidden'; Greek *στέγω* 'to cover, to conceal, to shelter, to protect', *στέγος*, *τέγος* 'a roof, any covered part of a house', *στέγη*, *τέγη* 'a roof'; Latin *tegō* 'to cover; to bury, to cover with earth; to hide, to conceal; to cover so as to protect, to shield', *tēctum* 'a covering, a roof', *tegulum* 'a covering, a roof', *teges* 'a mat, rug, covering', *toga* 'a covering, especially the white woolen upper garment worn by Romans in time of peace when they appeared in public'; Old Irish *tech* 'house', *étach* 'garment', *tugid* 'to roof over, to cover', *tugatóir* (poet.) 'thatcher'; Old Welsh *tig* 'house'; Old Icelandic *þak* 'bed cover; roof, thatch', *þekja* 'to thatch, to cover', *þekja* 'thatch, roof', *staka* 'skin, hide'; Norwegian *tekja* 'to cover', *tekkja*, *tak* 'roof'; Swedish *täcke* 'to cover', *tak* 'roof'; Danish *tække* 'to cover', *tag* 'roof'; Old English *þeccan* 'to cover', *þecan* 'roof, cover', *þæc* 'roof, thatch', *þaca* 'roof'; Old Frisian *thekka* 'to cover', *thek* 'roof'; Old Saxon *thekkian* 'to cover'; Middle Low German *dack* 'roof'; Dutch *dak* 'roof', *dekken* 'to cover'; Old High German *decchen* 'to cover' (New High German *decken*), *decchi* 'covering, roof' (New High German *Decke*), *dah* 'roof' (New High German *Dach*); Lithuanian *stogas* 'roof'; Old Prussian *steege* 'barn', *stogis* 'roof'; Old Church Slavic *o-stegъ* 'garment'. Rix 1998a:535 **(s)teg-* 'to cover'; Pokorny 1959:1013—1014 **(s)teg-* 'to cover'; Walde 1927—1932.II:620—621 **(s)teg-*; Mann 1984—1987:1315 **stheg-* (**steg-*) 'to cover, to hide', 1323 **sthogōs*, *-ā*, *-is* 'enclosure, cover', 1371 **tēgō*, *-jō* 'to cover, to roof-over, to shelter', 1371 **tegos*, *-es-* (**teget-*, **tegt-*, **tegu-*) 'cover, lid, roof, house', 1406—1407 **tog-*, 1407 **togos*, *-ā*, *-jā* 'cover, covering, roof, thatch'; Mallory—Adams 1997:134 **(s)teg-* 'to cover'; Gamkrelidze—Ivanov 1984.I:55 **(s)t[ʰ]eK'-* and 1995.I:49 **(s)theK'-* 'to cover'; Watkins 1985:65 **(s)teg-* and 2000:85 **(s)teg-* 'to cover'; Frisk 1970—1973.II:780—781; Chantraine 1968—1980.II:1046; Boisacq 1950:905 **st(h)ēg-*; Beekes 2010.II:1393 **(s)teg-*; Hofmann 1966:333 **(s)teg-*; Ernout—Meillet 1979:678—679; Walde—Hofmann 1965—1972.II:654—655 **steg-*; De Vaan 2008:608 **(s)teg-e/o-* 'to cover'; Orël 2003:415 Proto-Germanic **þakan*, 415 **þakjanan*, 415 **þakjō(n)*; Kroonen 2013:531—532 Proto-Germanic **þaka-* 'roof', **þakjan-*, **þakinō-*; De Vries 1977:542, 605, and 607; Falk—Torp 1903—

1906.II:349 *(s)togo-; Torp 1919:768; Klein 1971:758 *(s)teg-; Onions 1966:914 *tog-, *teg-; Kluge—Mitzka 1967:119 *teg- and 124; Kluge—Seebold 1989:125 *teg-, *steg- and 130; Derksen 2015:429 *stog-o-, *(s)teg-; Smoczyński 2007.1:605; Fraenkel 1962—1965.II:911; Wodtko—Irslinger—Schneider 2008:634—636 *(s)teg-.

Buck 1949:4.12 skin; hide; 6.22 wool; 7.12 house; 12.26 cover (vb.); 12.27 hide, conceal. Bomhard—Kerns 1994:315—316, no. 135. Different (doubtful) etymology in Dolgopolsky 2008, no. 2411, *to[ʔü]qa 'hide, skin'.

240. Proto-Nostratic root *t'ar- (~ *t'ar-):

(vb.) *t'ar- 'to tear, to rend, to cut, to sever';

(n.) *t'ar-a 'rip, tear, cut, slice'

Extended form:

(vb.) *t'ar-V-ph- 'to tear, to rend, to pluck';

(n.) *t'ar-ph-a 'tearing, rending, plucking'

- A. Proto-Afrasian *t'Vr- 'to take away': Proto-Semitic *ʔa-t'ar- 'to take away' (*ʔa- is a prefix) > Akkadian *eṭēru* 'to take something away (from somebody), to take out; (passive) to be taken away'. D. Cohen 1970— : 16. Egyptian *dr* 'to subdue (enemies), to expel, to drive out (people, illness), to remove (need, evil), to repress (wrongdoer, wrongdoing), to destroy (places)'. Faulkner 1962:314—315; Hannig 1995:983; Erman—Grapow 1921:215 and 1926—1963.5:473—474; Gardiner 1957:602. Orël—Stolbova 1995:520, no. 2486, *t'Vr- 'to take away'. For the semantics, cf. Gothic *dis-tairan* 'to tear down, to remove' and *ga-tarnjan* 'to rob, to take away', cited below.
- B. Dravidian: Tamil *tari* (-pp-, -tt-) 'to lop, to chop off, to cut off', *tari* (-v-, -nt-) 'to be cut off, broken', *tari* 'a cutting off, wooden post, stake, weaver's loom, a kind of axe', *tarikai* 'a kind of axe, chisel'; Malayalam *tarikka* 'to cut down', *tari* 'pot, hedge-stake, stick, cutting, weaver's loom'; Kota *tayr-* (*tarc-*) 'to cut (using an implement with one hand); to cut a path through jungle'; Kannada *tari*, *tare* 'to strip off, to cut off, to cut', *tari* 'cutting, slaughter; stake, post, sharp knife or sword'; Kodagu *tari-* (*tarip-*, *taric-*) 'to chop to small bits', *tarip* 'cutting'; Tulu *taripuni* 'to lop off, to clear (jungle)'; Telugu *tarugu*, *targu*, *taruvu*, *tarvu* 'to slice, to chop'; Kolami *targ-* (*tarakt-*) 'to cut, to cut off'; Naikri *targ-* 'to cut'; Kurux *tārnā* (*tāryas*) 'to fell (tree), to lop off (bough)'; Malto *tāre* 'to cut down, to fell', *tare* 'to break (as a stick), to injure'. Burrow—Emeneau 1984:273, no. 3140.
- C. Proto-Indo-European *t'er-/t'or-/t'ŕ- 'to tear, to rend, to flay': Sanskrit *dṛṇāti* 'to tear, to rend, to split open'; Greek *δέρω* 'to skin, to flay'; Armenian *teṛem* 'to flay'; Welsh *darn* 'fragment'; Gothic *dis-tairan* 'to tear down, to remove', *dis-taurnan* 'to tear apart', *af-taurnan* 'to tear off',

ga-taurnan ‘to vanish’ *ga-tarnjan* ‘to rob, to take away’; Old English *teran* ‘to tear’, *taru* ‘tear, rent’; Old Frisian *tera* ‘to tear’; Old Saxon *terian* ‘to tear’; Dutch *teren* ‘to tear’; Old High German *zeran*, *firzeran* ‘to tear’ (New High German *zehren*, *verzehren* ‘to destroy, to consume’), *zerren* ‘to pull, to drag, to haul’ (New High German *zerren*), *(in)trennen* ‘to separate, to divide, to part, to sever’ (New High German *trennen*); Lithuanian *diriù*, *derù*, *dirti* ‘to flay’; Old Church Slavonic *derq*, *dbrq*, *dbrati* ‘to tear, to flay’. Rix 1998a:102—103 **der-* ‘to tear, to rend’; Pokorny 1959:206—211 **der-*, **derə-*, **drē-* ‘to skin’; Walde 1927—1932.I:797—803 **der-*, **derē-*; Mann 1984—1987:141—142 **derō*, *-iō* ‘to flay, to tear, to wear, to waste’, 142 **dēros*, *-ā*, *-is* ‘rending; rip, tear, rupture’, 156 **doros*, *-ā* ‘rip, rag, torn piece’, 157 **doruos* ‘tearing, dragging’, 164 **d̥rō*, *-iō* (**dər-*) ‘to skin, to tan, to tear’; Watkins 1985:12 **der-* and 2000:16 **der-* ‘to split, to peel, to flay’; Gamkrelidze—Ivanov 1984.II:707 **t’er-* and 1995.I:192, I:201, I:202, I:612, I:780 **t’er-* ‘to remove bark, to skin’; Mallory—Adams 1997:567 **der-* ‘to tear off, to flay’; Mayrhofer 1956—1980.II:59; Chantraine 1968—1980.I:365—366; Boisacq 1950:178 **der-*; Hofmann 1966:55—56; Beekes 2010.I:318—319 **der-*; Frisk 1970—1973.I:368—370; Kroonen 2013:513 Proto-Germanic **teran-* ‘to tear’ (< **dér(H)-e-*); Orël 2003:405 Proto-Germanic **teranan*, 413 **turnōjanan*; Lehmann 1986:91—92 **der-* and 150 **der-*; Feist 1939:120 and 203—204; Skeat 1898:628; Onions 1966:906 **der-*; Klein 1971:748 **dere-*, **der-*; Kluge—Mitzka 1967:788 **der-*, 877 **der(ē)-*, 880, and 888—889 **der-*; Kluge—Seebold 1989:738 **der-*, 807, 810 **der-*, and 816; Fraenkel 1962—1965.I:96—97; Smoczyński 2007.1:115—116; Derksen 2008:99 **der(H)-* and 2015:132—133 **d(e)r-*.

- D. Chukchi-Kamchatkan: Proto-Chukotian **tærræŋ-* ‘to cut or break into pieces’ > Chukchi *tærræŋ-* ‘to break to pieces’; Koryak *tacran(ə)-* ‘to cut fish into pieces’; Alyutor *tarʹaŋ-* ‘to break or cut to pieces’. Fortescue 2005:282.

Sumerian *dar* ‘to split’.

Buck 1949:9.28 tear (vb. tr.); 9.29 flay, skin. Bomhard—Kerns 1994:301—302, no. 116. Different etymology in Dolgopolsky 2008, no. 2289, **terV* ‘to tear, to burst’.

241. Proto-Nostratic root **t’ar-* (~ **t’ər-*):

Extended form:

(vb.) **t’ar-V-ph-* ‘to tear, to rend, to pluck’;

(n.) **t’ar-ph-a* ‘tearing, rending, plucking’

Derivative of:

(vb.) **t’ar-* ‘to tear, to rend, to cut, to sever’;

(n.) **t’ar-a* ‘rip, tear, cut, slice’

- A. Afrasian: Proto-Semitic **t'ar-ap-* 'to tear, to rend, to pluck' > Hebrew *tāraḥ* [תָּרַח] 'to tear, to rend, to pluck', (hif.) *hātrīḥ* [הִתְרַח] 'to let someone enjoy (food)', *tereḥ* [תֵּרַח] 'prey, food, nourishment'; Aramaic *tāraḥ* 'to tear, to seize'; Arabic *ṭarafa* 'to graze on the borders of a pasture-ground (separate from the others)', *ṭaraf* 'utmost part, outermost point, extremity, end, tip, point, edge, fringe, limit, border; side; region, area, section; a part of, a bit of, some'. Klein 1987:251; Murtonen 1989:209; Zammit 2002:268. Coptic *tōrp* [ⲧⲟⲣⲡ] 'to seize, to rob, to carry off' (Semitic loan). Vycichl 1983:220; Černý 1976:194.
- B. Proto-Indo-European **t'reph-/t'rop^h-* 'to tear, to rend, to pluck': Greek *δρέπω* 'to pluck, to cull'; Albanian *drapër* 'sickle' (< Greek *δρέπανον* 'scythe'); Old Icelandic *trefill* 'tatter, rag', *trefr*, *tröf* 'fringes'; Russian (dial.) *drápat'*, *drápát'* [драпать] 'to scratch, to scrape'. Rix 1998a:111 **drep-* 'to tear or pull off'; Pokorny 1959:211 **drep-*, **drop-*; Walde 1927—1932.I:801—802 **dre-p-*; Mann 1984—1987:160 **dropō*, *-iō* 'to pluck, to tear'; Mallory—Adams 1997:567 **drep-* 'to scratch, to tear'; Boisacq 1950:200 **drep-*; Beekes 2010.I:353 **drep-*; Hofmann 1966:64 **dre-p-*; Chantraine 1968—1980.I:297—298 **dr-ep-*; Frisk 1970—1973.I:417; Prellwitz 1905:121; Orël 2003:408 Proto-Germanic **trabō*; Kroonen 2013:520 Proto-Germanic **trabō-* 'fringe' (< **drop-éh₂-*); De Vries 1977:597 **der-*; Derksen 2008:115.

Buck 1949:9.28 tear (vb. tr.); 12.35 end; 12.352 point; 12.353 edge; 12.36 side; 13.23 part (sb.). Bomhard—Kerns 1994:302, no. 117.

242. Proto-Nostratic root **t'aw-* (~ **t'əw-*):

(vb.) **t'aw-* 'to go, to leave, to go away; to let go';

(n.) **t'aw-a* 'distance, remoteness'; (adj.) 'far away, remote, at a distance'

- A. Proto-Afrasian **t'aw-* 'to go, to go away': Semitic: Arabic *tāʾa* (< **t'aw-a₂*) 'to come and go; to go far away'. West Chadic **t'a₂-* 'to go' > Warji *ṭa-n* 'to go'; Siri *ṭa* 'to go'; Jimbin *da* 'to go'. Central Chadic **t'uw-* 'to go' > Banana *tuwwa* 'to go'. East Chadic **tawi-* 'to go, to walk' > Tumak *tiw* 'to go, to walk'; Sokoro *teui* 'to go, to walk'. Orël—Stolbova 1995:511—512, no. 2440, **ṭa₂-*/**ṭaw-* 'to go, to come'.
- B. Proto-Kartvelian **t'ew-* 'to leave, to let go': Georgian *t'ev-* 'to leave, to let go'; Mingrelian *t'al-* 'to leave, to let go'; Laz *t'al-* 'to leave'. Klimov 1964:180 **ṭew-* and 1998:185 **ṭew-* 'to leave, to let go'.
- C. Proto-Indo-European **t'ew(A)-*/**t'ow(A)-*/**t'u(A)-* '(vb.) to go, to leave, to go away; (adv.) far off, far away, distant': Sanskrit *dāvati* 'to go', *dāváyati* 'to make distant, to remove', *dūtá-h* 'messenger, envoy', *dūrā-h* 'distant, far, remote, long (way)', *dāvīyas-* 'farther, very distant', *daviṣṭhá-h* 'remotest, very far away'; Avestan *dūrāt* 'far'; Old Persian *dūrai* 'afar, far away, far and wide', (adv.) *dūradaša* 'from afar', *duvaišta-* 'very long,

very far'; Greek (adv.) δῆν (< *δῆν) 'long, for a long time, (of place) far'; Middle High German *zouwen* 'to hasten, to proceed, to succeed' (New High German *zauen*); Middle Low German *touwen* 'to hasten, to proceed'; Hittite *tu-u-wa* 'to a distance, afar', (neut. pl.) *tu-u-wa-la* 'far off, distant'; Old Church Slavic *davě*, *davъnъ* 'ancient, long-standing'. Pokorny 1959:219–220 **deu-*, **deuə-*, **duā-*, **dū-* 'to move forward'; Walde 1927–1932.I:778–780 **deu(ā)-*; Mann 1984–1987:133 **dāu-*, **dāun-*, **dū-* 'long ago; long-standing', 144 **deuəros* 'lasting, firm', 144 **deu-* 'long, lasting', 144–145 **dēuō* 'to last', 158 **douō* (?), **douuō* 'to go', 169 **dūros* 'far, long-lasting, long', 170 **duāros* 'long-lasting'; Watkins 1985:12 **deuə-* (also **dwa₂-*) and 2000:17 **deuə-* 'long (in duration)' (oldest form **deu₂-*, with variant [metathesized] form **dwe₂-*, colored to **dwa₂-*, contracted to **dwā-*); Mallory–Adams 1997:349 **deuh₄-* 'to leave, to go away'; Gamkrelidze–Ivanov 1984.I:230 **t'eu-*, **t'ū-aH-* and 1995.I:200 **t'ew-*, **t'w-aH-* 'to remain'; Mayrhofer 1956–1980.II:25, II:26, and II:56–57 **deu(ā)-*; Beekes 2010.I:326 **dueh₂-m*; Boisacq 1950:183; Chantraine 1968–1980.I:274–275 **dwā-*; Frisk 1970–1973.I:381–382; Kluge–Mitzka 1967:875; Kluge–Seebold 1989:806; Derksen 2008:97; Kloekhorst 2008b:904–905 **dueh₂m*.

Sumerian *du* 'to go, to leave, to depart, to go away', *du-rí* 'long time', *du₈* 'to let go, to let loose, to release, to set free', *duh* 'to release, to set free, to loosen, to untie, to release, to open'.

Buck 1949:12.18 leave; 12.44 far (adv.); 12.57 long. Bomhard–Kerns 1994:319–320, no. 139. Slightly different etymology in Dolgopolsky 2008, no. 2448, **tāwhV* 'to abandon, to leave, to get lost'.

243. Proto-Nostratic root **t'aw-* (~ **t'əw-*):

(vb.) **t'aw-* 'to hit, to strike';

(n.) **t'aw-a* 'stroke, blow, injury, harm, damage'

- A. Proto-Afrasian **t'aw-* 'to hit, to strike': Proto-East Cushitic **daw-* 'to hit, to strike' > Elmolo *dā-* 'to hit, to strike'; Galla / Oromo *dā(w)-* 'to hit, to strike'; Konso *daw-* 'to hit, to strike'; Burji *daw-* 'to hit, to strike'; Dasenech *dō-* 'to hit, to strike'; Gidole *daw-* 'to hit, to strike'; Arbore (perf.) *dā-y-iy* 'to hit, to strike'. Sasse 1979:43.
- B. Proto-Kartvelian **t'wr-* 'to break, shatter, or smash to pieces, to destroy': Georgian *m-t'vr-ev-a*, *da-m-t'vr-ev-a* 'to break, shatter, or smash to pieces, to destroy'; Svan *li-t'wr-am-aw-i* 'to break, shatter, smash, or split to pieces'. Fähnrich 2007:399 **t'wr-*.
- C. Proto-Indo-European **t'ew-/t'ow-/t'u-* 'to hit, to strike': Welsh *dwrn* 'fist'; Old Irish *dorn* 'fist', *durni* 'to strike with fists'; Breton *dourn* 'hand'; Latvian *dūre*, *dūris* 'fist', *duŗu*, *dūru*, *duŗt* 'to sting, to thrust'; Old

Icelandic *tjón* ‘damage, loss’, *týna* ‘to lose, to destroy, to put to death’, (reflexive) *týnast* ‘to perish’, *týning* ‘destruction’; Old English *tēona* ‘injury, suffering, injustice, wrong, insult, contumely, quarrel’, *tēonian* ‘to irritate’, *tīenan* ‘to annoy, to irritate’; Old Frisian *tiōna*, *tiūna* ‘to damage’; Old Saxon *tiono* ‘evil, harm, injury, wrong, hostility, enmity’, *gitiunian* ‘to do wrong’. Pokorny 1959:203 **d̥uer-* : **dur-* or **d̥uōr-* : **d̥uər-* : **dur-*; Walde 1927—1932.I:794—795 **d̥uer-* : **dur-* or **d̥uōr-* : **d̥uər-* : **dur-*; Watkins 1985:12 **deu-* ‘to harm, to hurt’; Orël 2003:405 Proto-Germanic **teunō(n)*, 405—406 **teunjanan*; Kroonen 2013:515 Proto-Germanic **teuna-* ‘damage’, **teuna/ōn*, **teunjan-*; De Vries 1977:592 and 603; Onions 1966:907; Klein 1971:749; Boutkan—Siebinga 2005:410.

Sumerian *du*₇ ‘to butt, to gore’.

Buck 1949:4.33 hand; 9.21 strike (hit, beat). Bomhard—Kerns 1994:311—312, no. 129.

244. Proto-Nostratic (Eurasian only) (n.) **t’ay-a* ‘(elder) male in-law, (elder) male relative’:

- A. Proto-Indo-European **t’ay-wer-/t’ay-wr̥-* ‘brother-in-law on husband’s side’: Sanskrit *devār-* ‘brother-in-law’; Greek δᾱήρ (< *δαιῖήρ) ‘husband’s brother, brother-in-law’; Armenian *taigr* ‘brother-in-law’; Latin *lēvir* (for **laever*, with *l* for *d*) ‘brother-in-law’; Old English *tācor* ‘husband’s brother, brother-in-law’; Old Frisian *tāker* ‘husband’s brother’; Old High German *zeihhur* ‘brother-in-law’; Lithuanian *dieveris* ‘brother-in-law’; Latvian *diēveris* ‘brother-in-law’; Russian Church Slavic *děverb* ‘brother-in-law’. Pokorny 1959:179 **dāiūēr-* ‘husband’s brother, brother-in-law’; Walde 1927—1932.I:767 **daiuer-*; Mann 1984—1987:130—131 **daiguēr-* (**daiuēr-*, **daiur-*) ‘brother-in-law on husband’s side’; Gamkrelidze—Ivanov 1984.II:760 **t’aiuēr-* and 1995.I:662 **t’aiwēr-* ‘husband’s brother’; Watkins 1985:10 **daiwer-* and 2000:14 **daiwer-* ‘husband’s brother’; Mallory—Adams 1997:84 **daihauēr-* ‘husband’s brother’; Mayrhofer 1956—1980.II:64; Boisacq 1950:160 **daiuér-*; Frisk 1970—1973.I:338—339; Chantraine 1968—1980.I:245—246; Lejeune 1972:247, §265, Greek δᾱήρ (< *δαιῖήρ); Hofmann 1966:50 Greek δᾱήρ (< *δαιῖήρ); Beekes 1969:135 **daiuer-* and 2010.I:296 **deh₂i-uer-*; Ernout—Meillet 1979:352—353; Walde—Hofmann 1965—1972.I:787—788 **dāiūēr-*; De Vaan 2008:336 Proto-Italic **daiwēr-*; Orël 2003:399 Proto-Germanic **taikuraz-*; Kroonen 2013:506 Proto-Germanic **taikwer-* ‘brother-in-law’; Derksen 2008:105 **deh₂i-uer-* and 2015:128 **deh₂i-uer-*; Smoczyński 2007.1:111 **deh₂iuer-*; Fraenkel 1962—1965.I:94; Lehmann 1952:50—51, §5.4e, */deXywer/; Wodtko—Irslinger—Schneider 2008:58—60 **daiuér-*.

- B. Proto-Altaic **tāyV* ‘elder male in-law, elder male relative’: Proto-Tungus **dā-* ‘(elder) in-law, elder brother of father, grandfather’ > Manchu *dančan* ‘in-law’; Evenki *dā* ‘elder in-law’; Lamut / Even *dā* ‘elder in-law’; Negidal *dāŋta* ‘in-law’; Nanay / Gold *dā-mīn* ‘elder brother of father, grandfather’. Proto-Turkic **dāy-* ‘uncle’ > Old Turkic *taγay* ‘maternal uncle’; Karakhanide Turkic *taγay* ‘maternal uncle’; Turkish *dayı* ‘maternal uncle’; Azerbaijani *dayi* ‘uncle’; Turkmenian *dāyi* ‘uncle’; Uzbek *tāya* ‘uncle’; Uighur *taya* ‘uncle’; Kirghiz *tay, taya* ‘uncle’; Sary-Uighur *taγiγ* ‘uncle’; Kazakh (dial.) *taya* ‘uncle’; Tuva *dāy* ‘uncle’; Yakut *tāy* ‘uncle’. Starostin—Dybo—Mudrak 2003:1350 **tājV* ‘elder in-law, elder relative’.

Buck 1949:2.51 uncle; 2.65 brother-in-law (husband’s brother, Proto-Indo-European **daiwer-*). Dolgopolsky 2008, no. 2307, **ta[q|g]ayū* ‘relative-in-law (person of the opposite exogamous moiety)’.

245. Proto-Nostratic root **t’ay-* (~ **t’əy-*) or **t’iy-* (~ **t’ey-*):
 (vb.) **t’ay-* or **t’iy-* ‘to shine, to gleam, to be bright, to glitter, to glow; to burn brightly’;
 (n.) **t’ay-a* or **t’iy-a* ‘light, brightness, heat’
- A. Dravidian: Tamil *tī, tīy* ‘to be burnt, charred, blighted’; Malayalam *tī* ‘fire’; Kota *ti-y-* (*ti-c-*) ‘to be singed, roasted’; Toda *ti-y-* (*ti-s-*) ‘to be singed’, *ti-y-* (*ti-c-*) ‘to singe, to roast’; Kannaḍa *tī* ‘to burn, to scorch, to singe, to parch’; Telugu *tīṇḍrincu, tīḍirincu* ‘to shine’, *tīṇḍra* ‘light, brightness, heat’; Brahui *tīn* ‘scorching, scorching heat’, *tīrūnk* ‘spark’. Burrow—Emeneau 1984:285, no. 3266.
- B. Proto-Indo-European **t’ey-/t’oy-/t’i-* ‘to shine, to be bright’: Sanskrit *dīdeti* ‘to shine, to be bright; to shine forth, to excel, to please, to be admired’, *devá-h* ‘(n.) a deity, god; (adj.) heavenly, divine’, *dyótate* ‘to shine, to be bright or brilliant’, *dyáuḥ* ‘heaven, sky, day’, *divá-h* ‘heaven, sky, day’, *divyá-h* ‘divine, heavenly, celestial; supernatural, wonderful, magical; charming, beautiful, agreeable’, *dīpyáte* ‘to blaze, to flare, to shine, to be luminous or illustrious; to glow, to burn’, *dīptá-h* ‘blazing, flaming, hot, shining, bright, brilliant, splendid’, *dína-h* ‘day’; Greek *ἰός* ‘heavenly; noble, excellent; divine, marvelous’, *Ζεύς* ‘Zeus, the sky-god’; Armenian *tīw* ‘day’; Latin *diēs* ‘day’, *deus* ‘god’; Old Irish *die* ‘day’; Old Icelandic *teitr* ‘glad, cheerful, merry’, *tívor* (pl. *tívar*) ‘god’; Old English *Tīw* name of a deity identified with Mars; Lithuanian *dienà* ‘day’, *diēvas* ‘god’, *dailūs* ‘refined, elegant, graceful’; Old Church Slavonic *дѣнь* ‘day’; Hittite (dat.-loc. sg.) *šiwatti* ‘day’, (gen. sg.) *ši-(i)-ú-na-aš* ‘god’; Luwian (acc. pl.) *ti-wa-ri-ya* ‘sun’, (nom. sg.) *Ti-wa-az* name of the sun-god (= Sumerian *UTU*, Akkadian *ŠAMŠU*, Hittite *Ištanu-*); Hieroglyphic Luwian *SOL-wa/i-za-sa* (**Tiwats* or **Tiwazas*) name of the sun-god; Palaic (nom. sg.) *Ti-ya-az(-)* name of the sun-god. Rix 1998a:91—92 **deih₂-* ‘to shine

- brightly'; Pokorny 1959:183—187 *dei-, *dejā-, *dī-, *dīā- 'to shine brightly'; Walde 1927—1932.I:772—774 *dei-, *dejā-, *dejā-, *dī-, *dīā-; Mann 1984—1987:136 *deiyo-, -jos 'divine, inspired', 136 *dejō (*dīdēmi) 'to appear', 148 *dītis 'brightness, daytime', 148 *diu-; *diyo-, -om (*dīu-) 'sky, day', 149 *dīuio 'to shine, to light up', 149 *dīuio 'heavenly, divine, wonderful, strange', 149 *dīēu- 'to shine, to burn', 150 *dīēus (obl. *dīu-) 'god, sky'; Watkins 1985:10 *dei- 'to shine' and 2000:22 *dyeu- 'to shine' (and in many derivatives, 'sky, heaven, god'), zero-grade *dyu- (before consonants) and *diw- (before vowels), (noun) *deiwo- 'god' (formed by e-insertion in zero-grade *diw- and suffixation of [accented] -o-); variant form *dyē- (< earlier *dye₂-); variant form *deiā-; Gamkrelidze—Ivanov 1984.I:227, I:243, II:791 *t'eī-; I:36, I:226, I:242 *t'eīu-; I:242, II:791 *t'eīu-o-; I:272 *t'eīu-om; I:271, I:272, II:799 *t'eīu-os; I:243 *t'i-; I:242, II:791 *t'i-u-; I:223 *t'i-u-es; I:250 *t'iyo-; I:36, I:223, I:243, II:475, II:481, II:684, II:791 *t'iey-; II:475, II:476, II:792, II:798 *t'iey-/t'iu-; I:46 *t'iey-; and 1995.I:196, I:211, I:212, I:693 *t'ei- 'to give off light, to shine'; I:32, I:196, I:210, I:211 *t'ei-w- 'god'; I:210, I:692 *t'eiw-o-; I:237 *t'eiw-om; I:236, I:237, I:700 *t'eiw-os; I:211, I:396 *t'i-w-; I:32, I:192, I:196, I:210, I:211, I:212, I:396, I:401, I:590, I:692, I:693, I:699 *t'y-eu-; I:192 *t'i-w-es; I:218 *t'iwyos 'divine'; I:41 *t'yey-; I:693 *t'iu- 'day'; Mayrhofer 1956—1980.II:42 *diyes-, II:43, II:45, and II:70—71 (nom. sg.) *dīeus, (acc. sg.) *dīeum (> *dīēm); Boisacq 1950:189—190 *diu-, *deiyo- and 308 *dīēus; Hofmann 1966:60 *diu-, *deiyo- and 102 *dīēus; Frisk 1970—1973.I:396—397 *diu(i) jo- and I:610—611 *d(i)jēus; Chantraine 1968—1980.I:285—286 *dei- and I:399 *dy-ēu-; Beekes 2010.I:338 *dieu- and I:498—499 *dieu-; Ernout—Meillet 1979:170—171 *deiwo-, *dyeu- and 174—175 *dei-; Walde—Hofmann 1965—1972.I:345—346 *dēiyo- and I:349—351 *d(i)jēus; De Vaan 2008:167—168 and 170; Mallory—Adams 1997:149 *deino- ~ *dino- 'day', 149 *dīe(u)- 'day', 230 *deiyo- 'god', 513 *dei- 'to shine, to be bright (primarily of the sky)'; Orël 2003:408 Proto-Germanic *tīwaz; Kroonen 2013:519 Proto-Germanic *tīwa- 'Tyr' (< *dei-yo-); De Vries 1977:586 and 590; Derksen 2008:134—135 *d(e)i-n- and 2015:127 *d(e)in-; Smoczyński 2007.1:109—110 and 1:110—111; Fraenkel 1962—1965.I:93 *dī-, *dei- and I:93—94 *dīēu-; Kloekhorst 2008b:763—764 *dīēu- and 766—767 *dieu-ot-; Wodtke—Irslinger—Schneider 2008:69—81 *dej-.
- C. Etruscan *tin* 'day', *tiu*, *tiv*-, *tiur* 'moon, month'; Rhaetic *tiu-ti* 'to the moon'.

Sumerian *dé* 'to smelt', *dé*, *dè*, *dè-dal* 'ashes', *dè*, *di₅* 'glowing embers', *dè-dal-la* 'torch', *di₅* 'to flare up, to light up; to be radiant, shining; to sparkle, to shine'.

Buck 1949:1.51 sky, heavens; 1.52 sun; 1.53 moon; 1.84 ashes; 1.85 burn (vb.); 14.41 day; 14.71 month; 15.56 shine; 16.71 good (adj.); 16.81 beautiful (also pretty). Caldwell 1913:620. Bomhard—Kerns 1994:303—304, no. 119. Different (unlikely) etymology in Dolgopolsky 2008, no. 2241, **ti?û* ‘to shine, to be bright, to be seen’.

246. Proto-Nostratic root **t'eʔ-*:

(vb.) **t'eʔ-* ‘to say, to speak’;

(n.) **t'eʔ-a* ‘sound, speech’

A. Proto-Indo-European **t'eʔ-* (> **t'ē-*) ‘to say, to speak’: Old Church Slavic *dějo*, *děti* ‘to say’; Hittite (3rd sg. pres.) *te-iz-zi*, *te-e-iz-zi* ‘to speak’. Mann 1984—1987:140 **dē-mi* (**dējō*) ‘to say, to speak’; Sturtevant 1951:120, §220a, **deyty*; Tischler 1977— .III/9:291; Melchert 1994a:103 Proto-Anatolian **dā-*; Kloekhorst 2008b:857—858 **dhéh₁-ti*; Derksen 2008:104 **dhéh₁-*.

B. Proto-Altaic **tē-* ‘to say, to sound’: Proto-Turkic **dē-* ‘to say’ > Old Turkic *te-* ‘to say’; Turkish *de-* ‘to say, to tell’; Gagauz *de-* ‘to say’; Azerbaijani *de-* ‘to say’; Turkmenian *dī-* ‘to say’; Uzbek *de-* ‘to say’; Uighur *dā-* ‘to say’; Tatar *di-* ‘to say’; Bashkir *ti-* ‘to say’; Kirghiz *te-* ‘to say’; Kazakh *de-* ‘to say’; Noghay *de-* ‘to say’; Sary-Uighur *di-* ‘to say’; Tuva *de-* ‘to say’; Chuvash *te-* ‘to say’; Yakut *die-* ‘to say’; Dolgan *die-* ‘to say’. Starostin—Dybo—Mudrak 2003:1358 **tē* ‘to say, to sound’. Starostin—Dybo—Mudrak also compare Proto-Tungus **de(b)-* ‘(n.) song, tune; (vb.) to shamanize’ and Proto-Mongolian **dawu-* ‘sound, voice, song’.

Sumerian *dé* ‘to call, to cry out’, *di* ‘to say, to speak, to call’.

Buck 1949:18.21 speak, talk; 18.22 say.

247. Proto-Nostratic root **t'el-*:

(vb.) **t'el-* ‘to ask for, to request, to beg, to beseech’;

(n.) **t'el-a* ‘request, wish, desire’

A. Afrasian: Proto-Semitic **t'al-ab-* ‘to ask for, to request, to beg, to beseech’ > Arabic *ṭalaba* ‘to look, to search (for someone, for something); to request, to apply (for); to seek, to try to obtain; to ask, to beg; to want, to wish; to request, to entreat, to beseech’, *ṭalab* ‘what is sought, request, desire, demand’, *ṭaliba*, *ṭilba* ‘desire, wish, request, demand; application’, *ṭalba* ‘litany, prayer’, *maṭlab* ‘quest, search, pursuit; demand, call (for); request, wish; claim; problem, issue’; Ḥarsūsi *ṭelōb* ‘to ask, to beg, to request’, *ṭelēb* ‘request’, *meṭlāyb* ‘aim, desire’; Mehri *ṭelūb* ‘to request’, *ṭelēb* ‘request’, *məṭlāwb* ‘aim, desire’; Šheri / Jibbāli *ṭólōb* ‘to request, to

demand, to ask for; to take revenge for', *téléb* 'request', *mútlub* 'aim, desire'. Zammit 2002:271.

- B. Dravidian: Tamil *telucu* 'to praise, to worship, to request, to pray'; Gondi *talehkānā*, *talakhkáná* 'to beg, to ask for something (especially a bride)', *talk-* 'to ask', *talp-* 'to ask, to beg'. Burrow—Emeneau 1984:300, no. 3427.

Buck 1949:18.35 ask; request; 22.17 pray.

248. Proto-Nostratic (n.) **t'id-a* 'elevated ground, hill, mountain':

- A. Dravidian: Tamil *tiṭṭu* 'rising ground, bank, elevation, hillock, sandbank, wall separating elephant stables', *tiṭṭi* 'raised ground', *tiṭṭai* 'rising ground, bank, elevation, raised floor', *tiṭar*, *tiṭal* 'rising ground, bank, elevation, island, rubbish heap, prominence, protuberance', *tiṭaru* 'mound'; Malayalam *tiṭṭa* 'raised ground, hillock, shoal, raised seat (as in a veranda)', *tiṭṭu* 'mound, shoal', *tiṇṭu* 'earthen wall, bank, shoal'; Kota *tīt* 'hill'; Toda *tīl* 'mountain'; Kannaḍa *tiṭṭu*, *tiṭṭe* 'rising ground, hillock', *diḍḍa*, *diḍḍu* 'eminence, elevation, hillock'; Tuḷu *diḍḍu* 'mound, elevated ground', *tiṭṭe* 'the foundation platform of a house'; Telugu *tiṭṭa* 'heap, mound'. Burrow—Emeneau 1984:279, no. 3221.
- B. Proto-Altaic **tīdu* 'elevated ground, hill, mountain (ridge)': Proto-Tungus **dīdū* (~ *ž-*) 'mountain ridge' > Manchu *židun* 'the back side of a mountain'; Evenki *žīdi* (dial. *didi*) 'mountain ridge'; Lamut / Even (Okhotka) *gidan* 'mountain ridge' (= /*didan*/ ?); Ulch *žīdu* 'mountain ridge'; Orok *žīdu(n)* 'mountain ridge'; Oroch *žīdi* 'mountain ridge'. Starostin—Dybo—Mudrak 2003:1369—1370 **tīdu* 'elevation'.

Buck 1949:1.22 mountain, hill.

249. Proto-Nostratic root **t'il-* (~ **t'el-*):

(vb.) **t'il-* 'to say, to tell; to recount, to list, to enumerate';

(n.) **t'il-a* 'talk, speech, discourse, tale'

Derivative:

(n.) **t'il-a* 'tongue, language'

- A. Proto-Indo-European **t'el-* (secondary *o*-grade form: **t'ol-*) '(vb.) to say, to tell, to recount; to list, to enumerate; (n.) talk, speech, language; list, enumeration': Common Germanic **taljan* 'to say, to tell, to recount', **talō* 'talk, speech, tale, number' > Old Icelandic *telja* 'to tell, to say, to set forth; to count, to number', *tal* 'talk, conversation; speech, language; tale, list, series', *tala* 'speech, discourse; tale; number', *tala* 'to talk, to speak; to record, to tell'; Old English *talian* 'to enumerate, to consider, to account', *talū* 'series, statement, discussion, story, tale', *tellan* 'to count, to reckon,

to calculate; to consider, to account', *tæl* 'number'; Old Frisian *talia* 'to reckon, to count'; Old Saxon *tellian* 'to count, to tell', *talōn* 'to reckon, to count', *tala* 'number, speech'; Dutch *tellen* 'to reckon, to count', *taal* 'speech', *tal* 'number'; Old High German *zellen* 'to count, to reckon to relate, to tell' (New High German *zählen*), *zalōn* 'to count' (New High German *zahlen*), *zala* 'number' (New High German *Zahl*). Orël 2003:400 Proto-Germanic **talan*, 400 **taljanan*, 400 **talōjanan*, 401 **talō(n)*; Kroonen 2013:508 Proto-Germanic **talō(n)*- 'speech, recount'; De Vries 1977:580, 581, and 586; Skeat 1898:629; Onions 1966:900 and 908; Klein 1971:742 and 750; Kluge—Mitzka 1967:872; Kluge—Seebold 1989:804.

- B. Proto-Eskimo **tali-* 'to tell someone to do something': Seward Peninsula Inuit *tili-* 'to tell someone to do something, to send (someone) on an errand'; North Alaskan Inuit *tili-* 'to tell someone to do something'; Western Canadian Inuit *tili-* 'to tell someone to do something'; Eastern Canadian Inuit *tili-* 'to tell someone to do something'; Greenlandic *tili-* 'to tell someone to do something'. Fortescue—Jacobson—Kaplan 1994:339.

(?) Sumerian *dilib* 'calculation, computation', *dili-ì*, *dili-tur* '(mathematics) the writing down of a number'.

Buck 1949:18.21 speak, talk; 18.22 say. Dolgopolsky 2008, no. 2353, **teLV* 'to shout, to call'.

250. Proto-Nostratic (n.) **t'il-a* 'tongue, language':

Derivative of:

(vb.) **t'il-* 'to say, to tell; to recount, to list, to enumerate';

(n.) **t'il-a* 'talk, speech, discourse, tale'

- A. (?) Dravidian: Kui *tlēpka* (< *tlēk-p-*, *tlēkt-*) 'to put out the tongue, to thrust forth from a cavity'; Kuwi *tekh-* in: *vendōri tekhnū* 'put out your tongue!'. Burrow—Emeneau 1984:300, no. 3430.
- B. Proto-Indo-European (**t'ḡhuA-*/**t'ḡhweA-* >) **t'ḡhū-*/**t'ḡhwā-* 'tongue' (with widely different reflexes in the daughter languages due to taboo): Gothic *tuggō* 'tongue'; Old Icelandic *tunga* 'tongue'; Swedish *tunga* 'tongue'; Danish *tunge* 'tongue'; Old English *tunge* 'tongue'; Old Frisian *tunge* 'tongue'; Old Saxon *tunga* 'tongue'; Dutch *tong* 'tongue'; Old High German *zunga* 'tongue' (New High German *Zunge*); Latin *lingua* 'tongue' (Old Latin *dingua*); Old Irish *teng(a)e* 'tongue' (a shorter form, *teng*, is found only in verse); Sanskrit *jihvā* 'tongue'; Avestan *hizū-*, *hizvā-* 'tongue'; Armenian *lezu* 'tongue'; Lithuanian *liežūvis* 'tongue'; Old Church Slavic *językъ* 'tongue'; Russian *jazyk* [язык] 'tongue, language'; Ukrainian *jazyk* 'tongue'; Polish *język* 'tongue'; Lower Sorbian *jězyk* 'tongue'; Czech *jazyk* 'tongue'; Slovenian *jězik* 'tongue'; Serbo-Croatian *jèzik* 'tongue'; Macedonian *jazik* 'tongue'; Bulgarian *ezik* 'tongue'.

Pokorny 1959:223 **d̥ḡhū*, **d̥ḡhūā* ‘tongue’; Walde 1927—1932.I:792 **d̥ḡhū*, **d̥ḡhūā*; Mann 1984—1987:151 **d̥ḡhūā* ‘tongue’; Watkins 1985:15 **d̥ḡhū* and 2000:21 **d̥ḡhū* ‘tongue’; Gamkrelidze—Ivanov 1984:II:814 **t'ḡg^hjuH-* and 1995:714 **t'ḡg^huH-* ‘tongue’; Mayrhofer 1956—1980.I:436—437; Mallory—Adams 1997:594 **d̥ḡhuh_a-* ‘tongue’; Ernout—Meillet 1979:360; De Vaan 2008:343; Walde—Hofmann 1965—1972.I:806—807 **d̥ḡhūā*; Kroonen 2013:526—527 Proto-Germanic **tungōn-* ‘tongue’; Orël 2003:412 Proto-Germanic **tunḡōn*; Lehmann 1986:349; Feist 1939:482 **d̥ḡḡh-ū-ā*; De Vries 1977:600; Falk—Torp 1903—1906.II:389—390; Onions 1966:930; Klein 1971:771; Kluge—Mitzka 1967:892 **d̥ḡḡh-*; Kluge—Seebold 1989:818; Boutkan—Siebinga 2005:414—415; Fraenkel 1962—1965.I:369—370; Smoczyński 2001.1:353—354; Derksen 2008:159; Winter 1982. According to Pisani, Greek (Ionic) γλῶσσα (also γλάσσα), (Attic) γλῶττα ‘tongue’ belongs here as well. Pisani assumes development from *δλωχῤα (*δλχῤα) < *d̥l(ə)ḡhūā. However, this proposal is rejected by Lehmann (1986:349) (see also Beekes 1969:246 and 2010.I:278).

- C. Proto-Altaic **tilV* ‘tongue, voice’: Proto-Tungus **dilga-n* ‘voice’ > Manchu *žilgan* ‘sound, noise, voice’, *žilga-* ‘to sound, to shout, to sing (of birds)’; Spoken Manchu (Sibo) *žilhan* ‘voice’; Evenki *dilgan* ‘voice’; Lamut / Even *dilgən* ‘voice’; Negidal *dilga-n* ‘voice’; Nanay / Gold *žilgā* ‘voice’; Ulch *dilža(n)* ‘voice’; Oroch *žilda(n)* ‘voice’; Oroch *digga(n)* ‘voice’; Solon *dilgā* ‘voice’; Udihe *digana-* ‘to speak’. Proto-Turkic **dil-*, **dil-* ‘tongue, language’ > Old Turkic *til* ‘tongue, language’; Karakhanide Turkic *til* ‘tongue, language’; Turkish *dil* ‘tongue, language’, *dilli* ‘having a tongue’; Gagauz *dil* ‘tongue, language’; Azerbaijani *dil* ‘tongue, language’; Turkmenian *dil* ‘tongue, language’; Uzbek *til* ‘tongue, language’; Karaim *til*, *til* ‘tongue, language’; Uighur *til* ‘tongue, language’; Tatar *tel* ‘tongue, language’; Bashkir *tel* ‘tongue, language’; Kirghiz *til* ‘tongue, language’; Kazakh *til* ‘tongue, language’; Noghay *til* ‘tongue, language’; Tuva *dil* ‘tongue, language’; Yakut *til* ‘tongue, language’; Dolgan *til* ‘tongue, language’. Starostin—Dybo—Mudrak 2003:1370—1371 **tilV* ‘tongue, voice’.
- D. Proto-Chukchi-Kamchatkan (reduplicated) **jilə(jil)* (if from **tilə(til)*) ‘tongue’: Chukchi *jiliil*, *jilajil* ‘tongue, blade of oar, language’, *jeləcyən* ‘tongue’, *jilə-lʔən* ‘translator’; Kerek *jiləil* (Kamen *ciliil*) ‘tongue’; Koryak *jijil* ‘tongue’, *jilajil* ‘speech, language’, *jilə-lrən* ‘translator’, *jilə-lrət-* ‘to translate’; Alyutor *jiləjil* (Palana *jelilyən*) ‘tongue’, *jilə-lʔat-* ‘translate’; Kamchadal / Itelmen *ɬcel* ‘tongue’. Fortescue 2005:115; Mudrak 1989b:99 **jilvə-jilvə* ‘tongue’.

Buck 1949:4.26 tongue; 18.11 voice (sb.); 18.24 language. Slightly different etymology in Dolgopolsky 2008, no. 2354, *[t]ilV(-ko) (≠ *t- ?) ‘tongue, organs of speech’.

251. Proto-Nostratic (n.) **t'or^w-a* ‘tree, the parts of a tree’ (> ‘leaf, branch, bark, etc.’):

- A. Proto-Afrasian **t'[o]r-* ‘tree’, preserved in various tree names or names of parts of trees (‘leaves, branches, etc.’): Semitic: Akkadian *ṭarpaʔu* (*ṭarpiʔu*) ‘a variety of tamarisk’; Arabic *ṭarfāʔ* ‘tamarisk tree’. Hebrew *ṭārāḫ* [תָּרַח] ‘leaf’ (a hapax legomenon in the Bible); Aramaic *ṭarpā*, *ṭaraḫ* ‘leaf’; Syriac *ṭerpā* ‘leaf, branch’; Samaritan Aramaic *ṭrp* ‘leaf, part of a tree, branch’. Klein 1987:252. Egyptian *dʒb* ‘fig tree’ (< **drb*). West Chadic: Hausa *doorawaa* ‘locust-bean tree’. East Chadic: Bidiya *tirip* ‘a kind of tree’ (assimilation of vowels). Orël—Stolbova 1995:516, no. 2464, **ṭarip-* ‘tree’.
- B. Proto-Indo-European **t'er-w/u-/* **t'or-w/u-*, **t'r-ew-/* **t'r-ow-/* **t'r-u-* ‘tree, wood’: Greek δόρυ ‘tree, beam’, δρῦς ‘oak’; Sanskrit *dāru* ‘a piece of wood, wood, timber’, *drú-h* ‘wood or any wooden implement’; Avestan *drvaēna-* ‘wooden’, *dāuru-* ‘wood(en object), log’; Albanian *dru* ‘tree, bark, wood’; Welsh *derwen* ‘oak’; Gothic *triu* ‘tree, wood’; Old Icelandic *tré* ‘tree’, *tjara* ‘tar’; Old English *trēow* ‘tree, wood’, *tierwe*, *teoru* ‘tar, resin’; Old Frisian *trē* ‘tree’; Old Saxon *triu*, *treo* ‘tree, beam’; New High German *Teer* ‘tar’; Lithuanian *dervà* ‘resinous wood’, *dārva* ‘tar’; Old Church Slavic *drěvo* ‘tree’; Russian *derevo* [дерево] ‘tree, wood’; Serbo-Croatian *drījevo* ‘tree, wood’; Czech *dřevo* ‘tree, wood’; Hittite *ta-ru* ‘wood’. Pokorny 1959:214—217 **deru-*, **dōru-*, **dr(e)u-*, **dreu-*, **drū-* ‘tree’; Walde 1927—1932.I:804—806 **dereu(o)-*; Mann 1984—1987:142 **deruos*, *-ā*, *-iā* (**dreu-*) ‘tree, wood, timber, pitch-pine; pitch, tar, resin; hard, firm, solid, wooden’, 156 **dōru* ‘timber, pole, spike, spear’, 157 **doryos*, *-ā*, *-iā* ‘wood (timber); resin’, 161 **dru-* (radical) ‘timber, wood’, 161 **drūjō* (**drujō*, **-jō*; **drūn-*) ‘to harden, to strengthen’, 161 **drukos* ‘hard, firm, wooden’, 162 **drus-*, **drusos* ‘firm, solid’, 162 **druyos*, *-om*, *-is* ‘wooden, hard; wood’, 162 **drūios* ‘wooden, of oak, of hardwood; solid, firm, strong’, 165 **druis*, *-iā* ‘wood, trees, hardwood’, 165—166 **druyos*, *-om*; **drus-*, **dru-* ‘wood, timber, tree’; Gamkrelidze—Ivanov 1995.I:192 and I:193 **t'er-w-*, **t'or-w-*, **t'r-eu-*, **t'r-u-* ‘oak (wood), tree’; Mallory—Adams 1997:598 **dōru* ‘wood, tree’; Watkins 1985:12 **deru* (also **dreu-*) and 2000:16—17 **deru* (also **dreu-*) ‘to be firm, solid, steadfast’ (suffix variant form **drew-o-*; variant form **drou-*; suffix variant form **dru-mo-*; variant form **derw-*; suffix variant form **drū-ro-*; lengthened zero-grade form **drū-*; *o*-grade form **doru-*; reduplicated form **der-drew-*); Mayrhofer 1956—1980.II:36; Chantraine 1968—1980.I:294 **dor-w-*, **dr-ew-*; Beekes 2010.I:349 **doru*; Frisk 1970—1973.I:411—412; Hofmann 1966:63 **dōru*; Boisacq 1950:197—198 **doru*; Kroonen 2013:514 Proto-Germanic **terwa/ōn-* ‘tar’ and 522—523 Proto-Germanic **trewa-* ‘tree’; Orël 1998:76 and 2003:405 Proto-Germanic **terwōn* ~ **terwan*, 409—410 **trewan*; Lehmann 1986:347—

348 **deru-*, **drewo-*, **dr(e)w-(H-)*; Feist 1939:480—481 **der-ey-o-*; De Vries 1977:591 **dreu-* and 597; Klein 1971:745 **derew(o)-*, **drew(o)-* and 779 **derow(o)-*, **drew(o)-*; Onions 1966:904 and 939 **deru-*, **doru-*; Kluge—Mitzka 1967:775 **deru-*; Kluge—Seebold 1989:725 **deru-*; Huld 1984:56 **dru-n-*; Derksen 2008:99 **deru-o-* and 2015:123—124 **deru-o-*; Fraenkel 1962—1965.I:90—91; Smoczyński 2007.1:103; Benveniste 1969.I:104—111 and 1973:85—91; P. Friedrich 1970:140—149 **dorw-* ‘tree’ or ‘oak’; Osthoff 1901.I:98—180. Note: Indo-European loans (borrowed either from Baltic or from Germanic) in Uralic (Balto-Finnic): Finnish *terva* ‘tar’; Estonian *tõrv* ‘tar’; Livonian *tera* ‘tar’. Campbell 1990:173 and 1994:26. Also (Finno-Permian or Finno-Volgaic): Finnish *terho* ‘acorn’; Vote *туру, торо* ‘acorn’; Estonian *tõru, toro* ‘acorn’; Livonian *tērmōz* ‘acorn’. Campbell 1990:170 and 1994:25.

- C. Proto-Altaic **tōrʷu* ‘birch bark, vessel made of birch bark’: Proto-Tungus **duri* ‘cradle made of birch bark’ > Evenki *dör* ‘cradle made of birch bark’; Negidal *duj* ‘cradle made of birch bark’; Manchu *duri* ‘a swinging cradle’; Nanay / Gold *duri* ‘cradle made of birch bark’; Ulch *duri* ‘cradle made of birch bark’; Oroch *duji* ‘cradle made of birch bark’; Udihe *düi* ‘cradle made of birch bark’. Tsintsius 1975—1977.I:217. Proto-Mongolian **duru-sun* ‘bark (specifically the bark of the birch tree)’ > Written Mongolian *duru-sun* ‘shell, bark (specifically, the bark of the birch tree)’; Khalkha *durs* ‘shell, bark (specifically, the bark of the birch tree)’; Buriat *durhan* ‘bark’; Kalmyk *dursn* ‘bark’; Ordos *durusu* ‘bark, skin, peel’. Proto-Turkic **Tōrʷ* ‘birch bark; birch cover (for a bow); vessel made of birch bark’ > Old Turkic (Old Uighur) *tōz* ‘birch bark’; Turkish (Osmanli) *toz* ‘a material used to wrap bows’; Uighur *tozda* ‘on birch bark’; Uzbek *tos* ‘birch bark’; Tatar *tuz* ‘birch bark’; Bashkir *tuō* ‘birch bark’; Kazakh *toz* ‘birch bark’; Oyrot *tos* ‘birch bark’; Tuva *tos* ‘birch bark’; Yakut *tuos* ‘birch bark’. Clauson 1972:571; Tenishev—Dybo 2001—2006.I:103. Starostin—Dybo—Mudrak 2003:1380 **tōrʷu*. Semantic development as in Albanian *dru* ‘tree, bark, wood’, cited above.

Buck 1949:1.42 tree.

252. Proto-Nostratic root (Eurasian only) **t'ox^w-*:

(vb.) **t'ox^w-* ‘to give, to bring’;

(n.) **t'ox^w-a* ‘giving, gift, present’

- A. Proto-Indo-European (**t'ox^w-C-* >) **t'ō-*, **t'ox^w-V-* (> **t'ōw-*) ‘to give’: Sanskrit (reduplicated) *dā-dā-ti* (inf. *dāvāne*) ‘to give, to bestow, to grant, to yield, to impart, to present, to offer to, to place, to put, to apply (in medicine), to permit, to allow’; Greek (reduplicated) *δί-δω-μι* ‘to give, to grant, to offer’, (Cyprian inf.) *δοῖεναι* ‘to give’; Latin *dō* ‘to give’ (subj. *duim*, *duīs*, *duit*); Lithuanian *duoti* ‘to give’ (*daviaũ* ‘I gave’), *dovanà*

‘present, gift’; Old Church Slavic *dati* ‘to give’. Rix 1998a:89—90 **deh*₃- ‘to give’, 90—91 **deh*_{3u}- ‘to give’; Pokorny 1959:223—226 **dō*- : **dā*-, **dō*-u- : **dau*- : **du*- ‘to give’; Walde 1927—1932.I:814—816 **dō*-; Mann 1984—1987:144 **deu*- theme of verb ‘to give’, 146 **dīdōmi* (theme: **dō*-) ‘to give’, 152 **dō*- (**dōdmi*, *dīdōmi*) ‘to give’, 158 **dōu*- (theme of **dō*- ‘to give’), **dōuit*-; Watkins 1985:15 **dō*- (contracted from **do*₂-) and 2000:21 **dō*- ‘to give’ (oldest form **de*₂₃-, colored to **do*₂₃-, contracted to **dō*-), zero-grade form **dā*-; Gamkrelidze—Ivanov 1984.I:203 **t’oH*- > **t’ō*- and 1995.I:44, I:175, I:179, I:189, I:655, I:656, I:658, I:660, I:781, I:835 **t’oH*- to give; to take; to take a wife’, I:147 **t’oH*^o- > **t’oHw*-; Mallory—Adams 1997:224 **deh*₃- ‘to give’; Schmalstieg 1980:150—157; Derksen 2008:96; Mayrhofer 1956—1980.II:13—14; Boisacq 1950:186 **dō*-, **dā*-; Frisk 1970—1973.I:388—389; Hofmann 1966:59 **dō*-, **dā*-; Beekes 2010.I:331—332 **deh*₃-; Chantraine 1968—1980.I:279—281 **de*₂₃-; De Vaan 2008:174—175; Walde—Hofmann 1965—1972.I:360—363 **dō*-, **dā*-; Ernout—Meillet 1979:178—180; Fraenkel 1962—1965.I:111—112 **dō*-; Smoczyński 2007.1:134—135 **deh*₃-; Wodtke—Irslinger—Schneider 2008:60—69 **deh*₃-; Illič-Svityč 1965:338 **deH*^u. Note: Sturtevant (1951:52, §76) compares Hittite (3rd sg.) *da-a-i* ‘takes’ here and reconstructs Indo-Hittite **deh*- (cf. also Sturtevant 1942:43, §41c) — Kloekhorst (2008b:803—805), on the other hand, reconstructs Proto-Indo-European **dóh*₃-ei.

- B. Proto-Uralic **toxi*- ‘to give, to bring’: Finnish *tuo*- ‘to bring’; Estonian *too*- ‘to bring’; Lapp / Saami (Southern) *duokē*- ‘to sell’; Mordvin (Erza) *tuje*-, *tuva*- ‘to bring’; Vogul / Mansi *tuu*- ‘to bring’; Ostyak / Xanty *tu*- ‘to bring’ (Southern pret. *təwə*-, *təwə*-); Yurak Samoyed / Nenets *taa*- ‘to give, to bring’; Tavgi Samoyed / Nganasan *taa*- ‘to bring’; Yenisei Samoyed / Enets *te-d’a*- ‘to give, to bring’; Selkup Samoyed *ta-da*- ‘to bring’; Kamassian *de*^o-, *dep*- ‘to give, to bring’. Collinder 1955:64, 1960:408 **toγō*-, 1965:32, and 1977:81; Rédei 1986—1988:529—530 **toye*-; Décsy 1990:109 **tonga* ‘to bring, to get, to receive’; Joki 1973:331 **tōke*-; Sammallahti 1988:550 **toxi*-; Janhunen 1977b:145 **tā*-; Illič-Svityč 1965:338 **tōye*-; Zhivlov 2023:163 Proto-Uralic **toxi*- ‘to bring’.

Sumerian *du* ‘to bring’.

Buck 1949:11.21 give. Illič-Svityč 1965:338 **to/H/λ* ‘to give’ (‘давать’); Bomhard—Kerns 1994:305—306, no. 121; Collinder 1965:32; Dolgopolsky 2008, no. 2251, **toH[ü]* ~ **ta|æH[ü]* (= **to[Γ][ü]* ~ **ta|æ[Γ][ü]* ?) ‘to bring, to fetch, to give’; Fortescue 1998:158.

253. Proto-Nostratic root **t’u*^{2w}- (~ **t’o*^{2w}-):
 (vb.) **t’u*^{2w}- ‘to separate, divide, or split into two parts; to cut in half’;
 (n.) **t’u*^{2w}-a ‘separation or division into two; two halves’

Note: Used as the base for the numeral 'two' in Indo-European and Altaic.

- A. Proto-Indo-European (*t'u^{2w}-o-, *t'u^{2w}-i- >) *t'(u)wo-, *t'(u)wi- 'two': Sanskrit (m.) *dváu*, *dvā* (Vedic also *duváu*, *duvā*), (f./n.) *dvé* (Vedic also *duvé*), *dvi*- (in composition) 'two', *dviká-h* 'consisting of two', *dvīh* 'twice'; Avestan (m.) *dva*, (f./n.) *baē* 'two', *biš* 'twice'; Greek δύο 'two' (uninflected δύο), δις 'twice, doubly'; Latin *duo*, (f.) *duae* 'two', *bīnī* 'twofold, twice', *bis* 'twice'; Umbrian (m. nom.) *dur* 'two'; Old Irish *dáu*, *dóu*, *dó* 'two', *dé*- (in composition) 'two-, double'; Old Welsh *dou* 'two'; Old Breton *dou*, *dau* 'two'; Cornish *dow*, *dew* 'two'; Albanian (Gheg) (m.) *dy*, (f.) *dÿ* 'two'; Gothic (m.) *twai*, (f.) *twōs*, (n.) *twa* 'two'; Old Icelandic (m.) *tveir*, (f.) *tvær*, (n.) *tvau* 'two', *tvennr*, *tvinnr* 'consisting of two different things or kinds, twofold, in pairs', *tví*- (in compounds) 'twice, double', *tvisvar*, *tysvar* 'twice'; Faroese *tveir* 'two', *tvinnur* 'twofold'; Norwegian *to* 'two', *tvinn*, *tvenne* 'twofold'; Old Swedish (m.) *tu*, (f) *twār* 'two', *twiswar*, *tyswar* 'twice' (Modern Swedish *två* 'two', *tvänne* 'twofold'); Old Danish *tva*, *tve* 'two', *tysver*, *tysser*, *tøsser* 'twice' (Modern Danish *to* 'two', *tvende* 'twofold'); Old English (m.) *twēgen*, (f./n.) *twā*, (n.) *tū* 'two', *twi*- (prefix) 'two', *twinn* 'double', *twiwa* 'twice'; Old Frisian (m.) *twēne*, *tvēne*, (f./n.) *tva* 'two', *twi*- (prefix) 'twice, double', *twia* (adv.) 'twice, double'; Old Saxon (m.) *twēne*, (f.) *twā*, *twō*, (n.) *twē* 'two'; Dutch *twee* 'two'; Old High German (m.) *zwēne*, (f.) *zwā*, *zwō*, (n.) *zwei* 'two' (New High German *zwei*), *zwi*- (prefix) 'twice, double'; Lithuanian (m.) *dù*, (f.) *dvi* 'two'; Latvian (m./f.) *divi* 'two'; Old Prussian (m./f.) *dwai* 'two'; Old Church Slavic (m.) *dvъ*, (f./n.) *dvě* 'two'; Russian (m./n.) *dva* [два], (f.) *dve* [две] 'two'; Czech (m.) *dva*, (f./n.) *dvě* 'two'; Polish (m./n.) *dwa*, (f.) *dwie* 'two'; Bulgarian *dva* 'two'; Hieroglyphic Luwian *tuwa*- 'two'; Lycian *kbi*-, (Milyan) *tbi*- 'two'. Pokorny 1959:228—232 (m.) **duō(u)* 'two' (**duōu*), (f.) **duai*; **duēi*-, **duoi*-, **dui*-; Walde 1927—1932.I:817—821 **duōu*; Mann 1984—1987:171 **duēios* (**duēijos*) 'twofold, paired; two, pair', 171 **duāi* (fem. form of **duōu*), 171 **dui*- (prefix) 'two-, bi-', 172 **duidh*- 'divided, in two', 172 **duik*- 'in two, twofold, halved', 172 **duiksos*-, *-ios* 'double, twin, divided', 173 **duīnos*-, *-is* 'double, twin', 172 **duis* 'twofold, twice', 173 **duisios* 'double', 173 **duisim* 'in two, through the middle', 174 **duist*- 'twofold, divided, in two', 174 **duitos*-, *-ios* (-*īios*) 'second', 174 **duō*, 174 **duoidh*- 'double, half, two-way', 174 **duoijō* 'to divide, to pair, to double', 174 **duoil*- 'division, pair, double', 174 **duoin*- 'two, in twos, doubly', 174 **duoios* (**duoijos*) 'double; couple, pair', 174—175 **duōu*, **duūōu*, **duō*, (f./n.) **duāi*, **duūāi* 'two'; Watkins 1985:15—16 **dwo*- (variant form **duwo*-) and 2000:21—22 **dwo*- (variant form **duwo*-) 'two'; Mallory—Adams 1997:399—400 **duéh₃(u)* ~ **duūéh₃(u)* (dual) 'two', **dui*-*ios*, **dui*-*tos* 'belonging to two, second', **duoi* ~ **d(u)uoijos* 'two, group of two', **dui*- 'bi-' (prefix), **duis* 'twice', **duoios* 'double(d), twofold', **du(e)i-plos*

‘double, twofold’ and 2006:308—310 **dwéh₃(u)* ‘two’; Gamkrelidze—Ivanov 1984.II:844—845 **t’u_o-* (earlier **t’_o-*), II:845 **t’uis*, II:849 and 1995.I:742—743 **t’wo-* (earlier **t’_o-*), **t’w-i-* ‘two’, I:743 **t’wis* ‘twice’, I:746; Mayrhofer 1956—1980.II:82, II:84, II:85, II:85—86, and II:86; Boisacq 1950:190 **d(u)uis* and 205—206 **d(u)uō(u)*; Hofmann 1966:60 **duis* and 65 **d(u)uō(u)*, **dui-*, **duoi-*; Frisk 1970—1973.I:398—399 **dui-s* and I:424—425 **duuō̃*, **duuōu*, **duō(u)*; Chantraine 1968—1980.I:287 and I:301—301 **duwō-*, **dwō*; De Vaan 2008:183; Walde—Hofmann 1965—1972.I:106 **duī-no-* or **duēi-no-*, **duējino-*, I:107 **dui-*, and I:381—383 **d(u)uō̃*; Ernout—Meillet 1979:71 and 181—188 **duwō̃*; Orël 2003:414 Proto-Germanic **twiz*, 414—415 **twō(u)*; Kroonen 2013:529 Proto-Germanic **twa-* ‘two’ and 530 **twis* ‘twice’; Feist 1939:484—485 **duō̃u*, **duō̃*; Lehmann 1986:350—351 **dwō(u)*, (f.) **dwai*; De Vries 1977:601, 601—602 **duis-no-*, and 602; Torp 1919:824; Falk—Torp 1903—1906.II:367 and II:392; Onions 1966:952 **d(u)wo(u)*; Hoad 1986:511; Skeat 1898:671—672; Klein 1971:790 **duwō̃*, **duwōu-*, **dwō(u)-*; Barnhart 1995:841; Boutkan—Siebinga 2005:415—416 **duoh₁* and 417; Kluge—Mitzka 1967:894 **d(u)uō̃u*; Kluge—Seebold 1989:820 **dwōu*; Huld 1984:56—57; Orël 1998:79; Derksen 2008:130 **duo-h₁*; Brugmann 1904:364 **d(u)uō̃(u)*; Beekes 1995:212 (m.) **duo-h₁*, (f./n.) **duo-ih₁* and 2010.I:359 **duyo*, **duy-eh₃*; Szemerényi 1996:222 (m.) **duwō̃/*dwō̃*, (f.) **duwoi/*dwoi*; Fortson 2010:146 **d(u)uoh₁*; Blažek 1999b:161—184 **duwō̃*, earliest form **du*; Clackson 2007:198 **duó-*. Note: There is some evidence that this term may have been a borrowing from Northwest Caucasian (see Chapter 19, §19.10. Numerals, for details).

- B. Proto-Altaic **tju(wi)* ‘two’: Proto-Tungus **žu-* ‘two’ > Evenki *žūr* ‘two’; Lamut / Even *žōr* ‘two’; Manchu *žuwe* ‘two’, *žuru* ‘pair’; Spoken Manchu (Sibo) *žū* ‘two’; Jurchen *žuwe* ‘two’; Ulch *žuel(i)* ‘two’; Oroch *dū* ‘two’; Nanay / Gold *žū*, *žuer* ‘two’; Oroch *žū* ‘two’; Udihe *žū* ‘two’; Solon *žūr* ‘two’. Proto-Mongolian **žiw-* ~ **žui-* ‘two’ > Middle Mongolian *žirin* ‘two’; Written Mongolian *žiren* ‘two’; Khalkha *žirin* ‘two’; Dagur *žūr(ū)* ‘pair’; Monguor *žuru* ‘two’. Poppe 1955:243—244 **ži* ‘two’. Proto-Turkic **TV-bVr-* ‘second’ > Old Turkic (Old Bulgar) *tvirem* ‘second’; Chuvash *tebər*, *tebərew* ‘two’. Poppe 1960:28; Street 1974:14 **ji-* (and ? **jü-*) ‘two’; Starostin—Dybo—Mudrak 2003:1374—1375 **tjubu* ‘two’; Blažek 1999b:177 Proto-Altaic **tōwi* ~ **tüwi* ‘two’; Dolgopolsky 2008, no. 2243, Proto-Altaic **tüwu* ‘two’. Note: The Proto-Altaic reconstruction given here is based upon Blažek’s modified Proto-Altaic reconstruction.
- C. Chukchi-Kamchatkan: Proto-Chukotian (derivational affix) **-təvæ-* ‘to remove’ > Chukchi *-t(u)we-* ‘to remove (clothes)’; Kerek *-twa-* ‘to remove’ (*namjəṭXa-twa-* ‘to unstick’ from *namjəṭXa-u-* ‘to glue, to stick’); Koryak *-t(ə)ve-* ‘to remove (clothes)’; Alyutor *-tva-* ‘to remove’. Fortescue 2005:424.

Sumerian *du₈* ‘to split apart; to break off, to tear or pull off; to destroy, to demolish, to ruin, to pull down’, *du₈du₈* ‘to pull off or apart’.

Buck 1949:12.23 separate (vb.); 12.232 divide. Dolgopolsky 2008, no. 2243, **tü?/o*] ‘two’ Blažek 1999b:178—179 Proto-Nostratic **tu* or **tuwi*.

254. Proto-Nostratic root **t'uk'*- (~ **t'ok'*-):

(vb.) **t'uk'*- ‘to knock, to beat, to strike, to pound, to trample’;

(n.) **t'uk'*-*a* ‘knock, thump, blow, stroke’

- A. Proto-Afrasian **t'uk'*-, **t'ok'*- ‘to knock, to beat, to strike, to pound’:
 Proto-Semitic **t'ak'*- (**t'ak'*-*ak'*-, [reduplicated] **tak'*-*tak'*-, **t'ak'*-*aw*-, etc.) ‘to knock, to beat, to strike, to pound’ > Arabic *ṭakka* ‘(to make a striking, hitting, or flapping sound’ >) ‘to crack, to pop; to clack, to smack, to flap; to burst, to explode’, *ṭakṭaka* ‘to crack, to snap, to rattle, to clatter, to clang, to pop, to crash, to crackle, to rustle, to make the ground resound with the hoof, to crack the fingers or joints’, *ṭakṭūka* ‘crash, bang; clap, thud, crack, pop’; Harsūsi *ṭek* ‘to knock, to grind’, *meṭék* ‘pestle’; Šheri / Jibbāli *ṭekk* ‘to knock, to bang, to pound, to smash (rocks), to rip (clothes)’, *múṭṭək* ‘pestle’, *ṭeka* ‘to push’; Mehri *ṭək* ‘to knock, to pound, to smash, to rip (clothes)’, *məṭák* ‘pestle’; Soqotri *ṭək* ‘to tire’; Geez / Ethiopic *ṭakʿa* [ṡṡḥ] ‘to be intrepid, harsh, ruthless’, *ṭakawa* [ṡṡḡ] ‘to beat, to pound’; Tigrinya *ṭākʿe* ‘to oppress’, *ṭākṭākä* ‘to crush, to pound, to cram, to press’; Amharic *ṭākka* ‘to strike, to attack’; Gurage *ṭəkätäkä* ‘to squeeze things together, to stuff in, to level the floor of the house by pressing down the ground’. According to Leslau (1987:595), the following belong here as well: Geez / Ethiopic *ṭakʿa* [ṡṡḡ], *ṭakʿa* [ṡṡḥ] ‘to sound, to blow a trumpet, to ring a bell’, *maṭkəʿ* [ṡṡṡṡḡ] ‘trumpet, horn, church bell, gong’; Tigre *ṭakʿa* ‘to play an instrument’, *mäṭkəʿ* ‘bell, stone used in striking a bell’; Tigrinya *ṭākʿe* ‘to strike a bell’; Amharic *ṭākka* ‘to strike a bell’, *mäṭk* ‘small stone used in striking a bell’. Leslau 1979:629 and 1987:595, 596. Egyptian *dqw* ‘flour, powder’, *dq* ‘to pound, to crush’, *dqr* ‘to press (?)’, to exclude (?)’. Hannig 1995:988; Erman—Grapow 1921:216 and 1926—1963.5:494—495; Gardiner 1957:603; Faulkner 1962:316. Proto-Highland East Cushitic **dook'*- ‘to burst (intr.)’ > Hadiyya *t'ook'*- ‘to burst (intr.)’; Kambata *t'ook'*- ‘to burst (intr.)’; Sidamo *dook*- ‘to burst, to break (intr.)’, *t'ook*- ‘to burst (intr.)’. Hudson 1989:31 and 34. Proto-Southern Cushitic **duk'*- ‘to be broken to pieces’ > Iraqw *dukteno* ‘kindling’ (semantics: kindling is wood broken into small pieces); Dahalo *duk'*- ‘to be destroyed’, *duk'uð*- ‘to destroy’. Ehret 1980:192. (?) Central Chadic: Guduf *dəgə* ‘to pound (in a mortar)’; Dghwede *dəgà* ‘to pound (in a mortar)’; Ngweshe *dəgədà* ‘to pound (in a mortar)’; Gisiga *dugo*- ‘to pound (in a mortar)’. Jungtraithmayr—Ibriszimow 1994.II:268—269.

- B. Dravidian: Tamil *tukai* ‘to tread down, to trample on, to bruise or destroy by treading, to pound in a mortar, to mash, to vex’; Kannaḍa *tōku* ‘to beat, to strike’; Tuḷu *tōku* ‘collision’; Maṇḍa *tug-* (*tukt-*) ‘to trample’; Pengo *tog-* (*tokt-*) ‘to tread on, to step on’; Kui *tōga* (*tōgi-*) ‘to kick’; Kuṛux *tōknā* ‘to stamp violently with one foot or with both feet (as in *jatra* dance)’. Burrow—Emeneau 1984:311, no. 3539. Kannaḍa *dūku* ‘to push’; Kuṛux *tukknā* ‘to give a push to, to shove’; Malto *tuke* ‘to push, to remove’. Burrow—Emeneau 1984:287, no. 3286.
- C. Proto-Kartvelian **t’k’ač-* ‘to hit, to strike’: Georgian *t’k’ac-* ‘to strike, to hit, to crack, to split’; Laz *t’(k’)oč-* ‘to throw, to hurl’. Klimov 1964:182 **t’k’ac₁-*. Proto-Kartvelian **t’k’eč-/t’k’ič-* ‘to beat, to hit, to strike’: Georgian *t’k’ec-/t’k’ic-* ‘to beat’; Mingrelian *t’k’ač-* ‘to hit, to strike’; Svan *t’k’eč-/t’k’ič-* ‘to hit, to strike (with a stick)’. Fähnrich—Sardshweladse 1995:331 **t’k’ec₁-/*t’k’ic₁-*; Fähnrich 2007:403—404 **t’k’ec₁-/*t’k’ic₁-*; Klimov 1964:182 **t’k’ec₁-* and 1998:189 **t’k’ec₁-/*t’k’ic₁-* ‘to strike’; Schmidt 1962:134. Proto-Kartvelian **t’k’eb-/t’k’b-* ‘press, to squeeze’: Georgian *t’k’eb-/t’k’b-* ‘to press’; Laz *(n)t’k’ab-* ‘to press, to squeeze’; Svan *t’k’eb-/t’k’b-* ‘to press’. Fähnrich—Sardshweladse 1995:329—330 **t’k’eb-*; Fähnrich 2007:402 **t’k’eb-*; Klimov 1964:182 **t’k’eb-* and 1998:188 **t’k’eb-/t’k’b-* ‘to press, to press oneself’. Proto-Kartvelian **t’k’ep-* ‘to press, to trample’: Georgian *t’k’ep-* ‘to trample’; Laz *(n)t’k’ap-* ‘to trample’. Klimov 1998:189 **t’k’ep-* ‘to press, to trample’; Fähnrich—Sardshweladse 1995:329—330 **t’k’eb-* (**t’k’ep-* < **t’k’eb-* through assimilation); Fähnrich 2007:402 **t’k’eb-* (**t’k’ep-* < **t’k’eb-* through assimilation).
- D. Proto-Indo-European **t’ok’-* > (with regressive deglottalization) **t’ok’-* (secondary *e*-grade form: **t’ek’-*) ‘to knock, to beat, to strike’: Proto-Germanic **pek-/pāk-* ‘to knock, to beat, to strike’ > Old Icelandic *þjaka* ‘to thwack, to thump, to smite’, *þjakaðr* ‘worn, fainting, exhausted’, *þjökka* ‘to thwack, to thump, to beat, to chastise’, *þykkir* (< **þjökk-* < **pekk-*) ‘a thwack, thump, blow, a hurt’; Old English *þaccian* ‘to clap, to pat, to stroke, to touch gently, to smack, to beat’; Middle English *þakken* ‘to pat, to stroke’. Mann 1984—1987:1371 **teg-* ‘weary; to fail, to droop, to waste away’; Onions 1966:921; Klein 1971:765; Skeat 1898:641—642. Different etymology in De Vries 1977:630.
- E. Uralic: Proto-Finno-Permian **tuk3-* (**tuγ3-*) ‘to break, to crush’ > Cheremis / Mari *tuγe-* ‘to break, to crush’; Votyak / Udmurt *tijal-* ‘to break, to break off’. Rédei 1986—1988:800 **tuk3-* (**tuγ3-*). Semantic development as in Greek κλάω ‘to break, to break off’ < Proto-Indo-European **k^hel-* ‘to strike, to wound, to injure’ (cf. Latin *calamitās* ‘loss, misfortune, damage, calamity’, *clādēs* ‘disaster, injury’; Lithuanian *kalù*, *kalti* ‘to forge, to strike’; Old Church Slavic *kolq*, *klati* ‘to prick, to hew’). Yukaghir (Southern / Kolyma) *tuknə* ‘nail’, *tuknəš-* ‘to knock in’, *tuktujə* ‘blacksmith’s tools’. Nikolaeva 2006:438.

- F. (?) Altaic: Mongolian *tuyila-* ‘to strike with the feet, to rear, to buck (of a horse)’; Khalkha *tuil-* ‘to strike with the feet, to rear, to buck (of a horse)’.
 Turkic: Sagai (dialect of Khakas) *tuyula-* ‘to strike with the feet, to rear, to buck (of a horse)’. Poppe 1960:61; Street 1974:28 **tugī-la-* ‘to strike with the feet, to rear, to buck (of a horse)’.

Sumerian *dug₄-ga* ‘to strike, to beat, to hit, to smite, to kill’.

Buck 1949:9.21 strike (hit, beat); 9.26 break (vb. tr.). Bomhard—Kerns 1994:316—318, no. 136; Dolgopolsky 2008, no. 2349, **t[ü]Ka* ‘to thrust, to stab, to push’.

255. Proto-Nostratic (Eurasianic only) (n.) **t’ulʷ-a* ‘wedge, peg’:

- A. Proto-Indo-European **t’ul-* ‘pin, wedge, peg’: (?) Greek -δύλος in κόν-δύλος ‘knuckle’, σφόν-δύλος (sg.) a vertebra; (pl.) the backbone, spine, or neck’, κορ-δύλη ‘club, cudgel’; Old Irish *dul* ‘pin, wedge’, *dula* ‘peg’; Middle High German *zol* ‘log’ (New High German *Zoll*); Low German *tolle* ‘top-knot’; Frisian *tulle* ‘peg (in the game of tipcat)’; Lithuanian *dūlas* ‘rowlock’. Pokorny 1959:194—196 **del-* ‘to split, to cleave’; Walde 1927—1932.I:809—812 **del-*; Mann 1984—1987:167 **dulos*, -ā, -ō(n) ‘knob, plug, peg, thole-pin, rowlock’; Kluge—Mitzka 1967:887—888 **del-* ‘to split, to cleave’; Kluge—Seebold 1989:816.
- B. Proto-Uralic **tolwa* ‘wedge’: Mordvin (Erza) *tulo* ‘cork, plug; wedge’, (Moksha) *tula* ‘wedge’; Zyrian / Komi *tul* ‘peg, plug, wedge’. Sammallahti 1988:554 **tola* ‘wedge’; Zhivlov 2023:162 Proto-Uralic **tolwa* ‘wedge’; Rédei 1986—1988:797—798 **tola*.
- C. Proto-Altaic **ijūʷu* ‘wedge, peg’: Proto-Tungus **žul-* ‘wedge’ > Evenki *žulamaptin* ‘wedge’; Lamut / Even *žuḷ̥mptin* ‘wedge’; Ulch *žilemeče* ‘wedge’; Udihe *žolomopti* ‘wedge’. Proto-Turkic **dīʷ-* ‘tooth’ > Old Turkic *dīs* ‘tooth’; Turkish *diş* ‘tooth, cog’; Gagauz *diş* ‘tooth’; Azerbaijani *dış* ‘tooth’; Turkmenian *dış* ‘tooth’; Uzbek *tiş* ‘tooth’; Uighur *tiş*, *čiš* ‘tooth’; Karaim *tış* ‘tooth’; Tatar *teş* ‘tooth’; Bashkir *teş* ‘tooth’; Kirghiz *tis* ‘tooth’; Kazakh *tis* ‘tooth’; Noghay *tis* ‘tooth’; Tuva *diş* ‘tooth’; Yakut *tīs* ‘tooth’; Dolgan *tīs* ‘tooth’. Perhaps also Mongolian *duldui* ‘stick, staff, pilgrim’s staff’. Starostin—Dybo—Mudrak 2003:1375 **ijūʷu* ‘wedge, peg’.

Buck 1949:4.27 tooth.

256. Proto-Nostratic root **t’um-* (~ **t’om-*):

(vb.) **t’um-* ‘to quiet, to calm, to pacify, to tame’;

(n.) **t’um-a* ‘quietness, calmness, peace, tranquility’; (adj.) ‘quiet, calm, tame, peaceful’

- A. Afrasian: Semitic: Arabic *ṭammāna* ‘to quiet, to calm, to appease, to pacify, to allay, to assuage, to soothe’, *ṭamn* ‘quiet, tranquil’, *ṭamʿana*, *ṭaʿmana* ‘to calm, to quiet, to pacify, to appease, to assuage, to soothe’. Zammit 2002:273.
- B. Proto-Indo-European **tʰom-H-/*tʰm-H-* ‘to tame, to subdue’: Sanskrit *dāmyati* ‘to tame, to subdue, to conquer’, *damáyati*, *damāyāti* ‘to subdue, to overpower’; Prakrit *dāmiya-* ‘tamed’; Greek δαμάζω ‘to overpower, to tame, to subdue, to conquer’, δμῆσις ‘taming, breaking in (horses)’; Latin *domō* ‘to tame, to subdue, to overcome, to conquer’; Middle Irish *damnaim* ‘to subdue’; Gothic *ga-tamjan* ‘to tame’; Old Icelandic *temja* ‘to tame, to break in’, *tamr* ‘tame’, *tamning* ‘taming, breaking in’; Old English *temian* ‘to tame, to subdue’, *tama* ‘tameness’, *tam* ‘tame’; Old Frisian *temja* ‘to tame’, *tam* ‘tame’; Dutch *tam* ‘tame’, *temmen* ‘to tame’; Old High German *zemma* ‘to tame’ (New High German *zähmen*), *zam* ‘tame’ (New High German *zahn*); Hittite (3rd sg. pres.) *da-ma-aš-zi* ‘to press, to oppress’. Rix 1998a:99—100 **demh₂-* ‘to tame, to domesticate, to subdue, to control’; Pokorny 1959:199—200 (**demə-*) **domə-* : **dómə-* ‘to tame, to subdue’; Walde 1927—1932.I:788—790 (**demā-*) **domā-*, **dāmā-*; Mann 1984—1987:153—154 **domāiō* (**dāmāiō*, **dḥāiō*), *-eiō* ‘to tame, to domesticate’; Watkins 1985:11 **demə-* and 2000:16 **demə-* ‘to constrain, to force, especially to break in (horses)’ (oldest form **dem₂-*); Gamkrelidze—Ivanov 1984.I:205 **tʰemH-/*tʰmH-* > **tʰm-* and 1995.I:177 **tʰemH-/*tʰmH-* > **tʰm-* ‘to tame’; Mallory—Adams 1997:565 **demh₂-* ‘to subdue, especially to break a horse’; Mayrhofer 1956—1980.II:19 and II:35; Chantraine 1968—1980.I:250—251; Boisacq 1950:165—166; Frisk 1970—1973.I:346; Hofmann 1966:51 **domā-*, **dāmā-*; Beekes 2010.I:301 **demh₂-*; Ernout—Meillet 1979:181—182; Walde—Hofmann 1965—1972.I:367—368; De Vaan 2008:178; Orël 2003:401 Proto-Germanic **tamaz*, 401 **tamjanan*; Kroonen 2013:508 Proto-Germanic **tamjan-* ‘to tame’; De Vries 1977:581 and 586; Feist 1939:203 **dom-ā-*; Lehmann 1986:149—150; Skeat 1898:623; Onions 1966:901; Klein 1971:744; Kluge—Mitzka 1967:872; Kluge—Seebold 1989:804; Sturtevant 1951:61, §83; Kloekhorst 2008b:822—824 **dméh₂-s-ti*.
- C. Yukaghir (Northern / Tundra) *tumnerii-* ‘to be reserved about; to tell in secret’. Nikolaeva 2006:439.
- D. Proto-Altaic **tjūm(k)u* ‘silent, calm’: Proto-Tungus **duŋk-* ‘(adj.) dark, sullen; quiet, peaceful; (vb.) to bow the head; to knit the brows; to bow the head and slumber; to become silent, calm’ > Manchu *duŋki* ‘tired, exhausted, weak (in judgment)’; Evenki *duŋkin-* ‘to bow the head’; Lamut / Even *duŋkun-* ‘to bow the head, to knit the brows’; Ulch *duŋgu* ‘quiet, peaceful’; Oroch *duŋgalj-* ‘to bow the head and slumber’; Nanay / Gold *duŋgirien-* ‘to become silent, calm’, *duŋgu* ‘quite, peaceful’. Proto-Mongolian **düŋ-* ‘to become dull, murky (of sky), sullen, melancholic’ > Mongolian *düŋsüi-* ‘to be silent, to maintain one’s silence; to be morose,

sulky, pensive, melancholic; to look askance', *düñsüger* 'moroseness, melancholy, sorrow', *düñsüilče-* 'to be silent, pensive, or melancholic'; Khalkha *düñsī-* 'to become dull, murky (of sky), sullen, melancholic'; Buriat *düñyē-* 'to become dull, murky (of sky), sullen, melancholic'; Kalmyk *düñgē-*, *düñgī-* 'to be silent', *düñsī-* 'to become dull, murky (of sky), sullen, melancholic'; Ordos *düñ* 'obscure'. Proto-Turkic **dīm-* 'to be silent' > Turkmenian *dīm-* 'to be silent'; Bashkir *dīm-* 'to be silent'; Kirghiz *tīm*, *tīm* 'silently'; Kazakh *tīm* 'silently'. Starostin—Dybo—Mudrak 2003:1375—1376 **tūm(k)u* 'silent, calm'.

- E. Chukchi-Kamchatkan: Proto-Chukotian **təmyə-* 'still' > Chukchi *təmy-ew-* 'to grow still (wind or storm)', *təmyətəm* 'calm, still (weather)'; Kerek *təmy-au-* 'to grow calm (weather)', *nə-təmy-at-Xi* 'quiet', *təmək* 'quiet (outside)'; Koryak *təmy-et-* 'to grow still'; Alyutor *təmyətəm* 'calm, still (weather)'. Kamchadal / Itelmen (Eastern) *tymšazin* 'to calm, to pacify'. Fortescue 2005:297.

Bomhard—Kerns 1994:307—308, no. 125. Slightly different etymology in Dolgoposky 2008, no. 2379, **t[i]m[Vn]V* 'to be quiet, to be calm'.

257. Proto-Nostratic root **t'uq'w-* (~ **t'oq'w-*):

(vb.) **t'uq'w-* 'to be dark, cloudy, dusty, dirty, sooty, smoky';

(n.) **t'uq'w-a* 'darkness, (dark) cloud, dust, dirt, soot, smoke'

- A. Proto-Afrasian **t'o(o)k'w-* '(vb.) to be dark, cloudy, dusty, sooty, smoky; (n.) fog, cloud, darkness, soot, smoke': Semitic: Geez / Ethiopic *tākā* [ጥቁ] 'darkness, obscurity, gloominess, fog'; Tigre *takyat* 'fog, cloud, darkness'; Tigrinya *taka* 'fog, cloud, darkness'; Amharic *taka* 'fog, cloud, darkness'. Geez / Ethiopic *takara* [ጠቀረ] 'to be black, dusty, sooty', *takar* [ጠቀር] 'soot'; Tigrinya *täkkärä* 'to be black'; Amharic *täkk'wärä* 'to be black, to turn black, to tan (in the sun), to grow dark', *təkur* 'black, dark (skin)'; Gurage *täkwärä* 'to be black', *täkar* 'soot on the roof'; Harari *tiqär* 'soot'. Leslau 1979:628 and 1987:595, 596. Egyptian *dqr* 'incense'. Hannig 1995:988; Erman—Grapow 1926—1963.5:496. Proto-Southern Cushitic **deek'w-* 'to be dark' > Dahalo *deek'w'ááni* 'shadow'; Ma'a *kiduyú*, *kidugú* 'darkness'. Ehret 1980:190. According to Ehret, "[t]he back vowel of the Oromo reflex suggests that we have here another instance of pre-Southern Cushitic **o(o)* becoming proto-Southern Cushitic **e(e)* after a retroflex consonant — a rule note[d] in Chapter 2, section I, and if the environment proposed for the rule is correct, then an original verb must be reconstructed to account for the vowel shift."
- B. Dravidian: Tamil *tukaḷ* 'dust, particle of dust, pollen; fault, moral defect'; Telugu *dūgara* 'dust, dirt, soot'; Kolami *tu-k* 'dust, earth, clay'; Naikri *tūk* 'earth, clay'; Parji *tūk*, *tūkud* 'earth, clay, soil'; Gadba (Ollari) *tūkud* 'earth, clay'. Burrow—Emeneau 1984:287, no. 3283.

- C. Proto-Chukchi-Kamchatkan **taqi-* ‘(vb.) to smoke; (n.) smoke’: Koryak *taqəŋ-* ‘having the taste of strong tobacco’; Alyutor *tqi-* ‘to smoke’, *tqitəq-* ‘smoke’; Kamchadal / Itelmen *t’it’im* ‘smoke’, *t’e-kas-*, *t’i-* ‘to smoke’ (this may be a borrowing from Chukotian). Fortescue 2005:300—301.

Buck 1949:1.62 darkness; 1.73 cloud; 1.83 smoke (sb.).

22.9. PROTO-NOSTRATIC *dʲ

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
dʲ-	dʲ-	c-	ǰg-	dʰ-	tʲ-	ǰ-	c-
-dʲ-	-dʲ-	-c(c)-/ -y-	-ǰg-	-dʰ-	-tʲ-	-ǰ-/ -d-	-c-

258. Proto-Nostratic root **dʲab-* (~ **dʲəb-*):

(vb.) **dʲab-* ‘to beat, to hit, to strike, to harm, to injure’;

(n.) **dʲab-a* ‘stroke, blow, harm, injury; slaughter, killing’

- A. Proto-Afrasian **dʲab-* ‘to beat, to hit, to strike, to harm, to injure’: Proto-Semitic **dʲab-aħ-* ‘to kill, to slaughter’ > Hebrew *zāḇaḥ* [זָבַח] ‘to slaughter’; Phoenician *zbh* ‘to slaughter, to sacrifice’; Ugaritic *dbh* ‘to sacrifice’, *dbh(m)* ‘sacrifice(s)’; Arabic *dabaḥa* ‘to kill, to slaughter’; Akkadian *zibū* ‘offering’, *zebū* ‘to slaughter, to sacrifice’; Proto-Sinaitic *ḏbh* ‘to sacrifice, to kill, to murder’; Sabaean *ḏbh* ‘to sacrifice, to kill, to murder’; Geez / Ethiopic *zabha* [ዘበሐ] ‘to slaughter, to sacrifice, to offer sacrifices’; Tigre *zābha* ‘to skin an animal’. D. Cohen 1970— :326—327; Murtonen 1989:161; Klein 1987:193; Leslau 1987:631; Zammit 2002: 181—182. Egyptian (reduplicated) *ḏbḏb* ‘to destroy, to demolish’. Hannig 1995:1005. Lowland East Cushitic: Somali *dabaah-* ‘to slaughter’. Orël—Stolbova 1995:549—550, no. 2646, **žabaḥ*/**žibih* ‘to make sacrifice’.
- B. Dravidian: Tamil *cavaṭṭu* (*cavaṭṭi-*) ‘to destroy, to ruin (as a town), to kill, to beat, to tread upon, to trample’; Malayalam *caviṭṭuka* ‘to kick, to tread’, *caviṭṭika* ‘to cause to tread on’, *caviṭṭu*, *cavaṭi* ‘a kick’; Kodagu *cavṭ-* (*cavṭi-*) ‘to step on’, *cavṭi-* ‘footprint’. Burrow—Emeneau 1984:210, no. 2387.
- C. Proto-Indo-European **dʰebh-*/**dʰobh-* ‘to beat, to hit, to strike, to harm, to injure’: Sanskrit *dabhnóti* ‘to hurt, to injure, to deceive, to abandon’; Pāli *dubbhati* ‘to hurt, to deceive’; Prakrit *dūbhai* ‘to be unhappy’; Gujarati *dubhvū*, *dubhāvū* ‘to tease, to vex’; Avestan *dab-* ‘to deceive’; Lithuanian *dobiū*, *dóbtī* ‘to beat, to hit, to kill’. Rix 1998a:114—115 **dʰebh-* ‘to diminish’; Walde 1927—1932.I:850—851 **dhebh-*; Pokorny 1959:240 **dhebh-* ‘to injure’; Mallory—Adams 1997:258 **dhebh-* ‘to harm’; Mann 1984—1987:129 **dabh-* ‘to harm, to hurt, to damage’; Mayrhofer 1956—1980.II:17—18; Turner 1966—1969.I:353; Derksen 2015:124 (etymology unclear); Fraenkel 1962—1965.I:99; Smoczyński 2007.1:117; Wodtko—Irslinger—Schneider 2008:85—86 **dʰebh-*.
- D. Uralic: Proto-Finno-Ugrian **ʋapp3-* ‘to hit, to cut’ > Mordvin (Erza) *čapo-* ‘to cut (framework), to make a notch’, *čapo* ‘notch’; Votyak / Udmurt

čupy- ‘to notch, to cut’; Zyrian / Komi *čup-* ‘to make a notch, to make a frame house’, *čupôd* ‘notch’; (?) Hungarian *csap-* ‘to strike, to hit’; Vogul / Mansi *sopam* ‘a kind of timbered chest, a small temporary storehouse’, *šopŋ, sâpŋ* ‘chest or shed on a tomb (to protect the coffin)’; Ostyak / Xanty (N.) *šõpam* ‘framework in the forest (to keep berries or game), timbered superstructure on a tomb’. Collinder 1977:91; Rédei 1986—1988:29 **čapp3-*; Sammallahti 1988:543 (?) **čâppi-* ‘to hit, to cut’.

- E. Proto-Chukchi-Kamchatkan **ðapæ(ŋæ)* ‘hammer’: Chukchi *ræpeŋə* ‘hammer’; Kerek *ipaaip* ‘hammer’; Koryak *jæpeŋə* ‘hammer’; Alyutor *təpaŋə* ‘pestle for crushing *tolkuša*’, *kəlivə-təpaŋə* ‘stone hammer’; Kamchadal / Itelmen *spe* ‘stone pestle’. Fortescue 2005:72.

Buck 1949:11.28 harm, injure, damage (vb.); 16.68 deceit. Bomhard—Kerns 1994:321, no. 140.

259. Proto-Nostratic root **dyak^{wh}-* (~ **dyək^{wh}-*):

(vb.) **dyak^{wh}-* ‘to blaze, to be bright’;

(n.) **dyak^{wh}-a* ‘(burning) embers, fire, flame’

- A. Proto-Afrasian **dyak^w-* ‘to blaze, to be bright’: Proto-Semitic **dyak-aw/y-* ‘to blaze, to be bright’ > Arabic *ḍakā* ‘to blaze, to flare up’, *ḍukāʔ* ‘the sun’, *ʔadkā* ‘to light up, to stroke the fire’; Liḥyanite *ḍakaw* ‘flame’. D. Cohen 1970— :332.
- B. Dravidian: Telugu *jaggu* ‘shining, brilliancy’; Parji *jagjaga* ‘clean (of clothes), bright’; Gondi *cakk-* ‘to dazzle’. Burrow—Emeneau 1984:202, no. 2280.
- C. Proto-Indo-European **dyak^{wh}-*/**dyək^{wh}-* > (with depalatalization) **dhak^{wh}-*/**dhək^{wh}-* > (with progressive voicing assimilation) **dheg^{wh}-*/**dhog^{wh}-* ‘to blaze, to burn’: Sanskrit *dāhati* ‘to burn, to consume by fire, to scorch, to roast’; Pāli *dahati* ‘to burn, to roast’, *dahana-* ‘fire; burning’; Hindi *dahnā* ‘to burn, to be burnt, to blaze’; Sindhi *daho, dao* ‘strong light of fire, sun’; Avestan *dažaiti* ‘to burn’; Latin *favilla* ‘glowing ashes’ (with long *ī* [cf. Ernout—Meillet 1979:221]), *febris* ‘fever’, *foveō* ‘to warm, to keep warm’; Middle Irish *daig* ‘fire’; Old Prussian *dagis* ‘summer’; Lithuanian *degù, dėgti* ‘to burn’; Old Church Slavic *žego, žešti* ‘to burn, to ignite’; Greek τέφρα, (Ionic) τέφρη ‘(burning) ashes’, τέφρος ‘ash-colored’; Tocharian A *tsäk-, tsak-* ‘to burn’, *tsāk-* ‘to give light, to shine’, B *tsäk-* ‘to burn up, to consume by fire’; Albanian *djeg* ‘to burn’. Rix 1998a:115—116 **dheg^{uh}-* ‘to consume by fire, to burn’; Pokorny 1959:240—241 **dheg^{uh}-* ‘to burn’; Walde 1927—1932.I:849—850 **dheg^{uh}-*; Watkins 1985:13 **dheg^{wh}-* and 2000:18 **dheg^{wh}-* ‘to burn, to warm’, suffixed basic form **dheg^{wh}-rā-* (> Greek τέφρη); Mann 1984—1987:179 **dheg^{uh}hō* (**dhog^{uh}-*) ‘to burn; fire’; Mallory—Adams 1997:87 **dheg^{wh}-* ‘to burn’; Gamkrelidze—Ivanov 1984.I:154 **d[h]eg[h]^o-*/**d[h]og[h]^o-* and 1995.I:133 **dheg^ho-*/**dhog^ho-* ‘to

burn'; Mayrhofer 1956—1980.II:29; Turner 1966—1969.I:357; Hofmann 1966:363 **dheg^uh-*; Beekes 2010.II:1475—1476 **d^heg^{wh}-*; Frisk 1970—1973.II:888—889 **dheg^uh-*; Chantraine 1968—1980.II:1112 **dheg^{wh}-*; Boisacq 1950:963—964 **dheg^uh-*; De Vaan 2008:206—207 **d^houH-Í-* 'smoke/smoking'; Ernout—Meillet 1979:221, 222 **dheg^{wh}ri-s*, and 250—251 **dh^gwh-*; Walde—Hofmann 1965—1972.I:466—467 **dheg^uh-* and I:471—472 **dheg^uhri-s*; Adams 1999:733; Van Windekens 1976—1982.I:526 **dhegh^u-*; Orël 1998:68 **dheg^{wh}-* (> Proto-Albanian **dega*); Huld 1984:53—54 **dheg^{wh}-*; Fraenkel 1962—1965.I:85—86; Smoczyński 2007.1:97—98 **d^heg^uh-*; Derksen 2008.554—555 **d^heg^{wh}-* (> **geg-* in Slavic) and 2015:119 **d^heg^{wh}-e/o-*.

Buck 1949:1.85 burn (vb.); 15.87 clean. Bomhard—Kerns 1994:322, no. 142.

260. Proto-Nostratic (n.) **dʷan-a* 'sound; hearing; organ of hearing, ear':

Comment: A Proto-Nostratic verb stem seems to be implied here: **dʷan-* 'to listen, to hear', though this is nowhere attested. The verb forms found in the Semitic daughter languages are all denominative.

- A. Proto-Afrasian (n.) *(*ʔi/u-*)*dʷan-* 'ear': Proto-Semitic (n.) **ʔu-dʷn-* 'ear' > Ugaritic *ʔdn* 'ear'; Akkadian *uznu(m)* 'ear (of human or animal); wisdom, understanding'; Hebrew *ʔōzen* [ʔʕ̣ʕ̣] 'ear', (denominative) *ʔāzan* [ʔʕ̣ʕ̣] 'to listen, to hear'; Aramaic *ʔudnā* 'ear'; Syriac *ʔednā* 'ear'; Mandaic *ʔudna* 'ear; side, corner'; Arabic *ʔudn*, *ʔudun* 'ear; handle (of a cup)', *ʔadīna* 'to listen; to allow, to permit; to hear, to learn, to be informed'; Sabaeen *ʔdn* 'ear'; Geez / Ethiopic *ʔəzn* [ʕ̣ʕ̣] 'ear', *māʔəzn* [ʕ̣ʕ̣] 'angle, corner, border (of garment)'; Tigre *ʔəzn* 'ear'; Tigrinya *ʔəzni* 'ear'; Gafat *əznā* 'ear'; Harari *uzun* 'ear'; Argobba *izin* 'ear'; Gurage *əzn* 'ear'. South Arabian proto-form (n.) **ʔi-dʷān-* 'ear' > Šheri / Jibbāli *ʔidēn* 'ear', *ʔódən* 'to call to prayer'; Harsūsi *he-ydēn* 'ear', *ʔádden* 'to call to prayer'; Mehri *hə-ydēn* 'ear', *awōdēn* 'to call to prayer'; Soqotri *ʔidihen* 'ear'. D. Cohen 1970— :10 — Cohen notes: "Ugaritic (WUS 8) is very doubtful; 'idn may be a variant of 'udn (TO)"; Klein 1987:16; Leslau 1987:52; Murtonen 1989:86 — Murtonen notes that related forms are found in Chadic (Birgit /*ʔudun*gi/, Jegu /-ge/ 'ear') and Egyptian (/ydn/ 'ear' ["as a writing sign only"]); Zammit 2002:71; Militarev—Kogan 2000.I:6, no. 4, Proto-Semitic **ʔudn-* ~ **ʔužn-* 'ear' — they note: "A variant stem **ʔi-dʷān-* may be reconstructed on the MSA evidence since the long -ā- seems rather reliable." They do not list any non-Semitic cognates. Egyptian *idn* 'ear' (writing sign only). Erman—Grapow 1921:21 and 1926—1971.1:154; Hodge 1981:404. East Chadic: Jegu *ʔudunje* 'ear'; Birgit *udunji* 'ear'. Orël—Solbova 1995: 32—33, no. 126, **ʔudun-*/**ʔužun-* 'ear', Proto-Semitic **ʔudn-* 'ear' — they note: "An unexpected **d* ~ **ž* variation in

the root.” Comments: The vowel of the prefix is ambiguous — most of the Semitic and Chadic forms point to *ʔu-, while the South Arabian and Egyptian forms point to *ʔi-. Moreover, I have reconstructed the stem vowel of the Semitic and Afrasian proto-forms as *-a- on the basis of the South Arabian evidence. Finally, I consider */dʲ/ (traditional */d/) to be original.

- B. Proto-Yukaghir *čanč’- ‘sound’: Southern / Kolyma čad’il ‘echo’; Northern / Tundra čad’uu ‘sound’. Nikolaeva 2006:123, no. 211.

Buck 1949:4.22 ear; 15.41 hear; 15.42 listen; 15.43 ‘hearing’ (sb.); 15.44 sound (sb.).

261. Proto-Nostratic (n.) *dʲan-w-a ‘a kind of tree or bush’:

- A. Proto-Afrasian *dʲan-w- ‘a kind of tree’: Egyptian *ḏnw* ‘plant, a kind of bush’. Hannig 1995:1007; Erman—Grapow 1926—1963.5:575. Cushitic: Kambata *dana* ‘a kind of tree’; Gallinya *dāna* ‘a kind of tree’.
- B. Dravidian: Kannada *jāni-giḍa* ‘a small tree’ (= *Grewia abutilifolia*), *jāna* (= *G. asiatica*), *taḍa-jāna* (= *G. orbiculata*); Telugu *jāna* ‘a kind of tree’, *jāna* (= *G. orbiculata*), *nalla-jāna*, *pedda-jāna* (= *G. asiatica*). Burrow—Emeneau 1984:214, no. 2451.
- C. Proto-Indo-European *dʰanw/u- ‘a kind of tree’: Hittite (ntr.) *tanau* ‘fir(tree)’; Sanskrit *dhānu-ḥ*, *dhānvan-* ‘bow’; Old Saxon *danna*, *dennia* ‘fir’; Old High German *tanna* ‘fir-tree, oak’ (New High German *Tanne*). Pokorny 1959:234 **dhanu-* or **dhonu-* ‘a kind of tree’; Walde 1927—1932.I:825 **dhanu-* or **dhonu-*; Mallory—Adams 1997:202 **dhonu-* ‘fir’; Mayrhofer 1956—1980.II:90—91; Kloekhorst 2008b:827 **dʰn-ōu* (?); Orël 2003:68 Proto-Germanic **ḍannōn*; Walshe 1951:224; Kluge—Mitzka 1967:769; Kluge—Seebold 1989:721; P. Friedrich 1970:150—151 Proto-Germanic **danwō*.

Buck 1949:8.65 fir; 20.24 bow. Bomhard—Kerns 1994:321—322, no. 141.

262. Proto-Nostratic root *dʲar- (~ *dʲar-):

- (vb.) *dʲar- ‘to hold firmly’;
(n.) *dʲar-a ‘firm grip; hand, arm’

- A. Proto-Afrasian *dʲar- ‘(vb.) to hold firmly; (n.) hand, arm’: Proto-Semitic **dʲirāṣ-* ‘arm’ > Arabic *ḍirāṣ* ‘arm, forearm’; Hebrew *ʔezrōaʕ* [עֲזְרוֹאֵךְ], *zərōaʕ* [זְרוֹאֵךְ] ‘arm, shoulder’; Aramaic *dərāṣā* ‘arm’; Ugaritic *ḍr* ‘upper arm’; Mandaic *dra* ‘arm’; Akkadian *zuruḥ* ‘arm’, *duraʔu* ‘arm, foreleg’ (West Semitic loans); Soqotri *derāṣ* ‘forearm’; Ḥarsūsi *ḍerā* ‘forearm’; Šheri / Jibbāli *ḍēra* ‘forearm’; Mehri *ḍarʔ* ‘forearm’; Geez / Ethiopic *mazrāṣ* [መረሰት] ‘arm, shoulder (of an animal), sleeve (of a garment),

strength'; Tigrinya *māzraʿt* 'arm, forearm'; Tigre *zāraʿ, māzaraʿt* 'arm, forearm'. Leslau 1987:379; Murtonen 1989:171; Klein 1987:16 and 203; D. Cohen 1970—:341; Zammit 2002:182. Egyptian *ḏr-t* 'hand'; Coptic *tōre* [ⲧⲣⲉ] '(hand); handle; spade, pick, oar'. Hannig 1995:1009; Faulkner 1962:323; Gardiner 1957:604; Erman—Grapow 1921:221 and 1926—1963.5:580—585; Vycichl 1983: 219—220; Černý 1976:193. West Chadic: Mupun *žár* 'to take, to pick up'. Takács 2011a:161.

Comment: Militarëv—Kogan (2000.I:62—63, no. 65) reconstruct Proto-Semitic (n.) **ḏVrāš-* ~ **žVrāš-* 'arm'. They note: "The reconstruction of *-i- of the first syllable suggested in [Fron. Studi 48] is evidently based on Arb. only and may be questioned ..." Also: "[Fron. Studi 48] **ḏirāš-* 'arm' ..." They do not list any non-Semitic cognates.

- B. Proto-Kartvelian **žger-* 'to make firm, strong, unshakable' > 'to convince, to persuade': Georgian *žer-* in *da-žer-eb-a* 'to convince, to persuade', *m-žer-a* 'I believe, I am convinced', *žer-i* 'arrangement, order; conviction, belief'; Svan *a-žgir* 'he taught, made understand', *a-žgir-i* 'he teaches, advises, makes understand'. Fähnrich 2007:714 **žer-*.
- C. Proto-Indo-European **dher-/dhor-/dh̥r-* 'to hold firmly in the hand, to support': Sanskrit *dharati* (caus. *dhārāyati*) 'to hold, to bear, to preserve, to keep', *dharūṇa-h* 'bearing, holding, supporting', *dhṛti-h* 'firmness, resolution', *dhartrā-m* 'support, prop', *dhṛhyati* 'to be strong'; Avestan *dar-* 'to hold, to keep', *darz-* 'to hold, to fasten', *dərəzra-* 'firm, strong', *drva-* 'firm, sound'; Old Persian *dar-* 'to hold'; Latin *firmus* 'firm, strong, stout'; Lithuanian *diržti, diržti* 'to grow hard, to become firm', *diržūs* 'solid, firm'; Old Church Slavic *drъžjъ, drъžati* 'to hold, to possess'; Russian *deržat'* [держатъ] 'to hold, to keep'. Rix 1998a:126 **dher-* 'to fasten, to fix'; Pokorny 1959:252—255 **dher-*, **dherə-* 'to hold'; Walde 1927—1932.I:856—860 **dher-*; Mann 1984—1987:184 **dher-* 'hard, fast, firm', 185 **dhermos*, -ā, -jə (**dhermn-*, **dherom-*) 'firm, fixed; fixture, pact, order', 198 **dhōrejō* 'to hold, to keep', 311—312 **dhṛgh-* 'to hold'; Watkins 1985:14 **dher-* and 2000:18 **dher-* 'to hold firmly, to support'; Mallory—Adams 1997:270 **dher-* 'to be immobile; to support, to hold up' (Latin *firmus* < **dher-mo-*); Mayrhofer 1956—1980.II:61—62, II:93, II:94, II:100, II:111—112, and II:112; De Vaan 2008:223 **dher-mo-* 'holding'; Walde—Hofmann 1965—1972.I:505—506 **dher(ē)-*; Ernout—Meillet 1979:237; Derksen 2008:137—138 **dher-* and 2015:133; Fraenkel 1962—1965.I:97; Smoczyński 2007.1:116—117.

Buck 1949:4.31 arm; 4.33 hand; 4.81 strong, mighty, powerful; 11.15 hold; 17.15 believe. Bomhard—Kerns 1994:322—323, no. 143.

263. Proto-Nostratic root **dʷaw-* (~ **dʷəw-*):(vb.) **dʷaw-* ‘to run, to flow’;(n.) **dʷaw-a* ‘stream, current, flow’; (adj.) ‘running, flowing’

- A. Proto-Kartvelian **ǰgw-*, **ǰgw-am-/ǰgw-m-* ‘to defecate’: Georgian *ǰv-*, *ǰvam-/ǰm-* ‘to defecate’; Mingrelian (*n*)*ǰg(v)-*, *nǰgum-* ‘to defecate’; Laz *ǰg(v)-*, *ǰg(v)-*, *ǰgum-* ‘to defecate’; Svan *sgēr-* ‘to defecate’, *la-sg-ar* ‘lavatory, toilet’. Schmidt 1962:160; Klimov 1964:268 **ǰw-*, 268—269 **ǰw-am-/ǰw-m-* and 1998:343 **ǰw-*, **ǰw-am-/ǰw-m-* ‘to defecate’; Fähnrich—Sardshweladse 1995:572—573 **ǰw-*; Fähnrich 2007:715 **ǰw-*. For the semantics, cf. Malayalam *olippu* ‘flowing, looseness of bowels’ from the same stem found in *oliyuka* ‘to flow’, *olikka* ‘to flow, to run (as water, blood from wounds)’, etc. (cf. Burrow—Emeneau 1984:96, no. 999).
- B. Proto-Indo-European **dhew-/dhow-* ‘to run, to flow’: Sanskrit *dhavate* ‘to run, to flow’, *dhāvati* ‘to run, to flow, to stream’, *dhauti-h* ‘spring, well, rivulet’; Greek *θέω* ‘to run’, *θοός* ‘quick, swift’; Old Icelandic *dögg* ‘dew’; Faroese *døgg* ‘dew’; Norwegian *dogg* ‘dew’; Swedish *dagg*, *dugg* ‘dew’; Danish *dug* ‘dew’; Old English *dēaw* ‘dew’; Old Frisian *dāw* ‘dew’; Old Saxon *dau* ‘dew’; Dutch *dauw* ‘dew’; Old High German *tou* ‘dew’ (New High German *Tau*). Rix 1998a:128—129 **dheu-* ‘to run, to flow; to hasten, to hurry’; Pokorny 1959:259—260 **dheu-* ‘to run, to flow’; Walde 1927—1932.I:834 **dheu-*; Mann 1984—1987:188 **dheu-* ‘to flow’, 188 **dheuṇt-* (**dheuṇt-*) ‘flowing, flow’, 201 **dhouyos* (**dhouyo-*) ‘running, flowing; run, flow, course’; Watkins 1985:14 **dheu-* and 2000:19 **dheu-* ‘to flow’; Mallory—Adams 1997:491 **dheu-* ‘to run’; Mayrhofer 1956—1980.II:95 and II:101—102; Boisacq 1950:342—343 **dheuā-*; Hofmann 1966:114 **dheu-*; Frisk 1970—1973.I:668—669; Chantraine 1968—1980.I:433; Beekes 2010.I:544—545 **dheu-*; Kroonen 2013:91 Proto-Germanic **dawwa/ō-* ‘dew’; Orël 2003:70 Proto-Germanic **dawwēnan*, 70 **dawwō* ~ **dawwan*; De Vries 1977:92—93 Proto-Germanic **dauuō*; Falk—Torp 1903—1906.I:118; Torp 1919:64; Onions 1966:263 **dhawos*; Klein 1971:208; Boutkan—Siebinga 2005:68—69; Kluge—Mitzka 1967:772 Proto-Germanic **dawwa-*; Kluge—Seebold 1989:723 Proto-Germanic **dauwa-*. Note: The Germanic cognates contain so-called “lengthened w”. This phenomenon is commonly referred to in the literature by the German term “Verschärfung”. For details about the Germanic “Verschärfung”, cf. Austin 1946; Jasanoff 1978a; Lehmann 1952:36—46 and 1965:213—215; Lindeman 1964. Lehmann (1965:215) reaches the following conclusion concerning the origin of “lengthened -w-”: “PGmc. -w- was lengthened after short vowels when reflex of a laryngeal followed -w-”.

Buck 1949:4.66 void excrement; excrement, dung; 10.32 flow (vb.); 10.46 run (vb.). Brunner 1969:86, no. 469; Bomhard—Kerns 1994:324—325, no. 145

264. Proto-Nostratic indefinite pronoun stem *dʷi- (~ *dʷe-) ‘this one, that one’:

- A. Proto-Afrasian *dʷi- ‘this one, that one’: Proto-Semitic *dʷā, *dʷī ‘this one, that one’ > Arabic (m.) *dā*, (f.) *dī* ‘this one, this’; Hebrew (m.) *zeh* [זֶה], (f.) *zeh* [זֶה], (poetical) *zū* [זֹּ] ‘this’; Biblical Aramaic *dā* ‘this’; Sabaeen *d* ‘(he) who, (that) which’; Mehri *d(ə)*- ‘who, which, what’; Šheri / Jibbāli *d*- ‘one who, whoever’; Harsūsi *d(e)*- ‘who, which, that’; Geez / Ethiopic *za-* [ዘ-] ‘who, that, which’ (*ziʔa-* [ዘ.አ-] with possessive suffix pronouns), (m. sg.) *zə-* [ዘ-], (f. sg.) *zā-* [ዘ-] ‘this’ (adj. and pronoun); Tigrinya *zə* ‘he who, that’, *ʔəzu* ‘this’; Gurage *za* ‘that, that one, that one here’, *zə* ‘this’; Harari *zi* ‘he, who, that’, *-zo* ‘the’. D. Cohen 1970— :324; Klein 1987:194; Leslau 1979:701 and 1987:629—630; Zammit 2002:181. Perhaps also New Egyptian (adv.) *dy* ‘here, over here; there, over there’ (if from **dʷy*); Coptic *tai* [ⲧⲁⲓ] ‘here, in this place’, *tē* [ⲧⲏ] ‘there, in that place’. Hannig 1995:970; Faulkner 1962:309; Erman—Grapow 1921:211 and 1926—1963.5:420; Vycichl 1983:208 and 212; Černý 1976:177 and 178. Ehret 1995:260, no. 470, **ji* or **dzi* ‘one, someone, somebody’ (indefinite pronoun).
- B. Proto-Uralic **pe*/**pi* ‘this one, that one’: Finnish *se/si-* ‘this, that, it’; Mordvin *še* ‘this, that one’; Cheremis / Mari *sede* ‘this one, that one’; Ostyak / Xanty (N.) *šī, šīt* ‘this, that one’, (S.) *tʲi* ‘this one’; Tavgi Samoyed / Nganasan *sete* ‘he’, *seti* ‘both of them’, *setej* ‘they’; Kamassian *šōd* ‘that one here’. Collinder 1955:56 and 1977:73; Rédei 1986—1988:33—34 **će* ~ **ci*; Décsy 1990:109 **tje* ‘that’.

Bomhard—Kerns 1994:325, no. 146.

265. Proto-Nostratic root *dʷiʔ- (~ *dʷeʔ-):

- (vb.) **dʷiʔ-* ‘to reach, to arrive at, to come to; to surpass, to exceed’;
 (n.) **dʷiʔ-a* ‘arrival, attainment, ripening’

- A. Afrasian: Egyptian *dʷi* ‘to cross over, to ferry across water’, *dʷ-t* ‘ship’. Hannig 1995:992; Faulkner 1962:318; Gardiner 1957:603; Erman—Grapow 1921:218 and 1926—1963.5:512—513. West Chadic: Angas *jī* ‘to come’; Sura *jī* ‘to come’. Foulkes 1915:201; Jungtraithmayr—Ibrizimow 1994.II:82. Takács 2011a:126 and 161 **ǰ-ʔ* ‘to go’.
- B. Proto-Kartvelian **ǰg-* ‘to exceed, to overcome, to be better than’: Georgian [ǰ-] ‘to exceed, to overcome, to be better than’; Mingrelian [(*r*)*ǰg-*] ‘to exceed, to overcome, to be better than’; Laz [(*r*)*ǰg-*] ‘to exceed, to overcome, to be better than’. As noted by Klimov (1998:342), the unbound form of the stem is not attested. In Old Georgian, the stem is extended by *-ob-*: *u-m-ǰ-ob-es-* ‘better’. In Laz, it is extended by *-in-*: Laz *o-rǰg-in-u* ‘good’, *u-ǰg-in* ‘better’. Mingrelian *ǰg-ir-/ǰg-ər-* ‘good’, *rǰg-in-/rǰg-in-ap-/ǰg-un-* ‘to be better’. Klimov 1964:268 **ǰ-* and 1998:342 **ǰ-* ‘to exceed,

to overcome'; Fähnrich 2007:712—713 *ž-; Fähnrich—Sardshweladse 1995:571 *ž-.

- C. Proto-Altaic *ži- (~ *žja-) 'to reach, to arrive at, to come to; to strive': Proto-Tungus *ži- (~ *di-) 'to come' > Manchu *ži-* 'to come', (imperfect participle) *židere* 'coming, future, next'; Ulch *diwu* 'to come'; Nanay / Gold *ži-* 'to come'. Proto-Mongolian *žid-kü- 'to strive' > Mongolian *židkü-* 'to endeavor, to strive, to exert oneself; to pull', *židkü-* 'endeavor, effort, zeal, fervor, ardor', *židkü-mži* 'endeavor, effort, assiduity, application'; Khalkha *žütge-* 'to strive'; Kalmyk *zütə-* 'to strive'; Ordos *žüdχü-* 'to strive'. Proto-Turkic *yēt- 'to reach' > Old Turkic *yet-* 'to reach'; Karakhanide Turkic *yet-* 'to reach'; Turkish *yet-* 'to suffice, to reach, to attain', *yet-iş-* 'to reach, to attain, to suffice; to attain maturity, to grow up; to be brought up; to be ready or on hand in time', *yet-er* 'sufficient, enough!', *yet-iş-kin* 'arrived at full growth, ripe, perfected', *yet-iş-mis* 'arrived, reached maturity, grown up'; Gagauz *yet-* 'to reach'; Azerbaijani *yet-iş-* 'to reach'; Turkmenian *yet-* 'to reach'; Uzbek *yet-* 'to reach'; Uighur *yät-* 'to reach'; Tatar *žit-* 'to reach'; Bashkir *yet-* 'to reach'; Kirghiz *žet-* 'to reach'; Kazakh *žet-* 'to reach'; Noghay *yet-* 'to reach'; Chuvash *šit-* 'to reach'; Yakut *sit-* 'to reach'; Dolgan *hit-* 'to reach'. Starostin—Dybo—Mudrak 2003:1536 *ži (~ *žja) 'to come'.

Sumerian (reduplicated) *di-di* 'to come, to arrive, to approach'. S. Parpola 2016:64, no. 446, *dé-*, *di-* 'to come, to arrive; to give birth, to carry a child, to beget'.

Buck 1949:10.48 come; 10.54 overtake; 10.55 arrive (intr.) and arrive at, reach (tr.).

266. Proto-Nostratic root **dvip^h*- (~ **dvep^h*-):

- (vb.) **dvip^h*- 'to stink, to give off a strong odor';
(n.) **dvip^h*-a 'pungent smell, stench'

- A. Proto-Afrasian **dv[i]p-* '(vb.) to stink, to give off a strong odor; (n.) pungent smell, stench': Proto-Semitic **dvap-ar-* '(vb.) to stink, to give off a strong odor; (n.) pungent smell, stench' > Arabic *ḍafar* 'pungent smell, stench', *ḍafira* 'to smell strongly or badly'; Sabaeen *ḍfr?* 'ill-smelling plants'; Ḥarsūsi *ḍefīr* 'plant used to prepare medicine for stomach-ache and headache'; Syriac *zəḫar* 'to smell bad'. D. Cohen 1970—:339.
- B. Dravidian: Kannada *cippa-kasuvu* 'the fragrant grass *Andropogon schoenanthus*'; Telugu *cippa-kasavu*, *cippa-gaḍḍi* 'the fragrant grass *Andropogon schoenanthus*'. Burrow—Emeneau 1984:221, no. 2533.
- C. Proto-Altaic **žip^h*o 'strong odor, pungent smell': Proto-Mongolian **žiyar* 'strong perfume, musk' > Written Mongolian *žiyar*, *žayar* 'strong perfume, musk'; Khalkha *žār* 'strong perfume, musk'; Buriat *zār* 'strong perfume,

musk'; Kalmyk *zār* 'strong perfume, musk'; Ordos *žār* 'strong perfume, musk'; Shira-Yughur *žārə* 'strong perfume, musk'; Dagur *žār* 'strong perfume, musk'. Mongolian loans in: Manchu *žarin* 'musk'; Solon *žār* 'musk'. Proto-Turkic **yīpar* 'smell, perfume, musk' > Old Turkic *yīpar* 'smell, perfume, musk'; Karakhanide Turkic *yīpar* 'smell, perfume, musk'; Turkish (dial.) *yīpar* 'smell, perfume, musk'; Tatar *yīfar*, *žufar* 'smell, perfume, musk'; Bashkir *yofar* 'smell, perfume, musk'; Kirghiz *žīpar* 'smell, perfume, musk'; Kazakh *župar* 'smell, perfume, musk'; Yakut *sībar* 'smell, perfume, musk'. Starostin—Dybo—Mudrak 2003:1537 *žip'o* 'perfume, fumes'; Poppe 1960:47, 80, and 123; Street 1974:14 **jīpar* 'musk'.

Buck 1949:15.21—15.24 smell; 15.26 bad smelling, stinking.

22.10. PROTO-NOSTRATIC *tʰh

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
tʰh-	tʰ-	c-	čk-	tʰ-	tʰ-	čh-	c-
-tʰh-	-tʰ-	-c(c)-/ -y-	-čk-	-tʰ-	-tʰ-	-čh-	-c(c)-

267. Proto-Nostratic deictic stem *tʰh- ‘that over there, that yonder (not very far)’:

- A. Proto-Afrasian *tʰh- ‘that over there, that yonder (not very far)’: Proto-Semitic *tʰh-m- ‘that over there, that yonder (not very far)’ > Arabic *tamma* ‘there, yonder’, *tumma* ‘then, thereupon; furthermore, moreover; and again, and once more’, *tammata* ‘there, there is’; Sabaeen *tmm* ‘there’; Hebrew *šām* [שָׁם] ‘there, thither’; Imperial Aramaic *tḥ* ‘there’; Biblical Aramaic *tammā* ‘there’; Phoenician *šm* ‘there’; Ugaritic *tḥ* ‘there’. Klein 1987:664; Zammit 2002:112—113. Chadic: Hausa *cān* (adv.) ‘yonder, over there (distant but visible)’; *cān* (demonstrative pronoun — becomes *cān* if preceded by a word with final high tone) ‘that, those’.
- B. Proto-Altaic *čh- ‘that over there, that yonder (not very far)’: Proto-Tungus *čā- ‘that, further (not very far)’ > Manchu *ča-* ‘over there (not very far)’; *čala* ‘over there, on the other side; previously, before’, *čargi* ‘there, over there, that side, beyond; formerly’, *časi* ‘in that direction, thither, there’; Evenki *čā-* ‘that, further (not very far)’; Lamut / Even *čā-* ‘that, further (not very far)’; Negidal *čā-* ‘that, further (not very far)’; Ulch *ča-* ‘that, further (not very far)’; Oroch *čō-* ‘that, further (not very far)’; Nanay / Gold *ča-* ‘that, further (not very far)’; Oroch *čā-* ‘that, further (not very far)’; Udihe *ča-* ‘that, further (not very far)’; Solon *sā-* ‘that, further (not very far)’. Proto-Mongolian *ča- ‘that, beyond’ > Mongolian *ča-* in: *čadu*, *čayadu* ‘situated on the other or opposite side; beyond’, *čayaduki* ‘lying opposite, situated on the other side; situated beyond’, *čayayur* ‘along or on the other side; farther, beyond’, *čayan-a*, *čiyān-a* ‘farther, beyond, behind, yonder’, *čayanaḥan* ‘a little further or beyond’; Khalkha *cāna* ‘that, beyond’; Buriat *sā-* ‘that, beyond’; Kalmyk *cā-* ‘that, beyond’; Ordos *čāna* ‘that, beyond’; Dagur *čā-š* ‘that, beyond’, *čāši* ‘thither’; Monguor *čagšə*, *tagšə* ‘that, beyond’. Starostin—Dybo—Mudrak 2003:406 *čh- ‘that, beyond (not very far)’; Poppe 1960:26 and 139; Street 1974:10 *čagā ‘there, further away’.
- C. Proto-Eskimo demonstrative stem *cam- ‘down below, down-slope (not visible)’: Alutiiq Alaskan Yupik *camna*; Central Alaskan Yupik *camna*; Naukan Siberian Yupik *samna*; Central Siberian Yupik *saamna*; Sirenik *samna*; Seward Peninsula Inuit *samna*; North Alaskan Inuit *samna*; Western Canadian Inuit *hamna*; Eastern Canadian Inuit *sanna*; Greenlandic

Inuit *sanna*. Note: all of the preceding forms are cited in the absolutive singular. Fortescue—Jacobson—Kaplan 1994:458.

Dolgopolsky 2008, no. 374, *ča demonstrative pronoun stem of distant deixis.

268. Proto-Nostratic root *tʰal- (~ *tʰal-):

(vb.) *tʰal- ‘to strike with a sharp instrument’;

(n.) *tʰal-a ‘strike, blow; sharp instrument’

Derivative:

(n.) *tʰal-m-a ‘breach, opening, gap; crack, fissure, rift; hole’

- A. Afasian: Proto-Semitic *tʰal- ‘to strike with a sharp instrument’: *tʰal-al- ‘to destroy’ > Arabic *talla* ‘to tear down, to destroy, to overthrow, to subvert’, *talal* ‘destruction’, (reduplicated) *tultul* ‘destruction’; Sabaeen *lll* ‘to plunder, to take as booty’; Hebrew *šālāl* [לָלַשׁ] ‘to spoil, to plunder’, *šālāl* [לָלַשׁ] ‘prey, spoil, plunder, booty’; Akkadian *šalālu* ‘to take people into captivity, to take (goods, animals, gods, etc.) as booty; to plunder, to despoil, to loot (cities, regions, etc.)’, *šallu* ‘snatched away, deported, plundered’, *šālilu* ‘plunderer, looter’. Murtonen 1989:423; Klein 1987: 662. Proto-Semitic *tʰal-aš- ‘to break a person’s head’ > Arabic *talaʿa* ‘to break a person’s head’.
- B. Dravidian: Tamil *alai* ‘to beat, to slap’; Gondi *hal-*, *halāsnā* ‘to beat’, *halsnā* ‘to beat’, *halhi-halha ā-* ‘to exchange blows’. Burrow—Emeneau 1984:209, no. 2374. Tuḷu *selè* ‘chink, crack, flaw (as in a stone)’; Telugu *selagu*, *selayu*, *selāgu*, *celagu*, *celavu* ‘to cut’, *sela* ‘hole’; Kurux *calxnā* ‘to open, to uncover’, *calxrnā* (intr.) ‘to open’; Brahui *caling*, *calēnging* ‘to become cracked, split’; Malto *calge* ‘to break or split open’, *calgro* ‘torn asunder’. Burrow—Emeneau 1984:209, no. 2377.
- C. Proto-Kartvelian *čkalk- ‘sharp instrument’ > ‘fishing device’: Georgian *čalk-i* ‘fishing device’; Mingrelian *čolk-i* (< *čkolk- through dissimilation) ‘fishing device’. Fähnrich 2007:538 *čalk-.
- D. Proto-Altaic *čhalu ‘(vb.) to cut, to cut off, to cut down; (n.) sharp instrument’: Proto-Tungus *čal- ‘(vb.) to cut off; to cut into, to engrave; (n.) arrow head’ > Evenki *čalī* ‘arrow head’; Negidal *čōlī-* ‘to cut off’; Manchu *čoli-* ‘to engrave, to carve’; Ulch *čālu-* ‘to cut off; to cut into, to engrave’, *čaylī*, *čāilqa* ‘bed in cross-bow’; Nanay / Gold *čālī-* ‘to cut off; to cut into, to engrave’; Oroch *čali* ‘bed in cross-bow’. Proto-Mongolian *čali ‘sharp; crowbar’ > Written Mongolian *čali* ‘sharp’, *čalir*, *čaril* ‘iron bar for demolishing rocks, breaking ice, etc.; crowbar, wrecking bar’; Khalkha *čalir*, *čaril* ‘iron bar, crowbar’; Buriat *salī-* ‘to be sharp’; Kalmyk *calā*, *cālā* ‘sharp’, *calr*, *cāl* ‘crowbar’; Ordos *čalir* ‘crowbar’. Proto-Turkic *čal- ‘to whet, to sharpen; to cut, to pierce; to hit, to knock (down)’ > Old Turkic (Old Uighur) *čal-* ‘to hit, to knock (down)’; Karakhanide Turkic *čal-* ‘to hit, to knock (down)’; Turkish *çal-* ‘to give a blow to, to

knock (on a door), to strike (the hour), to ring (a bell), to play (a musical instrument), *çalım* ‘strike, blow, swagger’, *çalğı* ‘musical instrument’; Gagauz *čalim* ‘blade’; Azerbaijani *čal-* ‘to hit, to knock (down); to sting, to pierce; to sweep’, *čalyi* ‘a kind of broom’; Turkmenian *čal-* ‘to whet, to sharpen; to sweep; to sting, to pierce’, *čalgı* ‘scythe, whetstone’; Uzbek *čal-* ‘to hit, to knock (down)’, *čalyi urçq* ‘scythe’; Uighur *čal-* ‘to hit, to knock (down)’, *čalya* ‘scythe’; Karaim *cal-* ‘to hit, to knock (down); to mow’, *calqı, calyı* ‘scythe’; Tatar *čal-* ‘to hit, to knock (down)’, *čalyı* ‘scythe’; Bashkir *salı-* ‘to slaughter’; Kirghiz *čal-* ‘to hit, to knock (down); to slaughter’, *čalyı* ‘scythe’; *čalyın* ‘mowing, hay time’; Kazakh *šal-* ‘to trip’, *šalyı* ‘scythe’, *šalyın* ‘mowing, hay time’; Noghay *šal-* ‘to hit, to knock (down); to slaughter; to mow’, *šalyı* ‘scythe’; Sary-Uighur *čal(i)-* ‘to chop’; Oyrot (Mountain Altai) *čalyı* ‘scythe’; Tuva *šalı-* ‘to whet, to sharpen’; Chuvash *sol-* ‘to mow’, *solık* ‘a kind of broom’; Yakut *sālın-* ‘to fall abruptly’. Starostin—Dybo—Mudrak 2003:413—414 *č’alu ‘to sharpen, to cut’. Starostin—Dybo—Mudrak speculate that two separate roots may have to be reconstructed here for Proto-Turkic: (1) *čāl- ‘to knock down’ and (2) *čal- ‘to whet, to sharpen’.

- E. Chukchi-Kamchatkan: Proto-Chukotian *čəlqə- ‘to get worn down or notched’ > Chukchi *rəlqə-* ‘to get worn down (teeth)’; Alyutor *təlq* ‘notch, indentation’. Fortescue 2005:69.

Buck 1949:9.21 strike (hit, beat); 9.22 cut; 9.26 break (vb. trans.); 9.27 split (vb. trans.). Dolgopolsky 2008, no. 387, *čalV ‘to beat, to knock down, to fell’.

269. Proto-Nostratic root **ṽhal-* (~ **ṽhəl-*):

Extended form:

(n.) **ṽhal-m-a* ‘breach, opening, gap; crack, fissure, rift; hole’

Derivative of:

(vb.) **ṽhal-* ‘to strike with a sharp instrument’;

(n.) **ṽhal-a* ‘strike, blow; sharp instrument’

- A. Afrasian: Proto-Semitic **ṽal-am-* ‘to blunt, to make jagged, to break the edge of; to make a breach, gap, or opening (in a wall)’ > Arabic *ṭalama* ‘to blunt, to make jagged, to break the edge of; to make a breach, gap, or opening (in a wall); to defile, to sully’, *ṭalm* ‘nick, notch; breach, opening, gap; crack, fissure, rift’, *ṭālim* ‘dull, blunt’, *mutaṭallim* ‘blunted, blunt; cracking (voice)’.
- B. Dravidian: Tamil *calame, calime, calume, calme, cilume* ‘an orifice, a bore, small pit, hole dug in the dried bed of a river or a dried-up tank, spring of water or a fountain head’; Tuḷu *cilimbi, cilimè, cilmè* ‘a small tank’; Telugu *celama* ‘hole or pit dug for water in the dry bed of a river or rivulet, etc.’; Kuwi *salma* ‘well’. Burrow—Emeneau 1984:209, no. 2367.

Buck 1949:12.85 hole. Dolgopolsky 2008, no. 391a, *čAlVmV ‘orifice, pit’, or ‘breach’.

270. Proto-Nostratic root *tʰar- (~ *tʰar-):

(vb.) *tʰar- ‘to advance to or toward an end or a goal; to attain or achieve an end or a goal, to reach, to come to, to arrive at’;

(n.) *tʰar-a ‘advance, arrival, goal, attainment, end, aim; approach’

A. Proto-Afrasian *tʰar- ‘to advance to or toward, to reach, to come to, to arrive at’: Proto-Semitic *ʔa-tʰar- ‘(vb.) to advance to or toward, to reach, to come to, to arrive at; (n.) trace, vestige’ > Hebrew ʔāšar [אָשַׁר] ‘to go straight on, to advance, to go on, to lead’; Ugaritic ʔtr ‘to march’, ʔtr ‘place’, ʔtryt ‘future, destiny’; Arabic ʔatr ‘track, trace, vestige; sign, mark; impression, effect, action, influence’, ʔitr ‘trace’; Sabaean ʔar ‘after’; Akkadian ašaru, ašru ‘place, site, location, emplacement’ (semantic development as in Sanskrit āśā ‘space, region, quarter of heaven’ [cf. Avestan asah- ‘place, space’] < aś-nó-ti ‘to reach, to come to, to arrive at, to get, to obtain; to master, to become master of’); Geez / Ethiopic ʔasar [አሰር], ʔašar [አሠር] ‘path, trace, track, sole of foot, footprint, sign, mark’; Amharic asār ‘footprint’; Tigre ʔasar ‘trace’; Tigrinya ʔasār ‘trace’. Klein 1987:59; D. Cohen 1970— :37; Murtonen 1989:103; Zammit 2002:68. Diakonoff 1992:82 *ʔačr ‘place’. Berber: Tuareg əsrəd ‘to trace, to mark, to draw a line; to be traced’, təsərriṭ ‘line, stripe; gutter’; Ghadames əsrəd ‘to draw a line’, təsarəṭ ‘furrow’; Mزاب ssərṭəṭt ‘to align, to arrange; to be aligned’, tīsərṭt ‘line, trace’; Wargla əsrəd ‘to align; to be aligned’, tinsərṭt ‘ruler, straightedge’; Kabyle asriḍ ‘stripe’.

B. Proto-Dravidian *cār- ‘to reach, to approach, to go or come near to’: Tamil cār ‘to reach, to approach, to depend upon, to take shelter in, to be near to, to be associated or connected with, to unite, to be related to, to resemble, to lean on, to recline against’, cārvu ‘place, residence, pial, refuge, basis, help, support, means, attachment, vicinity, partiality’, cārpū ‘place, side, help, support, refuge, shelter, attachment, birth, bias, partiality, friendship, approximation, nearness’, cārntōr ‘relatives, friends’, cārttu (cārtti-) ‘to cause to lean, to support, to join, to unite, to connect’, cārcci ‘leaning, uniting, connection, approach, support’, cārppu ‘sloping roof’, cāral ‘drawing near, side, slope of a mountain’, cāri ‘side, wing, row, series’; Malayalam cāruka ‘to lean against, to rely upon, to be attached to, to be shut, to place against, to put on’, cāra ‘bending sideways, nigh, close’, cāral ‘leaning against, inclination, side, declivity of a hill, support’, cārikka ‘to lay against in order to support, to shut the door’, cārnnavar ‘kinsman’, cārcca ‘relation by blood’, cārttu ‘joining, assemblage’, cārttuka ‘to join (as wood), to put on (a dress), to adorn, to throw on’, cārttikka ‘to adorn (as an image with flowers)’; Kota ca-ry ‘near’; Kannaḍa sār ‘to come or go near to, to approach, to be or become near, to join, to

associate oneself to, to come to hand, to be obtained, to come about, to come or go, to be applied or used', *sāraṇ* 'nearness, proximity', *sārke* 'approach, nearness, proximity', *sārcu* 'to make oneself come or go near or near to, to go near, to approach; to make go or come near or near to, to apply, to put to, to put on, to put in'; Telugu *tāru* 'to move about, to wander, to stroll; to approach, to go near', *tār(u)cu* 'to bring together, to join, to procure (as procurer)'. Burrow—Emeneau 1984:215, no. 2460; Krishnamurti 2003:527 **cār*-/**cēr*- 'to go reach'.

- C. Proto-Indo-European **t^her*(*h*h)-/**t^hor*(*h*h)-/**t^hr*(*h*h)-, **t^hre*h_h- [**t^hra*h_hh-]/**t^hro*h_h- > **t^hrā*-/**t^hrō*- 'to advance to or toward an end or a goal, to pass across or over, to pass through; to achieve an end or a goal, to reach, to come to, to arrive at, to overcome, to overtake; to master, to become master of, to control': Sanskrit *tārati* 'to pass across or over, to cross over (a river); to get through, to attain an end or aim; to surpass, to overcome, to subdue, to escape; to acquire, to gain; to contend, to compete; to carry through or over', (causative) *tārayati* 'to carry or lead over or across, to cause to arrive at', *tūrvati* 'to overpower, to excel', *trāyāte* 'to protect, to defend', *tirāḥ* 'through, across, beyond, over'; Latin *intrō* 'to go into, to enter', *trāns* 'over, across'; Hittite (3 sg. pres.) *tar-aḥ-zi* 'to be powerful, to be able, to control, to conquer'. Rix 1998a:575—577 **ter*_h- 'to pass through, to cross over, to traverse'; Pokorny 1959:1074—1075 **ter*-, **terə*-, **t_j*-, **trā*-, **teru*- 'to cross over'; Walde 1927—1932.I:732—734 **ter*-; Mann 1984—1987:1386—1387 **terp*- (**terpō*) 'to put through, to pass through; penetrating, passage, penetration', 1414 **tor*-, 1420 **trājō* 'to go through, to pass, to persist, to last', 1420—1421 **trāt*- 'to cross, to pass', 1442—1443 **t_j*- (**t_j*-, **tər*-, **trə*-) 'through, across'; Watkins 1985:70 **terə*- and 2000:91 **terə*- 'to cross over, to pass through, to overcome' (oldest form **ter*₂-, with variant [metathesized] form **tre*₂-, colored to **tra*₂-, contracted to **trā*-); Gamkrelidze—Ivanov 1984.I:205 **t^h[h]erH*-/**t^h[h]rH*- and 1995.I:176 **t^herH*-/**t^hrH*- 'to cross, to penetrate; to defeat, to conquer, to overcome'; Mallory—Adams 1997:229 **ter*_h- 'to bring across, to overcome'; Mayrhofer 1956—1980.I:480, I:503, and I:520; Ernout—Meillet 1979:699—700 **ter*-, **terə*-; Walde—Hofmann 1965—1972.II:700 **ter*-; De Vaan 2008:627; Kloekhorst 2008b:835—839 **ter*_h-*u*-*ti*, **tr*_h-*u*-*enti*.
- D. Chukchi-Kamchatkan: Proto-Chukotian **ḍərat*- 'to extend' > Chukchi *rə-rərat-at*- 'to spread out (tr.)', *rəratetə wa-lʔən* 'flat, extensive'; Kerek *in-nijaat*- 'to spread'; Koryak *jəjat*- 'to spread out'; Alyutor *trat*- 'to spread out'. Fortescue 2005:74.

Buck 1949:9.32 stretch; 10.54 overtake; 10.55 arrive (intr.) and arrive at, reach (tr.); 10.56 approach (vb.); 12.11 place (sb.); 12.43 near (adv.); 20.41 victory. Bomhard—Kerns 1994:328—329, no. 149.

271. Proto-Nostratic (n.) *tʰarʷ-a ‘bull, bullock, ox’:

- A. Proto-Afrasian *tʰar- ‘bull, bullock, ox’: Proto-Semitic *tʰa/w/r- ‘bull, ox, bullock’ > Akkadian *šūru* ‘bull’; Ugaritic *tr* ‘bull’; Hebrew *šōr* [שׁוֹר] ‘ox, bull’; Palmyrene *twr* ‘bull, ox’; Syriac *tawrā* ‘bull, ox’; Mandaic *taura* ‘bull, ox’; Arabic *tawr* ‘bull, steer, ox’; Sabaeen *twr*, *tr* ‘bull; bull-statuettes’; Mehri *tawr* ‘bull’; Harsūsi *tawer* ‘bull’; Geez / Ethiopic *sor* [ሶር], *śor* [ሶር] ‘ox, bull’; Tigre *sor* ‘ox’. Klein 1987:647; Murtonen 1989:416; Militarev—Kogan 2005.II:307—310, no. 241, Proto-Semitic **tawr*- ~ **čawr*- ‘bull, ox’. Orël—Stolbova 1995:112, no. 477, **čawVr*-/**čur*- ‘bull’. (?) Egyptian *tjy* (if from **try*) ‘bull-calf’. Faulkner 1962:303; Erman—Grapow 1926—1963.5:345; Hannig 1995:943—944. Notes: (1) The possible non-Semitic cognates discussed by Militarev—Kogan (2005. II:307—310, no. 241) are too semantically remote (‘rhinoceros, antelope, kudu, elephant, etc.’) to be given serious consideration. (2) In my opinion, the Semitic proto-form contains a */w/ “triconsonantizer” (on which, see Militarev 2005), as also suggested by Orël—Stolbova (but with a different Egyptian cognate) — “Eg may represent the original form of the HS root while Sem reflects a secondary extension in *-w-.”
- B. Proto-Dravidian **car*- ‘bull, bullock, ox’: Gadba *saṛit* ‘bullock’; Kōṇḍa (Pūḷḡuṛa dial.) *sara* ‘bull’; Kui *sṛahnu* in *sṛahnu kōḍi* ‘bullock’ (*kōḍi* ‘cow, ox’). Burrow—Emeneau 1984:211, no. 2402.
- C. Altaic: Mongolian: Kalmyk *tsar* ‘ox’; Khalkha *šar* ‘ox’; Buriat *sar* ‘ox’. Turkic: Oyrot (Mountain Altai) *čar* ‘ox, work-ox’. Räsänen 1969:100; Sanžeev—Orlovskaya—Ševernina 2015—2018.I:134 and III:141; Radloff 1893—1911.III:1859; Ramstedt 1935:422.

Comment: Proto-Indo-European **thawro-s* ‘aurochs, bull’ (traditional **tauro-s*, **tawro-s*, or similar [cf. Pokorny 1959:1083; Walde 1927—1932. I:711; Mallory—Adams 1997:135; Mann 1984—1987:1369—1370]) is not related to any of the above forms. It is best seen as a loan from Semitic.

Buck 1949:3.21 bull; 3.22 ox; 3.24 calf. Different etymology in Dolgopolsky 2008, no. 409, **č[a]w[ú]/[ry]V* ‘bull, calf’.

272. Proto-Nostratic (n.) *tʰin-a ‘the other or opposite side’; (adj.) ‘different, other’:

- A. Proto-Afrasian **vin*- ‘two’: Proto-Semitic **vin-ay* ‘two’ > Akkadian (dual) *šinā*, *šenā* ‘two’; Arabic *ʔiṭnāni* ‘two’; Sabaeen *ṭny* ‘two’; Qatabanic *ṭnw* ‘two’; Ugaritic *ṭny* ‘two’; Hebrew *šənayim* [שְׁנַיִם] ‘two’; Phoenician *šnm*, *ʔšnm* ‘two’, *šny* ‘second’; Punic *šnm* ‘two’; Imperial Aramaic *tnyn* ‘second’; Aramaic *trēn* ‘two’; Syriac *tərēn* (< **tənēn*) ‘two’; Neo-Aramaic (Mandaic) *tre(n)* ‘two’; Harsūsi *terō* ‘two’; Šheri / Jibbāli *troh* ‘two’;

Mehri *təro*, *troh* ‘two’; Soqotri *trə* ‘two’. Brockelmann 1908.I:484—485; Lipiński 1997:284—285, §35.4; Moscati 1964:116, §§14.1—14.2; Bauer—Leander 1918—1922:622 (gen.-acc.) **bindi*; Gray 1934:68—70, §259, **bindi*; Klein 1987:670; Tomback 1978:327; Zammit 2002:113. (?) Egyptian *snw* (f. *snty*) ‘two’, *snnw* ‘second’; Coptic *snaw* [CNAΥ] (f. *snte* [CNTE]) ‘two’. Hannig 1995:713—714; Faulkner 1962:230; Erman—Grapow 1921:162 and 1926—1963.4:148—150; Gardiner 1957:590; Černý 1976:156; Vycichl 1983:192—193. Note: The Egyptian and Coptic forms may be borrowings from Semitic. The expected Egyptian form would be **tn-*, which may be preserved in *tni* ‘to distinguish, to make a distinction between, to give preference to (another), to be different from’, *tn* ‘difference’, *tnw* ‘distinction’. Hannig 1995:956; Faulkner 1962:305; Gardiner 1957:601; Erman—Grapow 1926—1963.5:374—375 and 5:376. Berber: Tuareg *assn* (f. *sənāt*) ‘two’; Siwa *sən* (f. *snāt*) ‘two’; Nefusa (f. *snāt*) *sən* ‘two’; Ghadames *sin* (f. *sənāt*) ‘two’; Wargla *sən* (f. *sənt*) ‘two’; Mzab *sən* (f. *sənt*) ‘two’; Tamazight *sin* (f. *snāt*) ‘two’; Tashelhiyt / Shilha *sin* (f. *snāt*) ‘two’; Riff *sin* (f. *snāt*) ‘two’; Kabyle *sin* (f. *snāt*) ‘two’; Chaouia *sin* (f. *snāt*) ‘two’; Zenaga *cinan* (f. *ciwat*) ‘two’. Ehret 1995:273, no. 503, **tsan-* or **can-* ‘two’ and 274, no. 505, **tsir(n)-* or **cir(n)-* ‘two’ (‘vowel reconstruction uncertain; PAA *u, *ee, or *oo are also possible here; contrary to earlier views, this is surely a distinct root from #503’); Diakonoff 1988:67 **čVn-* ‘two’ (Semitic **čīn-* > **tīn-*).

- B. Kartvelian: Svan (Upper Bal) *išgen* (< **i-čken*) ‘other, different’.
- C. Altaic: Proto-Mongolian **čina* (noun/adjective, adverb, and postposition) ‘the other or opposite side; beyond, further, on the other side’ > Written Mongolian *činadu* (noun/adjective, adverb, and postposition) ‘the other or opposite (side); adversary, opponent; in that direction, beyond, behind, on the other side’, *činaduda* (adv.) ‘on the other side, beyond; in the future’, *činaysi* (adv.) ‘away from; farther, beyond; from a certain time on, in the future’; Ordos *č’ās* ‘on the other side’; Monguor *čjaḡsə* ‘on the other side, further’.

Dolgopolsky 2008, no. 396, **čīnV* ‘other’.

273. Proto-Nostratic root **v^{hiq}’w-* (~ **v^{heq}’w-*):

(vb.) **v^{hiq}’w-* ‘to swell’;

(n.) **v^{hiq}’w-a* ‘swelling, growth’

- A. Proto-Kartvelian **čkiq’w-* ‘goiter’: Georgian *čiq’v-* ‘goiter’; Mingrelian *čiq’v-*, *čiq’vaq’v-* ‘goiter’; Svan *q’wiq’w-*, *q’uq’w-*, *q’wič-* ‘goiter’. Klimov 1964:220 **čiq’w-* and 1998:257 **čiq’w-* ‘goiter’. Different etymology in Fähnrich 2007:523 [**quq’w-*].
- B. Proto-Uralic **v^{iklā}* ‘swelling, outgrowth (on the skin), pustule’: Finnish *syylä* ‘wart’ (dial. *syplä*); Lapp / Saami *čiw’hle* ‘blotch’; Mordvin *čil’ge*,

sil'gä ‘wart, blotch’; Cheremis / Mari *šəgəl* ‘wart’; Hungarian *süly* ‘fester, ulceration, tumor, outgrowth (in the form of a fig), scurvy’; Selkup Samoyed *seela* ‘wart’. Collinder 1955:117 and 1977:130; Rédei 1986—1988:36—37 **čiklā* (**čüklā*), **čikl'ä* (**čükl'ä*); Décsy 1990:108 **tjiklā* ‘wart’; Aikio 2020:152 **čVklā* ‘wart’.

Bomhard—Kerns 1994:329, no. 150.

274. Proto-Nostratic (n.) **tʰom-a* ‘wild bovine’:

- A. Dravidian: Pengo *homa* ‘bison’; Maṇḍa *hama* ‘bison’; Kui *soma* ‘a wild buffalo’ (= ‘bison’); Kuwi *homma* ‘bison’, *hōma* ‘sambar’. Burrow—Emeneau 1984:247, no. 2849.
- B. Kartvelian: Georgian (Imeruli) *čoma* ‘cattle’.

Buck 1949:3.20 cattle. Dolgopolsky 1998:43, no. 40, **čoma* ‘aurochs, wild bovine’ and 2008, no. 394, **čoma* ‘wild bovine’.

275. Proto-Nostratic root **tʰum-* (~ **tʰom-*):

- (vb.) **tʰum-* ‘to strike, to beat, to pound, to knock; to tire out, to weary; to be or become weak or weary, to fade, to waste away’;
- (n.) **tʰum-a* ‘fatigue, weariness, dullness, stupor’

- A. Proto-Afrasian **tʰum-* ‘to strike, to beat, to pound, to knock; to tire out, to weary; to be or become weak or weary, to fade, to waste away’: Proto-Semitic **tʰam-am-* ‘to lay waste; to waste away; to be devastated, stunned, stupefied, dazed’ > Arabic *ṭamma* (inf. *ṭimām*) ‘to fall from all sides upon, to melt and blend, to waste away, to grow old and weak’; Hebrew *šāmam* [שָׁמַם] ‘to be desolated, deserted, waste, solitary, depopulated; to be stupefied, stunned, astonished, appalled, alarmed, shocked’; Biblical Aramaic *šamam* ‘to be dazed’; Geez / Ethiopic *samama* [ሰመመ] ‘to be silly’; Tigrinya *sāmām bälä* ‘to have the eyes closed (which indicates daze or stupor)’; Amharic *sämmämä* ‘to be in a daze or stupor, to be half-awake’. Murtonen 1989:427; Klein 1987:666; Leslau 1987:502. Proto-Semitic **wa-tʰam-* ‘to lay waste, to devastate; to be devastated, desolate, wasted’ > Arabic *waṭama* ‘to break, to pound, to grind, to crush’, *waṭima* ‘to produce little grass or food’; Sabaeen *wṭm* ‘open country’; Hebrew *yāšam* [יָשַׁם] ‘to be desolate’, *yāšimōn* [יָשִׁימוֹן] ‘waste, wilderness, desolation, wasteland’; Old Aramaic (abs. sg.) *yšmn* ‘desert’. Murtonen 1989:223; Klein 1987:266. Arabic *ṭamila* ‘to be or become drunk’, *ṭamal* ‘drunkenness’. Egyptian *tmsw* ‘injury, harm’. Faulkner 1962:305; Hannig 1995:954; Erman—Grapow 1926—1963.I:370; Gardiner 1957:601. Proto-East Cushitic **tum-* ‘to strike, to forge’ > Burji *tum-áano* ‘to churn, to

- thresh, to hit'; Galla / Oromo *tum-* 'to forge'; Somali *tum-* 'hammer', *tumaal* 'blacksmith'. Sasse 1979:10, 24 and 1982:179.
- B. Dravidian: Tamil *cōmpu* (*cōmpi-*) 'to be idle, indolent, slothful, lethargic, apathetic, dull; to droop, to fade (as persons, plants); to be spoiled, marred', *cōmāru* (*cōmāri-*) 'to be lazy, to shirk'; Telugu *soma* 'swoon, fainting, faintness, torpidity', *sōma* 'fatigue'; Kannaḍa *jompu*, *jōmpu* 'inebriation, stupor, suspension of sensibility, paralysis', *jompisu*, *jōmpisu* 'to get intoxicated, bewildered, stupefied'. Burrow—Emeneau 1984:249, no. 2882.
- C. Proto-Kartvelian **čkum-* 'to calm down': Georgian *čum-* 'to calm down; to fall silent, quiet'; Svan *čkwim* 'quiet, calm'. Fähnrich—Sardshweladse 1995:438 **čum-*; Fähnrich 2007:544 **čum-*; Klimov 1998:258 **čum-* 'to calm down'.
- D. Proto-Indo-European **t^hm-* (secondary full-grade forms: **t^hem-/t^hom-*) 'to strike, to hit, to beat, to stun, to stupefy; to be stunned, stupefied, faint, exhausted, dizzy': Sanskrit *tāmyati* 'to gasp for breath; to be faint, stunned, exhausted'; Prakrit *tammai* 'to be tired', *taṃta-* 'distressed, weary'; Kumaunī *taūro* (< **tamara-*) 'giddiness, dizziness'; Kashmiri *tam* 'fatigue, asthma'; Marathi *tāv*, *tav*, *tavā* (< *tāmas-*) 'giddiness'; Latin *tēmulentus* 'drunken, intoxicated, tipsy', *tēmētum* 'any intoxicating drink'; New High German *dämlich* 'dull, silly, stupid' (Bavarian *damisch*, older *dämisch*), *Dämel*, *Däm(e)lack* 'blockhead, fathead, asshole', *Dämelei* '(tom)foolery'; Russian Church Slavic *tomiti* 'to torture, to torment, to harass, to tire'; Russian *tomít'* [ТОМИТЬ] 'to tire, to wear out; to torment, to torture', *tómnost'* [ТОМНОСТЬ] 'languor'. Rix 1998a:567 **temH-* 'to tire, to exhaust, to weary, to weaken, to wear down; to become faint, weak, exhausted'; Pokorny 1959:1063 **tem-* 'stunned'; Walde 1927—1932.I:720 **tem-*; Mann 1984—1987:1368 **tām-* 'to quieten, to expire; silence, expiry', 1377 **tem-* (**tēm-*) 'to tire, to harass, to exhaust'; Mallory—Adams 1997:549 **tem_h-* 'to be struck, to be exhausted'; Mayrhofer 1956—1980.I:495; Ernout—Meillet 1979:679—680; Walde—Hofmann 1965—1972.II:657; De Vaan 2008:609 **tēmH-* 'intoxication'; Kluge—Mitzka 1967:120; Kluge—Seebold 1989:126.

Sumerian *šum* 'to slaughter'.

Buck 1949:4.76 kill; 4.91 tired, weary; 9.21 strike (hit, beat). Brunner 1969:91, no. 499; Bomhard—Kerns 1994:326—327, no. 147. For the semantic developments in the various Nostratic daughter languages, cf. Greek κοπιάω 'to be tired, to grow weary' < κόπος 'toil, trouble, weariness, suffering', originally 'striking, beating' < κόπτω 'to strike, to beat, to smite, to slaughter, to cut off, to chop off, to hammer, to forge, to pound, to knock; (metaphorical) to tire out, to weary'.

22.11. PROTO-NOSTRATIC *t'y

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
t'y-	t'y-	c-	č'k'-	t'-	t'y-	č-	c-
-t'y-	-t'y-	-c(c)-/ -y-	-č'k'-	-t'-	-t'yt'y-	-č-	-c-

276. Proto-Nostratic root *t'yad- (~ *t'yəd-):

(vb.) *t'yad- 'to strike, to beat, to pound, to hammer';

(n.) *t'yad-a 'hammer'

- A. Dravidian: Tamil *caṭai* 'to flatten (as the head or point of a nail by repeated blows), to clinch, to rivet', *cāṭu* (*cāṭi-*) 'to beat, to trample, to gore, to kill, to destroy', *cāṭṭu* (*cāṭṭi-*) 'to beat, to strike', *cāṭṭam* 'beating'; Kannada *jaḍi* 'to beat, to pound, to crush, to beat into (as mud in a hole), to force in, to ram (as a cartridge), to drive in (as a nail)', (causative *jaḍisu*), *jaḍata*, *jaḍita* 'beating, ramming, forcing in (as a cartridge), driving in (as a nail)'; Tulu *jaḍipini*, *jaḍipuni*, *jaḍiyuni* 'to ram, to stuff, to load (as firearms)', *caḍāyisuni* 'to beat, to strike, to flog', *caḍi* 'whip, stripe'; Telugu *saḍincu* 'to pound, to beat', *saḍimpu* 'pounding, beating', *saḍimpulu* 'rice beaten and cleaned', *jaḍiyu* 'to beat, to hit'; Parji *caḍp-* (*caḍt-*) 'to strike, to beat, to hammer'; Kui *jaṛsa* 'a whip, scourge'; Malto *jāre* 'to shake down, to beat down (as fruits)'. Burrow—Emeneau 1984:203, no. 2300.
- B. Proto-Kartvelian *č'k'ed- 'to hammer in, to nail': Georgian *č'ed-* 'to hammer in, to nail, to shoe', *č'de-* 'notch'; Mingrelian *č'k'ad-*, *č'k'and-* 'to nail, to shoe'; Laz *č'(k')ad-* 'to nail, to shoe'; Svan *šk'āḍ-*, *šk'id-* 'to forge, to hammer something', *mə-šk'id* 'smith'. Klimov 1964:254—255 *čed- and 1998:320 *čed- 'to hammer in, to nail'; Fähnrich—Sardshweladse 1995:537—538 *čed-; Fähnrich 2007:666—667 *čed-; Schmidt 1962:157. Proto-Kartvelian *č'k'ed-il- 'wrought, forged': Georgian *č'edil-* 'wrought, forged'; Mingrelian *č'k'adir-* 'wrought, forged'; Laz *č'k'ader-* 'wrought, forged'. Klimov 1998:320 *čed-il-. Proto-Kartvelian *m-č'k'ed-el- 'smith, blacksmith': Georgian *mč'edel-* 'smith, blacksmith'; Mingrelian *č'k'adu-* 'smith, blacksmith'. Klimov 1998:133 *m-čed-el- 'smith, blacksmith'.

Buck 1949:9.21 strike (beat, hit); 9.49 hammer (sb.); 9.60 smith; 9.61 forge (vb.). Bomhard—Kerns 1994:335—336, no. 158.

277. Proto-Nostratic root *t'yakh- (~ *t'yəkh-):

(vb.) *t'yakh- 'to cut into small pieces, to chop, to chip';

(n.) *t'yakh-a 'chip, small piece'

- A. Dravidian: Tamil *cakkai* ‘chips, small wooden peg’; Kota *cek* ‘chip’; Kannada *cakke, cekke, sakke, sekke* ‘chip’; Tuḷu *cakke, cekkè, cekki* ‘chip, split, splinter’; Telugu *cekku* ‘to pare, to cut the side or rind of, to sharpen (pencil), to engrave, to carve’, *cekka* ‘piece, chip, slice’, *cakku-cēyu* ‘to chop, to cut to pieces, to mince’; Kolami *sek- (sekt-)* ‘to make pointed (piece of wood)’; Naikri *šekk-* ‘to chip, to scrape’; Naiki (of Chanda) *sek-* ‘to plow’; Parji *cekk-* ‘to chip, to scrape, to plane’, *cekka* ‘piece, slice, chip of wood’; Gondi *cekkānā* ‘to cut’, *cekka* ‘piece’; Konda *sek* ‘to plane, to fashion things out of wood’; Kuwi *sekali* ‘to scrape (with a hoe)’, *seka* ‘piece’; Kuṛux *aktā, aktī* ‘a slice’, *akta’ānā* ‘to cut in slices’, *ceglā* ‘chip, splinter’; Malto *caka* ‘a slice’, *cagje* ‘to chop up (as meat)’. Burrow—Emeneau 1984:239, no. 2748.
- B. Proto-Indo-European **t’akh-* ‘to cut or tear into shreds’: Gothic *tahjan* ‘to tear apart’; Old Icelandic *tág* ‘stringy root, fiber’; Norwegian (dial.) *tæja* ‘to fray (of a garment)’; Middle Low German *tagge* ‘edge, prong’; Middle High German *zāch, zāhe* ‘wick’ (New High German *Zacke, Zacken* ‘[sharp] point, peak, jag; spike, prong, tine [of a fork]; tooth [of a saw or comb]; notch, indentation’). Probably also Sanskrit *dāsā* ‘fringe of a garment, wick’. Pokorny 1959:191 **dek-* (: **dōk-, *dēk-*) ‘to rip to pieces’; Walde 1927—1932.I:785 **dēk-, *dāk-, *dek-* (: **dōk-, *dēk-*); Mann 1984—1987:131 **daḱ-* ‘to tear, to bite, to gnaw’, 131 **daḱnos, -ā* (**daḱ-*) ‘grip, bite; clamp, tongs’; Watkins 1985:11 **dek-* and 2000:15 **dek-* referring to such things as ‘fringe, lock of hair, horsetail’; Mayrhofer 1956—1980.II:27; Orël 2003:398 Proto-Germanic **taǵaz*; Kroonen 2013:504 Proto-Germanic **tagla-* ‘hair’; Feist 1939:470—471 **dek-*; Lehmann 1986:338; De Vries 1977:580; Falk—Torp 1903—1906.II:349; Torp 1919:829; Kluge—Mitzka 1967:871; Kluge—Seebold 1989:804 (origin unclear).
- C. Eskimo-Aleut: Proto-Yupik-Sirenik **caki(tə)-* ‘to chop or cut into’ > Alutiiq Alaskan Yupik *cakitə-* ‘to hew, to carve’; Central Alaskan Yupik *caki-* ‘to cut out a small piece, to plane (wood)’, *cakitə-* ‘to chop, to cut into accidentally’, *caki(y)un* ‘chopping device’; Sirenik *saki(tə)-* ‘to chop, to dig with front paws (animal)’. Fortescue—Jacobson—Kaplan 1994:65.

Buck 1949:28 tear (vb. tr.); 12.56 small, little; 12.62 narrow. Bomhard—Kerns 1994:336—337, no. 159; Bomhard 1996a:159—160, no. 159.

278. Proto-Nostratic root **t’yal-* (~ **t’yəl-*) and/or **t’yil-* (~ **t’yel-*):
 (vb.) **t’yäl-* and/or **t’yil-* ‘to overshadow, to cover over, to make dark’;
 (n.) **t’yäl-a* and/or **t’yil-a* ‘shade, shadow; covering; darkness’
- A. Proto-Afrasian **t’yäl- ~ *t’yil-* ‘(vb.) to overshadow, to cover over, to make dark; (n.) shade, shadow; covering; darkness’: Proto-Semitic **t’yäl-al-* ‘to overshadow, to cover over’, **t’yill-* ‘shade, shadow’ > Hebrew *šālāl*

[ḥḥ] ‘to be or grow dark’, *ṣēl* [ḥḥ] ‘shade, shadow’; Aramaic *ṭəlal* ‘to overshadow’; Akkadian *ṣullulu* ‘to provide shade, to roof’, *ṣillu* ‘shade, shadow’; Arabic *zalla* ‘to shade, to overshadow, to screen, to shelter, to protect’, *zill* ‘shadow, shade; shelter, protection’, *zulla* ‘awning, marquee, canopy, sheltering hut or tent, shelter’; Ugaritic *ṭll* ‘shade’; Sabaean *ṭll* ‘to roof over’; Šheri / Jibbāli *ḍell* ‘to give shade’; Mehri *aḍləl* ‘to make shade (by erecting a sunshade)’; Geez / Ethiopic *ṣallala*, *ṣalala* [ṣḏḏ] ‘to shade, to make shade, to overshadow, to be shady, to darken, to conceal, to cover, to screen from view, to blind (an eye), to deafen, to protect’, *maṣallat* [ṣḏḏḏḏ] ‘sunshade, shady place, tent, booth, tabernacle’; Tigre (*ʿa*)*ṣlāla* ‘to give shade’, *ṣəlal* ‘shadow, darkness’; Tigrinya *ʿaṣlālā* ‘to shelter oneself’, *ṣəlal* ‘shade, shadow’; Amharic *ṭällälä* ‘to shade, to curtain off’, *ṭəla* ‘shade, shadow’; Gafat *čəläya* ‘shade, shadow’; Argobba *ṭəla* ‘shade, shadow’; Gurage (*aṭ*)*ṭillälä* ‘to curtain off’; Harari *čāya* ‘shade, shadow, luxury’ (Galla / Oromo loan). Murtonen 1989:359; Klein 1987:548; Leslau 1963:52, 1979:618, and 1987:555; Zammit 2002:276—277. Proto-Semitic *t'y_{al}-am- ‘to be or become dark’ > Arabic *ṣalima* ‘to be or grow dark’, *zulma*, *ṣalām* ‘darkness, duskiness, gloom, murkiness’, *muṣlim* ‘dark, dusky, gloomy, tenebrous, murky’; Akkadian *ṣalāmu* ‘to become dark, to turn black’; Harsūsi *məḍlem* ‘dark’; Šheri / Jibbāli *eḍlīm* ‘to become dark’; Mehri *həḍlāwm* ‘to go dark’; Geez / Ethiopic *ṣalma* [ṣḏḏ], *ṣalama* [ṣḏḏḏ] ‘to grow dark, to be darkened, to be black, to be enveloped in mist, to grow blind (eyes), to be obscured (face)’, *ṣalmata* [ṣḏḏḏḏ] ‘to be dark, to grow dark’ (denominative form *ṣəlmat* [ṣḏḏḏḏ] ‘darkness, darkening, eclipse’); Tigre *ṣalma* ‘to be dark’, *čälma* ‘to be dark-colored’; Tigrinya *ṣällämä* ‘to be dark’; Amharic *čällämä* ‘to be dark’; Gurage *čällämä* ‘to be dark’, (Muher, Soddo) *čälläma* ‘darkness’, (Selti) *čilma* ‘darkness’; Gafat *ṣillämä* ‘to be dark’; Harari *čəlāma* ‘to be dark’, *čilma* ‘darkness; dark’. Leslau 1963:51, 1979:180, and 1987:556; Zammit 2002:277. Cushitic: Bilin *čaläl* ‘to give shade’, *čalälä* ‘shade’, *čalām* ‘to be dark’, *čalämä*, *čilmä* ‘darkness’; Galla / Oromo *č’āya* (with palatalization of the *l*) ‘shade, shadow’. (According to Leslau 1987:555 and 556, the preceding Cushitic forms are loans from Ethiopian Semitic.) Appleyard 2006:52; Reinisch 1887:171. Highland East Cushitic: Sidamo *c’aal*:- *c’aal-šiiš* ‘to throw a shadow’, *c’aale* ‘shade, shadow’. Hudson 1989:356. North Cushitic: Beja / Beḍawye *dūluma* ‘darkness’. Reinisch 1895:66. North Bauchi Chadic **dīm* ‘darkness’ > Siryanci *dən-dələmi* ‘darkness’; Miyanci *dən-dələm* ‘darkness’; Jimbinanci *dan-dilam* ‘darkness’. Skinner 1977:17. Central Chadic **čilVm*- ‘dark, black’ > Buduma *čilim* ‘dark’; Gulfey *selem* ‘black’. Omotic: Aari *č’elmi* ‘black’. Diakonoff 1992:19 **čVI* ‘dark’, 86 **čall*- ‘shade, shadow’; Orël—Stolbova 1995:117—118, no. 503, **čal*-/**čil*- ‘shadow’ and 119, no. 511, **čilam*- ‘to be dark’; Ehret 1995:293, no. 555, **c’il*- ‘to darken, to become dark colored’, and 293, no. 556, **c’ilm*-/**c’alm*- ‘black’.

- B. Proto-Indo-European **t'el-/t'ol-* 'to cover over, to stretch over': Old Icelandic *tjald* 'tent', *tjalda* 'to pitch a tent'; Swedish *tjäll* 'tent'; Norwegian *tjeld* 'tent'; Old English *be-telden* 'to cover', *(ge)teld* 'tent', *teldian* 'to spread (tent)', *teldsele*, *tyldsyle* 'tent', *teldsticca* 'tent-peg', *teldwyrhta* 'tent maker'; Middle Low German *telt* 'tent'; Old High German *zelt* 'tent, vault, canopy' (New High German *Zelt*). Pokorny 1959:194—196 **del-*, (**dol-*), **delə-* 'to split'; Walde 1927—1932.I:809—812 **del-*; Mann 1984—1987:139—140 **delt-* 'to flatten, to stretch'; Watkins 2000:15—16 **delə-* 'to split, to carve, to cut'; Orël 2003:404 Proto-Germanic **teldan*; Kroonen 2013:512—513 Proto-Germanic **telda-* 'drape, tent', **teldan-* 'to cover'; De Vries 1977:591; Falk—Torp 1903—1906.II:357; Torp 1919:790; Kluge—Mitzka 1967:879; Kluge—Seebold 1989:808—809. Semantic development as in Arabic *zulla* 'awning, marquee, canopy, sheltering hut or tent, shelter', cited above. Old High German *zelto* 'a small, flat cake' (New High German [dial.] *Zelte[n]*). Kluge—Mitzka 1967:879 Proto-Germanic **teld-* 'to stretch over, to spread out over'; Kluge—Seebold 1989:809 Proto-Germanic **teld-a-*.
- C. Proto-Gilyak / Nivkh **čalu* 'mist, fog': Amur *čhəlu* 'mist, fog'; North Sakhalin *čhəlu* 'mist, fog'; East Sakhalin *čhəlu* 'mist, fog'; South Sakhalin *čalu* 'mist, fog'. Fortescue 2016:29. Assuming semantic development as in Geez / Ethiopic *šalma* [ጸለሙ], *šalama* [ጸለሙ] 'to grow dark, to be darkened, to be black, to be enveloped in mist, to grow blind (eyes), to be obscured (face)', cited above.

Buck 1949:1.62 darkness; 1.63 shade; 7.14 tent. Bomhard—Kerns 1994:332—333, no. 153; Möller 1911:41—42.

279. Proto-Nostratic root **t'yam-* (~ **t'yəm-*):

(vb.) **t'yam-* 'to be sour, bitter';

(n.) **t'yam-a* 'that which is sour, bitter, rotten, or spoiled'

- A. Proto-Afrasian **t'yam-* 'to be sour, bitter': North Omotic: Wolaitta / Wellamo *č'am-* 'bitter'; Kefa / Kaffa *č'āmm-* 'to be bitter'; Mocha *č'ammo* 'bitter'; Anfillo / Southern Mao *s'āmo* 'bile'.
- B. Dravidian: Naiki (of Chanda) *sam-* 'to be rotten'; Parji *cam-* 'to go bad, to become rotten', *camip-* (*camit-*) 'to make to go rotten'; Gadba (Ollari) *sam-* 'to become rotten', (Salur) *cammi cen-* 'to rot (as fruit)'. Burrow—Emeneau 1984:206, no. 2341. Note: Burrow—Emeneau also list forms such as Tamil *avi* 'to ferment (as decayed fruit, vegetable matter, manure heaps)', *avical* 'that which is decayed'; Malayalam *aviyuka* 'to rot, to spoil (as fruits laid on a heap)'; Kannaḍa *avi* 'to rot, to be spoiled or damaged'; Telugu *aviyu* 'to rot'; etc. Dolgopolsky (2008, no. 423) does not include these forms. Kuṛux *canxnā* 'to turn stale (of cooked things, meat or

vegetables), to turn moldy (bread)'; Malto *cange* 'to be or become rotten (of cooked food)', *cangro* 'rotten'. Burrow—Emeneau 1984:212, no. 2424.

- C. Proto-Kartvelian *č'k'max- 'sour' (> *m-č'k'max- > Georgian-Zan *mč'k'axe-): Georgian *mč'ax-e* 'very sour'; Laz *mč'ox-a* 'sour'. Klimov 1998:133 *mčaxe- 'sour'; Fähnrich—Sardshweladse 1995:254 *mčax-; Fähnrich 2007:305—306 *mčax-. Note: In Zan, -č'k'- > -č'- when followed by a velar consonant in the word — in this case, -x-.

Illič-Svityč 1971—1984.I:209—210, no. 54, *čäma 'bitter'; Dolgopolsky 2008, no. 423, *čäm[V]χV 'sour, bitter'. Illič-Svityč and Dolgopolsky include Uralic (Finno-Ugrian) forms in this etymology as well. However, the initial affricate of the reconstructed Proto-Finno-Ugrian form (*čem3 'sour; to become sour' [cf. Rédei 1986—1988:56—57]) is not what would be expected (*č-) on the basis of the forms from the other Nostratic daughter languages cited above. The vowel of the initial syllable (*e) is also problematic. Consequently, the Uralic forms are not included here. A better comparison would be with Proto-Kartvelian *žm- 'salt', *žm-ar- 'vinegar', with both the Uralic and Kartvelian forms going back to Proto-Nostratic *žem- 'sour, bitter, pungent, sharp'.

280. Proto-Nostratic root *t'yar- (~ *t'yər-):

(vb.) *t'yar- 'to be or become stuck, joined, or bound together; to be firmly or strongly attached';

(n.) *t'yar-a 'firmness, solidity, strength'; (adj.) 'firm, solid, strong, steadfast'

Derivative:

(vb.) *t'yar- 'to be rough, coarse, rigid, stiff, hard';

(n.) *t'yar-a 'that which is rough, coarse, rigid, stiff, hard'; (adj.) 'rough, coarse, rigid, stiff, hard'

- A. Proto-Afrasian *t'yar- 'to be or become stuck, joined, or bound together; to be firmly or strongly attached': Proto-Semitic *t'yar-ab- 'to be or become stuck, joined, or bound together; to be firmly or strongly attached' > Arabic *zariba* 'to stick, to adhere', *zurriba* 'to become hard, strong; to be firm, solid'. Proto-Semitic *t'yar- 'to be strong, firm, powerful' > Gurage (Selṭi) *ṭirāññe* 'to be strong, powerful, vigorous, firm, resistant, courageous, brave', (Chaha) *ṭārānā* 'strong, powerful, vigorous'; Amharic *ṭāṭṭārā* 'to be strong'; Gafat *šāwwārā* 'to be strong, rigid'; Argobba *teṭṭārā* 'to be strong'. Leslau 1979:631—632. Egyptian *dri* 'hard, firm'; Coptic *gro* [xpo], *čro* [spo] 'to become strong, firm, victorious', *gōōre* [xowpe] 'strength; to be strong'. Hannig 1995:1012; Faulkner 1962:323; Erman—Grapow 1921:221; Vycichl 1983:330; Černý 1976:319.

- B. Proto-Indo-European *t'er-w/u-; *t'r-ew-/*t'r-u-, *t'r-ew-H-/*t'r-u-H- (> *t'r-ū-) 'to be firm, solid, strong, steadfast': Gothic *triggws* 'true', *trauan* 'to trust'; Old Icelandic *tryggr* 'trustworthy, faithful', *trú* 'faith, belief', *trúa* 'to believe; to believe in, to trust'; Old English *trēow* 'truth', *trīewan*

‘to trust in’, (ge)trīewe ‘faithful, trustworthy, honest’, trūwian ‘to trust in (person)’, trymman, try(m)ian ‘to make strong, to build strongly’, trymp ‘firmness, support’, trum ‘firm, substantial, strong, healthy’; Old Frisian triūwe, triōwe ‘faithfulness’, triūwi, triowe ‘faithful, trustworthy’; Old Saxon treuwa ‘faithfulness’, triuwi ‘faithful, trustworthy’; Old High German triuwa ‘faithfulness’ (New High German Treue), gi-triuwi ‘faithful, trustworthy’ (New High German treu), (ga)trūēn, (ga)trūwēn ‘to trust’ (New High German trauen); Old Irish derb ‘certain’; Lithuanian drūtas, driūtas ‘strong, firm’; Old Prussian druwis ‘belief’. Feist 1939:479—480 *dreu- and 480 *dreu-uo-; Lehmann 1986:346—347 *derw-, *drewH- and 347; Orël 2003:410 Proto-Germanic *trewwaz, 410 *trewwipō, 410 *trewwjanan, 410 *trewwō, 410 *trewwōn; Kroonen 2013:523 Proto-Germanic *trewwu- ‘loyal, trustworthy’ and 523 *trūēn- ‘to trust’; De Vries 1977:599; Onions 1966:946; Klein 1971:786 *dru- ‘strong, faithful’; Boutkan—Siebinga 2005:414; Kluge—Seebold 1989: 737 and 739; Kluge—Mitzka 1967:786—787 and 789 *dreu-uo-; Fraenkel 1962—1965.I:107; Smoczyński 2007:128 *druH-tó-, *dreuH-.

Buck 1949:15.74 hard; 16.65 faithful. Bomhard—Kerns 1994:330—331, no. 151; Möller 1911:48.

281. Proto-Nostratic root *tʷar- (~ *tʷər-):

(vb.) *tʷar- ‘to be rough, coarse, rigid, stiff, hard’;

(n.) *tʷar-a ‘that which is rough, coarse, rigid, stiff, hard’; (adj.) ‘rough, coarse, rigid, stiff, hard’

Derivative of:

(vb.) *tʷar- ‘to be or become stuck, joined, or bound together; to be firmly or strongly attached’;

(n.) *tʷar-a ‘firmness, solidity, strength’; (adj.) ‘firm, solid, strong, steadfast’

A. Dravidian: Tamil caracara ‘to be rough (of surface)’, caral, caral, caraḷai ‘gravel, laterite’, caracarappu ‘roughness (of surface or edge)’, caruccarai ‘roughness, ruggedness’, curacura ‘to be rough, to have a rough surface’, curacurappu ‘roughness (as of woolen cloth)’; Malayalam caral, carakkallu ‘gravel’; Kannaḍa caralu ‘small rounded pebbles’; Tuḷu caratè ‘what is coarse, leavings or stalks’, jari ‘grit, granule, sand’; Kui srogu ‘a rough surface, coarse sand or pebbles; rough, coarse, uneven’, jrogu ‘rough, gravely’, srāmbu ‘gravel’. Burrow—Emeneau 1984:207, no. 2354.

B. Proto-Indo-European *tʷs- ‘rough, coarse’: Sanskrit dṛśád- ‘rock, large stone, mill-stone’; Czech drsný ‘rough, harsh’; Polish dziarstwo ‘gravel’; Slovenian drstev ‘gravel, sand’. Mann 1984—1987:164—165 *dṛs- ‘hard, harsh; hardness, harshness’; Mayrhofer 1956—1980.II:61.

C. Proto-Uralic *v̥ara ‘hard, rigid, stiff’: Lapp čāres ‘coarse (of wool), stiff (of bread)’; Votyak / Udmurt čuryt ‘hard, rigid, stiff’; Zyrian / Komi éoryd,

čoryt 'hard, strong'; Selkup Samoyed (Northern) *šaral*, *šarajek* 'hard, tough'. Collinder 1955:7 and 1977:29; Rédei 1986—1988:30 **čar3*; Décsy 1990:109 [**tjara*] 'hard, stable'; Aikio 2020:103—104 **čara-* 'dry; to harden'.

Buck 1949:1.44 stone, rock; 15.74 hard; 15.76 rough. Bomhard—Kerns 1994:331—332, no. 152. Different etymology in Illič-Svityč 1971—1984.I: 205, no. 47, **čara* 'hardened crust'.

282. Proto-Nostratic (n.) **t'yar-a* 'poplar tree, wood of the poplar':

Perhaps derived from:

(vb.) **t'yar-* 'to be or become stuck, joined, or bound together; to be firmly or strongly attached';

(n.) **t'yar-a* 'firmness, solidity, strength'; (adj.) 'firm, solid, strong, steadfast'

- A. Proto-Afrasian **t'yar-* 'poplar tree, wood of the poplar': Proto-Semitic **t'yarb-* 'poplar tree, wood of the poplar' > Akkadian *šarbatu*, *šerbatu*, *šerbetu* 'Euphrates poplar, poplar wood', *šarbu* 'Euphrates poplar (only in divine names)', (adj.) *šarbū* 'pertaining to the poplar'; Šheri / Jibbāli *ḏarb* 'wood, piece of wood'; Harsūsi *ḏarb* 'wood, piece of wood, peg'; Mehri *ḏarb* 'small piece of wood'. (?) Egyptian *ḏrd* 'leaf (of tree)'. Faulkner 1962:324; Hannig 1995:1013; Erman—Grapow 1926—1963.5:603—604; Gardiner 1957:604.
- B. Dravidian: Kuṛux *cār* 'a tree of the reed kind, which grows to a height of seven or eight feet (its wood is very hard and serves to make penholders and arrow-shafts); arrow-shaft, arrow'; Malto *cāru* 'arrow'. Burrow—Emeneau 1984:216, no. 2469.
- C. Proto-Altaic **čāri-kV* 'a kind of foliage tree': Proto-Tungus **žari-ka* 'hawthorn' > Ulch *žaraqta* 'hawthorn'; Nanay / Gold *žariqta* 'hawthorn'; Oroch *žarakta* 'hawthorn'. Tsintsius 1975—1977.I:246. Proto-Mongolian **čirgay* 'dense, tall (forest)' > Mongolian *čiryai* 'dense, tall, virgin (of forest)'; Khalkha *čargay* 'dense, tall (forest)'; Buriat *šerengi* 'thin growth, pinery'; Kalmyk *čiryā* 'dense (branches); a kind of tree or bush'. Proto-Turkic **derek* 'poplar; tree' > Karakhanide Turkic *terek* 'poplar'; Turkish (dial.) *tirek* 'tree'; Turkmenian *derek* 'poplar'; Uzbek *terak* 'poplar'; Uighur *deräk* 'poplar'; Karaim *terak* 'tree'; Tatar *tirek* 'poplar'; Bashkir *tiräk* 'poplar'; Kirghiz *terek* 'poplar'; Kazakh *terek* 'poplar; tree'; Noghay *terek* 'poplar'; Tuva *terek* 'poplar'; Chuvash *tirek* 'poplar'; Yakut *tirex* 'poplar'. Starostin—Dybo—Mudrak 2003:393 **čārikV* 'a kind of foliage tree'.

Buck 1949:1.42 tree.

283. Proto-Nostratic root **tʷar-* (~ **tʷər-*):(vb.) **tʷar-* ‘to cut, to split’;(n.) **tʷar-a* ‘cut, split, rip, tear; damage’; (adj.) ‘cut, split, ripped, torn’

- A. Proto-Elamo-Dravidian **car-* ‘to tear, to rend, to split’: Middle Elamite *sa-ri-* ‘to destroy, to demolish’; Royal Achaemenid Elamite *sa-ri-* ‘to destroy’. McAlpin 1981:99; Hinz—Koch 1987.II:1065. Proto-Dravidian **car-* ‘to tear, to rend, to split’: Parji *car-* ‘to be torn’, *carip-* (*carit-*) ‘to tear’; Gondi *sarrānā* ‘to be split (as wood), to be torn’, *sarrahtānā* ‘to tear’; Kuṛux *carrnā* ‘to tear, to rend, to dilacerate with the teeth, to plow for the first time in the year’; Malto *care* ‘to cut (as with teeth or scissors)’. Burrow—Emeneau 1984:212, no. 2416.
- B. Proto-Kartvelian **čʰkʰer-/ *čʰkʰr-* ‘to cut, to chop, to fell’: Georgian *čʰer-/ čʰr-* ‘to cut, to chop, to fell’; Mingrelian *čʰkʰər-, čʰkʰir-* ‘to cut; to reap, to mow’; Laz *čʰkʰi(r)-, čʰkʰor-* ‘to cut’; Svan [r-] in *lā-r-e* ‘meadowland, meadow’. Schmidt 1962:158; Klimov 1964:255—256 **čr-* and 1998:321 **čer-* : **čr-* ‘to cut, to chop, to fell’; Fähnrich—Sardshweladse 1995:536—537 **čar-/ *čr-*; Fähnrich 2007:665—666 **čar-/ *čr-*. Proto-Kartvelian **čʰkʰr-il-* ‘cut, chopped’: Georgian *čʰril-* ‘cut, slit, break’ (Old Georgian *močʰril-* ‘cut off’); Mingrelian *čʰkʰiril-* ‘cut’; Laz *čʰkʰire(r)-* ‘cut’. Klimov 1998:322 **čr-il-* ‘cut, chopped’. Proto-Kartvelian **mo-čʰkʰr-il-* ‘cut off’: Georgian *močʰril-* ‘cut off’; Mingrelian *močʰkʰiril-* ‘cut off’. Klimov 1998:124 **mo-čr-il-* ‘cut off’.
- C. Proto-Uralic **vārki-* ‘to split open, to rend’ > Finnish *särke-* ‘to break, to smash, to shatter’; Hungarian *sért-* ‘to injure, to damage, to harm, to hurt’; (?) Cheremis / Mari (Western) *šärye*, (Eastern) *šerye-* ‘to open, to disperse, to scatter’. Rédei 1986—1988:32—33 **čärke-*; Aikio 2020:118 **čärki-* ‘to chop’; Zhivlov 2023:166 Proto-Uralic **čärki-* ‘to chop’.
- D. Chukchi-Kamchatkan: Proto-Chukotian **ðara-* ‘to cut up’ > Chukchi *rəra-* ‘to cut up or through’, *rəramaw-* ‘to cut up meat or tobacco’; Kerek *icca-* ‘to cut up meat, carcass’; Koryak *cəca-* (medial *-cca-*) ‘to cut up’; Alyutor *tra-* ‘to cut up’. Fortescue 2005:73—74.

Buck 1949:9.28 tear (vb. tr.). Illič-Svityč 1971—1984.I:209, no. 53, **čarA-*; Bomhard—Kerns 1994:334, no. 156; Dolgopolsky 2008, no. 431, **č[a]rV* ‘to cut’.

284. Proto-Nostratic root **tʷar-* (~ **tʷər-*) (onomatopoeic):(vb.) **tʷar-* ‘to make a noise’;(n.) **tʷar-a* ‘(rustling or rumbling) noise’

- A. Dravidian: Tamil *cara-car-eṇal* onomatopoeic expression of rustling (as of dry leaves) or of gliding along, moving without impediment, *caracara* ‘to rustle (as dry leaves)’, *caracarappu* ‘rustling’; Malayalam *śara* ‘a rustling

sound'; Kota *car cur in-* 'to make noise (as a snake's motion)', *cor cor in-* (*id-*), *cork cork in-* (*id-*) 'to make noise in walking over leaves'; Kannaḍa *sara sara* 'the sound of rustling (produced by snakes, birds, etc. in leaves, bushes, etc.)'. Burrow—Emeneau 1984:207—208, no. 2355.

- B. Proto-Kartvelian *č'k'r- 'to squeak, to chirp': Georgian *č'r-ial-* 'to squeak'; Mingrelian [*č'k'ir-*] 'to chirp, to squeak'; Laz *č'k'ir-al-* 'to squeak'; Svan *č'k'ər-mən-* 'to chirp'. Klimov 1964:256 *čr- and 1998:322 *čr- 'to chirp'; Fähnrich 2007:670—671 *čr-; Fähnrich—Sardshweladse 1995:540 *čr-. Proto-Kartvelian *č'k'ṛč'k'in- 'to chirp, to squeak': Georgian *č'rč'in-* 'to chirp'; Mingrelian *č'k'irč'k'in-*, *č'k'ərč'k'an-* 'to chirp, to squeak'. Klimov 1964:256 *črč'in- and 1998:323 *črč'in- 'to chirp, to squeak'.
- C. Proto-Indo-European *t'er-/t'or-/t'ṛ- 'to make a noise; to hum, to buzz, to rattle': Greek (Hesychius) δάπδα 'bee'; Old Irish *dordaid* 'to hum, to buzz'; Welsh *dwrdd* 'rumble, stir'; Lithuanian *dardėti* 'to rattle, to clatter'; Slovak *drdlat'* 'to mutter, to hum, to buzz'; Slovenian *drdrāti* 'to rattle'. Walde 1927—1932.I:795 (*der-); Mann 1984—1987:163 *dṛd- 'to shake, to rattle', 168 *durdurō, -iō (*durdər-) 'to hum, to drone, to mutter, to grunt, to rumble'; Pokorny 1959:203—204 (*der-), (reduplicated) *derder-, *dṛdṛ-, *dor-d-, *dṛ-d- 'to grumble'; Chantraine 1968—1980.I:252; Beekes 2010.I:303; Frisk 1970—1973.I:349; Fraenkel 1962—1965.I:83; Smoczyński 2007.1:93. (?) Proto-Indo-European (*t'er-/t'or-/t'ṛ- 'to chirp' >) *t'rask'o-s 'a song-bird': Breton *drask* 'thrush'; Old Church Slavic *drozgb* 'finch'. Mann 1984—1987:159 *drasgos 'a song-bird'.

Bomhard—Kerns 1994:337, no. 160.

285. Proto-Nostratic (n.) *t'yaw-a 'bad thing, evil, wickedness'; (adj.) 'bad, evil':

- A. Afrasian: Egyptian *ḏw* 'bad, evil', *ḏw-t* 'bad thing, evil, wickedness', *ḏwy* 'evil'; Coptic *ḡowt* [Ⲭⲟⲟϣⲧ] 'base, lowly, rejected'. Hannig 1995:1000; Faulkner 1962:320; Gardiner 1957:603; Erman—Grapow 1921:219 and 1926—1963.5:545—549; Crum 1939:794; Vycichl 1983:333; Černý 1976:322.
- B. Proto-Indo-European *t'ews-/t'ows-/t'us- 'bad, evil; (prefix) ill-, un-, mis-': Sanskrit *doṣa-h* 'crime, fault, vice, want', *dúṣyati* 'to become bad, defiled; to be wrong', (prefix) *duṣ-*, *dur-*; Avestan (prefix) *duš-*, *duž-*; Greek (prefix) *δυσ-*; Gothic (prefix) *tuz-*; Old Icelandic (prefix) *tor-*; Old English (prefix) *tor-*; Old High German (prefix) *zur-*; Old Irish (prefix) *du-*, *do-*; Armenian (prefix) *t-*; Old Church Slavic (prefix) *dvž-* in *dvž-dv* 'rain'. Walde 1927—1932.I:816 *dus-; Pokorny 1959:227 *dus- 'evil, bad'; Mann 1984—1987:144 *deus- 'evil', 144 *deusən-, *deusn- 'evil, harm', 169 *dus-, *dusi- (prefix) 'ill-, mis-, hard-, un-', 170 *dusnos, -ā 'evil, sad; evil, sadness, hate'; Watkins 1985:15 *dus- and 2000:21 *dus-

‘bad, evil; mis- (used as prefix)’; Gamkrelidze—Ivanov 1984.II:780 **t’us-* and 1995.I:683 **t’us-* ‘bad’; Mallory—Adams 1997:43 **dus-* ‘bad’ (as prefix); Mayrhofer 1956—1980.II:55—56 and II:67—68; Frisk 1970—1973.I:425 **dus-*; Hofmann 1966:65; Chantraine 1968—1980.I:302 **dus-*; Boisacq 1950:204—205 **dus-*; Beekes 2010.I:359—360 **dus-*; Feist 1939:484; Lehmann 1986:349—350; De Vries 1977:595.

Buck 1949:16.72 bad. Bomhard—Kerns 1994:333, no. 154.

286. Proto-Nostratic root **t’yij-* (~ **t’yej-*):

(vb.) **t’yij-* ‘to think, to consider’;

(n.) **t’yij-a* ‘thought, consideration, idea’

- A. Proto-Afrasian **t’yij-* ‘to think’: Proto-Semitic **t’yan-an-* ‘to think’ > Arabic *ẓanna* ‘to think, to believe, to assume, to deem, to consider’, *ẓann* ‘opinion, idea, belief’; Ḥarsūsi *ḍen* ‘to think, to imagine’; Mehri *həḍnāwn* ‘to imagine; to have doubts, to be suspicious of’, *ḍān* ‘thought’; Šheri / Jibbāli *ḍinn* ‘to have an idea, to think’. Zammit 2002:277—278. Central Cushitic: Proto-North Agaw **zij-* ‘(vb.) to tell, to relate; (n.) story, tale, conversation’ > Xamir *ǧiṇa* ‘gossip, news, story’, *ǧij-* ‘to tell, to relate’; Quara *ǧəṇa* ‘story, tale’; Bilin *ǧiṇā* ‘conversation’, (denominative) *ǧiṇ-ist-* ‘to talk, to converse’. Appleyard 2006:76 and 132; Reinisch 1887:182.
- B. Proto-Indo-European **t’en-s-/t’ij-s-* (secondary *o*-grade form: **t’on-s-*) ‘great mental power, wise decision’: Sanskrit *dāmsas-* ‘a surprising or wonderful deed, marvelous power or skill’; Avestan *dāhišta-* ‘very wise’, *dāh-* ‘to be mighty, to be wise’, *dāhah-* ‘mastery’; Greek δαΐφρων ‘wise of mind, prudent’, (Homeric) δῆνεα (< **dānσ-*) ‘counsels, plans’. Pokorny 1959:201—202 **dens-* ‘great mental power’; Walde 1927—1932.I:793 **dens-*; Watkins 1985:11 **dens-* and 2000:16 **dens-* ‘to use mental force’ (reduplicated and suffixed zero-grade form **di-dys-sko-*); Mann 1984—1987:132 **dānos, -es-* (?) ‘art, craft’; Mallory—Adams 1997:567 **dens-* ‘to teach, to inculcate a skill’; Mayrhofer 1956—1980.II:9; Boisacq 1950:163 and 183 **dens-*; Frisk 1970—1973.I:342 and I:382 **dēnsos, *dys-*; Chantraine 1968—1980.I:248 and I:275 **densos, *dys-*; Hofmann 1966:50 and 58 **dens-, *dys-*; Beekes 2010.I:298 **dens-*.
- C. Proto-Altaic **čijV-* ‘to listen, to consider’: Proto-Tungus **žij-* ‘(vb.) to understand; (adj.) attentive, conscious’ > Evenki *žiktew-* (< **žij-ktew-*) ‘to understand’; Ulch *dinile* ‘attentive, conscious’; Nanay / Gold *žijire, žiksi-* ‘to understand’. Tsintsius 1975—1977.I:207 and I:256. Proto-Mongolian **čij-la-* ‘to listen’ > Written Mongolian *čijna-, čijla-* ‘to listen, to eavesdrop’; Khalkha *čagna-* ‘to listen’; Buriat *šagna-* ‘to listen’; Kalmyk *čijna-* ‘to listen’; Ordos *čijna-* ‘to listen’; Dagur *čincilə-* ‘to listen’; Monguor *cinla-, čijla-* ‘to listen’. Proto-Turkic **dij-la-, *dij-le-* ‘to listen; to hear; to consider, to meditate’, **dij* ‘reason, mind, cleverness’ > Old

Turkic *tijla-* ‘to listen’, *tij* ‘reason, mind, cleverness’; Turkish *dinle-* ‘to listen to, to hear, to pay attention to, to obey’; Azerbaijani *dinlä-* ‘to listen’; Turkmenian *diñle-* ‘to listen’, *diñ* ‘reason, mind, cleverness’; Uighur *tijla-* ‘to hear’; Karaim *dinle-*, *tijla-* ‘to hear’; Tatar *tijma-* ‘to listen’; Bashkir *tijla-* ‘to listen’; Kirghiz *tijša-* ‘to listen’; Kazakh *tijda-* ‘to listen’; Noghay *tijla-* ‘to listen’; Sary-Uighur *tinna-* ‘to hear’; Oyrot (Mountain Altai) *tijda-* ‘to listen’; Tuva *diyna-* ‘to listen’; Chuvash *č̣nla-* ‘to consider, to meditate’. Starostin—Dybo—Mudrak 2003:396—397 *č̣ñV ‘to listen, to consider’.

Buck 1949:17.13 think (= reflect, etc.); 17.14 think (= be of the opinion); 18.21 speak, talk. Möller 1911:43—44; Bomhard—Kerns 1994:333—334, no. 155.

287. Proto-Nostratic root *t'yip^h- (~ *t'yep^h-):

(vb.) *t'yip^h- ‘to pinch, to nip’;

(n.) *t'yip^h-a ‘fingernail, claw’

- A. Proto-Afrasian *t'yif-ar- ‘fingernail, claw’: Proto-Semitic *t'yipr-, *t'yupr- ‘fingernail, toenail, claw’ > Hebrew *šippōren* [שִׁפּוֹרֵן] ‘fingernail’; Syriac *teṓrā* ‘fingernail’; Mandaic *tuṗra* ‘claw, nail’; Akkadian *šupru* ‘fingernail, toenail; claw, hoof’; Arabic *zuṣur*, *zuṣr*, *ziṣr* ‘nail, fingernail; toenail; claw, talon’; Harsūsi *deṣir* ‘fingernail, toenail’; Šheri / Jibbāli *difēr* ‘fingernail, toenail’; Mehri *difēr* ‘fingernail, toenail, claw’; Soqotri *táyfar*, *táṣḥar* ‘fingernail, toenail’; Geez / Ethiopic *ṣaṣr* [ጻፍር] ‘fingernail, claw’; Tigre *ṣaṣar* ‘fingernail’; Tigrinya *ṣaṣri* ‘fingernail’; Gafat *ṣaṣrā* ‘fingernail’; Amharic *taṣar* ‘fingernail’; Gurage *taṣar* ‘fingernail’; Argobba *čaffar* ‘fingernail’; Harari *tiṣir* ‘fingernail, claw’. Murtonen 1989:366; Militarev 2010:57 Proto-Semitic *tip(V)r-; Klein 1987:555; Leslau 1963:152, 1979:614, and 1987:549; Zammit 2002:276. Central Cushitic: Bilin *čiffar* ‘fingernail, claw’; Quara *ḡarfā* ‘fingernail’; Xamir *sefir*, *sefir* ‘fingernail’ (these may be loans from Ethiopian Semitic). Proto-Southern Cushitic *t'yafar- (assimilated from *t'yifar- ?) > (with metathesis) *t'yaraf- ‘nail, claw’ > Burunge *carafu* ‘nail, claw’; Alagwa *carafu* ‘nail, claw’. Ehret 1980:329. Orël—Stolbova 1995:120, no. 513, *čupar- ‘fingernail’; M. Cohen 1947:160, no. 351. Note: The Highland East Cushitic and Omotic forms cited by Orël—Stolbova may be loanwords. Perhaps also Egyptian *df* ‘to separate, to sever’ (assuming derivation from *t'yif- ‘to pinch, to nip’). Hannig 1995:1006 and 2006:2837. Militarev 2010:57—58 Proto-Afrasian *čipar- ~ *čarap- ‘fingernail’ (“not quite reliable”); Takács 2011a:31 Proto-Afrasian *čVrVf-/ *čVfVr- ‘fingernail’.

Comment: Militarev—Kogan (2000.I:255—256, no. 285) reconstruct Proto-Semitic (n.) *tip(V)r ~ *čip(V)r- ‘nail’. They do not list any non-Semitic cognates. They note: “Note -u- of the first syllable in Akk., part of

Arm. and part of Arb. forms, which can possibly be explained as an independent development in individual languages under the influence of *-p-*.”

- B. Uralic: Proto-Finno-Ugrian **vipp3 ~ *vepp3* ‘(vb.) to pinch, to nip; (n.) fingertip’ > (?) Cheremis / Mari (Birk) *čəwəštala-* ‘to pinch, to nip; to finger, to feel, to touch, to handle’, (Kozmodemyansk) *cəwešte-*, (Uržum) *čəwəšte-* ‘to pinch, to nip’; (?) Votyak / Udmurt (Sarapul) *čepil’t-* ‘to pinch, to nip; to press together with the nails’, (Glazov) *čepil’ti-* ‘to press, to nip’; (?) Zyrian / Komi (Permyansk) *čepe-l’-* ‘fingertip’, *čepe-l’t-* ‘to pinch, to nip’, (Udora) *čeper* ‘pinch, nip’, *čepert-* ‘to pinch, to nip’, (East Permyansk) *čep-l’al-* ‘to pinch, to nip; to pick, to pluck’; (?) Hungarian *csíp* ‘to pinch, to nip; to sting; to bite’, *csípés* ‘pinch(ing), nip(ping), bite’, *csipked* ‘to pinch, to pick, to nip’. Rédei 1986—1988:49 **čəpp3* ‘(vb.) to pinch, to nip; (n.) fingertip’. According to Rédei, Finnish *hyppy*, *hippi* ‘fingertip; finger’, *hypistä-* ‘to finger’, Lapp / Saami (Kola) *ciehp* ‘finger, toe’ do not belong here (Finnish *h*, Lapp *c* < **č*, not **v* [traditional *č*]).

Buck 1949:4.39 nail. Dolgopolsky 2008, no. 427, **čUṗV(RV)* ‘fingernail, claw’. The Altaic (Tungus) forms cited by Dolgopolsky do not belong here (Starostin—Dybo—Mudrak [2003:1338] derive them from Proto-Altaic **šjop’a* ‘claw; to claw’).

288. Proto-Nostratic root **t’yor-*:

(vb.) **t’yor-* ‘to run, to flow’;

(n.) **t’yor-a* ‘running, flowing’; (adj.) ‘speedy, swift’

- A. Afrasian: Semitic: Arabic *zarā* ‘to flow, to run, to have diarrhea’.
- B. Proto-Dravidian **cor-* (< **cory-*) ‘to run, to flee’: Gondī *soṛitānā* ‘to run away’, *soṛi-* ‘to go away, to run away’; Pengo *hon-* ‘to run, to flee’; Manda *hun-* ‘to run, to flee’; Kuwi *hoṇ-* (*hoṭ-*) ‘to run, to flee’. Burrow—Emeneau 1984:248, no. 2861.
- C. Proto-Indo-European (**t’or-/t’r-*, **t’r-*) **t’reA-* [**t’raA-*] > **t’rā-*; **t’rem-/t’rom-/t’rṃ-*; **t’rew-/t’row-/t’ru-* ‘to run, to flow’: Sanskrit *drāti* ‘to run, to hasten’, *drāmati* ‘to run about, to roam, to wander’, *drāvati* ‘to run, to hasten’, *dravā-h* ‘running, flowing’, *dravantī* ‘river’, *druta-h* ‘speedy, swift’; Greek *δρησιμός* ‘flight, running away’, (aor.) *ἔδραμον* ‘to run, to move quickly’, *δρόμος* ‘course, running, race’; Gothic *trudan* ‘to tread, to step’; Old Icelandic *troða* ‘to tread’; Old English *tredan*, ‘to tread, to step on, to trample’, *treddian* ‘to tread, to walk’, *trod* (f. *trodu*) ‘track, trace’; Old Frisian *treda* ‘to tread’; Old Saxon *tredan* ‘to tread’; Dutch *treden* ‘to tread’; Old High German *tretan* ‘to tread’ (New High German *treten*), *trottōn* ‘to run’ (New High German *trotten*). Rix 1998a:110 **dreh₂-*, 110—111 **drem-*, 112 **dreu-*; Pokorny 1959:204—206 (**der-*), **drā-*, **dreb-*, **drem-*, **dreu-* ‘to run’; Walde 1927—1932.I:795—797

(**der-*), **drā-*, **dreb-*, **drem-*, **dreu-*; Mann 1984—1987:158 **drājō* (**drāmi*, **đīdrā-*) ‘to run’, 159 **dreṇāros* ‘flowing, fluid’, 160 **dromos* ‘course, way’; Mallory—Adams 1997:491 **dreh_a-* ‘to run’ and 491 **drem-* ‘to run’; Watkins 1985:12 **der-* and 2000:16 **der-* assumed base of roots meaning ‘to run, to walk, to step’ (extended form **dreb-*; extended zero-grade form **drā-*; root form **drem-* in suffixed *o*-grade form **drom-o-*); Mayrhofer 1956—1980.II:72 **dre-m-*, II:73, II:76, and II:78; Frisk 1970—1973.I:122—123, I:414—415 **drem-*, **drā-*, and I:419; Boisacq 1950:69 and 198; Chantraine 1968—1980.I:278—279 **der-*, **dr-e₂-*, **dr-ew-*, **dr-em-* and I:296; Hofmann 1966:21 **drā-*, **drem-*; Beekes 2010.I:351 and I:354—355 **drem-*; Orël 2003:409 Proto-Germanic **tredanan*, 410 **trudān*, 410 **trudānan*; Kroonen 2013:521 Proto-Germanic **tredan-* ~ **trudan-* ‘to tread, to trample’; Feist 1939:481 **drey-*; Lehmann 1986:348 **drew-*, **drem-*, **dreH-*, **dreb-*, based on **der-*; De Vries 1977:598; Onions 1966:939; Klein 1971:779; Kluge—Mitzka 1967:789 and 792—793; Kluge—Seebold 1989:739 and 742. For a listing and discussion of other possible cognates in Germanic, cf. Boutkan—Siebinga 2005:413—414, though some of the forms cited here may be borrowed from or influenced by a non-Indo-European substratum.

- D. Proto-Uralic **ṽor3-* ‘to run, to flow’: (?) Finnish *soro* ‘falling drops’, *sorotta-* ‘to drip, to trickle, to fall in drops’; Ostyak / Xanty (Vasyugan) *t'orəy-* ‘to run, to flow’; Hungarian *csorog-*, *csurog-* ‘to run, to flow’; Selkup Samoyed *sōrmba-* ‘to drop, to flow’. Rédei 1986—1988:40 **čor3-*; Décsy 1990:109 [**tjora*] ‘to run, to drip’.
- E. Proto-Altaic **čjor-ka* (~ *-u-*) ‘swift stream, current’: Proto-Tungus **žurku* ‘rapid, swift stream; fairway’ > Evenki *žurqu* ‘rapid, swift stream’; Negidal *žoyku* ‘fairway’. Tsintsius 1975—1977.I:277. Proto-Mongolian **dargil* ‘rapid current’ > Mongolian *dargil* ‘rapids of a river, rapid current, torrent; swift stream; shoal in a river’, *dargira-* ‘to rush with noise, to roar (as water); to run quickly, to flow rapidly; to make noise’, *dargi-* ‘to roar or rush noisily (of water)’, *dargiya* ‘roaring (as water); noise; gaiety’; Khalkha *dargil* ‘rapid current’; Kalmyk *därgl* ‘rapid current’. Starostin—Dybo—Mudrak 2003:404—405 **čurka* (~ *-jo-*) ‘swift stream, current’.

Buck 1949:10.32 flow (vb.); 10.46 run (vb.). Möller 1911:45—46; Bomhard—Kerns 1994:335, no. 157.

22.12. PROTO-NOSTRATIC *sʸ

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
sʸ-	sʸ-	c-	šk-	s-	sʸ-	s-	sʸ-
-sʸ-	-sʸ-	-c(c)-/ -y-	-šk-	-s-	-sʸ-	-s-	-sʸ-

289. Proto-Nostratic root *sʸam- (~ *sʸəm-):

(vb.) *sʸam- ‘to be hot, sunny’;

(n.) *sʸam-a ‘summer’

- A. Proto-Afrasian *sʸam- ‘to be hot, sunny’: Proto-Semitic *sʸamsʸ- ‘sun’ > Hebrew *šemeš* [שֶׁמֶשׁ] ‘sun’; Aramaic *šimšā* ‘sun’; Phoenician *šmš* ‘sun’; Akkadian *šamšu* ‘sun’; Arabic *šams* (< *sams) ‘sun’; Sabaeen *šms* ‘sun’. Murtonen 1989:429; Klein 1987:668; Zammit 2002:243—244. Egyptian *šmm* ‘to be hot’, *šmmt* ‘heat, fever’, *šmw* ‘summer’; Coptic *šōm* [ϣⲟⲙ] ‘summer’. Hannig 1995:821 and 822; Faulkner 1962:267; Erman—Grapow 1921:182 and 1926—1963.4:468, 4:469; Gardiner 1957:594; Vycichl 1983:263—264; Černý 1976:243.
- B. Proto-Indo-European *sem-/som-/sm̥- ‘summer’: Sanskrit *sāmā* ‘season, year, summer’; Armenian *am* ‘year’; Old Irish *sam*, *samrad* ‘summer’; Welsh *ham*, *haf* ‘summer’; Old Icelandic *sumar* ‘summer’; Norwegian *sumar* ‘summer’; Faroese *summar* ‘summer’; Swedish *sommar* ‘summer’; Danish *sommer* ‘summer’; Old English *sumor* ‘summer’; Old Frisian *sumur* ‘summer’; Old Saxon *sumar* ‘summer’; Middle Dutch *somer* ‘summer’ (Dutch *zomer*); Old High German *sumar* ‘summer’ (New High German *Sommer*); Tocharian A *šme* ‘summer’, B *šmāye* (adj.) ‘pertaining to summer’. Pokorny 1959:905 *sem- ‘summer’; Walde 1927—1932.II: 492—493 *sem-; Mann 1984—1987:1231 *sm̥er-, *sm̥ar- (?) ‘summer’; Mallory—Adams 1997:504 *sem- ‘summer’; Watkins 1985:57 *sem- (also *sem̥-) and 2000:75 *sem- (also *sem̥-) ‘summer’; Orël 2003:386 Proto-Germanic *sumeraz, 386 *sumerinǵaz ~ *sumerunǵaz, 386 *sumerōjanan; Kroonen 2013:491—492 Proto-Germanic *sumara- ‘summer’; De Vries 1977:560—561; Falk—Torp 1903—1906.II:255—256; Torp 1919:744; Onions 1966:885; Klein 1971:730 *sem-, *sam-; Boutkan—Siebinga 2005:381—382; Kluge—Mitzka 1967:715 *sem-; Kluge—Seebold 1989:679; Mayrhofer 1956—1980.III:437—438; Adams 1999:668 *sem-.

Buck 1949:1.52 sun; 14.76 summer. Brunner 1969:106, no. 580; Bomhard—Kerns 1994:342, no. 166.

290. Proto-Nostratic root *sʷaw- (~ *sʷəw-):
 (vb.) *sʷaw- ‘to be dry, arid, withered’;
 (n.) *sʷaw-a ‘dryness, dry place’; (adj.) ‘dry, arid, withered’
- A. Proto-Afrasian *sʷ[a]w- ‘to be or become dry’: Egyptian *šwi* ‘to be dry, arid, hot’, *šwt* ‘dryness’, *šwyt* ‘dry place’; Coptic *šowe* [ϣⲟⲟϥ] ‘to dry up, to be or become dry, desiccated, or stale’, *šow* [ϣⲟⲟϥ] ‘dry’. Hannig 1995:809; Faulkner 1962:263; Erman—Grapow 1921:179 and 1926—1963.4:429, 4:430; Gardiner 1957:594; Vycichl 1983:274; Černý 1976:258. West Chadic *syaH(a)- ‘to become dry’ > Bolewa *saa* ‘to become dry’; Karekare *saa* ‘to become dry’; Dera *sēe* ‘to become dry’; Ngamo *sa* ‘to become dry’. Central Chadic *sʷay- ‘to become dry’ > Zime Batua *soia* ‘to become dry’. East Chadic *sʷw- ‘to dry up’ > Mobu *səwe* ‘to dry up’. Orël—Stolbova 1995:469 *sew-/ *šew- ‘to be dry’.
- B. Proto-Kartvelian *škw-er-/ *škw-r- ‘to get dry, to become dry’: Georgian *šr-oba* ‘to get dry, to become dry’; Mingrelian *skər-*, *skir-* ‘to get dry, to become dry’; Laz *skir-*, *skur-* ‘to go out, to die out, to become dim’. Klimov 1964:216 *šwer-/ *šwr- and 1998:250—251 *šwer-/ *šwr- ‘to get dry, to become dry’; Schmidt 1962:144—145 *škwer-; Fähnrich—Sardshweladse 1995:428 *šwer-/ *šwr-; Fähnrich 2007:530 *šwer-/ *šwr-.
- C. Proto-Indo-European *saw-s-/ *su-s- ‘dry’: Sanskrit *śoṣa-h* ‘drying up’; Greek (Homeric) *αῖος* ‘dry, withered’; Old Icelandic *seyra* ‘starvation, famine’; Norwegian *søyra* ‘to make dry’; Old English *sēar* ‘dry, withered’, *sēarian* ‘to wither, to pine away’; Middle Low German *sōr* ‘dry, withered’; Dutch *zoor* ‘dry, withered’; Old High German *sōrēn* ‘to become dry’; Lithuanian *sausas* ‘dry, arid’; Old Church Slavonic *suxъ* ‘dry’. Pokorny 1959:880—881 *saus-, *sus- ‘dry’; Walde 1927—1932.II:447—448 *saus-, *sus-; Mann 1984—1987:1114 *sausos ‘dry, withered, mature’; *sausjō ‘to dry, to wither, to mature’; *sausjə ‘dryness, dry land, dry object’, 1337 *sus- ‘dry’, 1338 *susō, -jō ‘to dry, to wither, to be dry’; Watkins 1985:56 *saus- and 2000:73 *saus- ‘dry’; Gamkrelidze—Ivanov 1984.I:158 and II:598 *saus-/ *sus- and 1995.I:512 *saus-/ *sus- ‘dry’; Mallory—Adams 1997:170 *h₂sus- ~ *h₂sousos ‘dry’; Boisacq 1950:102 *sauso-s; Frisk 1970—1973.I:188—189 *sausos; Hofmann 1966:28—29 *sausos; Chantraine 1969—1980.I:141—142; Beekes 2010.I:171 *h₂s-us-; Orël 2003:320 Proto-Germanic *sauzaz. 320 *sauzjanan ~ *sauzōjanan; Kroonen 2013:428 Proto-Germanic *sauza- ‘dry’; De Vries 1977:471; Torp 1919:767; Klein 1971:687 *saus-, *sus-; Onions 1966:811 *sousós; Mayrhofer 1956—1980.III:362—363; Smoczyński 2007.1:537; Derksen 2008:473—474 *h₂sous-o-, Balto-Slavic *sousos, and 2015:390 *h₂sous-o-; Fraenkel 1962—1965.II:766 *sausos; Wodtko—Irslinger—Schneider 2008:345—348 *h₂seus-.

Buck 1949:15.84 dry. Bomhard—Kerns 1994:343—344, no. 168. Slightly different etymology in Dolgopolsky 2008, no. 2128, **sa[w]ûšV* ‘to get dry, to harden’.

291. Proto-Nostratic root **sʷaw-* (~ **sʷəw-*) or **sʷew-*:

(vb.) **sʷaw-* or **sʷew-* ‘to give birth, to bring forth, to be born’;

(n.) **sʷaw-a* or **sʷew-a* ‘son, child’

- A. Dravidian: Tamil *cēy* ‘son, child; juvenility, youth’; Malayalam *cēvala* ‘child at the breast’; Tuḷu *jēvu* ‘child, lad, youth’, *jōvu* ‘child, lad, youth, baby, female child’, *jōkulu* ‘children’; Parji *cēpal* ‘boy, lad’; Gadba (Ollari) *sēpal* ‘boy, lad’, (Salur) *sāpal* ‘boy’; (?) Kuṛux *jōxas* ‘lad, youth, servant’. Burrow—Emeneau 1984:244, no. 2813.
- B. Proto-Kartvelian **škew-/skw-* ‘to give birth, to beget’: Georgian *šv-a* ‘to give birth, to beget’, *šv-ili* ‘child, son’, [*mšo-*] ‘child’ in *p’ir-mšo-* ‘first-born, elder’; Mingrelian *sk(v)-* ‘to lay eggs (of birds)’, *skī*, *skua* ‘son’; Laz *skv-* ‘to lay eggs (of birds)’, *sk-iri*, *sk’-iri* (*sk’- < sk-*) ‘son’; Svan [*sg-*] ‘to be born’, *əmsge* ‘son’. Schmidt 1962:143; Klimov 1964:214—215 **šw-*, 217 **šw-il-* and 1998:128 **m-šw-e-* ‘child’, 248 **šew-/sw-* ‘to give birth, to beget’, 251 **šw-il-* ‘born’; Fähnrich—Sardshweladse 1995:423 **šew-/sw-*; Gamkrelidze—Ivanov 1984.II:597, fn. 2, **šew-*, **šw-*, II:878 **šw-* and 1995.I:511, fn. 75, **šew-*, **šw-*, I:775 **šw-* ‘to give birth, to be born’; Fähnrich 2007:525—526 **šew-/sw-*.
- C. Proto-Indo-European **sew(H)-/sow(H)-/su(H)-* ‘to give birth’: Sanskrit *sūte*, *sūyate* ‘to beget, to procreate, to bring forth, to bear, to produce, to yield’, *suta-h* ‘son, child’, *sūtī-h* ‘birth, production’, *sūnū-h* ‘son, child, offspring’; Avestan *hunu-š* ‘son’; Greek *νῑός*, *νιός* ‘son’; Old Irish *suth* ‘offspring’; Gothic *sunus* ‘son’; Old Icelandic *sunr*, *sonr* ‘son’; Swedish *son* ‘son’; Danish *søn* ‘son’ (with *ø* from the pl.); Old English *sunu* ‘son’; Old Frisian *sunu* ‘son’; Old Saxon *sunu* ‘son’; Dutch *zoon* ‘son’; Old High German *sunu* ‘son’ (New High German *Sohn*); Lithuanian *sūnūs* ‘son’; Old Church Slavic *synъ* ‘son’; Russian *syn* [сын] ‘son’; Czech *syn* ‘son’; Tocharian A *se*, B *soy* ‘son’. Rix 1998a:487 (?) **seuH-* ‘to bear, to give birth’; Pokorny 1959:913—914 **seu-*, (**seuə-*), **sū-* ‘to bear, to give birth’; Walde 1927—1932.II:469—470 **seu-*, **sū-*; Mann 1984—1987:1331 **su-*, 1335 **sūnus* ‘son’, 1339 **sut-* ‘offspring’; Watkins 1985:58 **seuə-* and 2000:76 **seuə-* ‘to give birth’; Gamkrelidze—Ivanov 1984.II:597, fn. 2, **seu-/su-*, II:878 and 1995.I:511, fn. 75, **seu-/su-* ‘to give birth’, I:775; Mallory—Adams 1997:533 **suh_xnūs* ‘son’ (also **suh_xiūs*), **seuh_x-* ‘to bear, to beget’; Mayrhofer 1956—1980.III:481, III:492, and III:494; Beekes 2010.II:1528 **suH-i(e)u-*; Frisk 1970—1973.II:959—961 **su-ju-*, **sūnus*, **su-tu-s*; Hofmann 1966:382—383 **su(ū)-iūs*, **sū-nūs*, **su-tus*; Chantraine 1968—1980.II:1153—1154 **sū-*; Boisacq 1950:999—1000 **su-ju-*, **sū-nu-s*; Adams 1999:703—704

*suh_{xyu}-, *suh_{xyu}- ‘son’, *seuh_x- ‘to give birth’; Van Windekens 1976—1982.I:424—425 *sūju-s, *sūn-eus; Kroonen 2013:492—493 Proto-Germanic *sunu- ‘son’; Orël 2003:388 Proto-Germanic *sunuz; Lehmann 1986:330—331 *sūnu-, *sewH-, *sū- ‘to give birth to’; Feist 1939:460—461; De Vries 1977:530 *su-; Falk—Torp 1903—1906.II:344 *sūnū-; Onions 1966:845 Common Germanic *sunuz; Klein 1971:698 *seu-, *su- ‘to bear, to bring forth; birth’; Boutkan—Siebinga 2005:383; Kluge—Mitzka 1967:713—714 *sūnūs, *seu-, *sū-; Kluge—Seebold 1989:677—678 *sunu-, *seuə-; Fraenkel 1962—1965.II:941—942; Smoczyński 2007.1:614—615 *seuH-; Derksen 2008:483 *suH-n-ú- and 2015:435 *suH-n-ú-; Wodtko—Irslinger—Schneider 2008:617—618 *seuH- and 686—690 *suH-, *suH-nu-, *suH-ju-.

Buck 1949:2.41 son; 4.71 beget (of father). Bomhard—Kerns 1994:344—345, no. 169; Dolgopolsky 2008, no. 2179, *š[e]wḥV ‘to give birth, to be born’.

292. Proto-Nostratic (n.) *sʷaw-a ‘wild boar’:

- A. Afrasian: Egyptian: Middle Egyptian šṣ, šṣy ‘pig, wild boar’, šṣyt ‘sow’; Demotic iš ‘pig, sow’; Coptic (Sahidic, Bohairic) ešō [ⲉⲩⲱ] ‘sow’, (Bohairic) ešaw [ⲉⲩⲱⲁ] ‘sow’, (Sahidic) še [ⲩⲉ], (Akhmimic) ša- [ⲩⲁ-] ‘pig’ (male). Hannig 1995:801; Faulkner 1962:260; Gardiner 1957:594; Erman—Grapow 1921:178 and 1926—1963.4:401, 4:405; Černý 1976:40; Vycichl 1983:49 and 254.
- B. Proto-Kartvelian *e-škw- ‘wild boar, pig’: Old Georgian ešw-i ‘wild boar’ (Modern Georgian ešv- ‘tusk’); Mingrelian o-sk-u (< *o-askv-u [*askv- = ‘pig’]) ‘pigsty’. Klimov 1964:81 *ešw- and 1998:48 *ešw- ‘wild boar, pig’; Fähnrich—Sardshweladse 1995:126 *ešw-; Gamkrelidze—Ivanov 1984.II:877 *e-šw- and 1995.I:774 *e-šw- ‘boar, pig’ (according to Gamkrelidze—Ivanov, the Kartvelian forms are borrowings from Indo-European); Schmidt 1962:108; Fähnrich 2007:152 *ešw-.
- C. Proto-Indo-European (*sewH-/*suH- ‘(wild or domesticated) pig, sow’: Greek ὕς, ὅς (also σῦς, σὺς) ‘wild swine, whether boar (hog) or sow’; Avestan hū (gen. sg. for *huwō) ‘pig’; Sanskrit sū- in sūkará-h ‘boar, hog, pig, swine’; Latin sūs ‘sow, swine, pig, hog’, (m.) *suculus*, (f.) *sucula* ‘piglet’, *suillus* ‘of swine’; Umbrian (acc. sg.) *sim* ‘sow, pig’; Old Irish *socc* in *socc sáil* ‘porpoise’; Old Welsh *hucc* ‘pig, sow’ (Welsh *hwch*); Cornish *hoch* ‘pig, sow’; Breton *houc’h*, *hoc’h* ‘pig, sow’; Albanian *thi* ‘pig, piglet’; Old Icelandic *sýr* ‘sow’; Faroese *súgv* ‘sow’; Norwegian *sū* ‘sow’; Danish *so* ‘sow’; Swedish *so* ‘sow’ Old English *sū*, *sugu* ‘sow’; Old Saxon *suga* ‘sow’; Middle Low German *soge* ‘sow’; Dutch *zeug* ‘sow’; Old High German *sū* ‘sow’ (New High German *Sau*); Latvian *suvēns*, *sivēns* ‘young pig, piglet’; Tocharian B *suwo* ‘pig, hog’, *swāmññe* ‘pertaining to a pig’ (cf. *swāññana misa mitāmpa wirot* ‘pork flesh with

- honey [is] forbidden'). Benveniste 1969.I:27—36 and 1973:23—31 **sū-*; Pokorny 1959:1038—1039 **sū-s*, **suu-ós* 'pig, sow'; Walde 1927—1932.II:512—513 **sū-* (**sū-s*, **suu-ós*); Mann 1984—1987:1337—1338 **sūs* 'pig, sow'; Watkins 1985:67 **sū-* and 2000:87 **sū-* (contracted from earlier **su₂-*) 'pig' (suffixed form **su₂-īno-*); Gamkrelidze—Ivanov 1984.II:593—594 **sū-* 'pig', II:597, fn. 2, II:877, and 1995.I:508 **sū-* 'pig', I:511—512, fn. 75, I:774; Mallory—Adams 1997:425 **sūs* (possibly better reconstructed as **sūhₛs*) 'pig (wild or domesticated)' and 2006:139 **sūs* 'pig'; Mayrhofer 1956—1980.III:490; Boisacq 1950:1006—1007 **sū-s*; Frisk 1970—1973.II:973—974 **sū-s*; Hofmann 1966:386—387 **sūs*, (gen. sg.) **suuós*; Chantraine 1968—1980.II:1161 **sū-s*; Walde—Hofmann 1965—1972.II:635—637 **sū-s*; Beekes 2010.II:1537 **suH-*; Ernout—Meillet 1979:670; De Vaan 2008:603; Huld 1983:119; Meyer 1891:90; Van Windekens 1971—1982.I:446 **sū-*; Adams 1999:698 **sū-*; Orël 1998:477 and 2003:389 Proto-Germanic **sūz*; Kroonen 2013:490 Proto-Germanic **sū-* ~ **suw-* 'sow'; De Vries 1977:574 **sū-*; Falk—Torp 1903—1906.II:252—253; Klein 1971:700 **sū-*; Onions 1966:849 **sū-*; Barnhart 1995:741; Kluge—Mitzka 1967:636 **sū(w)-*; Kluge—Seebold 1989:619 **sū-*; Mayrhofer 1956—1980.III:490; Wodtko—Irslinger—Schneider 2008:683—686 **suH-*. Proto-Indo-European **sw-iH-no-s* (> **swīnos*) 'of, belonging to, or pertaining to a pig': Latin *suīnus* 'of, belonging to, or pertaining to swine'; Gothic *swein* 'pig'; Old Icelandic *svín* 'swine, pig'; Faroese *svín* 'swine, pig'; Norwegian *svin* 'swine, pig'; Danish *svin* 'swine, pig'; Swedish *svin* 'swine, pig'; Old English *swīn* 'swine, pig'; Old Frisian *swīn* 'swine, pig'; Old Saxon *swīn* 'swine, pig'; Middle Dutch *swijn* 'swine, pig' (Dutch *zwijn*); Old High German *swīn* 'swine, pig' (New High German *Schwein*); Latvian *svīns* 'dirty'; Old Church Slavic *svinъ* 'pertaining to a pig', *svinija* 'swine, pig'; Russian (adj.) *svinój* [свиной] 'pig-', *svin'já* [свинья] 'pig, swine, hog; sow; boar'; Czech *svině* 'pig, swine'. Mann 1984—1987:1339 **suuīnos*, -ā (**suīn-*) 'pertaining to a pig'; Orël 2003:397 Proto-Germanic **swīnan*; Kroonen 2013:502 Proto-Germanic **swīna-* 'pig'; Lehmann 1986:334 **sū-s*; Feist 1939:465 **sū-*; Falk—Torp 1903—1906.II:333; De Vries 1977:570; Torp 1919:756—757; Barnhart 1995:786; Skeat 1898:617; Onions 1966:894 Common Germanic **swīnaz*; Klein 1971:735; Kluge—Lutz 1898:205; Boutkan—Siebinga 2005:387—388; Kluge—Mitzka 1967:691 **s(u)wīno-*; Kluge—Seebold 1989:660; Walshe 1951:205; Preobrazhensky 1951:259—260 **sū-*; Derksen 2008:477 **suH-iHn-o-*.
- D. Altaic: Tungus: Udihe *sū* 'one-year-old boar'. Nikolaeva—Tolskaya 2001: 920.

Buck 1949:3.31 swine; 3.32 boar; 3.33 barrow; 3.34 sow; 3.35 pig.
 Dolgopolsky 2008, no. 89, *[ʔV]š[ü]H₂V 'wild boar'; Blažek 2013:44, no. 17.

293. Proto-Nostratic root *sʷaxʷ- (~ *sʷəxʷ-):

(vb.) *sʷaxʷ- ‘to be or become hot, warm; to heat up, to make hot, to warm, to burn’;

(n.) *sʷaxʷ-a ‘warmth, heat; sun’

- A. Afrasian: Proto-Semitic *sʷaxʷ-an- ‘to be or become warm; to heat up, to warm’ > Akkadian *šaḫānu* ‘to become warm; to warm, to heat; to warm oneself (in the sun’s heat)’, **šaḫnu* (f. *šaḫuntu*) ‘warm’, *šuḫnu* ‘heat’; Arabic *saḫana*, *saḫina*, *saḫuna* ‘to be or become warm; to warm (up); to be feverish; to make hot, to heat, to warm (something)’, *saḫn* ‘hot, warm’, *saḫāna*, *saḫūna* ‘heat, warmth’, *sāḫin* ‘hot, warm’; Šheri / Jibbāli *šxan* ‘to warm oneself at the fire’, *šxanūn* ‘warm’; Hebrew **šḥn* **[ḥṣ]* ‘to be hot’; Post-Biblical Hebrew *šāḫēn* *[ḥṣ]* ‘hot, warm’; Aramaic *šāḫēn* ‘to become hot’, *šāḫēn* ‘warm, hot’; Ugaritic *šḥn* ‘feverish’; Geez / Ethiopic *səḥna* *[ḥṣ]*, *saḫana* *[ḥṣ]*, *saḫana* *[ḥṣ]* ‘to warm oneself, to become warm’, *səḥin* ‘incense, frankincense’; Tigrinya *sāhanā* ‘to be hot’; Tigre *sāhana* ‘to be hot’; Amharic *səḥin* ‘incense’ (Geez loanword). Murtonen 1989:417; Klein 1987:650; Leslau 1989:495. Orël—Stolbova 1995:459, no. 2172, **saḫan*- ‘to burn, to be warm’.
- B. (?) Proto-Dravidian **cūt*-/**cut*-*V*- (if from *sʷəxʷd-) ‘to be hot, to burn’: Tamil *cuṭu* (*cuṭuv*-, *cuṭṭ*-) ‘to be hot, to burn; to warm (tr.), to heat, to burn up, to roast, to toast, to bake, to fry, to cook in steam, to burn (as bricks in a kiln), to cauterize, to brand’, *cuṭu* ‘burning, heating, scalding’, *cuṭar* ‘light, brilliance, luster, sun, sunshine, moon, planet, fire, burning lamp, flame, spark’, *cuṭal* ‘drops of burning oil falling from a lamp, charred end of a burning stick’, *cuṭalai*, *cuṭu-kāṭu* ‘burning-ground’, *cūṭu* (*cūṭi*-) ‘to brand (as cattle); to cauterize’, *cūṭu* ‘that which is heated, burnt, roasted; heat, warmth; feverishness, fomentation; hot temper, anger, brand’, *cūṭṭu* ‘that which is burnt or cooked, a kind of *ola* torch’; Malayalam *cuṭuka* ‘to burn (intr.), to be hot, to feel hot; to burn (tr.), to make hot, to toast, to roast, to bake, to boil’, *cuṭuvikka* ‘to get one to burn’, *cuṭar* ‘fire, brightness’, *cuṭala* ‘the burning place in the southern corner of the compound; burning or burying place’, *cūṭu* ‘heat, burning’, *cūṭṭu* ‘torch’, *cūṭṭa* ‘the top of a coconut branch used as a torch’; Kota *tur*- (*tuṭ*-) ‘to roast, to bake (pots), to burn (corpses)’, *cuṛ ga-r* ‘funeral burning-place’, *cu-r* (oblique *cu-t*-) ‘heat, a burn, spark thrown off by hammered iron’; Toda *tur*- (*tuṭ*-) ‘to burn (tr.)’; Kannaḍa *suḍu* (*suṭṭ*-) ‘to burn (tr.), to roast, to bake, to fire (a gun); to be consumed with fire, to burn (intr.), to feel hot, to be roasted’, *suḍu* ‘burning, etc.’, *suḍuka* ‘who has burned’, *suḍuvike*, *suḍuha* ‘burning’, *suḍu-gāḍu* ‘cemetery’, *sūḍu* ‘cauterization, burning’, *sūṭe* ‘a torch of wisps, etc.’, *soḍa* ‘burning’, *soḍar*, *soḍaru*, *soḍalu* ‘lamp’, *sunṭage*, *sunṭige* ‘roast meat; the act of burning or roasting; that which is chiefly taken for roasting on a spit, the heart’; Koḍagu *cud*- (*cuḍuv*-, *cuṭṭ*-) ‘to burn (tr.)’, *cuḍi gaḷa* ‘cremation place’, *tu-ḍi* ‘torch of dry reeds or

small splints of wood'; Tuḷu *suḍupini*, *suḍpini*, *tuḍupini* 'to burn, to be hot, to be sultry; to burn (tr.), to bake, to toast, to roast', *suḍalè* 'burning a dead body', *suḍu*, *sūḍu* 'the act of burning', *suḍugāḍu* 'cemetery', *suḍsuḍu* 'a burning sensation in the throat', *suḍaru*, *tuḍaru*, *tuḍāru* 'lamp', *cūḍu* 'heat, warmth, zeal; hot, warm', *cūṭè*, *tūṭè* 'torch made of palm leaves, etc.', *soḍaru* 'the smell of burning'; Koraga *sūḍi* 'torch made of coconut leaves'; Telugu *cūḍu* 'to burn, to brand with a hot iron or the like', *cūḍu* 'burning, branding, a brand', *suḍiyu* 'to burn (intr.)'; Kolami *suḍ-* (*suṭṭ-*) 'to cook'; Naikri *suṭ-* 'to roast'; Naiki (of Chanda) *suṭ-/suḍḍ-* (*suṭṭ-*) 'to fry'; Gondi *surrānā* 'to cook bread', *sūr* 'torch'; Konda *sur-* (*suRt-*) 'to roast, to burn (incense)'; Pengo *huz-* (*hust-*), *huzba-* 'to roast'; Kui *subga* (*sugd-*) '(vb.) to roast; (n.) roasting'; Kuwi *hūḍ-* (*-it-*) 'to burn; to shoot with a gun', *hūḍali* 'to burn'; Kuṛux *kuṛnā* (*kuṭṭas*) 'to grow warm, to become hot, to be heated; to cook (tr.) on live embers, to bake on an open fire'; Malto *kure* (*kuṭ-*) 'to burn, to roast, to sear', *kuṛnare* 'to be hot or warm', *kuṛni* 'warm, hot'. Krishnamurti 2003:148 **cūṭ-/cuṭ-V-* 'to be hot, to burn'; Burrow—Emeneau 1964:229—230, no. 2654.

- C. Proto-Indo-European **seh^hw-* [**sa^hh^{w-}*] (unattested root) 'to be or become hot, warm; to heat up, to make hot, to warm, to burn'; only found with the suffixes *-(e)l-, *-(e)n-: **seh^hw-(e)l-* (> **sāwel-*), **seh^hw-ōl-* (> **swōl-*), (**sā^hh^{w-l-}* >) **su^hh^{w-l-}* (> **sūl-*); **seh^hw-en-* (> **swen-*), **sā^hh^{w-n-}* > **su^hh^{w-n-}* (> **sūn-*), etc. 'the sun': Greek ἥλιος (Doric ἄλιος, ἄέλιος; Epic Greek ἡέλιος; Aeolian and Arcadian ἰέλιος; Cretan ἰβέλιος [that is, ἰφέλιος]) (< **ṣāFélio^s*) 'the sun'; Latin *sōl* (< **swōl-* < **seh^hw-ōl-*) 'the sun'; Old Irish *súil* 'eye'; Welsh *haul* 'the sun'; Gothic *sauil* (< Proto-Germanic **sōwilō*) 'the sun', *sugil* 'the sun', *sunno* 'the sun' (< Proto-Germanic **sun-ōn*, with -nn- from the gen. sg. **sunnez* < **s(w)ŋ-* < **seh^hw-ŋ-*); Old Icelandic *sól* 'the sun', *sunna* 'the sun'; Faroese *sól* 'the sun', *sunna* 'the sun'; Norwegian *sol* 'the sun'; Old Danish *sol* 'the sun'; Old Swedish *sol* 'the sun', *sunna* 'the sun'; Old English *sōl* 'the sun', *sigel*, *segl*, *sægl*, *sygil* 'the sun', *sunne* 'the sun'; Old Frisian *sunne* 'the sun'; Old Saxon *sunna* 'the sun'; Dutch *zon* 'the sun'; Old High German *sunna* 'the sun' (New High German *Sonne*); Avestan *hvarə* 'the sun', (gen. sg.) *x³ōng* (< **swen-s*); Sanskrit *svār-* (*súvar-*) 'the sun', (gen. sg. *súrah*), *súrya-h* 'the sun'; Lithuanian *saulė* 'the sun', *svilinti* 'to singe'; Latvian *saule* 'the sun'. Pokorny 1959:881—882 **sāuel-*, **sāuol-*, **suuél-*, **suel-*, **sūl-* 'the sun'; Walde 1927—1932.II:446—447 **sāuel-*, **suuél-*, **suel-*, **sūl-*; **suen-*, **sun-*; Mann 1984—1987:1114 **sāul-*, **sāuel-* 'the sun' (Indo-Iranian variant: **sūl-*); Watkins 1985:56 **sāwel-*, also **s(u)wel-*, **su(ə)el-*, **su(ə)en-*, **sun-* and 2000:72 **sa₂wel-* (oldest form **se₂wel-*) 'the sun' ('[t]he element *-el- was originally suffixal, and alternated with *-en-, yielding the variant zero-grades **s(u)wen-* and [reduced] **sun-*"); Gamkrelidze—Ivanov 1984.I:117 **suel-/sāuel-*, I:196 **sāuel-* ~ **suen-*, I:210 fn. 1 **sāuel-*, II:684 **s(a)uHel-/n-* and 1995.I:100 **swel-/sāwel-*

‘sun’, I:161 fn. 30 *swel-/swen-, I:168 *sāwel-/swen-, I:181 fn. 47 *sāwel-, I:590 *s(a)wHel-/n-; Mallory—Adams 1997:556 *séhaul (gen. *shāu-én-s) ‘sun’ and 2006:128 *séhaul; Mayrhofer 1956—1980.III:496 *su₂l-, *su₂el-, *se₂uel- and III:566—567; Boisacq 1950:321 *sāuel-; Frisk 1970—1973.I:631—632 *sāuel-, *sūl-; Hofmann 1966:107 *sāuel-; Chantraine 1968—1980.I:410—411 *sāwel-, *sūl-; Beekes 1969:62 *seh₂uel- and 2010.I:516 *seh₂u-el-; Sihler 1995:84 *suH₂el-; Walde—Hofmann 1965—1972.II:553—554 *sāuel-; Ernout—Meillet 1979:632 *sāwel-, *sāwol-, *swöl-; De Vaan 2008:570; Kroonen 2013:463—464 Proto-Germanic *sōel- ~ *sunnōn- ‘sun’ (< *seh₂u-l/n-); Orël 2003:361 Proto-Germanic *sōwelan ~ *sowelō, 387 *sunnōn; Feist 1939:412 *sāuel- and 460 *syen-; Lehmann 1986:297 *sexwel- → *sāwel- ‘sun’ and 330 *sāwel-, *swen-; De Vries 1977:529 *sāuel : *sunés and 561—562; Torp 1919:681 Germanic *sówulō, *sówila-; Falk—Torp 1903—1906.II:253—254; Boutkan—Siebinga 2005:382—383 *sh₂-uen-, *seh₂-ul-; Onions 1966:885 “IE *su- with *n*-formative, beside *sāu- with *l*-formative...”; Klein 1971:730; Kluge—Mitzka 1967:716; Kluge—Seebold 1989:679; Walshe 1951:211; Derksen 2015:390 *seh₂u-l, *sh₂u-en-; Fraenkel 1962—1965.II:954; Smoczyński 2007.1:536—537 *seh₂-uel-, *seh₂-ul-; Hamp 1965a:132—133 *seAʷel-, *sAʷl-; Fortson 2010:123 *seh₂-ul (or *sh₂-ul in the case of Latin *sōl*), Vedic Sanskrit *sūrya-h* ‘sun’ (< *suh₂-l-); Wodtko—Irslinger—Schneider 2008:606—611 *seh₂uel-, *sh₂(u)uen- (?), *sh₂un-, *suh₂l-; Benveniste 1935:11—12 *sāwel-, *s(u)wel- : *s(u)wen-.

Buck 1949:1.52 sun.

294. Proto-Nostratic root *sʷenʷ-:

(vb.) *sʷenʷ- ‘to change, to deteriorate, to grow old’;

(n.) *sʷenʷ-a ‘old age; old person’; (adj.) ‘aged, old’

- A. Proto-Afrasian *sʷ[e]n- ‘to change, to deteriorate, to grow old’: Proto-Semitic *sʷan-an- ‘to grow old, to reach old age’ > Akkadian *šanānu* ‘to have reached, attained’, *šinnatu* ‘attainment, achievement, equality’; Arabic *sanna* ‘to grow old, to age, to be advanced in years’, *ʔasann* ‘older, farther advanced in years’, *musinn* ‘old, aged’; Šheri / Jibbāli *esnín* ‘to become old’, *sən* ‘age’; Mehri *šəsnōn* ‘to think someone is old’, *sənáy* ‘person a year older than oneself’.
- B. Dravidian: Gondi *sēnāl* ‘old man, senior’, *sēnō* ‘old woman’, (m.) *senāl*, (f., nt.) *seno* ‘aged’, *senāl* ‘old man’, *seno* ‘old woman’; Kui *senḍa* ‘first-born, eldest’, *senḍenju* ‘founder of a race, early settler’. Burrow—Emeneau 1984:243, no. 2808.
- C. Proto-Indo-European *sen-/sṇ- ‘old’: Sanskrit *sána-h* ‘old, ancient’; Avestan *hanō* ‘old’; Old Persian *hanatā-* ‘old age, lapse of time’; Latin *senex* ‘old, aged’; Old Irish *sen* ‘old’; Welsh *hên* ‘old’, *hyned* ‘so old’, *hŷn*,

hynach ‘older’; Cornish *hēn* ‘old’; Breton *hen* ‘old’; Gothic *sineigs* ‘old’; Lithuanian *sēnas* ‘old’, *sēnis* ‘old man’; Armenian *hin* ‘old’. Pokorny 1959:907—908 **sen(o)-* ‘old’; Walde 1927—1932.II:494 **sen(o)-*; Mann 1984—1987:1127 **senāit-* ‘age’, 1127 **senēiō* (**sen[e]skō*) ‘to grow old’, 1128 **senos* ‘old’; **senis*, *-jos* ‘elderly; old man’; Watkins 1985:57 **sen-* and 2000:75 **sen-* ‘old’; Gamkrelidze—Ivanov 1984.II:783, fn. 1, **sen-* and 1995.I:685, fn. 4, **sen-* ‘old’; Ernout—Meillet 1979:613 **sen-*; Walde—Hofmann 1965—1972.II:513—514 **sēnos*; De Vaan 2008:553—554; Mallory—Adams 1997:409 **sēnos* ‘old’; Wodtko—Irslinger—Schneider 2008:613—615 **sen-*; Mayrhofer 1956—1980.III:426; Lewis—Pedersen 1937:3 and 183; Morris Jones 1913:134, 247—248, and 261—262; Thurneysen 1946:118; Kroonen 2013:433 Proto-Germanic **senīga-* ‘senior’; Orël 2003:324 Proto-Germanic **senīgaz*; Feist 1939:422—423 **sēno-*; Lehmann 1986:304—305 **seno-*; Fraenkel 1962—1965.II:775; Smoczyński 2007.1:543.

Buck 1949:14.15 old. Brunner 1969:105, no. 577; Möller 1911:226—227; Bomhard—Kerns 1994:342—343, no. 167; Dolgopolsky 2008, no. 2075, **s[e]nV* ‘long time, year, old’.

295. Proto-Nostratic (Eurasian only) (n.) **svil-a* ‘fat, lard’:

- A. Proto-Indo-European **sel-ph-/sḷ-ph-* (secondary *o*-grade form: **solph-*) ‘fat, butter’: Sanskrit *sarpīṣ-* ‘clarified butter, ghee’, *sīprā-h* ‘slippery, oily’; Greek ἔλπος ‘butter’, (?) ὄλη, ὄλις ‘a leathern oil-flask’; Gothic *salbōn* ‘to anoint’, *salbōns* ‘ointment’; Old English *salf*, *sealf(e)* ‘salve, ointment’, *sealfian* ‘to salve, to anoint’; Old Frisian *salvia* ‘to anoint’; Old Saxon *salba* ‘salve, ointment’, *salbōn* ‘to anoint’; Dutch *zalf* ‘salve, ointment’; Old High German *salba* ‘salve, ointment’ (New High German *Salbe*), *salbōn* ‘to anoint’ (New High German *salben*); Tocharian A *ṣālyp*, B *ṣalype*, *ṣalywe* ‘ointment, grease’; Albanian *gjalpë* ‘oil, butter’ (< **sólpo-*). Pokorny 1959:901 **selp-* ‘fat, butter’; Walde 1927—1932.II:508 **selp-*; Mann 1984—1987:1125 **selpis*; **selpos*, *-es-* ‘grease, butter; smeared, greasy’; Watkins 1985:57 **selp-* and 2000:75 **selp-* ‘fat, butter’; Gamkrelidze—Ivanov 1984.II:703—704 **selp[h]-* and 1995.I:609 **selp[h]-* ‘oil, butter’; Mallory—Adams 1997:194 **sélpes-* (or **sélph_x(e)s-* ?) ‘oil, fat, grease’; Mayrhofer 1956—1980.III:446; Boisacq 1950:246 **selp-*; Frisk 1970—1973.I:503 **selp-*; Hofmann 1966:80 **selp-*; Chantraine 1968—1980.I:342—343 **selp-*; Beekes 2010.I:415—416 (pre-Greek, on the basis of the φ found in Cyprian ἔλφος); Orël 1998:129 and 2003:315 Proto-Germanic **salbō*, 315 **salbōjanan*; Kroonen 2013:424 Proto-Germanic **salbō-* ‘ointment’; Feist 1939:407—408; Lehmann 1986:293; Onions 1966:785; Klein 1971:653 **selp-* ‘fat, oil’; Kluge—Mitzka 1967:621 **selp-*, **solp-*; Kluge—Seebold 1989:615; Walshe 1951:186;

Adams 1999:652—653 **sélpos*; Van Windekens 1976—1982.I:450—451 **selep-*, **selp-*; Wodtko—Irslinger—Schneider 2008:612—613 **selp-*; Huld 1983:148.

- B. Proto-Uralic **svilä* ‘fat, lard’: Finnish *silava* ‘fat, lard (especially of pork)’; Vogul / Mansi *šilt* ‘fat, lard (of bear)’; Tavgi Samoyed / Nganasan *sela* ‘melted fat (of fish)’; Selkup Samoyed (adj.) *siile* ‘fat’; Kamassian *sil* ‘fat, lard’. Collinder 1955:56 and 1977:74; Rédei 1986—1988:478—479 **šilä*; Décsy 1990:108 **sjilä* ‘fat, bacon’; Janhunen 1977b:140 **selâ* ~ **silâ*.

Bomhard—Kerns 1994:338, no. 161; Dolgopolsky 2008, no. 2194a, **šilV* (and **šilV* ?) ‘fat’.

296. Proto-Nostratic root **svilV-* (~ **svelv-*):

(vb.) **svilV-* ‘to take (away), to seize, to snatch’;

(n.) **svilV-a* ‘removal, robbery, plunder’

- A. Proto-Afrasian **svil-* ‘to take, to seize, to plunder’: Proto-Semitic **sval-al-* ‘to take, to seize, to plunder’ > Hebrew *šālāl* [שָׁלַל] ‘to spoil, to plunder’; Akkadian *šalālu* ‘to spoil, to plunder, to carry away’; Arabic *salla* ‘to draw or pull out slowly, to draw a sword’; Mehri *səl* ‘(wolf) to drag away (its prey)’, *slul* ‘to let (a wolf) take an animal from you’, *sáttəl* ‘to steal away unobserved’; Šheri / Jibbāli *sell* ‘(wolf) to drag away its prey’. Murtonen 1989:423; Klein 1987:662; Zammit 2002:226. Proto-Semitic **sval-ab-* ‘to rob, to plunder, to take away’ > Arabic *salaba* ‘to take away, to steal, to rob, to plunder’; Šheri / Jibbāli *səlōb* ‘to take (someone’s gun) by force’; Harsūsi *selōb* ‘to disarm’; Mehri *səlūb* ‘to disarm someone’; Geez / Ethiopic *salaba* [ሰለበ] ‘to take off, to strip off, to take away, to remove, to deprive, to take spoils, to plunder, to despoil’; Tigrinya *säläbä* ‘to rob someone of his clothes’; Tigre *saläba* ‘to rob, to snatch away’; Amharic *sälläbä* ‘to cheat, to rob by magical means’; Gurage (Soddo) *sälabi* ‘cheater’. Leslau 1987:498—499. Proto-Semitic **sval-ap-* ‘to draw out, to pull out’ > Hebrew *šālaq* [שָׁלַח] ‘to draw out’; Aramaic *šēlaq* ‘to draw a sword, to pull off (shoes)’; Akkadian *šalāpu* ‘to draw (a sword, a dagger) from a sheath, to tear out, to pull out, to extricate, to rescue’. Murtonen 1989:426; Klein 1987:663; Zammit 2002:225. Coptic *sōlp* [ϥⲟⲗⲡ] ‘to break off, to cut off’, *sloplep* [ϥⲗⲟⲡⲗⲉⲡ], *sleplōp* [ϥⲗⲉⲡⲗⲟⲡ] ‘to tear apart’ (Semitic loans). Vycichl 1983:188; Černý 1976:151. Proto-Southern Cushitic **sil-* ‘to strip bare, to make empty’ > K’wadza *sil-* ‘to pluck (a bird)’; Ma’a -*silo* ‘bare, naked, empty’. Ehret 1980:180. Ehret 1995:158, no. 217, **sil-* ‘to pull off, to draw off’.
- B. Dravidian: Kannaḍa *sele* ‘(vb.) to draw, to pull, to pull off, to rob, to pull about; (n.) pulling, pulling off, robbing, force of a stream’; Tuḷu *selè* ‘force’; Telugu *celuku* ‘to pull out (as the eyes)’. Burrow—Emeneau 1984:242, no. 2791.

- C. Proto-Indo-European **sel-/s_l-* (secondary *o*-grade form: **sol-*) ‘to take, to seize’: Greek ἐλαῖν ‘to take, to seize’; Gothic *saljan* ‘to offer sacrifice’; Old Icelandic *selja* ‘to give up, to sell’, *sal* ‘payment, installment’; Old English *sellan*, *syllan* ‘to give, to furnish, to supply, to lend’, *selen*, *sylen* ‘gift, grant’, *salu* ‘sale’; Old Frisian *sella* ‘to give up, to hand over, to deliver’; Old Saxon *sellian* ‘to hand over, to deliver’; Old High German *sellen* ‘to hand over, to deliver’, *sala* ‘transmission’; Old Irish *sellaim* ‘to take’, *selb* ‘possession’. Rix 1998a:479—480 **selh₁-* ‘to take’; Pokorny 1959:899 **sel-* ‘to take, to seize’; Walde 1927—1932.II:504—505 **sel-*; Mann 1984—1987:1125 **seluā*, **seluos* ‘landed property, possession’; Watkins 1985:57 **sel-* and 2000:75 **sel-* ‘to take, to grasp’; Mallory—Adams 1997:564 **sel-* ‘to seize, to take possession of’; Chantraine 1968—1980.I:335 **swel-/sel-*; Boisacq 1950:240—241 **sel-* ‘to take’; Hofmann 1966:78; Frisk 1970—1973.I:487—488; Beekes 2010.I:405 **selh₁-*; Orël 2003:316 Proto-Germanic **saljanan*, 316 **salō(n)*; Kroonen 2013:424—425 Proto-Germanic **saljan-* ‘to offer, to sell’ (< **selh₁-* ‘to take’); Feist 1939:408—409 **sel-*; Lehmann 1986:294 **sel-* ‘to take’; De Vries 1977:469 **sel-*; Onions 1966:783 and 808; Klein 1971:651 and 670 **sel-* ‘to take’.

Sumerian *šilig* ‘to hold tight, to grasp’.

Buck 1949:11.59 rob, robber; 11.82 sell. Brunner 1969:105, no. 576; Bomhard—Kerns 1994:341, no. 164; Dolgopolsky 2008, no. 2159, **šeIV* (or **šeIV*) ‘to take off, to destroy, to pull off’ and, no. 2194, **šil[û]* (or **šil[û]* ?) ‘to take, to take away/off/up’.

297. Proto-Nostratic root **s^yir-* (~ **sver-*):

(vb.) **s^yir-* ‘to twist, turn, tie, or bind together’;

(n.) **s^yir-a* ‘band, cord, any cord-like object: sinew, tendon, nerve, vein’

Perhaps related to:

(n.) **s^yir-a* ‘root (of tree or plant)’

- A. Proto-Afrasian **s^y[i]r-* ‘(vb.) to twist, turn, tie, or bind together; (n.) band, cord, any cord-like object: sinew, tendon, nerve, vein’: Proto-Semitic **s^yar-ar-* ‘to fasten firmly’, **s^yurr-* (< **s^yərr-*) ‘band, cord, any cord-like object: sinew, tendon, nerve, vein, umbilical cord’ > Akkadian *šaršarratu* ‘chain, fetter’; Hebrew *šōr* [שׁוֹר] ‘umbilical cord’, *šārīr* [שָׂרִיר] ‘sinew, muscle’, *šaršarāh* [שָׂרְשָׁרָה] ‘chain’; Aramaic *šarar* ‘to chain, to knot’, *šūrā* ‘umbilical cord’; Arabic *surr* ‘umbilical cord’, *surra*, *surar* ‘navel, umbilicus’, *surur*, *sirar* ‘umbilical cord’; Mehri *šīrē* ‘navel’; Šheri / Jibbāli *šīrō* ‘navel’; Ḥarsūsi *šerā* ‘navel’; Soqotri *šira* ‘navel’; Geez / Ethiopic *šərw* [ሥርወ], *šūr* [ሥር], *šər* [ሥር] ‘sinew, tendon, nerve, muscle’ (also ‘basis, root, origin, stock, tribe’); Amharic *sər* ‘vein, artery, nerve, tendon’

(also ‘root, bottom; under, beneath, at the foot of’). Klein 1987:680 and 684; Murtonen 1989:437; Leslau 1987:535—536. Ehret 1995:164, no. 231, *saraar-/siraar- ‘muscle, sinew’; Orël—Stolbova 1995:484, no. 2298, *sur- ‘rope’.

- B. Dravidian: Tamil *cēr* (-v-, -nt-) ‘to become united, incorporated, joined together; to become mixed, blended; to have connection with, to be in close friendship or union; to fit, to suit; to be collected, aggregated; to join, to associate with, to be in contact with, to belong to’, *cēr* (-pp-, -tt-) ‘to join, to attach, to admix; to admit to one’s society, to add, to insert, to gather, to assemble’, *cērkkai* ‘collecting, gathering, combining, mixing; compound; fellowship, company, union’, *cērtti* ‘combining, union, fellowship, suitability, fitness, resemblance, equality’, *cērvai* ‘fellowship, association, union, mixture, compound, collection, assemblage’; Malayalam *cēruka* ‘to approach, to come close, to join, to belong to, to fit, to suit’, *cērikka* ‘to have collected’, *cērumānam* ‘assemblage (as for a riot), party’, *cērkkā* ‘to make to arrive or join, to collect (as men)’, *cēcca* ‘adherence, union, harmony, fitness’, *cērppikka* ‘to have assembled or collected’, *cērppu* ‘joining, mortising, assemblage’, *cērvva* ‘mixture’; Kota *ce-r-* (*ce-d-*) ‘to arrive, to join, to gather’; Kannada *sēr* (*sērd-*) ‘to become or be close or near, to go to, to approach, to reach, to come, to belong to, to enter, to be included, to be connected with, to join, to side with, to assemble, to be collected; to agree, to concur, to suit, to be agreeable’, *sērike* ‘meeting, union’, *sērisu* ‘to join, to put together, to put to, to attach, to cause to reach, to put into, to make enter, to insert, to fix, to assemble’, *sēruvike* ‘joining’, *sēruve*, *sērve* ‘collection, assemblage, mass, herd (of cattle)’; Kodagu *se-r-* (*se-ri-*) ‘to join’; Tuḷu *šēruni* ‘to arrive, to reach, to be added or joined to, to be included in, to enter (as a member of a sect), to be in harmony, to agree together; to be relished, to be liked; to agree with; to adhere to, to be attached’, *šērāvuni* ‘to join, to combine, to mix, to include’, *šērigè*, *šērvè* ‘union, inclusion’; Telugu *cēru* ‘to join, to unite or combine with; to approach, to draw near or close to, to reach, to arrive at; to enter or join (as a class); to form a part or portion of; to be attached to, to be connected or related to; to assemble; to be received, to come to hand; to be included or added, to belong, to appertain’, *cērika* ‘union, junction, contiguity, nearness, proximity, familiarity, access’, *cēr(u)cu* ‘to put, place, or bring together; to join, to unite, to combine, to mix, to add, to include, to enclose, to admit, to enroll, to add or sum up; to reach, to cause to reach or be delivered’; Gadba (Salur) *sēr-* ‘to arrange, to reach’; (?) Kui *serna aḍa* ‘to cleave to’, *serna* ‘clingingly’. Burrow—Emeneau 1984:244, no. 2814.
- C. Proto-Indo-European *ser-/sʷr- (secondary *o*-grade form: *sor-) ‘(vb.) to twist, turn, tie, or string together; (n.) band, cord, string, thread; sinew, tendon, vein, nerve’: Sanskrit *sarat* ‘thread’, *sarā-h* ‘cord, string’, *sirā* ‘nerve, vein, artery, tendon’; Prakrit *sarā* ‘string, garland, necklace’, *sirā* ‘vein, sinew’; Oriya *sari*, *sarā* ‘string (of garlands, etc.)’, *sira* ‘vein,

artery', *sirāla* 'having conspicuous veins'; Greek εἶπω 'to fasten together in rows, to string', ἔρμα 'band, noose; serpent's coils', in plural (ἔρματα) 'earrings'; Latin *serō* 'to join together, to put in a row, to connect', *seriēs* 'a row, succession, chain, series', *sera* 'a movable bar or bolt for fastening doors'; Gothic *sarwa* 'weapons, armor'; Old Icelandic *sørvi* 'necklace; armor'; Old English *searo* 'device, contrivance; skill, work of skill, machine; armor, arms; cunning, treachery', *sierwan* 'to devise; to lie in wait for, to plot, to conspire'; Old Frisian *sera* 'to arm, to arrange'; Old High German *saro* 'weapons, armor'; Old Lithuanian *sėris* 'thread, cobbler's thread'; Tocharian A *sar-* 'vein'. Rix 1998a:484 **ser-* 'to string together, to arrange in a row; to tie or bind together'; Pokorny 1959:911 **ser-* 'to line up'; Walde 1927—1932.II:499—500 **ser-*; Mann 1984—1987:1131 **sermn-* (**sermō(n)*) 'chain, row, series', 1131 **serō*, -*īō* 'to join, to range, to arrange'; Watkins 1985:58 **ser-* and 2000:76 **ser-* 'to line up'; Mallory—Adams 1997:354 **ser-* 'to line up'; Mayrhofer 1956—1980.III:469; Boisacq 1950:229; Beekes 2010.I:392—393 **ser-*; Frisk 1970—1973.I:469; Hofmann 1966:74 **ser-*; Chantraine 1968—1980.I:325 **ser-*; De Vaan 2008:557; Walde—Hofmann 1965—1972.II:522—523; Ernout—Meillet 1979:618—619; Kroonen 2013:427 Proto-Germanic **sarwa-* 'armor, equipment'; Orël 2003:319 Proto-Germanic **sarwan*; Feist 1939:411; Lehmann 1986:296 **ser-* 'to arrange'; De Vries 1977:577; Van Windekens 1976—1982.I:414 **sor-*; Mayrhofer 1956—1980.III:442 and III:469.

- D. Proto-Altaic **sīra-* (~ -*u*, -*o*) 'to quilt, to sew together': Proto-Tungus **sīra-* 'to sew together, to piece down' > Manchu *sira-* 'to connect, to tie together'; Spoken Manchu (Sibo) *šira-* 'to connect, to tie together, to join'; Evenki *sira-* 'to sew together, to piece down'; Lamut / Even *hīr̥q-* 'to sew together, to piece down'; Negidal *siya-* 'to sew together, to piece down'; Ulch *siira-* 'to sew together, to join'; Nanay / Gold *siira-* 'to sew together, to join'; Oroch *siya-* 'to sew together, to join'; Udihe *seä-* 'to sew together, to join'. Proto-Mongolian **siri-* 'to quilt, to stitch' > Written Mongolian *siri-* 'to quilt, to stitch'; Khalkha *šire-* 'to quilt, to stitch'; Ordos *šire-*, *širi-* 'to quilt, to stitch'; Buriat *šere-* 'to quilt, to stitch'; Kalmyk *šir-* 'to quilt, to stitch'; Dagur *širi-* 'to quilt, to stitch'; Shira-Yughur *širə-* 'to quilt, to stitch'; Monguor *širə-* 'to quilt, to stitch'. Proto-Turkic **siri-* 'to sew tightly' > Karakhanide Turkic *siri-* 'to sew tightly'; Turkish *sırma* 'lace, embroidery', (dial.) *sırı-* 'to sew tightly'; Azerbaijani *siri-* 'to sew tightly'; Turkmenian *sira-* 'to sew tightly'; Uighur (dial.) *siri-* 'to sew tightly'; Tatar *sir-* 'to sew tightly'; Bashkir *hīr-* 'to sew tightly'; Kazakh *siri-* 'to sew tightly'; Noghay *siri-* 'to sew tightly'; Tuva *siri-* 'to sew tightly'. Starostin—Dybo—Mudrak 2003:1259 **sīra* (~ -*u*, -*o*) 'to quilt, to sew together'. Proto-Altaic **siörme* 'sinew': Proto-Tungus **sumu* 'sinew' > Manchu *sube* 'tendon, nerve, muscle'; Spoken Manchu (Sibo) *suvu* 'tendon'; Evenki *sumu* 'sinew' (note also *sura* 'vein'); Lamut / Even *hum*

‘sinew’; Negidal *sumu* ‘sinew’; Ulch *sumul* ‘sinew’; Orok *sumu* ~ *χumu* ‘sinew’; Nanay / Gold *sumul* ‘sinew’; Oroch *sumu(l)* ‘sinew’; Udihe *sumul(i)* ‘sinew’; Solon *sumul* ‘sinew’. Proto-Mongolian **sirmö-*, **sirbö-* ‘sinew, nerve, tendon’ > Written Mongolian *širbüsü(n)*, *širmüsü(n)* ‘nerve, sinew, tendon; fiber, filament’; Khalkha *šörmös(ön)*, *šürbüs*, *šörvös(ön)* ‘sinew’; Buriat *šürbehe(n)*, *šürmehe(n)* ‘nerve, sinew, tendon’; Kalmyk *šürwsn*, *šir(w)ūsñ* ‘nerve, sinew, tendon’; Ordos *šörwös*, *šörwösü* ‘sinew’; Dagur *širbes*, *širbus* ‘sinew’; Monguor *šbuzə*, *šuluzə*, *šurbusə* ‘sinew’. Poppe 1960:30 and 117; Street 1974:25 **sir* ‘sinew, tendon’; Starostin—Dybo—Mudrak 2003:1283—1284 **šjörme* ‘sinew’.

Sumerian *šer* ‘to tie, to bind’, *šér(-šér)* ‘to tie, to bind’, *šèr-šèr* ‘chain’, *šìr-šìr* ‘band, chain’, *šèr-šèr-apin* ‘chain’.

Buck 1949:9.19 rope, cord. Bomhard—Kerns 1994:345, no. 170; Dolgopolsky 2008, no. 2106, **säR[u]* (= **säRo* ?) ‘sinew, fiber’.

298. Proto-Nostratic (n.) **sʷir-a* ‘root (of tree or plant)’:

Perhaps related to:

(vb.) **sʷir-* ‘to twist, turn, tie, or bind together’;

(n.) **sʷir-a* ‘band, cord, any cord-like object: sinew, tendon, nerve, vein’

A. Proto-Afrasian **sʷir-* ‘root’: Proto-Semitic **sʷirsʷ-/sʷursʷ-* (< **sʷərsʷ-*) ‘root’ > Akkadian *šuršu* ‘root’; Hebrew *šōreš* [שֹׁרֶשׁ] ‘root (of plant)’; Syriac *šeršā* ‘root’; Phoenician *šrš* ‘root’; Ugaritic *šrš* ‘root’; Arabic *širš* (< **sirs*) ‘root’. Murtonen 1989:439; Klein 1987:684. Proto-Semitic **sʷirr-/sʷurr-* (< **sʷərr-*) ‘root’ > Arabic *sirr* ‘root, origin, source’; Geez / Ethiopic *šərw* [ሥርወ], *šūr* [ሥር], *šər* [ሥር] ‘basis, root, origin, stock, tribe’ (also ‘sinew, tendon, nerve, muscle’); Tigrinya *sər*, *sur* ‘root’; Tigre *sər* ‘root’; Amharic *sər* ‘root, bottom; under, beneath, at the foot of’ (also ‘vein, artery, nerve, tendon’); Gafat *sər* ‘root’; Harari *sər* ‘root, bottom; near’; Gurage *sər* ‘root, bottom of a thing’. Leslau 1963:142, 1979:558, and 1987:535—536. Central Cushitic: Awngi / Awiya *sár* ‘root’; Kemant *sər* ‘root’; Quara *sər* ‘root’; Bilin *zir* ‘root’. Appleyard 2006:116—117; Reinisch 1887:309. Ehret 1995:164, no. 230, **sar-/sir-* ‘root’.

B. Dravidian: Gonda *sīr*, *šīr*, *sīr*, *hīr*, *hīr*, *īr* ‘root’; Pengo *cīra* ‘root’; Kui *sīru* ‘root’; Kuwi *hīrū*, *hīru* ‘root’. Burrow—Emeneau 1984:228, no. 2626.

Buck 1949:8.54 root.

299. Proto-Nostratic root **sʷol-*:

(vb.) **sʷol-* ‘to be safe, well, sound’;

(n.) **sʷol-a* ‘safety; health, welfare’; (adj.) ‘safe, well, sound’

- A. Proto-Afrasian **sʷ[o]l-* ‘to be safe, well, sound’: Proto-Semitic **sʷal-am-* ‘to be safe, well, sound’ > Hebrew *šālēm* [שָׁלֵם] ‘to be complete, sound’, *šālōm* [שָׁלוֹם] ‘peace’; Syriac *šālēm* ‘to be complete, to be safe’; Phoenician *šlm* ‘to be complete’; Ugaritic *šlm* ‘(vb.) to be complete; (n.) peace’; Arabic *salima* ‘to be safe and sound, unharmed, unimpaired, intact, safe, secure’, *salām* ‘soundness, unimpairedness, intactness, well-being; peace, peacefulness; safety, security’, *salim* ‘peace’, *salīm* ‘safe, secure; free (from); unimpaired, undamaged, unhurt, sound, intact, complete, perfect, whole, integral, faultless, flawless; well; safe and sound; healthy; sane’, *sālīm* ‘safe, secure; free (from); unimpaired, unblemished, faultless, flawless, undamaged, unhurt, safe and sound, safe; sound, healthy; whole, perfect, complete, integral’; Akkadian *šalāmu* ‘to be well’, *šulmu* ‘health, welfare’; Sabaeen *slm* ‘peace, soundness, health’; Ḥarsūsi *sēlem* ‘to be safe’, *selōm*, *selām* ‘peace’, *selōmet* ‘peace, safety’; Šheri / Jibbāli *sēlm* ‘to be safe’, *sélum* ‘peace, safety’; Mehri *sīlām* ‘to be safe, saved’, *sālōm* ‘peace’, *sēlom*, *sōlām* ‘safe’; Geez / Ethiopic *salām* [ሰላም] ‘peace, salutation, safety’; Tigrinya *sālam* ‘peace’; Tigre *sālma* ‘to greet’; Amharic *sālam* ‘peace, tranquility’, *sällāma* ‘to pacify’. Arabic loan in Gurage (Soddo) *sālam* ‘peace’. Murtonen 1989:425—426; Klein 1987:662—663; Leslau 1979:643 and 1987:499—500; Zammit 2002:227. Egyptian *snb* (< **šnb* /šlm/) ‘to be sound, healthy’. Hannig 1995:717—718; Erman—Grapow 1921:164 and 1926—1963.4:158—159; Faulkner 1962:231.
- B. Proto-Dravidian **cōl-* (‘whole, healthy, sound’ >) ‘excellent, beautiful, fine’: Pengo *hōl-* ‘to be beautiful, fine, good, excellent’; Maṇḍa *hūlpā-* ‘to be fine, beautiful’. Burrow—Emeneau 1984:250, no. 2890.
- C. Proto-Indo-European **sol-* ‘whole, sound, well, safe’: Sanskrit *sārva-ḥ* ‘all, whole, entire; altogether, wholly, completely’, *sarvātāti* ‘totality; completeness, perfect happiness or prosperity; soundness’; Pāli *sabba-* ‘all’; Avestan *haurva-* ‘whole, entire’; Old Persian *haruva-* ‘all’; Greek ὅλος ‘whole, entire, complete’; Armenian *olj* (< **solyo-*) ‘whole, healthy’; Latin *salvus* ‘safe, unhurt, well, sound’, *salus* ‘health, soundness’; Tocharian A *salu* ‘completely, entirely’, B *solme* ‘completely, altogether’. Pokorny 1959:979—980 **solo-*, **sol(e)uo-* ‘well-kept, whole’; Walde 1927—1932.II:510—511 **sōlo-*, **sol(e)uo-*; Mann 1984—1987:1220 **sṷuos* ‘complete, total, full, whole’, 1243—1244 **soluos*, *-jos* ‘whole, all, entire, sound, hale’; Gamkrelidze—Ivanov 1984.II:812, fn. 1, **sol-(u-)* and 1995.I:711, fn. 1, **sol-(w-)* ‘health’; Watkins 1985:62—63 **sol-* (also **solā-*) and 2000:81—82 **sol-* (also **solā-*) ‘whole’; Mallory—Adams 1997:262 **sóluos* ‘whole’; Beekes 2010.II:1072 **sol(H)-uo-*; Boisacq 1950:699 **sol-uo-s*; Hofmann 1966:230—231 **sol-uos*; Frisk 1970—1973.II:381 **sóluo-s*; Chantraine 1968—1980.II:794—795 **sol-wos*; Ernout—Meillet 1979:591—592; Walde—Hofmann 1965—1972.II:471 and II:472—473 **səl-uo-*, **solo-s*; De Vaan 2008:537 **slH-u-* ‘whole’;

Mayrhofer 1956—1980.III:446—447; Van Windekens 1976—1982.I:412 *sol-; Adams 1999:705 and 2013:771 *solwo-.

Buck 1949:4.83 well; health; 11.26 safe; 16.81 beautiful (also pretty). Brunner 1969:105, no. 574; Bomhard—Kerns 1994:338—339, no. 162; Dolgopolsky 2008, no. 2046, *salû ‘intact’ (→ ‘entire’), ‘in good condition, healthy’.

300. Proto-Nostratic root *sʷor-:

(vb.) *sʷor- ‘to surge, gush, flow, spring, or spread forth’;

(n.) *sʷor-a ‘surge, gush, flow’

- A. Proto-Afrasian *sʷ[o]r- ‘to surge, gush, flow, spring, or spread forth’: Proto-Semitic *sʷar-ac- ‘to surge, gush, flow, spring, or spread forth’ > Hebrew *šāraṣ* [ʃʰʁʁʃ] ‘to swarm, to team’, *šeres* [ʃʰʁʁʃ] ‘creeping things, reptiles’; Syriac *šəraṣ* ‘to creep, to crawl’; Geez / Ethiopic *šaraša* [ʃʰʁʁʃ], *šarša* [ʃʰʁʁʃ], *šaraḍa* [ʃʰʁʁʃ] ‘to germinate, to blossom, to shoot forth, to sprout, to burgeon, to bud, to proceed, to arise’; Tigrinya *sārāšä* ‘to sprout’; Amharic *sārräṭä* ‘to suffuse’. Murtonen 1989:438; Klein 1987:683; Leslau 1987:535. Proto-Semitic *sʷar-ab- ‘to flow (forth)’ > Arabic *sariba* ‘to flow, to run out, to leak; to creep’, *sirb* ‘herd, flock, bevy, covey, swarm’; Akkadian *šarbu*, *šurbu* ‘shower (of rain)’; Geez / Ethiopic *saraba* [ʃʰʁʁʃ] ‘to flood’, *ʔasrāb* [ʃʰʁʁʃ] (pl.) ‘torrents, showers’; Tigrinya *sārābä* ‘to begin to rain’; Amharic *asrab* ‘cataract, flood’ (Geez loan). Leslau 1987:511; Zammit 2002:218—219. Proto-Semitic *sʷar-aṣ- ‘to move quickly, to surge forth’ > Arabic *saruʿa* ‘to be quick, fast, prompt, rapid; to urge (on); to speed up, to accelerate, to expedite; to hasten, to hurry, to rush, to dash’; Ugaritic *šrʿ* ‘surging’; Akkadian *šerū* ‘to well up’. Zammit 2002:219—220. Egyptian *šrr* ‘fluid, liquid’, *šrš* ‘(of horses) to be quick, swift’. Faulkner 1962:270; Hannig 1995:833. Berber: Tuareg *əsri* ‘to run, to let a horse gallop’, *səsri* ‘to make run’; Wargla *amsari* ‘horse race, horse riding’; Tamazight *srirrəy* ‘to move quickly, to be fast and efficient’, *asrirrəy* ‘the act of moving quickly, a quick and happy ending’; Kabyle *isrir* ‘to be clear (sky), to be free (local)’.
- B. Dravidian: Tamil *cōr* ‘to trickle down (as tears, blood, or milk), to fall, to drop, to be dropped, to exude, to ooze out’, *cōrvu* ‘falling, pouring’, *cōri* ‘blood, rain, shower’, *cori* ‘to pour forth, to effuse’, *cura* ‘to spring forth, to stream out, to gush, to flow, to swell morbidly with secretion, to increase by steady accumulation of wealth, to pour forth continuously, to give abundantly’, *curappu* ‘welling out, flowing out, gushing out, spring, fountain, swelling’; Kota *jo-r-* (*jo-ry-*) ‘(tears and snot) to run in streams’; Malayalam *cōruka* ‘to flow, to ooze, to trickle, to leak’, *cōrkka* ‘to drop through, to melt wax’, *coriyuka* ‘to pour down, to flow, to shower; to pour out (tr.)’; Kannada *sōr* ‘(vb.) to drop, to drip, to trickle, to ooze, to flow (as coconut water, water-drops, juice of fruit, etc.)’; (n.) leaking, dropping,

etc.’, *jōru* ‘(vb.) to trickle, to drip, to drop, to leak; (n.) trickling, flowing’, *suri* ‘to flow, to drop, to pour (as tears, blood, rain, etc.)’, *surisu* ‘to cause to flow, to cause to pour’, *suriyuvike* ‘flowing’, *juri* ‘to ooze away, to flow or ooze out plentifully’; Tuḷu *sōruni*, *tōruni* ‘to leak, to ooze, to run’; Telugu *torāgu*, *torūgu*, *torāgu* ‘to flow, to gush, to run, to burst out, to fall’; Gadba (Ollari) *sōrp-* (*sort-*) ‘to pour’, (Salur) *cōr-* ‘to pour (of water)’; Brahui *curing* ‘to flow, to gush’. Burrow—Emeneau 1984:249—250, no. 2883.

- C. Proto-Indo-European **sor-* (secondary *e*-grade form: **ser-*) ‘to move quickly, to run, to flow’: Sanskrit *sáratī* ‘to run, to flow, to move’; Greek ὄρμη ‘onset, rush’; Middle Irish *sirid* (< **sēr-*) ‘to wander through’. Pokorny 1959:909—910 **ser-* ‘to stream’; Walde 1927—1932.II:497—498 **ser-*; Mann 1984—1987:1131 **sēr-* ‘fluid’, 1131 **seros-*, *-om* (?) ‘fluid’; Mallory—Adams 1997:207 **ser-* ‘to flow’; Watkins 1985:48 **ser-* and 2000:76 **ser-* ‘to flow’; Gamkrelidze—Ivanov 1984.I:227 **ser-* and 1995.I:197 **ser-* ‘to flow, to move’; Frisk 1970—1973.II:419—420 **sór-mo-*, **sor-mā-*; Chantraine 1968—1980.II:831 (Chantraine rejects the comparison of Greek ὄρμη with Sanskrit *sáratī*); Boisacq 1950:713 **ser-*; Beekes 2010.II:1104—1105 **sor-meh₂-*; Hofmann 1966:238 **ser-*. Proto-Indo-European **ser-ph-*/**sor-ph-*/**sṛ-ph-* ‘to creep, to crawl’: Sanskrit *sárpātī* ‘to creep, to crawl’; Greek ἔρπω ‘to creep, to crawl’; Latin *serpō* ‘to creep, to crawl’, *serpens* ‘snake, serpent’; Albanian *gjarpër* ‘snake’. Rix 1998a:485 **serp-* ‘to creep, to crawl’; Pokorny 1959:912 **serp-* ‘to creep, to crawl’; Walde 1927—1932.II:502 **serp-*; Mann 1984—1987:1132 **serp-* ‘creeper, creeping, reptile’; Mallory—Adams 1997:141 **serp-* ‘to crawl’; Gamkrelidze—Ivanov 1984.I:223 **serp[h]-* : **sṛp[h]-* and 1995.I:193 **serph-* : **sṛph-* ‘to crawl; snake’; Watkins 1985:58 **serp-* and 2000:76 **serp-* ‘to crawl, to creep’; Mayrhofer 1956—1980.III:445—446; Boisacq 1950:283; Hofmann 1966:94; Beekes 2010.I:463—464 **serp-*; Frisk 1970—1973.I:565—566; Chantraine 1968—1980.I:374—375 **ser-*; De Vaan 2008:558; Ernout—Meillet 1979:619; Walde—Hofmann 1965—1972.II:524 **ser-p-*; Huld 1983:67—68. Proto-Indo-European **sr-ew-*/**sr-ow-*/**sr-u-* ‘to flow’: Greek ῥέω ‘to flow’; Sanskrit *srávati* ‘to flow’; Old Irish *srúaim* ‘flood, current’; Old Icelandic *straumr* ‘stream, current’; Danish *strøm* ‘stream’; Swedish *ström* ‘stream’; Norwegian *straum* ‘stream’; Old English *strēam* ‘flowing, current; running water, river’; Old Frisian *strām* ‘stream’; Old Saxon *strōm* ‘stream’; Dutch *stroom* ‘stream’; Old High German *stroum* ‘stream, current’ (New High German *Strom*); Lithuanian *sraviù*, *sravėti* ‘to flow’; Thracian river name Στρυμόν. Rix 1998a:535 **sreu-* ‘to flow’; Pokorny 1959:1003 **sreu-* ‘to flow’; Walde 1927—1932.II:702—703 **sreu-*; Mann 1984—1987:1276 **sreum-* ‘flowing; flow, stream; to pour’, 1276 **sreut-* ‘flow’, 1276—1277 **sreuō*, *-iō* ‘to run, to flow’; **sreuos*, *-ā*, *-iā* ‘stream, flow, current’, 1278 **sroum-* ‘current, stream, flow’, 1278 **sroughos*, *-ā* ‘flowing, flow’, 1278

**srou̯tos*, 1278 **srou̯os*, -ā, -iā ‘flowing; flow, stream’, 1279 **sru̯d-* ‘flow’, 1279 **sru̯mos*, -ā ‘stream, flow’, 1279—1280 **sru̯tlos*, -is ‘stream, outpour’, 1280 **sru̯tos*, -is ‘flowing; flow, fluid’, 1280 **sru̯tō*, -iō; Watkins 1985:64 **sreu-* and 2000:83—84 **sreu-* ‘to flow’; Mallory—Adams 1997:207 **sreu-* ‘to flow’; Mayrhofer 1956—1980.III:554—555; Gamkrelidze—Ivanov 1984.I:227 **sr-eu-* and 1995.I:196 **sr-eu-* ‘to flow, to move’; Boisacq 1950:839 **s(e)reu-*; Chantraine 1968—1980.II:970—971 **srew-*; Hofmann 1966:297 **sreu-*; Frisk 1970—1973.II:650—652 **srēu-eti*, **sreū-mē*, **srou-mon-*, **srou-mo-*; Beekes 2010.II:1281—1282 **sreu-*; Kroonen 2013:483 Proto-Germanic **strauma-* ‘stream’ and 485 **strudu-* ‘river’; Orël 1998:130 and 2003:380—381 Proto-Germanic **straumaz*; De Vries 1977:552; Falk—Torp 1903—1906.II:311; Torp 1919:724; Klein 1971:721 **sreu-*; Onions 1966:874 **srou-*, **sreu-*, **sru̯-*; Boutkan—Siebinga 2005:379; Kluge—Mitzka 1967:758 **sreu-*; Kluge—Seebold 1989:709 **sreu-*; Fraenkel 1962—1965.II:888—889 **sreu-*; Smoczyński 2007.1:593—594; Derksen 2015:424—425 **srou-*; Wodtko—Irslinger—Schneider 2008:630—634 **sreū-*.

- D. Proto-Altaic **sjori-* ‘to flow, to be soaked’: Proto-Tungus **sora-* ‘to be soaked, wet; to rinse, to wash’ > Manchu *sura-* ‘to rinse (rice), to wash (rice)’, *suraha* ‘water in which rice has been rinsed (used as pig feed)’, *suran* ‘water in which rice has been rinsed’; Negidal *soy-* ‘to be soaked, wet’; Nanay / Gold *soro-* ‘to be soaked, wet’. Starostin—Dybo—Mudrak 2003:1283 **sjori* ‘to flow, to be soaked’. Proto-Altaic **sjūrvi-* ‘to flow, to drip’: Proto-Tungus **sir-* ‘(vb.) to squeeze, to press out; to milk; (n.) spring, well’ > Manchu *šeri* ‘spring, source’, *siri-* ‘to wring, to squeeze out (a liquid); to milk’; Evenki *sir-* ‘to squeeze, to press out; to milk’; Lamut / Even *hīr-* ‘to milk’; Negidal *siy-* ‘to milk’; Ulch *siṛi-* ‘to squeeze, to press out; to milk’; Orok *siṛi-* ‘to squeeze, to press out; to milk’; Nanay / Gold *siṛi-* ‘to squeeze, to press out’; Oroch *sī-* ‘to milk’; Udihe *sie* ‘bay with spring water’, *sī-* ‘to squeeze, to press out; to milk’. Proto-Mongolian **sūr-* ‘to rain in small drops, to sprinkle’ > Written Mongolian *sūrči-* ‘to spray, to strew, to sprinkle’, *sūrčig* ‘sprinkling, strewing; sacrifice (made by sprinkling or strewing)’; Khalkha *šūrši-*, *sūrši-*, *sūrči-* ‘to rain in small drops, to sprinkle’; Kalmyk *sūrči-* ‘to rain in small drops, to sprinkle’; (?) Dagur *surē* ‘to pour (water)’. Proto-Turkic **sūrʷ-* ‘to strain, to filter; to swim, to float; to walk in water’ > Old Turkic (Old Uighur) *süz-* ‘to strain, to filter’; Turkish *süz-* ‘to strain, to filter’, *süzül-* ‘to be strained or filtered’, *süzgeş* ‘filter, strainer’; Gagauz *süz-* ‘to strain, to filter’; Azerbaijani *süz-* ‘to strain, to filter; to swim, to float’; Turkmenian *süz-* ‘to strain, to filter’; Uzbek *suz-* ‘to swim, to float’; Uighur *süz-* ‘to strain, to filter’; Tatar *söz-* ‘to strain, to filter; (dial. also) to swim, to float’; Kirghiz *süz-* ‘to strain, to filter; to swim, to float’; Kazakh *süz-* ‘to strain, to filter’; Noghay *süz-* ‘to strain, to filter’; Tuva *süs-* ‘to walk in water’; Chuvash *sər-* ‘to strain, to filter; to catch fish by a drag-net’. Starostin—Dybo—Mudrak 2003:

1298—1299 **sǰūrī* ‘to flow, to drip’. Starostin—Dybo—Mudrak note: “A Western isogloss. The root may in fact be the same as **sǰōri* (reflected in the Eastern area) q.v., but modified under the influence of a synonymous **sǰūrū* q.v.”

Sumerian *šur* ‘to pour out, to flow, to bubble or boil up, to gush out; to arise from, to spring forth; to spread or stretch out, to rain’.

Buck 1949:10.32 flow (vb.); 10.41 creep, crawl. Brunner 1969:104, no. 567; Möller 1911:229—230, 230, and 232; Bomhard—Kerns 1994:339—341, no. 163. Different etymology in Dolgopolsky 2008, no. 2169, **ša[ri]XV* ‘to stream, to flow’.

301. Proto-Nostratic (n.) **sʷub-a* ‘end, edge; top, front part’:

- A. Proto-Kartvelian **škub(l)-* ‘forehead; front part’: Georgian *šubl-* ‘forehead’; (?) Mingrelian *skibu-*, *skəbu-* ‘millstone’; (?) Laz *mskibu-*, *pskibu-* ‘mill’; Svan [*sgob-*, *sgweb-*, *sgeb-*] (< **šgub-* < **škub-*) in: *sgobin*, *sgwebin*, *sgebin* ‘in front of, forward’. Klimov 1964:218 **šubl-* and 1998:253 **šubl-* ‘forehead; front part’ (Klimov notes that the Zan cognates have undergone a semantic shift); Fähnrich—Sardshweladse 1995:431 **šub-* (Fähnrich—Sardshweladse do not include the Zan forms); Schmidt 1962:146; Fähnrich 2007:534 **šub-*.
- B. Proto-Altaic **sǰūbu* ‘end’: Proto-Tungus **sube-* ‘end, edge; top’ > Lamut / Even *hūre* ‘end, edge; top’; Manchu *subexə* ‘the end of a branch, the end of a hair from the beard’; Evenki *suwerē* ‘end, edge; top’; Negidal *suweyē* ‘top’; Ulch *suwe* ‘top’; Orok *suwe* ‘top’; Nanay / Gold *suwe*, *sue* ‘top’; Oroch *su-ŋe* ‘end, edge; top’; Udihe *sue* ‘top’; Solon *sugur* ‘end, edge; top’. Proto-Mongolian **seyül* ‘tail, end’ > Written Mongolian *segül* ‘tail, end’; Khalkha *sūl* ‘tail, end’; Buriat *hūl* ‘tail, end’; Kalmyk *sūl* ‘tail, end’; Ordos *sūl* ‘tail, end’; Moghol *söül* ‘tail, end’; Dagur *seuli*, *seul* ‘tail, end’; Shira-Yughur *sūl* ‘tail, end’; Monguor *sūr* ‘tail, end’. Proto-Turkic **sīb-ri* ‘sharp, sharp-edged’ > Old Turkic *süvri* ‘sharp, sharp-edged’; Karakhanide Turkic *süvri* ‘sharp, sharp-edged’; Turkish *sivri* ‘sharp-pointed’; Gagauz *sivri* ‘sharp, sharp-edged’; Azerbaijani *sivri* ‘sharp, sharp-edged’; Turkmenian *süyri* ‘sharp, sharp-edged’; Karaim *sivri*, *süvrü* ‘sharp, sharp-edged’; Kirghiz *süyrü* ‘sharp, sharp-edged’; Kazakh *süyir* ‘sharp, sharp-edged’; Tuva *sūr* ‘sharp, sharp-edged’; Chuvash *šəwvəwr* ‘sharp, sharp-edged’; Yakut *üörbe* ‘sharp, sharp-edged’. Starostin—Dybo—Mudrak 2003:1286—1287 **sǰūbu* ‘end’.

Buck 1949:4.205 forehead; 12.33 top; 12.35 end; 12.353 edge.

302. Proto-Nostratic root *sʷur- (~ *sʷor-):

- (vb.) *sʷur- ‘to frighten; to be or become frightened, to fear’;
 (n.) *sʷur-a ‘fear’

- A. Dravidian: Tamil *cūr* ‘to frighten, to be cruel’, *cūr* ‘fear, suffering, affliction, sorrow, disease, cruelty, malignant deity, celestial maidens’, *cūrppu* ‘a cruel, ferocious deed’; Malayalam *cūr* ‘fiend, affliction, disgust’. Burrow—Emeneau 1984:237, no. 2725.
 B. Proto-Kartvelian *škur- ‘to be in an awkward situation; to fear’: Georgian *šur-* ‘to envy’, *šur-i* ‘envy, jealousy’; Mingrelian *škur-* ‘to fear’; Laz *škur-*, *šk’ur-* ‘to fear’, *ma-škur-in-u* ‘I got frightened’; Svan *šgur-* ‘to be ashamed’. Schmidt 1962:144; Klimov 1998:253 *šur- ‘to be in an awkward situation; to fear’ and 253—254 *šur- ‘shame, envy’; Fähnrich—Sardshweladse 1995:432 *šur-; Fähnrich 2007:535—536 *šur-.

Buck 1949:16.45 shame (sb.); 16.53 fear, fright.

303. Proto-Nostratic root *sʷuw- (~ *sʷow-):

- (vb.) *sʷuw- ‘to be proper, fitting, suitable, appropriate, good, well, fine, beautiful’;
 (n.) *sʷuw-a ‘propriety, suitability, appropriateness’; (adj.) ‘proper, fitting, suitable, appropriate’

Semantics as in Geez / Ethiopic *šannaya* [ሠነዮ] ‘to be beautiful, to be good, to seem good, to be well, to be fine, to be excellent, to be fitting, to be appropriate’ and its derivatives (cf. Leslau 1987:531—532).

- A. Proto-Afrasian *sʷ[u/w]- ‘to be proper, fitting, suitable, appropriate, good, worthy, equal, equivalent’: Proto-Semitic *sʷaw-ay- ‘to be equal, even’ > Arabic *sawīya* ‘to be equivalent, to be equal (to something); to even, level, flatten, straighten (something); to smooth (something); to equalize, to make equal (something to something else); to put (something) on the same level (with something); to put two persons on an equal footing, to treat two persons as equal, to reconcile two persons; to make regular, to make good (something); to regulate, to arrange, to make up, to smooth over, to settle, to put in order (a dispute, controversy, etc.)’, *siwan*, *suwan* ‘equality, sameness’, *sawāʔ* ‘equal; equality, sameness’, *sawīy* ‘straight, right, correct, proper; unimpaired, intact, sound; even, regular, well-proportioned, shapely, harmonious’, *mustawin* ‘straight, upright, erect; even, smooth, regular; well done (cooking); ripe, mature’; Hebrew *šāwāh* [שָׁוָה] ‘to be like, equal, equivalent’, *šāwēh* [שָׁוְהָ] ‘level, plain’, *šāweh* [שָׁוֶה] ‘equal, fitting, appropriate’; Syriac *šəwā* ‘to be even, like, equal’; Harsūsi *sewō* ‘to be equal to’, *sewē* ‘together; even’; Mehri *sōwi* ‘to level’; Šheri / Jibbāli *essōi* ‘to act, justly’, *siéʔ* ‘equal’; Soqotri *seʔ* ‘to balance, to

offset', *suwa* 'good, convenient, suitable'. Murtonen 1989:414; Klein 1987:644; Zammit 2002:232. Egyptian *šw* 'worth, value', *ir šw* 'to be profitable', *šw* 'suitable, useful, worthy', *šw-mr* 'worthy of love'; Coptic *šaw* [ϣⲁϣ] '(n.) use, value; (adj.) useful, suitable, fitting, virtuous', *m(p)ša* [ⲙ(ⲡ)ϣⲁ] '(vb.) to be worthy, deserving (of); (n.) worth, deserts, fate', *atmpša* [ⲁⲧⲙⲡϣⲁ] 'worthless, undeserving', *r šaw* [ⲣ ϣⲁϣ] 'to be useful, suitable (for); to become prosperous, virtuous', *mntšaw* [ⲙⲛⲧϣⲁϣ] 'usefulness; propriety, modesty', *šumerit* [ϣⲟϣⲙⲉⲣⲓⲧ] 'lovable', (prefix) *šu-* [ϣⲟϣ-] 'worthy of, fit for'. Hannig 1995:801; Erman—Grapow 1921:178 and 1926—1963.4:404; Faulkner 1962:261; Vycichl 1983:255 and 274; Černý 1976:87 and 257. Cushitic: Beja / Beḍawye *šō* 'good, beautiful'. Reinisch 1895:208.

- B. Proto-Kartvelian **škw-* 'to befit someone; to be proper, fit, suitable, becoming; to decorate, to beautify': Georgian *šv-* 'to befit someone, to be proper'; Svan *sgw-*, *sgu-*: *li-sgw-e* 'to befit someone', (archaic) *li-sgw-e-ži* 'to be kind enough to', *ma-sgw-a* 'suitable, corresponding'; Mingrelian *sku-* 'to decorate', *skv-a* 'beautiful'; Laz *msku-* 'to impress by one's beauty, to be proud', *sku-al-i* 'beautiful'. Klimov 1964:217—218 **šu-* and 1998:248 **šw-* 'to befit somebody, to be proper'; Fähnrich 2007:526—527 **šw-*; Fähnrich—Sardshweladse 1995:424—425 **šw-*. Proto-Kartvelian **škw-en-/škw-n-* (**škw-* plus **-en-* extension) 'to decorate; to be proper, to befit': Georgian *šven-* 'to decorate; to be proper, to befit', *šno-* 'charm, fascination'; Mingrelian [*skvam-*] in *skvam-*, *sk'vam-* 'beautiful, proper' (see below), (action noun) *skv-am-eb-a-* 'to be suitable, proper, fit, seemly, becoming; to beautify, to decorate'; Laz *skvan-* in *domoskvanu* 'he decorated me'; Svan [*sgwen-*] in *mu-sgw-en* 'beautiful' (see below). Klimov 1998:250 **šw-en-/šw-n-* 'to decorate; to be proper, to befit'. Proto-Kartvelian **m-škw-en-* '(adj.) beautiful, wonderful, proper; (n.) beauty': Old Georgian *mšuen-ier-* 'standing in beauty'; Georgian *m-šwen-* 'beautiful, wonderful', *m-šven-ier-i* 'beautiful'; Laz *mskva-*, *mskvalina-*, *pskva-* 'beautiful'; Mingrelian *skvam-*, *sk'vam-* 'beautiful, proper'; Svan *mu-sgw-en* 'beautiful', *sgwän* 'beauty, charm'. Klimov 1998:128—129 **m-šwen-* 'beautiful; beauty'; Schmidt 1962:142 **skwen-*.
- C. Proto-Indo-European (prefix) **su-* 'well, good': Sanskrit *sú* (also *sū* in the R̥gveda) 'good, excellent, right, virtuous, beautiful, easy, well, rightly, much, greatly, very, any, easily, quickly, willingly' in *su-kāra-h* 'easy to be done, easy to be managed, easily achieving', *su-kāra-m* 'doing good, charity, benevolence', *su-kṛt-* 'doing good, benevolent, virtuous, pious; fortunate, well-fated, wise; making good sacrifices or offerings; skillful', *su-kṛt-á-h* 'a good or righteous deed, a meritorious act, virtue, moral merit; a benefit, bounty, friendly assistance, favor; good fortune, auspiciousness; reward, recompense', *su-divá-h* 'a bright or fine day', *su-mānas-* 'well disposed', etc.; Avestan *hu-* 'well, good' in *hu-mata-* 'well thought', *hu-manah-* 'in a good mood', etc.; Old Persian *u-* (*uv-* before vowels) 'well,

good' in *u-xšnav-* 'well satisfied', *u-cāra-* 'well done, successful', *u-barta-* 'well-borne, lifted, esteemed', *u-raθa-* 'having good chariots', etc.; Greek *ύ-* in *ύ-γής* 'sound, healthy', *ύ-γεία* 'soundness, health', etc.; Gaulish *su-* in *Su-carius*, *Su-ratus*, etc.; Old Irish *su-*, *so-* 'good' in *so-chor* 'good contract', *su-aitribhide* 'habitable', *so-lus* 'bright', etc.; Welsh *hy-* in *hy-gar* 'well-beloved, lovable', *hy-dyn* 'tractable', *hy-fryd* 'pleasant', etc.; Cornish *hy-*; Breton *he-*; Old Icelandic *sú-* in *sú-svort* 'nightingale' (this word is obsolete in Icelandic); Lithuanian *sū-* in *sū-drūs* 'luxuriant', etc.; Old Church Slavic *sv-* in *sv-dravъ* 'healthy', etc. Pokorny 1959:1037—1038 **su-*, **sū-* 'well, good'; Walde 1927—1932.II:512 **su-*; Mann 1984—1987:1331 **su-* 'well-'; Watkins 1985:67 **su-* 'well, good'; Gamkrelidze—Ivanov 1984.II:780 **su-* and 1995.I:683 **su-* 'good'; Mallory—Adams 1997:235 **su-* 'good' and 2006:337 *(*h*₁)*su-*; Boisacq 1950:997 Greek *ύ-γής* < **su-gʷijēs*; Frisk 1970—1973.II:954—955 **su-* 'well, good'; Hofmann 1966:381 **su-*; Chantraine 1968—1980.II:1150—1151 **su-*; Beekes 2010.I:484—485 **h*₁(*e*)*su-*, **h*₁*su-*; Mayrhofer 1956—1980.III:478—480; Smoczyński 2007.1:613; Fraenkel 1962—1965.II:937 **sū-*; Derksen 2008:478—479 and 2015:434 **h*₁*su-*; Wodtko—Irslinger—Schneider 2008:239—243 **h*₁*es-u-*.

- D. Proto-Altaic **sū* 'well, very, extremely': Proto-Tungus **sō* 'very, verily, significantly' > Evenki *sō* 'very, verily, significantly'; Lamut / Even *hō* 'very, verily, significantly'; Negidal *sō* 'very, verily, significantly'; Oroch *so* word added after addressing someone. Proto-Mongolian **su* 'hail, blessing; distinction, genius' > Middle Mongolian *su* 'hail, blessing', *su-tu* 'blessed, happy'; Written Mongolian *su* 'hail, blessing', *sū* (noun and adj.) 'distinction, superiority, genius, ingenuity; ingenious'; Khalkha *sū* 'genius'; Kalmyk *sū* 'distinction, genius'; Ordos *sudu* 'distinction genius'. Starostin—Dybo—Mudrak 2003:1310—1311 **sū* 'well, very, extremely'.

Buck 1949:9.943 fitting, suitable; 16.71 good (adj.); 16.81 beautiful (also pretty). Illič-Svityč 1965:371 **šuwA* ['хороший'] 'good'; Dolgopolsky 2008, no. 2177, **šüwA* → **šuwE* 'fit, good'.

22.13. PROTO-NOSTRATIC *₃

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
* ₃ -	* ₃ -	*c-	* ₃ -	*d ^h -	*č-	*ǰ-	*c-
-* ₃ -	-* ₃ -	-(c)-	-* ₃ -	-d ^h -	-č-	-ǰ-/ -d-	-c-

304. Proto-Nostratic root **zag-* (~ **zəg-*):

(vb.) **zag-* ‘to push, to shove, to drive’;

(n.) **zag-a* ‘push, shove, force’

Related to:

(vb.) **zag-* ‘to stuff, press, or squeeze tight’;

(n.) **zag-a* ‘plug’; (adj.) ‘pressing, squeezing, cramming’

- A. Proto-Afrasian **zag-* ‘to push, to shove’: [Proto-Semitic **zag-ag-* ‘to throw, to hurl; to push, to shove; to drive’ > Arabic *zağğā* ‘to throw, to hurl; to push, to shove, to urge, to drive; to press, to squeeze, to force, to cram’; Gurage (reduplicated) (*a*)*zgäzägä* ‘to throw in a spiral motion’; Amharic (reduplicated) (*am*)*zägäzzägä*, (*an*)*zägäzzägä* ‘to throw in a spiral motion’. Leslau 1979:705. Proto-Semitic **zag-aw-* ‘to drive, to urge on; to press, to squeeze’ > Arabic *zağā* ‘to drive, to urge on; to press, to squeeze, to force, to cram; to push, to shove’. Zammit 2002:206. Proto-Semitic **zag-ar-* ‘to drive’ > Arabic *zağara* ‘to drive back, to drive away; to hold back, to retain, to prevent; to scold, to rebuke, to upbraid’, *zağr* ‘forcible prevention, suppression (of customs, abuses, crimes); rebuke, reprimand’. Zammit 2002:206.]
- B. Proto-Kartvelian **zger-* ‘to push, to shove’: Georgian *zger-* ‘to push, to shove’; Svan *zger-*, *zgr-* ‘to push, to shove’. Fähnrich—Sardshweladse 1995:474 **zger-*; Fähnrich 2007:590 **zger-*.

Sumerian *zag* ‘to drive away, to expel’.

Buck 1949:10.65 drive (vb. tr.); 10.67 push, shove (vb.).

305. Proto-Nostratic root **zag-* (~ **zəg-*):

(vb.) **zag-* ‘to stuff, press, or squeeze tight’;

(n.) **zag-a* ‘plug’; (adj.) ‘pressing, squeezing, cramming’

Related to:

(vb.) **zag-* ‘to push, to shove, to drive’;

(n.) **zag-a* ‘push, shove, force’

- A. Proto-Afrasian **zag-* ‘to stuff, press, or squeeze tight’: [Proto-Semitic **zag-ag-* ‘to throw, to hurl; to push, to shove; to drive’ > Arabic *zağğa* ‘to throw, to hurl; to push, to shove, to urge, to drive; to press, to squeeze, to force, to cram’; Gurage (reduplicated) (*a*)*zgäzägä* ‘to throw in a spiral motion’; Amharic (reduplicated) (*am*)*zägäzzägä*, (*an*)*zägäzzägä* ‘to throw in a spiral motion’. Leslau 1979:705. Proto-Semitic **zag-aw-* ‘to drive, to urge on; to press, to squeeze’ > Arabic *zağā* ‘to drive, to urge on; to press, to squeeze, to force, to cram; to push, to shove’. Zammit 2002:206. Proto-Semitic **zag-ar-* ‘to drive’ > Arabic *zağara* ‘to drive back, to drive away; to hold back, to retain, to prevent; to scold, to rebuke, to upbraid’, *zağr* ‘forcible prevention, suppression (of customs, abuses, crimes); rebuke, reprimand’. Zammit 2002:206.] Geez / Ethiopic *zagʿa* [ዘግዐ] ‘to close in, to seclude, to plug up’. Leslau 1987:632. Geez / Ethiopic *zagha* [ዘገሐ], *zagha* [ዘግዐ] ‘to close, to shut in, to enclose, to include’, *zaghāt* [ዘግሐት] ‘closing, shutting in, enclosing’; Tigrinya (*tä*)*zäghe* ‘to lose the voice after singing a lot’, literally, ‘to be closed (voice)’; Amharic *zägga* ‘to shut, to close up, to enclose’. Leslau 1987:633. (?) Egyptian *zg* ‘to bring to a stop (a sailing boat)’. Hannig 1995:775; Faulkner 1962:252. Assuming semantic development from ‘to press, to squeeze, to force’ as in Dravidian: Malayalam *aṭaṇṇuka* ‘to be pressed down, enclosed, contained; to submit, to yield; to be allayed, calmed’; Kota *arg-* (*argy-*) ‘to stop, to be obedient’, *ark-* (*arky-*) ‘to cause to stop’; Kannada *aḍaku* ‘to press, to press into a narrower compass, to pack; to subdue, to control’; etc. (cf. Burrow—Emeneau 1984:7, no. 63). (?) Berber: Tuareg *əzzəğ* ‘to milk, to be milked’, *taḥək* ‘the act of milking’; Nefusa *əzzəg* ‘to milk’; Ghadames *əzzəğ* ‘to milk’; Mzab *əzzəğ* ‘to milk’; Tamazight *zzəg*, *zzəy* ‘to milk’, *tamazzagt* ‘teat, udder’; Wargla *əzzəg* ‘to milk, to be milked’; Tashelhiyt / Shilha *əzzəg* ‘to milk’; Riff *əzzəg* ‘to milk’; Kabyle *əzzəg* ‘to milk’, *tuzzga* ‘milking’, *tamazzagt* ‘teat, udder’; Chaoia *əzzəg* ‘to milk’; Zenaga *tuzugt* ‘milking’. Assuming semantic development from ‘to press, to squeeze’ as in Dravidian: Kui *pīs-* ‘to press, to squeeze, to milk’; etc. (cf. Burrow—Emeneau 1984:366, no. 4135).
- B. Dravidian: Tamil *cakkaḷi* ‘to become oblate, flattened, compressed’; Kannada *cakkaṛi* ‘that has become flat by pressure’; Tuḷu *cakku* ‘flat’. Burrow—Emeneau 1984:201, no. 2271.
- C. Proto-Kartvelian **zgib-* ‘to stuff (tight), to drive in’: Georgian *zgib-* ‘to tense, to strain, to tighten one’s brows’; Mingrelian *zgib-* ‘to stuff (tight), to drive in’; Laz (*n*)*zgip-* ‘to caulk’; Svan *zgub-* : *zgb-* ‘to stuff (tight)’. Klimov 1998:278—279 **zgib-* ‘to stuff (tight), to drive in’; Fähnrich—Sardshweladse 1995:474 **zgib-*; Fähnrich 2007:590—591 **zgib-*.

Buck 1949:12.25 shut, close (vb.).

306. Proto-Nostratic root **zag-* (~ **ʒəg-*):(vb.) **zag-* ‘to whet, to sharpen’;(n.) **zag-a* ‘edge, side’A. Dravidian: Kuṛux *caknā* ‘to sharpen an edge instrument, to whet’; Malto *cake* ‘to sharpen, to whet’. Burrow—Emeneau 1984:202, no. 2277.B. Proto-Kartvelian **zga-* ‘edge, brim’: Georgian (with metathesis: **zg-il-* >) *gz-il-* ‘edge, brim’; Mingrelian *zga-* ‘bank, shore’; Laz *zga-*, *mzga-* ‘bank, shore; edge’. Svan *zgig* ‘edge’. Klimov 1998:278 **zga-* ‘edge, brim’; Fähnrich 2007:589—590 **zg-*.Sumerian *zag* ‘border, boundary, side’.

Buck 1949:12.353 edge.

307. Proto-Nostratic root **zak’-* (~ **ʒək’-*):(vb.) **zak’-* ‘to make fun of, to deride, to mock; to make sport, to play about, to joke’;(n.) **zak’-a* ‘mockery, ridicule, sport’A. Dravidian: Tamil *cakkaṭṭam*, *cakkantam* ‘scoff, mockery, sport, censure’; Kannaḍa *cakkanda* ‘sportful, idle talk; happiness, pleasure, contentedness’, *jakkulisu*, *jakkulisu* ‘to amuse, to divert, to rejoice, to play about, to jeer at, to make sport of, to deride’; Tuḷu *cakkanda* ‘plausibility, speciousness’; Telugu *jakkalimpu* ‘jeering, quizzing’; Gondi *cakkā kiyānā* ‘to deride, to make fun of’; Kōṇḍa *sekali* ‘ridicule, satire’. Burrow—Emeneau 1984:201, no. 2269.B. Proto-Kartvelian **zek’-* ‘simple-minded, silly, dimwitted, dumb; simpleton’: Georgian *zek’-* ‘simple-minded, silly, dimwitted, dumb; simpleton’; Mingrelian *zak’-* ‘simple, ordinary’ (cf. *zak’i k’oč’i* ‘ordinary man’). Klimov 1998:279 **zek-* ‘simple, silly; simpleton’; Fähnrich 2007:592 **zek-*; Fähnrich—Sardshweladse 1995:476 **zek-*. Semantic development from ‘to play the fool’ as in Swedish *tokig* ‘foolish’, *tok* ‘fool’ and Danish (dial.) *tok(k)et* ‘crazy’, *tokke* ‘to act crazy’, borrowed from Middle Low German *token* ‘to play, to joke’ (cf. also Russian *durít’* [дурить] ‘to make a fool of oneself, to act foolishly, to play the fool’, *dúren’* [дурень] ‘fool, simpleton’, *durák* [дурак] ‘jester, fool, ass’).

Buck 1949:16.26 play (vb.); 17.22 foolish, stupid.

308. Proto-Nostratic root **zar-* (~ **ʒər-*) or **žar-* (~ **žər-*):(vb.) **zar-* or **žar-* ‘to run, flow, leak, or spill out; to spring forth, to issue (from); to flow or gush forth’;(n.) **zar-a* or **žar-a* ‘drizzle, rain, downpour; current, stream, torrent’

- A. Proto-Afrasian **zar-* ‘to run, flow, leak, or spill out; to spring forth, to issue (from); to flow or gush forth’: Proto-Semitic **zar-am-* ‘to gush forth, to burst forth, to spurt’ > Hebrew *zāram* [זָרַם] ‘to pour forth in floods, to flood away’, *zerem* [זֶרֶם] ‘flood of rain, downpour’, *zīrmāh* [זִרְמָה] ‘issue, ejaculation (of semen)’; Aramaic *zarmīθ* ‘downpour’; Ugaritic *zrm* ‘to make rain’ (?); Akkadian *zarāmu* ‘to overwhelm’; Gurage (Gyeto) *zəram* ‘rain’; Geez / Ethiopic (with *n* for *r*) *zanma* [ጸጸመ] ‘to rain’, *zanām* [ጸጸም] ‘rain, rainy season’; Tigrinya *zānāmā* ‘to rain’; Tigre *zānma* ‘to rain’; Amharic *zānnāmā* ‘to rain’. Murtonen 1989:170; Klein 1987:204; Leslau 1979:710, 715 and 1987:641. Proto-Semitic **zar-ab-* ‘to gush forth, to flow forth, to rain’ > Arabic *zariba* ‘to flow, to run, to run out, to flow over’, *zīrb* ‘canal’; Gurage (Chaha, Eža) (n.) *zərab* ‘rain’, (Chaha, Zway) (with *n* for *r*) (vb.) *zānābā* ‘to rain’; Argobba *zānnābā* ‘to rain’. Leslau 1979:710. Egyptian *zrmt* ‘flood, torrent’; *zḥ* ‘to flow’. Hannig 1995:658 and 730; Faulkner 1962:209; Erman—Grapow 1921:142 and 1926—1963.3:420, 3:463. Berber: Touat *amazzer* ‘artificial waterfall’; Tamazight *zrir* ‘to be or become liquid, to liquify’, *zizzər* ‘to cascade, to flow along’, *amuzzər* ‘waterfall, torrent’; Kabyle *əzzər* ‘to flow, to drop to the bottom’, *zriri* ‘to flow (tears, fountain)’, *izir* ‘squirt of milk from an udder’; Tashelhiyt / Shilha *amuzzər* ‘waterfall’. Orël—Stolbova 1995:548, no. 2640, **zVrab-* ‘to flow’.
- B. Dravidian: Tamil *cāru* (*cāri-*) ‘to slip off, to slip down (as from a tree), to slant, to incline (as a post), to deviate, to flow, to issue’, *cāral* ‘drizzling rain’; Malayalam *cāruka* ‘to run off or out, to drizzle’, *cārūka* ‘to drizzle’, *cāral*, *cārral*, *maṛa cārral*, *cārū maṛa* ‘drizzling rain’; Kannaḍa *jāru* ‘to slip, to slide, to slip away, to slide away, to steal away, to withdraw, to retire, to shrink, to go off or start swiftly, to run, to drop or ooze out; to flow, (knot) to slip or become loose’, *jārisu* ‘to make to slip, to go away’, *jāra*, *jārike*, *jāruvike* ‘slipping, sliding, slipperiness, flowing, trickling’; Tuḷu *jāruni* ‘to slip, to slide down, to be slippery or smooth, to tumble, to fall down, to be dislocated, to shrink, to hesitate, to backslide, to flee, to flay, to lop off (as branches of a tree)’, *jārupaḍi*, *jārpaḍi* ‘to slide, to glide, to slip, to become loose, to ooze’, *jārucu*, *jārcu* ‘to let slip or drop, to let down, to loosen’, *jāruḍu* ‘slipperiness, sliding, slipping’; Koṇḍa *zār-* ‘to slip, to slide’. Burrow—Emeneau 1984:216—217, no. 2482.
- C. Proto-Indo-European **dher-/dhor-/dh₃-* ‘to gush forth, to burst forth, to spurt’: Greek θορός, θορή ‘semen’, θοῦρος (< *θόρ-φος) ‘rushing, raging’, θρόσκω ‘to leap, to spring; to attack, to assault, i.e., to leap upon; to rush, to dart’; Sanskrit *dhārā* ‘flood, gush’; Pāli *dhārā* ‘stream, current’; Middle Irish *dar-* ‘to spring, to leap’. Rix 1998a:127 **dherh₃-* ‘to spring, to leap’; Pokorny 1959:256 (**dher-*) **dhor-* : **dh_{er}-* ‘to jump’; Walde 1927—1932.I:861 (**dher-*) **dhor-* : **dh_{er}-*; Mann 1984—1987:186 **dhēros* (?) ‘rush, attack’; Mallory—Adams 1997:323 **dher-* ‘to leap, to spring’; Frisk 1970—1973.I:678 and I:689; Chantraine 1968—1980.I:444 **dhre₂₃-*;

Hofmann 1966:116 **dhereu-* and 349 Greek $\theta\omicron\upsilon\rho\omicron\varsigma$ < **dhũ-* (**dheũā^x-*); Boisacq 1950:348—349; Beekes 2010.I:552 **dherh₃-* and I:560—561 **dherh₃-*; Mayrhofer 1956—1980.II:100—101.

- D. Proto-Eskimo **carvar* ‘current’: Alutiiq Alaskan Yupik *carwaq* ‘current’; Central Alaskan Yupik *carvaq* ‘current, rapidly flowing stream’, *carvə-*, *carvar-* ‘to flow (of current)’; Sirenik *sarvətətəX* ‘drift’; Seward Peninsula Inuit *sarvaq* ‘current’, *sarvaq-* ‘to flow (of current)’; North Alaskan Inuit *sarvaq* ‘current’, *sarvaq-* ‘to have a strong current, to be carried away by current’; Western Canadian Inuit *sarvaq* ‘current’; Eastern Canadian Inuit *sarvaq* ‘river rapids’; Greenlandic Inuit *sarfaq* ‘current, river rapids’, *sarfar-* ‘to have a current (river)’. Fortescue—Kaplan—Jacobson 1994:71. Proto-Inuit **carat-* ‘to be moist or slippery on surface’ > Eastern Canadian Inuit *sarat-* ‘to be lightly dampened on surface (waterproof object)’; Greenlandic Inuit *sarat-* ‘to glisten (with moisture)’, *sarassi-* ‘to slip out of one’s hand’. Fortescue—Kaplan—Jacobson 1994:71.

Sumerian *zar* ‘to run, flow, leak, or spill out; to spring forth, to issue (from); to flow or gush forth; to bubble over’.

Buck 1949:1.75 rain (sb.); 10.32 flow (vb.); 10.43 jump, leap (vb.). Bomhard—Kerns 1994:349—350, no. 176.

309. Proto-Nostratic root **zer-* or **žer-*:

- (vb.) **zer-* or **žer-* ‘to pierce, to jab, to stab, to thrust or shove into’;
(n.) **zer-a* or **žer-a* ‘spear, javelin, weapon’

- A. Afrasian: Proto-Semitic **zar-ak-* ‘(vb.) to pierce, to jab, to stab, to thrust or shove into; (n.) spear, javelin’ > Hebrew *zārak* [זָרַק] ‘to throw, to toss’; Arabic *zaraḳa* ‘to hit or pierce with a javelin; to jab or to bore (into something or someone)’, *mizrāk* ‘javelin’; Mehri *zərūk* ‘to throw a dagger or dart at someone, to stab at (with a spear)’; Šheri / Jibbāli *zórók* ‘to throw (a dagger or dart) at, to stab at; (snake) to strike at’; Ḥarsūsi *zerōk* ‘to dart at, to sting, to stab’; Geez / Ethiopic *zaraḳa* [ዘረቀ] ‘to pierce with a spear’, *məzrāk* [ምዘረቀ] ‘javelin’; Tigrinya *zārākä* ‘to pierce with a spear’, *māzrak* ‘javelin’; Tigre *märzaḳ* (with metathesis) ‘big staff with iron point’. Perhaps also Amharic *məzraṭ* ‘spear which has a square tip’. Klein 1987:204; Murtonen 1989:171; Leslau 1987:644. [Orël—Stolbova 1995:543, no. 2610, **zarik-* / **zaruk-* ‘to throw, to push’ — the Cushitic forms cited by Orël—Stolbova are surely loans.]
- B. Dravidian: Tamil *ceruku* (*ceruki-*) ‘to insert, to slide into’, *cerumu* (*cerumi-*) ‘to sink, to pierce through’; Malayalam *cerutuka* ‘to shove in, to put in’; Kannada *serku*, *sekku* ‘to shove in, to put in, to insert, to tuck (the end of a garment) into another (part of the garment)’, *sekke* ‘insertion’; Telugu *cekku* ‘to set (as a precious stone), to thrust, to tuck up’, *ceruvu* ‘to insert,

to stick in'; Kuṛux *xerrnā* (*xirryas*) 'to introduce lengthwise by gradual pushing, to insert, to stick into or behind'; Malto *qere* 'to thrust in, to tuck in'. Burrow—Emeneau 1984:241, no. 2778; Krishnamurti 2003:126 **cer-* 'to insert'.

- C. Proto-Indo-European (**dher-* / **dhr-*) 'to strike, to beat, to knock; to thrust': Old Icelandic *drepa* 'to strike, to beat, to knock; to slay, to kill, to slaughter; to put, to thrust; to tuck up the sleeves or skirts of a garment', *dráp* 'slaughter, killing'; Norwegian *drepe* 'to kill, to put to death, to slay', *dreper* 'killer; (explosive) harpoon', *drap* 'homicide, manslaughter, murder'; Danish *dræbe* 'to kill'; Swedish *dräpa* 'to kill, to slay; to squash, to quash', *dräpande* 'killing, slaughter'; Old English *drepan* 'to strike, to hit with a weapon', *drepe* 'death stroke, blow', *gedrep* 'stroke (of darts)'; Old Saxon *drepan* 'to strike, to hit'; Old High German *treffan* 'to hit, to strike' (New High German *treffen*). Kroonen 2013:101—102 Proto-Germanic **drepan-* 'to hit'; Orël 2003:75 Proto-Germanic **drepan*, 75 **drepanan*; De Vries 1977:81 and 83; Torp 1919:71; Walshe 1951:229; Kluge—Mitzka 1967:788 **dhreb-*; Kluge—Seebold 1989:738.
- D. Proto-Altaic **žere* (~ **žaro*, -a) 'armor, weapon(s)': Proto-Mongolian or **žer-* 'weapon' > Written Mongolian *žer* 'weapons, armament'; Khalkha *zer* 'weapon'; Buriat *zer* 'weapon'; Kalmyk *zer* 'weapon'; Ordos *žir* 'weapon'. Proto-Turkic **yarik* 'armor' > Old Turkic *yariq* 'armor'; Karakhanide Turkic *yariq* 'armor'. As noted by Starostin—Dybo—Mudrak (2003:1534): "Modern languages widely reflect **jarak* 'weapon, armour' (Kirgh[iz] *žaraq*, Uygh[ur] *jaraq*, etc., see ЭСЯ 4, 139). This seems to be a contamination of the earlier attested **jarag* 'readiness, opportunity' (derived from **jara-* 'to be fit, suitable' q.v. sub **žāra*; see EDT *ibid.*) and **jarik* 'armour'." Starostin—Dybo—Mudrak 2003:1534—1535 **žere* (~ **žaro*, -a) 'armor, weapon'.

Buck 1949:20.21 weapons, arms; 20.26 spear (sb.).

310. Proto-Nostratic root **zil-* (~ **zel-*) or **žil-* (~ **žel-*):
 (vb.) **zil-* or **žil-* 'to flow, to flow forth';
 (n.) **zil-a* or **žil-a* 'drip, drop, raindrop'; (adj.) 'flowing, trickling, dropping, sprinkling'
 Probably identical to:
 (vb.) **zil-* or **žil-* 'to glide, to slide';
 (n.) **zil-a* or **žil-a* 'the act of slipping, sliding, gliding'; (adj.) 'smooth, slippery'
- A. Proto-Afrasian **ʒ[i]l-* 'to flow, to flow forth': Proto-Semitic **ʒal-ag-* 'to flow' > Post-Biblical Hebrew *zālay* [זָלַי] 'to drip, to flow'; Aramaic *zəlay* 'to drip, to flow'; Geez / Ethiopic *zalaga* [ረገገ] 'to flow, to trickle, to drop'; Tigrinya *zälägg bälä*, *zäläglägg bälä* 'to flow'; Amharic (*tä*)*zlägällägä* 'to

- flow'. Klein 1987:198; Leslau 1987:637. Proto-Semitic **zal-ah-* 'to drip, to sprinkle, to pour' > Hebrew *zālah* [זָלַח] 'to drip, to sprinkle, to spray, to be wet'; Aramaic *zəlah* 'to sprinkle, to rain; to pour out'; Geez / Ethiopic *zalha* [ረሐ], *zalləha* [ረሐረ] 'to drain out, to empty all of the liquid from a vessel'. Klein 1987:199; Leslau 1987:637. Proto-Semitic **zal-ap-* 'to drip, to pour, to spill over' > Hebrew *zālaq* [זָלַק] 'to pour, to sprinkle, to spray'; Aramaic *zəlaq* 'to drop, to trickle down'; Geez / Ethiopic *zalaqa* [ረሐረ] 'to drip, to spill over'. Klein 1987:199; Leslau 1987:637. Proto-Semitic **zal-aʔ-* 'to flow' > Aramaic *zālā* 'to flow, to glide'. Berber: Tuareg *ahəl* 'to run, to flow (water)'; Tawlemmet *azəl* 'to run, to run away', *azzalan* 'course, speed, flight'; Siwa *əzzəl* 'to run, to flow', *zəlli* 'act of running, course'; Nefusa *azzəl* 'to run'; Ghadames *əzzəl* 'to run'; Tamazight *azzəl* 'to run, to flow', *tazzla* 'course, flow'; Wargla *azzəl* 'to run, to flow', *tazla* 'course, haste'; Riff *azzəl*, *azzər* 'to run'; Tashelhiyt / Shilha *azzəl* 'to run, to flow', *tizla* 'course'; Kabyle *azzəl* 'to run, to flow', *tazzla* 'the act of coming and going, occupation, course'; Chaouia *azzəl* 'to run', *tazlla* 'course'.
- B. Dravidian: Tamil *cilucilu* 'to rain gently', *cilumpu* (*cilumpi-*) 'to flow out, to gush out', *cilu-nīr* 'raindrop dripping from leaves'; Kota *cilk iṛ-* (*iṛ-*) 'to drizzle'; Kannaḍa *cilkunīru* 'water in fine drops', *jilipu* 'to ooze (as water from a new pot)'; Koraga *cilbi* 'to splash water with the finger'; Telugu *ciluku* 'to sprinkle (tr.), to spurt, to shed; to be spilled', *cilikincu*, *cilukarincu* 'to sprinkle', *cilacila* imitative of flowing, *cilupu* 'a pond'; Kolami *silka* 'a river'; Naikri *śilka* 'brook, river'; Parji *cilva* 'brook, rivulet'; Gondi *silka* 'small river'; Kuwi *silk-* 'to splash (intr.)'. Burrow—Emeneau 1984:223, no. 2569. Telugu *sela*, *selayēru* 'waterfall, cascade', *jela* 'a spring of water'; Kannaḍa *sele* 'spring, fountain-head'. Burrow—Emeneau 1984:242, no. 2785.
- C. Proto-Altaic **žiōlu* 'riverbed, stream': Proto-Tungus **žila-* 'a place in a river where water does not freeze because of a fast current' > Manchu *žilan*, *žulan* 'a place in a river where water does not freeze because of a fast current'. Proto-Mongolian **žilga* 'riverbed, ravine' > Written Mongolian *žilya* 'riverbed, ravine'; Khalkha *žalga* 'riverbed, ravine'; Buriat *žalga* 'riverbed, ravine'; Kalmyk *žalyə* 'riverbed, ravine'; Dagur *žalag* 'riverbed, ravine'; Shira-Yughur *žalga* 'riverbed, ravine'. Proto-Turkic **yul* 'stream, brook, fountain' > Old Turkic *yul* 'stream, brook, fountain'; Karakhanide Turkic *yul* 'stream, brook, fountain'; Khakas *čul* 'stream, brook, fountain'; Oyrot (Mountain Altai) *yul* 'stream, brook, fountain'; Chuvash *śʷl* 'stream, brook, fountain'. Starostin—Dybo—Mudrak 2003:1543 **žiōlu* 'riverbed, stream'.

Buck 1949:1.36 river; stream; brook; 10.32 flow (vb.).

311. Proto-Nostratic root **zil-* (~ **zel-*) or **žil-* (~ **žel-*):
 (vb.) **zil-* or **žil-* ‘to glide, to slide’;
 (n.) **zil-a* or **žil-a* ‘the act of slipping, sliding, gliding’; (adj.) ‘smooth, slippery’
 Probably identical to:
 (vb.) **zil-* or **žil-* ‘to flow, to flow forth’;
 (n.) **zil-a* or **žil-a* ‘drip, drop, raindrop’; (adj.) ‘flowing, trickling, dropping, sprinkling’
- A. Proto-Afrasian **ʒ[i]l-* ‘to glide, to slip, to slide’: Proto-Semitic **zal-* (**zal-ag-*, **zal-ak-*, **zal-aḥ-*, **zal-al-*) ‘to glide, to slip, to slide’ > Arabic *zaliḳa* ‘to glide, to slide, to slip, to make slippery’, *zalla* ‘to slip’, *zalaḡa* ‘to slip, to slide, to glide’; Ḥarsūsi *zelōk* ‘to slip’; Tigrinya *zālḥaṭ bālā* ‘to totter, to stagger’; Harari (*tä*)*zālḥaṭa* ‘to slip’, *zilḥiç bāya* ‘to slip’; Amharic (*an*)*zālaṭṭāṭā* ‘to make slip’; Gurage (Wolane) (*a*)*zlaṭṭā* ‘to be slippery’, (Selti) (*a*)*zlaṭā* ‘to slip, to slide’, (Zway) *anzālālāṭā* ‘to slip, to slide’. Leslau 1963:166 and 1979:707; Zammit 2002:209. Berber: Mzab *əzləḡ* ‘to skid, to slide; to be distorted’, *uzliḡ*, *uzlij* ‘cord of twisted thread’; Wargla *aməzlag* ‘twisted, smooth (rope, thread)’; Tuareg *ehleḡ* ‘to have on the side, to have on one’s right or on one’s left, to have hanging on the side’, *təhalḡə* ‘left side’; Tawlemmet *əzləḡ* ‘to carry, to have hanging on the side, to carry (clothing) on the side’, *təzalgə* ‘left, left side’, *zallag* ‘to be awkward, clumsy’; Tashelhiyt / Shilha *zlag* ‘to twist thread into a rope, to be wound’; Riff *əzrəḡ* ‘to turn, to roll’; Kabyle *əzləḡ* ‘to be twisted, distorted, misplaced (object, clothing, shoes)’; Chaouia *əzləḡ* ‘to be askew, to go wrong, to miss the mark’. Cushitic: Proto-Agaw **ʒələw-* ‘to go round, to turn’ > Bilin *jələw-* ‘to go round, to turn’; Xamir *jəlw-* ‘to go round, to turn’; Kemant *jəlw-* ‘to go round, to turn’; Awngi / Awiya *zur-* ‘to go round, to turn’. Appleyard 2006:75; Reinisch 1887:180 Bilin *jiluw-*.
- B. Proto-Altaic **žiūlu-* (~ -*a*) ‘(vb.) to slide; (adj.) smooth, slippery’: Proto-Tungus *žulV-* ‘smooth, naked’ > Evenki *žulā-kin* ‘naked’; Lamut / Even *žulaqqan* ‘naked’; Solon *žulu-brēx* ‘smooth’, *žulāxī* ‘naked’. Proto-Mongolian **žil-* ‘smooth, level’ > Written Mongolian *žilim*, *žilum* ‘smooth, level’, *žildam* ‘level’; Khalkha *žildem* ‘level’; Buriat *želeger* ‘smooth, level’; Kalmyk *žilm* ‘smooth, level’. Proto-Turkic **yīl-* ‘(vb.) to creep; (n.) snake’ > Old Turkic *yīlan* ‘snake’; Karakhanide Turkic *yīlan* ‘snake’; Turkish *yılan* ‘snake’; Gagauz *yīlan* ‘snake’; Azerbaijani *ilan* ‘snake’; Turkmenian *yīlān* ‘snake’; Uzbek *žil-* ‘to creep’, *ilōn* ‘snake’; Uighur *ilan* ‘snake’; Tatar *yīl-* ‘to creep’, *yīlan* ‘snake’; Bashkir *yīlan* ‘snake’; Kirghiz *žil-* ‘to creep’, *žīlan* ‘snake’; Kazakh *žīlan* ‘snake’; Noghay *yīlan* ‘snake’; Tuva *čil-* ‘to creep’, *čīlan* ‘snake’; Chuvash *śəwlen* ‘snake’; Yakut *sīl-* ‘to creep’. Starostin—Dybo—Mudrak 2003:1548—1549 **žiūlu* (~ -*a*) ‘to slide; smooth, slippery’
- C. Eskimo: Proto-Inuit **cilirak-* ‘to glide’ > Seward Peninsula Inuit *siliak-* ‘to glide’; North Alaskan Inuit *silviak-* ‘to swoop down on, to be blown along

with wind, to glide'; Western Canadian Inuit *siliak-* 'to glide downward (of bird)'; Greenlandic *ciliray-* 'to go obliquely, to tack'. Fortescue—Jacobson—Kaplan 1994:79. Proto-Yupik **cilur-* 'to slide or glide' > Alutiiq Alaskan Yupik *ɬur-* 'to slide (down)'; Central Alaskan Yupik *cilur-* 'to glide, to skip on water'; Central Siberian Yupik *əstur-* 'to go south, to travel with wind'. Fortescue—Jacobson—Kaplan 1994:80.

Buck 1949:3.85 snake; 10.42 slide, slip (vb.); 15.77 smooth.

312. Proto-Nostratic root **zim-* (~ **zem-*) or **žim-* (~ **žem-*):
 (vb.) **zim-* or **žim-* 'to blow, to play (a wind instrument)';
 (n.) **zim-a* or **žim-a* 'blowing, playing (a wind instrument)'
- A. Proto-Afrasian **zim-* 'to blow, to play (a wind instrument)': Proto-Semitic **zam-ar-* 'to blow, to play (a wind instrument), to make music' > Hebrew *zamar* [זָמַר] 'to sing, to praise, to play (a musical instrument)', *zmrāh* [זִמְרָה] 'melody, song'; Aramaic *zmrūrā* 'flute', *zēmār* 'music'; Old Akkadian *zamārum* 'to sing'; Arabic *zamara* 'to blow, to play (a wind instrument)'; Geez / Ethiopic *zammara* [ሠሠረ] 'to sing, to recite Psalms, to play a musical instrument, to celebrate with song, to praise or glorify in song', *mazmūr* [ሠሠሠር] 'psalm, hymn, song, psalter, music, chorus'; Tigrinya *zāmārā* 'to sing, to recite Psalms'; Tigre *zāmmāra* 'to sing, to chant'; Amharic *zāmmārā* 'to sing'; Gurage (Soddo) *zimmārā* 'to sing', (Chaha) *azāmārā* 'to sing a war song or an epic song, to bestow praise on someone or oneself'. Murtonen 1989:166—167; Klein 1987:200; Leslau 1979:709 and 1987:639. Egyptian *zb* 'to play the flute', **zb'w* 'flautist'. Faulkner 1962:220; Hannig 1995:684; Erman—Grapow 1921:144 and Erman—Grapow 1926—1963.3:433. Central Cushitic: Proto-Agaw **zəm-* 'to dance, to sing' > Xamir *gim-* 'to dance, to sing'; Xamta *gim-* 'to sing'; Awngi / Awiya *gəm-* 'to dance, to sing'. Appleyard 2006:51 and 124.
- B. Dravidian: Kannaḍa *semilu* 'to sneeze'; Koraga *cimili* 'to sneeze'. Burrow—Emeneau 1984:240, no. 2774. Semantic development as in Old Icelandic *fnýsa* 'to sneeze' from the same stem found in Greek *πνέω* 'to breathe, to blow'.
- C. Proto-Indo-European **d^{hem}(H)-* / **d^hη(H)-* (secondary *o*-grade form: **d^hom(H)-*) 'to blow (as wind or as to blow any wind instrument)': Sanskrit *dhāmati* 'to blow (as wind or as to blow any wind instrument)'; Prakrit *dhamaṇī* 'bellows'; Ashkun *domō* 'wind'; Parachi *dhamān* 'wind'; Hindi *dhaūknā* 'to blow (with bellows), to breathe on, to pant'; Lithuanian *dumiù, dūmti* 'to blow, to smoke'; Old Church Slavonic *dъmъ, dъti* 'to blow'. Rix 1998a:133—134 **d^hmeH-* 'to blow'; Pokorny 1959:247—248 **dhem-*, **dhemə-* 'to fly about like dust'; Walde 1927—1932.I:851—852 **dhem-*, **dhemā^x-*; Mann 1984—1987:189 **dhəm-* (**dhṃ-*, **dhm-*) 'to blow, to puff, to swell', 192 **dhm-*, **dhṃ-*, **dhmə-* (radical element of **dhəm-*,

dhūm*-) ‘to blow, to swell’; Mallory—Adams 1997:147 **dhemh_x*- ‘to blow’; Mayrhofer 1956—1980.II:92; Smoczyński 2007.1:133 *d^hṁH-C-*, **d^hmeH-*; Fraenkel 1962—1965.I:88; Derksen 2008:114—115 **d^h(o)mH-* and 2015:145 **d^h(o)mH-*.

Buck 1949:4.54 sneeze (vb.); 10.38 blow (vb. intr.). Bomhard—Kerns 1994: 348—349, no. 175.

313. Proto-Nostratic root **zum*- (~ **zom*-) or **žum*- (~ **žom*-):

(vb.) **zum*- or **žum*- ‘to take, to seize’;

(n.) **zum-a* or **žum-a* ‘the act of taking or seizing’; (adj.) ‘taking, seizing’

A. Proto-Afrasian **zum*- ‘to take, to seize’: Semitic: Akkadian *zummū* ‘to lack, to miss, to be deprived of; to cause to miss, to deprive of’. Central Chadic **zum*- ‘to rob’ > Logone *zum* ‘to rob’. Orël—Stolbova 1995:547, no. 2632, **zum*- ‘to rob’.

B. Dravidian: Kolami *sum-* (*sumt-*) ‘to catch, to seize, to buy’; Naikri *sum-* ‘to catch, to seize, to buy; to lay’; Naiki (of Chanda) *sum-* ‘to buy, to catch, to hold’; Parji *cumm-* ‘to seize, to catch hold of’. Burrow—Emeneau 1984:232, no. 2679.

Buck 1949:11.58 rob, robber; 11.13 take; 11.14 seize, grasp, take hold of.

314. Proto-Nostratic (reduplicated) (n.) **zuʒ-a* (< **zu-zu-*) ‘tip, point’ (> ‘nipple, breast’):

Note: There has been a good deal of remodeling in the Nostratic daughter languages, including Afrasian (Semitic). The original form has been best preserved in Kartvelian in Georgian and Mingrelian.

A. (?) Afrasian: Semitic: Hebrew *zīz* [זִּז] ‘nipple, full breast’ (a hapax legomenon in the Bible, occurring in Isaiah 66:11); Arabic *zīza* ‘udder (breast, teat)’ (vulgar); Akkadian *zīzu* ‘teat’; Ugaritic *zd*, *ḏd* ‘breast, chest’. Del Olmo Lette—Sanmartín 2003:999; Koehler—Baumgartner 1958:254; Klein 1987:197.

Comment: Militarev—Kogan (2000.I:266, no. 295) reconstruct Proto-Semitic (n.) **zīḏ-* ~ **zīḏ-* ‘teat’. However, they note: “Phonetically problematic. Low compatibility of *z* and *ḏ* in Sem. makes their combination in the same root questionable; however, it may account for somewhat unusual developments in Ugr. and Arb.” As further noted by Militarev—Kogan, the above forms are not related to or derived from Proto-Semitic (n.) **dayd-* (> **dadd-* in Hebrew and Aramaic) ‘teat, women’s breast’ discussed above; also not related to the Semitic proto-

form reconstructed by Militarëv—Kogan (2000. I:250—251, no. 280) as (n.) **tVdy-* ~ **čVdy-* ‘(woman’s) breast’. Finally, Militarëv—Kogan do not list any non-Semitic cognates.

- B. Dravidian: Proto-Dravidian **cu-kkay* ‘spot, dot, point’ (> ‘star’): Tamil *cukkai* ‘star’ (Telugu loan); Kannaḍa *cukke* ‘small mark, dot’; Telugu *cukka* ‘star, spot, dot, drop’; Kolami *sukka* ‘star’; Naiki (of Chanda) *cukkin* ‘star’; Naikṛi *cukka* ‘star’; Parji *cukka* ‘star’; Gadba *cukka* ‘drop of rain’, *sukka* ‘star’; Gondi *sukkum* ‘star’; Konda *suka* ‘star’; Pengo *huka* ‘star’; Maṇḍa *hukerij* ‘star’; Kui *suka* ‘star’; Kuwi *hūka*, *kukka* ‘star’. Burrow—Emeneau 1984:229, no. 2646; Krishnamurti 2003:13 **cukk-V* ‘star’.
- C. Proto-Kartvelian (reduplicated) **zuzu-* ‘breast (female)’: Georgian *zuzu-* ‘breast (female)’, Mingrelian *zuzu-* ‘breast (female)’, Laz *buʒ-* ‘breast (female)’ (perhaps a loan from or influenced by Modern Greek βυζί ‘breast’ or Northwest Caucasian (Circassian): Bžedux *bəʒə* ‘woman’s breast’, Kabardian *bəʒ* ‘woman’s breast’). Fähnrich—Sardshweladse 1995:481 **zu-*; Fähnrich 1994:223 and 2007:598 **zu-*; Schmidt 1962:153; Klimov 1964:235 **zuzu-* and 1998:281—282 **zuzu-* ‘breast (female)’.
- D. Proto-Indo-European (reduplicated) **dhudʰdh-o-* ‘nipple’ (> ‘anything having the size or shape of a nipple: lump, knot, dot, etc.’): Late Latin *dudda* ‘nurse, nanny’ (loan from unknown source); Old High German *tutto*, *tutta* ‘nipple’ (New High German [dial.] *Tütte*); Middle High German (dim.) *tüttel* ‘nipple’ (New High German *Tüttel* ‘point, dot, jot’); Dutch *dot* ‘lump, small knot’; Old English *dott* ‘speck, head (of a boil)’; East Frisian *dotte*, *dot* ‘lump, clump’. Mann 1984—1987:215 **dhuddhlom* ‘pendant; penis’, 215 **dhuddhos*, *-ā*, *-ios* ‘tiny; tiny tot’; Kluge—Mitzka 1967:799; Vercoullie 1898:61; Koolman 1879—1884.I:323—324; Onions 1966:285; Klein 1971:226; Walshe 1951:232. Possibly also the following Greek forms: τυτθός ‘(of children) little, small, young’, (pl.) τυτθά (in Homeric only: τυτθά διατμήξας ‘cut small’), (adv.) τυτθόν ‘a little, a bit’, (Doric) τυννός ‘small, little’. For discussion, cf. Boisacq 1950:993; Hofmann 1966:379; Chantraine 1968—1980.II:1147; Frisk 1970—1973.II:949; Beekes 2010.II:1518 and II:1521.

Buck 1949:1,54 star; 4.41 breast (of woman); 12.352 point (sb. = sharp end). Different etymology in Dolgopolsky 2008, no. 2767, **žūžV* ~ **žūñžA* ‘teat, female breast’.

22.14. PROTO-NOSTRATIC *c^h

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
c ^h -	c-	c-	c-	t ^h -	č-	č ^h -	c-
-c ^h -	-c-	-c(c)-	-c-	-t ^h -	-č-	-č ^h -	-c(c)-

315. Proto-Nostratic root *c^hag- (~ *c^həg-):

(vb.) *c^hag- ‘to prick, to pierce’;

(n.) *c^hag-a ‘prick, sting, rupture’

- A. Proto-Afrasian *cag- ‘to prick, to pierce’: Proto-Semitic *cag-aš- ‘to pierce’ > Ethiopic / Geez *sag^wʿa* [ሰጉዐ], *sagūʿa* [ሰጉዐ] ‘to perforate, to pierce through’; Tigrinya *säg^wʿe*, *šäg^wʿe* ‘to cut off, to pierce’. Leslau 1987:490. (?) Egyptian *sḏ* ‘(vb.) to break; to break into, to invade; to break open, to rupture; (n.) fracture, rupture’. Erman—Grapow 1921:176 and 1926—1963.4:373—375; Hannig 1995:790; Faulkner 1962:257. West Chadic: Hausa *tsaagàà* ‘to split, to crack, to rip; to make a cut or incisions in something’, *tsaagaa* ‘crack, slit’. Orël—Stolbova 1995:90, no. 373, *cag- ‘to break’.
- B. Dravidian: Kurux *cakkhñā* (*cakkhyaś/cakkos*) ‘to pierce with a prick, to prick, to penetrate into, to puncture, to cause a prickly sensation, to experience a prickly sensation’, (reflexive) *cakkhñā* ‘to get tattooed, etc.’, *cakhtaʔāñā* ‘to cause to be pierced, tattooed’; Malto *caqe* ‘to sting, to pierce, to stab’ (also applied to the sowing of certain grains for which hoes are made in the earth), *caqro* ‘worm-eaten roots’, *caqtre* ‘to have the ears pierced’, *caqu* ‘shooting pains in the stomach’; Brahui *jaxxing* ‘to run into, to pierce’. Burrow—Emeneau 1984:202, no. 2278.
- C. Proto-Kartvelian *cag- ‘to prick, to pierce’: Laz *cig-* ‘to prick, to pierce’; Svan *cäg* ‘thorn’, *cag-ār* ‘prickly’. Fähnrich—Sardshweladse 1995:444 *cag-; Fähnrich 2007:553 *cag-.

(?) Sumerian *ság* ‘to smite, to slay, to kill’.

316. Proto-Nostratic root *c^haḥ- (~ *c^həḥ-):

(vb.) *c^haḥ- ‘to crush, to pound, to grind, to beat, to bruise, to destroy’;

(n.) *c^haḥ-a ‘the act of crushing, beating, thrashing, pounding, grinding’;

(adj.) ‘crushing, beating, thrashing, pounding, grinding’

- A. Proto-Afrasian *caḥ- ‘to crush, to pound, to grind, to beat’: Proto-Semitic *caḥ- (extended forms: *caḥ-ak-, *caḥ-an-, *caḥ-al-, *caḥ-ag-, *caḥ-ak-, *caḥ-aw/y-, *caḥ-at-) > Hebrew *sāḥāḥ* [סָחַח] (< *caḥ-aw/y-) ‘to scrape’;

Akkadian *sāku* (< **cah-ak-*) ‘to pound, to crush’; Arabic *saḥaḳa* ‘to crush, to pound, to bruise, to pulverize; to annihilate, to wipe out, to wear out’, *sāḥiḳ* ‘crushing’, *saḥana* ‘to crush, to pound, to bruise, to grind; to smooth by rubbing’, *saḥala* ‘to scrape off, to shave off, to peel; to smooth, to make smooth, to plane, to file’, *saḥāla* ‘filings, file dust’, *saḥaḡa* ‘to scrape off, to shave off, to rub off; to graze, to abrade, to strip off’, *saḥata* ‘to extirpate, to annihilate, to root out’, *saḥā* ‘to shovel or sweep away, to shave off (hair)’; Sabaean *šht* ‘to destroy’; Ḥarsūsi *seḥāḳ* ‘to crush, to grind fine’, *seḥāl* ‘to grind (a knife), to scratch’; Šheri / Jibbāli *šhaḳ* ‘to crush, to grind fine’, *šhal* ‘to scratch, to grind (a knife)’; Mehri *səḥāḳ* ‘to crush, to mill, to grind fine’, *səḥāl* ‘to scratch, to grind (a knife)’; Ethiopic / Geez *saḥala* [ሰሐለ] ‘to sharpen’; Tigrinya *sāḥalä* ‘to sharpen’; Tigre *sāḥla* ‘to sharpen’; Amharic *salä* ‘to sharpen’; Gurage *sala* ‘razor made locally’. The Ethiopian forms may be loans from Arabic (cf. Leslau 1979:542). Murtonen 1989:298; Klein 1987:440; Leslau 1979:542 and 1987:493; Zammit 2002:216. (?) Egyptian *šm* (Old Kingdom *zhm*) ‘to crush, to pound’. Faulkner 1962:238; Erman—Grapow 1921:167 and 1926—1963.4:215; Hannig 1995:736; Gardiner 1957:591. Berber: Kabyle *cəqq* (< **cah-ak-*) ‘to split; to be split, cracked’. Orël—Stolbova 1995:98, no. 408, **cVḥaḳ-* ‘to cut, to break’.

- B. Dravidian: Tamil *cāttu* (*cātti*) ‘to beat, to thrash’, *cāttu* ‘beating, thrashing’; Kota *ca-t-* (*ca-ty-*) ‘to give a blow, to beat’. Burrow—Emeneau 1984:214, no. 2450.
- C. Proto-Kartvelian **cex-* ‘to grind, to crush’: Georgian *cex-* ‘to remove stubble’; Mingrelian *cax-* ‘to grind, to crush’; Svan *li-cēxw-e* ‘to mow’ (Georgian loan). Klimov 1964:228 **c₁exw-* ‘to pound, to crush’ and 1998:264 **cex-* ‘to remove stubble’; Fähnrich—Sardshweladse 1995:447 **cex-*; Fähnrich 2007:557 **cexw-*; Schmidt 1962:149.
- D. Indo-European: Hittite (1st sg. pres. act.) *za-aḥ-mi* ‘to hit, to beat’; (nom. sg.) *za-aḥ-ḥa-iš* ‘battle, war’; derivatives: (1st sg. pres. act.) *za-aḥ-ḥi-ya-mi* ‘to battle (someone)’, (impf. reduplicated) *za-aḥ-za-aḥ-ḥi-eš-ke/a-* ‘to battle fiercely’; (3rd sg. imp. act.) *za-aḥ-ḥur-ra-id-du* ‘to break, to crush’; (acc. sg.) *za-aḥ-ra-in* ‘knocker’ (?). Friedrich 1961:256—258; Kloekhorst 2008b:1019—1020, 1021—1022, 1023, and 1023—1024. These may be relic forms in which an original initial dental affricate has been preserved in Hittite. Though Kloekhorst compares Greek σῆμα ‘sign, mark’, σῶμα ‘corpse’, and σῖτος ‘grain, food’, there are no sure non-Anatolian cognates. Sanskrit *tāla-ḥ* ‘clapping of hands’, *tāḍa-ḥ* ‘beating, striking; blow, thump, knock’, *tāḍāyati* ‘to beat, to punish’ are suggestive, though not without their own problems. Cf. Mayrhofer 1956—1980.I:492—493 and I:498.

Buck 1949:5.56 grind; 9.21 strike (hit, beat); 9.31 rub. Bomhard 1996a:222—223, no. 633.

317. Proto-Nostratic root *c^hal- (~ *c^həl-):(vb.) *c^hal- ‘to cut, to split, to cleave, to break off or apart’;(n.) *c^hal-a ‘cut, crack, split; stroke, blow’

Derivative:

(n.) *c^hal-a ‘part, piece, chip, fragment’

- A. Proto-Afrasian *cal- ‘to cut, to split, to cleave, to break off or apart’: Proto-Semitic *cal-aṣ- ‘to split, to cleave’ > Arabic *salī’a* ‘to split, to cleave; to break open, to burst’, *salʿ*, *silʿ* ‘crack, fissure, rift’; Hebrew *selaʿ* [שֶׁלַע] ‘cliff, crag’; Aramaic *sīlʿā* ‘rock’; Šheri / Jibbālī *sēlaʿ* ‘to cut out the cheek (of a slaughtered animal)’, *seʿlʿ* ‘cheek’. Murtonen 1989:301; Klein 1987:448. Proto-Semitic *cal-at- ‘to cut, to split, to cleave, to break off or apart’ > Akkadian *salātu* (also spelled *šalātu*) ‘to split off, to split, to cut; to split into many parts, to cut through, to cut up; to be split apart’, *salṭu* ‘a cut’, *siltu* ‘shaving, splinter’, *silittu* ‘splitting off, forking off’; Arabic *salata* ‘to extract, to pull out; to chop off (something, especially a part of the body)’; Geez / Ethiopic *sallata* [ሰለተ] ‘to sift, to split’; Tigrinya *sälätä* ‘to remove a plant from its stem, to peel off’; Tigre *səllatat* ‘notches, cuts’, *šälta* ‘to destroy’; Amharic *šällätä* ‘to cut, to shear’. Leslau 1987:500—501.
- B. Dravidian: Tuḷu *selē* ‘crack, flaw (as in a stone)’; Telugu *selagu*, *selayu*, *celagu*, *celavu* ‘to cut’, *sela* ‘hole’; Kuṛux *calxnā* ‘to open, to uncover’, *calxrnā* ‘to open (intr.)’; Malto *calgo* ‘to split or break open’, *calgro* ‘torn asunder’; Brahui *caling*, *calēnging* ‘to become cracked, split’. Burrow—Emeneau 1984:209, no. 2377. Tamil *cāl* ‘furrow in plowing, track of a sower while passing and repassing in sowing’, *cālai* ‘street, avenue, road’; Malayalam *cāl* ‘furrow, channel, track, line, direction’; Kota *ca-l* ‘furrow’; Toda *so* ‘furrow’; Kannaḍa *sāl* ‘a continuous line, a furrow’; Koḍagu *ca-lli* ‘line, furrow, one complete plowing of a field, people related in any way by descent from a common ancestor’; Tuḷu *sāly* ‘line, row, furrow’; Telugu *cālu* ‘line, row, furrow, groove, track’, *cālupu* ‘line, row, series’; Gondī *āl* ‘furrow’ (loan from Telugu); Koṇḍa *sāl* ‘furrow’. Burrow—Emeneau 1984:216, no. 2471.
- C. Proto-Kartvelian *cel- ‘to cut, to mow’: Georgian *cel-* ‘to mow’; Mingrelian *cel-* ‘to mow’; Laz (*n*)*cal-*, (*m*)*cal-* ‘to cut into pieces’. Schmidt 1962:149; Klimov 1964:223 **cel-* and 1998:263 **cel-* ‘to mow’; Fähnrich—Sardshweladse 1995:445—446 **cel-*; Fähnrich 2007:554—555 **cel-*. Proto-Kartvelian **cel-* ‘scythe’: Georgian *cel-* ‘scythe’; Mingrelian *cal-* ‘scythe’. Klimov 1964:223 **cel-* and 1998:262—263 **cel-* ‘scythe’. Perhaps also: Proto-Kartvelian **cal-/cel-/cl-* ‘to remove, to take off, to tear off’: Georgian *cal-/cl-* ‘to remove, to take off’; Svan *cel-/cl-* ‘to tear, to be torn into two parts, to split into two parts’, *cil* ‘bark (of tree)’. Fähnrich 2007:554 **cal-/cel-/cil-*; Klimov 1998:263 **cel-* : **cl-* ‘to peel, to strip off’; Fähnrich—Sardshweladse 1995:444—445 **cal-/cel-/cil-*.

- D. Proto-Altaic **č^halu-* ‘(vb.) to cut; (adj.) sharp’: Proto-Tungus **čal-* ‘(vb.) to cut off; to engrave, to carve; (n.) bed in a crossbow; arrowhead’ > Manchu *čoli-* ‘to engrave, to carve’, *čolikū* ‘an engraving knife’; Evenki *čalī* ‘arrowhead’; Negidal *čōlī-* ‘to cut off’; Ulch *čālu-* ‘to cut off; to engrave, to carve’, *čaylī*, *čailqa* ‘bed in a crossbow’; Oroch *čayla* ‘bed in a crossbow’; Nanay / Gold *čālī-* ‘to cut off; to engrave, to carve’; Oroch *čali* ‘bed in a crossbow’. Proto-Mongolian **čali* ‘sharp; sharp instrument, crowbar’ > Written Mongolian *čali* ‘sharp’, *čalir*, *čaril* ‘iron bar for demolishing rocks, breaking ice; crowbar, wrecking bar’; Khalkha *calir*, *caril* ‘sharp instrument, crowbar’; Buriat *salī-* ‘to be sharp’; Kalmyk *calā*, *cālā* ‘sharp’, *calr*, *cāl* ‘sharp instrument, crowbar’; Ordos *čalir* ‘sharp instrument, crowbar’. Proto-Turkic **čal-* ‘(vb.) to knock (down), to hit, to agitate; to whet; to slaughter; to mow; to sting, to pierce; to sweep; to chop; to sharpen; (n.) scythe; whetstone; mowing; blade’ > Old Turkic *čal-* ‘to knock (down)’; Karakhanide Turkic *čal-* ‘to knock (down)’; Turkish *çal-* ‘to give a blow to, to knock (on a door), to strike (the hour)’, *çalım* ‘stroke, blow, swagger’, *çalın-* ‘to be struck’; Gagauz *čalim* ‘blade’; Azerbaijani *čal-* ‘to knock (down), to hit; to sting, to pierce; to sweep’, *čalyi* ‘a kind of broom’; Turkmenian *čal-* ‘to sharpen, to whet; to sweep; to sting, to pierce’, *čalgī* ‘scythe; whetstone’; Uzbek *čal-* ‘to knock (down), to hit’, *čalyi uruq* ‘scythe’; Uighur *čal-* ‘to knock (down), to hit’, *čalya* ‘scythe’; Karaim *cal-* ‘to knock (down), to hit, to agitate; to mow’, *calqī*, *calyi* ‘scythe’; Bashkir *salī-* ‘to slaughter’; Tatar *čal-* ‘to knock (down), to hit, to slaughter’, *čalyi* ‘scythe’; Kirghiz *čal-* ‘to knock (down), to hit, to slaughter’, *čalyi* ‘scythe’, *čalyin* ‘mowing’; Noghay *šal-* ‘to knock (down), to hit’, *šalyi* ‘scythe’; Oyrot (Mountain Altai) *čalyi* ‘scythe’; Kazakh *šal-* ‘to trip’, *šalyi* ‘scythe’, *šalyin* ‘mowing’; Yakut *sālīn-* ‘to fall abruptly’; Tuva *šalī-* ‘to sharpen, to whet’; Chuvash *sol-* ‘to mow’, *solbkk* ‘a kind of broom’. Starostin—Dybo—Mudrak 2003:413—414 **č^halu* ‘sharp; to cut’.
- E. Chukchi-Kamchatkan: Proto-Chukotian **calra-* ‘to crush or press down on’ > Koryak *calīra-* ‘to crush, to press down on’; Alyutor *salīra-* ‘to crush, to press down on’. Fortescue 2005:43. Assuming semantic development from ‘to cut or break in pieces, to rub to pieces’ > ‘to crush’.

Buck 1949:9.22 cut (vb.); 9.26 break (vb. tr.); 9.27 split (vb. tr.); 9.31 rub; 12.23 separate (vb.).

318. Proto-Nostratic (n.) **c^hal-a* ‘part, piece, chip, fragment’:
 Derivative of:
 (vb.) **c^hal-* ‘to cut, to split, to cleave, to break off or apart’;
 (n.) **c^hal-a* ‘cut, crack, split; stroke, blow’
- A. Dravidian: Tamil *calli* ‘small pieces of stone or glass, potsherd, small chips (as of stone), rubble, small flat shells used for lime, small copper coin’;

Malayalam *calli* ‘chip, potsherds, copper cash’; Kannada *jalli* ‘broken stone, metal’; Tuḷu *calli* ‘chip, potsherd’, *jalli* ‘broken stones’; Telugu *jalli* ‘road metal, broken stone’; Parji *jalub* ‘small stone chips’. Burrow—Emeneau 1984:209, no. 2381.

- B. Proto-Kartvelian **cal-* ‘part, piece’: Georgian *cal-* ‘part, one’; Laz *co(r)-* ‘piece’. Klimov 1998:262 **cal-* ‘part, piece’.

Buck 1949:13.23 part (sb.).

319. Proto-Nostratic root **c^huk^h-* (~ **c^hok^h-*):

(vb.) **c^huk^h-* ‘to close, to shut, to cover’;

(n.) **c^huk^h-a* ‘closure, cover, stoppage’

- A. Proto-Afrasian **cuk-* ‘to close, to shut, to cover’: Proto-Semitic **cak-ak-* ‘to close, to shut, to cover’ > Hebrew *sāḫaḫ* [סַחַח] ‘to screen, to cover, to thatch; to plait, to interweave’, *māsāḫ* [מַסַּח] ‘covering, screen’; Aramaic *səḫaḫ* ‘to interlace, to weave, to fence in’; Arabic *sakka* ‘to lock, to bolt (the door)’; Akkadian *sakāku* ‘to plug up, to block’; Šheri / Jibbāli *sekk* ‘to sew, to close’; Tigrinya *sāk^we*, *sāk^oe* ‘string’; Tigre *sāk^oa* ‘thread’; Gurage *sākkākā* ‘to drive a peg or a pointed object into the ground or the wall’, *māskāk* ‘peg’; Amharic *sākkākā* ‘to thread through, to drive through’, *sākka* ‘string, thread’; Harari *sākāka* ‘to string, to put in a row’. Murtonen 1989:299; Klein 1987:446; Leslau 1963:139 and 1979:540. Proto-Semitic **cak-ar-* ‘to shut, to close; to plug up, to block’ > Hebrew *sāḫar* [סַחַר] ‘to shut up, to stop up’; Syriac *səḫar* ‘to shut, to obstruct’; Arabic *sakara* ‘to shut, to close, to lock, to bolt’; Akkadian *sekēru* ‘to dam up, to close, to clog (a watercourse, a canal); to block (parts of the body)’, *sikkūru* ‘bolt’. Murtonen 1989:300; Klein 1987:446. (?) Berber: Tuareg *əskəm* ‘to withhold, to hold back (a small quantity of something which one is giving)’, *askum* ‘a stick with a hook used to grab the branches of trees in order to make it easier to cut them off’; Wargla *əskəm* ‘to withhold, to hold back, to stop, to halt’; Tashelhiyt / Shilha *tasskimt* ‘a stick with a hook, used to break dried branches’. Highland East Cushitic **c^huk-* ~ **cuk-* ‘to close (with a lid)’ > Bambala *cuk-* ‘to close (with a lid)’; Burji *c^huk-*, *c^hukk-* ~ *cuk-* ‘to cover (a pot), to close’, *c^hukkā* ‘cover, stopper’. Sasse 1982:49; Hudson 1989:184. Central Chadic **ca-cV^hkwa-* ‘to stop up’ > Mofu *sasəkw* ‘to stop up’. Orël—Stolbova 1995:97, no. 407, **cuk-* ‘to close’; Takács 2011a:21 **c-k/g* ‘to close’.

- B. Proto-Uralic **čukka-* ‘to close, to shut, to cover’: Hungarian *csuk-* ‘to close, to shut, to shut up, to shut in’; Votyak / Udmurt *čoktal-*, *čoktal-* ‘to cover, to stop up, to stuff up (for example, an opening)’, *čoksal-*, *čoksal-* ‘to cover; to stop up, to stuff up (for example, an opening)’, *čoktät-* ‘stopper, cork; lid’; Yurak Samoyed / Nenets *takaḷḡa-* ‘to hide (tr.)’; Yenisei Samoyed / Enets *tekaa-* ‘to hide (intr.)’; Selkup Samoyed *čagaža-*,

čakača-, *takata-* ‘to shut up, to lock up, to shut’; Kamassian *tåktō* ‘bolt, lock, contrivance used for shutting; (fish)-weir’, *tåktə-* ‘to close, to shut’. Collinder 1955:7 and 1977:28; Rédei 1986—1988:62 **čukka-*; Décsy 1990:98 [**chuka*] ‘to shut, to block’.

Buck 1949:7.23 lock (sb.); 12.25 shut, close (vb.). Bomhard—Kerns 1994: 351—352, no. 177.

22.15. PROTO-NOSTRATIC *c'

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
c'-	c'-	c-	c'-	t'-	č-	č-	c-
-c'-	-c'-	-c(c)-	-c'-	-t'-	-č-	-č-	-c-

320. Proto-Nostratic root *c'al- (~ *c'əl-) or *č'al- (~ *č'əl-):

(vb.) *c'al- or *č'al- 'to stretch out, to extend, to exceed; to be wealthy, to prosper, to do well';

(n.) *c'al-a or *č'al-a 'wealth, prosperity, abundance'

- A. Proto-Afrasian *c'al- '(vb.) to stretch out, to extend, to exceed; to be wealthy, to prosper, to do well; (n.) wealth, prosperity': Proto-Semitic *c'al-ah- 'to stretch out, to extend, to exceed; to be wealthy, to prosper, to do well' > Hebrew *šālāh* [שָׁלַח] 'to advance, to prosper'; Aramaic *šālah* 'to prosper'; Arabic *šalāḥa* 'to be in good or perfect condition', *šilh* 'in good condition, perfect', *šalāḥ* 'soundness, good or healthy condition; beautiful order; peace; good actions, justice'; Sabaeen *šlh* 'to make successful, to prosper'; Ḥarsūsi *šāyleh* 'to be fat'; Šheri / Jibbāli *šēlah* 'to be suitable, fine', *ešlāh* 'to do well'; Mehri *šāyləh* 'to be fat'. Murtonen 1989:360; Klein 1987:548; Zammit 2002:256—257. Proto-Semitic *c'al-at- 'to stretch, to extend' > Arabic *šaltāh* 'wide, broad', *šulātīh* 'spacious, roomy, wide'. Egyptian *ḏī* '(arm) to stretch out, to extend'. Hannig 1995:992—993; Faulkner 1962:318; Erman—Grapow 1921:218 and 1926—1963.5:514; Gardiner 1957:603 (*ḏ*). Berber: Tuareg *əzzəl* 'to make right, to rectify one thing, to be made right, to go right, to rectify, to be rectified, to go right, to be right, to extend, to expand', *zənnəzzəl* 'to stretch'; Siwa *əzzəl* 'to extend the hand'; Ghadames *əzzəl* 'to offer, to extend, to be extended'; Mzab *zzəl* 'to offer, to extend, to lengthen'; Tamazight *zzəl* 'to extend, to be extended'; Tashelhiyt / Shilha *əzzəl* 'to stretch, to extend'; Riff *əzzəl*, *əzzər* 'to stretch, to extend'; Kabyle *əzzəl* 'to offer, to extend, to be extended'. Proto-East Cushitic *d₁aal- 'to exceed, to be long(er)' > Saho *ḏel-* 'to be long'; Gidole *c'aal-* 'to be better, wealthier, taller'; Konso *jaal-* 'to exceed, to be bigger, to be longer'; Galla / Oromo *c'aal-* 'to exceed'. Sasse 1979:27.
- B. Dravidian: Tamil *cāl* (*cālv-*, *cānr-*) 'to be abundant, full; to be suitable, fitting; to be great, noble; to be sufficient', *cāl* 'fullness, abundance', *cālpu* 'excellence, nobility'; Malayalam *cāla* 'richly, fully'; Kannaḍa *sāl*, *sālu* 'to be sufficient or enough, to suffice'; Telugu *cālu* 'to be able, capable; to bear, to endure; to be enough, sufficient', *cālu* 'sufficiency', *cāلامي* 'insufficiency, inability', *cālika* 'ability', *cāla* 'abundant; abundantly'; Kolami *sāl* 'to be able'; Gondi *hāl* 'completely'; Konḍa *sāl* 'to be capable

of, to be suitable'; Kuwi *hāl* 'to suffice, to be enough to'. Burrow—Emeneau 1984:216, no. 2470.

- C. Indo-European: Hittite (3rd sg. pres. act.) *za-lu-ga-nu-zi* 'to postpone, to delay', (verbal noun) *za-lu-ga-nu-mar* 'postponement, delay'; (derivative) (3rd sg. pret. act.) *za-lu-ki-iš-ta* 'to take long'. Friedrich 1961:258—259; Melchert 1994a:67, 110, 172, and 175; Kloekhorst 2008b:1027—1028. These may be relic forms in which an original initial dental affricate has been preserved in Hittite. Though Kloekhorst considers these forms to be derived from Proto-Indo-European **dlugh-* (cf. Hittite [pl.] *da-lu-ga-e-eš* 'long'; Sanskrit *dirghá-h* 'long'; Greek *δολῆός* 'long'; Old Church Slavic *dlъgъ* 'long'; Russian *dólgij* [долгий] 'long'; etc.), the consensus (Eichner, Laroche, Melchert, etc.) seems to be that two separate stems are involved here: (1) *daluki-* and (2) **zaluki-*.
- D. Proto-Altaic **čālo* 'full, abundant': Proto-Tungus **žalu-* 'to fill, to be filled', **žalu(m)* 'full' > Manchu *žalu-* 'to be full, to be fulfilled, to fulfill', *žalu* 'full; fullness', *žalun* 'fullness', *žalukiya-* 'to fill out, to fill up, to fill a quota', *žalukan* 'somewhat full'; Spoken Manchu (Sibo) *žalū* 'full'; Evenki *žalum* 'full'; Lamut / Even *žalu-* 'full'; Negidal *žalum* 'full'; Jurchen *žaw-lu-ḡa* 'full'; Ulch *žalu(n)* 'full'; Oroch *dalumžī* 'full'; Nanay / Gold *zalo* 'full'; Oroch *žalu-* 'full'; Solon *žalū* 'full'. Proto-Mongolian **del-* '(vb.) to expand; (adj.) full, abundant; wide, broad' > Mongolian *delge-* 'to spread, to display, to lay out, to unroll, to unwrap; to open, to stretch, to elongate; to propagate', *delger* 'extensive, vast; full, abundant; flourishing', *delgere-* 'to unfold, to grow, to increase, to expand, to spread, to become extensive; to develop, to bloom, to blossom', *delgerel* 'spreading, propagation, development', *deli-* 'to stretch', *delimel* 'stretched, extended', *delbeg* 'large, wide; plentiful(ly), abundant(ly), bountiful(ly)', *delbeger* 'wide, broad, large', *delbei-* 'to be or become wide or broad (usually of objects)', *delegüü* 'large, vast, spacious, wide extensive'; Khalkha *delger* 'full, abundant; wide', *delge-*, *dele-* 'to expand', *delḡiy*, *delū* 'wide, broad'; Buriat *delger* 'full, abundant; wide'; Kalmyk *delgr* 'full, abundant; wide', *del-* 'to expand'; Ordos *delger* 'full, abundant; wide'; Dagur *delgere-*, *delgē-* 'to develop'; Monguor *derge-* 'to unwrap, to unfold'. Poppe 1955:157. Proto-Turkic **döl-* 'full' > Old Turkic (Old Uighur) *tolu* 'full'; Karakhanide Turkic *tolu* 'full'; Turkish *dolu* 'full'; Gagauz *dolu* 'full'; Azerbaijani *dolu* 'full'; Turkmenian *dōli* 'full'; Tatar *tulī* 'full'; Bashkir *tulī* 'full'; Karaim *tolī* 'full'; Kirghiz *tolo* 'full'; Kazakh *tolī* 'full'; Uzbek *tula* 'full'; Uighur *tola*, *tolyan* 'full'; Noghay *tolī* 'full'; Tuva *dolu* 'full'; Khakas *tol-* 'to fill'; Chuvash *tol-* 'to fill', *tollī* 'full'; Yakut *tuol-* 'to fill', *toloru* 'full'; Oyrot (Mountain Altai) *tolo* 'full'; Dolgan *tuol-* 'to fill', *toloru* 'full'. Starostin—Dybo—Mudrak 2003:390—391 **čālo* 'full; to fill'.

Sumerian *zal* 'to become wide'.

Buck 1949:11.42 wealth, riches; 11.51 rich; 12.57 long; 12.58 tall; 12.61 wide, broad.

321. Proto-Nostratic root *c'ar- (~ *c'ar-) stem indicating downward motion:

(vb.) *c'ar- 'to slip or slide down, to fall down, to roll down, to lean or bend down, to throw down';

(n.) *c'ar-a 'the act of slipping, sliding, falling, or rolling down';

(particle) *c'ar- 'down'

A. Afroasiatic: Proto-Semitic *c'ar-aš- 'to throw down, to fell, to bring to the ground' > Arabic *šara'a* 'to throw down, to fell, to bring to the ground; to be epileptic, to have an epileptic fit', *šarī'*, *mašrū'* 'thrown to the ground, felled; epileptic; demented, insane, mad, crazy'; Epigraphic South Arabian *šr'* 'to throw down, to humiliate'. Zammit 2002:253. According to several scholars, the following are related to the Arabic and Epigraphic South Arabian forms cited here: Hebrew *šāra'aθ* [שָׂרָאָה] 'leprosy', *šārūā'* [שָׂרָוּאָה] 'suffering from a skin eruption, struck with a skin disease'; Aramaic *šar'aθā* 'leprosy'; Geez / Ethiopic *šarnə't* [ረ-ርንዕት] 'scab, malignant ulcer', *šarnə?* [ረ-ርንእ] (for **šarnə'*) 'eczema, poisonous snake' (probably rather 'ulcer' or 'disease caused by a poisonous snake'); Akkadian *šennītu*, *šennittu*, *širnittu* 'a skin disease'. Murtonen 1989:367; Klein 1987:557; Leslau 1987:564. Berber: Tuareg *əndər* 'to jump quickly from one's seat, to fall suddenly from one's seat; to be or become angry'; Ghadames *əndər* 'to throw, to shoot, to drop'; Nefusa *ənṭar* 'to fall, to drop, to abort'; Wargla *əndər* 'to make fall, to drop, to have a miscarriage, to abort'; Tamazight *ḍər* 'to go down, to slope down, to find', *sḍər* 'to go down, to remove, to lay (eggs)', *taḍuri* 'descent, fall'; Riff *nḍər* 'to throw'; Tashelhiyt / Shilha *ḍər* 'to fall'; Kabyle *ḍər* 'to fall', *ḍḍər* 'to jump, to ascend and descend suddenly'.

B. Dravidian: Tamil *cari* (-v-, -nt-) 'to slip away, to slide down, to roll, to tumble, to stumble down, to give way, to yield, to lean, to incline, to be aslant, to slope', *cari* (-pp-, -tt-) 'to cause to slip or roll, to topple, to pour down, to make slant, to incline', *cari* 'declivity, slope of a mountain', *carivu* 'sliding, rolling, slipping down, slope, declivity', *carukku* (*carukki*-) 'to slip', *caruvu* (*caruvi*-) 'to slip away, to slide down', *caruvu* 'declivity, steep side of a rock', *caruval* 'sloping, slope'; Malayalam *cariyuka* 'to slide, slip, or roll down; to lean, to bend', *carikka* 'to bend, to make to lean sideways, to lower a vessel, to pour', *carippikka* 'to cause to lean', *cariccal* 'a low shed, a side room', *carivu*, *caru* 'inclination, slope, bending', *carkuka* 'to glide, to slide'; Kota *jarv-* (*jard-*) 'to slide and fall, to slide down a slope', *jarv-* (*jart-*) 'to cause to slip and fall'; Kannada *sari* 'to move, to go, to go or move to one side, to move out of place, to slide, to go to the right or left, to slip, to fall down, to run off, to run away, to put on one side', *sari* 'sliding, flight, state of being aside, precipice, deep ravine',

sari ‘steep precipice’, *jari* ‘to slip or fall, to slide, to collapse, to slip away’, *jari* ‘ravine’, *jaragu*, *jarigu*, *jarugu* ‘to slip, to slide, to roll down, to move aside, to elapse (time)’, *saraku*, *saruku* ‘to slip, to slide, to move aside, to give place, to yield’; (?) Koḍagu *tari-* (*tariv-*, *tariñj-*) ‘to bend to one side (intr.)’, *tari-* (*tarip-*, *taric-*) ‘to bend to one side (tr.)’; Telugu *jaragu*, *jarugu* ‘to pass, to elapse (time), to occur, to be current or usual, to come to pass, to slide, to glide, to slip, to creep, to crawl, to move on, to be slippery’, *jarapu* ‘to spend or pass (time), to push or move forward’, *jaruguḍu* ‘slipping, sliding’, (?) *s(r)aggu* ‘to decrease, to grow less, to be diminished, to abate, to sink, to go down’, *cari*, *cariya* ‘cliff, precipice, side of a hill or mountain’; Kolami *jarāg-* ‘to slip’; Kuwi *jarginai* ‘to occur’; Malto *jarqe* ‘to be dropped, to fall’, *jarqtre* ‘to drop, to let fall’. Burrow—Emeneau 1984:208, no. 2360.

- C. Proto-Kartvelian **c’ar-* (preverb of direction) ‘down, away, off’: Georgian *c’a(r)-* (preverb) ‘away, off’; Mingrelian *c’o-* (preverb) ‘down, below’; Laz *c’o-* (preverb) ‘down, below’. Klimov 1964:241—242 **ça-* and 1998:292—293 **çar-* (preverb of direction) ‘down, away, off’; Fähnrich 2007:616—617 **çar-*. Proto-Kartvelian (adverb) **c’are* ‘down, downwards’: Georgian *c’are* ‘down, downwards’; Mingrelian *c’ale* ‘down’; Laz *c’ale* ‘down’. Klimov 1964:242 **ça-re*.
- D. Yukaghir (Northern / Tundra) *t’arqayaj-* ‘to stumble’, *t’arqal’u* ‘curve (of a road or a river)’, *čarqal’uu* ‘something curved, bent’, *čarqayarej-* ‘to twist (a joint)’. Nikolaeva 2006:126. Assuming semantic development from ‘to stumble, to fall down’.

Buck 1949:10.42 slide, slip (vb.).

322. Proto-Nostratic root **c’ar-* (~ **c’ar-*) or **č’ar-* (~ **č’ar-*):

- (vb.) **c’ar-* or **č’ar-* ‘to be or become visible, clear, evident; to reveal, to make known, to make clear, to clarify’;
(n.) **c’ar-a* or **č’ar-a* ‘visibility, clarity’; (adj.) ‘visible, clear, evident’

- A. Proto-Afrasian **c’ar-* ‘to be or become visible, clear, evident; to make clear, to clarify’: Proto-Semitic **c’ar-* (extended forms: **c’ar-aḥ-*, **c’ar-aw/y-*) ‘to be or become clear, evident; to make clear, to clarify’ > Arabic *šaraḥa* ‘to make clear, to clarify, to explain’, *šaruḥa* ‘to become clear, evident’, *šarīḥ* ‘clear, distinct, obvious, plain, evident’, *šarā* ‘to look at, to gaze’; Geez / Ethiopic *šarya* [ጸርየ] ‘to be purified, refined, cleansed, filtered’; Tigrinya *šārāyā* ‘to be pure, clear’; Tigre *šāra* ‘to be clear, pure, healthy’; Amharic *tārra* ‘to be pure, to be clarified, to be clear, to brighten, to clear up (weather)’, *aṭārra* ‘to purify, to make clear, to clean, to elucidate’; Gurage *tārra* ‘to be filtered, purified, clear’. Leslau 1979:629 and 1987:564. Berber: Tawlemmet *əzzəru* ‘iris (pupil of the eye)’; Nefusa *zər* ‘to see’; Siwa *zər* ‘to see’; Wargla *zər* ‘to see, to look at; to know’;

Mzab *zər* 'to see, to imagine'; Tamazight *zər* 'to see, to look at; to know; to pay a visit', *izri* 'eyesight, eyes'; Riff *zər* 'to see, to look at, to examine'; Kabyle *zər* 'to see; to know', *izri* 'eyesight, eyes'; Chaoia *zər* 'to see, to look at; to know, to foresee'; Zenaga *zar* 'to see; to find by accident, to discover'.

- B. Proto-Dravidian **cārri-* 'to reveal, to make known, to make clear, to clarify': Tamil *cārru* (*cārri-*) 'to publish, to announce, to explain in detail, to speak, to mention, to praise, to beat (as a drum)'; Malayalam *cārruka* 'to speak loud, to call on gods and sing (as astrologers)'; Kota *ca-r-* (*ca-ry-*) 'to tell news in all places'; Kannaḍa *sāru* 'to cry out, to proclaim aloud, to publish'; Tuḷu *sāriyuni* 'to proclaim, to publish, to preach, to warn', *sāriyāvuni* 'to cause to proclaim or publish'; Telugu *cāṭu* 'to proclaim, to declare, to announce, to publish, to make known to the public', *cāṭimpu* 'proclamation, announcements, publishing by beat of drum', *cāṭuva* 'proclamation'. Burrow—Emeneau 1984:217, no. 2486.
- C. Proto-Indo-European **t'er-/t'or-/t'y-* 'to be or become visible, clear, evident': Sanskrit *dārpaṇa-h* 'mirror'; Old High German *zorft* 'clear'; Greek δρᾶω (= ὁρᾶω) 'to see, to look, to observe', δρωπάζω 'to gaze at'. Walde 1927—1932.I:803 **derep-*; Pokorny 1959:212 **der(ep)-* 'to see' (?); Boisacq 1950:203; Frisk 1970—1973.I:422; Beekes 2010.I:357; Hofmann 1966:55—56 **derep-*; Chantraine 1968—1980.I:300; Mayrhofer 1956—1980.II:22. Proto-Indo-European **t'erkh-/t'orkh-/t'ykh-* 'to be or become visible, clear, evident; to see clearly': Sanskrit *dars-* 'to see, to behold, to look at, to regard, to consider; to see with the mind, to learn, to understand; to notice, to care for, to look into, to try, to examine', *dṛṣṭá-h* 'seen, visible', *dṛṣṭi-h* 'seeing, sight', *dṛśya-h* 'conspicuous, visible', *darsá-h* 'sight, glimpse'; Greek δέπκομαι 'to see clearly, to look at, to look on, to perceive', δέπξις 'sense of sight', δράκος 'eye'; Old Irish *derc* 'eye'; Welsh *drych* 'sight, appearance, mirror'; Gothic *ga-tarhjan* 'to denote, to identify, to distinguish'; Old English *torht* 'bright, beautiful, illustrious', *torhtian* 'to make clear, to show'; Old Saxon *toroht* 'bright, clear'; Old High German *zoraht* 'bright, clear', *ougo-zorhtan* 'to reveal'; Albanian *dritë* 'light'. Rix 1998a:105 **derk-* 'to look or glance at, to see, to behold'; Walde 1927—1932.I:806—807 **derk-*; Pokorny 1959:213 **derk-* 'to look'; Mann 1984—1987:141 **derkō*, *-jō* 'to see, to look, to notice', 141 **derkos* (**derks-*) 'seeing, clear; sight, look', 156 **dork-* 'sight', 163 **dṛk-* (radical) 'to see', 164 **dṛksos*, *-ā*, *-jos* 'vision', 164 **dṛktis* 'seeing, sight, brightness'; Watkins 1985:12 **derk-* and 2000:16 **derk-* 'to see'; Gamkrelidze—Ivanov 1984.I:217 **t'erk[h]-* and 1995.I:186 **t'erkh-* 'to see'; Mallory—Adams 1997:505 **derk-* 'to glance at'; Mayrhofer 1956—1980.II:23—24, II:58, and II:61; Huld 1983:55 **dṛk-ti-*, **derk-*; Boisacq 1950:178 **derk-*; Frisk 1970—1973.I:368; Hofmann 1966:55—56 **derk-*; Chantraine 1968—1980.I:264—265; Beekes 2010.I:317—318 **derk-*; Kroonen 2013:510 Proto-Germanic **tarhjan-* 'to mark'; Orël 1998:75 and

2003:402 Proto-Germanic **tarxjanan*; Feist 1939:203 **derk-*; Lehmann 1986:150 **derk-*.

Buck 1949:6.96 mirror; 15.51 see; 15.52 look (vb.), look at; 15.53 sight (subj.); 15.54 sight (obj.), look (obj.), appearance; 17.34 clear, plain. Bomhard—Kerns 1994:354—355, no. 180.

323. Proto-Nostratic root **c'aw-* (~ **c'əw-*):

(vb.) **c'aw-* 'to be or become dry, withered, emaciated, lean';

(n.) **c'aw-a* 'that which is withered, dry, lean, blighted'; (adj.) 'dry, withered, lean, blighted'

Extended form:

(vb.) **c'aw-V-lv-* 'to be or become dry, withered, emaciated, lean';

(adj.) **c'aw-lv-a* 'that which is withered, dry, lean, blighted'; (adj.) 'dry, withered, lean, blighted'

A. Dravidian: Tamil *cavaḷai* 'leanness of an infant not fed on mother's milk, tenderness, immaturity', *cavaṅku* (*cavaṅki-*) 'to become lean, emaciated; to shrink, to subside; to become faint, to languish', *cavu* 'to become weak, to be emaciated', *cāvi* 'withered crop, blighted or empty grain', *cāvaṭṭai* 'withered grain, chaff; emaciated person, dried betel leaves'; Malayalam *cavala* 'empty corn, hollowness, leanness', *cāvi* 'empty grain, blighted corn, cankerworm, palmerworm'; Tuḷu *cavuli* 'old'; Telugu *cavile* 'leanness, thinness', *sāvi* 'blasted stalk of withered corn'. Burrow—Emeneau 1984:210, no. 2392.

B. Proto-Kartvelian **c'wel-* 'dry stem, straw': Georgian *c'vel-* 'chaff'; Mingrelian *c'u-* 'straw, stem'; Laz *c'u-* 'straw, stem', *o-c'val-e-* 'chaff'; Svan *c'wi*, *c'uw* (< **c'wel-*) 'stalk, stem'. Fähnrich—Sardshweladse 1995:500—501 **çwel-*; Klimov 1998:294—295 **çwel-* 'dry stem, straw'; Fähnrich 2007:622—623 **çwel-*.

C. Proto-Gilyak / Nivkh **če-* 'to dry' (Fortescue [2015:31] notes: "there may be entanglement with PN **tey-* 'to go up [from shore]' here"): Amur *č^he-dv* 'to dry', *seu-dv* / *-č^heu-dv* (tr.) 'to dry', *č^he* (attributive) 'dry'. Fortescue 2015:31. Note: Fortescue also lists South Sakhalin *teyu-* 'to be dry', *řeyu-* (tr.) 'to dry' as possible cognates.

Buck 1949:15.84 dry.

324. Proto-Nostratic root **c'ilv-* (~ **c'elv-*):

(vb.) **c'ilv-* 'to strip off, to peel off, to pick, to pluck';

(n.) **c'ilv-a* 'peeling, picking, plucking'

A. Dravidian: Tamil *ilī* 'to strip off, to pluck'; Malayalam *ciḷikka* '(the rind of a fruit) to open from ripeness'; Tuḷu *culkuni* 'to flay'; Parji *cilḡg-* 'to peel

off, to flake off (intr.)', *cilkip-* (*cilkit-*) 'to peel off, to scale off (tr.)'; Kui *slinga* (*slingi-*) 'to be plucked, untied, loosened', *slipka* (< **slik-p-*; *slikt-*) 'to loosen, to untie, to pluck off'. Burrow—Emeneau 1984:224, no. 2585.

- B. Proto-Kartvelian **c'il-* 'to pick (fruit, flowers)': Georgian *c'il-* 'to gather, to pick (fruit, flowers)'; Mingrelian *c'il-* 'to pick (fruit, flowers)'; Laz *c'il-* 'to pick (fruit, flowers)'. Fähnrich—Sardshweladse 1995:502—503 **čil-*; Fähnrich 2007:625 **čil-*; Klimov 1998:296 **čil-* 'to pick (fruit, flowers)'.

Sumerian *zil* 'to peel off, to strip off'.

325. Proto-Nostratic root **c'irʷ-* (~ **c'erʷ-*):

(vb.) **c'irʷ-* 'to squeak, to chirp, to cheep, to peep';

(n.) **c'irʷ-a* 'a kind of bird'

- A. Proto-Afrasian **c'ir-* 'a kind of bird': Semitic: Tigrinya *čəru* 'a kind of bird'; Gurage (Masqan) *čərri*, (Gogot) *čərriyä* 'a kind of bird'; Amharic *čəre* 'a kind of bird'. These forms may be borrowings from Cushitic. Leslau 1979:187. Egyptian *ḏrt*, *ḏryt*, *ḏrw* 'kite' (Demotic *tr-t* 'bird of prey'); Coptic *tre* [ṯṣṣ] 'kite'. Faulkner 1962:323; Hannig 1995:1011; Erman—Grapow 1921:221 and 1926—1963.5:596 and 5:601; Černý 1976:194; Vycichl 1983:220. Lowland East Cushitic: Galla / Oromo *čirrii* 'a kind of bird'. Omotic: Ome *čeraa* 'bird'. Orël—Stolbova 1995:105, no. 443, **čir-* 'bird'.

Militarëv—Nikolaev (2021:348—349) reconstruct Proto-Afrasian **čiraʃ-* 'a kind of bird' on the basis of the following evidence: Semitic **ʕVššūr-* (met.) > Akkadian *iššūr-u* 'bird'; Ugaritic *ššr* [šuššūru] 'bird (generic); domesticated fowl, poultry'. Chadic **čVr-*: West Chadic **čury-* > Hausa *čiry-ā* 'parakeet'; Polchi *cúr-a* 'hawk'. East Chadic **sar-* and **sarsir-* (redupl.) > Dangla *sàrsir-ò* 'bird of prey'; Bidiya *sár-a* 'épervier' ('sparrowhawk') [*Accipiter* sp.]. Cushitic **čirr-* and **čičir-* (redupl.) 'red-billed oxpecker' [*Buphaga erythrorhynchus*]: Central Cushitic **čarrur-* > Bilin *čarrúr-ā* 'Madenhacker' [*Buphaga erythrorhynchus*]. Lowland East Cushitic: Saho-Afar **čarraʃ-* > Saho *čarāʃ*, *čarrāʃ* 'Madenhacker' [*Buphaga erythrorhynchus*]. Lowland East Cushitic **čirr-* > Oromo *či/err-ii* 'a kind of bird that sucks blood from a cow, like a hornbill' [*Buphaga erythrorhynchus*]. Highland East Cushitic **čirr-* > Sidamo *čirr-e* 'red-billed oxpecker' [*Buphaga erythrorhynchus*]. Southern Cushitic **čiraʃ-* > Iraqw, Gorowa *čirʃ-i*; Alagwa *ciraʃ-a*; Burunge *čiraʃ-a*; Asa *širaʔ-a* 'bird' (generic term); Dahalo *čičir-a* 'tick bird' [*Buphaga erythrorhynchus*], *čuár-e* 'sp. bird (Roller?)'. (?) North Omotic: Wolaita *čer-aa* 'a kind of bird' (very likely a Cushitic loan).

Comments: (1) According to Militarëv—Nikolaev, Egyptian *ḏrt*, *ḏryt*, *ḏrw* ‘kite’ is not related to the forms they cite “due to lack of *ṣ* whose presence in this root is confirmed by both Sem., Saho and S. Cush. forms.” Here, I agree with Orël—Stolbova as opposed to Militarëv—Nikolaev. (2) On the other hand, I would not include the Semitic forms cited by Militarëv—Nikolaev. (3) The disparity between the vowels of the first syllable in some of the Cushitic forms cited by Militarëv—Nikolaev is troubling. This may indicate that we are dealing with two different stems here. (4) No doubt, borrowing has occurred with some of these forms.

- B. Proto-Dravidian **cīr-* ‘a kind of bird’: Gondi *sīrī*, *hīrī* ‘parrot’; Konda *sīra* ‘parrot’; Pengo *hīra* ‘a kind of bird’. Burrow—Emeneau 1984:224, no. 2582.
- C. Proto-Kartvelian **c’rip-* ‘to cheep, to peep’: Georgian *c’rip-* ‘to squeak, to peep’; Laz *c’ip-* ‘to cheep, to peep’. Klimov 1998:302 **c’riṗ-* ‘to cheep, to peep’. Proto-Kartvelian **c’ruc-* ‘to peep, to squeak’: Georgian *c’ruc-* ‘to peep, to squeak’; Mingrelian *c’irc-* ‘to weep, to whimper, to squeal, to peep, to cheep’. Fähnrich 2007:636 **c’ruc-*.
- D. Yukaghir (Northern / Tundra) *čiremedie* ‘little bird’, *čiremed-uo* ‘bird egg’. Nikolaeva 2006:133.
- E. Altaic: Mongolian *čirala-* ‘to squeak, to scream, to cry; to grunt, to roar’.
- F. Eskimo-Aleut: Proto-Inuit **cīrvaq* ‘guillemot’ > Seward Peninsula Inuit *sīrvaq* ‘guillemot’; North Alaskan Inuit *sīrvaq* ‘sea pigeon’; Greenlandic Inuit *sīrfaq* ‘guillemot’. Fortescue—Jacobson—Kaplan 1994:86.

Buck 1949:3.64 bird.

326. Proto-Nostratic root **c’ur-* (~ **c’or-*):

- (vb.) **c’ur-* ‘to twist, to turn, to revolve; to press, tie, or bind together; to wrap up; to surround, to encircle, to enclose’;
- (n.) **c’ur-a* ‘that which is tied, twisted, wrapped, or bound together: coil, wrapping, binding, loop, etc.; that which surrounds, encircles, or encloses: enclosure, wall, surroundings, circle’

- A. Proto-Afrasian **c’ur-* ‘to press, tie, or bind together; to wrap up; to surround, to encircle, to enclose’: Proto-Semitic **c’a/wa/r-* ‘to press, tie, or bind together; to wrap’ > Hebrew *šūr* [צור] ‘to confine, to bind together, to besiege; to wrap’; Aramaic *šūr* ‘to wrap up, to wrap together; to besiege, to beleaguer’. Murtonen 1989:357; Klein 1987:543. Proto-Semitic **c’ar-ar-* ‘to press, tie, or bind together; to enclose, to wrap’ > Arabic *šarra* ‘to lace, to cord, to tie up, to truss up, to bind (something)’, *šurra* ‘bag, purse; bundle, packet, parcel’; Hebrew *šārar* [צָרַר] ‘to bind, to tie up; to wrap, to enclose; to be restricted, narrow, scant, cramped’, *šarōr* [צָרוֹר] ‘bundle, package’; Aramaic *šarar* ‘to tie up, to wrap, to enclose’; Mehri *šar* ‘to tie the foreskin tight before circumcision’, *šāttar* ‘to be tied; to have retention

of the urine'; Šheri / Jibbāli *šerr* 'to tie the foreskin tight before circumcision'; Harsūsi *šer* 'to tie the foreskin tight before circumcision'. Murtonen 1989:366; Klein 1987:557. Egyptian *ḏri* 'enclosing wall' (?), *ḏrīt* 'wall' (?), *ḏrw* 'wall' (?), *ḏrww* 'wall' (?). Hannig 1995:1010, 1012, and 1012—1013; Faulkner 1962:323—324; Gardiner 1957:604; Erman—Grapow 1926—1963.5:599. East Chadic **sur-* 'to press, to pack' > Kabale *sər-* 'to press, to pack'; Bidiya *surray-* 'to press, to pack'; Migama *suura-* 'to be heavy; to load'. Orël—Stolbova 1995:107—108, no. 455, **čur-* 'to press together'.

- B. Dravidian: Tamil *curru* (*curri-*) '(vb.) to revolve, to circulate, to turn around, to spin, to take a circuitous course, to wind about, to wander about, to be coiled, to lie encircling, to be giddy or dizzy; to encircle, to entwine, to embrace, to surround, to encompass, to wear round, to coil up, to roll up, to whirl; (n.) moving round, revolving, rolling, circumference, circuit, roundabout way, surroundings, neighborhood, coil, roll, toe-ring, surrounding wall', *curru-murru* 'all around, on all sides', *cūru* (*cūri-*) 'to surround, to encompass'; Malayalam *currūka* 'to be about, to go about, to be giddy, to roll around, to put on', *currū* 'what is circular, circumference, a ring', *cūrā* 'a circle, coil; once around'; Kota *cut-* (*cuty-*) 'to wander, to wrap around, to coil (rope), to twirl (sling), to wrap on (waistcloth)'; Kannaḍa *suttu* '(vb.) to surround, to encompass, to wrap round, to wind, to roll up, to go round, to circumambulate; (n.) that surrounds, enclosure, state of being enclosed, circumference, compass, coil, cheroot, coiled metal ring, a walk around, a turn', *sutta* (adv.) 'round about', *sutta mutta* 'all around, completely around', *suttal* 'round about, state of being round about', *suttuvike* 'turning round, feeling giddy'; Koḍagu *cutt-* (*cutti-*) 'to wind around, to wander about'; Tuḷu *sutta* 'circumference, circuit, round about', *suttuni* 'to wind, to roll, to wrap, to surround'; Telugu *cuṭṭu* '(vb.) to roll as a mat, to pass around, to wrap (as thread, cloth, turban), to wind, to encircle, to encompass, to go round, to circumambulate; (n.) a round, circuit, a going round, ring; (adj.) circuitous, round about; (adv.) all around, on all sides', *cuṭṭa* 'a roll of anything, loop, coil, ring, cheroot'; Kolami *sut-* (*sutt-*) 'to wind (turban)' (Telugu loan); Naikri *sutt-* 'to wind'; Parji *cutt-* 'to wind round'; Gadba (Salur) *cuṭṭ-* 'to roll up'; Konda *sut-* 'to twine (rope)'. Burrow—Emeneau 1984:236—237, no. 2715. Tamil *curi* (*-v-*, *-nt-*) 'to be spiral (as a conch), to whirl around, to eddy (as water), to curl', *curi* (*-pp-*, *-tt-*) 'to wind spirally, to whirl, to curl, to lie in a circle', *curi* 'whirling, spiral, curve, screw, white curl on the forehead of bulls', *curiyal* 'curling, curly hair, lock of hair, woman's hair', *curuḷ* (*curuḷv-*, *curuṇṭ-*) '(vb.) to become coiled, to roll, to curl (as hair); (n.) rolling, roll, coil, curl, woman's hair curled and tied up in dressing', *curuḷal* 'ringlet, coil', *curuḷai* 'roll', *curuṭṭu* (*curuṭṭi-*) '(vb.) to roll up, to coil, to curl, to fold, to twist; (n.) curling, coiling, anything rolled up, cheroot', *curuṭṭai* 'curly hair, curly-haired boy or girl', *curuṇai* 'anything rolled up', *cūr* 'to

revolve, to whirl around', *cūrppu* 'whirling, revolving; bracelet', *cūral* 'whirling (as of wind)'; Malayalam *curiyal* 'a round rattan basket', *curuṭṭu* 'a roll, cheroot, a sheaf', *curuḷ* 'scroll, roll', *curuḷuka* 'to be rolled up, to be curled', *curuṭṭuka* 'to roll up (tr.)'; Kota *curṇ-* (*curḍ-*) 'to lie in coils (snake, rope)', *curṭ-* (*curṭy-*) 'to coil, to roll (tr.)'; Kannada *suruḷi*, *suruḷe*, *suraḷi* 'a coil, rope', *suruḷu*, *suruṇṭu* 'to coil, to roll up (intr.)', *surku*, *sukku* 'to curl', *surku*, *sukku*, *suṅku*, *sokku* 'a curl'; Koḍagu *turiḍ-* (*turiṇḍ-*) 'to be rolled up', *turiṭ-* (*turiṭi-*) 'to roll up (tr.)', *tore* 'a string that goes round', *tore* (*torev-*, *torand-*) 'to be wound round and round (a string)', *tora* (*torap-*, *torat-*) 'to wind round and round (a string)'; Tuḷu *turuḷu* 'a woman's hair tied in a knot', *suraḷi*, *suruḷi* 'a coil, a roll of anything'; Parji *cird-* 'to turn', *cirdip-* (*cirdit-*) 'to make to turn', *cirdukuḍ* 'circuit, roundabout way', *cirl-* 'to revolve', *cirlip-* (*cirlit-*) 'to make to revolve'; Gadba (Salur) *sirl-* 'to revolve', *sirl-* (*silr-*, *silir-*) 'to rotate'; Gondi *suruṇḍānā* 'to go round and round (especially in the Bhawar marriage ceremony)', *suruṇḍ-* 'to roll'; Pengo *hūr-* 'to wind, to wind round, to roll up'; Kui *sursuri* 'curly'; Kuṛux *kūrṇā* 'to put on and tie a *sāri* round one's waist'; Malto *kurge* 'to roll up, to wrap up'; Brahui *kūring* 'to roll up (tr.), to make a clean sweep of'. Burrow—Emeneau 1984:232—233, no. 2684; Krishnamurti 2003:126 **cur-V-*/**cūr-* 'to curl, to roll up'.

- C. Proto-Kartvelian **c'r-ax-* and **c'r-ex-*/**c'r-ix-* 'to twist tightly together': Georgian *c'rex-/c'rix-* 'to twist tightly together', *da-c'rax-n-a-* 'to twist tightly together' (< **c'r-ax-*); Mingrelian *c'irox-/c'irix-* 'to twist tightly together'. Klimov 1998:302 **çr-ex-* : **çr-ix-* 'to twist, to weave; to interlace'; Fähnrich—Sardshweladse 1995:510 **çr-ex-*/**çr-ix-*; Fähnrich 2007:635 **çrex-*/**çrix-*. Perhaps also: Proto-Kartvelian **c'ur-* 'to filter, to strain, to press out' > Georgian *c'ur-* 'to filter, to strain, to press out'; Mingrelian *c'ur-*, *c'ər-* 'to filter, to strain, to press out'; Laz (*n*)*c'or-*, (*n*)*c'ir-* 'to press, to squeeze'; Svan *c'wr-*, *c'ur-* 'to filter, to strain, to press out'. Fähnrich—Sardshweladse 1995:511 **çur-*; Fähnrich 2007:637 **çur-*; Klimov 1964:246 **çur-* and 1998:303 **çur-* 'to press, to squeeze out; to flow out'. Proto-Kartvelian **c'r-ed-*/**c'r-id-*/**c'ṛ-d-* 'to filter, to strain' > Georgian *c'ret'-/c'rit'-/c'rt'-* 'to filter, to strain', [*c'ret'il-*] in *dac'ret'il-* 'filtered, strained'; Mingrelian *c'irad-/c'irid-/c'ird-* 'to filter, to strain, to be filtered', *c'iradil-*, *c'əradil-* 'filtered, strained'; Laz *c'rod-/c'urd-* 'to filter, to strain'. Klimov 1964:246 ***çred-*/**çrid-*/**çerd-* and 1998:301 **çred-*/**çr-id-*/**çr-d-* 'to filter, to strain' and 302 **çred-il-* 'filtered, strained'; Fähnrich—Sardshweladse 1995:509—510 **çred-*/**çrid-*/**çrd-*; Fähnrich 2007:634—635 **çred-*/**çrid-*/**çrd-*.

Buck 1949:9.16 bind (vb. tr.); 10.12 turn (vb.); 10.13 turn around (vb.); wind, wrap (vb.); roll (vb.).

22.16. PROTO-NOSTRATIC *s

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
s-	s-	c-	s-	s-	s-	s-	
-s-	-s-	-c(c)-	-s-	-s-	-s-	-s-	

327. Proto-Nostratic root *saʔ- (~ *səʔ-):

Extended form:

(vb.) *saʔ-V-y- ‘to sift’;

(n.) *saʔ-y-a ‘sieve’

- A. Afrasian: Egyptian *sīʔ*, *sīʔ* ‘to sift (flour)’. Hannig 1995:657 and 664; Faulkner 1962:209; Erman—Grapow 1926—1963.4:16.
- B. Proto-Indo-European *seʔ(y/i)- ‘(vb.) to sift; (n.) sieve’: Greek ἵθω, ἵθῆω ‘to sift, to strain’, ἵθμός ‘a strainer’; Welsh *hidl* ‘sieve’; Old Icelandic *sáld* ‘sieve’, *sælda* ‘to sift’; Faroese *sáld* ‘sieve’; Norwegian *saald* ‘sieve’, *sælda* ‘to sift’; Swedish *såll* ‘sieve’, (dial.) *sålida*, *sålla* ‘to sift’; Danish *saald*, *sold* ‘sieve’, (dial.) *sælde* ‘to sift’; Lithuanian *sietas* ‘sieve’, *sijóju*, *sijóti* ‘to sift’; Old Church Slavonic *sějǫ, *sěti (*sějati) in *pro-sějati* ‘to sift, to winnow’, *sito* ‘sieve’; Russian *síto* [сито] ‘sieve, sifter, bolt, bolter, strainer’; Serbian *sijati* ‘to sift’, *sīto* ‘sieve’. Rix 1998a:469—470 *seh₁(i)- ‘to sift’; Pokorny 1959:889 *sē(i)- ‘to sift’; Walde 1927—1932.II:459 *sē(i)-; Watkins 1985:56 *sē- and 2000:73 *sē- ‘to sift’ (contracted from earlier *seʔ₁-); Mallory—Adams 1997:518 *seh₁(i)- ‘to sift’; Boisacq 1950:315; Beekes 2010.I:511 *seh₁-; Frisk 1970—1973.I:624; Hofmann 1966:105; Chantraine 1968—1980.I:407; Orël 2003:327 Proto-Germanic *sēðlan; Kroonen 2013:430 Proto-Germanic *sēðla- ‘sieve, riddle’ (< *seh₁- ‘to sift’); De Vries 1977:460 and 575; Torp 1919:570; Falk—Torp 1903—1906.II:254; Derksen 2008:448 *seh₁i- and 2015:397; Fraenkel 1962—1965.II:783 and II:784 *sēði-; Smoczyński 2007.1:549 *sih₁-eh₂-, *seh₁i-.
- C. Altaic: Proto-Tungus *sayi-ža (~ -ga) ‘sieve’ > Ulch *sayža* ‘sieve’; Nanay / Gold *sayža* ‘sieve’. Starostin—Dybo—Mudrak 2003:1198 *sájgo ‘to filter, to ooze’. Starostin—Dybo—Mudrak also compare Proto-Mongolian *saya- ‘to milk’ and Proto-Turkic *sag- ‘to milk’.

328. Proto-Nostratic root *sadʷ- (~ *sədʷ-):

(vb.) *sadʷ- ‘to hear, to listen, to judge’;

(n.) *sadʷ-a ‘hearing, judgment, condemnation, punishment’

- A. Afrasian: Egyptian *sḏm* ‘to hear, to listen, to obey, to understand, to judge’, *sḏmi* ‘judge’; Coptic (Sahidic) *sōtm* [ⲥⲱⲧⲙ], (Bohairic) *sōtem* [ⲥⲱⲧⲉⲙ] ‘to

hear, to listen to, to obey'. Hannig 1995:794; Faulkner 1962:259; Erman—Grapow 1921:177 and 1926—1963.4:384—387; Gardiner 1957:593; Vycichl 1983:199; Černý 1976:165.

- B. Proto-Kartvelian **sažg-/sžg-* 'to judge, to try, to punish': Georgian *saž-/sž-* 'to judge, to try, to punish', *ržul-* (< **sžul-*) 'law, trust'; Mingrelian *zož-* (< **sožg-*, with assimilation of initial *s-* to *z-*) 'to wish, to desire'; Svan *sgož-* 'to judge, to try' (Zan loan, with consonants transposed). Klimov 1998:163 **saž-* : **sž-* 'to judge, to try, to punish'.
- C. Proto-Altaic **sažV-* 'to slander, to condemn': Proto-Tungus **sažĩ-* 'to condemn' > Evenki *sažĩ-ča-* 'to condemn'; Solon *sāžilā-* 'to condemn'. Proto-Mongolian **sežig* 'doubt' > Written Mongolian *sežig* 'doubt, suspicion, distrust', *sežigle-* 'to doubt, to suspect, to distrust'; Khalkha *sežig* 'doubt'; Buriat *hežeg* 'doubt'; Kalmyk *sežag* 'doubt'; Ordos *sežik* 'doubt'. Proto-Turkic **say-* '(vb.) to slander, to lie; (n.) slander, lie' > Uzbek *sayiγ* 'delirium'; Khakas *sayya-* 'to slander, to lie', *sayyaχ* 'slander, lie'; Oyrot (Mountain Altai) *sayyaq* 'slander, lie'; Chuvash *soy-* 'to slander, to lie', *soy* 'slander, lie'. Starostin—Dybo—Mudrak 2003:1221 **sažV* 'to slander, to condemn'.

Buck 1949:15.41 hear; 15.42 listen; 15.43 hearing (sb.); 15.44 sound (sb.); 21.16 judge (vb.); 21.162 decide; 21.17 judgment; 21.32 condemn.

329. Proto-Nostratic root **sag-* (~ **səg-*) or **šag-* (~ **šəg-*):

- (vb.) **sag-* or **šag-* 'to reach, to arrive at, to attain, to achieve, to get, to obtain';
 (n.) **sag-a* or **šag-a* 'acquisition, attainment, victory'

- A. Proto-Afrasian **sag-* 'to get, to obtain': Proto-Semitic **sag-al-* 'to get, to obtain, to possess' > Hebrew *šəyullāh* [שְׂיֻלָּה] 'possession, property'; Akkadian *sugullāte* 'herds'; Ugaritic *sgl* 'treasure'; Aramaic *siggēl*, *sīyēl* 'to acquire'; Arabic *sağala* 'to possess many goods'. Murtonen 1989:296; Klein 1987:434. Egyptian *sd̥wt* (?) 'precious things, treasure', *sd̥wtwy* (?) 'treasurers', *sd̥w* (?) 'precious'. Faulkner 1962:258.
- B. Proto-Indo-European **segh-/sogh-* 'to get, to obtain': Greek *ἐχῶ* 'to have, to hold'; Sanskrit *sáhate* 'to overcome, to conquer', *sáhas-* 'strength, power, force, victory'; Avestan *hazah-* 'power, victory'; Gothic *sigis* 'victory'; Old Icelandic *sigr* 'victory', *sigra* 'to vanquish, to overcome'; Old English *sigor*, *sige* 'triumph, victory, success', *sigorian* 'to triumph'; Old Frisian *sī* 'victory'; Old Saxon *sigi-*, only in *sigi-drohtin* 'lord of victory, God'; Dutch *zege* 'victory'; Old High German *sigu*, *sigi* 'victory', *sigirōn* 'to conquer' (New High German *Sieg* 'victory, triumph, conquest', *siegen* 'to be victorious, to triumph, to gain a victory' [*über* 'over'], *Sieger* 'conqueror, victor, winner'); Tocharian A/B *sāk-* 'to remain (behind), to restrain, to hold back'. Rix 1998a:467—468 **segh-* 'to have, to hold; to

overcome, to defeat, to conquer'; Pokorny 1959:888—889 **seġh-* 'to hold fast'; Walde 1927—1932.II:481—482 **seġh-*; Mann 1984—1987:1118 **sēġhis*, 1119 **seġhlos* 'hold, grip', 1119 **seġhmn-* (**seġhano-*, **seġhno-*) 'hold, holder, beam, support, stay, strut', 1119 **seġhō* 'to hold, to seize', 1119 **seġhos*, -*es-* 'hold, grip, might; mighty, firm', 1119 **seġthis*, 1119—1120 **seġhuros* (**soġh-*) 'strong, firm', 1239—1240 **sogh-* (**soghos*, -*ā*, -*ja*) 'hold, holder, handle', 1240 **soghuros* (**soġhuros*) 'firm, stable', 1240 **soghlos*, **soghelos* (**soġh-*) 'hold, holder', 1240 **soġh-*; Watkins 1985:56 **segh-* and 2000:74 **segh-* 'to hold'; Mallory—Adams 1997:123—124 **seġh-* 'to hold fast, to conquer'; Gamkrelidze—Ivanov 1984.I:155 **seġ[h]-*/**sġ[h]-* and 1995.I:134 **seġh-*/**sġh-* 'to have, to hold; to defeat, to conquer'; Boisacq 1950:302—303 **seġh-*; Hofmann 1966:100—101 **seġhō*; Chantraine 1968—1980.I:392—394 **segh-*; Frisk 1970—1973.I:602—604; Beekes 2010.I:490—491 **seġh-*; Orël 2003:322 Proto-Germanic **seġez* ~ **seġaz*, 322 **seġezōjanan*; Kroonen 2013:430 Proto-Germanic **segiz-* 'victory'; Feist 1939:419 **seġhos-*; Lehmann 1986:302 **seġh-* 'to hold fast, to conquer'; De Vries 1977:474; Kluge—Mitzka 1967:707—708 **seġh-*; Kluge—Seebold 1989:671; Mayrhofer 1956—1980.III:450—451 and III:452; Van Windekens 1976—1982.I:416 and I:417 **seġh-*; Adams 1999:679—680 and 2013:743—744 **seġh-*; Wodtko—Irslinger—Schneider 2008:600—604 **seġh-*.

- C. Proto-Uralic **saxi-* 'to reach, to arrive at, to attain, to achieve, to get, to obtain': Finnish *saa-* in *saada* 'to get, to obtain; to receive', *saapua* 'to arrive (at, in), to come (to), to get (there), to approach', *saavuttaa* 'to reach, to achieve, to attain', (causative) *saatta-* 'to accompany, to go with, to escort; to be able (to), to be capable; to get, to induce' (> Lapp / Saami *sat'te-* 'to be able, to bring something upon someone or bring someone or something somewhere; to make, to get to, to do something'); Lapp / Saami (Kola) *sakky-* 'to procure, to get'; Mordvin (Erza) *sa-*, (Moksha) *sajə-* 'to come, to arrive, to become; to overtake, to find, to meet'; (Erza) *saje-*, *sai-*, (Moksha) *sěvə-*, *sāvə-*, *šavə-* 'to take, to get'; (Erza) *sato-*, (Moksha) *satō-* 'to suffice; to attain, to come upon; to procure, to bring'; (Erza) *savto-* 'to bring'; Cheremis / Mari *šua-*, *šoa-* 'to get; to attain to, to arrive', *šukte-* 'to complete, to finish'; Votyak / Udmurt (derivative) *sut-* 'to attain to'; Zyrian / Komi *su-* 'to overtake, to reach; to come and take unawares; to occur'; (?) Yurak Samoyed / Nenets *tōdwa-* 'to arrive, to reach, to attain'; (?) Tavgi Samoyed / Nganasan *tuu'a-* 'to attain, to reach'; (?) Yenisei Samoyed / Enets *tae-*, *toe-* 'to attain, to reach'; (?) Selkup Samoyed *tü-*, *tüüa-*, *tüüwa-* 'to come, to arrive'; (?) Kamassian *tu-* 'to arrive somewhere, to reach a destination'. Collinder 1955:54 and 1977:72; Rédei 1986—1988:429—430 **saye-* and 749—750 **saye-hta-* (~ *-tta-*); Décsy 1990:17 **sanga* (**sagha*) 'to arrive, to reach'; Sammallahti 1988:553 Proto-Finno-Permian **sěxi-* 'to come'; Janhunen 1977b:146 **t'ə'jwə-* (? ~ **t'ə'jwə-*); Zhivlov 2023:160

Proto-Uralic **saxi-* ‘to arrive, to get’. Yukaghir (Southern / Kolyma) *šegešej-*, *šegišej-* ‘to carry away’. Nikolaeva 2006:400.

Buck 1949:11.11 have; 11.12 own, possess; 11.16 get, obtain; 11.41 property; 11.46 treasure. Bomhard—Kerns 1994:359—360, no. 185; Dolgopolsky 2008, no. 2021, **sagæ* (= **sage* ?) ‘to obtain, to hold’.

330. Proto-Nostratic root **sah-* (~ **səh-*) or **šah-* (~ **šəh-*):

- (vb.) **sah-* or **šah-* ‘to examine, to consider, to try to find out, to try to understand, to think about’;
- (n.) **sah-a* or **šah-a* ‘thought, idea, understanding, inquiry, examination, consideration, investigation’

- A. Afrasian: Egyptian *shj* ‘to remember, to call to mind, to think about’, *shjw* ‘remembrance, memory’, *shr* ‘thought, idea, plan, counsel, will, determination’; Coptic *eršiši* [ⲉⲣⲩⲩⲱⲛⲓ] ‘to have power, to have authority’ (< *iri shr* ‘to take care of’, literally, ‘to make plans’). Gardiner 1957:591; Hannig 1995:742 and 748—749; Faulkner 1962:240 and 243—244; Erman—Grapow 1921:168, 170, and 1926—1963.4:232—234, 4:258—260; Černý 1976:38; Vycichl 1983:47.
- B. Proto-Indo-European **seh₂h-k-* [**sah₂h-k-*] (> **sāk-*) ‘to examine, to consider, to try to find out, to try to understand, to think about’: Latin *sāgiō* ‘to perceive quickly, to feel keenly’, *sāgus* ‘prophetic’, *sāga* ‘wise woman, fortune-teller’, *sāgax* ‘keen, acute, intellectually quick’; Greek ἡγέομαι ‘to go before, to lead the way, to guide, to conduct; to suppose, to believe, to hold’; Old Irish *saigid* ‘to seek out, to approach, to attack’; Gothic *sōkjan* ‘to seek, to desire, to long for, to argue with, to dispute’, *sōkjan samana* ‘to reason together, to discuss’, *sōkns* ‘search, inquiry’, *sōkeins* ‘investigation’, *us-sōkjan* ‘to search, to examine, to judge’, *sōkareis* ‘investigator, disputer’; Old Icelandic *sækja* ‘to seek’; Swedish *söka* ‘to seek’; Norwegian *søkja* ‘to seek’; Danish *søge* ‘to seek’; Old English *sēcan* ‘to seek, to try to find, to try to get, to try to find out, to investigate, to inquire’, *sōcn* ‘investigation’; Old Frisian *sēka* ‘to seek’; Old Saxon *sōkian* ‘to seek’; Dutch *zoeken* ‘to seek’; Old High German *suohhan* ‘to seek’ (New High German *suchen*), *suochāri* ‘searcher’. Perhaps also Hittite *šākiya-* ‘to give a sign or omen; to signify, to declare’, *šagaiš* ‘sign, omen’ (cf. Melchert 1994a:69 — Melchert assumes loss of the laryngeal *ǵ₂*, with compensatory lengthening of the preceding vowel). Rix 1998a:470—471 **seh₂g-* ‘to investigate, to look or inquire into, to track’; Pokorny 1959:876—877 **sāg-* (: **sag-*) ‘to seek out’; Walde 1927—1932.II:449 **sāg-* (: **sag-*); Mann 1984—1987:1107 **sāgiō* ‘to get to know, to inquire, to perceive, to sense’; Watkins 1985:55 **sāg-* and 2000:72 **sāg-* ‘to seek out’ (oldest form **seǵ₂g-*, colored to **saǵ₂g-*, contracted to **sāg-*; suffixed form **sāg-yo-*); Gamkrelidze—Ivanov 1984.II:805 **sāk-* and

1995.I:705—706 **sāk*- ‘to recognize by signs, omens; to ask (the god’s will)’; Mallory—Adams 1997:505—506 **sah_ag*- ‘to perceive acutely, to seek out’; Boisacq 1950:314 **sāg*- : **səg*-; Frisk 1970—1973.I:621—622 **sāgejo/e*-; Hofmann 1966:104 **sāg*-; Chantraine 1968—1980.I:405—406; Beekes 2010.I:508—509 **seh₂g*-; De Vaan 2008:534—535; Ernout—Meillet 1979:580 **sāg*-, **səg*-; Walde—Hofmann 1965—1972.II:464—465 **sāg*-, **səg*-; Orël 2003:360 Proto-Germanic **sōkiz*, 360 **sōkjanan*, 360 **sōkniz*; Kroonen 2013:464 Proto-Germanic **sōkjan*- ‘to seek, to find, to demand’ (< **seh₂g-je*-); Feist 1939:442 **sāg*- (or **sāġ*-); Lehmann 1986:318 **sāg*- ‘to perceive acutely’; De Vries 1977:577; Falk—Trop 1903—1906.II:343; Torp 1919:765; Onions 1966:806 **sāg*-, **səg*-; Klein 1971:668 **sāg*-; Skeat 1898:538; Kluge—Mitzka 1967:762 **sāg*-; Kluge—Seebold 1989:713; Kloekhorst 2008b:697—698 **seh₂g-ōi*-.

- C. Proto-Altaic **sā*- ‘to think, to consider, to count’: Proto-Tungus **sā*- ‘to know’ > Manchu *sa*- ‘to know, to understand’; Evenki *sā*- ‘to learn, to come to know’; Lamut / Even *hā*- ‘to find out’, *hān* ‘knowledge’; Negidal *sā*- ‘to know’; Ulch *sāwū* ‘to know’; Oroch *sā*- ‘to know’; Nanay / Gold *sā*- ‘to know’; Oroch *sā*- ‘to know’; Udihe *sā*- ‘to know’; Solon *sā*- ‘to know’. Proto-Mongolian **sā-n-a*- ‘to think’ > Mongolian *sana*- ‘to think, to reflect, to ponder’, *sanay-a(n)* ‘thought, thinking, idea, reflection, attention’, *sanal* ‘thought, reflection, idea, supposition, proposal, intention; opinion, viewpoint’, *sanamġi* ‘thought, idea’; Buriat (Alar) *hana*- ‘to think’; Dagur *sana*- ‘to think’; Ordos *sana*- ‘to think’; Monguor *sana*- ‘to think’. Poppe 1955:164. Proto-Turkic **sā(y)*- ‘to count, to consider’, **sā-n* ‘number, count’ > Old Turkic *sa*- ‘to count’, *san* ‘number’; Turkish *say* ‘number, reckoning’, *say*- ‘to count, to number, to enumerate; to regard, to count as; to esteem, to respect; to deem, to suppose’, *saygı* ‘respect, esteem; thoughtfulness, consideration’, *sayım* ‘a counting, census’, *sayın* ‘esteemed; excellent’, *san*- ‘to think, to suppose, to deem’, *sani* ‘idea, imagination’; Gagauz *say*- ‘to count, to consider’; Azerbaijani *say*- ‘to count, to consider’; Karaim *say*- ‘to count, to consider’; Turkmenian *sāy*- ‘to count, to consider’, *sān* ‘number’; Kazakh *say*- ‘to count, to consider’; Chuvash *su*-, *sɔv*- ‘to count, to consider’; Yakut *ā*- ‘to count’. Poppe 1960:29, 97, and 123; Street 1974:25 **sā*- ‘to think, to consider, to count’, **sā-n-a*-. Different etymology in Starostin—Dybo—Mudrak 2003:1219—1220 (**sāri* ‘to know, to beware, to feel’). Starostin—Dybo—Mudrak (2003:1275) follow A. M. Ščerbak (Щербак) in considering the Mongolian forms cited above to be Turkic loans.

Buck 1949:11.31 seek; 13.12 number; 17.13 think (= reflect); 17.14 think (= be of the opinion); 17.31 remember. Bomhard—Kerns 1994:365—366, no. 195. Different (false) etymology in Dolgopolsky 2008, no. 2029, **sāhk[a]* ‘to search, to find, to know’.

331. Proto-Nostratic root **sak^h-* (~ **səkh-*):(vb.) **sak^h-* ‘to cut, to split’;(n.) **sak^h-a* ‘any sharp instrument used for cutting: knife, sword, dagger, axe, etc.’

- A. Afrasian: Egyptian *sk* ‘to fell (trees)’, *ski* ‘to perish; to destroy’, *sksk* ‘to fell (trees), to destroy’. Hannig 1995:772, 773, and 775; Faulkner 1962:251 and 252; Erman—Grapow 1921:173 and 1926—1963.4:312—313 and 4:319; Gardiner 1957:592.
- B. Proto-Indo-European **sek^h-*/**sok^h-* ‘to cut’: Latin *secō* ‘to cut’, *secūris* ‘axe, hatchet’, *sectūra* ‘a cutting’; Middle Irish *tescaid* ‘to chop off’, *eiscid* ‘to cut off’; Old Icelandic *sax* ‘a short, one-edged sword’, *sög* ‘saw’, (m.) *sigðr*, (f.) *sigð* ‘sickle’; Norwegian *sag* ‘saw’, *saks* ‘sword’; Swedish *såg* ‘saw’, *sax* ‘sword’; Danish *sav* ‘saw’, *saks* ‘sword’; Old English *seax* ‘knife, short sword, dagger’, *secg* ‘sword’, *sigðe*, *sīðe* ‘scythe’, *sagu* ‘saw’; Old Frisian *sax* ‘knife’; Old Saxon *sahs* ‘knife’; Dutch *zicht* ‘sickle’, *zaag* ‘saw’; Old High German *saga*, *sega* ‘saw’ (New High German *Säge*), *sahs* ‘knife’ (New High German *Sachs* ‘weapon’); Old Lithuanian *ešsekti* (also *ešsekti*) ‘to chisel’; Old Church Slavic *seko*, *sešti* ‘to cut, to chop’, *sekyra* ‘axe’. Rix 1998a:475 **sekH-* ‘to cut, to separate’; Pokorny 1959:895—896 **seḱ-* ‘to cut’; Walde 1927—1932.II:474—476 **seq-*; Mann 1984—1987:1123 **sek-*, **-sekā*, *-iə* ‘cutting, mowing’, 1123 **seḱiṽos*, *-om* ‘cut, cutting’, 1123 **sekmn-* (**seḱn-*) ‘cutting; offcut’, 1123 **seḱō* (**seḱāiō*) ‘to cut’, 1123 **sektos*, *-ā* pp. form of type **seḱō*, 1123—1124 (**sekūrā*, *-is* ‘chopper, cutter, axe’; “[a] hybrid, said to be of Semitic origin”), 1242 **sok-* (**sokjós*, *-iə*, **sokús*) ‘cutting; cutting implement, billhook’; Mallory—Adams 1997:144 **sek-* ‘to cut’; Watkins 1985:56—57 **sek-* and 2000:74 **sek-* ‘to cut’; Ernout—Meillet 1979:607—608 **sek-*; Walde—Hofmann 1965—1972.II:504—505; De Vaan 2008:550—551; Kroonen 2013:420 Proto-Germanic **sagja-* ‘sedge’, 421 **sagō-* ‘saw’, 421 **sahaza-* ‘sedge’, and 421 **sahsa-* ‘knife’; Orël 2003:311 Proto-Germanic **saǵjōn*, 311 **saǵō*, 311 **saǵōjanan*, 312 **saxsan*; De Vries 1977:465—466 **sek-*, 473, and 578; Falk—Torp 1903—1906.II:140 **sek-* and 141; Torp 1919:564; Boutkan—Siebinga 2005:327; Kluge—Mitzka 1967:619 **sek-* : **sok-*; Kluge—Seebold 1989:612 and 613 **sek-*; Derksen 2008:446 **sek-*. Note: This root had numerous derivatives in Proto-Indo-European.
- C. Proto-Altaic **sak^ha-* (~ *z-*) ‘(vb.) to cut, to split; (n.) sharp instrument’: Proto-Tungus **sak-pi* ‘axe’ > Ulch *saqpi* ‘axe’. Starostin—Dybo—Mudrak 2003:1203 **sak’a* (~ *z-*) ‘sharp instrument; to cut, to split’.

Buck 1949:9.22 cut (vb.); 9.25 ax; 9.27 split (vb. tr.). Dolgopolsky 2008, no. 2037, **šVḲV* ‘to carve, to chisel’.

332. Proto-Nostratic root **sak*^w- (~ **sək*^w-):(vb.) **sak*^w- ‘to tie, to bind, to fasten’;(n.) **sak*^w-*a* ‘fastening, loop’

- A. Proto-Kartvelian **sk*^w- ‘to tie (up), to bind (up)’: Georgian [*sk*^v-] in *sk*^v-*en*-/*sk*^v-*n*- ‘to conclude, to enclose, to comprise’, *sk*^v*ul*- ‘knot’; Mingrelian *sk*^v-, *skv*- ‘to tie (up)’, *sk*^v*vir*- ‘fastened’ (also, figuratively, ‘stingy, greedy’); Laz *sk*^v-, *skv*- ‘to tie (up)’; Svan [*sk*^w-] in *le-sk*^w-*er* ‘cord, rope’. Fähnrich—Sardshweladse 1995:302—303 **sḱw*-; Fähnrich 2007:368—369 **sḱw*-; Klimov 1964:164 **sḱw*- and 1998:166 **sḱw*- ‘to tie (up), to bind (up)’.
- B. Proto-Indo-European **sek*^w-/**sok*^w- ‘to attach, to fasten’: Sanskrit *sájati* ‘to cling or stick or adhere to, to be attached to or engaged in or occupied with’, (passive) *sajyáte* ‘to be attached or fastened; to adhere, to cling, to stick’, *saktá-h* ‘clinging or adhering to’; Lithuanian *segù*, *sègti* ‘to fasten, to attach, to fix, to button’. Rix 1998a:468 **seg*- ‘to attach, to fasten’; Pokorny 1959:887—888 **seg*-, (with nasal infix) **seng*- ‘to attach, to fasten’; Walde 1927—1932.II:480—481 **seg*-, (with nasal infix) **seng*-; Mann 1984—1987:1118 **seg*- ‘to attach, to fasten’; Mallory—Adams 1997:64 **seg*- ‘to fasten’; Mayrhofer 1956—1980.III:419; Smoczyński 2007.1:539 **seg*-; Fraenkel 1962—1965.II:770; Derksen 2015:391 **seng*-.
- C. Yukaghir (Southern / Kolyma) *šoqnə*- ‘to put together’, *šaqał’əš*- ‘to gather, to collect’, *šaqał’ə*- ‘to gather’, (Northern / Tundra) *soqol’e* ‘coils of a lasso’, *soqol’es*- ‘to roll up a lasso’. Nikolaeva 2006:397 — Nikolaeva notes: “This root shows the irregular correspondence K[olyma] -*a*- ~ T[undra] -*o*-, and the variations -*a*- ~ -*o*- are irregular as well, both in T[undra] and in K[olyma].”
- D. Proto-Altaic **sĭōku*- (~ *z*-) ‘(vb.) to loop, to fasten, to tie; (n.) loop, fastening’: Proto-Tungus **siaKu*- ‘loop, hinge’ > Ulch *śaqu(n)*, *sêxu(n)* ‘loop, hinge’; Nanay / Gold *sjoxor* ‘loop, hinge’. Proto-Mongolian **segel-dereg*/**sagal-darag* ‘loop, fastening’ > Mongolian *sayaldurγ-a* ‘string for attaching objects to the saddle or for fastening a hat under the chin’; Khalkha *segeldreg*, *sagaldraga* ‘string, cord; loop’, *sagaldragalaχ*- ‘to tie a string or cord’, *malagai sagaldraga* ‘cord for tying a hat under the chin’; Buriat *hagaldarga* ‘belt buckle’; Kalmyk *segldr*- ‘to pass through an opening’; Shira-Yughur *saldərga* ‘loop, fastening’. Starostin—Dybo—Mudrak 2003:1276 **sĭōku* (~ *z*-) ‘loop, lace’.

Buck 1949:9.16 bind (vb. tr.); 9.19 rope, cord. Different etymology in Dolgopolsky 2008, no. 2030, **śāk[V]ʔU* ‘to plait, to tie, to bind; wicker’.

333. Proto-Nostratic root **sal*- (~ **səl*-):(vb.) **sal*- ‘to go up, to lift up, to raise up’;(n.) **sal*-*a* ‘ascent; height’; (adj.) ‘elevated, high, raised’

- A. Proto-Afrasian **sal-* ‘to go up, to lift up, to raise up’: Proto-Semitic **sal-* ‘to go up, to lift up, to raise up’ > Hebrew *sālāl* [סָלַל] ‘to lift up, to heap up, to lay out (a road); to pile up’, *sōlālāh* [סֹלְלָה] ‘siege-mound’, *sullām* [סֻלָּם] ‘ladder’ (a hapax legomenon in the Bible); Phoenician *słmt* ‘stairs’; (?) Akkadian *simmiltu* ‘ladder, stair; siege ladder’; Arabic *sullam* ‘ladder, (flight of) stairs, staircase’ (Aramaic loan); Tigre *sälla* ‘to climb a slope’; Tigrinya *mäsäläl* ‘ladder’; Gurage (Soddo) *mäsäläl* ‘ladder’, (Muher) *sällälä* ‘the cheese comes to the top and the whey remains at the bottom’ (< ‘to go up’); Amharic *mäsäläl* ‘ladder’. Murtonen 1989:301; Klein 1987:447—448; Leslau 1979:429 and 543. Semitic loan (?) in Hadiyya *salalo* ‘cheese’. Proto-Semitic **sal-ak-* ‘to ascend, to climb up’ > Hebrew *sālāk* [סָלַק] ‘to ascend, to climb up’ (Aramaic loan); Aramaic *sālēk* ‘to go up, to ascend’; Arabic *salaḥa* ‘to ascend, to mount, to climb, to scale’; metathesis in: Soqotri *sīklhel* ‘high’; Harari (*tä*)*sēkāla* ‘to climb’; Amharic (Gondar) *tä-säkkälä* ‘to climb’. Murtonen 1989:301; Klein 1987:448; Leslau 1963:141—142.
- B. Proto-Kartvelian **sal-* ‘steep, high’: Georgian *sal-* ‘steep, high’; Mingrelian *sol-* ‘steep, high’. Fähnrich—Sardshweladse 1995:294 **sal-*; Fähnrich 2007:359 **sal-*; Klimov 1998:162 **sal-* ‘steep’.
- C. (?) Proto-Indo-European **sel-/sol-* ‘(vb.) to go up, to lift up, to raise up; (adj.) raised, elevated, high’: Armenian *elanem* (< **sel-* ?) ‘to go up, to climb, to ascend; to go out, to leave, to exit’, *el* ‘ascent, exit’. Mann 1984—1987:1124 **sel-* ‘to jump, to rise’; Hübschmann 1897:441, no. 120. Perhaps also the following (assuming semantic development from ‘raised, elevated, high’ > ‘fully grown, adult’ as in Latin *ad-ultus*): Hittite (nom. sg.) *šal-li-iš* ‘big, great, large, important; adult, fully grown’, (nom.-acc. sg.) *šal-la-a-tar* ‘greatness; kingship, rulership’; Luwian *ša-al-ḥa-a-ti* ‘great, grown’, *ša-al-ḥi-an-ti-in* ‘growth’, *ša-al-ḥi-it-ti-iš* ‘growth’. Note also Tocharian A *šul*, B *šale* ‘mountain, hill’, B *šlyiye* ‘pertaining to a mountain or hill’, *šlīye leñke* ‘mountain valley’. Adams 1999:651—652 **swelo-*, 669 and 2013:714 **swelo-* and 733; Van Windekens 1976—1982.I:465 **selu-*, **selo-s*.

Buck 1949:10.22 raise, lift; 12.31 high; 12.53 grow; 12.55 large, big (great).

334. Proto-Nostratic root **sam-* (~ **səm-*):

(vb.) **sam-* ‘to resemble, to be like’;

(n.) **sam-a* ‘form, shape, appearance, likeness’; (adj.) ‘similar, alike, same’

- A. Proto-Afrasian **sam-* ‘to resemble, to be like’: Proto-Semitic **sam-al-* ‘to resemble, to be like’ > Hebrew *semel* [שֶׁמֶל] ‘image, statue’; Phoenician *sml* ‘image, statue’; Geez / Ethiopic (with metathesis) *masala* [መሰለ], *masla* [መሰለ] ‘to be like, to look like, to be likened to, to resemble, to appear, to seem’, *māsl* [መሰል] ‘likeness, similarity, form, figure, image,

statue, parable, proverb'; Tigrinya *mäsälä* 'to be like'; Tigre *mäsä* 'to be similar, to resemble, to seem'; Amharic *mässälä* 'to be like, to look like, to resemble, to liken, to simulate, to seem, to appear', *mäsäl* 'likeness, image, effigy, figure (picture)'; Gurage *mäsälä* 'to resemble, to be like, to look like, to appear, to seem'; Harari *mäsäla* 'to appear, to be like, to resemble, to seem'. Murtonen 1989:302; Klein 1987:449; Leslau 1987:365—366; Tomback 1978:230. Egyptian *sm* 'form, image', *smīti* 'to assimilate, to equalize'. Erman—Grapow 1926—1963.4:121; Hannig 1995:705.

- B. Proto-Indo-European **sem-/som-/sm-* 'like, same': Sanskrit *samā-ḥ* 'equal, same'; Pāli *sama-* 'equal, like, level'; Avestan *hāma-* 'like'; Old Persian *hama-* 'equal, same'; Greek *ὁμός* 'same'; Latin *similis* 'like, similar'; Old Irish *-som* 'that one'; Gothic *sama* 'the same one'; Old Icelandic *samr* 'the same'; Old English (adv.) *same* 'similarly, also'; Old High German *samo* 'the same'; Old Church Slavonic *samъ* 'same'. Pokorny 1959:902—905 **sem-* 'one, together'; Walde 1927—1932.II:488—492 **sem-*; Mann 1984—1987:1125 **sem-* 'one', 1126 **semen-*, 1126 **semēlis*, *-os* 'as one, like, equal, simple', 1230—1231 **sm-* 'in one, together', 1231 **smijā* 'one', 1231 **smios* 'one, a certain, some', 1231 **sm-pl-* 'onefold, simple', 1231 **sm-tero-* comparative of type **sm-*, 1244 **som-* 'together, in one, by itself, alone; self', 1244—1245 **somēlos* 'together, equal, even, like', 1245 **somm-* (**somen-*, **somnd-*) 'together, altogether, all'; Watkins 1985:57 **sem-* and 2000:75 **sem-* 'one; together with'; Gamkrelidze—Ivanov 1984.I:199 **smmo-* and 1995.I:172 **smmo-*, I:740—741 **sem-/som-* 'one'; Mallory—Adams 1997:499 **somós* 'same'; Mayrhofer 1956—1980.III:436—437; Boisacq 1950:702 **somós-*; Frisk 1970—1973.II:390; Chantraine 1968—1980.II:799—800 **somo-*; Hofmann 1966:232—233 **somós*; Beekes 2010.II:1079 **som-h₂-o-*; De Vaan 2008:564—565; Walde—Hofmann 1965—1972.II:539—540 **sem-*; Ernout—Meillet 1979:626—627 **sem-*; Thurneysen 1946:485; Mayrhofer 1956—1980.III:436—437; Orël 2003:317—318 Proto-Germanic **samōn*; Kroonen 2013:425 Proto-Germanic **sama(n)-* 'the same'; Lehmann 1986:294—295 **somo-* 'same'; Feist 1939:409 **sem-*; De Vries 1977:462; Onions 1966:785 **somós*, base **sem-*, **sōm-*, **sām-*; Klein 1971:653 **sem-*, **sm-* 'one, together'; Hoad 1986:415 **som-*.
- C. Proto-Altaic **sāmo* 'shape, appearance': Proto-Tungus **sāma* 'sign, mark' > Manchu *samḡa* 'mole or birthmark on the face or body'; Evenki *sāme* 'sign, mark'; Lamut / Even *hām* 'sign, mark'; Oroch *sama-lkī* 'sign, mark'; Nanay / Gold *sāmogdā* 'a talisman placed on the breast of the deceased so that the shaman can recognize him when taking his soul to the other world'. Proto-Turkic **som* 'number; honor; shape, silhouette' > Khalay *soma* 'shape, silhouette'; Khakas *som* 'shape, silhouette'; Oyrot (Mountain Altai) *som* 'shape, silhouette'; Tuva *soma* 'shape, silhouette'; Chuvash *som* 'number; honor'; Yakut *omoon* 'shape, silhouette'. Starostin—Dybo—Mudrak 2003:1207 **sāmo* 'shape, appearance'.

Buck 1949:12.51 form, shape; 12.91 equal; 12.92 like, similar. Brunner 1969: 106, no. 580; Bomhard—Kerns 1994:358—359, no. 184; A. Dybo 2004:100.

335. Proto-Nostratic root **san-* (\sim **sən-*) or **šan-* (\sim **šən-*), **sin-* (\sim **sen-*) or **šin-* (\sim **šen-*), **sun-* (\sim **son-*) or **šun-* (\sim **šon-*):
- (vb.) **san-* or **šan-*, **sin-* or **šin-*, **sun-* or **šun-* ‘to sense, to perceive’;
- (n.) **san-a* or **šan-a*, **sin-a* or **šin-a*, **sun-a* or **šun-a* ‘(a) that which senses or perceives: mind, nose; (b) that which is sensed or perceived: perception, sense, feeling’
- A. Proto-Afrasian **san-*, **sin-* ‘(vb.) to smell; (n.) nose’: Egyptian *sn* ‘to smell, to kiss, to breathe’, *snsn* ‘to smell, to stink’. Hannig 1995:716; Faulkner 1962:230; Erman—Grapow 1921:163. Proto-East Cushitic **san-/sin-/son-/sun-* ‘nose’ > Rendille *sam* ‘nose’; Somali *san* ‘nose’; Boni *saŋ* ‘nose’; Burji *sún-a* ‘nose’; Arbore *son-o* ‘nose’; Gidole *sin-a* ‘nose’; Konso *siin-a* \sim *soon-a* ‘nose’; Sidamo *san-o* ‘nose’; Kambata *san-e* ‘nose’; Hadiyya *san-e* ‘nose’; Gedeo / Darasa *san-o* ‘nose’. Sasse 1979:5, 24 and 1982:169; Hudson 1989:106. Southern Cushitic: Dahalo *sina* ‘nose’. Proto-Chadic **sunə* ‘to smell’ > Hausa *sansànaa* ‘to smell, to sniff’; Warji *səsən-* ‘to smell’; Tumak *hunən* ‘to smell’. Newman 1977:31. Omotic: Ome *siŋan* ‘nose’; Gim *sən* ‘nose’; Nao *sin-us* ‘nose’; Maji *sinu* ‘nose’. Orël—Stolbova 1995:463, no. 2194, **san-/sin-* ‘nose’ and 476, no. 2251, **sin-* ‘to smell’. [Ehret 1995:161, no. 224, **siij^w-* ‘to smell (tr.)’.]
- B. Proto-Indo-European **senth-/sonth-/sñth-* ‘to sense, to perceive’: Latin *sentio* ‘to feel, to experience, to perceive’, *sēnsus* ‘sense, feeling, perception’; Old High German *sin* ‘mind, understanding, meaning’ (New High German *Sinn*); Old Frisian *sinna* ‘to think, to ponder’; Dutch *zinnen* ‘to consider, to ponder’, *zin* ‘sense, meaning, sentence; inclination, desire, mind’. Rix 1998a:483 **sent-* ‘to go’ → ‘to perceive’; Pokorny 1959:908 **sent-* ‘to take a direction, to go’; Walde 1927—1932.II:496—497 **sent-*; Mann 1984—1987:1129 **sentō*, *-iō* ‘to track, to trace, to sleuth, to proceed, to follow’; Watkins 1985:58 **sent-* and 2000:75 **sent-* ‘to head for, to go’; Mallory—Adams 1997:418 **sent-* ‘to perceive, to think’; Walde—Hofmann 1965—1972.II:515—516; Ernout—Meillet 1979:614; De Vaan 2008:554; Orël 2003:325 Proto-Germanic **senþanan*; Kroonen 2013:437 Proto-Germanic **sinnan-* ‘to head for; to long for’; Kluge—Mitzka 1967:709; Kluge—Seebold 1989:673; Vercoullie 1898:337. This stem is distinct from Proto-Indo-European **senth-/sonth-/sñth-* ‘to go, to proceed’.

Buck 1949:15.11 perceive by the senses; sense (sb.); 15.21—15.24 smell. Bomhard—Kerns 1994:360—361, no. 187. Different etymologies in Dolgopolsky 2008, no. 2078, **SoñV* (= **šoñV* ?) ‘to hear’ and, no. 2090, **sūŋV* ‘to smell’.

336. Proto-Nostratic (Eurasianic only) (n.) *s[e]n-a or *š[e]n-a (the root vowel is uncertain but is probably *e) ‘sinew, tendon’:

- A. Proto-Indo-European *senHw-, *sneHw- (> *snēw-) ‘sinew, tendon’: Sanskrit *snāvan-* ‘tendon, muscle, sinew’; Armenian *neard* ‘sinew, fiber’; Greek *νεῦρον* ‘sinew, tendon’; Latin *nervus* (metathesis from **newro-s*) ‘sinew, tendon, nerve’; Old Icelandic *sin* ‘sinew, tendon’; Faroese *sin(a)* ‘sinew’; Norwegian *sin(a)* ‘sinew’; Swedish *sena* ‘sinew’; Danish *sene* ‘sinew’; Old English *sin(e)we*, *sionwe*, *seonew-* (oblique form of *sinu-*, *seonu* [< Proto-Germanic **senawō*]) ‘sinew’; Old Frisian *sini*, *sin(e)* ‘sinew’; Old Saxon *sinewa* ‘sinew’; Middle Low German, Middle Dutch *sene* ‘sinew’; Dutch *zeen*, *zenuw* ‘sinew’; Old High German *senawa* ‘sinew’; Middle High German *sene* ‘sinew’ (New High German *Sehne*); Tocharian B *šñor* ‘sinew, tendon’. Note also Hittite *išḫunauwar* ‘sinew, bowstring’ (< **snawar* < Proto-Indo-European **snóHw̥* ‘sinew, tendon’). According to Puhvel (1984— .1/2:403—404), **snawar* was probably “contaminated” by forms of *išḫiya-* ‘to bind’. Walde 1927—1932.II:696 **snēu-(e)r-*; Pokorny 1959:977 **snēu-(e)r-*, *-en-* ‘tendon, sinew’; Mann 1984—1987:1235 **snēuā* (**senūā*, **sēnəuā*, **sneuos*) ‘twist, cord, sinew’, 1235—1236 **snēuəros* (**sneuros*, *-ā*, *-iā*) ‘sinew, nerve, vein’; Watkins 1985:62 *(s)*nezu-* ‘tendon, nerve’ and 2000:81 *(s)*nēu-* ‘tendon, sinew’ (contracted from earlier **snezu-*, extension of **snezu-* ‘to sew’ [*(s)*nē-*]; suffixed form *(s)*nēw-ŕ-*, with further suffixes); Mallory—Adams 1997:568 **snēh₁ur* ‘sinew, tendon’; Gamkrelidze—Ivanov 1984.II:816 **sneu-r/n-* and 1995.I:716 **sneu-r/n-* ‘tendon, sinew’; Boisacq 1950:665 **senēu-*, **senōu-*; Frisk 1970—1973.II:303—304; Chantraine 1968—1980.II:747 **snē-wer/n-*; Hofmann 1966:215—216 **snēu-er-*, **snēu-en-*; Beekes 2010.II:1010—1011 **sneh₁-ur/n-*; Ernout—Meillet 1979:439; De Vaan 2008:407 **snēh₁-ur* ‘sinew’; Walde—Hofmann 1965—1972.II:165 **snēueros*; Adams 1999:665 **sneh₁w̥r*; Van Windekens 1976—1982.I:458 **snē-uer/n-*; Mayrhofer 1956—1980.III:433—434; Orël 2003:329 Proto-Germanic **sin(a)wō*; Kroonen 2013:433 Proto-Germanic **senuwō-* ‘sinew’; De Vries 1977:476; Falk—Torp 1903—1906.II:152; Torp 1919:579; Boutkan—Siebinga 2005:341—342; Onions 1966:828; Klein 1971:686; Kluge—Mitzka 1967:698; Kluge—Seebold 1989:663—664. Note: Kloekhorst (2008b:395—396) translates Hittite *išḫunauwar* as ‘arm, upper arm’ and rejects the etymology proposed here.
- B. Proto-Uralic **se̯ni* ‘sinew, tendon’: Finnish *suoni* ‘sinew, tendon, vein’; Estonian *soon* ‘sinew, tendon, vein’; Lapp / Saami *suodnâ/suonâ-* ‘sinew, tendon, artery, vein’; Mordvin *san* ‘sinew, vein’; Cheremis / Mari *šün* ‘sinew’; Votyak / Udmurt *sön* ‘sinew’; Zyrian / Komi *sön* ‘sinew, vein’; Vogul / Mansi *tōōn* ‘sinew, vein’; Hungarian *ín/ina-* ‘sinew’; Tavgi Samoyed / Nganasan *taan/tana-* ‘sinew’; Yenisei Samoyed / Enets *ti[?]/tin-* ‘sinew’; Selkup Samoyed *ten-*, *čän*, *can* ‘sinew’; Kamassian *ten* ‘sinew’.

Collinder 1955:58, 1965:145 **sōñō*, and 1977:75; Décsy 1990:107 **senä*/**sona* ‘vein, tendon, sinew’; Rédei 1986—1988:441 **sene* (**sōne*); Sammallahhti 1988:548 Proto-Finno-Ugrian **siini*; Janhunen 1977b:32—33 **ceñ-*; Joki 1973:316 Proto-Uralic **sōne* (< Pre-Uralic **sone*); Zhivlov 2023:162 Proto-Uralic **seni* ‘sinew, vein’, Proto-Finnic **sōne-*.

Bomhard—Kerns 1994:361—362, no. 189; Hakola 2000:178, no. 795; Dolgopolsky 2008, no. 2081, **son*[*Vq*]/[*ü*] (= **soni*[*q*]/[*ü*] ?) ‘sinew, tendon; root’.

337. Proto-Nostratic second person pronoun stem **si-* (~ **se-*) ‘you’:

- A. Proto-Kartvelian **si-* second person singular pronoun stem: ‘you’: Mingrelian *si* ‘you’; Laz *si(-n)* ‘you’; Svan *si* ‘you’. Schmidt 1962:142; Klimov 1964:162—163 **sen-* and 1998:164 **sen* ‘you’; Fähnrich—Sardshweladse 1995:300 **si-* (variant **si-n-* with secondary *-n-*); Fähnrich 2007:366 **si-*. In Georgian, this stem has been replaced by that of the possessive pronoun: Georgian *šen-* ‘you’ (< **škwe*[*n*]-).
- B. Proto-Indo-European **si* (< **s* plus deictic particle **i*) second person singular primary verb ending, **s* second person singular secondary verb ending: Hittite second person singular *mi*-conjugation: *-ši*, preterit second person singular of thematic verbs: *-š*; Sanskrit (primary) *-si*, (secondary) *-s*; Avestan (primary) *-si*, (secondary) *-s*; Greek (primary) *-σι*, (secondary) *-ς*; Latin *-s*; Gothic *-s*; Old Russian *-sb* [-шь]; Lithuanian *-si*. Beekes 1995:232—234; Brugmann 1904:590; Meillet 1964:227—228 and 229; Szemerényi 1996:233—236; Burrow 1973:306—314; Fortson 2010:92—93; Sihler 1995:459—460.
- C. Proto-Altaic **si* second person singular pronoun: ‘thou, you’: Proto-Tungus **si*, **sū* second person singular pronoun: ‘thou, you’ > Manchu *si* ‘you’; Spoken Manchu (Sibo) *šī* ‘you’; Evenki *si* ‘you’; Lamut / Even *hī* ‘you’; Negidal *sī* ‘you’; Ulch *si* ‘you’; Oroch *si* ‘you’; Nanay / Gold *śi* ‘you’; Oroch *si* ‘you’; Udihe *si* ‘you’; Solon *śi* ‘you’. Second person singular possessive suffixes: Lamut / Even (after vowels) *-s*, (after consonants) *-as*, (after *n*) *-si*; Evenki (after vowels) *-s*, (after consonants) *-is*. Proto-Turkic **se-* second person singular pronoun: ‘thou, you’ > Old Turkic (Old Uighur) *sen* ‘you’; Karakhanide Turkic *sen* ‘you’; Turkish *sen* ‘you’; Gagauz *sän* ‘you’; Azerbaijani *sän* ‘you’; Turkmenian *sen* ‘you’; Tatar *sin* ‘you’; Bashkir *hin* ‘you’; Karaim *sīn* ‘you’; Kazakh *sen* ‘you’; Kirghiz *sen* ‘you’; Noghay *sen* ‘you’; Uzbek *sen* ‘you’; Uighur *sän* ‘you’; Tuva *sen* ‘you’; Oyrot (Mountain Altai) *sen* ‘you’; Sary-Uighur *sen* ‘you’; Chuvash *ezä* ‘you’; Yakut *en* ‘you’. Second person singular possessive suffixes/personal markers: Turkish *-sin*; Kazakh *-sīn*; Kirghiz *-sīn*; Uzbek *-sän*. Fuchs—Lopatin—Menges—Sinor 1968; Johanson—Csató 1998. Starostin—Dybo—Mudrak 2003:1237—1238 **si* ‘thou’.

Greenberg 2000:74—76; Dolgopolsky 2008, no. 2006a, **ś/ü*] (> ***śi*) ‘thou’.

338. Proto-Nostratic 3rd person pronoun stem **si-* (~ **se-*) ‘he, she, it; him, her; they, them’; 3rd person possessive suffix **-si* (~ **-se*) ‘his, her, its; their’:

A. Proto-Afrasian **si-* 3rd person pronoun stem, **-s(i)* 3rd person suffix: Egyptian *-s*, *-sy* third person singular suffix; dependent pronouns: *sw* ‘he, him, it’, *sy* ‘she, her, it’, *sn* ‘they, them’, *st* old form of the dependent pronoun 3rd singular f., which has been specialized for certain particular uses, mainly in place of the 3rd plural ‘they, them’ or of the neuter ‘it’. Gardiner 1957:45, §43, 46, §44, and 98, §124; Hannig 1995:647, 674, 712, and 777; Faulkner 1962:205, 211, 215, 230, and 252. Berber: Tamazight 3rd person indirect pronouns: (singular after preposition and possessive with kinship) *s*, *as*, (poss. sg.) *-nnəs* or *ns*; (m. pl.) *sən*, *-sən*, *asən*, (f. pl.) *sənt*, *-sənt*, *asənt*, (poss. m. pl.) *-nsən*, (poss. f. pl.) *-nsənt*. Penchoen 1973:26—27. Tuareg (after prepositions) (m. and f. sg.) *-s*, *-əs*, *-ās*, *-is*, (m. pl.) *-sən*, *-əsən*, *-isən*, (f. pl.) *-sənət*, *-əsənət*, *-isənət*; (after kinship terms) (m. and f. sg.) *-s*, *-əs*, *-is*, (m. pl.) *-sən*, *-ssən*, *-əsən*, *-isən*, (f. pl.) *-sənət*, *-isənət*; (after nouns) (m. pl.) *-(n)əsən*, (f. pl.) *-(n)əsənət*; Kabyle (after prepositions) (m. and f. sg.) *-s*, (m. pl.) *-sən*, (f. pl.) *-sənt*; (after kinship terms) (m. and f. sg.) *-s*, (m. pl.) *-(t)sən*, (f. pl.) *-(t)sənt*; (after nouns) (m. and f. sg.) *-as*, (m. pl.) *-asən*, (f. pl.) *-asənt*; Ghadames (after prepositions) (m. and f. sg.) *-əs*, (m. pl.) *-sən*, (f. pl.) *-əsənət*; (after kinship terms) (m. and f. sg.) *-is*, (m. pl.) *(it)-sən*, (f. pl.) *(it)-əsənət*; (after nouns) (m. and f. sg.) *-(ənn)əs*, (m. pl.) *-(ənn)əsən*, (f. pl.) *-(ənn)əsənət*. Chadic: Ngizim demonstratives (previous reference): (deictic predicator) *səná* ‘here/there (it) is, here/there they are (pointing out or offering)’, (pronoun) *sənú* ‘this one, that one; this, that (thing or event being pointed out or in question)’; Hausa *ši* ‘he’, (direct object) *ši* ‘him’. Proto-East Cushitic **ʔu-s-uu* ‘he’ > Burji *ís-i* 3rd singular m. personal pronoun abs. (= obj.) ‘him’; Gedeo / Darasa *isi* 3rd singular m. nom. pronoun ‘he’; Kambata *isi* 3rd singular m. nom. pronoun ‘he’; Sidamo *isi* 3rd singular m. nom. pronoun ‘he’. Proto-East Cushitic **ʔi-š-ii* ‘she’ > Burji *íš-ée* 3rd singular f. personal pronoun abs. (= obj.) ‘her’; Gedeo / Darasa *ise* 3rd singular f. nom. pronoun ‘she’; Hadiyya *isi* 3rd singular f. nom. pronoun ‘she’; Kambata *ise* 3rd singular f. nom. pronoun ‘she’; Sidamo *ise* 3rd singular f. nom. pronoun ‘she’. Sasse 1982:106 and 107; Hudson 1989:77 and 132. Highland East Cushitic: Kambata *-si* 3rd singular possessive pronoun (m.): ‘his’, *-se* 3rd singular possessive pronoun (f.): ‘her’; Sidamo *-si* 3rd singular possessive pronoun (m.): ‘his’, *-se* 3rd singular possessive pronoun (f.): ‘her’. Hudson 1989:80. Proto-Southern Cushitic **ʔi-si-* ‘she’ > Iraqw, Burunge, Alagwa *-s* in *-os* ‘his, her, its’. Proto-Southern Cushitic **-si* (bound) ‘her’ > Dahalo *ʔiði* ‘she’, *-ði* ‘her’. Proto-Southern Cushitic **ʔu-su-* ‘he’ > Iraqw, Burunge, Alagwa *-s* in *-os* ‘his, her, its’. Proto-Southern Cushitic **-su* (bound) ‘his’

> Ma'a -*ʔu* in *ku-ʔu* 'his, her, its'; Dahalo *ʔúðu* 'he', -*ðu* 'his'. Ehret 1980:290 and 295. Omotic: Gamo *sekki* 'that, those'; 3rd person singular subject markers (affirmative): (m.) -*es*, (f.) -*us*; Zayse bound 3rd person singular subject pronouns: (m.) -*s*, (f.) -*is*; 3rd person singular independent pronouns: (subject m.) *ʔé-s-í*, (subject f.) *ʔí-s-í*, (direct object complement m.) *ʔé-s-a*, (direct object complement f.) *ʔí-s-a*, (postpositional complement m.) *ʔé-s-u(-ro)*, (postpositional complement f.) *ʔí-s-u(-ro)*, (copular complement m.) *ʔé-s-te*, (copular complement f.) *ʔí-s-te*. North Bauchi Chadic (Bu: / Zaranda) *si*: (3rd pl. indep. pron.) 'they' (cf. Caron 2008:107).

- B. Elamo-Dravidian: Elamite -*š* (< **-si* ?) 3rd singular personal suffix (Khačikjan 1998:34; Grilhot-Susini 1987:33; Reiner 1969:76).
- C. Proto-Kartvelian **-s* verb suffix used to mark the 3rd person singular (subjective conjugation): Georgian -*s*; Mingrelian -*s*; Laz -*s*; Svan -*s*. Klimov 1964:160 **-s*; Fähnrich—Sardshweladse 1995:292 **-s*; Fähnrich 2007:357—358 **-s*.
- D. Proto-Indo-European **-s-* 3rd person singular verb ending: Hittite *hi*-conjugation 3rd singular preterit ending -*š* (cf. J. Friedrich 1960:76—79; Sturtevant 1951:144, §270a); Sanskrit 3rd singular root aorist optative ending -*s* in, for example, *bhū-yá-s* (cf. Burrow 1973:352); Tocharian A 3rd singular verb ending -*š* (< **-se*) in, for example, *pālkāš* 'shines' (cf. Adams 1988:56, §4.212). According to Watkins (1962), it was this suffix that gave rise to the sigmatic aorist in Indo-European. (?) Proto-Indo-European **-s-* in (m.) **ʔey-s-os*, (f.) **ʔey-s-eA* [-*aA*] (> -*ā*), **ʔey-s-yos* a compound demonstrative pronoun: 'this': Sanskrit *eṣá-h* (f. *eṣā*) 'this'; Avestan *aēša-* (f. *aēšā*) 'this'; Oscan *eiseis* 'he'; Umbrian *erec*, *erek*, *ere*, *eřek*, *erse* 'he, it'. Note: the **-s-* element could be from the Proto-Indo-European demonstrative stem **so-* 'this, that' (< Proto-Nostratic **ša-/šə-* 'this, that') instead. Pokorny 1959:281—283; Walde 1927—1932.I:96—98; Mann 1984—1987:235 **eisjos* (**eiso-*, **eito-*) a compound pronoun; Mayrhofer 1956—1980.I:129.
- E. Proto-Uralic **-se* 3rd person singular possessive suffix / 3rd person verb suffix (determinative conjugation). Abondolo 1998:29; Hajdú 1972:40 and 43—44.
- F. Proto-Altaic **sV* (~ **š-*) 'this, that' (3rd person pronoun): Proto-Turkic **-sī* 3rd person possessive suffix > Old Turkic -*sī*; Karakhanide Turkic -*sī*; Turkish -*sı*; Gagauz -*sī*; Azerbaijani -*sī*; Turkmenian -*sī*; Tatar -*sī*; Bashkir -*hī*; Karaim -*sī*; Uzbek -*sī*; Kazakh -*sī*; Kirghiz -*sī*; Uighur -*sī*; Noghay -*sī*; Oyrot (Mountain Altai) -*sī*; Tuva -*zī*; Chuvash -*šə*. Starostin—Dybo—Mudrak 2003:1320—1321 **sV* (~ **š-*) 'this, that' (3rd person pronoun).

Greenberg 2000:99—101; Dolgopolsky 2008, no. 2006, **sE* 'he/she'. This is an old anaphoric pronoun stem distinct from Proto-Nostratic **ša-/šə-* 'this, that'.

339. Proto-Nostratic root *sig- (~ *seg-):

(vb.) *sig- ‘to flow forth, to rain’;

(n.) *sig-a ‘flowing, raining, storm’

- A. Afrasian: Proto-Semitic *sag-ar- ‘to flow forth, to rain’ > Hebrew *sayrūr* [סַרְרָר] ‘steady, persistent rain’ (a hapax legomenon in the Bible); Syriac *sayrā* ‘heavy rain’; Arabic *sağara* ‘to cause water to flow, to shed, to fill the sea, to swell’, *sağrat* ‘small cistern for rain-water’. Klein 1987:435; Zammit 2002:215—216.
- B. (?) Uralic: Proto-Finno-Ugrian *siks^{ve} (*süks^{ve}) ‘autumn’ > Finnish *syksy*, *syyks* (gen. *syyksen*) ‘autumn’; Estonian *sügis* (gen. *sügise*) ‘autumn’; Lapp / Saami *čák’čâ/čâvčâ-* ‘autumn’; Mordvin (Erza) *sokś, śoks, śokś, (Moksha) śoks, śokś* ‘autumn’; Cheremis / Mari *šəžə, šizə* ‘autumn’; Votyak / Udmurt *sižyl* ‘autumn’; Vogul / Mansi *tüks* ‘autumn’; Ostyak / Xanty *söğəs* ‘autumn’; Hungarian *ősz* ‘autumn’. Collinder 1955:116, 1960:414 *sükeše, and 1977:130; Rédei 1986—1988:443 *sikše (*sükše); Sammallahti 1988:549 *sükši ‘autumn’. Semantic development as in Evenki *siyelese(nī)* ‘autumn’, cited below.
- C. Proto-Altaic *sigi (~ z-, -e, -o) ‘rain, storm’: Proto-Tungus *sig- ‘(vb.) to be foggy, misty; (n.) fog, mist’ > Udihe *sig-a* ‘to be foggy, misty’; Manchu *sigan* ‘mist, heavy fog’; Evenki *siglamāt-* ‘to be foggy, misty’, *siyelese(nī)* ‘autumn’. Proto-Mongolian *siyur- ‘(vb.) to rage (as a storm); (n.) blizzard, snowstorm’ > Mongolian *siyur-* ‘to rage (as a storm)’, *siyurɣa(n)* ‘snowstorm, blizzard, storm with cold rain’, *siyurɣala-* ‘to rage (of a snowstorm)’; Khalkha *šūra-* ‘to rage (of a snowstorm)’, *šūrɣa* ‘snowstorm, blizzard’; Buriat *šūrɣa* ‘snowstorm, blizzard’; Kalmyk *šūr-* ‘to rage (of a snowstorm)’, *šūrɣɨ* ‘snowstorm, blizzard’; Ordos *šūrgan* ‘snowstorm, blizzard’; Shira-Yughur *šūrɣa* ‘snowstorm, blizzard’; Dagur *šörgə* ‘snowstorm, blizzard’; Monguor *šūrɣa* ‘snowstorm, blizzard’. Starostin—Dybo—Mudrak 2003:1242—1243 *sigi (~ z-, -e, -o) ‘rain, (snow) storm’.

Buck 1949:1.75 rain (sb.); 1.76 snow (sb.). Hakola 2000:180, no. 805.

340. Proto-Nostratic root *sih- (~ *seh-):

(vb.) *sih- ‘to scatter, to strew, to cast or throw, to sprinkle (with water)’;

(n.) *sih-a ‘the act of scattering, strewing, casting, or throwing about’; (adj.) ‘scattered, strewn, cast, or thrown about’

- A. Afrasian: Proto-Semitic *saḥ-aw- ‘to extend, to spread out; to be scattered, strewn, dispersed, spread out’ > Geez / Ethiopic *saḥwa* [ሰሐወ], *saḥawa* [ሰሐወ] ‘to be extended, expanded, spread out, dispersed; to run (liquid)’, *səḥəw* [ሰሐወ] ‘scattered, dispersed’; Tigre *säha* (*shw*) ‘to be extended’; Tigrinya *sähawä* ‘to be scattered, to be thinly sown’. Leslau 1987:495.

Arabic *sahha* ‘to pour out plentifully; to be poured out, to shed, to flow down’.

- B. (?) Proto-Kartvelian **sx-* ‘to bear fruit, to grow’: Georgian *sx-* ‘to bear fruit, to grow’; Svan [*cx-*]. Klimov 1998:169 **sx-* ‘to bear fruit, to grow’; Fähnrich—Sardshweladse 1995:306 **sx-*; Fähnrich 2007:373 **sx-*. Proto-Kartvelian **sx-am-/sx-m-* ‘to bear fruit, to grow’: Georgian *sxam-/sxm-* ‘to bear fruit’, *m-sxm-o-j* ‘fruit-bearing’; Svan *cxem-* ‘to grow’. Klimov 1998:169—170 **sx-am-* : **sx-m-* ‘to bear fruit, to grow’. Semantic development from ‘to throw, to scatter’ > ‘to sow (seeds), to make to grow’ > ‘to grow, to bear fruit’ as in Old English *sæd* ‘seed (of plants and animals); fruit, crop; growth; sowing; source; progeny, posterity’, cited below.
- C. Proto-Indo-European **sih_h-* [**seh_h-*] (> **sē-*) ‘to throw, to scatter’ > ‘to sow (seeds), to make to grow’: Latin *sēmen* ‘seed’, *sēmentis* ‘a sowing, planting’, *serō* (< **sisō*) ‘to sow, to plant’; Gothic *saian* ‘to sow’, *-sēps* in *manasēps* ‘mankind’; Old Icelandic *sá* ‘to sow; to throw, to scatter’, *sáð* ‘seed, corn, crop’, *sæði* ‘seed, (in pl.) crops’; Swedish *så* ‘to sow’, *sådd* ‘seed’; Danish *saa* ‘to sow’; Old English *sāwan* ‘to sow, to strew seeds, to plant’, *sæd* ‘seed (of plants and animals); fruit, crop; growth; sowing; source; progeny, posterity’; Old Saxon *sāian* ‘to sow’, *sād* ‘seed’, *sāmo* ‘seed’; Old Frisian *sēd* ‘crop, sowing’; Old High German *sāen*, *sāwen* ‘to sow’ (New High German *säen*), *sāt* seed’ (New High German *Saat*), *sāmo* ‘seed’ (New High German *Same* ‘seed, grain; sperm, semen; germ, source; offspring, descendants’); Lithuanian *sėjū*, *sėti* ‘to sow’, *sėmens*, *sėmenys* ‘flax seed’, *sėlėna* ‘husk of a seed’; Old Church Slavonic *sějō*, *sėti* (also *sējati*) ‘to sow’, *sēmę* ‘seed’; Polish *siać* ‘to sow’; (?) Hittite (3rd sg. pres.) *iš-hu-u-wa-a-i* ‘to shed, to throw, to scatter, to sow (seeds), to pour’. Rix 1998a:469 **seh₁-* ‘to plant’ → ‘to sow’; Pokorny 1959:889—891 **sē(i)-* : **sai-* : **sī-*; **sē-* : **sā-* and **sei-* : **si-* ‘to throw, to scatter, to let fall, to sow’; Walde 1927—1932.II:459—463 **sēi-*; Mann 1984—1987:1122 **sējō* (**sājō*) ‘to sow’, **sējā* ‘sowing, seed-time’, 1126 **sēmn-*, **sēmō(n)* ‘seed’, 1133 **sēt-* (**sētos*) ‘sown, planted; sowing, seed’, 1134 **sētlos*, *-ā*, *-om* ‘sowing, seed; sowing-basket, seedloft, seedlip’; Watkins 1985:56 **sē-* (contracted from **se₂-*) and 2000:73 **sē-* ‘to sow’ (contracted from earlier **se₂-*); Mallory—Adams 1997:505 **seh₁men-* ‘seed’, 534 **seh₁-* ‘to sow’; Gamkrelidze—Ivanov 1984.II:688—689 **seH(i)-* and 1995.I:594—595 **seH(i)-* ‘to sow’, **sēmen-* ‘seed, semen’; Ernout—Meillet 1979:617—618 **sē-*, **sā-*; Walde—Hofmann 1965—1972.II:522 **sē-*; De Vaan 2008:557 **si-sh₁-e/o-* ‘to sow’; Orël 2003:327 Proto-Germanic **sēanan*, 327 **sēdan*, 327 **sēdiz*, 328 **sēmōn*; Lehmann 1986:290 **sē(y)-* (< **se[?]-*), **sī-*, **sei-*; Feist 1939:403—404 **sē(i)-*; De Vries 1977:459 **sē(i)-*, **sejā-*; Falk—Torp 1903—1906.II:137—138; Onions 1966:806 and 849; Klein 1971:668 **sē-* and 700 **sē(i)-*; Kluge—Mitzka 1967:617 *sei-*, 619 **sē(i)-*, and 622—623 **sēi-*; Kluge—Seebold 1989:612, 613 **sē-*, and 616; Kloekhorst

2008b:396—399; Tischler 1977— .2:391—392 and 2:393—394; Puhvel 1984— .1/2:404—409; Smoczyński 2007.1:545 **seh_l-*; Fraenkel 1962—1965.II:778—779 **sē-*; Derksen 2008:446, 447—448 **seh_l-*, and 2015:393, 395 **seh_l-*.

Buck 1949:5.71 fruit; 8.31 sow; seed; 12.53 grow.

22.17. PROTO-NOSTRATIC *ž

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Karvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
ž-	ʒ-	c-	ž-	d ^h -	č-	ž-	c-
-ž-	-ʒ-	-c(c)-	-ž-	-d ^h -	-č-	-ž-/ -d-	-c-

341. Proto-Nostratic root *žal- (~ *žal-):

(vb.) *žal- ‘to die, to fade, to wither’;

(n.) *žal-a ‘death’

- A. Proto-Afrasian *žal- ‘to die, to fade, to wither’: Semitic: Arabic *zaʔama* ‘to die suddenly’. Egyptian *zʕ* ‘to become weak or feeble’, *zʕ-ʕ* ‘weak, feeble man’. Hannig 1995:657; Faulkner 1962:209. Proto-Southern Cushitic *žaaʔ- ‘to be extinguished’ > Alagwa *tsaʔata* ‘barren (animal, person)’; Dahalo *dzaaʔ-* ‘to die’, *dzaaʔe* ‘death’, *dzaaʔama* ‘corpse’, *dzaaʔaʔa* ‘enemy’. Ehret 1980:197. Proto-Southern Cushitic *žalʔes- ‘to extinguish’ > Iraqw *tsaʔes-* ‘to extinguish’; Dahalo *dzeʔeð-* ‘to kill’. Ehret 1980:197.
- B. Proto-Dravidian *caH- ~ *ceH- ‘to die’: Tamil *cā* (*cāv-/cākuv-*, *cett-*) ‘to die, to be spoiled or blighted (as crops), to be exhausted’, *cāvu* ‘death, ghost’, *cettal* ‘dying’, *cākkāṭu* ‘death’; Malayalam *cāka* (*catt-*) ‘to die’, *cākkū* ‘death, mortality’, *cāvu* ‘death, case of death, mourning feast’, *catta* ‘dead’; Toda *soy-* (*sot-*) ‘to die (of others than Todas)’; Kannaḍa *sāy* (*sattu*) ‘to die’, *sāvu* ‘death, a corpse’; Kōḍagu *ca-l-* (*ca-v-*, *catt-*) ‘to die’, *ca-vu-* ‘corpse’; Telugu *caccu* (*cā-*, *cāv-*) ‘to die, to fade, to wither, to disappear, to cease’, *caccu* (adj.) ‘dead, listless, insipid’, *cāvu* ‘death’; Tulu *saipini*, *taipini* ‘to die, to be starved’, *sāvu*, *tāvu* ‘death, mourning feast’; Parji *cay-* (*cañ-*) ‘to die’; Kui *sāva* (*sāt-*) ‘to die, to be ill, to suffer’; Kōṇḍa *sā-* ‘to die, to go out (of fire)’; Kuwi *hā-* ‘to die’, *hāki* ‘death’; Kurux *khēʔenā* (*keccas*) ‘to die, to fall out of use (as a law)’; Malto *keye* (*kec-*) ‘to die’, *keype* ‘dead’, *keyu* ‘mortal’; Brahui *kahing* ‘to die, to die down (of fire)’, *kasifing*, *kasfing* ‘to kill’. Krishnamurti 2003:46, 118, 126—127, 156, and 293 *caH- ~ *ceH- ‘to die’; Burrow—Emeneau 1984:212—213, no. 2426.
- C. Proto-Kartvelian (*žl-in- >) *ž-in- ‘to sleep, to fall asleep’: Georgian *žin-* ‘to sleep, to fall asleep’; Mingrelian *žir-* ‘to lie (down); to lean (on)’, *o-nžir-al-i* ‘bed’; Laz *žin-*, *žir-* ‘to go to bed; to sleep’, *o-nžir-e* ‘bed’. Schmidt 1962:152; Klimov 1964:238 *ž₁in- and 1998:287 *ž₁in- ‘to sleep, to fall asleep’; Fähnrich 2007:607—608 *ž₁in-/*ž₁il-; Fähnrich—Sardshweladse 1995:489—490 *ž₁in-/*ž₁il-. Proto-Kartvelian (*žl-il- >)

*ž-il- ‘dream, sleep’: Georgian *žil-i* ‘dream, sleep’; Mingrelian [*žir-*] ‘dream, sleep’; Laz (*n*)*žir-*, *nži-* ‘dream, sleep’. Klimov 1964:238 **žil-* and 1998:287 **žil-* ‘dream, sleep’.

- D. Proto-Indo-European **dhē₂-/dhō₂-* > **dhē-/dhō-* ‘to waste away; to become exhausted, faded, withered, weak, weary’: Latin *famēs* ‘hunger’, *fatīgō* ‘to weary, to tire’; Old Irish *ded-* ‘to dwindle’; Old English *demn* ‘damage, injury, loss, misfortune’; Old Icelandic *dási* ‘sluggard, lazy fellow’, *dasast* ‘to become weary, exhausted’, *dasaðr* ‘weary, exhausted (from cold or bodily exertion)’; Swedish *dasa* ‘to lie idle’. Pokorny 1959:239 **dhē-* ‘to pass away’ (?); Walde 1927—1932.I:829 **dhē-*; Watkins 1985:13 **dhē-* ‘to vanish’ (contracted from **dhe₂-*); Walde—Hofmann 1965—1972.I:451 **dhē-* (: **dhə-*); De Vaan 2008:200 and 204—205; Orël 2003:69 Proto-Germanic **dasōn* ~ **dasaz*; De Vries 1977:74; Falk—Torp 1903—1906.I:96.

Buck 1949:4.61 sleep (vb., sb.); 4.75 die; dead; death; 4.91 tired, weary; 5.14 hunger (sb.). Bomhard—Kerns 1994:347, no. 172.

342. Proto-Nostratic (n.) **žag^w-a* ‘a small tree, a bush or shrub’:

- A. Proto-Afrasian **žag^w-* ‘a kind of tree’: Semitic: Geez / Ethiopic *zāgbā* [ጸጌባ] possibly ‘podocarpus’ (it renders Biblical ‘cedar, cypress’); Tigrinya *zāgba* ‘podocarpus’; Amharic *zāgba*, *zəgba* ‘podocarpus’; Gurage *zəgba* ‘a kind of tree’. Leslau 1979:704 and 1987:633. New Egyptian *sg* (< **zg* ?) ‘tree’. Hannig 1995:775. Proto-Highland East Cushitic **dzagiba* ‘cedar tree’ > Hadiyya *digiba* ‘cedar tree’; Kambata *zagiba*, *zagisšu* (< **zagib-cu*) ‘cedar tree’; Sidamo *daguba*, *dagucco* (< **dagub-co*) ‘cedar tree’. Hudson 1989:37.
- B. Dravidian: Kannaḍa *cakli* ‘the Manilla tamarind tree’; Tuḷu *cakkulimara* ‘the Manilla tamarind tree’. Burrow—Emeneau 1984:201, no. 2273.
- C. Proto-Kartvelian **žegw-* ‘blackthorn, sloe’: Georgian (Lečxumi dialect) *žegv-* ‘blackthorn, sloe’; Mingrelian [*žag(v)-*] ‘small shrubby’. Fähnrich 2007:603 **ž, egw-*; Fähnrich—Sardshweladse 1995:485—486 **ž, egw-*; Klimov 1998:284 **ž, egw-* ‘blackthorn, sloe’.

343. Proto-Nostratic root **žah-* (~ **žəh-*):

(vb.) **žah-* ‘to call (out), to cry (out)’;

(n.) **žah-a* ‘call, cry; name’

- A. Proto-Afrasian **žah-* ‘to call (out), to cry (out), to groan’: Proto-Semitic **žah-ar-* ‘to grunt, to groan, to moan’ > Arabic *zaḥara* ‘to groan, to moan’, *zaḥīr* ‘groan, moan’; Šḥeri / Jibbālī *zaḥār* ‘(animal) to push out its young squealing; (woman) to push out a child grunting and groaning’; Mehri

zəḥār ‘to squeak, to grunt, to squeal’; Harsūsi *zeḥār* ‘to grunt or squeak while giving birth’. Egyptian *zhzh* ‘to cry out, to shriek’. Hannig 1995:737.

- B. Proto-Kartvelian **ḡax-/ḡx-* ‘to call, to be called’: Georgian *ḡax-* ‘to call, to cry, to shout’; Mingrelian *ḡox-* ‘to be called’; Laz *ḡox-*, *jox-* ‘to call’; Svan *ḡāx-/ḡx-* (*ḡx-*) ‘to be named, to be called’. Klimov 1964:236—237 **ḡ₁ax-* and 1998:283 **ḡ₁ax-* : **ḡ₁x-* ‘to call, to be called’; Fähnrich—Sardshweladse 1995:484—485 **ḡ₁ax-*; Fähnrich 2007:602—603 **ḡ₁ax-*. Proto-Kartvelian **ḡax-e-* ‘name’: Georgian *sax-el-* ‘name’; Mingrelian *ḡox-o* ‘name’; Laz *ḡox-o* ‘name’; Svan *ḡax-e*, *ḡāx-e* ‘name’. Klimov 1964:237 **ḡ₁axe-* and 1998:283—284 **ḡ₁ax-e-* ‘name’.

Buck 1949:18.41 call (vb. = summon); 18.42 call (vb. = name; b) be called, named).

344. Proto-Nostratic root **ḡal-* (~ **ḡəl-*):

(vb.) **ḡal-* ‘to fasten, to tie’;

(n.) **ḡal-a* ‘string, strap, cord’

- A. Proto-Kartvelian **ḡal-* ‘string, cord’: Georgian *ḡal-* ‘string’; Svan (Lower Bal) *ḡəl-*, (Upper Bal) *ḡil-* ‘string, cord’. Klimov 1998:282 **ḡ₁al-* ‘sinew, string’; Fähnrich—Sardshweladse 1995:482—483 **ḡ₁al-*; Palmaitis—Gudjedjiani 1985:313. Different etymology in Fähnrich 2007:600 [**ḡ₁il-*].
- B. Yukaghir (Northern / Tundra) *tude-čalete-* ‘to hang oneself’. Nikolaeva 2006:122. This stem is an exception to vowel harmony.
- C. Proto-Altaic **ḡālo-* ‘(vb.) to fasten, to tie; (n.) string, strap, cord’: Proto-Tungus **ḡala-n* ‘joint; shoe straps’ > Manchu *ḡala(n)* ‘a section (of bamboo, grass), a joint; generation, age; world; subdivision of a banner, ranks; measure word for walls and fences’; Spoken Manchu (Sibo) *ḡalən* ‘joint’; Evenki *ḡalan* ‘joint’, *ḡalaptun* ‘shoe straps’; Lamut / Even *ḡalḡn* ‘joint’, *ḡalḡpkḡr* ‘shoe straps’; Negidal *ḡalan* ‘joint’, *ḡalaptin* ‘plummet’; Ulch *ḡala(n)* ‘joint; generation, world’; Oroch *dala(n)* ‘joint; generation, world’; Nanay / Gold *ḡalā* ‘joint; generation world’; Oroch *ḡala(n)* ‘joint; generation, world’; Udihe *ḡala(n)* ‘joint; generation world’. Proto-Mongolian **ḡalga-* ‘to fasten, to join’ > Written Mongolian *ḡalya-* ‘to fasten, to join’; Khalkha *zalga-* ‘to fasten, to join’; Buriat *zalga-* ‘to fasten, to join’; Kalmyk *zalyə-* ‘to fasten, to join’; Ordos *ḡalga-* ‘to fasten, to join’; Dagur *ḡalga-* ‘to fasten, to join’; Shira-Yughur *ḡalgaḡab-* ‘to fasten, to join’; Monguor *ḡirga-*, *ḡalgā-* ‘to fasten, to join’. Proto-Turkic **yala-* ‘sacred band; flag; tie, strap’ > Turkmenian (dial.) *yalow* ‘flag’; Uzbek *yaloʻw* ‘flag’; Uighur (dial.) *ḡala* ‘tie, strap’; Tatar (dial.) *yalaʻw* ‘flag’, *yala* ‘tie, strap’; Kirghiz *yalaʻu* ‘flag’; Kazakh *ḡalaw* ‘flag’; Sary-Uighur *ḡala* ‘tie, strap’; Oyrot (Mountain Altai) *yalaʻa*, *d’alaʻa* ‘tie, strap’; Tuva *čalā* ‘tie, strap’, *čalama* ‘sacred band’; Yakut *salama* ‘sacred band’. Starostin—Dybo—Mudrak 2003:1526—1527 **ḡālo* ‘to fasten, to bind, to hang’.

Sumerian *zal* ‘to bind’.

Buck 1949:9.16 bind (vb. tr.); 9.19 rope, cord.

345. Proto-Nostratic root *žaw- (~ *žəw-):

(vb.) *žaw- ‘to wear out, to be used up, to cease to function’;

(n.) *žaw-a ‘cessation, end, extinction’; (adj.) ‘worn out, used up, wasted, decrepit, old’

- A. Proto-Afrasian *žaw- ‘to wear out, to be used up, to cease to function’:
Proto-Semitic *žaw-al- ‘to wear out, to be used up, to cease to function’ >
Hebrew *zūl* [זול] ‘to waste, to lavish, to squander; to be cheap’, *zūlāh* [זולה] ‘removal, cessation’; Arabic *zāla* ‘to cease to be in a place, to remove; to cease, to perish; to cause to cease, to disappear; to destroy; to abolish’, *zawāl* ‘end, passage, extinction, disappearance, vanishing, cessation, setting (of the sun); decline, change for the worse, injury, harm’, *ʔizāla* ‘removal, elimination’; Sabaeen *zwl* ‘to vanish, to complete’. Murtonen 1989:163; Klein 1987:196; Zammit 2002:211. Arabic *zawā* ‘to take away, to remove’. Egyptian *zwn* ‘to perish’, *zwn* ‘affliction’. Hannig 1995:677; Faulkner 1962:217; Erman—Grapow 1926—1963.3:428. [Ehret 1995:262, no. 477, *jaw- or *dzaw- ‘to wear out, to be used up, to cease to function’.]
- B. Dravidian: Tamil *cavalai* ‘leanness of an infant not fed on mother’s milk, tenderness, immaturity’, *cavu* ‘to become weak, to be emaciated’, *cavañku* (*cavañki-*) ‘to become lean, emaciated; to shrink, to subside, to faint, to languish’, *cāvi* ‘withered crop, blighted or empty grain’, *cāvaṭṭai* ‘withered grain, chaff, emaciated person, dried betel leaves’; Malayalam *cavala* ‘empty corn, leanness, hollowness’, *cāvi*, *cāri* ‘empty grain, blighted corn; cankerworm, palmerworm’, *cāṭa* ‘seedless, empty (as husk)’; Kota *jag-* (*jagy-*) ‘to become lean’, *jalv-* (*jald-*) (< *javl-) ‘to become lean and stringy with old age’; Tuḷu *cavuḷi* ‘old’; Telugu *cavile* ‘leanness, thinness’, *cavile-pōyina* ‘lean, thin (as an infant)’, *sāvi* ‘a blasted stalk of withered corn’. Burrow—Emeneau 1984:210, no. 2392.
- C. Proto-Kartvelian *žw-el- ‘decrepit, old (of things)’: Georgian *zveli* ‘decrepit, old (mostly of things)’; Mingrelian *žvesi* ‘old’; Laz *m-žveši*, *n-žveši* ‘old’; Svan *žwinel* ‘old’. Fähnrich 2007:606 *žw-; Schmidt 1962: 152; Fähnrich—Sardshweladse 1995:488 *žw-; Klimov 1964:238 *ž₁wel- and 1998:286 *ž₁w-el- ‘decrepit, old’. Proto-Kartvelian *žw-en-/ *žw-in- ‘to become old’: Laz *m-žven-* ‘to become old’; Svan [žwin-] ‘to become old’. Klimov 1964:238 *ž₁wen- and 1998:286—287 *ž₁w-en : *ž₁w-in- ‘to become old’.
- D. Proto-Indo-European *d^hw-iH- (> *d^hw-ī-) ‘to dwindle, to waste away, to wane’: Old Icelandic *dvína* ‘to dwindle, to cease, to subside’; Old English *dwīnan* ‘to become smaller, to dwindle, to waste away’; Middle Low

German *dwīnan* ‘to waste away’; Dutch *verdwijnen* ‘to waste away, to vanish’. Mann 1984—1987:228 **dhūñō* ‘to wane’; Watkins 1985:14 **dheu-* ‘to become exhausted, to die’ (suffixed zero-grade form **dhwī-no-* in Germanic) and 2000:19 **dheu-* (also **dheuə-*) ‘to die’ (extended zero-grade form **dhuḡi-*, metathesized to **dhwīḡ-*, contracted to **dhwī-*, whence suffixed form **dhwī-no-*); Orël 2003:81 Proto-Germanic **dwīnanan*; Kroonen 2013:112—113 Proto-Germanic **dwīnan-* ‘to diminish’; De Vries 1977:89; Klein 1971:233 **dhwei-*; Onions 1966:296.

- E. Yukaghir (Northern / Tundra) *čawire-*, *čawure-* ‘to pretend to be poorer than one is’. Nikolaeva 2006:127.
- F. Chukchi-Kamchatkan: Proto-Chukotian **ḍawwaca-* ‘to perish’ > Chukchi *rakwaca-* ‘to perish; to be crippled, maimed’; Kerek *jakwa(a)ca-* ‘to perish; to be crippled’; Koryak *jawwaca-* ‘to be crippled, maimed’; Alyutor *sawwasa-* ‘to perish; to be crippled’. Fortescue 2005:55.

Buck 1949:12.56 small, little; 14.15 old; 14.28 cease; 16.31 pain, suffering. Bomhard—Kerns 1994:346, no. 171.

- 346. Proto-Nostratic (n.) **žem-a* ‘anything that is sour, bitter, pungent, sharp’; (adj.) ‘sour, bitter, pungent, sharp’:

- A. (?) Afroasiatic: Semitic: Akkadian (reduplicated) *zimzimmu* (*zinzimmu*) ‘a type of onion’, probably ‘red onion’.
- B. Proto-Kartvelian **žm-* ‘salt’: Georgian [*zm-*] ‘salt’; Mingrelian *žimu-* ‘salt’; Laz (*n*)*žumu-* ‘salt’; Svan *žəm-*, *žim-* ‘salt’. Klimov 1964:239 **ž₁m-* and 1998:289—290 **ž₁m(u)-* ‘salt’; Fähnrich—Sardshweladse 1995:493—494 **ž₁um-*; Fähnrich 2007:611—612 **ž₁um-*. Proto-Kartvelian **žm-ar-* ‘vinegar’: Georgian *zm-ar-i* ‘vinegar’; Mingrelian [*žimol-*] ‘vinegar’; Laz *žumori* ‘vinegar’; Svan *žimar-* (?) ‘vinegar’. Klimov 1964:240 **ž₁m-ar-* and 1998:289 **ž₁m-ar-* ‘vinegar’; Schmidt 1962:152—153.
- C. Uralic: Proto-Finno-Ugrian **čemз* ‘sour; to become sour’ > Votyak / Udmurt *šōm* ‘taste, leaven’; Zyrian / Komi *šom* ‘leaven, sourness’; Ostyak / Xanty (Tremyugan) *čim-*, (North Kazym) *šim-*, (Obdorsk) *šim-* ‘to turn sour (dough), to ferment, to rise, to get spoiled, to rot from humidity (of garment or rope)’. Rédei 1986—1988:56—57 **čemз*; Collinder 1955:118 and 1977:131.

Buck 1949:5.81 salt (sb.); 5.83 vinegar; 15.36 salt (adj.); 15.38 acid, sour. Bomhard—Kerns 1994:347—348, no. 173.

22.18. PROTO-NOSTRATIC *čʰ

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
čʰ-	c-	c-	č-	tʰ-	č-	čʰ-	c-
-čʰ-	-c-	-c(c)-	-č-	-tʰ-	-č-	-čʰ-	-c(c)-

347. Proto-Nostratic root *čʰal- (~ *čʰəl-):

- (vb.) *čʰal- ‘to leave, to leave behind, to abandon, to get rid of, to empty; to set free, to release, to let go’;
(n.) *čʰal-a ‘freedom, leisure, emptiness’; (adj.) ‘empty, abandoned, released, freed (from), at leisure’

Semantics as in Sanskrit *ric-* and its derivatives: *ric-* ‘to empty, to evacuate, to leave, to give up, to resign; to release, to set free; to leave behind; to separate, to remove from’, *ricyáte* ‘to be emptied, to be deprived of or freed from’, *riktá-ḥ* ‘emptied, empty, void’.

- A. Proto-Afrasian *cal- ‘to empty, to get rid of’: Proto-Semitic *cal-ay- ‘to empty, to get rid of’ > Hebrew *sālāh* [סָלַח] ‘to make light of, to toss aside, to treat as worthless’; Aramaic *sālā* ‘to throw away, to despise, to reject’; Arabic *salā*, *saliya* ‘to get rid of the memory of, to forget; to comfort, to console, to cheer up; to distract, to divert; to amuse, to entertain; to alleviate, to dispel; to take delight, to take pleasure, to have a good time, to have fun’; Šheri / Jibbāli *essōli* ‘to amuse, to entertain’, *eslé* ‘to amuse’; Mehri *sōli* ‘to amuse, to entertain’; (?) Akkadian *salū* (also *šalū*, *šalāʾu*) ‘to reject, to throw away’ (also ‘to whirl up, to kick up dust, to toss, to sprinkle, to spit blood or spittle; to shoot arrows, to hurl weapons’). Klein 1987:447. (?) Egyptian: Coptic (Sahidic, Bohairic) *sōl* [ⲥⲟⲗ], (Bohairic) *sol-* [ⲥⲟⲗⲉ], (Sahidic) *sēl* [ⲥⲏⲗ] ‘to dissipate, to pervert’. Černý 1976:151 — according to Černý (1976:160—161), *sōl* [ⲥⲟⲗ] is “probably identical with ⲥⲟⲡ”; Crum 1939:330. On the other hand, *sōl* [ⲥⲟⲗ] is not listed in Vycichl 1983.
- B. (?) Dravidian: Kannaḍa *calla*, *cella* ‘great mirth, fun, jest, smiling, laughter’, *callavāḍu* ‘to frolic, to sport, to gambol’, *callāṭa*, *cellāṭa* ‘sport, fun’; Telugu *cellāṭamu* ‘sport, play, toying’, *cellāḍu* ‘to sport, to play, to frolic’, *ceral-āḍu* ‘to sport, to play, to roam about for pleasure’, *ceral-āṭamu* ‘sport, play, roaming for pleasure’. Burrow—Emeneau 1984:209, no. 2378. Semantic development as in the Arabic and South Arabian forms cited above.
- C. Proto-Kartvelian *čal-/čl- ‘to empty’: Georgian *cal-/cl-* ‘to empty; to have spare time’, *cal-ier-i* ‘empty’; Mingrelian *čol-* ‘to empty’; Laz [čol-]. Schmidt 1962:148; Klimov 1964:227 *c₁al- and 1998:269 *c₁al- ‘to

empty'; Fährnrich—Sardshweladse 1995:457—458 **c₁al-*; Fährnrich 2007: 570—571 **c₁al-*.

- D. Proto-Indo-European **thel-/thol-/thl-* 'to leave, to leave behind, to abandon, to get rid of, to empty; to set free, to release, to let go' (extended form in Germanic: **thl-ew-/thl-ow-/thl-u-*, with root in zero-grade and suffix in full-grade): Hittite (3rd sg. pres.) *ta-la-a-i*, *da-li-ya-zi* 'to leave, to abandon, to let go'; Gothic *þliuhan* 'to flee', **unþa-þliuhan* 'to escape', *þlauhs* 'flight'; Old Icelandic *flyja* (< Proto-Germanic **pleuḡan-*) 'to flee, to take flight', *flugr* 'flight', *flótti* 'flight'; Norwegian *flya* 'to flee'; Old English *flēon* 'to fly from, to flee, to escape', *flyht* 'flying, flight', *flēam* 'flight'; Old Frisian *fliā* 'to flee', *flecht* 'flight'; Old Saxon *fliohan* 'to flee', *fluht* 'flight'; Middle Dutch *vlien*, *vlieden* 'to flee', *vlucht* 'flight'; Old High German *fliohan* 'to flee' (New High German *fliehen* 'to flee, to run away, to escape'), *fluht* 'flight' (New High German *Flucht*). According to Onions (1966:361), the Common Germanic forms are to be reconstructed as follows: **pleuḡan*, **plauḡ*, **pluzum*, **plogan-*. Semantic development in Germanic from 'to leave, to leave behind, to depart' to 'to flee, to escape' as in Kashmiri *rinzun* 'to escape, to flee away secretly' (cf. Pāli *riñcati* 'to leave behind'). Kroonen 2013:544 Proto-Germanic **pleuhan* 'to flee'; Orël 2003:107 Proto-Germanic **fleuxanan*; Uhlenbeck 1900:151—152 Proto-Indo-European **tleuk-*, **tluk-*; Balg 1887—1889:474 Germanic root **pluh-* (**plug-* by grammatical change), Pre-Germanic **tluk-*, **tleuk-*; Feist 1939:499—500 Proto-Indo-European **tlk₁ō* (Osthoff), Old Icelandic *flyja* (< Proto-Germanic **pleuhjan* ?), *flōja* (< Proto-Germanic **plauhjan*) (Noreen); Lehmann 1986:363—364; De Vries 1977:134; Torp 1919:126; Falk—Torp 1903—1906.I:174 **pluh-*; Onions 1966:361; Klein 1971:285; Boutkan—Siebinga 2005:120—121 Proto-Germanic **pleuhanaN*; Kluge—Mitzka 1967:207 and 209; Kluge—Seebold 1989:221 and 223; Bomhard 2004a:34—35. Different Hittite etymology in Kloekhorst 2008b:816—818. Probably also: Old Irish *-tella*, (analogical) *-talla* (< **telp-nā-*) 'there is room for'; Lithuanian *telpù*, *tĩpti* 'to find or have room enough, to go in', *talpà* 'capacity, holding power', *ištĩpti* 'to make oneself free'; Tocharian B *tālp-* 'to be emptied, purged', *tālpālle* 'purgative'. Rix 2001:623 **telp-* 'to make room'; Pokorny 1959:1062 **telp-* 'to have room', **tolpā* 'space, room'; Walde 1927—1932.I:741—742 **telp-*; Mallory—Adams 1997:534 **telp-* 'to have room' and 2006:287—288 **telp-* 'to have room'; Mann 1984—1987:1377 **telpō* (**tolp-*, **tlp-*) 'to have room', 1402 **tlp-* 'space', and 1410 **tolp-* 'space, area; to find room'; Thurneysen 1946:55 and 95; Smoczyński 2007.I:678 **telp-*, **tlp-*; Fraenkel 1962—1965.II:1094; Adams 1999:297 **telp-*; Van Windekens 1976—1982.I:500.

Sumerian *sal* 'to set free, to release, to let loose, to let go; to leave, to abandon'.

Buck 1949:10.51 flee; 12.18 leave; 13.22 empty. Bomhard—Kerns 1994:352, no. 178.

348. Proto-Nostratic root *čʰan- (~ *čʰən-):

(vb.) *čʰan- ‘to bring forth, to produce, to grow, to be born’;

(n.) *čʰan-a ‘that which is brought forth, produced, grown: fruit; bringing forth: birth’

- A. Dravidian: Parji *cand-* ‘to grow up’, *candip-* (*candit-*) ‘to make to grow up, to bring up, to rear’; Gadba (Ollari) *sand-* ‘to grow’, *sandup-* (*sandut-*) ‘to make to grow’, (Salur) *sand-* ‘to grow (plants, etc.)’. Burrow—Emeneau 1984:205, no. 2329.
- B. Proto-Kartvelian *čēn-/čēn- ‘to grow, to flourish (plants)’: Georgian *cen-* ‘to grow, to flourish (plants)’, Mingrelian *čan-* ‘to grow, to flourish’; Laz *čan-* ‘to grow, to flourish’; Svan *šen-* (< *čēn-) : *šn-*, *šän-* ‘to bear fruit’, *ma-šen*, *ma-šän* ‘fruit’. Schmidt 1962:149; Klimov 1964:228 **c₁en-* and 1998:271 **c₁en-* : **c₁n-* ‘to grow, to flourish (about plants)’; Fähnrich—Sardshweladse 1995:461 **c₁en-*; Fähnrich 2007:574—575 **c₁en-*.
- C. Proto-Uralic *ča(n)čə- ‘to be born, to grow’: Mordvin (Erza) *šačo*, *čačo*, (Moksha) *šačə* ‘to be born, to arise, to develop’; Cheremis / Mari *šača-*, *šoča-*, *čoča-* ‘to be born, to grow’; Votyak / Udmurt *čyžy* : *čyžy-vyžy* ‘family, tribe, race, stock’; Zyrian / Komi *čuž-*, *čuž-* ‘to be born, to grow’; Vogul / Mansi *săssă* ‘indigenous’; Ostyak / Xanty *čăčă* ‘indigenous; birth-place, home’, *čăčă-măg* ‘native land, homeland’; (?) Yurak Samoyed / Nenets *tôônc* ‘sort, kind, family’; (?) Tavgi Samoyed / Nganasan *tansa* ‘family’; (?) Yenisei Samoyed / Enets (Hantai) *tid’o*, (Baiha) *tizo* ‘family’; Selkup Samoyed *čaž*, *taaže* ‘family’. Collinder 1955:60 and 1977:77; Rédei 1986—1988:52 *čăčə- ~ *čăncə-.

Buck 1949:5.71 fruit; 12.53 grow; 19.23 tribe, clan, family (in wide sense).

349. Proto-Nostratic root *čʰečʰ-:

(vb.) *čʰečʰ- ‘to press, to squeeze, to crush’;

(n.) *čʰečʰ-a ‘the act of pressing, squeezing, crushing; that which is pressed, squeezed, crushed: crumb(s)’

- A. Afrasian: Egyptian *ssh* ‘to destroy (enemies), to shatter’. Hannig 1995:756; Faulkner 1962:246; Gardiner 1957:592.
- B. Proto-Kartvelian *čēc- ‘to crumble’: Georgian [*cec-*] ‘to crumble’ in: *na-m-cec-* ‘bread crumbs’ (Old Georgian *na-m-cuec-*, with an unclear *-u-*); Mingrelian *čač-* ‘to thresh, to crumble’. Klimov 1964:228 **c₁ec₁₋* and 1998:271 **c₁ec₁₋* ‘to crumble’ (Klimov notes that, in view of the Old Georgian derivative, a proto-form **c₁uec₁₋* is also possible); Fähnrich—Sardshweladse 1995:462—463 **c₁wec₁₋* (Fähnrich—Sardshweladse state

that -w- has been lost in Mingrelian: **c₁wec₁-* > *čáč-*); Fähnrich 2007:577 **c₁wec₁-*.

- C. Proto-Altaic **č^hec^hi-* ‘to press, to squeeze’: Proto-Tungus **čeče-re-* ‘to press, to embrace’ > Manchu *čečere-* ‘to press tightly, to embrace tightly’, *čečerše-* ‘to exert a great amount of effort, to quiver from exertion’. Starostin—Dybo—Mudrak 2003:420 **č^hec^hi* ‘to press, to squeeze’.

Buck 1949:9.342 press (vb.).

350. Proto-Nostratic root **č^hok^h-*:

(vb.) **č^hok^h-* ‘to bend, to twist, to turn, to wind’;

(n.) **č^hok^h-a* ‘the act of bending, twisting, turning, winding’

- A. Proto-Kartvelian **čok-* ‘to kneel down’: Georgian *čok-* in *da-čok-eb-a* ‘to kneel down’; Svan *čok-/čk-* ‘to kneel down’. Fähnrich 2007:544 **čok-*.
- B. Proto-Indo-European **thok^h-* ‘to bend, to turn, to twist, to wind’: Old Irish *tochraim* ‘to wind, to thread’, *tochras* ‘coiling’; Lithuanian *tākilas* ‘grindstone, wheel of a lathe’; Russian *tokárnyj* [токарный] ‘turning’, *tókar* [токарь] ‘turner, lathe operator’. Mann 1984—1987:1408 **tokəl-*, **tokər-* ‘spin, turn; spinner, turner’; Fraenkel 1962—1965.II:1074.

Buck 1949:9.14 bend (vb. tr.); 10.12 turn (vb.); 10.13 turn around (vb.); 10.14 wind, wrap (vb.); 10.15 roll (vb.).

22.19. PROTO-NOSTRATIC *čʰ

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
čʰ-	cʰ-	c-	čʰ-	tʰ-	č-	č-	c-
-čʰ-	-cʰ-	-c(c)-	-čʰ-	-tʰ-	-č-	-č-	-c-

351. Proto-Nostratic (n.) *čʰam-a ‘reed, grass’:

- A. Afrasian: Egyptian *dmʿ* ‘papyrus (book), papyrus (sheet or roll)’; Coptic *ḡōōme* [Ⲭⲱⲙⲉ] ‘sheet, roll of papyrus, written document, book’. Hannig 1995:1006; Erman—Grapow 1926—1963.5:574; Vycichl 1983:327; Černý 1976:314.
- B. Dravidian: Tamil *campu* ‘elephant grass’, *campan-kōrai* ‘elephant grass’, *caṇpu* ‘elephant grass; a species of sedge grass’; Kannaḍa *jambu* ‘a kind of reed or sedge’; Telugu *jambu* ‘a bulrush, sedge’. Burrow—Emeneau 1984:207, no. 2347.
- C. Proto-Kartvelian *čʰam- (or *čʰem-) ‘grass’: Georgian [*cʰam-*] in *ler-cʰam-* ‘rush, reed’, *cʰam-al-* ‘medicine, drug’; Laz (*m*)čʰam- ‘medicine, drug’; Svan *čʰēm* ‘hay’. Fähnrich 2007:643—644 *čʰam-; Fähnrich—Sardshweladse 1995:518—519 *čʰam-; Klimov 1964:249 *čʰem- and 1998:306 *čʰam- // *čʰem- ‘grass’.
- D. Proto-Altaic *čamu ‘brier, thorny plant’: Proto-Tungus *žamu ‘brier, thorny plant’ > Manchu *žamu* ‘wild rose, sweet-brier, dog-brier, dog-rose’, *žamu ilha* ‘an exotic red rose without odor’, *žamuri ilha* ‘hedgerose’, *žamuri orho* ‘gromwell, puccoon’; Spoken Manchu (Sibo) *žaməṛə* ‘wild-rose, sweet-brier, dog-brier, dog-rose’; Udihe *žamukta* ‘wild-rose, sweet-brier, dog-brier, dog-rose’. Manchu loan in Written Mongolian *žamur* ‘fruit of sweet-brier (eglantine)’. Tsintsius 1975—1977.I:247—248; Starostin—Dybo—Mudrak 2003:392 *čamu ‘a kind of tree’. Note: The alleged Mongolian and Japanese cognates proposed by Starostin—Dybo—Mudrak are not included here.

Buck 1949:8.51 grass; 8.52 hay. Bomhard 1996a:227, no. 641.

352. Proto-Nostratic root *čʰikʰ- (~ *čʰekʰ-):

- (vb.) *čʰikʰ- ‘to be small’;
 (n.) *čʰikʰ-a ‘small things’; (adj.) ‘small’

- A. Afrasian: North Omotic: Male *cʰikʰo* ‘small’.
- B. Dravidian: Tamil *cikka* ‘in brief, in a nutshell’; Malayalam *cikkinī* ‘young, small (said of girls)’; Iruḷa *cikkeḍu* ‘mosquito’; Kota *cikn* ‘mouse’; Kannaḍa *cikka*, *ciga* ‘little, small, young’, *cīku* ‘smallness, littleness of size’

(used of grain and pulse)', *cikkatana* 'childhood, youth'; Koḍagu *cikk-aḍake* 'very young, tender areca-nut'; Tuḷu *cikka* 'little, young, small, short', *cikini* 'tender, young, small', *cikkè* 'a dwarf', *cikkeli* 'a small variety of mouse'; Telugu *cikiciki* 'small, little'; Gondi *cikkāl*, *cikkal* 'muskkrat', *cikkāl* 'mouse'. Burrow—Emeneau 1984:218, no. 2495.

- C. Proto-Kartvelian **č'ik*- 'tiny, wee; small things': Georgian (Tušian) *c'ik*-*u-j* 'smallest; crumb', (Kartlian) *c'ik*-*o-mak*'-*o*- 'small things'; Mingrelian *č'ik*-*u* 'small, little'. Klimov 1998:313 **č₁iku*- 'tiny, wee; small things'; Fähnrich—Sardshweladse 1995:527 **č₁ik*-, Fähnrich 2007:654 **č₁ik*-.
- D. Chukchi-Kamchatkan: Kamchadal / Itelmen (Eastern) *-cic*, *-cuc* 'small' (note also *-dec* in *kigidec* 'small river'), (Western) *-c(a)X* 'little, small', *-cxicaX* 'very small', (Southern) *-cic* 'small'. Fortescue 2005:390—391.

Buck 1949:12.56 small, little. Dolgopolsky 2008, no. 334, **čEkV* 'small'. Note: The Altaic material cited by Dolgopolsky does not belong here.

353. Proto-Nostratic root **č'ir*- (~ **č'er*-):

- (vb.) **č'ir*- 'to cut, to cut off, to cut through; to cut into, to scratch, to scrape';
 (n.) **č'ir-a* 'that which is cut, cut off, cut into: slice, board, plank, scratch; that which cuts: knife, axe, adze'

- A. Proto-Afrasian **c'ir*- 'to cut, to cut off, to cut through, to cut into': Proto-Semitic **c'ar-am*- 'to cut, to cut off' > New Hebrew *šāram* [שָׂרַם] 'to grate on the ear; to injure, to split'; Syriac *šəram* 'to crop, to cut off (the ears), to cut grass (for cattle); to pluck, to tear up (plants); to dare'; Arabic *šarama* 'to cut off, to sever, to break, to tear', *šarm*, *šurm*, *šuram* 'separation, breach, rupture', *šarīm* 'cut off'. Murtonen 1989:367; Klein 1987:557; Zammit 2002:254. Proto-Semitic **c'ar-ay*- 'to cut, to cut off' > Arabic *šarā* 'to cut, to cut off, to lop'; Syriac *šəṛā* 'to rend asunder'. Proto-Semitic **c'ar-ab*- 'to cut, to hew, to carve' > Arabic *šaraba* 'to cut, to remove'; Soqotri *šerob* 'to cut'; Mehri *məšrāb* 'saw-edged knife used (by women) to cut grass for fodder'; Šheri / Jibbāli *məšrēb* 'grass-cutting knife (used by women in autumn)'; Geez / Ethiopic *šaraba* [ረረብ] 'to hew, to act as a carpenter, to do carpentry', *mašrab* [መረብ] 'axe', *šarb* [ረብ] 'plank'; Tigrinya *šārābā* 'to hew, to carve'; Tigre *šārba* 'to hew, to carve'; Gafat *šārrābā* 'to hew, to carve'; Gurage *ṭārrābā* 'to slice thin pieces of wood from a surface, to plane wood, to chip stones, to tear off a leaf of the *äsāt*, to remove leaves with a stroke, to hit the edge of a whip'; Amharic *ṭārrābā* 'to carve, to hew (wood, stones)', *ṭārb* 'board, plank, lumber, beam (of wood)', *mātrābiya* 'hatchet, axe, adze'; Argobba *ṭārrāba* 'to carve, to hew'. Leslau 1979:630 and 1987:563. Lowland East Cushitic: Galla / Oromo *c'ir*- 'to cut'. Highland East Cushitic (perhaps loans from Oromo): Burji *c'ir*- 'to chop, to clear forest, to gnaw'; Sidamo *c'ir*- 'to gnaw, to

- shave'. Hudson 1989:71, 184, and 357; Sasse 1982:49. Orël—Stolbova 1995:105, no. 444, *čir- 'to cut'.
- B. (?) Proto-Dravidian *cēr- 'to scratch, to scrape' > '(vb.) to plow; (n.) plow (with draught oxen)': Tamil ēr (Jaffna cēr) 'plow, plow and team of oxen, yoke of oxen'; Malayalam ēr 'a yoke of oxen, plow with draught oxen'; Kota e-r 'pair of bullocks used for plowing'; Toda e-r 'plow'; Kannaḍa ēru, ār 'pair of oxen yoked to a plow'; Telugu ēru 'plow with draught oxen made ready for plowing'; Kolami cēr 'plow and team of bullocks'; Parji (pl.) cereyakul 'pair of bullocks'; Gondi sēr, hēr 'a plow'; Konda sēru 'yoke of oxen'; Pengo hēr 'set of plow and bullocks'; Kui sēru 'a yoke of oxen, a pair, two of cattle for plowing'; Kuwi hērū 'plow', hēru 'pair of plowing bullocks'. Burrow—Emeneau 1984:244—245, no. 2815; Krishnamurti 2003:6 *cēr 'plow'.
- C. Proto-Kartvelian *č'er-/ *č'r- 'to cut into, to scratch, to carve', hence 'to write': Georgian c'er- 'to write; to depict'; Mingrelian (n)č'ar- 'to write'; Laz (n)č'ar-, č'a(r)- 'to write'; Svan jr- 'to write something'. Schmidt 1962:154; Klimov 1964:249 *č_ier- and 1998:309 *č_ier- : *č_ir- 'to scratch; to depict'; Fähnrich—Sardshweladse 1995:521—522 *č_ier-; Fähnrich 2007:648—649 *č_ier-. Semantic development as in Latin scrībō 'to engrave with a sharp-pointed instrument, to draw lines', hence 'to write' from the same root found in Latvian scrīpāt 'to notch, to scratch' and Old English sceran, scieran 'to cut, to shear', scierdan 'to injure, to destroy', scierpan 'to sharpen', scort 'short', etc.
- D. Proto-Altaic *čūrū- (~ -a) 'to scratch': Proto-Tungus *žurū- 'to draw', *žura-n 'a scratch, a line' > Manchu žižu- 'to draw lines, to draw, to write, to cast lots', žižun 'stroke, line, lines of a divination figure', žižuxan, žižugan 'diagram, trigram, or hexagram of the *Book of Changes*'; Evenki žurū- 'to draw'; Negidal žoyan 'a scratch, line'; Ulch žura(n) 'a scratch, line'; Nanay / Gold žorā 'a scratch, line'; Oroch žurara 'striped'; Udihe žūnda- 'to draw'; Solon žurī- 'to draw'. Proto-Turkic *dīrŋa- 'to scratch, to scrape', *dīrŋa-k 'fingernail, claw' > Old Turkic tīrŋaq 'fingernail, claw'; Karakhanide Turkic tīrŋaq 'fingernail, claw'; Turkish turnak 'fingernail, toenail, claw', turnakla- 'to scratch with the nails', turman- 'to cling with the claws or fingertips', turmık 'scratch; rake; harrow; drag-hook', turmıkla- 'to scratch, to rake, to harrow', turmala- 'to scratch, to worry, to annoy, to offend'; Gagauz tīrnaq 'fingernail, claw'; Azerbaijani dīrnag 'fingernail, claw'; Turkmenian dīrnaq 'fingernail, claw'; Uzbek tīrnəq 'fingernail, claw'; Uighur tīrnaq 'fingernail, claw'; Karaim tīrnaḡ 'fingernail, claw'; Tatar tīrnaq 'fingernail, claw'; Bashkir tīrnaq 'fingernail, claw'; Kirghiz tīrnaq 'fingernail, claw'; Kazakh tīrnaq 'fingernail, claw'; Noghay tīrnaq 'fingernail, claw'; Sary-Uighur dərmaḡ 'fingernail, claw'; Oyrot (Mountain Altai) tīrḡaq 'fingernail, claw'; Tuva dīrḡaq 'fingernail, claw'; Chuvash čərne 'fingernail, claw'; Yakut tīñirax

‘fingernail, claw’; Dolgan *tīŋīrak* ‘fingernail, claw’. Starostin—Dybo—Mudrak 2003:402 *čjǔru (~ -a) ‘to scratch’.

Buck 1949:8.21 plow (vb.; sb.); 9.81 carve; 18.51 write. Bomhard—Kerns 1994:356—357, no. 183.

22.20. PROTO-NOSTRATIC *š

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
š-	s-	c-	š-	s-	s-	s-	
-š-	-s-	-c(c)-	-š-	-s-	-s-	-s-	

354. Proto-Nostratic demonstrative pronoun stem *ša- (~ *šə-) ‘this, that’:

- A. Afrasian: Chadic: Ngizim demonstrative pronoun *sónú* ‘this one, that one; this, that’; near demonstrative pronoun *sáu* ‘this one’, *sáu ... sáu* ‘this one ... that one’; demonstrative pronoun *síyú* ‘that one’; Hausa *sà* ‘his, him’; independent pronouns: (m. sg.) *šii* ‘he’, (m. pl.) *suu* ‘they’; direct objects: (m. sg.) *ši* ‘him’, (m. pl.) *su* ‘them’.
- B. Proto-Kartvelian *-š- pronoun stem: Georgian [-s-]; Mingrelian [-š-]; Laz [-š-]; Svan [-š-]. Klimov 1964:173 **s_I*- and 1998:178 **s_I*- pronoun stem; Fähnrich—Sardshweladse 1995:310—311 **s_I*-; Fähnrich 2007:378 **s_I*-.
- C. Proto-Indo-European **so-*, (f.) **seA* [**saA*] (> **sā*) demonstrative pronoun stem: ‘this, that’: Sanskrit *sá-h*, (f.) *sā* (also *sī*) demonstrative pronoun; Avestan *ha-* demonstrative pronoun stem; Greek *ὁ*, (f.) *ἡ* demonstrative pronoun and definite article; Old Latin (m. singular) *sum* ‘him’, (f. singular) *sam* ‘her’, (m. plural) *sōs*, (f. plural) *sās* ‘them’; Gothic *sa*, (f.) *sō* (also *sī*) ‘this, that; he, she’; Old Icelandic *sá*, *sú* ‘that’; Old English *sē* ‘that one, he’, (f.) *sēo* ‘she’; Dutch *zij* ‘she’; Old High German (f.) *sī*, *siu* ‘she’ (New High German *sie*); Tocharian A (m.) *sa-*, (f.) *sā-*, B (m.) *se(-)*, (f.) *sā(-)* demonstrative pronoun; Hittite *ša* connective particle, *-še* 3rd person singular enclitic pronoun. Pokorny 1959:978—979 **so(s)*, **sā* ‘the, this’; Walde 1927—1932.II:509 **so*, **sā*; Mann 1984—1987:1137 **sī-* (**sīm*) ‘he, she, it’, 1142—1143 **sīā* (**sīā*) ‘she, it’, 1143—1144 **sīos*, **sīā* ‘he; she; this, it’, 1250 **sos*, (f.) **sā* ‘this; he, she’; Watkins 1985:62 **so-* and 2000:81 **so-* ‘this, that’ (nominative); Gamkrelidze—Ivanov 1984.I:384 **so*, (f.) **sā* and 1995.I:336 **so*, (f.) **sā*; Mallory—Adams 1997:457 (m.) **so*, (f.) **seh_a*, (n.) *tód* ‘that (one)’; Boisacq 1950:681—682 **so-*, **sā-*; Hofmann 1966:223 **so*, **sā*; Frisk 1970—1973.II:342—343 **so(s)*, **sā*; Chantraine 1968—1980.II:770; Beekes 2010.II:1041 **so*; Walde—Hofmann 1965—1972.II:550 **so-*, **sā-*; Ernout—Meillet 1979:630 **so*; Feist 1939:402; Lehmann 1986:289 **so*, **sā*; Orël 2003:310 Proto-Germanic **sa*, 329 **sī*; De Vries 1977:459; Onions 1966:817; Klein 1971:678; Kluge—Mitzka 1967:706; Kluge—Seebold 1989:671; Adams 1999:698 **so*/**seh_a*; Van Windekens 1976—1982.I:410 **so*, **sā*. (?) Proto-Indo-European *-s- in (m.) **ṛey-s-os*, (f.) **ṛey-s-eA* [-*aA*] (> -*ā*), **ṛey-s-yos* compound demonstrative pronoun: ‘this’: Sanskrit *eṣá-h* (f. *eṣā*) ‘this’; Avestan *aēša-* (f. *aēšā*) ‘this’; Oscan *eiseis* ‘he’; Umbrian *erec*, *erek*,

ere, eřek, erse ‘he, it’. Note: the *-s- element could be from the Proto-Nostratic 3rd person anaphoric stem **si-/se-* instead. Pokorny 1959:281—283; Walde 1927—1932.I:96—98; Mann 1984—1987:235 **eisjos* (**eiso-*, **eito-*) a compound pronoun; De Vaan 2008:309—310; Mayrhofer 1956—1980.I:129.

- D. Uralic: Proto-Finno-Ugrian **s[ä]* ‘he, she, it’ > Finnish *hän* (< **sän*) ‘he, she’; Lapp / Saami *son* ‘he, she’; Mordvin *son* ‘he, she’; Votyak / Udmurt *so* ‘that, yonder; he, she, it’; Zyrian / Komi *sy* ‘he, she, it’, *sija* ‘he, she, it; that, yonder’; Vogul / Mansi *täu* ‘he, she’; Ostyak / Xanty (Vasyugan) *jõh* ‘he, she’; Hungarian *ő* ‘he, she, it’. Collinder 1955:80—81 and 1977:97; Rédei 1986—1988:453—454 **sš*; Décsy 1990:107 **sä* ‘he, she, it’; Hajdú 1972:40 Proto-Uralic **se*; Abondolo 1998:25 Proto-Uralic **sF* (*F* = front vowel).

Greenberg 2000:99—101; Bomhard—Kerns 1994:364—365, no. 194.

355. Proto-Nostratic root **sar-* (~ **šar-*):

(vb.) **sar-* ‘to split, to rip apart, to tear asunder’;

(n.) **sar-a* ‘that which splits: knife’

- A. Proto-Afrasian **sar-* ‘to split, to rip apart, to tear asunder’: Berber: Tuareg *surət* ‘to split, to crack, to be split’, *səssurət* ‘to make split’, *tasārit* ‘split, crack, fissure’; Tashelhiyt / Shilha *ssər* ‘to pierce, to drill, to make a hole in’; Tamazight *tisirit* ‘plot of land to be plowed’. East Cushitic: Hadiyya *seer-e* ‘knife’; Burji *ser-óo* ‘knife’; Dobase *seer-e* ‘knife’; Koyra *soro* ‘knife’ (probably a loan from Burji). Sasse 1982:164 and 168; Hudson 1989:87. Proto-Southern Cushitic **sar-* ‘to cut with repeated knife strokes’ > Burunge *sar-* ‘to scarify’; Dahalo *sar-* ‘to cut’. Ehret 1980:178.
- B. Elamo-Dravidian: Royal Achaemenid Elamite *šá-ra-* ‘to cut, to split’.
- C. Proto-Kartvelian **šar-/šr-* ‘to destroy, to ruin’: Georgian *sar-/sr-* ‘to destroy’; Mingrelian *šar-, šir-* ‘to wear out, to destroy’; Laz *šir-* ‘to wear out’. Schmidt 1962:132; Klimov 1964:177—178 **s_lr-* and 1998:178 **s_lar-/s_lr-* ‘to destroy, to ruin’; Fähnrich—Sardshweladse 1995:311—312 **s_lar-/s_lr-*; Fähnrich 2007:378—379 **s_lar-/s_lr-*.
- D. Proto-Indo-European **ser-/sor-/sṛ-* ‘to split, to rip apart, to tear asunder’: Hittite (3rd singular pres.) *šar-ra-i* ‘to separate, to divide, to break’. Proto-Indo-European **sor-gh-* ‘to wound, to tear’: Icelandic *sarga* ‘to hack (with a blunt instrument)’; Swedish *sarga* ‘to wound, to graze, to tear’; Old Church Slavonic *sragъ* ‘awful’; Russian *sražát’* [сражать], *srazít’* [сразить] ‘to slay, to strike down, to smite’. Mann 1984—1987:1249 **sorgh-* (?).
- E. Uralic: Proto-Finno-Permian **särz-* ‘to break’ > Mordvin (Erza) *seřed’e-* ‘to be sick, to hurt, to be in pain’; Votyak / Udmurt (Sarapul) *ser-* ‘to break, to smash, to destroy’. Rédei 1986—1988:756 **särz-*.

F. Altaic: Turkic: Chuvash *soran* ‘wound, loss, damage’.

Buck 1949:4.85 wound (sb.); 9.21 strike (hit, beat); 9.23 knife; 9.26 break (vb. tr.); 9.27 split (vb. tr.); 9.28 tear (vb. tr.); 11.27 destroy. Bomhard—Kerns 1994:363—364, no. 192.

356. Proto-Nostratic root *šaw- (~ *šəw-):

(vb.) *šaw- ‘to drink, to swallow’;

(n.) *šaw-a ‘drink, juice’

A. Afrasian: Berber: Tamazight *səw* ‘to drink’; Kabyle *səw* ‘to drink’.

B. Proto-Kartvelian *šw- ‘to drink’: Georgian *sv-* ‘to drink’; Mingrelian *š(v)-* ‘to drink’; Laz *š(v)-* ‘to drink’; Svan *š(w)-* ‘to drink’. Gamkrelidze—Ivanov 1995.I:223 *šw- ‘to drink’; Klimov 1964:173 **s_Iw-* and 1998:179 **s_Iw-* ‘to drink’; Fähnrich—Sardshweladse 1998:313 **s_Iw-*; Fähnrich 2007:380 **s_Iw-*. Proto-Kartvelian *šw-am-/ *šw-m- ‘to drink’: Georgian *svam-/sm-* ‘to drink’; Mingrelian *šum-* ‘to drink’; Laz *šum-* ‘to drink’. Schmidt 1962:131 *šu-; Klimov 1964:173—174 **s_Iw-am-/ *s_Iw-m-* and 1998:179 **s_Iw-am-/ *s_Iw-m-* ‘to drink’.

C. Proto-Indo-European *sew(H)-/ *sow(H)-/ *su(H)- ‘to suck, to drink, to swallow’: Latin *sūgō* ‘to suck’, *sūcus* ‘juice, sap’; Old Irish *súgid* ‘to suck’ (Latin loan ?); Old Icelandic *súpa* ‘to sip, to drink’, *súga*, *sjúga* ‘to suck’; Old English *sēaw* ‘juice, liquid’, *sūcan* ‘to suck’, *sūpan* ‘to swallow, to sip, to taste, to drink, to sup’, *sūpe* ‘sup, draft’, *sūgan* ‘to suck, to suck in’, *sōgian* ‘to suckle’; Old Saxon *sou* ‘juice, liquid’, *sūgan* ‘to suck’; Dutch *zuifen* ‘to guzzle, to booze’, *zuigen* ‘to suck’; Old High German *sou* ‘juice, liquid’, *sūfan* ‘to gulp down liquids, to guzzle, to booze’ (New High German *saufen*), *sūgan* ‘to suck’ (New High German *saugen*), *sougen* ‘to suckle’ (New High German *säugen*); Old Church Slavonic *сѣсо, сѣсати* (< *sup-s-) ‘to suck’. Rix 1998a:488 *seuk- ‘to suck’; Pokorny 1959:912—913 *seu-, *seuə- : *sū- ‘juice’; Walde 1927—1932.II:468—469 *seu-; Mann 1984—1987:1331—1332 *sūb- (*subō, *subāiō) ‘to suck up, to slurp’, 1332—1333 *sūgō, -iō (*sūg- ?) ‘to suck’, 1333 *sūghō, 1333 *sūk- ‘juice, sap, resin, whey, liquor’, 1338 *suslā ‘fluid, liquid’; Watkins 1985:58 *seuə- and 2000:76 *seuə- ‘to take liquid’; Gamkrelidze—Ivanov 1984.I:143—144, fn. 1, *seuk[h]- ~ *seuk- ‘to suck’ and 1995.I:123—124, fn. 64, *seukh- ~ *seuk- ‘to suck’; Mallory—Adams 1997:556 *seug/k- ‘to suck’; Walde—Hofmann 1965—1972.II:622 *seuq-, *seug-; Ernout—Meillet 1979:662 and 664; De Vaan 2008:596 and 598; Orël 2003:320 Proto-Germanic *sauǵjanan, 320 *saupan ~ *saupaz, 320 *sawan, 388 *sūžanan, 389 *sūpanan; Kroonen 2013:428 Proto-Germanic *sawwa- ‘juice’; De Vries 1977:560 and 562; Onions 1966:882 and 886; Klein 1971:728 *seuq-, *seug- and 730 *seu-; Kluge—Mitzka 1967:627 *seu-; Kluge—Seebold 1989:619 *seuə-. Proto-Indo-European *sw-el- ‘to

swallow': Avestan *xʷar-* 'to consume, to eat, to drink'; Old Icelandic *svelga* 'to swallow', *sollr* 'swill', *sylgr* 'a drink of something, a draft'; Faroese *svølgja* 'to swallow'; Norwegian *svelgja* 'to swallow'; Swedish *svälja* 'to swallow'; Danish *svelge* 'to swallow'; Old English *swelgan* 'to swallow; to devour, to consume'; Old Saxon *far-swelgan* 'to swallow'; Dutch *zwellen* 'to gulp, to swallow'; Old High German *far-swelhan*, *fir-swelgan*, *swelahan*, *swelgan* 'to swallow' (New High German *schwelgen* 'to feast'), *swelgo* 'glutton'. Rix 1998a:554 **suel-* 'to swallow'; Pokorny 1959:1045 **suel-(k-)* 'to swallow greedily'; Walde 1927—1932.II:530 **suel-*; Watkins 1985:68 **swel-* and 2000:88 **swel-* 'to eat, to drink'; Orël 2003:390 **swal(ǵ)wōn*, 394 **swelǵanan*; De Vries 1977:529, 567 **suelkō*, and 573; Falk—Torp 1903—1906.II:329; Torp 1919:753; Klein 1971:734; Onions 1966:891; Kluge—Mitzka 1967:692 **suel-*; Kluge—Seebold 1989:660.

Buck 1949:5.13 drink (vb.); 5.16 suck (vb.). Palmaitis 1986b:313; Bomhard—Kerns 1994:362—363, no. 190; Dolgopolsky 2008, no. 2141, **sVwH₂V* 'to drink'.

357. Proto-Nostratic root **šaw-* (~ **šəw-*):

(vb.) **šaw-* 'to sigh, to pant, to gasp, to breathe deeply';

(n.) **šaw-a* 'breath, sigh'

Related to:

(vb.) **šaw-* 'to sleep, to rest';

(n.) **šaw-a* 'sleep, slumber, rest'

A. Afrasian: Egyptian *swḥ* 'wind, air, breath'. Hannig 1995:679; Erman—Grapow 1926—1963.4:72; Faulkner 1962:217. Berber: Tuareg *usu* 'to cough', *təsut* 'cough'; Tawlemmet *əsəw* 'to cough', *təsut* 'cough'; Tamazight *asu*, *usu* 'to cough', *tasutt*, *tusutt* 'cough'; Tashelhiyt / Shilha *ttusu* 'to cough strongly', *tusut* 'cough'; Riff *usu* 'to cough', *tusut* 'cough'; Kabyle *usu* 'to cough', *tusut* 'cough'; Chaouia *ussi* 'to cough', *tussit* 'cough'.

B. Proto-Kartvelian **šw-er-/šw-r-* 'to sigh': Georgian *sur-* 'to wish', *survil-* 'wish, desire'; Mingrelian *šur-* 'to smell'; Laz *šur-* 'to smell (at), to smell (of)', *šur-on-* 'fragrant, odorous'; Svan *šwr-*, *šur-* 'to sigh', *li-šur-jēl* 'to sigh', *šwär* 'sigh'. Klimov 1964:174—175 **s_Iwer-* 'deep breath, sigh' and 178 **s_Iur-* 'to breathe', 1998:180 **s_Iwer-/s_Iwr-* 'to sigh'; Fähnrich—Sardshweladse 1995:313—314 **s_Iw-*; Fähnrich 2007:380—381 **s_Iw-*. Proto-Kartvelian **šul-* 'soul, spirit': Georgian *sul-* 'soul, breath, smell'; Mingrelian *šur-* 'soul, spirit'; Laz *šur-* 'soul, spirit'. Klimov 1964:178 **s_Iul-* 1998:182 **s_Iul-* 'soul, spirit'; Schmidt 1962:132; Fähnrich—Sardshweladse 1995:319—320 **s_Iul-*; Fähnrich 2007:387—387 **s_Iul-*.

- C. Proto-Indo-European **sew-/sow-/su-* ‘to sigh, to pant, to gasp’: (?) Armenian *hev* ‘breath, gasp’, *hevam* ‘to gasp’; Middle High German *siufzen* (earlier *siuftēn*; Old High German *sūftōn*, *sūfteōn*) ‘to sigh’ (New High German *seufzen* ‘to sigh’, *Seufzen* ‘a sigh’), *sūft* ‘a sigh’; Lithuanian *siaubiù*, *siaūbti* ‘to fume, to rage’. Mann 1984—1987:1134 **seu-* (**sēu-*) ‘to sigh, to pant, to gasp’, 1134 **seubō*, *-iō* ‘to fume, to pant, to gasp’; Kluge—Mitzka 1967:705; Kluge—Seebold 1989:670; Fraenkel 1962—1965.II:779.

Buck 1949:4.51 breathe; breath; 16.39 groan (vb.). Bomhard—Kerns 1994:366—367, no. 196.

358. Proto-Nostratic root **šaw-* (~ **šəw-*):

(vb.) **šaw-* ‘to sleep, to rest’;

(n.) **šaw-a* ‘sleep, slumber, rest’

Related to:

(vb.) **šaw-* ‘to sigh, to pant, to gasp, to breathe deeply’;

(n.) **šaw-a* ‘breath, sigh’

- A. Proto-Kartvelian **šw-en-/šw-n-* ‘to breathe, to sigh; to rest’: Georgian *sven-* ‘to rest’, *sun-* ‘breath, smell’; Mingrelian [*švan-*] ‘to breathe, to sigh’, *švanž-* ‘rest’; Laz *švan-* ‘to breathe, to sigh’, *švaž-* ‘rest, respite’; Svan *šwem-/šwm-* ‘to rest’. Schmidt 1962:132 **šwen-/šwer-*, **šwem-*; Klimov 1964:174 **s₁w-en-* and 1998:179 **s₁wen-/s₁wn-* ‘to breathe, to sigh; to rest’; Fähnrich—Sardshweladse 1995:313—314 **s₁w-* Fähnrich 2007:380—381 **s₁w-*.
- B. Proto-Indo-European **sw-ep^h-/sw-op^h-/su-p^h-* ‘to sleep’: Sanskrit *svapiti* (Vedic also *svápati*, *svápate*) ‘to sleep, to fall asleep, to lie down, to recline’, (causative) *svāpáyati* ‘to cause to sleep, to lull to rest’, *svápna-h* ‘sleep, sleeping, sleepiness, drowsiness’; Avestan *x^hap-* ‘to sleep, to slumber’, *x^hafna-* ‘sleep’; Greek ὑπνοϝ ‘sleep, slumber’, ὑπνῶω ‘to put to sleep’; Latin *sōpiō* ‘to put to sleep, to lull to sleep’, *sōpor* ‘deep sleep’, *somnus* ‘sleep, slumber’; Old Irish *súan* ‘sleep’; Old Icelandic *sofa* ‘to sleep’, *sofna* ‘to fall asleep’, *svefja* ‘to lull to sleep’, *svefna* ‘sleep’; Old English *swefan* ‘to sleep’, *swefn* ‘sleep, dream’; Old Saxon *sweban* ‘dream’; Old High German *-swebben*, etc., in: *ant-swebben*, *bi-swebben*, *be-sweven*, *in-swebben*, *in-sweppan* ‘to fall asleep’; Lithuanian *sāpnas* ‘dream’; Old Church Slavonic *сънъ* ‘sleep’; Tocharian A *špām*, B *špāne* ‘sleep’; Hittite (3rd sg. pres.) *šu-up-pa-ri-y[a-zi ?]* ‘to sleep’. Rix 1998a:556—557 **suep-* ‘to fall asleep’; Pokorny 1959:1048—1049 **suep-*, **sup-* ‘to sleep’, **supno-s* ‘sleep’; Walde 1927—1932.II:523—524 **suep-*, **sup-*; Mann 1984—1987:1336 **supnos*, *-om* ‘sleep, drowsiness, dream’, 1347 **suepnos*, *-om* ‘sleep’, 1347 **suepō*, *-iō* ‘to be drowsy, to sleep’; **suopeiō* ‘to lull’, 1362—1363 **suop-* ‘sleep’; **suōpeiō*, *-iō* ‘to put

to sleep'; Watkins 1985:68 **swep-* and 2000:88 **swep-* 'to sleep'; Gamkrelidze—Ivanov 1984.I:117, I:217, I:224 **šuep*^[h]- and 1995.I:100, I:187, I:194 **swep*^h- 'to sleep'; Mallory—Adams 1997:527 **šuep-* 'to sleep, to dream', **šuoṗnos*, **šuépnos*, **supnós* 'sleep, dream'; Boisacq 1950:1004—1005 **sup-no-s*, **šuepno-*, **šuoṗno-*; Hofmann 1966:385—386 **sup-no-s*, **šuepnos*, **šuoṗnos*; Chantraine 1968—1980.II:1159—1160; Frisk 1970—1973.II:970—971 **sup-no-s*, **šuoṗno-s*, **šuep-no-s*; Beekes 2010.II:1535 **su(e/o)p-no-*; De Vaan 2008:573—574 and 575; Walde—Hofmann 1966—1972.II:557—558 **šuepnos*, **šuoṗnos* and II:561; Ernout—Meillet 1979:634—635 **swep-*; Mayrhofer 1956—1980.III:561 and III:561—562; Van Windekens 1976—1982.I:460—461 **sepno-s*; Adams 1999:666 **swepno-*; Orël 2003:392 Proto-Germanic **swēbnaz*, 392—393 **swefanan*, 393 **swēfnōjanan*; Kroonen 2013:497 Proto-Germanic **swēbjan-* 'to cause to sleep' and 497—498 **swēfna-* 'sleep'; De Vries 1977:528 and 566; Fraenkel 1962—1965.II:762; Smoczyński 2007.1:534 **šuoṗno-*; Derksen 2008:481 **sup-n-o-* and 2015:389 **su(e/o)p-no-*; Kloekhorst 2008b:787—788 **sup-ó*, **sup-tó* and 788—789 **sup-r-je/o-*; Wodtko—Irslinger—Schneider 2008:675—680 **šuep-*.

Buck 1949:4.61 sleep (vb.; sb.). Bomhard—Kerns 1994:367, no. 197.

359. Proto-Nostratic root **ših-* (~ **seh-*):

- (vb.) **ših-* 'to separate into (equal) parts, to divide';
- (n.) **ših-a* 'part, portion, separation, division, section'

- A. Proto-Kartvelian **šx-w-a-* 'one; other': Georgian *sx-v-a* 'other, another; foreign'; Mingrelian *šx-v-a* 'other, foreign'; Laz *čk-v-a* 'other, one more'; Svan *ešxu* 'one'. Klimov 1964:178—179 **s_lxwa-* and 1998:184 **s_lxwa-* 'one; other'; Schmidt 1962:133; Fähnrich—Sardshweladse 1995:322 **s_lxwa-*; Fähnrich 2007:389 **s_lxwa-*.
- B. Proto-Indo-European **sih_h-* [**seh_h-*] > **sē-* 'separately, apart': Latin *sēd*, *sē* (shortened forms *sēd*, *sē*) (preposition) 'without', (prefix) 'apart'; (?) Old Icelandic *sér* 'for oneself, separately, singly'; Middle English *sēr* (adj.) 'several, particular' (Norse loan), *sēre-lēpi* (adj.) 'separate, various', (adv.) *sēr-līche* 'particularly'. Mann 1984—1987:1115; Walde—Hofmann 1965—1972.II:506—507 **sue-*, **se-*; Ernout—Meillet 1979:609; De Vaan 2008:549—550; De Vries 1977:470 **se*. Proto-Indo-European **sih_h-th-* [**seh_h-th-*] > **sē-th-* 'division, section': Avestan *hāiti-* 'division, section'; Latvian *sēta* 'hedge, section, division, staff'. Mann 1984—1987:1133—1134 **sēt-* 'division, separation'. Proto-Indo-European **sih_h-mi-* [**seh_h-mi-*] > **sē-mi-* 'half': Sanskrit (indeclinable) *sāmi* 'half, incompletely, imperfectly, partially'; Greek (prefix) ἡμι- 'half', (adj. and noun) ἡμισυς 'half'; Latin (prefix) *sēmi-* 'half', *sēmis* 'the half of anything'; Old High

German (prefix) *sāmi-* ‘half’; Old Saxon (prefix) *sām-* ‘half’; Old English (prefix) *sām-* ‘half’. Pokorny 1959:905—906 **sēmi-* ‘half’; Walde 1927—1932.II:493 **sēmi-*; Mann 1984—1987:1126 **sēmi-* ‘half’; Mallory—Adams 1997:253 **sēmis* ‘half’; Watkins 1985:57 **sēmi-* and 2000:75 **sēmi-* ‘half’; Gamkrelidze—Ivanov 1984.II:843 **sēm-i-* and 1995.I:741 **sēm-i-* ‘half’; Boisacq 1950:324—325; Hofmann 1966:108; Frisk 1970—1973.I:636; Chantraine 1968—1980.I:413; Beekes 2010.I:519—520 **sēmi-*; Walde—Hofmann 1965—1972.II:512—513 **sēmi-*; Ernout—Meillet 1979:612—613 **sēmi-*; De Vaan 2008:553; Orël 2003:328 Proto-Germanic **sēmiz*; Mayrhofer 1956—1980.III:459 **sēmí-*.

Buck 1949:13.24 half. Bomhard—Kerns 1994:367—368, no. 198. For the semantics, cf. (1) Sanskrit *néma-h* ‘one, several; half; portion; time; limit, boundary’, *néma-néma-h* ‘the one, the other’; (2) Kannaḍa *bēre* ‘separate, apart, different, other, else; separately’; (3) Geez / Ethiopic *naḥk* [ገፋቅ] ‘half, middle, semi-’, *manfaḥ* ... *manfaḥ* [መገፋቅ...መገፋቅ] ‘one part ... (and) another part’ < *naḥaḥa* [ገፋቅ] ‘to tear off, to tear away, to rend, to divide, to divide in two, to separate, to cleave asunder, to split’.

360. Proto-Nostratic root **šiw-* (~ **šew-*):

(vb.) **šiw-* ‘to swell’;

(n.) **šiw-a* ‘swelling’; (adj.) ‘swollen, puffed up’

- A. Proto-Kartvelian **šiw-* ‘to swell, to swell up’: Georgian *siv-* ‘to swell, to swell up’, *si-m-sivn-e* ‘swelling’; Mingrelian *šin-* (< **šiw-n-*) ‘to swell, to swell up’; Svan *ši(w)-* ‘to swell’, *mə-ši(w)-* ‘swollen’. Fähnrich—Sardshweladse 1995:316 **s_ii(w)-*; Klimov 1964:177 **s_ii-* and 1998:180—181 **s_ii(w)-* ‘to swell, to swell up’; Fähnrich 2007:383 **s_ii(w)-*. Proto-Kartvelian (reduplicated) **ši(w)-ši(w)n-* ‘to stuff oneself’: Georgian *sisin-* ‘to stuff oneself’; Mingrelian *šišin-* ‘to stuff oneself’. Klimov 1964:177 **s_iis_iin-* and 1998:181 **s_ii(w)-s_ii(w)n-* ‘to stuff oneself’.
- B. Proto-Indo-European **sw-el-* ‘to swell’: Proto-Germanic **swellan* ‘to swell’ > Gothic *uf-swalleins* ‘swollen, puffed up’ (< causative **swalljan* ‘to make swell’); Old Icelandic *svella* ‘to swell’; Faroese *svølla* ‘to swell’; Norwegian *svella* ‘to swell’; Swedish *svälla* ‘to swell’; Danish *svelle* ‘to swell’; Old English *swellan* ‘to swell’, *swyle* ‘swelling’; Old Frisian *swella* ‘to swell’; Old Saxon *swellan* ‘to swell’, *swil* ‘swelling’; Dutch *zwellen* ‘to swell’; Old High German *swellan* ‘to swell’ (New High German *schwellen* ‘to swell’), (m.) *swilo*, (n.) *swil* (< **swiliz*) ‘callous swelling, welt’ (New High German *Schwiele*). Orël 2003:394 Proto-Germanic **swellan*, 394 **swellanan*; Kroonen 2013:494 Proto-Germanic **swalljan-* ‘to cause to swell’ and 499 **swellan-* ‘to swell’; Feist 1939:513; Lehmann 1986:373; De Vries 1977:567; Falk—Torp 1903—1906.II:329—330; Torp 1919:753;

Onions 1966:893; Klein 1971:735; Kluge—Mitzka 1967:692 **s_uel-* and 693 **s_uel-*; Kluge—Seebold 1989:660 and 661 **swel-*.

361. Proto-Nostratic root **šuw-* (~ **šow-*):

(vb.) **šuw-* ‘to be wet, moist; to make wet, to soak’;

(n.) **šuw-a* ‘liquid, moisture’; (adj.) ‘moist, wet, soaked’

Extended form:

(vb.) **šuw-V-l-* ‘to be wet, moist; to make wet, to soak’;

(n.) **šuw-l-a* ‘liquid, moisture’; (adj.) ‘moist, wet, soaked’

A. Proto-Kartvelian **šow-* ‘to be wet, soaked’, **šow-el-* ‘wet, soaked’: Georgian [*sov-*] ‘to be wet, soaked’, *sovel-* ‘wet, soaked’, [*sovl-*] ‘to wet, to make wet’; Mingrelian *šol-* ‘to wet, to make wet’, *šə-* ‘wet, soaked’, *šol-ir-i* ‘wet’; Laz *šuv-* ‘to be wet, soaked’, *šu-* ‘wet, soaked’, *šol-* ‘to wet, to make wet’. Klimov 1964:174 **s₁wel-* and 1998:182 **s₁ow-* ‘to be wet’, **s₁ow-el-* ‘wet, soaked’, **s₁owl-* ‘to wet, to make wet’; Fähnrich 2007:385 **s₁ow-*; Fähnrich—Sardshweladse 1995:318 **s₁ow-*; Schmidt 1962:131—132.

B. Proto-Indo-European **swel-/sul-* ‘(vb.) to wet, to moisten, to flow; (n.) liquid, moisture’: Sanskrit *sūrā* ‘spirituous liquor, wine’; Avestan *hurā* ‘drink’; Ossetic *xwlīdz* ‘wet, wetness, humidity’; Greek ὕλη, ὕλις (ὕλις) ‘mud, slime’, ὑλίζω ‘to filter, to strain’; Old Icelandic *sulla* ‘to swill’; Old English *swillan*, *swilian* ‘to flood with water so as to wash or rinse, to drink in large quantities’, *sol* ‘mud, wet sand’, *syl* ‘wallowing place, miring place’, *sylan* ‘to make muddy or dirty, to pollute’; Old High German *sol* ‘mud, puddle’ (New High German *Suhle*), *bi-sulen* ‘to wallow in mud, mire’ (New High German *suhlen*, *sühlen*); Lithuanian *sulà* ‘sap’; Old Prussian *sulo* ‘curdled milk’. Pokorny 1959:912—913 **seu-*, **seuə-* : **sū-* ‘juice’; Walde 1927—1932.II:468—469 **seu-*; Mann 1984—1987:1334 **sūl-* (**sūlos*, -ā) ‘liquor, issue, sludge’, 1334—1335 **sulū-* (**sulūjō*) ‘liquid; (to flow)’; Boisacq 1950:1000—1001 **seu-*, **sū-*; Hofmann 1966:363 **sū-l-*, **seu-*; Frisk 1970—1973.II:963; Chantraine 1968—1980.II:1155; Beekes 2010.II:1529—1530 Greek ὕλη, ὕλις (ὕλις) ‘mud, slime’ < **suol-h₂-* ‘firewood’ and II:1530; Orël 2003:385 Proto-Germanic **sulan*; Klein 1971:735; Onions 1966:893 English *swill*, no known cognates; Kluge—Mitzka 1967:763; Kluge—Seebold 1989:714; Mayrhofer 1956—1980.III:487; Fraenkel 1962—1965.II:940; Smoczyński 2007.1:614; Derksen 2015:434—435 **su-leh₂-*.

Buck 1949:1.214 mud; 15.83 wet, damp. Dolgopolsky 2008, no. 2140, **[s]/[ü]whâ* ⇐ **[s]E₂uw_hV* ‘moisture, water, wet, rain’; Bomhard—Kerns 1994:363, no. 191.

22.21. PROTO-NOSTRATIC *g

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
g-	g-	k-	g-	g ^h -	k-	g-	k- q-
-g-	-g-	-k-	-g-	-g ^h -	-x-	-g-	-ʃ-

362. Proto-Nostratic root *gaʔ- (~ *gəʔ-):

- (vb.) *gaʔ- ‘to go, to leave, to depart; to leave behind, to abandon, to forsake’;
 (n.) *gaʔ-a ‘abandonment, lack, want, need, deprivation, loss, deficit’; (adj.)
 ‘abandoned, forsaken, left behind; wanting, lacking, deprived of’

- A. Afrasian: Egyptian *gʃw* ‘to be narrow, constricted; to languish; to lack, to be lacking; to deprive’, *gʃw* ‘lack’, *gʃwt* ‘lack, want’, *ngʃw* ‘without’, *ngʃ* ‘to lack, to want, to be short of’. Hannig 1995:439 and 893—894; Gardiner 1957:597; Faulkner 1962:287 and 288; Erman—Grapow 1921:197 and 1926—1963.2:349, 5:151—152.
- B. Dravidian: Kuṛux *kānā* ‘to go, to lead to (as a road), to progress favorably, to go on, to continue, to perish, to pass (of time), to come to an end, to have diarrhea (stomach), to bring oneself to, to be able to’; Malto *kale* ‘to go, to come to’; Brahui *hining* (pres. indef. *kāv, kās, kāe, kān, kāre, kār*; pres.-fut. *kāva, kāsa, kāik, kāna, kāre, kāra*) ‘to go, to depart, to disappear, to be past, to pass beyond, to be no longer fit for, to flow, to have diarrhea (stomach)’. Burrow—Emeneau 1984:133, no. 1419.
- C. Proto-Indo-European *g^{he}ʔ-/ *g^{ho}ʔ- (> *g^hē-/ *g^hō-), *g^{he}ʔ-y/i-/ *g^{ho}ʔ-y/i-/ (> *g^hēy-/ *g^hōy-; *g^{he}i-/ *g^{ho}i-) ‘to go, to leave, to depart; to abandon, to forsake’: Sanskrit (reduplicated) *já-hā-ti* ‘to leave, to abandon, to desert, to quit, to forsake, to relinquish’, (causative) *hāpayati* ‘to cause to leave or abandon; to omit, to neglect; to fall short of, to be wanting’, *hāni-h* ‘abandonment, relinquishment, decrease, diminution; deprivation; damage, loss, failure, ruin; insufficiency, deficit’; Avestan (reduplicated) *za-zā-mi* ‘to release’; Greek (Homeric) (reduplicated) *κῑχᾶνω*, (Attic) *κῑγχάνω* ‘to reach, hit, or light upon; to meet with, to find; (Homeric) to overtake, to reach, to arrive at’, *χῑῖρα* (Ionic *χῑρη*) ‘bereft of husband, widow’, *χῑρος* ‘widowed, bereaved’, *χώρα* ‘the space in which a thing is’, *χωρέω* ‘to make room for another, to give way, to draw back, to retire, to withdraw; to go forward, to move on or along’, *χωρος* ‘piece of ground, ground, place’, (adv.) *χωρίς* ‘separately, asunder, apart, by oneself or by themselves’, (dat.) *χίται* ‘in lack of’, *χατέω* ‘to crave, to long for, to have need of, to lack’, *χατίζω* ‘to have need of, to crave; to lack, to be without’, *χατίζων* ‘a needy, poor person’; Latin *hērēs* ‘heir’; Gothic *gaidw* ‘lack’; Crimean Gothic *geen* ‘to go’; Swedish *gå* ‘to go’; Danish *gaa* ‘to go’; Old

English *gān* ‘to go, to come, to proceed’, *gād* ‘want, lack’, *gāsne* ‘barren, deprived of, without; wanting, scarce; dead’; Old Frisian *gān*, *gēn* ‘to go’; Old Saxon *-gān* in *ful-gān* ‘to accomplish’; Middle Dutch *gaen* ‘to go’ (Modern Dutch *gaan*); Old High German *gān* ‘to go’ (New High German *gehen*). Rix 1998a:152—153 **g^{he}h₁-* ‘to leave behind, to abandon’; Pokorny 1959:418—419 **ghē-*, **ghēi-* ‘to be empty, void; to lack’; Walde 1927—1932.I:542—544 **ghē(i)-*; Mann 1984—1987:311 **ghāiō* (**ghāmi*, **ghīghāmi*) ‘to go, to move, to depart’, 331—332 **ghōros* (?) ‘space, extent, stretch’, 417 **ghīghāmi*; Watkins 1985:21 **ghē-* (contracted from **ghe₂-*) (suffixed *o*-grade form: **ghō-ro-* ‘empty space’) and 2000:28 **ghē-* ‘to release, to let go’ (contracted from earlier **ghe₂-*); Mallory—Adams 1997:349 **gheh₁-* ‘to leave’; Mayrhofer 1956—1980.I:426; Boisacq 1950:461—462 **ghē(i)-*, **ghī-*, **ghā-*, 1046, 1058—1059, and 1059 **ghē-*, **ghēi-*, **ghī-*; Frisk 1970—1973.I:861—862, II:1077—1078, II:1095—1096, and II:1125—1126; Hofmann 1966:145 **ghē(i)-*, **ghā-*, 417 **ghē(i)-*, and 424 **ghēi-*; Beekes 2010.I:705—706 **g^{he}h₁-*; Chantraine 1968—1980.I:536 **ghi-ghē-mi*, II:1249 **ghē-*, **ghā-*, II:1257 **ghē-re/o-*, and II:1281—1282; Walde—Hofmann 1965—1972.I:641—642 **ghēi-*; Ernout—Meillet 1979:292; De Vaan 2008:282—283 **g^{he}h₁ro-* ‘derelict’; Orël 2003:125 Proto-Germanic **ǵanǵanan*, 133—134 **ǵēnan*; Kroonen 2013:174 Proto-Germanic **gēn-* ‘to go’ (< **g^{he}h₁-*); Lehmann 1986:139 **ghēy-* ‘to lack, to be empty’; Feist 1939:185 **ghēj-*; Onions 1966:403 **ghē(i)-*; Klein 1971:316 **ghē-*, **ghēi-*; Kluge—Mitzka 1967:241 **ghē-*; Kluge—Seebold 1989:252; Benveniste 1973:68—69; Falk—Torp 1903—1906.I:209—210.

- D. Proto-Altaic **ga-* ‘to take, to take off, to take away; to let go, to leave; to put’: Proto-Tungus **ga-* ‘to take’ > Manchu *gai-* ‘to take, to take away, to take off’; Spoken Manchu (Sibo) *gia-* ‘to take, to take away, to take off’; Evenki *ga-* ‘to take’; Lamut / Even *ga-* ‘to take’; Negidal *ga-* ‘to take’; Ulch *ga-* ‘to take’; Orok *ga-* ‘to take’; Nanay / Gold *ga-* ‘to take’; Oroch *ga-* ‘to take’; Udihe *ga-* ‘to take’. Proto-Turkic **Ko-* (perhaps originally **Ka-* but changed to **Ko-* under the influence of the synonymous stem **Kod-* ‘to put; to leave’) ‘to put; to let go; to leave’ > Turkish *ko-*, *koy-* ‘to put; to let go; to leave; to permit; to suppose’; Karaim *qo-* ‘to put; to leave’; Chuvash *χiv-*, *χu-* ‘to put; to leave’. Starostin—Dybo—Mudrak 2003:525 **ga* ‘to take, to put’.

Buck 1949:2.76 widow; 10.47 go; 12.18 leave. Bomhard—Kerns 1994:396—397, no. 234.

363. Proto-Nostratic (n.) **gab-a* ‘front, front part’:
Probably identical to:
(n.) **gab-a* ‘peak, tip, top’

- A. Proto-Afrasian **gab-* ‘front, front part’: Proto-Semitic **gab(-ah-)* ‘forehead, front, brow’ > Hebrew *gaḇ* [גַּב] ‘brow’; Arabic *ġabīn*, *ġabha* ‘forehead’; Mandaic *gbina*, *gbana* ‘brow, eyebrow, eyelash’; Šheri / Jibbāli *gebhāt* ‘brow’; Ḥarsūsi *yābheh* ‘brow’; Mehri *gebhēt* ‘front’; Tigre *gābbah* ‘broad-fronted’, *gābbāhit* ‘forehead’. D. Cohen 1970— :95; Murtonen 1989:125; Klein 1987:89. East Cushitic: Somali *gabo* ‘breast’. Blažek 2020:48. Proto-Chadic **gab-* ‘front, front part’ (> ‘breast, chest’) > Hausa *gābaa* ‘front part of body (of person or animal)’, (adv.) *gāba* ‘in front, forward, ahead’, *gāban* (prep.) ‘in front of, before’; Kera *gāw* ‘breast’; Tumak *gāu* ‘breast’; Ndam *gāwú* ‘breast’. Jungraithmayr—Ibrisizimow 1994.II:46—47. Orël—Stolbova 1995:194, no. 858, **gab-* ‘front’.

Comments:

1. Militarëv—Kogan reconstruct three Semitic proto-forms here: (1) (n.) **gabb(-at)-* ‘eyebrow, eye-pit, front’ (2000.I:63, no. 66); (2) (n.) **gVbh(-at)-* ‘forehead, front’ (2000.I:65, no. 68); and (3) (n.) **gVb(b)īn-* ‘eyebrow, front’ (2000.I:65—66, no. 69). Concerning Proto-Semitic **gabb(-at)-* ‘eyebrow, eye-pit, front’, they note (2000.I:63, no. 66): “Reliably attested only in Hebr. and Arb.; cf. obviously related roots: **gVb(b)īn-* ‘eyebrow, front’, No. 69 (< **gaby-an-*, with the *-an suffix ?) and **gVbh(-at)-* ‘forehead, front’, No. 68 (with -h serving as a triconsonantizer ?)”. They do not list any non-Semitic cognates. The obvious Afrasian proto-form is **gab-* ‘front, front part’ (so Orël—Stolbova 1995:194, no. 858, **gab-* ‘front’), which serves as the basis for the Semitic proto-forms reconstructed by Militarëv—Kogan.
 2. Blažek (2020:48) lists Beja / Beḍawye *gibab* ‘breast’. He derives Beja / Beḍawye *gabala* ‘front, direction’, *gabalok* ‘in front of you’ from Arabic *kibal* ‘side, direction’, *ḵabla* ‘before’ (he writes *qibal* and *qabla*, respectively).
- B. Proto-Eskimo **qavlu(ṛ)* ‘eyebrow’: Alutiiq Alaskan Yupik *qauyluq* ‘eyebrow’; Central Alaskan Yupik *qavluq* ‘eyebrow’; Naukan Siberian Yupik *qavluq* ‘eyebrow’; Seward Peninsula Inuit *qavlu* ‘eyebrow’; North Alaskan Inuit *qavlu* ‘eyebrow’, *qavluna(a)q* ‘brow ridge’; Western Canadian Inuit *qavlu* ‘eyebrow’, *qavlunaq* ‘brow ridge’; Eastern Canadian Inuit *qallu* ‘eyebrow’; Greenlandic Inuit *qaṭṭu* ‘eyebrow’. Fortescue—Jacobson—Kaplan 1994:292.

Sumerian *gab*, *gaba* ‘breast’.

Buck 1949:4.205 forehead; 4.206 eyebrow; 4.40 breast (front of chest); 12.33 top; 12.35 end. Bomhard—Kerns 1994:383—384, no. 219.

364. Proto-Nostratic (n.) **gab-a* ‘peak, tip, top’:

Probably identical to:

(n.) **gab-a* ‘front, front part’

Note also:

(n.) **gub-a* ‘highest point, summit, top’

- A. Proto-Afrasian **gab-* ‘peak, tip, top’: Proto-Southern Cushitic **gab-* ‘above, up, on’ > Iraqw *gawa* ‘above, up, on’; K’wadza *gawato* ‘hill’; Dahalo *gáppo* ‘above, up, on’. Ehret 1980:234. Ehret 1995:179, no. 263, **gab-* ‘top’ (the Semitic forms cited by Ehret are included instead under Proto-Nostratic **gub-a* ‘highest point, summit, top’).
- B. Proto-Indo-European **g^{hebh}-* ‘gable, head, pinnacle’: Greek κεφαλή ‘head, front, end, point’ (Macedonian κεβαλή); Gothic *gibla* ‘gable, pinnacle’; Old Icelandic *gafl* ‘gable, gable-side’; Faroese *gavlur* ‘gable’; Norwegian *gavl* ‘gable-side’; Swedish *gavel* ‘transverse wall, partition’; Old Saxon *gibilla* ‘skull, head’; Middle Low German *gevel* ‘gable’; Old High German *gibil* ‘gable’ (New High German *Giebel* ‘gable’), *gebal*, *gibilla* ‘skull, head’; Tocharian A *špāl-* ‘head’, B *špālu*, *špālmēm* ‘superior, excellent’. Pokorny 1959:423 **ghebh-el-* ‘gable, head’; Walde 1927—1932.I:571 **ghebh-el-*; Mann 1984—1987:316—317 **ghebhəlos*, *-ā* ‘peak, tip, top; knob, head, spike’; Watkins 1985:21 **ghebh-el-* and 2000:28 **ghebh-el-* ‘head’; Gamkrelidze—Ivanov 1984.I:408 **g^[h]eb^[h]-(e)l-* and 1995.I:357 **g^{hebh}-(e)l-* ‘head’; Mallory—Adams 1997:260 **ghebhōl* ‘head’; Boisacq 1950:445 **ghebh-*; Frisk 1970—1973.I:835—836 **ghebh(e)l-*; Hofmann 1966:141 **ghebh-ēlā*; Chantraine 1968—1980.I:522 **ghebh(e)l-*; Beekes 2010.I:682—683 **g^{hebh}-l-*; Van Windekens 1976—1982.I:488 **ghebh-ōl*; Adams 1999:642—643 **g^{hebh}-(e)l-* ‘head’; De Vries 1977:152 **ghebh-l-*; Torp 1919:149 Germanic *gabala-*; Orël 2003:121 Proto-Germanic **ǵablaz* ~ **ǵablō*, 130 **ǵeb(e)lōn*; Kroonen 2013:173 Proto-Germanic **gebla(n)-* ~ **gabila-* ‘top’; Lehmann 1986:155 **ghebh-el-/lo-*; Feist 1939:214; Onions 1966:384 **ghebhālā*; Klein 1971:301 **ghebh^{el}-*; Kluge—Seebold 1989:266 **ghebh-* ‘head’; Kluge—Mitzka 1967:257 **ghebh-l-*.
- C. Eskimo-Aleut: Proto-Inuit **kavžaq*, **kavžəq* ‘crown of head’ > Seward Peninsula Inuit *kavžaq* ‘crown of head, peak of a woman’s parka’; North Alaskan Inuit *kavžaq* ‘crown of head’; Western Canadian Inuit *kavžiq* ‘crown of head’; Eastern Canadian Inuit *kayyiq* ‘crown of head’; Greenlandic Inuit *kaššiq* ‘crown of head’. Aleut *kamy-iX* (< **kavəy*) ‘head’. Fortescue—Jacobson—Kaplan 1994:162.

Buck 1949:4.20 head; 4.202 skull; 12.33 top; 12.35 end. Bomhard—Kerns 1994:383—384, no. 219; Dolgopolsky 2008, no. 586, **gabV(-/l̥V)* ‘head’ (→ ‘top; skull’).

365. Proto-Nostratic root *gab- (~ *gab-):

(vb.) *gab- ‘to grasp, to seize’;

(n.) *gab-a ‘hand, arm’

- A. Proto-Afrasian *gab- ‘hand, arm’: Egyptian *gb* (f. *gbt*) ‘arm’; Coptic (Sahidic) *čboy* [Ⲫⲟⲓ(ⲉ)ⲓ], (Bohairic) *ǧphoy* [Ⲭⲫⲟⲓ] ‘arm (of human being), leg (of animal)’. Faulkner 1962:288; Hannig 1995:898; Erman—Grapow 1921:198 and 1926—1963.5:163; Gardiner 1957:597; Vycichl 1983:338; Černý 1976:325. Cushitic: Saho-Afar *gab- ‘hand’ > Saho *gabaa* ‘hand’; Afar *gaba*, *gabaa* ‘hand’. Orël—Stolbova 1995:194, no. 859, *gabaʔ- ‘hand, arm’.
- B. Dravidian: Tamil *kavar* ‘to seize, to grasp, to catch, to steal, to get control of, to receive, to experience, to desire, to have sexual intercourse with’, *kavarcci* ‘captivation, attraction’, *kavarvu* ‘captivation, attraction, desire’, *kavavu* (*kavavi*-) ‘(vb.) to desire, to embrace, to copulate; (n.) copulation’, *kavarru* (*kavarri*-) ‘to attract’, *kavai* ‘to include, to join with, to embrace’; Malayalam *kavaruka* ‘to plunder, to rob’, *kavarcca* ‘robbery, plunder’; Kannada *kavar* ‘to take away by force, to seize, to strip, to plunder’, *kavarte*, *kavate* ‘taking by force, seizing, plundering’. Burrow—Emeneau 1984:123—124, no. 1326.
- C. Proto-Indo-European *g^{habh}- ‘to grab, to seize’: Sanskrit *gābhastī*-h ‘hand, arm’; Khotanese *ggoštā* (< *gabasti-) ‘handful’; Old Irish *ga(i)bid* ‘to take, to seize’; Latin *habēō* ‘to have, to hold’; Umbrian *habe* ‘to take, to receive, to have’; Gothic *gabei* ‘riches’; Lithuanian *gābana*, *gabanà* ‘armful’, *góbiu*, *góbti* ‘to wrap, to cover, to seize, to snatch’, *gobùs* ‘greedy’. Rix 1998a:172 *g^{hebh}- ‘to take, to seize; to give’; Pokorny 1959:407—409 *g^{habh}- ‘to take, to seize’; Walde 1927—1932.I:344—345 *g^{habh}-; Mann 1984—1987:309 *g^{habh}- ‘to seize, to hold’, 309—310 *g^{habh}alos, -iə, -io- (*g^{habh}ul-) ‘hold, holder’, 310 *g^{habh}an- (*g^{habh}in-, *g^{habh}ēn-) ‘hold, holder, container’, 310 *g^{hab}sos, -ā ‘hold, grip, handful’; Watkins 1985:20 *g^{habh}- (also *g^{hebh}-) and 2000:28 *g^{habh}- (also *g^{hebh}-) ‘to give or receive’; Gamkrelidze—Ivanov 1984.I:143, I:146 *g^[h]ab^[h]- and 1995.I:123, I:125, I:251 *g^{habh}- ‘to have, to catch’; Mallory—Adams 1997:564 *g^{habh}- ‘to take, to seize’; Mayrhofer 1956—1980.I:322—323; Ernout—Meillet 1979:287—288; Walde—Hofmann 1965—1972.I:630—631 *g^{hab}(h)-; De Vaan 2008:277—278; Orël 2003:121 Proto-Germanic *ǵabiǵaz ~ *ǵabuǵaz, 121 *ǵabīn; Lehmann 1986:134; Feist 1939:175—176; Fraenkel 1962—1965.I:126—127. Note: Two separate stems must be reconstructed for Proto-Indo-European: (1) *g^{habh}- ‘to grab, to seize’ and (2) *g^{hebh}- ‘to give’, which is preserved only in Germanic.

Buck 1949:4.31 arm; 4.33 hand; 11.11 have; 11.13 take; 11.14 seize, grasp, take hold of; 11.15 hold.

366. Proto-Nostratic root **gad-* (~ **gəd-*):(vb.) **gad-* ‘to be or become big, great, mighty’;(n.) **gad-a* ‘bigness, greatness, might’; (adj.) ‘big, great, mighty’

- A. Proto-Afrasian **gad-* ‘to be or become big, great, mighty’: Proto-Semitic **gad-ad-* ‘to be or become great, honored, rich’ > Arabic *ḡadda* ‘to be great, honored, rich’, *ḡadd* ‘good luck, good fortune’, *ḡiddan* ‘very, much’, *ḡadd* ‘riches, wealth, good fortune; greatness, honor; rich’; Sabaean *gdd* ‘(the) great, great ones’. D. Cohen 1970—:99—100; Zammit 2002:118—119. Egyptian *ḡḏ* ‘(to be) fat’; Coptic *ḡate* [ḡATE] ‘to become ripe, mature; to advance in age’, *ḡtay* [ḡTAI] ‘to ripen’. Hannig 1995:1019; Faulkner 1962:325; Gardiner 1957:604; Erman—Grapow 1921:223 and 1926—1963.5:631; Černý 1976:321; Vycichl 1983:332. Berber: Nefusa *guda* ‘pile, heap’; Tamazight *gudy* ‘to be numerous, to be many’, *sgudy* ‘to produce a lot, to furnish a large quantity’, *agdud* ‘crowd (on a festival day), a gathering’; Tashelhiyt / Shilha *gudi* ‘to be in a pile or heap’, *agudi* ‘pile, heap’; Kabyle *agdud* ‘swarm of bees’. Highland East Cushitic: Gedeo / Darasa *gada* ‘king, chief’; Sidamo *gada* ‘king, chief’. Hudson 1989:86—87. Proto-Southern Cushitic **a-gad-* ‘man, adult man’ > Burunge *gaduwa* ‘elder’; Alagwa *garma* ‘elder’; Ma’a *mwagiru* ‘man, adult man’. Ehret 1980:297. Omotic: Dime *gääd* ‘big’. Ehret 1995:180, no. 265, **gad-/gud-* ‘to be big’.
- B. Dravidian: Telugu *gāṭamu* ‘much, great’; Pengo *gāṭi*, *gāṭu* ‘much’; Manda *gāṭu* ‘much’; Kuwi *gāṭi* ‘much’. Burrow—Emeneau 1984:134, no. 1442.
- C. Uralic: Proto-Ugric **kat3-* ‘to become fat’ > Ostyak / Xanty (Vasyugan) *katəm* ‘fat, stout’, (Krasnoyarsk) *χottə-* ‘to become fat’; Vogul / Mansi *koot-* ‘to become fat’; Hungarian *hiz-* ‘to become fat’. Rédei 1986—1988:855 **kat3-*.

Buck 1949:11.42 wealth, riches; 11.51 rich; 12.55 large, big (great); 13.15 much, many; 19.32 king.

367. Proto-Nostratic root **gad-* (~ **gəd-*):(vb.) **gad-* ‘to cut, to split, to strike (with an instrument)’;(n.) **gad-a* ‘that which cuts: (pick)axe, saw; that which is cut, split: cut, split, piece, fragment, bit’

- A. Proto-Afrasian **gad-* ‘to cut, to split’: Proto-Semitic **gad-ad-* ‘to cut off’ > Akkadian *gadādu* ‘to chop’; Hebrew *gāḏaḏ* [ḡḏḏ] ‘to cut, to make incisions in oneself’; Aramaic *gəḏaḏ* ‘to cut’; Mandaic *gdd* ‘to cut off, to put an end to’; Arabic *ḡadda* ‘to cut, to cut off’; Geez / Ethiopic *gəddu* [ḡḏ] ‘piece of wood cut with an axe or a saw’; Tigre *gādda* (< **gad-ay-*) ‘to tear off’, *gədet* ‘a piece of meat (severed from the bone)’; Amharic *gəd* ‘name of a cut of meat’. D. Cohen 1970—:99—100; Murtonen 1989:127;

- Klein 1987:91; Leslau 1987:180. Proto-Semitic **gad-aʿ*- ‘to cut, to cut off’ > Hebrew *gāḏaʿ* [גָּדַע] ‘to cut down or off, to hew’; Aramaic *gāḏaʿ* ‘to cut off, to amputate’; Arabic *ḡadaʿa* ‘to cut off, to amputate’; Geez / Ethiopic *gʷadʿa* [ገድድ], *gʷadʿa* [ገድድ] ‘to strike, to smite, to thrust, to knock, to crush, to shake, to touch, to butt, to heave with sobs’; Tigre *gādʿa* ‘to push, to pound’; Tigrinya *gʷädʿe* ‘to crush, to damage’; Amharic *gʷädda* ‘to harm, to damage’; Argobba *gʷädda* ‘to harm, to damage’; Gurage *gʷäda* ‘to injure, to harm, to hurt’. D. Cohen 1970— :102; Murtonen 1989:182; Klein 1987:92; Leslau 1979:260 and 1987:180. Proto-Semitic **gad-am-* ‘to cut off’ > Akkadian *gadāmu* ‘to cut off (hair)’; Hebrew *gāḏam* [גָּדַם] ‘to cut off, to lop off, to amputate’; Aramaic *gāḏam* ‘to cut down’; Mandaic *gdm* ‘to cut’; Arabic *ḡadama* ‘to cut off’; Geez / Ethiopic *gadāmit* [ገዳሚት] ‘scissors’; Tigre *gāddom* ‘pickaxe’; Amharic *gāḡāmo* ‘axe’. D. Cohen 1970— :101; Klein 1987:92; Leslau 1987:182—183. Berber: Kabyle *ḡaddəḥ* ‘to cut down, to hack’. East Chadic **gad-* ‘to split’ > Tumak *gaad-* ‘to split’; Ndam *gəda* ‘to split’. Cushitic: Bilin *gad-* ‘to smite, to hit’; Beja / Beḡawye *gaddūm*, *gadūm* ‘axe’; Afar *gadumaa* ‘axe’; Somali *gaduumo* ‘axe’. Reinisch 1895:91. Orël—Stolbova 1995:196, no. 868, **gad-* ‘to cut, to split’, 197, no. 872, **gadum-* ‘cut; axe, hoe’.
- B. Dravidian: Tamil *kaṭi* (-v-, -nt-) ‘to cut away’, *kaṭi* (-pp-, -tt-) ‘to cut into pieces’, *kaṭikai* ‘piece cut off’; Malayalam *kaṭiyuka* ‘to clear bamboos from thorns’; Kannaḍa *kaḍi* ‘to cut, to chop, to fell, to cut off, to dig (as well, ditch)’, *kaḍi*, *kaḍita*, *kaḍa*, *kaḍata*, *kaḍuku* ‘cutting, a cut, portion cut off, chip, bit’, *kaḍiyuvike* ‘cutting’, *kaḍisu*, *kaḍiyisu* ‘to cause to cut’, *kaḍitale* ‘sword’; Tuḷu *kaḍiyuni* ‘to be cut in two’, *kaḍi* ‘small fragment, bit’, *kaḍpuni*, *kaḍupuni* ‘to cut, to fell’, *kaḍḍāṭa* ‘cutting, fighting’, *kaḍṭa*, *gaḍi* ‘a cut, incision’, *kaḍtale* ‘a long-edged sword’; Telugu *kaḍi* ‘a morsel, a mouthful’, *kaḍi-kaḇḍalu* ‘fragments, bits, pieces’; Kuṛux *xaṭṭnā* (*xaṭṭyas*) ‘to divide, to separate into several sets or parts, to portion out’. Burrow—Emeneau 1984:106, no. 1125.
- C. Proto-Indo-European **ghodh-* ‘to hit, to strike’: Avestan *gaḏō* ‘plague, murderer’, *gaḏa-* ‘club, stick’; Greek (Hesychius) κοθώ ‘harm, damage’; Czech *u-hodit-* ‘to strike’. Mann 1984—1987:327 **ghodh-* ‘to hit, to strike’; Beekes 2010.I:729—730.
- D. Proto-Chukchi-Kamchatkan **katya* ‘adze’: Chukchi *yatya-tko-* ‘to chop with adze’, *yatte* ‘adze’; Koryak *yatte* ‘adze’, *yacya-tku-* ‘to chop with adze’; Kerek *hacci* ‘adze’, *Xali-yatya-ttu-* ‘to chop with adze’; Alyutor *yatya-tku-* ‘to chop with adze’; Kamchadal / Itelmen *kasf* ‘axe’. Fortescue 2005:128.
- E. Proto-Eskimo **kaḍuy-* ‘to strike (with an instrument)’: Alutiiq Alaskan Yupik *kauy-* ‘to strike with an object’; Central Alaskan Yupik *kauy-* ‘to strike with an object’; Naukan Siberian Yupik *kaaw-* ‘to strike with a hammer’; Central Siberian Yupik *kaaw-* ‘to strike with a hammer’; Seward Peninsula Inuit *kauk-* ‘to strike with a hammer’; North Alaskan Inuit *kauk-*

‘hammer’; Western Canadian Inuit *kauk-* ‘hammer’; Eastern Canadian Inuit *kauk-* ‘to hit with an object’; Greenlandic Inuit *kaat-* ‘hammer’. Fortescue—Jacobson—Kaplan 1994:151. Proto-Eskimo **kaō(ō)uṃun* and **kaōuyutar* ‘hammer’: Alutiiq Alaskan Yupik *kau<y>utag* ‘club’; Central Alaskan Yupik *kauyun* ‘hammer’; Central Siberian Yupik *kaayusiq* ‘hammer’; Seward Peninsula Inuit *kažžuun*, *kažžuutag* ‘hammer’; North Alaskan Inuit *kautag* ‘hammer’; Western Canadian Inuit *kautag* ‘hammer’; Eastern Canadian Inuit *kautag* ‘hammer’; Greenlandic Inuit *kaatag* ‘hammer’. Fortescue—Jacobson—Kaplan 1994:151.

Buck 1949:9.21 strike (hit, beat); 9.22 cut; 9.26 break (vb. tr.); 9.27 split (vb. tr.); 12.23 separate (vb.).

368. Proto-Nostratic (n.) **gad-a* ‘kid, young goat’:

- A. Proto-Afrasian **gad-* ‘kid, young goat’: Proto-Semitic **gady-* ‘kid, young billy-goat’ > Akkadian *gadū* ‘male kid’; Ugaritic *gdy* ‘kid’; Hebrew *gəḏī* [גְּדִי] ‘kid’; Punic *gdʔ* ‘kid’; Aramaic *gadyā* ‘kid’; Arabic *ġady* (pl. *ġidāʔ*) ‘kid, young billy-goat’. D. Cohen 1970— :100—101; Murtonen 1989:127; Klein 1987:91. (?) Chadic: Hausa *gàdāa* ‘duiker’; Ngizim *gádùwà* ‘crested duiker’; Dghwede *gəḏəḡirè* ‘duiker’. Jungraithmayr—Ibriszimow 1994.II: 112—113.

Militarëv—Nikolaev (2021:348—349) reconstruct Proto-Afrasian **guday-* ‘a kind of larger bovid’ on the basis of the following evidence: Semitic **gaday-* ‘kid’ > Ugaritic *gdy* ‘kid’; Phoenician *gdʔ* ‘goat’; Hebrew *gəḏī* ‘kid (of goat or sheep)’; Ancient Aramaic *gdh* ‘goat’; Syriac *gady-ā*; Mandaic *gadi-a*; Arabic *ġady-* ‘kid’, *ġadāy-at-* ‘gazelle; petit de gazelle’ (‘young gazelle’) [*Gazella gazella*]. (?) North Berber **-gVnd-uz* ‘bull, calf’ > Rif *a-yenduz* ‘taureau’ (‘bull’); Snus *a-yenduz*; Shenwa *a-genduz*; Kabyle *a-genduz*; Sened *a-gendus* ‘calf’; etc. Chadic **ga/uday-*: West Chadic **ga/ud-* ‘a kind of larger bovid’ > Hausa *gàd-āa* ‘antelope, duiker’ [*Tragelaphus sp.*]; Kariya *gud-am*; Miya *gud-ən-zāku*; Pa’a *gud-an-cəka* ‘Western kob’ [*Kobus sp.*]; Ngizim *gád-ùwà* ‘duiker’ [*Tragelaphus sp.*]. Central Chadic **gVday-* > Zime-Batna *gódây* ‘buck’. Cushitic **gad-* and **gund-* ‘a kind of larger bovid’: East Cushitic **gad-am-*: Lowland East Cushitic **gad-am-* > Oromo *gad-am-sa* ‘greater kudu’ [*Tragelaphus strepsiceros*]; Dirayta *gad-an-sa*, *gad-am-sa* ‘antelope’. Highland East Cushitic **gud-* > Sidamo *god-a* ‘deer, gazelle’. Southern Cushitic **gwand-* > Iraqw *gwand-a*; Alagwa *gwand-o* ‘ram’; Burunge *gond-i* ‘old ram’. North Omotic **gayd-* (met.) > Zayse *gaaid-é* ‘cattle’, *gaid-é-endo* ‘buffalo’.

Comments: (1) Some of the forms compared by Militarëv—Nikolaev are too semantically divergent and should, consequently, be removed from this etymology. (2) The sound correspondences, especially the vowels, do not always match. (3) The cumulative evidence from the daughter languages points to *-a- rather than *-u- as the root vowel in the Afrasian proto-form.

- B. Proto-Dravidian *kaṭ-ac- ‘young male animal’: Tamil *kaṭavu*, *kaṭā*, *kaṭāy* ‘male of sheep or goat, he-buffalo’, *kiṭā* ‘buffalo, bull, ram’, *kiṭāy* ‘male of sheep’, *kaṭāri*, *kiṭāri* ‘heifer, young cow that has not calved’, *kaṭamai* ‘female of the goat’; Malayalam *kaṭā*, *kiṭā*, *kaṭāvu* ‘male of cattle, young and vigorous; child, young person’, *kaṭacci* ‘heifer, young cow, calf’, *kiṭāri* ‘a cow-calf, heifer; female buffalo’; Kannada *kaḍasu* ‘young cow or buffalo that has not yet calved’; Koḍagu *kaḍici* ‘young cow or buffalo that has not yet calved’; Tuḷu *gaḍasu* ‘young cow or buffalo that has not yet calved’; Gondi *kārā* ‘young buffalo’; Kuṛux *karā* ‘young male buffalo’. Burrow—Emeneau 1984:106, no. 1123; Krishnamurti 2003:12 *kaṭ-ac- ‘young male animal’, 16 *kaṭ-ac- ‘young male animal’, 123 *kaṭ-aca- ‘male of cattle, heifer’, and 160 *kaṭ-ac- ‘male of a domestic animal’.
- C. Proto-Chukchi-Kamchatkan *kətepa ‘mountain sheep’: Chukchi *kətepalyən* ‘mountain sheep’; Kerek *kəciipaŋa* ‘mountain sheep’; Koryak *kətep(a)* ‘mountain sheep’; Alyutor *ktip(a)* ‘mountain sheep’; Kamchadal / Itelmen *qtep* (Western, Sedanka *ktep*) ‘mountain sheep’. Fortescue 2005:153; Mudrak 1989b:100 *kətepa ‘mountain goat’.

Buck 1949:3.36 goat; 3.37 he-goat; 3.38 kid. Dolgopolsky 1998:48—49, no. 49, *gadi (or *gati ?) ‘kid, young goat’.

Note: Proto-Indo-European *gʰayt’o- (traditional reconstruction *ghaido- or *ǵhaido- [cf. Pokorny 1959:409]) ‘goat’ does not belong here! It is only attested in Italic and Germanic (cf. Lehmann 1986:140—141; Mallory—Adams 1997:229), and it gives every indication of being a borrowing from a non-Indo-European source (cf. De Vaan 2008:278; Diakonoff 1985:130 and 132; Kroonen 2013:163—164; Gamkrelidze—Ivanov 1995:I:769 and I:862), Dolgopolsky’s (2008, no. 603) objection notwithstanding.

369. Proto-Nostratic root *gal- (~ *gəl-):

(vb.) *gal- ‘to cut, break, tear, or pluck off; to separate’;

(n.) *gal-a ‘cut, break, tear, separation’

Derivative:

(vb.) *gal- ‘to dig, scoop, or hollow out’ (> ‘to plow’);

(n.) *gal-a ‘the act of digging, scooping, or hollowing out’

- A. Proto-Afrasian *g[a]l- ‘to cut, break, tear, or pluck off; to separate’: Proto-Semitic *gal-al- ‘to to cut, break, tear, or pluck off; to separate’ > Geez /

- Ethiopic *galla* [ገለ], *gallala* [ገለለ] ‘to separate, to pick out, to choose, to set aside, to move aside, to winnow’, *gəlāl* [ገለል] ‘matter picked out (gleanings), winnowed or cleared grain’; Tigrinya *gälälä* ‘to move away from a place, to make way’; Amharic *gäläll alä* ‘to make way, to depart’. D. Cohen 1970— :125—129; Leslau 1987:191. Proto-Semitic **gal-ay-* ‘to cut, break, tear, or pluck off; to separate’ > Geez / Ethiopic *galaya* [ገለየ] ‘to cut off, to cut away, to pluck off, to break off, to separate, to divide’; Amharic *gällälä* ‘to cut (wood)’; Harari *gäläla* ‘to cut the fingernails, to cut the edges, to remove impurities from the surface’. Leslau 1963:71 and 1987:192—193; D. Cohen 1970— :120—122. Proto-Semitic (reduplicated) **gal-gal-* ‘to cut, break, tear, or pluck off; to separate’ > Geez / Ethiopic *galgala* [ገለገለ] ‘to lay bear, to empty, to evacuate, to separate, to pillage, to destroy’; Tigre *gälgälä* ‘to tear off and split’; Tigrinya *g^wälg^wälä* ‘to take out’; Amharic *gäläggälä* ‘to uproot’. Leslau 1987:190; D. Cohen 1970— :118. Berber: Tuareg *agəlhim* ‘hoe’; Nefusa *agəlzim* ‘axe, hoe’; Ghadames *agəlzim*, *agərzim* ‘hatchet’; Tamazight *agəlzim* ‘pick, pickaxe’, *tigəlzimt* ‘pickaxe, hatchet, hoe’; Riff *agəlzim* ‘pick, pickaxe’; Kabyle *agəlzim* ‘pick, pickaxe’, *tagəlzimt* ‘hatchet’.
- B. Dravidian: Kuṛux *kal^agnā* (*kalgas/kalgyas*), *kal^aknā* (*kalkyas*) ‘to bite so as to disable, to open or unhusk with the teeth’; Malto *kalge* ‘to break off a part with the teeth’, *kalke* ‘to bite off’. Burrow—Emeneau 1984:123, no. 1315.
- C. Proto-Kartvelian **gal-/gl-* ‘to tear, to pick; to break, to burst’: Georgian *gal-/gl-* ‘to tear, to pick; to break, to burst’; Svan *gl-/gil-* ‘to tear, to break’, *na-gil* ‘piece, bit’. Klimov 1964:63 **gl-* and 1998:26 **gal-/gl-* ‘to tear, to pick; to break, to burst’; Fähnrich—Sardshweladse 1995:75—76 **gal-*; Fähnrich 2007:94—95 **gal-*. Proto-Kartvelian **gl-ežg-/gl-ižg-/gl-žg-* ‘to tear, to break’: Georgian *glež-/gliž-/g(l)ž-* ‘to tear, to break’; Mingrelian *gurž-on-* ‘to tear, to break’. Fähnrich 2007:108—109 **glaž-/glež-/gliž-/glž-*; Fähnrich—Sardshweladse 1995:86—87 **glež-/gliž-/glž-*; Klimov 1964:63 **gl-* and 1998:30—31 **gl-ež-/gl-iž-/gl-ž-* ‘to tear, to break’.
- D. Proto-Indo-European **ghel-/ghol-/ghl-* ‘to cut off’: Gothic *gilpa* ‘sickle’; Old Icelandic *gelda* ‘to castrate’, *geldr* ‘yielding no milk, dry’, *geldingr* ‘wether, eunuch’; Middle English *gelden* ‘to castrate, to geld’, *geldere* ‘gelder’, *geldinge* ‘gelding’ (Norse loans); Welsh *gylm* ‘knife, dagger’. Pokorny 1959:434 **ghel-* ‘to cut’ (?); Walde 1927—1932.I:629 **ghel-*; Watkins 1985:21 **ghel-* and 2000:29 **ghel-* ‘to cut’; Lehmann 1986:156 **ghel-* ‘to cut’; Orël 2003:124 Proto-Germanic **ǵaldinǵaz*, 124 **ǵaldiz* ~ **ǵaldjāz*, 124 **ǵaldjānan*; Kroonen 2013:164 Proto-Germanic **gald(j)a-* ‘barren, not (yet) pregnant’ and 165—166 **galtan-* ‘(castrated) boar’; Feist 1939:215 **ghel-*; De Vries 1977:162—163 **ghel-*; Onions 1966:392; Klein 1971:306.
- E. Proto-Chukchi-Kamchatkan **kəlvə-* ‘to make a notch or mark’: Chukchi *kəlvə-* ‘to make a notch or mark’, *kəlvə tajkəjo* ‘carving’, *kəlvəyərən*,

kəlwəkəl ‘notch, line, mark’; Koryak *kəlvəyəjɲən* ‘notch, mark’, *kəlyəkəl* ‘notch or step, knot on a counting string’; Alyutor *kəlv-* ‘notch, mark’; Kamchadal / Itelmen *kəlvə-nōm* ‘mark (on reindeer)’ (this may be a loan from Chukotian). Fortescue 2005:146.

Buck 1949:4.58 bite (vb.); 9.26 break (vb. tr.); 9.27 split (vb. tr.); 9.28 tear (vb. tr.); 12.23 separate (vb.). Bomhard—Kerns 1994:392—393, no. 229.

370. Proto-Nostratic root *gal- (~ *gəl-):

- (vb.) *gal- ‘to dig, scoop, or hollow out’ (> ‘to plow’);
- (n.) *gal-a ‘the act of digging, scooping, or hollowing out’
- Derivative of:
- (vb.) *gal- ‘to cut, break, tear, or pluck off; to separate’;
- (n.) *gal-a ‘cut, break, tear, separation’

- A. Afrasian: Proto-Semitic (reduplicated) *gal-gal- ‘to plow repeatedly’ > Gurage *gəläggälä* ‘to plow for the second time’; Amharic *gäläggälä* ‘to repeat, to plow for the second and third time’; Harari *giläggälä* ‘to repeat (referring to plowing)’. D. Cohen 1970— :118; Leslau 1963:71 and 1979:273.
- B. Dravidian: Tamil *kalappai* ‘plow, plowshare’; Malayalam *kalappa* ‘a plow and what belongs to it’; Telugu *kalapa* ‘materials for a plow, timber for buildings’; Kannada *kalapu* ‘materials for a house, for a plow’. Burrow—Emeneau 1984:122, no. 1304. Malayalam *kalluka* ‘to dig out, to excavate’; Tamil *kallu* (*kalli-*) ‘to dig out (as a hole), to hollow (as a rat), to excavate, to scoop out (as a nut), to erode’, *kellu* (*kelli-*) ‘to dig’; Kota *kelv-* (*kelt-*) ‘to dig with fingers or paws’. Burrow—Emeneau 1984:123, no. 1319.
- C. Proto-Indo-European *ghel-/ *ghol-/ *ghl̥- ‘(vb.) to plow; (n.) a plow’: Sanskrit *halá-h* ‘a plow’; Armenian *jlem* ‘to plow’; Lithuanian *žiuolis* ‘sleeper, tie’. Pokorny 1959:434 *ghel- ‘to cut’ (?); Walde 1927—1932.I:629 *ghel-; Watkins 1985:21 *ghel- and 2000:29 *ghel- ‘to cut’; Smoczyński 2007.1:792.

Buck 1949:8.21 plow; 8.22 dig. Bomhard—Kerns 1994:393—394, no. 230.

371. Proto-Nostratic (n.) *gal-a ‘pot, vessel’:

- A. Proto-Afrasian *gal- ‘pot, vessel’: Egyptian *gn-t* [*gl-] ‘vessel, container (for wine)’, *gn̄gn-t* [*gl-gl-] ‘vessel, container (for milk)’. Erman—Grapow 1926—1963.5:173 and 5:177; Hannig 1995:901 and 902. West Chadic *gal- ‘calabash’ > Warji *galiya* ‘calabash’; Kariya *gali* ‘calabash’; Geji *gale* ‘calabash’; Burma *kal* ‘calabash’; Buli *gal* ‘calabash’. Central Chadic *gal- ‘pot’ > Banana *gala* ‘pot’. Orël—Stolbova 1995:199, no. 878, *gal- ‘vessel’.

- B. Dravidian: Tamil *kalam* ‘vessel, plate, utensil, earthenware, ship’; Malayalam *kalam* ‘pot, vessel, ship’; Kota *kalm* (obl. *kalt-*) ‘clay pot in the making’; Kannaḍa *kala* ‘pot, vessel’; Koḍagu *kala* ‘big pot’; Tuḷu *kara* ‘an earthen vessel’; Telugu *kalamu* ‘ship’; (?) Brahui *kaland* ‘broken earthen pot, any old pot’. Burrow—Emeneau 1984:122, no. 1305.

Sumerian *gal* ‘cup, beaker, goblet; a large pitcher or jug’.

Buck 1949:5.26 pot.

372. Proto-Nostratic root **gal-* (~ **gəl-*):

(vb.) **gal-* ‘to be or become visible, clear, obvious, evident; to regard, to look at, to peer at’;

(n.) **gal-a* ‘visibility, clarity, understanding’; (adj.) ‘clear, plain, evident’

- A. Proto-Afrasian **gal-* ‘to be or become visible, clear, obvious, evident; to regard, to look at, to peer at’: Proto-Semitic **gal-ay-* ‘to be or become shining, bright, clear, clean; to make shining, bright, clear, clean’ > Arabic *ġalā* ‘to clean, to polish; to make clear, to clear up, to clarify, to reveal, to disclose, to unveil; to shine, to be brilliant; to distinguish (oneself); to regard, to look at’, *ġalīy* ‘clear, plain, evident’, *ġalayān* ‘vision, revelation’; Hebrew *gālāh* [גָּלָה] ‘to uncover, to reveal, to disclose’; Phoenician *gly* ‘to uncover’; Aramaic *gālā* ‘to reveal’; Harsūsi *gelō* ‘to clean (a wound)’; Geez / Ethiopic *galaya* [ገለየ] ‘to explain, to interpret, to reveal, to disclose’, *gəlyat* [ግልየት] ‘explanation, interpretation’. D. Cohen 1970— :120; Murtonen 1989:134—135; Leslau 1987:192—193; Klein 1987:99; Zammit 2002:125. Proto-Semitic **gal-ah-* ‘to be visible, clear, obvious, evident’ > Tigrinya *gālhe* ‘to reveal’, *g^wəlhi*, *g^wəl* ‘visible’, *gūläh* ‘visible’; Gurage *gūläh* ‘clear, evident’; Amharic *gūläh* ‘evident, visible, obvious, plain (clear)’, *g^wälla* ‘to be clear, to stand out’, *ag^wälla* ‘to make clear, to magnify, to accentuate, to amplify, to emphasize’. D. Cohen 1970— :120; Leslau 1979:273. Egyptian (Demotic) *glp*, *grp* ‘to reveal, to uncover’; Coptic *ġōlp* [ጳጳጳጳ] ‘to uncover, to reveal’. Vycichl 1983:339; Černý 1976:328. Proto-Southern Cushitic **gal-* or **gaal-* ‘to look at or look over’ > K’wadza *gal-* ‘to see’; Ma’a *-galí* ‘to try’. Ehret 1980:235. Chadic: Zaar *gali* ‘to see’. Ehret 1995:183, no. 276, **gal-* ‘to show’.
- B. (?) Dravidian: Kannaḍa *gālaka* ‘a good, proper man’; Telugu *gālākūḍu* ‘a clever, ingenious man’. Burrow—Emeneau 1984:139, no. 1496. For the semantics, cf. Old English *glēaw* ‘quick-sighted, sagacious, wise, prudent, clever, skillful, skilled in’, Old High German *glau* ‘intelligent’, and Welsh *glew* ‘clever’, cited below.
- C. Proto-Kartvelian **gal-* ‘to know, to be acquainted with, to understand’: Georgian *gal-* in *a-gan-gal-a-ob-a* name of a children’s game; Svan (reduplicated) *gan-gal-* (< **gal-gal-*) ‘to know, to be acquainted with, to

understand'. Fährnich—Sardshweladse 1995:76 *gal-; Fährnich 2007:95 *gal-.

- D. Proto-Indo-European *g^hel-/ *g^hol-/ *g^hl̥-: *g^hl-en-d^h- 'to be or become visible, clear, obvious, evident; to regard, to look at, to peer at': Old Irish *glinn* 'pure, clear'; Middle High German *glins* 'glint, shine'; Old Church Slavonic *po-glědъ* 'aspect', *glězdō*, *glěděti* 'to see, to look'; Russian *gljadět'* [глядеть] 'to look (at), to peer (at), to gaze (upon)'; Serbo-Croatian *glědati* 'to look, to see'; Old Polish *ględać* 'to look at'; Bulgarian *glédam* 'to look at'; Latvian *gleņst* 'to (barely) perceive'. Rix 1998a:178—179 *g^hlend^h- 'to look or gaze at; to shine'; Mann 1984—1987:323 *g^hlendō, -iō 'to be clear, to be open, to shine', 323 *g^hlendos 'clear, open, bright; clarity, gleam'; Kroonen 2013:181 Proto-Germanic *g^hlantan- 'to shine, to look'; Derksen 2008:264 *g^hlend-. Proto-Indo-European *g^hl-ewH-/ *g^hl-owH-/ *g^hl-uH- 'clear, evident' > Gothic *glaggwaba* 'diligently'; Old Icelandic *glöggr* 'clear, distinct'; Old Swedish *glugga* 'to look, to lurk'; Old English *glēaw* 'quick-sighted, sagacious, wise, prudent, clever, skillful, skilled in'; Old High German *glau* 'intelligent' (New High German [dial.] *glau* 'bright, lively, quick'); Welsh *glew* 'clever'; Cornish *glew* 'bright, sharp'. Mann 1984—1987:324 *g^hleu-, *g^hleu- 'bright, keen, clever'; Orël 2003:136 Proto-Germanic *glawwaz; Kroonen 2013:180 Proto-Germanic *glawwa- 'sharp-sighted'; Feist 1939:216 *ghlou-; Lehmann 1951:43, §4.42b, and 1986:157; De Vries 1977:177 *ghleu-. Note: In Indo-European, some of the reflexes of this stem fell together with those of Proto-Nostratic *gil- (~ *gel-) 'to shine, to glisten'.
- E. Proto-Altaic *gālV 'clear (of sky, weather)': Proto-Tungus *galu- 'clear (of sky, weather)' > Manchu *galga* 'clear (of weather)'; Ulch *galu-galu bi* 'clear (of sky, weather)'; Oroch *gāl-* 'clear (of sky, weather)'; Nanay / Gold *galga* 'clear (of sky, weather)'. Proto-Turkic *K(i)ali- '(vb.) to clear up (of sky); (n.) sky' > Old Turkic (Old Uighur) *qaliq* 'sky'; Karakhanide Turkic (*kök*) *qariq* 'sky'; (?) Chuvash *yāl-* 'to shine, to glitter'; Yakut *kiley-χaley* 'shining', *χalīn-* 'to clear up (of sky)', *χallān* 'clear sky, good weather'; Dolgan *kallān* 'sky'. Starostin—Dybo—Mudrak 2003:528 *gālV 'clear (of sky, weather)'.

Buck 1949:15.51 see; 15.52 look, look at; 17.17 know; 17.34 clear, evident. [Bomhard—Kerns 1994:390—392, no. 228.]

373. Proto-Nostratic *gal- (~ *gəl-):

- (vb.) *gal- 'to cry out, to shout, to clamor; to be noisy, boisterous';
(n.) *gal-a 'clamor, uproar, tumult, disturbance, turmoil, noise'

- A. Afrasian: Proto-Semitic *gal-ab- 'to cry out, to shout, to clamor; to be noisy, boisterous' > Arabic *ḡalaba* 'to shout, to clamor; to be noisy,

- boisterous', *ǵalab* 'clamor, uproar, tumult, turmoil', *ǵalbada-t* 'neigh', *ǵalbaḳa-t* 'clamor, noise, tumult'. D. Cohen 1970— :116—117 and 117.
- B. Dravidian: Tamil *kalipali*, *kalipili* 'uproar, disturbance, quarrel, wrangle'; Tuḷu *galibili* 'disorder, tumult, anarchy', *galabu* 'tumult, confusion, noise'; Kannaḍa *galabali*, *galabili*, *galibili* 'disorder, confusion', *galabe* 'hubbub, clamor'; Telugu *galibili*, *galaba* 'confusion, noise, disturbance'. Burrow—Emeneau 1984:123, no. 1310.
- C. Proto-Indo-European **ghel-/ *ghol-/ *ghl-* 'to cry out, to shout, to clamor; to be noisy, boisterous': Old Icelandic *gjalla* 'to scream, to shriek', *gala* 'to crow (cock); to cry, to scream; to sing, to chant', *gal* 'screaming, howling'; Faroese *gella* 'to scream, to shriek'; Swedish *gälla* 'to scream, to shriek'; Danish *galde* 'to scream, to shriek'; Norwegian (dial.) *gjella* 'to scream, to shriek'; Old English *giellan* 'to scream, to cry out, to shout, to sound', *galan* 'to sing; to scream (of birds)'; Old High German *gellan* 'to make a shrill sound' (New High German *gellen*), *galan* 'to bewitch', *galm* 'outcry'; Middle High German *gal* 'sound, note'. Pokorny 1959:428 **ghel-* 'to call'; Walde 1927—1932.I:538—539 **gal-* (also **ghel-*), I:628 **ghel-*; Mann 1984—1987:318 **ghelsos* 'voice, sound, noise', 330 **gholjō* 'to weep, to cry', 330 **gholos* 'cry, noise'; Kroonen 2013:164 Proto-Germanic **galan-* 'to shout, to sing, to chant' and 174 **gellan-* 'to sound, to yell'; Orël 2003:123—124 Proto-Germanic **ǵalanan*, 131 **ǵellanan*; De Vries 1977:153 and 169—170; Falk—Torp 1903—1906.I:22; Torp 1919:157; Onions 1966:1019; Klein 1971:837 **ghel-* 'to cry out, to call, to shout, to sing'; Kluge—Mitzka 1967:245 **ghel-*; Kluge—Seebold 1989:2555.

Buck 1949:18.13 shout, cry out.

374. Proto-Nostratic root **gal-* (~ **gəl-*):
- (vb.) **gal-* 'to ache, to be in pain, to be ill, to suffer';
- (n.) **gal-a* 'ache, pain, disease, illness'
- A. Afrasian: Proto-Semitic **gal-aw-* 'to ache, to be in pain, to be ill, to have a fever' > Ḥarsūsi *gēlew* 'to have a fever', *gōlew* 'fever'; Soqotri *góle?* 'fever'; Mehri *gēlāw* 'to be ill, to have a fever, to have a short illness', *gōlāw* 'fever'; Šḥeri / Jibbāli *gīzi/ygól* 'to be ill, to have a fever', *gólē?* 'fever', *gélē?* 'ill'. D. Cohen 1970— :120—122. Tigre *ḡele* 'weak, miserable', *ḡolāli gāʔa* 'to suffer pain (head, body), to have no power'; Amharic *ag^wlalla* 'to mistreat, to inflict hardship on'. D. Cohen 1970— : 125 and 126.
- B. Proto-Kartvelian **glo(w)-* 'to grieve': Georgian *glov-* 'to grieve, to deplore', *glova-* 'grief'; Mingrelian *rg(v)-* 'to grieve, to deplore'. Klimov 1964:63 **glo-* and 1998:31 **glo(w)-* 'to grieve, to deplore'; Fähnrich—Sardshweladse 1995:86 **gl-*; Fähnrich 2007:107—108 **gl-*; Schmidt 1962: 101 **gel-*.

- C. Proto-Indo-European (**ghel-/*)**ghol-* ‘(vb.) to ache, to be in pain, to be ill, to suffer; (n.) ache, pain, disease, illness’: Hittite (acc. sg.) *kal-la-ra-an* ‘inauspicious, unpropitious, nefarious, baleful, enormous, monstrous’; Old Irish *galar* ‘disease, illness’; Welsh *galar* ‘grief’; Lithuanian *žalà* ‘hurt, harm, injury’. Pokorny 1959:411 **ghal-*, **ghal-ar-* ‘physical defect, infirmity, affliction, ailment’; Walde 1927—1932.I:540 **ghal-*, **ghal-ar-*; Fraenkel 1962—1965.II:1286; Smoczyński 2007.1:771 **ghal-*; Puhvel 1984— .4:20—21; Kloekhorst 2008b:429 **g^(h)olH-ro-* or **g^(h)olH-ro-* (?); Derksen 2015:511 **gholh₃-*.

Buck 1949:16.31 pain, suffering; 16.32 grief, sorrow. Dolgopolsky 2008, no. 612, **giL[U]* ‘illness, pain, distress’, and no. 615b, **go/|lV* ‘to weep’.

375. Proto-Nostratic (n.) **gal-a* ‘blemish, fault, scar, sore on the skin’:

- A. Dravidian: Malayalam *kala* ‘mark as of smallpox, scar, mole’; Kannaḍa *kale*, *kali* ‘scar of an old wound, mark of smallpox; stain of mud, oil, etc.’; Koḍagu *kale* ‘scar, white spot on nail’; Tuḷu *kalè* ‘scar, mark, blemish, stain’. Burrow—Emeneau 1984:123, no. 1313.
- B. Proto-Indo-European **ghal-* ‘blemish, fault, sore on the skin’: Old Icelandic *galli* ‘defect, fault, flaw’; Old Swedish *galli* ‘defect, fault, flaw’; Old English *gealla* ‘a sore on the skin’; Middle Low German *galle* ‘a sore place on the skin’; Middle High German *galle* ‘flaw, defect; boil, blister; swelling, protuberance (on the skin of horses)’ (New High German *Galle*). Pokorny 1959:411 **ghal-*, **ghal-ar-* ‘physical defect, infirmity, affliction, ailment’; Walde 1927—1932.I:540 **ghal-*; Orël 2003:124 Proto-Germanic **gallōn*; Kroonen 2013:165 Proto-Germanic **galra-* ‘swelling (?)’; De Vries 1977:154; Onions 1966:386; Klein 1971:302; Kluge—Mitzka 1967:229; Kluge—Seebold 1989:242.

Buck 1949:16.76 fault, guilt.

376. Proto-Nostratic root **gal-* (~ **gəl-*):

- (vb.) **gal-* ‘to be strong, powerful; to be able’;
(n.) **gal-a* ‘strength, power, ability’

- A. Afrasian: Semitic: Arabic *ḡulabiz* ‘hard, brave’; Amharic *gulbät* ‘knee, strength, might, vigor, energy, effort’; Tigre *ḡalb* ‘stronghold, safety; fidelity, firmness, given word’. D. Cohen 1970— :117.
- B. Dravidian: Tamil *kali* ‘strength, force’, *kaliyan* ‘warrior’; Kannaḍa *kali* ‘man noted for valor and prowess; warrior, hero’, *kalitana* ‘valor, heroism’; Telugu (in inscriptions) *kalitanamu* ‘bravery’. Burrow—Emeneau 1984:122, no. 1308.

- C. Proto-Indo-European **g^hal-* ‘(vb.) to be strong, powerful; to be able; (n.) strength, power, ability’: Old Irish *gal* ‘fighting, valor’; Middle Welsh *gallu* ‘to be able’; Middle Breton *gal* ‘might, ability’; Cornish *gallos* ‘ability, power’; Lithuanian *galiù*, *galėti* ‘to be able (to)’, *galià* ‘might, power’. Pokorny 1959:351 **gal-* or **ghal-* ‘to be able to’; Walde 1927—1932.I:539—540 **gal-* or **ghal-*; Mann 1984—1987:311—312 **ghal-* ‘(adj.) hard, strong, able; (n.) hardness, strength, ability’, 312 **ghalmos* ‘fort, keep, lock-up’; Fraenkel 1962—1965.I:131; Smoczyński 2007.1:154.

Buck 1949:4.81 strong, mighty, powerful; 9.95 can, may (3rd sg.). Dolgopolsky 2008, no. 868, **ka[h]lV* ‘(n.) power, force; (vb.) to be able’.

377. Proto-Nostratic root **gam-* (~ **gəm-*):

(vb.) *gam-* ‘to bend, to be bent’;

(n.) *gam-a* ‘a bent or curved object: hook; wrist, ankle; etc.’

- A. Proto-Afrasian **gam-* ‘to bend, to be bent’: Proto-Semitic **gam-atl̥-* ‘to bend, to be bent’ > Geez / Ethiopic *gamaša*, *gammaša* [ገመሶ], *gamaḍa* [ገመፅ] ‘to incline, to bend, to be bent, to bow down; to pervert (justice), to be partial (in justice)’; Tigre *gəmčuy* ‘crooked, perverted’; Tigrinya *gämäšä* ‘to tell a lie’; Amharic *gämmäṭä* ‘to speak ill (of an absent person)’. Leslau 1987:195—196; D. Cohen 1970— :143—144. Akkadian *gamlu* ‘bent or curved stick (as projectile), throwing-stick’, *gamliš* (adv.) ‘like a bent (throwing-)stick, like a *gamlu*’. Perhaps also Ugaritic *gml*, if the meaning is ‘sickle’. D. Cohen 1970— :139. Egyptian *gmḥt* ‘a braid or plait of hair, a lock of hair, a tress; temple(s) (of head)’. Hannig 1995:900; Faulkner 1962:289; Erman—Grapow 1926—1963.5:171. Berber: Tuareg *iğəm* ‘tent post to which the door is attached (for example, cord attached to the part of the canopy holding the door in place)’, *tagma* ‘nipple’; Siwa *gum* ‘pivot of mill’; Ghadames *uğəm* ‘pivot of the millstone of a home mill’; Wargla *asgum* ‘axle, pivot, spindle’; Tamazight *agum* ‘breechblock, pivot of mill’; Kabyle *agum* ‘pivot of mill’.
- B. Proto-Indo-European **g^hem-/g^hom-/g^hṃ-* ‘to bend down, to incline’: Armenian *gmem* ‘to lie down’. Mann 1984—1987:348 **ghumbhō* ‘to bend, to incline, to lie down’. Note: The Lithuanian form cited by Mann is phonologically ambiguous. It has been placed under Proto-Nostratic **k’um-* (~ **k’om-*) ‘to bend, to curve; to bend the head or body, to bow or stoop down’ below. The following probably belong here as well: Lithuanian *gėmbė* ‘wooden hook’; Armenian *gam* ‘hook, catch, bracket, nail’. Mann 1984—1987:330 **ghombh-* (?) ‘claw, hook; harpy, hawk, vulture’. Note: The Old Icelandic forms cited by Mann are loanwords from Middle High German, ultimately from Romance (cf. De Vries 1977:155).
- C. Proto-Eskimo **qaməŋar* ‘ankle bone’: Alutiiq Alaskan Yupik (Koniag) *qamaŋaq* ‘ankle bone’; Central Alaskan Yupik *qamaŋaq* ‘ankle bone’;

Naukan Siberian Yupik *qamanuaq* ‘pelvis’; North Alaskan Inuit *qamṇaq* ‘ankle’; Greenlandic Inuit (North Greenlandic) *qamṇak* ‘ankle or wrist bone’. Fortescue—Jacobson—Kaplan 1994:282.

Sumerian *gam* ‘to bend, to be bent’.

Buck 1949:9.14 bend (vb. tr.); 12.75 hook. Different etymology in Dolgopolsky 2008, no. 634, *g[u]m[V]çV ‘to incline, to bow, to bend’.

378. Proto-Nostratic root *gam- (~ *gəm-):

(vb.) *gam- ‘to fill (up)’;

(n.) *gam-a ‘plenty, surplus, abundance’

A. Proto-Afrasian *gam- ‘(vb.) to fill (up); (adj.) full, abundant, plentiful, much’: Proto-Semitic *gam-am- ‘(vb.) to fill (up); (adj.) full, abundant, plentiful, much’ > Arabic *ḡamma* ‘to gather; to collect (one’s thoughts); to grow luxuriantly’, *ḡamm* ‘(adj.) abundant, plentiful; much, a great deal of; many, numerous; manifold, multiple; (n.) crowd, group of people’, *maḡamm* ‘place where something gathers or flows together’; Maghrebi *ḡamm* ‘to be near, to be abundant, to be full’, *ḡammam* ‘to fill to the brim’; Šheri / Jibbāli *gimm* ‘(water) to gather again after being depleted’; Hebrew *gam* [גַּם] ‘also, moreover’; (?) Punic *gm* ‘majesty’. Klein 1987:102; D. Cohen 1970— :141—142; Tombaek 1978:66; Zammit 2002:126. Berber: Kabyle *əgməm* ‘to amass, to accumulate’, *ggəmgəm* ‘to be full to the brim; to be swarming, teeming, or bustling with people; to froth, to seethe, to bubble up’ (these may be Arabic loans). West Chadic *gamu- ‘to fill, to be full’ > Sura *gam* ‘to fill, to be full’; Tal *gām* ‘to fill, to be full’; Angas *gam* ‘to fill, to be full’; Montol *gum* ‘to fill, to be full’; Ankwe *gam* ‘to fill, to be full’; Bolewa *gom* ‘to fill, to be full’; Pero *kem* ‘to fill, to be full’; Ngamo *ḡgama* ‘to fill, to be full’. Jungraithmayr—Ibriszimow 1994.II: 156—157. Orël—Stolbova 1995:201, no. 888, *gam- ‘to be full’.

B. Dravidian: Kui *gāmpa* (*gāmbi-*) ‘(vb.) to exceed, to increase, to surpass, to be much or many; (n.) increase, excess’, *gāme* ‘much, many, excessive, very’, *gāppa* (*gāpt-*) ‘to cause to increase, to make more of, to make larger’, *gāpsi* ‘much, more, excessively’, *gāminanji* ‘eldest (son)’; Kuwi *gaph’nai* ‘to increase’, *wende gāph’nai* ‘to multiply’, *gaphihi hīnai* ‘to overpay’. Burrow—Emeneau 1984:135, no. 1457.

Buck 1949:13.15 much; many; 13.19 multitude, crowd; 13.21 full. Dolgopolsky 2008, no. 629, *g[A]mV (and *g[A]mçV ?) ‘altogether, full’ and no. 630, *g[e]mV ‘strong, firm’.

379. Proto-Nostratic (n.) **gaŋ-a* (with different extensions in the various daughter languages: **gaŋ-sʷ-* and/or **gaŋ-s-*, **gaŋ-tʷ-*, etc. and sporadic loss of *ŋ*) ‘a waterfowl, an aquatic bird: goose, duck, etc.’:
- A. (?) Afrasian: Egyptian (**gaŋ-sʷ-* > **gasʷ-* >) *gš* ‘a migratory bird’. Hannig 1995:908; Erman—Grapow 1926—1963.5:208.
 - B. Dravidian: Tamil (reduplicated) *kaṇkaṇam* ‘a waterfowl’; Telugu *kaṇkaṇamu* ‘a large bustard with a red head’. Burrow—Emeneau 1984: 102, no. 1083.
 - C. Proto-Indo-European **gʰans-* ‘goose’: Sanskrit *hamsá-h* ‘goose, gander, swan’; Greek *χῆν* (Doric *χῆν*) (< **χανσ-*) ‘goose’; Latin *ānser* (< **hānser*) ‘goose’; Old Irish *géis* (< **gansī*) ‘swan’; Old Icelandic *gás* ‘goose’; Swedish *gås* ‘goose’; Danish *gaas* ‘goose’; Old English *gōs* ‘goose’; Old Frisian *gōs* ‘goose’; Middle Low German *gōs* ‘goose’; Dutch *gans* ‘goose’; Old High German *gans* ‘goose’ (New High German *Gans*); Lithuanian *žqsis* ‘goose’; Latvian *zūoss* ‘goose’; Russian *gus’* [гусь] ‘goose’; Polish *gęś* ‘goose’; Old Czech *hus* ‘goose’. Pokorny 1959:412 **ġhan-s-* ‘goose’; Walde 1927—1932.I:536 **ġhans-*; Mann 1984—1987:411 **ġhansis* ‘goose’, 314 **ghansis* ‘goose’; Watkins 1985:21 **ghans-* and 2000:28 **ghans-* ‘goose’; Gamkrelidze—Ivanov 1984.II:542 **ġ[h]ans-* and 1995.I:460 **ġhans-* ‘swan, goose’; Mallory—Adams 1997:236 **ġhan-s* ‘goose’; Boisacq 1950:1058; Chantraine 1968—1980.II:1256—1257 **ġhāns-*; Frisk 1970—1973.II:1094—1095 **ġhans-*; Hofmann 1966:417 **ġhans-*; Beekes 2010.II:1630 **ġhh₂en-s-*; Ernout—Meillet 1979:36 **ghans-*; Walde—Hofmann 1965—1972.I:52 **ġhans-*; De Vaan 2008:44; Kroonen 2013:168 Proto-Germanic **gans-* ‘goose’; Orël 2003:126 Proto-Germanic **ǵansz*; De Vries 1977:157; Falk—Torp 1903—1906.I:210—211; Onions 1966:406 **ghans-*; Klein 1971:318; Kluge—Mitzka 1967:231; Kluge—Seebold 1989:243—244 **ghans-*; Fraenkel 1962—1965.II:1292—1293; Smoczyński 2007.1:774 **ġhans-*; Derksen 2008:184 and 2015:514 **ġhh₂ens-*.
 - D. Proto-Uralic (**gaŋ-tʷ-* >) **katʷz* ~ (?) **kanʷtʷz* ‘wild duck’: Votyak / Udmurt *kwaši* ‘drake’; Ostyak / Xanty (Vah) *kos* ‘a kind of duck with red legs and a pointed beak’, (Upper Demyanka) *χos* ‘a kind of large wild duck with a pointed beak’, (Kazym) *χos* ‘a large aquatic bird’; Selkup Samoyed *kueče* ‘wild gray duck’. Rédei 1986—1988:111 **kačz* ~ (?) **kañčz*; Décsy 1990:100 **katja* ‘wild duck’.
 - E. Proto-Altaic (**gaŋ-sʷ-* > **gasʷ-* >) **gaso* (~ -i) ‘aquatic bird’: Proto-Tungus **gasa* ‘aquatic bird’ > Manchu *gasxa* ‘large bird’; Spoken Manchu (Sibo) *gasəhə* ‘large bird’; Negidal *gasa* ‘swan’; Evenki *gasa* ‘crane’; Ulch *gasa* ‘duck’; Oroch *gasa* ‘duck’, *gasawaqqu* ‘kite’; Nanay / Gold *gasa* ‘duck’; Oroch *gasa* ‘duck’; Udihe *gahä* ‘bird, duck’. Proto-Mongolian **geske* ‘fish-eagle’ > Written Mongolian *geske* ‘fish-eagle’; Kalmyk *geskə*

‘fish-eagle’. Starostin—Dybo—Mudrak 2003:532 **gaso* (~ -i) ‘crane, aquatic bird’.

- F. Chukchi-Kamchatkan: Proto-Chukotian **kæŋu* ‘a kind of small seagull’ > Chukchi *kaŋolʸən* (pl. *keŋut*) ‘a kind of small seagull’; Koryak *kaŋullʷaq* ‘a kind of small seagull’; Alyutor *kaŋulya* ‘a kind of seabird’. Note also Kamchadal / Itelmen (Western) *kennec* ‘seabird, merganser’. Fortescue 2005:133.
- G. Proto-Eskimo **kaŋur* ‘snow goose’: Alutiiq Alaskan Yupik (Alaskan Peninsula) *kaŋuq* ‘snow goose’, (Prince William Sound) *kamuk* ‘brant’; Central Alaskan Yupik *kaŋuq* ‘snow goose’; Central Siberian Yupik *kaŋu* ‘snow goose’; Seward Peninsula Inuit *kaŋuq* ‘snow goose’; North Alaskan Inuit *kaŋuq* ‘snow goose’; Western Canadian Inuit *kaŋuq* ‘snow goose’; Eastern Canadian Inuit *kaŋuq* ‘snow goose’; Greenlandic Inuit *kaŋuq* ‘snow goose’. Fortescue—Jacobson—Kaplan 1994:158.

Buck 1949:3.56 goose; 3.57 duck. Greenberg 2002:83, no. 182.

380. Proto-Nostratic root **gaŋ-* (~ **gəŋ-*):

(vb.) **gaŋ-* ‘to bend: to bend forward; to bend back; to bend to the side’;

(n.) **gaŋ-a* ‘side, corner, flank, edge’

- A. Proto-Afrasian **gaŋ-* ‘(vb.) to bend; (n.) side, edge’: Proto-Semitic **gan-ah-* ‘to bend’, **gan-h-*, **gin-h-* ‘side, flank; wing’ > Arabic *ġinḥ* ‘side, edge; shore, bank’, *ġanāḥ* ‘wing (of a bird, of an airplane, of a building, of an army); side, edge, flank; shoulder, arm, hand’, *ġāniḥ* ‘side, flank, wing’, *ġanaḥa* ‘to incline, to be inclined; to lean (to or toward); to turn, to go over, to join, to associate oneself (with); to diverge, to depart, to turn away, to break (with)’; Šheri / Jibbāli *ġénaḥ* ‘wing’; Soqotri *ganḥ* ‘side’; Mehri *agōnəḥ* ‘to fly’. D. Cohen 1970— :157; Zammit 2002:127. Proto-Semitic **gan-ab-* ‘to turn away from, to turn aside’, **gan-b-* ‘side’ > Arabic *ġanaba* ‘to keep away, to avert, to ward off (from someone or something), to keep someone out of the way, to spare; to be or walk by someone’s side; to run alongside of, to run parallel to, to skirt, to flank; to avoid (something)’, *ġanb* (prep.) ‘beside, next to, near, at’, *ġanba* ‘side, region, area’, *ġanbī* (adj.) ‘lateral, side’, *ġānib* ‘side; lateral portion; sidepiece; flank; wing; face (geometry); part, portion, partial amount; partial view, section (of a scene, picture, or panorama); quantity, amount; a certain number; a few, some’, *ġannābīya* ‘curb, embankment, levee; side channel, lateral (following a road or railroad tracks); bypass (of a lock or sluice)’; Arabic (Yemenite) *ġanb*, *ġamb* ‘shoulder’; Sabaeen *gnb* ‘to fight on the side of’; Šheri / Jibbāli *ganb* ‘side’; Harsūsi *yanb* ‘side’, *b-ayanb de* ‘beside’; Mehri *ganb* ‘side’, *gātnəb* ‘to take someone aside from others in a group’. D. Cohen 1970— :150—151; Zammit 2002:127. Egyptian *ḏnḥ* ‘wing’, (?) *ḏnḥ* ‘upper part of hind-leg, ham’. Hannig 1995:1008; Faulkner

1962:322; Erman—Grapow 1921:220 and 1926—1963.5:577—578, 5:578. Berber: Tuareg *əḡən* ‘to crouch down, to squat’, *səḡən* ‘to make crouch down (camel)’; Tamazight *gən* ‘to lie down, to sleep (by extension, to be confined to bed; to be flattened, bent, inclined); to be in labor’, *sgən* ‘to put to sleep’; Tashelhiyt / Shilha *gən* ‘to lie down’; Kabyle *gən* ‘to lie down, to sleep’, *asg^wən* ‘bed’. Central Chadic: Zime *gan* ‘to bend’. Orël—Stolbova 1995:202, no. 891, **gan*- ‘leg’, 202, no. 893, **ganaḥ*- ‘to bend’, and 215—216, no. 954, **gonVḥ*- ‘elbow, shoulder, wing’, 224, no. 994 **gün*- ‘to bend’.

- B. (?) Dravidian: Tamil *kaṇ* ‘place, site’; Malayalam *kaṇi* ‘a place’. Burrow—Emeneau 1984:110, no. 1161. Assuming semantic development as in New High German *Ort* ‘place, spot, point, site’ < Old High German *ort* ‘point, edge, shore’ (cf. Kluge—Mitzka 1967:525; Kluge—Seebold 1989:520).
- C. Proto-Kartvelian **gan*- ‘side’: Georgian *gan*- ‘side; width, breadth’, *ga(n)*-preverb ‘outside, outwards’; Mingrelian [*gon*-] in *go*- preverb; Laz [*gon*-] in *go*- preverb. Klimov 1964:59 **ga*- and 1998:26 **gan*- ‘side’, **ga(n)*-preverb of direction ‘outside, outwards’ — according to Kimov, this preverb is derived from the noun **gan*- ‘side’; Fähnrich—Sardschweladse 1995:76—77 **gan*- prefix and preverb; Fähnrich 2007:95—96 **gan*-; Schmidt 1962:99.
- D. (?) Proto-Indo-European (**ghen*-/**ghn*- ‘to bend or stoop forward; to bend’ (Germanic only): Old Icelandic *gnapa* ‘to stoop or bend forward; to bend the head’, *gneppr* (poet.) ‘bent forward’, *gneypr* ‘bent forward, drooping’, *gnúfa* ‘to droop, to stoop’. De Vries 1977:178, 179, and 180.
- E. Proto-Altaic **gaṇa*- ‘to bend (back); to be bent (back)’: Proto-Mongolian **gana*- ‘to bend (back); to be bent (back)’ > Written Mongolian *γandayi*- ‘to be(come) bent, curved, or depressed in the middle with upturned ends; to hold one’s chest out’, *γandari*- ‘to bend, to curve, to arch, to twist’, *γandayar* (adj.) ‘sunken; curved backward, arched, crooked; holding one’s chest out’; Khalkha *ganday*- ‘to be backward’, *gandgar* ‘bent backward; with the chest protruding’; Buriat *ganay*-, *ganaylza*- ‘to sit back’; Kalmyk *γandā*- ‘to be bent, curved’; Ordos *ganā*- ‘to be inclined backwards’. Proto-Turkic **Kaṇjir*- ‘to bend’ > Turkish *kanır*- ‘to force back; to bend; to attempt to force open’, *kanırık*, *kanrık* ‘perverse, very obstinate’; Azerbaijani *ganir*- ‘to bend’; Turkmenian *gañir*- ‘to bend’; Uzbek (dial.) *qenir*- ‘to bend’. Starostin—Dybo—Mudrak 2003:540 **gēnṇa* ‘to bend’. Note: The Tungus forms cited by Starostin—Dybo—Mudrak are problematic from both a semantic and a phonological point of view. Consequently, they are not included here.
- F. Chukchi-Kamchatkan: Proto-Chukotian **kæŋ(æt)*- ‘to bend’ > Chukchi *keñet*- ‘to bend, to bow’, *rəkeñew*- ‘to bend (tr.)’, *kañat-γəryən* ‘a bend in a river’, *keñu-neñ* ‘staff, stick’; Kerek *kaña(a)t*- ‘to twist, to wind, to bend, to lean forward’; Koryak *kañat*- ‘to bend’, *jə-kañ-av*- ‘to bend (tr.)’, *kañu-nañ* ‘hook’, *kañat-γəjñən* ‘bend, elbow’; Alyutor *kañat*- (Palana *keñet*-) ‘to

bend'. Fortescue 2005:132. Either here or with Proto-Nostratic **k'əŋ-* (~ **k'əŋ-*) '(vb.) to bend, twist, turn, or tie together; (n.) wreath, rope, cord, fiber, tie, band, string'.

- G. Proto-Eskimo **kaŋirar* 'corner': Alutiiq Alaskan Yupik *kaŋiraaq* 'bay', (Alaska Peninsula) 'corner post'; Central Alaskan Yupik *kaŋiraaq* 'corner'; Central Siberian Yupik *kaŋiraaq* 'corner, cove'; Sirenik *kaŋiraX* 'bay'; Seward Peninsula Inuit (Qawiaaraq) *kaŋiraaq* 'corral', *kaŋiraluk* 'corner'; North Alaskan Inuit *kaŋiraaq* 'corral, blind for hunting caribou', *kaŋiralluk* 'corner'. Fortescue—Jacobson—Kaplan 1994:157. Proto-Eskimo **kaŋir-ɬuy* 'bay': Alutiiq Alaskan Yupik (Chugach) *kaŋiquluk* 'bay, cove'; Central Alaskan Yupik *kaŋiXɬuk* 'bay'; North Alaskan Inuit *kaŋiqɬuk* 'bay'; Western Canadian Inuit *kaŋiqɬuk* 'bay, fjord'; Eastern Canadian Inuit *kaŋirsuk* 'bay'; Greenlandic Inuit *kaŋirɬuk* 'bay', (East Greenlandic) *kaŋirsik* 'fjord'. Fortescue—Jacobson—Kaplan 1994:158.

Buck 1949:9.14 bend (vb. tr.); 12.11 place (sb.); 12.353 edge; 12.36 side; 12.76 corner. Dolgopolsky 2008, no. 641, **gānhV* 'side (of something), width' and no. 642, **gVñ[V]bV* or **gVñ[V]b?V* 'side, edge'.

381. Proto-Nostratic root **gar-* (~ **gər-*):

(vb.) **gar-* 'to seize, to grasp, to take hold of';

(n.) **gar-a* 'hand'

- A. Afrasian: Highland East Cushitic: Burji *gaar-* (Sasse) 'to catch (thrown objects or animal)'; (Hudson) 'to hold, to seize', (reduplicated) *gagaar-*, *gagar-* 'to catch hold', *gadd-* (< **gaar-d-* < **gaar-* 'to take') 'to take, to receive, to accept'. Sasse 1982:73; Hudson 1989:148, 192, and 193.
- B. Proto-Indo-European **gher-/ghor-/gh₂-* 'to seize, to grasp, to take hold of', **gher(s)-* 'hand': Sanskrit *hárati* 'to take, to take away, to carry off, to seize, to remove'; Greek *χείρ* 'hand' (according to Boisacq, < **χερσ-*); Armenian *jeṛn* 'hand' (according to Boisacq, < **gher-η*); Albanian *dorë* (according to Boisacq, < **ghērā*) 'hand'; Tocharian A *tsar*, B *šar* 'hand'. Rix 1998a:157 **gher-* 'to take hold of, to seize'; Pokorny 1959:442—443 **gher-* 'to grip, to seize'; Walde 1927—1932.I:603—604 **gher-*; Mann 1984—1987:415 **gherō*, -*jō* 'to take, to hold', 415 **gher-*, **ghēr-* 'to take, to get, to receive; gift', 415—416 **ghers-* (**ghēr-*, **gher-*) 'hand', 423 **gh₂r-*, **ghr-* radical element of **gh₂r-* 'hand', 424 **gh₂rt-* (**gh₂rtis*, -*os*) 'gripped, collected; grip, seizure, handful'; Watkins 1985:22 **gher-* and 2000:30 **gher-* 'to grasp, to enclose'; Mallory—Adams 1997:564 **gher-* 'to grasp'; Boisacq 1950:1054 **gher-*; Frisk 1970—1973.II:1082—1083 **ghesr-*; Hofmann 1966:414 **gher-*; Beekes 2010.II:1620—1621 **ghes-r-*; Huld 1983:54; Orël 1998:70 **ghesr-*; Van Windekens 1976—1982.I:521 Tocharian A *tsar*, B *šar* 'hand' < Proto-Indo-European **dher-*; Adams

1999:649—650 **ghesr-*. An alternative theory derives the words for ‘hand’ from Proto-Indo-European **ghes-r-* (cf. Mallory—Adams 1997:254).

- C. Proto-Altaic **gara* (~ *-e-*) ‘hand, arm’: Proto-Mongolian **gar* ‘hand, arm’ > Written Mongolian *yar* ‘hand, arm’; Khalkha *gar* ‘hand, arm’; Buriat *gar* ‘hand, arm’; Kalmyk *yar* ‘hand, arm’; Ordos *gar* ‘hand’; Moghol *yar* ‘hand, arm’; Dagur *gari*, *gar* ‘hand, arm’; Shira-Yughur *gar* ‘hand, arm’; Monguor *gar* ‘hand, arm’. Poppe 1955:26. Proto-Turkic **Kar* ‘arm, forearm; cubit’ > Old Turkic *qar* ‘arm’, *qari* ‘forearm’; Karakhanide Turkic *qari* ‘arm’; Turkish [*karu-ğa*] ‘arm’; Azerbaijani (dial.) *gari* ‘shin-bone of animal’; Turkmenian *gari* ‘shin-bone of animal, cubit’; Uzbek *qari* ‘arm, cubit’, (dial.) *qara* ‘shin-bone of animal’; Uighur *qeri* ‘cubit’, (dial.) *qaya* ‘shin-bone of animal’; Tatar *qari* ‘arm’, (dial.) *qara* ‘cubit’; Bashkir *qar* ‘shin-bone of animal’; Kirghiz *qar*, *qari* ‘arm’; Kazakh *qar* ‘forearm’, *qari* ‘forearm, shin-bone of animal’; Noghay *qari* ‘cubit’; Tuva *qiri* ‘forearm’; Oyrot (Mountain Altai) *qari* ‘arm’; Chuvash *xor* ‘forearm, cubit’; Yakut *chari*, *chara* ‘forearm, shin-bone of animal’. Starostin—Dybo—Mudrak 2003:530—531 **gara* (~ *-e-*) ‘arm’; Poppe 1960:24, 97, and 154; Street 1974:13 Proto-Altaic **gar(a)* ‘hand, arm’.
- D. Proto-Gilyak / Nivkh **garu-* ‘to hold back’ (initial fricativization in the daughter languages): Amur *γaru-dv* (tr.) ‘to detain, to hold back’; East Sakhalin *γaru-(n)d* ‘to hold back’. Fortescue 2016:58.

Buck 1949:4.33 hand; 11.13 take; 11.14 seize, grasp, take hold of. Bomhard—Kerns 1994:385—386, no. 222; Dolgopolsky 2008, no. 655, **garV* ‘hand’.

382. Proto-Nostratic root **gar-* (~ **gar-*):

(vb.) **gar-* ‘to cut, to split’;

(n.) **gar-a* ‘cut, injury; that which cuts: (pick)axe’; (adj.) ‘cut, separated, shortened’

- A. Proto-Afrasian **gar-* ‘to cut, to split’: Proto-Semitic **gar-a3-* ‘to cut, to split’ > Hebrew *gāraz* [גָּרַז] ‘to cut, to cut off’, *garzen* [גָּרַז] ‘pick, pickaxe’; Arabic *ḡaraza* ‘to cut off, to lop; to annihilate, to kill; to kick; to sting, to injure’; Geez / Ethiopic *garaza* [ገረዘ] ‘to cut’; Tigre *gārza* ‘to divide’; Tigrinya *gārāzā* ‘to partition’, *gārāwā*, *gārāyā* ‘to divide the meat of a slaughtered cow’; Amharic *gārrāzā* ‘to circumcise’, *gārāzzāzā* ‘to cut down a tree’; Gafat *gārrāzā* ‘to cut’; Harari *gērāza* ‘to plait hair’ (from the basic meaning ‘to separate’). D. Cohen 1970— :184—185; Murtonen 1989:140—141; Klein 1987:108; Leslau 1963:75 and 1987:204; Zammit 2002:121. Proto-Semitic **gar-aš-* ‘to cut, to shave’ > Hebrew *gāraʿ* [גָּרַע] ‘to shave, to trim (beard)’; Aramaic *gəraʿ* ‘to shave (the head)’; Šheri / Jibbāli *géraʿ* ‘to cut, to shave off (all the head hair)’; Mehri *gōra* ‘to shave (the head)’; Soqotri *gáraʿ* ‘to shave’. Murtonen 1989:142; D. Cohen 1970— :190; Klein 1987:110. Egyptian *grp* ‘to cut, to carve’.

grb ‘to form, to fashion’. Hannig 1995:903. Berber: Tuareg *ağər* ‘eunuch, castrated animal’; Tamazight *iggər* ‘infertile, sterile’; Zenaga *aggur* ‘to be sterile, to be castrated’; Kabyle *əngər* ‘to die childless, especially without male progeny; to be massacred (family, people)’, *ssəngər* ‘to destroy, to make die’, *aməngur* ‘a childless man’. Cushitic: Saho *garaʿ*- ‘to castrate’; Afar *garaʿ*- ‘to cut off’; Galla / Oromo *garaʿ*- ‘to cut’. Orël—Stolbova 1995:203—204, no. 900, **garaʿ*- ‘to cut’.

- B. Proto-Indo-European **gher*-/**ghor*-/**ghj*- ‘to cut off, to shorten’: Sanskrit *hrāsati* ‘to become short or small, to be diminished or lessened’, *hrasvá-h* ‘short, small’; Middle Irish *gerr* ‘short’, *gerraim* ‘to cut off, to shorten’. Pokorny 1959:443 **gher*- (**gherə*-, **ghrē*-) ‘short, small’; Walde 1927—1932.I:604—605 **gher*- (**gherē*- ?); Mallory—Adams 1997:515 (?) **gher*- ‘less, short’.
- C. Altaic: Manchu *garža*- ‘to split, to break’, *garžasχūn* ‘broken, split’, *garla*- ‘to break, to ruin, to destroy, to take apart’, *garlan* ‘ruin, destruction’, *garimi*- ‘to cut into small pieces, to tear into pieces, to break up’.

Buck 1949:9.22 cut; 9.26 break (vb. tr.); 9.27 split (vb. tr.); 12.59 short.

383. Proto-Nostratic root **gar*- (~ **gər*-):

(vb.) **gar*- ‘to scratch, to scrape’;

(n.) **gar-a* ‘that which scratches, scrapes: spade, rake’

Derivative:

(n.) **gar-b-a* ‘itch, scab, sore’

- A. Proto-Afrasian **gar*- ‘to scratch, to scrape’: Proto-Semitic **gar-ad*- ‘to scratch, to scrape, to peel’ > Hebrew *gāraḏ* [גָּרַד] ‘to scratch, to scrape’; Aramaic *gəraḏ* ‘to scrape off’; Phoenician *m-grd* ‘scraper’; Arabic *ḡarada* ‘to peel, to pare’; Šheri / Jibbāli *górōd* ‘to disarm, to strip someone of his uniform, to strip (tree of branches)’; Mehri *gərōd* ‘to undress (tr.), to disarm (tr.), to strip someone of everything, to cut (a branch off a tree) for no apparent purpose’; Geez / Ethiopic *garada* [ገረደ] ‘to remove chaff’; Tigrinya *gurdi* ‘chaff’, *gʷärädä* ‘to become chaff’; Tigre *gərd* ‘chaff’; Amharic *gʷärädä* ‘to separate chaff from grain’, *gərd*, *gʷərdo* ‘chaff’. D. Cohen 1970— :182; Klein 1987:107; Leslau 1987:201; Zammit 2002:120.
- B. Dravidian: Gondi *kār*-, *kār*- ‘to dig’; Konḍa *kār*- ‘to dig, to make a pit, to dig out’; Pengo *kār*- ‘to dig’; Maṇḍa *kār*- ‘to dig’; Kui *kārpa* (*kārt*-) ‘(vb.) to dig up; (n.) the act of digging up’; Kuwi *kār*- ‘to dig’, *kārhnai* ‘to sculpt, to spade’. Burrow—Emeneau 1984:137, no. 1467.
- C. Proto-Indo-European **gher*-/**ghj*- ‘to scratch, to scrape’: Greek *χαράσσω* ‘to cut, to engrave, to scratch’, *χάραξ* ‘a pointed stake, especially a vine prop or pole’, *χαρακτός* ‘notched, toothed (like a saw or file)’; Lithuanian *žeriu*, *žerūti* ‘to rake’. Pokorny 1959:441 **gher*- ‘to scratch, to scrape, to cut, to etch’; Walde 1927—1932.I:602 **gher*-; Watkins 1985:22 **gher*-

and 2000:30 *gher- ‘to scratch, to scrape’; Boisacq 1950:1051 *gher-; Frisk 1970—1973.II:1073—1075; Chantraine 1968—1980.II:1246—1247 *gher-; Hofmann 1966:412—413; Beekes 2010.II:1614—1615. Proto-Indo-European *ghrebh-/ *ghrobh-/ *gh_ybh- ‘to scratch, to scrape’: Gothic *graban* ‘to dig’, *grōba ‘hole’; Old Icelandic *grafa* ‘to dig, to bury; to carve, to engrave’, *gröf* ‘pit, ditch, grave’, *græfr* ‘fit to be buried’; Swedish *gräva* ‘to dig’; Danish *grave* ‘to dig’; Norwegian *grava* ‘to dig’; Old English *grafan* ‘to dig, to penetrate; to engrave, to carve’, *græft* ‘sculpture, carved object’, *grafere* ‘carver, sculptor’, *græf* ‘cave, grave’, *grafett* ‘trench’; Old Frisian *gref* ‘grave’, *grēva* ‘to dig’; Old Saxon *graf* ‘grave’, *bi-graban* ‘to dig, to bury’; Dutch *graven* ‘to dig’; Old High German *graba* ‘spade’, *grap* ‘grave’ (New High German *Grab*), *graban* ‘to dig, to bury’ (New High German *graben*); Lithuanian *grėbiu*, *grėbti* ‘to rake’, *grėblėlis* ‘rake’; Serbo-Croatian *grěbsi* ‘to scratch’; Russian *grábli* [грабли] ‘rake’. Rix 1998a:179—180 *ghrebh- ‘to dig’; Pokorny 1959:455—456 *ghrebh- ‘to scratch, to dig’; Walde 1927—1932.I:653—654 *ghrebh-; Mann 1984—1987:334 *ghrābhō, -iō ‘to rake’, 334 *ghrābhō, -iō ‘to dig’, 334 *ghrābhōs, -ā ‘ditch, hole’, 335—336 *ghrebh-; *ghrebhlo-, -iō-, -iə ‘scraper, rake, oar’, 336 *ghrebhō ‘to dig’; Watkins 1985:23 *ghrebh- and 2000:31 *ghrebh- ‘to dig, to bury, to scratch’; Mallory—Adams 1997:159 *ghrebh- ‘to dig’; Smoczyński 2007.1:196—197; Orël 2003:139 Proto-Germanic *grābanan, 139 *grābilaz, 139 *grābjaz ~ *grābjan, 139 *grābō ~ *grāban; Kroonen 2013:185 Proto-Germanic *graba- ‘grave’ and 185—186 *graban- ‘to dig’; Feist 1939:218—219 *ghrebh-; Lehmann 1986:158—159 *ghrabh-; De Vries 1977:184 *ghrebh-, 192, and 193; Falk—Torp 1903—1906.I:245—246; Torp 1919:178; Onions 1966:411; Klein 1971:321 *ghrebh-, *ghrobh-; Walshe 1951:85—86 *ghrebh-/ghrobh-; Kluge—Mitzka 1967:266 *ghrebh-, *ghrobh-; Kluge—Seebold 1989:273 *ghrebh-. Proto-Indo-European *ghrew-/ *ghrow-/ *ghru- ‘to scrape, to graze’: Greek χαῶω ‘to scrape, to graze, to wound slightly’, χρώς ‘the surface of the body, the skin’, χροῖά (Ionic χροῖή) ‘the surface of the body, the skin; the body itself’ (derivative of χρώς), χρῶμα ‘the surface of the skin’. Pokorny 1959:460—462 *ghrēu- : *ghrəu- : *ghrū- ‘to rub away, to grate’; Walde 1927—1932.I:648—650 *ghrēu- : *ghrəu- (< *gher-); Mann 1984—1987:335 *ghraūō, -iō ‘to scrape, to rasp’, 339 *ghrōiō (*ghrōiūō) ‘to graze, to scrape, to skim’, 342 *ghrōt- ‘to scrape, to graze, to skim’; Boisacq 1950:1068—1069 *ghrəu-, *ghreu-, *ghrōu- and 1071 *gh(e)rēu-; Hofmann 1966:422 *ghrēu-, *ghrəu- and 424 *ghrō(u)- (in ablaut with *ghrəu-); Frisk 1970—1973.II:1115—1116 and II:1120—1121 *ghrēu-, *ghrēi-; Beekes 2010.II:1646—1647 *ghreh₂u-; Chantraine 1968—1980.II:1272 and II:1279. Proto-Indo-European *ghrem-/ *ghrom- ‘to scrape’: Lithuanian *grémžiu*, *grémžti* ‘to scrape’. Pokorny 1959:458 *ghrem- ‘to scrape’; Walde 1927—1932.I:655 *ghrem-.

Buck 1949:8.22 dig. Bomhard—Kerns 1994:386—387, no. 223.

384. Proto-Nostratic (n.) **gar-b-a* ‘itch, scab, sore’:

Derivative of:

(vb.) **gar-* ‘to scratch, to scrape’;

(n.) **gar-a* ‘that which scratches, scrapes: spade, rake’

- A. Proto-Afrasian **gar-ab-* ‘itch, scab, sore’: Proto-Semitic **gar-ab-* ‘itch, scab’ > Akkadian *garābu* ‘itch, scab, leprosy’; Hebrew *gārāḇ* [גָּרַב] ‘itch, scab’; Syriac *garbā* ‘leprosy, scabies’; Mandaic *girba* ‘leprosy, scurf’; Arabic *ġarab* ‘itch, scabies’; Ḥarsūsi *garb* ‘mange’; Šḥeri / Jibbāli *gērāb* ‘to have the mange’; Mehri *gērāb* ‘to have the mange’, *garb* ‘mange’; Soqotri *gerb* ‘scabies’; Tigre *garbeb* ‘scab’. Murtonen 1989:140; Klein 1987:107; D. Cohen 1970—:178. East Chadic: Somray *gaber* ‘syphilis’ (< **gabyar-* < **gabari-* [metathesis from **garabi-*]). Orël—Stolbova 1995:203, no. 889, **garab-* ‘disease’.

Comment: Militarëv—Kogan (2000.I:85—86, no. 91) reconstruct Proto-Semitic (n.) **gar(a)b-* ‘leprosy, mange, scab’. They do not list any non-Semitic cognates. Regarding the alleged East Chadic cognate listed above, they note: “Cf. E. Chad.: Somray *gaber* ‘syphilis’ compared as a metathetic form to Sem. in [OS 203]; an interesting case which is, nevertheless, hardly sufficient for a common Afras. reconstruction.”

- B. Dravidian: Tamil *karappan* ‘eruption in children’, *karappān* ‘eruption, any cutaneous disease, rash, eczema, erysipelas, etc.’; Malayalam *karappan* ‘eruptions, scurf (especially on children’s heads)’. Burrow—Emeneau 1984:118, no. 1272. Kannaḍa *karame* ‘an ulcer’; Tuḷu *karampè* ‘wound’, *karampely* ‘scar of a wound’; Gondi *karem*, *karam*, *kaṛam*, *kaṛēm* ‘boil, wound, sore’; Kui *krēmbu* ‘sore, wound’. Burrow—Emeneau 1984:118, no. 1273. (?) Malayalam *kāra* ‘a sharp eruption on the skin’; Kannaḍa *gāru* ‘a sharp eruption on the body from internal heat’. Burrow—Emeneau 1984:137, no. 1469.

Buck 1949:4.85 wound (sb.). Bomhard—Kerns 1994:386—387, no. 223.

385. Proto-Nostratic root **gar^y-* (~ **gar^y-*):

(vb.) **gar^y-* ‘to swell, to increase, to grow’;

(n.) **gar^y-a* ‘swelling, increase, growth; great quantity, abundance, excess’

Identical to:

(vb.) **gar^y-* ‘to stick out, to stand out, to jut out, to project, to protrude; to be or become erect, rigid, stiff’;

(n.) **gar^y-* ‘tip, point, peak’

- A. Proto-Afrasian **gar-* ‘(vb.) to swell, to increase, to grow; (n.) swelling, increase, growth; great quantity, abundance, excess’: Berber: Tuareg *ağər* ‘to be bigger than, superior to’; Tamazight *agər* ‘to be older, bigger, superior’, *ssəgru* ‘to multiply, to augment, to increase’, *agar* ‘advantage, superiority’, *ugar* ‘more, more than’, *amyagar* ‘inequality, bad disposition, disequilibrium, difference (height, age, etc.)’; Kabyle *ag^war* ‘to surpass, to exceed’, *ugar* ‘more’. Central Cushitic: Bilin (pl.) *gāri-w* ‘strong; much; numerous’, *gār-* ‘to be strong, powerful, capable’, *gārā-s-* ‘to be able’; Quara *gārš-* ‘to be able’. Appleyard 2006:21 and 97; Reinisch 1887:157.
- B. Dravidian: Kannaḍa *kaṛale*, *kaṛile* ‘bamboo shoot’; Naiki (of Chanda) *karrka* ‘bamboo’; Patji *karri* ‘bamboo shoot’; Gondi *karka* ‘bamboo sapling’. Burrow—Emeneau 1984:125—126, no. 1353. Tamil *kaṛi* ‘much, great, excessive’, *kaṛi* ‘to be great in quantity or quality, to be abundant, to be excessive’, *kaṛivu* ‘excess, abundance, surplus’; Malayalam *kaṛi* ‘to be excessive’, *kaṛiha* ‘exceeding’. Burrow—Emeneau 1984:126, no. 1358. Tamil *kaṛumu* (*kaṛumi-*) ‘(vb.) to be full, complete, abundant, copious; to overflow; (n.) denseness (as a tuft of hair)’; Telugu *krammu* ‘to spread, to extend, to overspread, to overflow’, *kraccu* ‘to surround, to overspread’; Kui *garja* (*garji-*) ‘to spread out, to increase, to multiply, to grow thick and outspreading’. Burrow—Emeneau 1984:127, no. 1368.
- C. Proto-Indo-European **ghreE-/ *ghroE-* (> **ghrē-/ *ghrō-*) ‘to grow’: Gothic *gras* ‘grass’; Old Icelandic *gróa* ‘to grow (of vegetation)’, *gróði* ‘growth, increase’, *gróðr* ‘growth, crop’, *gróna* ‘to become green’, *gras* ‘grass, herbage, herb’, *grænn* ‘green’; Faroese *gróa* ‘to grow’; Swedish *gro* ‘to grow’, *gräs* ‘grass’; *grön* ‘green’; Norwegian *gro* ‘to grow’, *grønn* ‘green’; Danish *gro* ‘to grow’, *græs* ‘grass’, *grøn* ‘green’; Old English *grōwan* ‘to grow, to increase, to flourish’, *grōwnes* ‘growth, prosperity’, *græs*, *gærs* ‘grass’, *græd* ‘grass’, *grēne* ‘green’; Old Frisian *grōwa*, *grōia* ‘to grow’, *grēne* ‘green’, *gres*, *gers* ‘grass’; Middle Low German *grōien* ‘to grow’; Old Saxon *grōni* ‘green’; Dutch *groeien* ‘to grow’, *groen* ‘green’; Old High German *gruoan* ‘to grow, to become green’, *graz* ‘shoot, sprig, sprout’, *gras* ‘grass’ (New High German *Gras*), *gruoni* ‘green’ (New High German *grün*); (?) Latin *grāmen* (< **ghra-s-men*) ‘grass, stalk’. Pokorny 1959:454 (**ghrē-*), **ghrō-*, **ghrā-* ‘to grow, to become green’; Walde 1927—1932.I:645—646 (**ghrē-*), **ghrō-*, **ghrā-*; Watkins 1985:23 **ghrē-* and 2000:31 **ghrē-* ‘to grow, to become green’ (contracted from **ghre₂-*); Walde—Hofmann 1965—1972.I:616—617 **ghrōs-*, **ghrās-*; Ernout—Meillet 1979:280; De Vaan 2008:269—270; Orël 2003:143 Proto-Germanic **grōanan*, 143 **grōdiz* ~ **grōduz*, 143 **grōniz*, 143—144 **grōnjanan*; Kroonen 2013:187 Proto-Germanic **grasa-* ‘grass’ and 191 **grōan-* ‘to grow’; Feist 1939:220; Lehmann 1986:159—160 **ghrō-*, **ghrā-*; De Vries 1977:185, 190, and 192; Falk—Torp 1903—1906.I:250, I:254, and I:255—256; Torp 1919:183; Onions 1966:410—411, 413, and 417; Klein 1971:321 **ghrōs-*, 322 **ghrō-*, and 325 **ghrō-* ‘to grow’;

Boutkan—Siebinga 2005:138 and 144; Kluge—Mitzka 1967:268 **ghrō-* and 275; Kluge—Seebold 1989:275 and 280. Perhaps also: West Germanic **grautaz* ‘great, large’ > Old English *grēat* ‘thick, stout, bulky, big’; Old Frisian *grāt* ‘great, big, high’; Old Saxon *grōt* ‘big, great’; Dutch *groot* ‘big, great; tall, grown-up’; Old High German *grōz* ‘large, big, great; tall, high’ (New High German *groß*). Kroonen 2013:197 Proto-Germanic **grauta-* ‘coarse’; Onions 1966:412 **grautaz*; Klein 1987:322; Kluge—Lutz 1898:93; Barnhart 1995:329; Boutkan—Siebinga 2005:143; Regnaud 1901:155; Kluge—Mitzka 1967:272—273; Kluge—Seebold 1989:279. Thus, not related to Old Icelandic *grautr* ‘porridge’ (Orël 2003:141 Proto-Germanic **grautaz*).

Buck 1949:4.81 strong, mighty, powerful; 9.95 can, may (3rd sg.); 12.53 grow; 12.55 large, big (great). Bomhard—Kerns 1994:388, no. 225.

386. Proto-Nostratic root **garʷ-* (~ **gərʷ-*):

(vb.) **garʷ-* ‘to stick out, to stand out, to jut out, to project, to protrude; to be or become erect, rigid, stiff’;

(n.) **garʷ-* ‘tip, point, peak’

Identical to:

(vb.) **garʷ-* ‘to swell, to increase, to grow’;

(n.) **garʷ-a* ‘swelling, increase, growth; great quantity, abundance, excess’

- A. Proto-Afrasian **gar-* ‘to stick out, to stand out, to jut out, to project, to protrude; to be or become erect, rigid, stiff’: Semitic: (?) Akkadian *garānu* (also *karānu*) ‘to store, to pile up in heaps’, *gurunnu* ‘heap, mound’; (?) Geez / Ethiopic *gʷarʿa* [**Ṭ-C0**] ‘to pile, to heap up stores’ (according to Leslau 1987:200, this is probably reconstructed from Amharic *gʷärä*). Cushitic loans (cf. Leslau 1979:288) in: Gurage (Soddo) *gara* ‘mountain’, *gägära* ‘ascent, hill, uphill, upward slope’; Amharic *gara* ‘mountain’. East Cushitic: Burji *gáar-i* ‘eyebrow’ (perhaps a loan from Oromo); Galla / Oromo *gaara* ‘eyebrow’; Gedeo / Darasa *gaara* ‘eyelash, eyebrow’; Boni *gaar-i* ‘eyebrow’ (loan from Oromo); Konso *káar-a* ‘edge’; Sidamo *gaara* ‘forehead, eyelash; brow, hill’. Sasse 1982:73; Hudson 1989:60.
- B. Dravidian: Tamil *kaṛal* (*kaṛalv-*, *kaṛanr-*) ‘to produce, to bulge out, to pass through (as an arrow)’, *kaṛalai* ‘wen, tubercle, tumor’; Malayalam *kaṛarruka* ‘to protrude’, *kaṛala* ‘a swelling (chiefly in the groin)’; Kota *kaṛv-* (*kaṛd-*) ‘to be stretched, to protrude through a hole (for example, piles)’, *kaṛt-* (*kaṛty-*) ‘to make to protrude through a hole’; Tulu *karalè* ‘a swelling’; (?) Telugu *koḍalu-konu* ‘to swell, to rise, to increase’. Burrow—Emeneau 1984:125, no. 1350.
- C. (?) Proto-Kartvelian **gora-* ‘mountain, hill’: Georgian *gora-* ‘mountain, hill’; Mingrelian *gola-*, *gvala-* ‘mountain, hill’; Laz *gola-* ‘summer roaming place’, *golur-* (< **gor-ur-*) ‘mountainous, mountaineer’. Klimov

1964:64 *gora- and 1998:31—32 *gora- ‘mount, hill’; Fähnrich 2007:111 *gor-. Perhaps influenced by *gor-/*gr- ‘to roll, to wallow’.

- D. Proto-Indo-European *gher-/*ghor-/*ghr- (extended form *ghr-eE-/*ghr-oE- > *ghrē-/*ghrō-) ‘(vb.) to stick out, to stand out, to jut out, to project, to protrude; to be or become erect, rigid, stiff; (n.) tip, point, peak’: Greek χάρμη ‘tip, point of a lance, spear-head’, χοιράς (< *χορ-ιαδ-) ‘of a hog’, (as a noun) ‘a sunken rock; (pl.) scrofulous swellings in the glands of the neck’, χοιράς πέτραι ‘rocks (rising just above the sea) like a hog’s back’, χοιραδ-ώδης ‘rocky’, χοῖρος (< *χορ-ιο-) ‘a young pig, a porker’; Middle Irish *grenn* ‘beard’; Welsh *garth* ‘hill, promontory’, *grann* ‘eyelid’; Breton *grann* ‘eyebrow’; Gothic *grana (acc. pl. *granos*) ‘pigtail’; Old Icelandic *grön* ‘moustache’; Swedish (dial.) *grån* ‘fir(tree)’; Old English *granu* ‘moustache’; Middle High German *grane* ‘hair (of head), moustache’ (New High German *Granne*), *grans* ‘beak, snout; peak’ (New High German *Grans* ‘bow [of a ship]’), *grāt* ‘(sharp) edge, ridge, crest (of a mountain)’ (New High German *Grat*); Russian *gran’* [грань] ‘border, brink, verge’, *granica* [граница] ‘border’; Polish *grot* ‘arrow-point’. Pokorny 1959:440 *gher-, *ghrē- : *ghrō- : *ghrə- ‘to jut out’; Walde 1927—1932.I:606 *gher-; Mann 1984—1987:335 *ghrānis, -os ‘tip, point, spike, edge’, 341—342 *ghronos ‘point, tip; mark; period; moment’; Boisacq 1950:1051 *gher-, *gh(e)rē-; *ghorjo-; Frisk 1970—1973.II:1075 *gher- and II:1107—1108; Hofmann 1966:413 *gher- and 421 *gher-; Chantraine 1968—1980.II:1247, II:1266, and II:1266—1267 *ghor-yo-; Beekes 2010.II:1615 (?) *gher- and II:1640—1641; Kroonen 2013:190—191 Proto-Germanic *granō- ‘hair of the beard’; Orël 2003:140 Proto-Germanic *granō; Kluge—Mitzka 1967:267 *gher-, 267—268, and 268 *ghrē-; Kluge—Seebold 1989:275 *gher- and 276 *gher-. Note: there is some disagreement about whether Greek χοιράς, χοῖρος, and their derivatives belong here. Proto-Indo-European *ghers-/*ghors-/*ghrs- ‘to bristle’: Sanskrit *hārṣati*, *hārṣate* ‘to bristle, to become erect or stiff or rigid; to become sexually excited; to be excited or impatient, to rejoice in the prospect of, to be anxious or impatient for’, *hr̥ṣṭá-h* ‘bristling, erect, standing on end (said of hairs on the body); rigid, stiff; thrilling with rapture, rejoiced, pleased, glad, merry; surprised, astonished’, *harṣa-h* ‘bristling, erection (especially of the hair in a thrill of rapture or delight)’; Greek (noun and adj.) χέρσος ‘dry land; dry, firm (of land), hard, barren’; Latin *horreō* ‘to bristle’, *horridus* ‘rough, shaggy, bristly’; Old English *gorst* ‘furze bush’. Rix 1998a:158 *ghers- ‘to stand on end, to bristle up; to be or become rigid, stiff’; Pokorny 1959:445—446 *ghers- ‘to stiffen’; Walde 1927—1932.I:610 *ghers-; Mann 1984—1987:332 *ghors- ‘rough; to scrub’, 332 *ghorstos ‘rough, rugged, coarse’, 346 *ghrs- ‘bristle’; *ghrstos (*ghrsitos) ‘bristly, shaggy; bristle, shag’, 416 *ghersos, -ios ‘rough, waste, barren’; Watkins 1985:22 *ghers- and 2000:30 *ghers- ‘to bristle’; Mallory—Adams 1997:547 *ghers- ‘to stiffen (of hair), to bristle’;

Boisacq 1950:1056—1057 **gher-*, **gheres-*; **gherē-* (**ghrē-*, **ghrō-*, **ghrā-*); Beekes 2010.II:1626—1627 **ghers-o-*; Hofmann 1966:416—416 **ghers-*; Frisk 1970—1973.II:1089—1090 **ghers-*; Chantraine 1968—1980.II:1255 **gher(s)-*; De Vaan 2008:290; Ernout—Meillet 1979:299—300; Walde—Hofmann 1965—1972.I:659 **ghers-*; Orël 2003:147 Proto-Germanic **gurstaz*.

- E. Chukchi-Kamchatkan: Proto-Chukotian (reduplicated) **kəru(kəru)* (or **kukəru*) ‘wart’ > Chukchi *kokʹolyən* (pl. *kukʹut*) ‘wart, growth on tree’; Koryak *k(ə)rukuw* ‘wart’; Alyutor *krukru* ‘wart’. Fortescue 2005:152.

Buck 1949:1.22 mountain; hill; 4.142 beard; 4.206 eyebrow; 12.352 point; 12.353 edge. Dolgopolsky 2008, no. 667, **goRʹV* ‘hill, (small ?) mountain’.

387. Proto-Nostratic root **gasʷ-* (~ **gəsʷ-*):

(vb.) **gasʷ-* ‘to touch, to feel, to handle’;

(n.) **gasʷ-a* ‘hand’

- A. Proto-Afrasian **g[a]sʷ-* ‘to touch, to feel, to handle’: Proto-Semitic **gaš-aš-* ‘to touch, to feel, to handle’ > Hebrew *gāšāš* [גָּשַׁשׁ] ‘to feel with the hand’; Aramaic *gāšāš* ‘to feel, to touch’; Arabic *ḡassa* ‘to touch, to feel, to handle’; Geez / Ethiopic *gasasa* [ገሰሰ] ‘to touch, to feel, to handle’; Tigre (*tə*)*gasāsa* ‘to honor by touching, kissing, or prostrating oneself’, *gəssat* ‘touch, touching, handling’; Tigrinya (*tä*)*gasäsä* ‘to go around a church praying (and touching the walls)’; Amharic *gəssase* ‘feeling with the fingers’ (Geez loan). D. Cohen 1970—:197—198; Murtonen 1989:142; Klein 1987:111; Leslau 1987:204; Zammit 2002:123. [Ehret 1995:187, no. 288, **guš-* ‘to feel, to run fingers over’.]
- B. Dravidian: Tamil *kacanku* (*kacanki-*) ‘to be squeezed, crumpled; to be displeased, hurt (in mind)’, *kacakku* (*kacakki-*) ‘(vb.) to rub, to bruise between the fingers or hands, to squeeze, to crumple; to harass, to annoy; (n.) squeezing, bruising’, *kayaṅku* (*kayaṅki-*) ‘to be squeezed by the hand, to be bruised, to be mashed’, *kayakku* (*kayakki-*) ‘to squeeze in the hand, to bruise, to mash’; Malayalam *kasāṇṇuka* ‘to be squeezed, to be broken’, *kaśakka* ‘to crumple, to squeeze in the hand’, *kayakkuka* ‘to squeeze’; (?) Kurux *khacnā* (*khaccas*) ‘to squeeze soft matter (e.g., grains) into a compact mass by pressing, trampling upon, or working inside with a stick’. Burrow—Emeneau 1984:102, no. 1087. Tamil *kai* ‘hand, arm; elephant’s trunk; handle’, *kai* (-*pp-*, -*tt-*) ‘to feed with the hand’; Malayalam *kai*, *kayyi* ‘hand, arm; trunk of elephant; handle’, *kayyu* ‘the hand’, *kayyāl* ‘an assistant, helper’; Kota *kay* ‘hand, arm’; Toda *koy* ‘hand, arm’; Kannada *kai*, *kayi*, *kayyi*, *key* ‘hand, forearm; elephant’s trunk; handle’; Koḍagu *kay* ‘hand, arm’; Tuḷu *kai* ‘hand; handle’; Telugu *cēyi*, *ceyi*, *ceyyi* ‘hand, arm; elephant’s trunk’, *kēlu*, *kai* ‘the hand’; Kolami *ki-*, *key*, *kīy*, *kīyu* ‘hand, arm’; Naikri *kī* ‘hand, arm’; Naiki (of Chanda) *kī* ‘hand’; Parji *key* ‘hand’;

Gadba (Ollari) *ki*, (Salur) *kiyyū*, *kiy* ‘hand’; Gondi *kay*, *kai* ‘hand’; Konda *kiyu* ‘hand’; Pengo *key* ‘hand’; Maṇḍa *kiy* ‘hand’; Kui *kaju*, *kagu* ‘hand, arm; elephant’s trunk’, *kaju* ‘hand’; Kuwi *kēyū*, *kēyu*, *keyyu*, *keyu*, *kayyu* ‘hand, arm; handle’. Burrow—Emeneau 1984:183, no. 2023; Krishnamurti 2003:119 **kay* ‘hand’.

- C. Proto-Indo-European **g^{hes}-*/**g^{hos}-* (**g^{hes}-r-* and **g^{hes}-t^{ho}-*) ‘hand’: Sanskrit *hāsta-h* ‘hand’; Avestan *zasta-* ‘hand’; Old Persian *dasta-* ‘hand’; Latin *praestō* (< **prae-hestōd*) ‘at hand’; Lithuanian *pa-žastis* ‘underarm’; Hittite *ki-eš-šar* ‘hand’. Also, with loss of an earlier initial voiced velar before high front vowel: Cuneiform Luwian (nom. sg.) (*i-*)*iš-ša-ri-iš* ‘hand’; Hieroglyphic Luwian (dat. sg.) *istri* ‘hand’; Lycian *izri-* ‘hand’ (< Proto-Anatolian **gēsar* ‘hand’). The Hieroglyphic Luwian form contains an epenthetic *t*. Pokorny 1959:447 **ghesor-*, **ghesr-* ‘hand’, 447 **ghesto-* ‘hand, arm’; Walde 1927—1932.I:541 **ghasto-*; Mann 1984—1987:411 **ghastos*, *-ā*, *-is*, *-iə* ‘hand, arm, handle, grasp’; Watkins 1985:22 **ghesor-* and 2000:30 **ghes-* ‘hand’ (suffixes **ghes-ōr*; suffixes **ghes-to-*); Gamkrelidze—Ivanov 1984.II:807 **ḡ^[h]es-r-*/**ḡ^[h]es-t^[h]o-* and 1995.I:687 **ḡ^{hes}-r-*/**ḡ^{hes}-t^{ho}-* ‘hand’; Mallory—Adams 1997:254 **ḡhēs-r-* ‘hand’, **ḡhós-to-s* ‘hand’; Ernout—Meillet 1979:532; De Vaan 2008:486 Latin *praestō* = ablative singular “of an adj. **praisto-* ‘ready, available’, the analysis of which is uncertain”; Walde—Hofmann 1965—1972.II:356; Puhvel 1984— .4:160—165 **ḡhēsōr*; Kloekhorst 2008b:471—472; Fraenkel 1962—1965.II:1293; Smoczyński 2007.1:444—445 **ḡhēs-to-*; Derksen 2015:347 **ḡhes-to-*; Wodtko—Irslinger—Schneider 2008:170—172 **ḡhes-*.

Sumerian *gašam* ‘expert, specialist; craftsman, artisan, workman; artist’, *gašam* ‘work’.

Buck 1949:4.33 hand; 15.71 touch; 15.72 feel. Bomhard—Kerns 1994:384, no. 220.

388. Proto-Nostratic root **gat-* (~ **gət-*):

(vb.) **gat-* ‘to take (with the hand), to grasp’;

(n.) **gat-a* ‘hand’

- A. Proto-Afrasian **gat-*, **get-* ‘to take’: Highland East Cushitic: Burji *gaḏ-* ‘to take’. According to Sasse, the original meaning was probably something like ‘to possess’. Sasse compares Eastern Galla / Oromo *gaḏ diis-* ‘to set free, to let go’. Sasse 1982:75; Hudson 1989:148 and 192. Proto-Southern Cushitic **geḏ-* ‘to take’ > Alagwa *geger-* ‘to carry’; Iraqw *gagar-* ‘to carry’; K’wadza *gel-* ‘to choose’; Ma’a *-géra* ‘to bring’; Dahalo *gettokum-* ‘to carry’. Ehret 1980:237.

- B. Dravidian: Tamil *katuvu* (*katuvi-*) ‘to seize, to grasp, to take more than a proper share’; Kannaḍa *kadubu* ‘to seize or hold firmly’, *kadi* ‘to steal’, *kadaka* ‘a thievish, deceitful man’ (f. *kadiki*); Tuḷu *kadipu*, *kadupu*, *kadpu* ‘stealing, theft’; Telugu *kadumu* ‘to seize’. Burrow—Emeneau 1984:112, no. 1200. Proto-Dravidian **ketkā* > **kekkā* > **khekkhā* ‘hand’: Kuṛux *xekkhā* ‘hand, arm’; Malto *qege* ‘hand’. Burrow—Emeneau 1984:183, no. 2023; Burrow 1946:87.
- C. Proto-Indo-European **g^{het}-*/**g^{hot}-*, (with nasal infix) **g^{he}-n-t-* ‘to take (with the hand)’: Greek *χαρδάνω* ‘to take in, to hold, to comprise, to contain’; Latin *prehendō* ‘to seize’; Gothic *bigitan* ‘to find’; Old Icelandic *geta* ‘to get’; Old English *begietan* ‘to get, to obtain, to attain’; Old Saxon *bigetan* ‘to seize’; Old High German *pigezzan* ‘to get, to obtain, to receive’; Albanian *gjindem* ~ *gjëndem* ‘to be found’. Rix 1998a:173 **g^{hed}-* ‘to grasp, to seize, to take hold of’; Pokorny 1959:437—438 **ghend-*, **ghed-* ‘to grasp, to seize’; Walde 1927—1932.I:589—590 **ghend-*; Mann 1984—1987:317 **ghed-* ‘to acquire; acquisition’, 319 **ghend-*, 326—327 **ghnd-* ‘to seize, to hold, to get, to retain, to contain’, 327 **ghnd-*; Watkins 1985:22 **ghend-* (also **ghed-*) and 2000:29—30 **ghend-* (also **ghed-*) ‘to seize, to take’; Mallory—Adams 1997:564 **ghe(n)dh-* ‘to seize, to take in (physically or mentally)’; Boisacq 1950:1050 **ghnd-*; Chantraine 1968—1980.II:1245—1246 **ghe(n)d-*; Hofmann 1966:412 **ghnd-*; Frisk 1970—1973.II:1071—1072 **ghnd-*; Beekes 2010.II:1613 **ghed-*; Ernout—Meillet 1979:531 **ghed-* and **ghend-*; De Vaan 2008:487; Walde—Hofmann 1965—1972.II:359 **ghe(n)d-*; Orël 2003:133 Proto-Germanic **getanan*; Kroonen 2013:176 Proto-Germanic **getan-* ‘to find (a way), to be able’; Feist 1939:90; Lehmann 1986:69 **ghed-*; De Vries 1977:165 **ghed-*; Falk—Torp 1910—1911.I:208 **ghed-*, **ghend-*; Onions 1966:85 and 396 **ghed-* (**ghod-*); Klein 1971:76 and 311 **ghe(n)d-*.
- D. Proto-Uralic **kāti* ‘hand’: Finnish *käsi/käte-* ‘hand’; Mordvin *ked'*, *käd'* ‘hand’; Lapp / Saami *giettâ/gieđâ-* ‘hand’; Cheremis / Mari *kit* ‘hand’; Votyak / Udmurt *ki* ‘hand’; Zyrian / Komi *ki* ‘hand’; Vogul / Mansi *käät* ‘hand’; Ostyak / Xanty *köt*, (Southern) *ket* ‘hand, fore paw’; Hungarian *kéz/keze-* ‘hand’. Collinder 1955:87, 1960:411 **käte*, 1965:138 Common Finno-Ugrian **käte*, and 1977:103; Sammallahti 1988:545 Proto-Finno-Ugrian **kāti* ‘hand, arm’; Rédei 1986—1988:140 **käte*; Zhivlov 2023:167 Proto-Uralic **kāti* ‘hand’, Proto-Finnic **käte-*.

Buck 1949:4.33 hand; 11.13 take; 11.14 seize, grasp, take hold of; 11.16 get, obtain. Illič-Svityč 1971—1984.I:227, no. 80, **gäti* ‘hand, arm’; Dolgopolsky 2008, no. 694, **gätâ* ‘to grasp, to take, to possess’; Bomhard—Kerns 1994:388—389, no. 226.

389. Proto-Nostratic (n.) **gen-a* ‘jaw, cheek’:

- A. Proto-Afrasian **gen-* ‘jaw, cheek’: Proto-Semitic **ʔa-gan-*, **wa-gan-* ‘cheek’ > Arabic *ʔa-ġna-t*, *ʔi-ġna-t*, *ʔu-ġna-t* ‘fullest part of the cheek’, *wa-ġnāʔ* ‘having strong cheeks (strong she-camel)’, *wa-ġna-t*, *wi-ġna-t*, *wu-ġna-t*, *wa-ġana-t* ‘cheek’; Šheri / Jibbāli *ōgən* ‘to have prominent cheekbones’, *ēgənt* ‘cheekbone’; Mehri *wəgnēt* ‘cheekbone’; Harsūsi *wegnēt* ‘cheek’. D. Cohen 1970—:7 and 493—494. Berber: Ayer *əganan* ‘cheek, cheek-bone’. Cushitic: Beja / Beḍawye *genúun* ‘jaw, jawbone, mandible’. Chadic: Sura *gén* ‘cheek’; Dera *gəngá* ‘cheek’; Pa’a *gàncóka* ‘cheek’; Zime-Dari *gin* ‘cheek’; Zime-Batna *gìn* ‘cheek’. Jungraithmayr—Ibriszimow 1994.II:68—69.

Comments:

1. Militarev—Kogan (2000.I:78—79, no. 84) reconstruct Proto-Semitic (n.) **gu/in-*, **ʔwVgn-* ‘(area including) cheek-bone and eye-socket’ and Proto-Afrasian **gVn-* ‘cheek-bone; chin; parts of face’. They note: “Common Sem. status problematic; the Arb. data, however, are supported by Afras. (below). Syr. and Gur. forms are semantically difficult and may have different origin, while all MSA forms may be Arabisms ...”
 2. Blažek (2020:53) lists Beja / Beḍawye Hdd *gunúun* ‘jaw’ (BG) = *ginuun* ‘jaw, gum of teeth’ (Wd) = *genúun* and *ginúun* ‘gum of teeth’ (RP) = *genúun* ‘jaw, jawbone, mandible’ (Re) = *genúun* ‘jawbone’ (AI) = *o’guun* ‘gum(s)’ (Mu). For abbreviations, cf Blažek (2020:100).
- B. Dravidian: Tamil *cenni*, *cennai* ‘cheek’; Malayalam *cennam* ‘jaw, cheek’; Kota *keyn* ‘cheek just in front of the ear’; Kannaḍa *kenne* ‘the upper cheek’; Tuḷu *kenni*, *kennē* ‘cheek’. Burrow—Emeneau 1984:181, no. 1989.
- C. Proto-Indo-European **g^henu-* ‘jaw, cheek’: Sanskrit (f.) *hānu-h* (also *hānū*) ‘jaw, cheek’; Avestan *zānu-* ‘jaw’. Pokorny 1959:381—382 **ġenu-* and (**ġenadh-* :) **ġonadh-* ‘jaw, cheek’; Walde 1927—1932.I:587 **ġ(h)enu-s*; Mann 1984—1987:393—394 **ġenus* (**ġenuə*, **ġenəuə*, **ġenə*) ‘jaw, jowl, angle of the face, angle, wedge’; Watkins 1985:19 **ġenu-* and 2000:26 *ġenu-* ‘jawbone, chin’ (variant form **g(h)enu-*); Gamkrelidze—Ivanov 1984.I:183 **k’enu-s*, II:815 **k’enu-* and 1995.I:157 **k’enu-s*, I:715 **k’enu-* ‘jaw, chin’; Mallory—Adams 1997:322 **ġénu-* ‘jaw’ and 2006:174 **ġénu-* ‘jaw’, 176 **ġénu-*. Note: It appears that there were two variants in Proto-Indo-European: (1) **g^henu-* and (2) **k’enu-*. The first is found only in Indo-Iranian, while the second is found in the remaining daughter languages. It is only the first variant (provided it is not an Indo-Iranian innovation) that belongs here.

Buck 1949:4.207 jaw (Proto-Indo-European **ġenu-* ‘jaw, cheek, chin’); 4.208 cheek; 4.209 chin. Dolgopolsky 2008, no. 637, **genû* ‘jaw, cheek’.

390. Proto-Nostratic (n.) *g[e]n-d-a ‘virility, strength; a male (human or animal)’:

- A. Dravidian: Tamil *kaṇṭaṇ* ‘warrior, husband’, *kaṇṭi* ‘buffalo bull’, *kaṇavan* ‘husband’, *keṇṭaṇ* ‘robust, stout man’, *kiṇṭaṇ* ‘fat man, strong person’; Malayalam *kaṇṭan* ‘the male, especially of cat’, *kaṇavan* ‘husband’, *kiṇṭan* ‘big; a stout, bulky fellow’; Kota *gaṇḍ* ‘male’; Kannaḍa *gaṇḍu* ‘strength, manliness, bravery; the male sex, a male, man’, *gaṇḍa* ‘a strong, manly male person, a husband; strength, greatness’, *gaṇḍiga* ‘a valiant man’, *gaṇḍasa*, *gaṇḍasu*, *gaṇḍusa*, *gaṇḍusu* ‘male person’, *gaṇḍike* ‘prowess’, *geṇḍā* ‘husband’, *geṇḍu* ‘male’; Koḍagu *kaṇḍē* ‘male (of dogs and other animals, mostly wild; not of cats)’; Tuḷu *gaṇḍu* ‘male, valiant, stout’, *gaṇḍusu* ‘husband’, *gaṇḍūkāvi*, *gaṇḍustana*, *gaṇḍastana* ‘manliness’, *kaṇḍaṇi*, *kaṇḍaṇye* ‘husband’, *gaṇṭē*, *gaṇṭapuccē* ‘male cat’; Telugu *gaṇḍu* ‘bravery, strength, the male of the lower animals’, *gaṇḍūdu*, *gaṇḍādu* ‘a brave, strong man’; Malto *geṇḍa* ‘male’. Krishnamurti 2003:11 **kaṇṭ-a-* ‘male’, 169 **kaṇ-ṭV-* ‘warrior’, and 525 **kaṇṭ-anṭu* ‘husband, warrior’; Burrow—Emeneau 1984:111, no 1173. Dravidian loanword in Sanskrit *gaṇḍā-*, *gaṇḍīra-* ‘hero’ (cf. Mayrhofer 1956—1980.I:318). Perhaps also: Kota *geṇḍ kaṭ-* (*kac-*) ‘dog’s penis becomes stuck in copulation’; Kannaḍa *keṇḍa* ‘penis’; Gondi *geṭānā*, *gēṭ-* ‘to have sexual intercourse’, *gēṭ* ‘sexual intercourse’. Burrow—Emeneau 1984:177, no. 1949.
- B. Proto-Altaic **gendV* (~ **k-*) ‘male, self’: Proto-Mongolian **gendü* ‘male of animals’ > Written Mongolian *gendü(n)* ‘small male panther; male of animals in general; male tiger’; Khalkha *gendü* ‘a male tiger or leopard’; Buriat *gende* ‘male sable’; Kalmyk *gendṇ* ‘male of animals’. Proto-Turkic *[*g*]*entü* (-*nd-*) ‘self’ > Old Turkish (Orkhon, Old Uighur) *kentü* ‘self’; Karakhanide Turkic *kendü* ‘self’; Turkish *kendi* ‘self’; Azerbaijani *gendi* ‘self’; Yakut *kini* ‘he’; Dolgon *gini* ‘he’. Starostin—Dybo—Mudrak 2003: 541 **gentV* (~ **k-*) ‘male, self’; Poppe 1960:25; Street 1974:13 **gendü(n)* ‘male; self’.

Buck 1949:2.23 male; 3.12 male (of animals); 4.492 penis. Illič-Svityč 1965:362 **gāndā* [‘cameц’] and 1971—1984.I:226—227, no. 79, **gāndu* ‘male’ (Proto-Dravidian **kaṇṭ-*; Proto-Altaic **gāndü*); Dolgopolsky 2008, no. 643, **gændū* ‘male’. Note: The Afrasian forms cited by Dolgopolsky are problematic from a semantic perspective. Consequently, they are not included here. Semantically, this is a very attractive etymology. However, the lack of agreement between Dravidian and Altaic in the stem vowels is problematic. Both Illič-Svityč and Dolgopolsky try to get around this problem by positing a stem vowel **æ* (Illič-Svityč writes **ä*) in the Proto-Nostratic form. Rather, I think it more likely that one or the other of the branches has innovated — most likely Dravidian. Particularly telling are forms in Dravidian such as Tamil *keṇṭaṇ* ‘robust, stout man’, *kiṇṭaṇ* ‘fat man, strong person’, etc. If the Dravidian

words for ‘penis’ cited above are, indeed, related, they would provide further evidence that the original stem vowel was **e*.

391. Proto-Nostratic pronominal base of unclear deictic function **gi-* (~ **ge-*):

- A. Proto-Kartvelian **-g-* pronominal base of unclear deictic function in **e-g-*, **i-g-*: Georgian *e-g-e* ‘this, he, she, it’, *i-g-i* ‘he, she, it, that’; Svan [*e-ǰ-*] in the dialectal variants *e-ǰ-i*, *e-ǰ-e*, *e-ǰ-ä* ‘he, she, it, that’. Klimov 1964:57 **-g-* and 1998:24 **-g-* pronominal base of unclear deictic function; Fähnrich—Sardshweladse 1995:73 **-g-*; Fähnrich 2007:92 **g-*.
- B. Proto-Indo-European **-g^h-* pronominal base of unclear deictic function in (nom. sg.) **ǵe-g^h-* ‘I’, (dat. sg.) **me-g^h-* ‘to me’: Sanskrit (nom. sg.) *ahám* ‘I’, (dat. sg.) *máhya(m)* ‘to me’; Avestan (nom. sg.) *azəm* ‘I’; Old Persian (nom. sg.) *adam* ‘I’; Latin (dat. sg.) *mihi* ‘to me’; Umbrian (dat. sg.) *mehe* ‘to me’; (?) Old Church Slavic (nom. sg.) *azъ* ‘I’. Sihler 1994:369—382; Burrow 1973:263—269. Meier-Brügger (2003:226) assumes dissimilation of **me-b^{hej}* to **me-g^{hej}* in the dative sg. Preserved as an independent pronominal stem in Latin *hīc*, *haec*, *hōc* ‘this, this one here’. Palmer 1954:255—256; Ernout—Meillet 1979:293; Lindsay 1894:430.
- C. Chukchi-Kamchatkan: Chukchi *-γ-* in *-iγəm* ~ *-eyəm* ‘I’ (shorter forms: *γəm* ~ *γəm*), (sg.) *γət* ‘thou’. Greenberg 2000:78—79; Fortescue 2005: 142—143 and 146—147; Mudrak 1989b:109 **xəm*, **xəmn-* ‘I’.

Greenberg 2000:77—81.

392. Proto-Nostratic root **gib-* (~ **geb-*):

(vb.) **gib-* ‘to bestow upon, to give’;

(n.) **gib-a* ‘gift’

- A. Proto-Afrasian **g[i]b-* ‘to bestow upon, to give’: Proto-Semitic (**gib-* > **g^vib-* > **d^vib-* > **zab-* [~ secondary *a*-grade form: **zab-*] >) **zab-ad-* ‘to bestow upon, to give’ > Hebrew *zāḇaḏ* [זָבַד] ‘to bestow upon, to endow with’, *zeḇeḏ* [זֶבֶד] ‘endowment, gift’; Aramaic *zāḇaḏ* ‘to bestow upon’; Arabic *zabada* ‘to bestow upon, to give little’; Sabaeen *zbd* ‘gift’. Murtonen 1989:160; Klein 1987:193. Egyptian (**gib-* > **g^vib-* > **d^vib-* >) *ḏb*, *ḏb³* ‘to supply, to furnish with, to equip, to provide’; Coptic *tōḏbe* [ⲧⲟⲩⲃⲉ] ‘(vb.) to repay, to requite; (n.) requital, repayment’. Hannig 1995:1002; Faulkner 1962:321; Erman—Grapow 1921:219 and 1926—1963.5:555—556; Vycichl 1983:211; Černý 1976:181.
- B. Proto-Indo-European **g^{hebh-}* ‘to give’: Proto-Germanic **geḅan* ‘to give’ > Gothic *giban* ‘to give’, **fra-gifts* ‘presentation, betrothal’; Runic (1st sg. pres.) *gibu* [𐌵𐌿𐌲] ‘I give’; Old Swedish *giva* ‘to give’; Old Danish *give* ‘to give’; Old Icelandic *gefa* ‘to give’, *gjöf* ‘gift’; Old English *giefan* ‘to give’, *giefu* ‘gift’; Old Frisian *geva* ‘to give’, *geve* ‘gift’; Old Saxon *geḅan* ‘to

give', *geba* 'gift'; Dutch *geven* 'to give'; Old High German *geban* 'to give' (New High German *geben*), *geba* 'gift', *gift* 'gift; poison' (New High German *Gift*). Rix 1998a:172 **g^{he}bh-* 'to take, to seize, to give'; Pokorny 1959:407—409 **ghabh-* 'to take, to seize'; Walde 1927—1932.I:344 **ghabh-*; Watkins 1985:20 **ghabh-* (also **ghebh-*) and 2000:28 **ghabh-* (also **ghebh-*) 'to give or receive'; Orël 2003:130 Proto-Germanic **gebānan*, 130 **gebō*, 130 **gebōn*, 130 **geftiz*, 130 **geftjanan*; Kroonen 2013:172—173 Proto-Germanic **geban-* 'to give' and 173 **gebō-* 'gift, present'; Feist 1939:214; Lehmann 1986:155 probably from **ghabh-* 'to take, to grasp'; De Vries 1977:160 and 171; Onions 1966:397 Common Germanic **geftiz* and 399 Common Germanic **geban*; Klein 1971:311 and 313 **ghab(h)-* 'to take, to hold, to have; to give'; Kluge—Mitzka 1967:227 (New High German *Gabe* 'gift'), 237 **ghabh-*, and 258; Kluge—Seebold 1989:240 (New High German *Gabe* 'gift'), 249, and 267; Boutkan—Siebinga 2005:204—205; Falk—Torp 1903—1906.I:225. Two separate stems must be reconstructed for Proto-Indo-European: (1) **g^habh-* 'to grab, to seize' and (2) **g^{he}bh-* 'to give', which is preserved only in Germanic.

Buck 1949:11.21 give. Bomhard—Kerns 1994:459, no. 304.

393. Proto-Nostratic root **gid-* (~ **ged-*) or **gid-* (~ **ged-*):

- (vb.) **gid-* or **gid-* 'to force, drive, or press together; to join; to unite; to gather (together); to collect';
- (n.) **gid-a* or **gid-a* 'force, compulsion; collection, heap; union'; (adj.) 'pressed close together, near, united'

- A. Proto-Afrasian **gid-* 'to force, drive, or press together; to join; to unite; to gather (together); to collect': Proto-Semitic **gad-ad-* 'to force, drive, or press together; to join; to unite; to gather (together); to collect' > Hebrew *gāḏaḏ* [גָּדַד] 'to gather in bands or troops', *gəḏūḏ* [גְּדוּד] 'band, troop'; Phoenician (pl.) ?*gddm* 'troops'; Akkadian **gudūdu* 'military detachment' (Hebrew loan); Geez / Ethiopic *gadada* [ገደደ] 'to force, to compel, to be cruel, to be deformed', *gədud* [ግደድ] 'serious, severe, impure, dirty', *bagədud* [በግደድ] 'by force'; Tigre *gədd* 'compulsion, force'; Tigrinya *gädädä* 'to force, to compel', (*bä*)*gäddi* 'compulsory'; Amharic *gäddädä* 'to force, to oblige'; Harari *gädäd* 'stubborn'; Gurage (Soddo) (*ag*)*giddädä* 'to force someone to do something'. D. Cohen 1970—:99—100; Murtonen 1989:127; Klein 1987:91 (different from *gāḏaḏ* 'to cut'); Leslau 1979:262 and 1987:181 (not derived from Semitic **gdd* 'to cut'). Egyptian (**gid-* > **g^vid-* > **d^vid-* >) *ḏdb* 'to gather; to assemble, to come together (people); *to heap or pile up', *ḏdmt* / *ḏidma-t* 'heap, pile'; Coptic (Sahidic) *ḡatme* [Ⲭⲁⲩⲙⲉ], (Akhmimic) *ḡetme* [Ⲭⲉⲩⲙⲉ] 'heap (of grain)'. Hannig 1995:1019; Erman—Grapow 1921:223 and 1926—1963.5:632 and 5:634; Černý 1976:321; Vycichl 1983:332. Highland East Cushitic: Hadiyya

gidd-is- ‘to compel, to force; to persuade’; Kambata *gidd-is-* ‘to order’. Hudson 1989:279 and 318.

- B. Dravidian: Tamil *kiṭṭu* (*kiṭṭi-*) ‘to draw near (in time or place); to be on friendly terms with; to be attained, accomplished; to be clenched (as the teeth in lockjaw); to approach, to attack, to meet, to tie, to bind’, *kiṭṭa* ‘near, close by’, *kiṭṭam* ‘nearness, vicinity’, *kiṭṭi* ‘clamps (used in torture, etc.)’, *kiṭṭinar* ‘relations, friends, associates’, *kiṭai* (*-pp-*, *-tt-*) ‘(vb.) to be obtained, found; to come into one’s possession; to join, to come together; to approach, to encounter; to oppose; (n.) comparison, likeness, equality’; Malayalam *kiṭa* ‘approach, match, equality’, *kiṭayuka* ‘to knock against, to quarrel, to be found or obtained’, *kiṭaccal* ‘meeting, quarrelling’, *kiṭekka* ‘to be obtained, to engage in’, *kiṭṭuka* ‘to come to hand, to be obtained, to reach’, *kiṭṭam* ‘vicinity, nearness’, *kiṭṭi* ‘torture by pressing the hands between two sticks’; Toda *kiṭ-* (*kiṭy-*) ‘to be caught (in crowd, by buffalo’s horns, by promise that one must keep, etc.)’, *kiṭ-* ‘vicinity’; Kannaḍa *kiṭṭu* ‘to touch, to reach, to come to hand, to be obtained’, *giṭṭisu* ‘to cause oneself to be reached’, *kiṭṭi* ‘torture in which hands, ears, or noses are pressed between two sticks’, *kiṭṭu* ‘touching, approach’; Koḍagu *kiṭṭ-* (*kiṭṭi-*) ‘to be gotten, to come into possession of’; Tuḷu *kiṭṭa* ‘proximity; near’, *giṭṭu* ‘proximate, near’; Koraga *kiṭṭi* ‘to touch’; Telugu *kiṭṭu* ‘to approach, to draw near, to agree, to suit’; Malto *kiṭe* ‘near, nigh’. Burrow—Emeneau 1984:141—142, no. 1538.
- C. Proto-Indo-European **ghedh-* (secondary *o*-grade form: **ghodh-*) ‘to force, drive, or press together; to join; to unite; to gather (together); to collect’: Sanskrit *gadh-* ‘to cling to, to hang on to’, *gādhyā-h-* ‘seized or gained as booty’; Gothic *gadiliggs* ‘cousin’; Old Frisian *gadia* ‘to unite’, *gadur* ‘together’; Old English *gadrian*, *gaderian* ‘to gather together, to collect, to store up’, *gaderung* ‘assembly’, *gadere* ‘together’, *gada*, *gegada* ‘companion, associate’, *gaderwist* ‘association, intercourse’, *gadrigendlic* ‘collective’, *gæd* ‘fellowship’, *gædeling* ‘companion, kinsman’, *geador*, *tō-gædere* ‘together’; Middle Dutch *gaderen* ‘to come together, to unite’; Old High German *be-gatōn* ‘to come together, to unite’, *gatiling* ‘relative’; New High German *begatten* ‘to pair, to mate, to copulate’, *Gatte* ‘husband’, *Gattin* ‘wife’, *gatten* ‘to match, to pair, to couple, to unite, to copulate’; Old Church Slavonic *godb* ‘time’. Pokorny 1959:423—424 **ghedh-*, **ghodh-* ‘to unite’; Walde 1927—1932.I:531—533 **ghadh-*; Mann 1984—1987:327—328 **ghodh-* ‘to fit, to meet, to join; apt, fitting’; Watkins 1985:21 **ghedh-* and 2000:28 **ghedh-* ‘to unite, to join, to fit’; Gamkrelidze—Ivanov 1984.I:146, fn. 2, I:154 **g[h]ed[h]-*/**g[h]od[h]-* and 1995.I:126, fn. 69, and I:133 **ghedh-*/**ghodh-* ‘to unite’; Mallory—Adams 1997:64 **ghedh-* ‘to join, to fit together’; Mayrhofer 1956—1980.I:320—321; Orël 2003:121—122 Proto-Germanic **ḡadilīnḡaz* (also **ḡadōjanan*); Kroonen 2013:163 Proto-Germanic **ḡadurōjan-* ‘to gather’; Lehmann 1986:136 **ghadh-* ‘to unite, to fit together’; Feist 1939:178—179 **ghodh-*;

Kluge—Mitzka 1967:235; Kluge—Seebold 1989:246—247; Derksen 2008:172—173.

- D. Yukaghir (Northern / Tundra) *kit̃ie-* ‘to choke, to suffocate’. Nikolaeva 2006:214.
- E. Altaic: Manchu *gida-* ‘to press, to crush, to roll flat; to stamp (a seal); to force, press, or compel someone to do something; to quell, to crush, to defeat; to raid, to plunder; to suppress, to hold back (laughter)’, *gidabun* ‘suppression, defeat’.

Buck 1949:11.14 seize, grasp, take hold of; 12.21 collect, gather; 19.48 compel. Bomhard—Kerns 1994:384—385, no. 221.

394. Proto-Nostratic root **gil-* (~ **gel-*):

(vb.) **gil-* ‘to glide, to slip, to slide’;

(n.) **gil-a* ‘gliding, sliding’; (adj.) ‘smooth, slippery’

- A. Kartvelian: Georgian *gl-u-* ‘slippery’.
- B. Proto-Indo-European **gʰl-ey-/ *gʰl-oy-/ *gʰl-i-* ‘to glide, to slip, to slide’: Swedish *glinta* ‘to glide, to slip’; Old English *glīdan* ‘to glide, to slip’, *glidder* ‘slippery’; Old Frisian *glīda* ‘to glide’; Old Saxon *glīdan* ‘to glide’; Dutch *glijden* ‘to glide’; Old High German *glītan* ‘to glide, to slip’ (New High German *gleiten*). Pokorny 1959:433 **gʰleidh-* ‘to glide, to slip’; Walde 1927—1932.I:627 **gʰleidh-*; Watkins 1985:21 **ghel-* ‘to shine’ and 2000:29 **ghel-* ‘to shine’: “19. Possibly distantly related to this root is Germanic **glīdan* ‘to glide’”; Orël 2003:136 Proto-Germanic **glīdanan*; Kroonen 2013:181 Proto-Germanic **glīdan-* ‘to glide’; Onions 1966:401 West Germanic **glīdan*; Klein 1971:314; Kluge—Mitzka 1967:261; Kluge—Seebold 1989:269.
- C. Uralic: Proto-Finno-Ugrian **kil̥z* (**kül̥z*) ‘smooth, slippery’ > Zyrian / Komi (Sysola) *gylyd* ‘smooth, slippery’; Votyak / Udmurt (Sarapul) *gylyt* ‘slippery’, (Malmyž) *gylyd* ‘smooth, slippery’; Ostyak / Xanty (Obdorsk) *kuli* ‘smooth’. Rédei 1986—1988:156 **kil̥z* (**kül̥z*). Yukaghir (Southern / Kolyma) (*ña:čədə-*) *killəbə-* ‘to fall down and roll; to skim the water (of a stone)’. Nikolaeva 2006:210.

Buck 1949:10.42 slide, slip (vb.). Bomhard—Kerns 1994:455, no. 300; Dolgopolsky 2008, no. 625, **gU/[E]hU* ‘to be smooth’.

395. Proto-Nostratic root **gil-* (~ **gel-*):

(vb.) **gil-* ‘to freeze’;

(n.) **gil-a* ‘ice’

- A. Afrasian: Semitic **gal-ad-* ‘to freeze’ > Arabic *ḡalida* ‘to freeze, to be frozen’, *ḡalīd* ‘ice’, *ḡalīdī* ‘icy, ice-covered, glacial, ice; snow-covered’,

muğallad ‘icy, frozen, ice-covered’; Modern Hebrew *gālaḏ* [גָּלַד] ‘to freeze, to congeal, to jell’, *gālīḏ* [גָּלִיֵּד] ‘ice’; Jewish Palestinian Aramaic *gālīḏā* ‘ice’; Syriac *ʿaglīḏā* ‘cold, frozen’. D. Cohen 1970— :119; Murtonen 1989:134; Klein 1987:99.

- B. Proto-Indo-European **g^helHt-*/**g^hlHt-* ‘ice, hail’: Greek *χάλαζα* ‘hail’; Old Church Slavic *žlédica* ‘freezing rain’; Ukrainian *ózeled* ‘rain mixed with snow; ice-covered branches’; Polish (obsolete) *žlódz* ‘frozen rain; ice-covered ground’; Polabian *zlod* ‘hail’; Slovenian *žléd* ‘ice-covered ground’; Latvian *dzeldēt* ‘to harden (of snow)’; Farsi *žāla* (< **žarda-* < **g^helH₂-d-*) ‘hail, hoarfrost’. Pokorny 1959:435 **ghelad-* ‘ice’; Walde 1927—1932.I:629—630 **ghelad-*; Mallory—Adams 1997:287 **ghel(h₂)-d- ~ *ghl(h₂)-ed- ?* ‘hail’; Watkins 1985:22 **ghelad-* and 2000:29 **ghelad-* ‘hail’; Beekes 2010.II:1608 **ghlh₂-d-*; Boisacq 1950:1047; Hofmann 1966:410 **ghelad-*; Chantraine 1968—1980.II:1241—1242; Frisk 1970—1973.II:1065—1066 **ghelad-*; Derksen 2008:555 **g^helh₂-d-*.
- C. Altaic: Proto-Tungus **gil-* ‘cold’ > Evenki *gildi* ‘cold’; Lamut / Even *gilrḡ* ‘cold’; Negidal *gīlīgdī* ‘cold’; Ulch *gītūlī*, *gītīsī* ‘cold’; Oroch *gīčūlī* ‘cold’; Nanay / Gold *gīčīsī* ‘cold’; Oroch *gīči-si* ‘cold’; Udihe *gīlihi* ‘cold’. Starostin—Dybo—Mudrak 2003:545 **gīlo* ‘cold’. Note: The putative Turkic cognates meaning ‘winter’ cited by Starostin—Dybo—Mudrak have not been included here due to problems with the phonetics.
- D. Proto-Chukchi-Kamchatkan **kil(kil)* ‘ice’: Chukchi *yilyil* ‘sea ice, ice floe’; Kerek *hilyil* ‘(sea) ice, ice covered with snow, ice floe’; Koryak *yilyil* ‘ice’; Alyutor *yilyil*, *kityəl* ‘ice’; Kamchadal / Itelmen *ketvol* ‘ice’. Fortescue 2005:137.

Buck 1949:1.77 ice; 15.86 cold. Dolgopolsky 2008, no. 628, **gil[V#]ʔV[d]V* ‘ice, frost; to freeze’ (and **gilV* ‘ice, frost’).

396. Proto-Nostratic root **gin-* (~ **gen-*) or **gin-* (~ **gen-*):

(vb.) **gin-* or **gin-* ‘to be young, small, weak’;

(n.) **gin-a* or **gin-a* ‘youth, young one’; (adj.) ‘young, small, weak’

- A. Afrasian: Egyptian *gnn* ‘to be weak, soft’, *gnnwt* ‘weakness’ (?); Coptic *čnon* [GNON] ‘to become soft, smooth, weak’. Hannig 1995:901; Faulkner 1962:290; Gardiner 1957:598; Erman—Grapow 1921:198 and 1926—1963.5:174—175; Černý 1976:332; Vycichl 1983:342.
- B. Dravidian: Toda *kin* ‘small’; Kannaḍa *kiṇkini beraḷu* ‘little finger’; Koḍagu *kiṇṇē* ‘boy’; Tuḷu *kinni* ‘small, young; the young of an animal, smallness’, *kinyavu* ‘the young of an animal, a little thing’, *kinyappē* ‘mother’s younger sister’, *kinyamme* ‘father’s younger brother’, *kinkana*, *kiṇkaṇa* ‘a little’, *kiṇṇṇṇṇṇ*, *kinaru*, *kinalu* ‘a little bit’; Koraga *kinnige* ‘younger one’, *kinyo* ‘small’. Burrow—Emeneau 1984:147, no. 1603.

Sumerian *gen* ‘small’, *genna* ‘child’, *genna* ‘young, small’, *gina* ‘heir, child, son’, *gina* ‘small, weak’, *ginna* ‘child’. (Sumerian loanword in Akkadian *ginū* ‘infant, child’.)

Buck 1949:4.82 weak; 12.56 small, little; 14.14 young. Bomhard 1996a:221—222, no. 630.

397. Proto-Nostratic root **gin-* (~ **gen-*):

(vb.) **gin-* ‘to grind, to pound, to break or crush into pieces’;

(n.) **gin-a* ‘the act of grinding, pounding, crushing’

- A. Proto-Afrasian **gin-* ‘to grind, to pound’: Egyptian (**gin-* > **gʷin-* > **dʷin-* >) *ḏn* ‘to grind’. Hannig 1995:1007; Erman—Grapow 1926—1963.5:575. East Chadic **gin-* ‘to pound’ > Somray *gine* ‘to pound’; Ndam *gəna* ‘to pound’; Tumak *gən* ‘to pound’; Dangla *igina* ‘to pound’. Orël—Stolbova 1995:209, no. 927, **gin-* ‘to grind, to pound’.
- B. Dravidian: Kodagu *kinn-* (*kinni-*) ‘to tear into strips (rags, plantain, or screwpine leaves)’; Kolami *kini-* (*kinit-*) ‘to break into pieces (intr.)’, *kink-* (*kinikt-*) ‘to break into pieces (tr.)’; (?) Naiki (of Chanda) *kinup-* ‘to break, to crack knuckles’. Burrow—Emeneau 1984:147, no. 147.
- C. Proto-Indo-European (**ghen-*/**ghn-*) ‘to gnaw, to rub or scrape away, to pulverize, to grate’: Greek *χναύω* ‘to nibble’, *χναῦμα* ‘slice, tidbit’, (Hesychius) *χνίειν* ‘to break or crush into small pieces’; Avestan *aiwi-ynixta-* ‘gnawed, nibbled, eaten’; Old Icelandic *gnaga* ‘to gnaw’, *gniða* ‘to rub, to scrape’, *gnista* ‘to gnash the teeth, to snarl’, *gnastan* ‘a gnashing’, *gnist* ‘a gnashing’, *gnistan* ‘gnashing of the teeth’, *gnúa* ‘to rub’; Swedish *gnaga* ‘to gnaw’, *gnissla* (dial. *gnist*) ‘to grate’, *gnō* ‘to rub’; Old Danish *gnistre* ‘to grate’; Old English *gnagan* ‘to gnaw’, *gnīdan* ‘to rub, to pulverize’, *gnidel* ‘pestle’; Middle English *gnāsten* ‘to gnash the teeth together’, *gnāstinge* ‘gnashing’, *gnacchen* ‘to gnash’; East Frisian *gnīsen*, *knīsen* ‘to gnash the teeth’; Old Saxon *gnagan* ‘to gnaw’; Dutch *knagen* ‘to gnaw’; Old High German *gnagan*, *nagan* ‘to gnaw’ (New High German *nagen*). Pokorny 1959:436—437 **ghen-* ‘to gnaw, to rub or scrape away, to pulverize, to grate’; Walde 1927—1932.I:584—585 **ghen-*; Mann 1984—1987:326 **ghnaghō*, *-iō* ‘to gnash, to gnaw’, 326 **ghnauuō* (**ghnauō*, **ghnūuō*), *-iō* ‘to rub, to scrape’; Watkins 1985:22 **ghen-* and 2000:29 **gh(e)n-* ‘to gnaw’; Boisacq 1950:1064 **ghnəu-* (stem **ghnēu-*), along with **ghn-eu-*, **ghn-ou-* and 1064—1065 **ghnēi-*, **ghnī-*; Frisk 1970—1973.II:1106 and II:1106—1107; Chantraine 1968—1980.II:1265; Hofmann 1966:420 **ghnēu-*, **ghnēi-*; Beekes 2010.II:1639; Kroonen 2013:183 Proto-Germanic **gnagan-* ‘to gnaw’ and 183 **gnīdan-* ‘to rub’; Orël 2003:137—138 Proto-Germanic **ḡnaḡanan*, 138 **ḡnīdanan*; De Vries 1977:177—178 **ghen-*, 179 **ghen-*, and 180 **ghneu-*; Falk—Torp

1903—1906.I:240; Onions 1966:403; Klein 1971:316; Kluge—Mitzka 1967:501; Kluge—Seebold 1989:498.

Buck 1949:4.58 bite (vb.); 5.56 grind; 9.26 break (vb. tr.).

398. Proto-Nostratic root **gir-* (~ **ger-*):

(vb.) **gir-* ‘to gird, to enclose’;

(n.) **gir-a* ‘enclosure, fence, wall’

- A. Proto-Afrasian **gir-* ‘to gird, to enclose’: Proto-Semitic (**gir-* > **g^vir-* > **d^vir-* > **zar-* [~ secondary *a*-grade form: **zar-*] >) **zar-* (**a-zar-*, **zar-ar-*) ‘to gird’ > Arabic *zarra* ‘to button up’, *ʔazara* ‘to surround’; Hebrew *zēr* [זֶר] ‘circlet, border’, *zarzār* [זֶרְזָר] ‘girded, girt’, *ʔāzar* [אָזַר] ‘to gird, to encompass, to equip’, *ʔezōr* [אֶזֶר] ‘waistcloth’; Ugaritic *mīzrt* ‘wrap, shawl’; Ḥarsūsi *wezār* ‘waistcloth’; Šheri / Jibbāli *zerr* ‘to tie tightly, to pull (a rope) tight’; Mehri *zar* ‘to fix, to secure’. Murtonen 1989:86 and 169; Klein 1987:16 and 203; D. Cohen 1970— :14. Egyptian (**gir-* > **g^vir-* > **d^vir-* >) *ḏri* ‘to constrain, to enclose, to fortify’, *ḏr* (later variant *ḏrit*) ‘wall, enclosure’. Hannig 1995:1012—1013; Faulkner 1962:323; Gardiner 1957:604; Erman—Grapow 1926—1963.5:598. Proto-Berber (**gir-* > **g^vir-* > **d^vir-* >) **dar-* > Tawlemmet *adər* ‘to keep, to support, to maintain’, *asədər* ‘a rope used to hold another’; Nefusa *ədri* ‘to close’; Tashelhiyt / Shilha *idri* ‘rack’; Kabyle *adar* ‘row, line’.
- B. Dravidian: Tamil *ceri* (-*pp-*, -*tt-*) ‘to join together, to tighten, to shut, to close, to block up, to secure, to store up, to pack closely’, *cirai* ‘to restrain, to imprison, to dam up’; Malayalam *cerukkuka* ‘to dam up, to enclose, to oppose, to prevent’, *cira* ‘dam, enclosure, limit, tank, reservoir’; Kannada *kir-* (*kett-*) ‘to confine, to close, to shut, to block up, to make a fence, to cover’; Telugu *cera* ‘prison, imprisonment’, *kiriya* ‘to be tight’; Koḍagu *kere* ‘tank’; Koṇḍa *ker-* ‘to close, to shut (as a door, box, etc.), to build a wall (as enclosure)’; Kui *ker-* ‘to fence’. Burrow—Emeneau 1984:180, no. 1980.
- C. Proto-Indo-European **gher-/g^hir-* (secondary *o*-grade form: **g^hor-*) ‘to gird, to enclose’: Sanskrit *grhá-h* ‘house’; Greek *χότρος* ‘enclosed place’; Albanian *gardh* ‘fence’; Latin *hortus* ‘garden’, *cohors* ‘enclosure, yard’; Oscan *húrz* ‘enclosed place’; Gothic *bi-gairdan* ‘to gird’, *uf-gairdan* ‘to gird up’, *gairda* ‘girdle’, *gards* ‘house, family’; Old Icelandic *garðr* ‘fence, wall’, *gyrða* ‘to gird (with a belt)’, *gyrðill* ‘girdle’, *gerð* ‘gear, harness’, *gerða* ‘to fence in’; Swedish *gjorda* ‘to gird’; Old English *geard* ‘fence, enclosure’, *gyrdan* ‘to gird’, *gyrdel* ‘girdle, belt’; Old Frisian *gerda* ‘to gird’; *gertel* ‘girdle, belt’, *garda* ‘garden’; Old Saxon *gurdian* ‘to gird’, *gard* ‘enclosure’, *gardo* ‘garden’; Dutch *gorden* ‘to gird’, *gordel* ‘girdle’, *gaard* ‘garden’; Old High German *gurtan*, *gurtan* ‘to gird’ (New High German *gürten*), *gurtel* ‘girdle, belt’ (New High German *Gürtel*), *gart*

‘circle’, *garto* ‘garden’ (New High German *Garten*); Lithuanian *gar̃das* ‘enclosure’; Old Church Slavic *gradъ* ‘city’. Rix 1998a:176 **gherdh-* ‘to enclose, to gird’; Pokorny 1959:442—443 **gher-* ‘to grasp, to seize, to enclose’, 444 **gherdh-* (and **gherdh-*) ‘to embrace, to enclose, to encompass’; Walde 1927—1932.I:603—604 **gher-*; Mann 1984—1987:331 **ghordhos* ‘fortified place, walled enclosure’, 331 **ghoros* ‘enclosure, envelope’, 332 **ghortos, -is, -us* ‘enclosure’, 415 **gherdhō* ‘to clasp, to embrace’; Mallory—Adams 1997:199 **ghórdhos* (**ghórtos* ~ **ghórdhos*) ‘fence, hedge; enclosure, pen, fold’; Watkins 1985:22 **gher-* and 2000:30 **gher-* ‘to grasp, to enclose’; Gamkrelidze—Ivanov 1984.II:744 **g[h]erd[h]-* and 1995.I:647 **gherdh-* ‘fence’, **gher-/gher-* ‘to fence in, to surround’; Mayrhofer 1956—1980.I:344; Frisk 1970—1973.II:1113—1114 **ghorto-*; Boisacq 1950:1067—1068 **gher-*; Beekes 2010.II:1644—1645 **ghor-t-*; Hofmann 1966:422 **ghortos, gher-dh-*; Chantraine 1968—1980.II:1270—1271 **gher-*; Ernout—Meillet 1979:131 and 300 **ghert-, ghortó-*; Walde—Hofmann 1965—1972.I:242—243 **gher-, ghor-tos* and I:660 **ghor-to-, ghor-dho-*; De Vaan 2008:290—291; Kroonen 2013:169 Proto-Germanic **garda-* ‘courtyard’; Orël 1998:110 and 2003:126—127 Proto-Germanic **gardaz*, 127 **gardjan*, 127 **gardōn*, 146—147 **gurdaz*, 147 **gurdilaz*, 147 **gurdjanan*; Feist 1939:99 **gherdh-*, 185—186 **ghert-, gherdh-* (**gherdh-*), and 197—198 **gherdh-*; Lehmann 1986:68 **gherdh-*, 140 **gherdh-*, and 147—148 **gherdh-*; De Vries 1977:156, 164, and 197; Onions 1966:389, 399, and 1018; Klein 1971:304, 312, and 836 **ghor-to-, ghor-dho-, gher-*; Kluge—Mitzka 1967:233—234 **ghordho-* and 277 **gherdh-*; Kluge—Seebold 1989:245—246 **ghortó-* and 282 **gherdh-*; Boutkan—Siebinga 2005:136—137; Fraenkel 1962—1965.I:135—136; Derksen 2008:178 **ghordh-o-* and 2015:164—165 **ghordh-o-*; Smoczyński 2007.I:157—158.

Sumerian *gir₁₁* ‘to tie on, to tie together, to join together; to harness’.

Buck 1949:6.57 belt, girdle; 7.15 yard, court. Bomhard—Kerns 1994:458, no. 303.

399. Proto-Nostratic root **gir^y-* (~ **ger^y-*):

(vb.) **gir^y-* ‘to be or become old’;

(n.) **gir^y-a* ‘old age, old person’; (adj.) ‘old’

- A. Proto-Afrasian **ger-* ‘to be or become old’: Proto-East Cushitic **gerʃ-* ‘to become old’ > Galla / Oromo *jaar-sa* ‘to become old’; Gidole *kerʔ-* ‘to become old’; Sidamo *geed-, geedd-* (< **geer-d-*) ‘to grow old (of people)’, (pl.) *geerra* ‘old men, elders’, *geer-co* ‘old man, old woman’; Gedeo / Darasa *geer-co* ‘old man, old woman’, (pl.) *geeʔre* ‘old men’. Hudson 1989:107; Sasse 1979:37. Proto-Chadic **garə* ‘to grow old’ > Kirfi *gaaro*

‘old’; Ngizim *gàrú* ‘to grow old’; Tera *gorə* ‘to grow old’. Newman 1977:27. Takács 2011a:197 **g-r* ‘old’; Ehret 1995:186, no. 284, **gerf-* ‘to become old’.

- B. Dravidian: Tamil *kīram*, *kīraṭu* ‘old age; aged person, animal, or thing (contemptuous)’, *kīramai*, *kīravu* ‘old’, *kīraṇ*, *kīraṇōṇ* ‘old man’, (f.) *kīravi* ‘old woman’, *kīraṇ* ‘old fellow’ (used in contempt), (f.) *kīraṭi* ‘old lady’ (used in contempt); Malayalam *kīraṇ* ‘old man’, (f.) *kīravi*, *kīraṭti* ‘old woman’; Kannaḍa *keṛava*, *keṛiva* ‘old man’; Tuḷu *kīru* ‘ancient, old’. Burrow—Emeneau 1984:145, no. 1579.
- C. (?) Proto-Indo-European **ghr-eH-* (> **ghr-ē-*) ‘gray-haired, old’: Proto-Germanic **grēwaz* ‘gray, gray-haired’ > Old Icelandic *grár* ‘gray, gray-haired’; Faroese *gráur* ‘gray’; Norwegian *graa* ‘gray’; Danish *graa* ‘gray’; Old Swedish *grā* ‘gray’ (Modern Swedish *grå* ‘gray’); Old English *græg* ‘gray’; Old Frisian *grē* ‘gray’; Dutch *grauw* ‘gray’; Old High German *grāo* ‘gray’ (New High German *grau* ‘gray’). Watkins 2000:30 **gh(e)r-* ‘to shine, to glow; gray’; Orël 2003:142 Proto-Germanic **grēwaz*; Kroonen 2013:189 Proto-Germanic **grēwa-* ‘grey’; De Vries 1977:185 **ghrēj-*, **ghrēu-*; Torp 1919:178; Onions 1966:413 **ghrēghwos*; Klein 1971:322; Falk—Torp 1903—1906.I:242—243 Germanic stem **grāwa-*; Kluge—Mitzka 1967:268; Kluge—Seebold 1989:276. Old Frisian *grīs* ‘gray’; Old Saxon *grīs* ‘gray’; Dutch *grijs* ‘gray’; Old High German *grīs* ‘gray’; Middle High German *grīse* ‘old man’ (New High German *Greis*). Kluge—Mitzka 1967:269; Kluge—Seebold 1989:277; Orël 2003:143 Proto-Germanic **grīsaz*; Kroonen 2013:191 Proto-Germanic **grīsa-* ‘grey’.

Buck 1949:14.15 old.

400. Proto-Nostratic root **gir^y-* (~ **ger^y-*) or **gir^y-* (~ **ger^y-*):
- (vb.) **gir^y-* or **gir^y-* ‘to move, to move swiftly, to hasten, to hurry; to run, to flow; to go, to walk’;
- (n.) **gir^y-a* or **gir^y-a* ‘movement, flow, flux, step, course’
- A. Proto-Afrasian **gir-* ‘to move, to move swiftly, to hasten, to hurry; to run, to flow’: Proto-Semitic **gar-ay-* ‘to move, to move swiftly, to hasten, to hurry; to run, to flow’ > Arabic *ġarā* ‘to flow, to stream (water); to run; to hurry, to rush, to hasten; to blow (wind); to take place, to come to pass, to happen, to occur; to be under way, to be in progress, to be going on (work); to befall, to happen; to be in circulation, to circulate, to be current; to wend one’s way, to head (for); to proceed; to follow, to yield, to give way; to entail; to run or be after something, to seek to get something’, *ġary* ‘course’, *ġarrā?* ‘runner, racer’, *ġarayān* ‘flow, flux; course; stream’, *ġārin* ‘flowing, streaming, running; circulating’, *maġran* ‘course, stream, rivulet, gully; torrent or flood of water’; Syriac *gərā* ‘to run, to flow’. D. Cohen 1970—:187; Zammit 2002:121—122. Berber: Riff *uġur* ‘to go, to walk’;

Iznasen *uyur* ‘to go, to walk’. West Chadic **gura*?- ‘to come; to go around’ > Dera *gur*- ‘to come’; Bokkos *gara*?- ‘to go around’. Central Chadic **gwar*- (< **gura*-) ‘to go into; to return; to follow’ > Tera *gari*- ‘to return’; Hildi *gwar*- ‘to go into’; Logone *gar*- ‘to go into’; Banana *gwara*- ‘to follow’. East Chadic **gVr*- ‘to come’ > Sibine *gar*- ‘to come’. Cushitic: Beja / Beɣawye ?*agir*-, ?*agar*- ‘to return’. Highland East Cushitic: Hadiyya *geer*- ‘to run’. Hudson 1989:279. Orël—Stolbova 1995:211, no. 934, **gir*-/**gur*- ‘to go, to run’.

- B. Proto-Indo-European **ghr-edh*-/**ghr-odh*-/**ghy-dh*-, **ghr-ey-dh*-/**ghr-oy-dh*-/**ghr-i-dh*- ‘to walk, to step’: Latin *gradior* ‘to step, to walk’, *gradus* ‘a step’; Old Irish *in-grenn*- ‘to pursue’; Gothic *grips* ‘standing’; Middle High German *grit* ‘step, stride’, *griten* ‘to straddle’; Lithuanian *gridiju*, *gridyti* ‘to wander about’; Old Church Slavic *grędō*, *gręsti* ‘to come, to journey’; Russian (obsolete) *grjadú* [гряду], *grjastí* [грести] ‘to approach’. Rix 1998a:181 (?) **ghrejdh*- ‘to walk, to step’; Pokorny 1959:456—457 **ghredh*- ‘to walk, to step’; Walde 1927—1932.I:651—652 **ghredh*-; Watkins 1985:23 **ghredh*- and 2000:32 **ghredh*- ‘to walk, to go’; Mallory—Adams 1997:546 **ghredh*- ‘to step, to go’; Ernout—Meillet 1979:279—280; Walde—Hofmann 1965—1972.I:615—616 **ghredh*-; De Vaan 2008:268—269; Orël 2003:142 Proto-Germanic **gridiz*; Kroonen 2013:189 Proto-Germanic **gridi*- ‘step’; Feist 1939:222 **ghredh*- (?); Lehmann 1986:161 etymology disputed — **ghredh*- has been proposed; Fraenkel 1962—1965.I:171; Preobrazhensky 1951:166 Russian *grjastí* [грести] < Proto-Indo-European **ghredh*-; Derksen 2008:188 **ghri-n-dh*-.
- C. Proto-Altaic **giǰa*- ‘to walk, to step’: Proto-Tungus **giari*-, **gira*- ‘to walk, to step’ > Manchu *garda*- ‘to rush, to walk fast’, *gardaša*- ‘to walk vigorously, to walk swiftly, to walk in a race’, *gari*- ‘to walk around, to walk away’; Evenki *gira-hta*- ‘to step’; Lamut / Even *giraŋ*-, *girqə*- ‘to step’; Negidal *giyān*- ‘to step’; Ulch *giran*- ‘to step’; Oroch *giran*- ‘to step’; Nanay / Gold *giari*- ‘to walk’, *giran*- ‘to step’; Oroch *gāri*- ‘to walk’, *gia*- ‘to step’; Udihe *geä-li*- ‘to walk’, *geäna*- ‘to step’. Proto-Mongolian **gar*- ‘to go out’ > Written Mongolian *γar*- ‘to go or come out, to emerge, to leave’; Khalkha *gar*- ‘to go out’; Buriat *gara*- ‘to go out’; Kalmyk *γar*- ‘to go out’; Ordos *gar*- ‘to go out’; Moghol *γaru*- ‘to go out’; Dagur *gar*- ‘to go out’; Monguor *gari*- ‘to go out’. Proto-Turkic **gEr*- ‘to walk, to walk through’ > Old Turkic (Old Uighur) *kez*- ‘to walk, to walk through’; Karakhanide Turkic *kez*- ‘to walk, to walk through’; Turkish *gez*- ‘to go about, to travel, to walk about (especially with a view to seeing things or for enjoyment)’, *gezici* ‘traveling, touring, itinerant’, *gezme* ‘patrol; watchman’, *gezi* ‘promenade, excursion’; Gagauz *gez*- ‘to walk, to walk through’; Azerbaijani *güz*- ‘to walk, to walk through’; Turkmenian *gez*- ‘to walk, to walk through’; Uzbek *kez*- ‘to walk, to walk through’; Tatar *giz*- ‘to walk, to walk through’; Bashkir *gid*- ‘to walk, to walk through’; Uighur *güz*-/*küz*- ‘to walk, to walk through’; Karaim *gez*- ‘to walk, to walk

through'; Kirghiz *kez-* 'to walk, to walk through'; Noghay *kez-* 'to walk, to walk through'. Cf. also Yakut *keriy-* (with *-r-*) 'to walk around'. Starostin—Dybo—Mudrak 2003:550—551 **giǎra* 'to walk, to step'.

Sumerian *gir*₇ 'to trot'.

Buck 1949:10.11 move (vb.); 10.32 flow (vb.); 10.45 walk (vb.); 10.46 run (vb.).

401. Proto-Nostratic (n.) **gol-a* 'edge, corner, valley':

- A. Proto-Afrasian **gol-* 'edge, corner, valley': Proto-East Cushitic **gol-* 'edge, slope, valley' > Burji *gól-oo* 'slope'; Afar *gol-o* 'valley'; Somali *gol* 'foot of hill'; Tsamay *gole* 'river'; Galla / Oromo *gol-a* 'corner, edge, gorge'; East Oromo *gol-uu* 'valley'; Gawwada *kol-l-e* 'river'; Gollango *kol-l-e* 'river'; Sidamo *gola, gollo* 'corner'. Hudson 1989:194 and 366; Sasse 1982:83.
- B. Dravidian: Malayalam *kolli* 'valley, corner'; Kannaḍa *kolli, kolle* 'a bend, corner, gulf, bay'; Koḍagu *kolli* 'small stream with rocky bed'; Tuḷu *kolli* 'a bay'. Burrow—Emeneau 1984:192, no. 2137.
- C. Proto-Indo-European **g^{hl}-ent'o-s* 'bank (of river), side, shore, valley': Old Irish *glenn* 'valley'; Welsh *glyn* 'valley', *glan* 'side, shore, bank'; Breton *glann* 'bank'.
- D. Uralic: Proto-Finno-Ugrian **kolʒ* 'hollow, hole; crack, fissure, crevice, rift' > Finnish *kolo* 'cavity, hollow, hole; crack, fissure, crevice'; (?) Lapp / Saami (Lule) *gollo/golo-* 'fissure'; Zyrian / Komi *kolas* 'crack, distance, interval (in space and time)'; Vogul / Mansi *kal, hal* 'rift, crack, interspace'; Ostyak / Xanty *kōl* 'rift, crack'. Collinder 1955:90 and 1977:106; Rédei 1986—1988:174—175 **kolʒ*.

Buck 1949:1.24 valley; 1.36 river, stream, brook; 12.72 hollow; 12.76 corner; 12.85 hole. Bomhard—Kerns 1994:501—502, no. 349; Dolgopolsky 2008, no. 620, **gowlu* (or **gowlü* ?) 'deep; valley'.

402. Proto-Nostratic (n.) **gub-a* 'highest point, summit, top':

Note also:

(n.) **gab-a* 'peak, tip, top'

- A. Proto-Afrasian **gub-* 'highest point, pinnacle': Proto-Semitic **gab-* 'highest point, summit, top, mountain, hill' > Hebrew *gāḇah* [גָּבַהַ] 'to be high, exalted', *gəḇāl* [גְּבָל] 'mountainous region', *giḇ'āh* [גִּבְעָה] 'hill, height, elevation'; Ugaritic *gb'* 'hill', *gbl* 'mountain'; Akkadian *gab'u* 'summit, top, height'; Arabic *ḡabal* 'mountain', *ḡabalī* 'mountainous, hilly'; Sabaeen *gblt* 'hill country'; Mehri *gebēl* 'mountain'; Šheri / Jibbālī

giél (base *gbl*) ‘mountain’; Amharic *gābāta* ‘high hill’. Militarëv 2012:74 Proto-Semitic **gVb-Vl-*; D. Cohen 1970— :96 and 97; Klein 1987:89 and 90; Murtonen 1989:126; Zammit 2002:116. Proto-East Cushitic **gub(b)-* ‘mountain’ > Burji *gúbb-a* ‘highland’; Dullay *gūp-o* ‘mountain’; Dasenech *gum* ‘mountain’; Afar *gubb-i* ‘high spot in undulating country’; Galla / Oromo *gubb-aa* ‘up, above’. Sasse 1979:15 and 1982:85; Hudson 1989: 195. Southern Cushitic: Dahalo *guṣa* ‘plains’. Central Chadic **guba-* (< **gubaH-*) ‘mountain’ > Glavda *γoba* ‘mountain’; Gava *γuba* ‘mountain’; Mesme *gəbəy* ‘mountain’. Orël—Stolbova 1995:223, no. 992, **gūbaʃ-* ‘mountain’; Militarëv 2012:74 Proto-Afrasian **ga/ub-*. [Ehret 1995:179, no. 263, **gab-* ‘top’.]

- B. Dravidian: Toda *kofoy* ‘top of a hill, horizon’; Kannaḍa *kobe* ‘top of a coconut tree’, *kobaḷu* ‘top of a roof’; Telugu *koppu* ‘the crest or ridge of a roof’, *kopparamu*, *kopramu* ‘the top, summit, turret’; Tuḷu *kubaḷu* ‘top of the roof’, *kubè* ‘top of a coconut tree’; Koraga *kobali* ‘top of the roof’, *kobe* ‘top of a coconut tree’. Burrow—Emeneau 1984:158, no. 1731(b).

(?) Sumerian *gub* ‘to stand, to erect’.

Buck 1949:1.22 mountain. Bomhard—Kerns 1994:383—384, no. 219; Dolgopolsky 2008, no. 593, **g[U]bʃV(LV)* ‘hill, mountain’.

403. Proto-Nostratic root **gub-* (~ **gob-*):

(vb.) **gub-* ‘to cook, to roast, to burn’;

(n.) **gub-a* ‘the act of cooking; that which is used for cooking: pot, pan; stove, furnace’

- A. Proto-Afrasian **gub-* ‘to cook, to roast, to burn’: Semitic: Akkadian *gubbubu* ‘to roast’, *gabbubu* ‘roasted’, **gubibtu* (pl. *gubibāte*) ‘parched barley’. Proto-East Cushitic **gub-* ‘to burn’ > Somali *gub-* ‘to burn’; Rendille *gub-* ‘to burn’; Boni *kub-* ‘to burn’; Galla / Oromo *gub-* ‘to burn’; Konso *kup-* ‘to burn’; Yaaku *kup-* ‘to rot’. Sasse 1979:17. Highland East Cushitic: Gedeo / Darasa (transitive) *gub-* ‘to burn, to burn the mouth (food)’, (intransitive) *gub-at-* ‘to burn’; Burji (transitive) *gub-*, *gub-ad-* ‘to burn’. Hudson 1989:33—34, 195, and 243. The Highland East Cushitic forms may be loanwords from Galla / Oromo. Orël—Stolbova 1995:219, no. 971, **gub-* ‘to burn’. Orël—Stolbova include Dahalo *guṣ-* ‘to burn’. However, Ehret (1980:238) derives the Dahalo form from Proto-Southern Cushitic **guf-* ‘to burn (something)’.
- B. (?) Indo-European: Old Lithuanian *gabija*, *gubija* ‘fire’, *Gubija* name of the fire-goddess.
- C. Proto-Altaic **giūbe* ‘to smoke, to roast’: Proto-Tungus **gūb-* ‘(vb.) to fume, to smoke; (n.) furnace, stove’ > Evenki *gī-* ‘to fume, to smoke’, *gīwun* ‘furnace, stove’; Manchu *gūwa-ḡiyan* ‘a hole for cooking used by

soldiers in the field; a tripod used for supporting a cooking pot over a hole'. Proto-Turkic **gübeč* 'frying pan; earthenware cooking pot' > Karakhanide Turkic *küveč* 'frying pan; earthenware cooking pot'; Turkish *güvec* 'earthenware cooking pot; casserole'; Gagauz *güveč* 'frying pan; earthenware cooking pot'; Azerbaijani *güväž* 'frying pan; earthenware cooking pot'; Turkmenian *göweč* 'frying pan; earthenware cooking pot'; Uzbek (dialectal) *köväš* 'frying pan; earthenware cooking pot'; Oyrot (Mountain Altai) *kös* 'skull'. Starostin—Dybo—Mudrak 2003:558 **giübe* 'to smoke, to roast'.

Buck 1949:1.85 burn (vb.); 5.21 cook; 5.23 roast, fry. Dolgopolsky 2008, no. 592, **g[uy]bV* 'to heat' (→ 'to cook, to roast, to burn, to dry'). Blažek (1991a:362, no. 8) compares several Kartvelian forms with those given above, and Dolgopolsky includes these as well in his *Nostratic Dictionary*. However, these forms are suspect inasmuch as the root vowel of the reconstructed Kartvelian proto-form (**gab-/gb-* 'to cook, to boil') does not agree with what is found in the putative cognates in other Nostratic languages. Consequently, the Kartvelian material is not included here.

404. Proto-Nostratic root **gud-* (~ **god-*):

(vb.) **gud-* 'to throw, to toss, to shake';

(n.) **gud-a* 'that which is thrown or tossed off or aside: rubbish, refuse, cast-out things'

- A. Proto-Afrasian **g[u]d-* 'to throw, to cast': Proto-Semitic **gad-ap-* 'to throw (away), to cast (away)' > Arabic *ğadafa* 'to cut off, to throw, to move the hands about in walking fast', *ğadaf* 'dregs, dirt'; Geez / Ethiopic *gadafa* [ገጸፈ] 'to throw away, to thrust, to reject, to cast away, to discard, to cast down, to cast aside, to retrench, to give up, to abandon, to omit, to repudiate, to despise, to lose, to avoid, to deduct, to forget', *gʷədɸ* [ገጸፍ] 'sweepings, rubbish, refuse'; Tigre *gädfa* 'to throw away', *gədɸ*, *gʷədɸ* 'cast-out things'; Tigrinya *gädäfä* 'to abandon, to throw away', *gʷäduf* 'rubbish'; Amharic *gäddäfa* 'to forget something one has learned, to skip a line'; Gurage *gädäfä* 'to break a fast', *guduf* 'dirt'; Harari *guduf* 'place where rubbish is placed'. D. Cohen 1970— :102; Leslau 1979:262 and 1987:181.
- B. Dravidian: Malayalam *kuṭayuka* 'to throw out, to fling away, to shake extremities'; Kannaḍa *koḍapu*, *koḍavu* 'to scatter or throw in different directions with the hand, to shake or toss about'; Koḍagu *koḍa-* (*koḍap-*, *koḍand-*) 'to shake'; Tuḷu *kuḍpuni* 'to shiver (as from ague); to dust, to shake off (as the dust from a cloth)'. Burrow—Emeneau 1984:152—153, no. 1662.
- C. Proto-Kartvelian **gd-* 'to throw, to cast, to fling, to toss': Georgian *a-gd-eb-a* 'to throw, to cast, to fling, to toss', *da-gd-eb-a* 'to throw, to hurl';

Svan *li-gd-ur-i* ‘to seize, to clutch, to grasp, to hold’. Schmidt 1962:100; Fähnrich 2007:98 **gd-*.

Buck 1949:10.25 throw (vb.); 10.26 shake (vb. tr.). Bomhard—Kerns 1994:394—395, no. 232.

405. Proto-Nostratic (n.) **gul-a* (~ **gol-a*) ‘enclosed space’:

- A. Afrasian: Proto-East Cushitic **gol-* ‘enclosed space: shed, pen, stable’ > Somali *gol-a* ‘enclosed space, pen, stable’; Burji *gola* ‘wall (of house); shed for animals’; Gedeo / Darasa *gola* ‘shed for animals’; Sidamo *golo*, *goló* ‘fence, wall; cattle-pen outside house’. Hudson 1987:194, 242. and 366. Cushitic loans in: Geez / Ethiopic *gol* [ጎል] ‘stable, crib, manger, cave’, *golāmḥəsā* [ጎለምሕሳ] ‘old pen for cattle’; Tigre *gol* ‘stable’; Gurage *gʷāla* ‘pen for mules or horses inside the house’. Leslau 1979:271 and 1987:189, 191.
- B. Uralic: Proto-Finno-Ugrian **külä* ‘dwelling’ > Finnish *kylä* ‘village’; Estonian *küla* ‘village’; Lapp / Saami (Northern) *gal’li-* ‘to visit, to pay a visit to’; Vogul / Mansi *kül*, *kwäl* ‘house, dwelling’. Collinder 1955:93, 1960:412 **külä*, and 1977:109; Rédei 1986—1988:155—156 **kilä* (**külä*).
- C. Proto-Altaic **gūli* ‘dwelling, cottage’: Proto-Tungus **gūle* ‘hut, dwelling-place’ > Evenki *gūle* ‘hut, dwelling-place’. Proto-Turkic **gūl* ‘house, home, dwelling’ > Turkish *-gil* suffix meaning ‘belonging to the family of’ (dial. ‘home, dwelling-place’); Azerbaijani *-gil* suffix meaning ‘belonging to the family of’; Chuvash *kil*, *kül* ‘dwelling, hut’; Yakut *külä* ‘vestibule, inner porch’. Starostin—Dybo—Mudrak 2002:570—571 **gūli* ‘dwelling, cottage’.

Buck 1949:7.12 house; 7.13 hut; 19.16 village. Dolgopolsky 2008, no. 617, **gūlA* ‘dwelling, house’.

406. Proto-Nostratic root **gun-* (~ **gon-*):

(vb.) **gun-* ‘to perceive, to notice’;

(n.) **gun-a* ‘notice, memory, mind, perception, remembrance, recollection’

- A. Afrasian: Egyptian *gnt* ‘memory, remembrance, recollection’. Hannig 1995:901; Erman—Grapow 1926—1963.5:173.
- B. Proto-Kartvelian **gon-* ‘to think, to remember’: Georgian *gon-* ‘to think, to remember’, *gon-eb-a* ‘reason, mind’; Mingrelian *gon-* ‘to think, to remember’; Laz (*n*)*gon-* ‘to think, to remember’; Svan *gon-/gn-* (*li-gn-ew-i*) ‘to think up, to inspire’. Fähnrich—Sardshweladse 1995:87—88 **gon-*; Fähnrich 2007:109—110 **gon-*; Klimov 1964:63—64 **gon-* and 1998:31 **gon-* ‘to think, to remember’.

- C. Uralic: Proto-Finno-Ugrian **kunta-* ‘to perceive’ > Finnish *kuuntele-* ‘to listen’; Karelian *kuntele-*, *kuundele-* ‘to listen’; Veps (Northern) *kund'l'e-* ‘to listen, to obey’; Vogul / Mansi *qont-* ‘to find; to perceive, to see’, *kontaml-* ‘to hear (to perceive, to notice)’, *koontl-* ‘to notice’; Ostyak / Xanty *kunhəl-* (< **kuntəhəl-*), (Tremyugan) *kuntəgɸ-*, (Southern) *huntt-*, *hunttət-* ‘to hear, to perceive, to notice’; Hungarian *hall-* ‘to hear’. Collinder 1955:28 and 1977:48; Rédei 1986—1988:207—208 **kunta-l3* ‘to listen, to hear’; Sammallahti 1988:544 Proto-Finno-Ugrian **kuntå* ‘to perceive; to catch’; Décsy 1990:101 **kunta* ‘to catch, to find; to receive booty’. Finnish *kuuntele-* may have been influenced by *kuule-* ‘to hear’.
- D. Proto-Altaic **gūno-* ‘to think’: Proto-Tungus **gūn-* ‘to say, to think’ > Manchu *gūni-* ‘to think’, *gūnin* ‘intention, thought, opinion, feeling, sense; mind, spirit’; Spoken Manchu (Sibo) *goni-* ‘to think’; Evenki *gūn-* ‘to say’; Lamut / Even *gōn-* ‘to say’; Negidal *gūn-* ‘to say’; Oroch *gun-* ‘to say’; Nanay / Gold *un(de)-* ‘to say’; Orok *un-* ‘to say’; Udihe *gun-* ‘to say’; Solon *gun-* ‘to say’. Proto-Mongolian **guni-* ‘to be sad, anxious’ > Mongolian *γuni-* ‘to grieve; to be afflicted, sad’, *γuniγ-* ‘grief, sadness, sorrow’, *γuniγalža-* ‘to lament, to be sad, to mourn’, *γuniγla-* ‘to grieve; to be afflicted, sad, depressed, or worried; to mourn’, *γuniγtai* ‘sad, sorrowful, mournful, downcast, cheerless; monotonous, melancholy’, *γunira-* ‘to be or become sad, grieved, sorrowful, distressed, afflicted’, *γuniγara-* ‘to be sad, melancholy, lonely for; to grieve, to be sorrowful’; Khalkha *guni-* ‘to be sad, anxious’; Buriat *guni-* ‘to be sad, anxious’; Kalmyk *γunǎ-* ‘to be sad, anxious’; Ordos *gunid-* ‘to be sad, anxious’; Dagur *guni-* ‘to be sad, anxious’. Proto-Turkic **Kun-* ‘(vb.) to yearn; to be anxious, sorry; (n.) attention, care, usefulness’ > Middle Turkic *qunuq-* ‘to yearn; to be anxious, sorry’; Uzbek *qunt* ‘attention, care’; Tatar *qon* ‘attention, care’, (dial.) *qonar* ‘usefulness’, *qono* ‘diligent, busy’, *qonoq-* ‘to get used, to become accustomed’; Bashkir (dial.) *qont* ‘attention, care’, *qonar* ‘usefulness’; Kirghiz *qunt* ‘attention, care’, *qunar* ‘usefulness’; Kazakh *qunt* ‘attention, care’; Tuva *qunuq-* ‘to yearn; to be anxious, sorry’. Poppe 1960:24; Street 1974:13 Proto-Altaic **guni-* ‘to think, to grieve’; Starostin—Dybo—Mudrak 2003:571—572 **gūno* ‘to think’.

Buck 1949:15.11 perceive by the senses; sense (sb.); 17.13 think (= reflect); 17.14 think (= be of the opinion); 17.31 remember. Dolgopolsky 2008, no. 640, **gūn[h]i* ⇐ **gu[h]nī* (or **gūn[ʔ]i* ⇐ **gu[ʔ]nī*) ‘to think’; Bomhard—Kerns 1994:387, no. 224.

407. Proto-Nostratic root (Eurasian only) **gup^h-* (~ **gop^h-*):
 (vb.) **gup^h-* ‘to extinguish; to be extinguished, to die out, to perish’;
 (n.) **gup^h-a* ‘loss, destruction’

- A. Proto-Indo-European **g^hup^h*- > (with progressive voicing assimilation) **g^hub^h*- (secondary full-grade forms: **g^hewb^h*-/**g^howb^h*-) ‘to be extinguished, destroyed; to perish’: Latvian *gubstu*, *gubt* ‘to subside, to collapse’; Old Church Slavic *gybělъ* ‘loss, destruction’, *gybljъ*, *gybati* (intr.) ‘to be destroyed’, *gybnъ*, *gybnъti* (beside *gynъti*) (intr.) ‘to perish’, *pa-guba* ‘destruction, ruin’, *gubiti* ‘to spoil, to ruin’; Russian *gubitel’* [губитель] ‘undoer, ruiner, destroyer’, *gubit’* [губить] ‘to ruin; to be the undoing (of); to destroy; to spoil’; Czech *hubiti* ‘to spoil’; Serbo-Croatian *gubiti* ‘to spoil’; Hittite *ku-up-ta-ar* ‘refuse, waste (of a ritual)’. Pokorny 1959:450 **gheub(h)*- ‘to bend, to bow (down)’; Walde 1927—1932.I: 567—568 **gheub(h)*-; Mann 1984—1987:332—333 **ghoubh*- ‘empty, vain, useless; loss, destruction’, 333 **ghoubhijō* (**ghoubhijō*) ‘to be empty, to be vain; to come to naught’; Preobrazhensky 1951:166—167; Derksen 2008:195 **ghoub^h-eie-*, 197 **g^hub^h*-, and 200; Puhvel 1984— .4:259 **ghubht^r* ‘wasting, waste’ (root **ghewb^h*-). Note: Only in Balto-Slavic and Anatolian.
- B. Proto-Uralic **kupsa*- ‘to extinguish, to be extinguished’: Estonian *kustu*- (dial. *kistu*-) ‘to be or become extinguished, to go out, to die out; to be obliterated, to be wiped out; to fade out’, *kustuta*- ‘to extinguish, to put out’, *kustutus* ‘extinction’; Saami / Lapp (Kola) *gop’sē* ‘to extinguish, to be extinguished’; Votyak / Udmurt *kys*- ‘to be extinguished; to put out, to extinguish’; Yurak Samoyed / Nenets *hapta*- ‘to put out, to extinguish’; Tavgi Samoyed / Nganasan *kabta*- ‘to extinguish’, *kabtu*- ‘to be extinguished’; Yenisei Samoyed / Enets *kota*- ‘to extinguish’; Selkup Samoyed (C) *kapta*- ‘to extinguish’; Kamassian *kubder*- ‘to extinguish’. Collinder 1955:29 and 1977:49; Rédei 1986—1988:214—215 **kupsa*-; Décsy 1990:101 **kupsa* ‘to extinguish’; Sammallahti 1988:537 **kupsā* ‘to extinguish’; Janhunen 1977b:54 **kāptā*-.
- C. Proto-Altaic **giūp^ha* (~ -u-) ‘to extinguish’: Proto-Tungus **gūp*- ‘to extinguish; to be extinguished’ > Ulch (intr.) *gūpu*-, *gōkpi*- ‘to be extinguished’, (tr.) *gūptu*- ‘to extinguish’; Nanay / Gold *gūpku*- ‘to be extinguished’, (tr.) *gūpu*- ‘to extinguish’; Oroch (intr.) *gūptu*- ‘to be extinguished’, (tr.) *gūpu*- ‘to extinguish’. Proto-Turkic **Kīp*- ‘spark, ashes’ > Tatar *qīpīn* ‘spark’; Kirghiz *qīpīn* ‘spark’; Kazakh *qīpīn* ‘ashes’; Oyrot (Mountain Altai) *qībīn* ‘spark’, *qībīr* ‘ashes’; Yakut *kībīan* ‘spark’. Starostin—Dybo—Mudrak 2003:560 **giūp’a* (~ -u-) ‘to extinguish’.

Illič-Svityč 1965:335 **ku/p/sa* [‘гаснуть’] ‘(intr.) to burn out; (tr.) to extinguish’, 1971—1984.I:311, no. 185, **Kuśa* ‘to burn out; to extinguish’; Dolgopolsky 2008, no. 916, **kuPsa* ‘to extinguish, to exhaust’; Greenberg 2002:62—63, no. 134.

408. Proto-Nostratic root **gur-* (onomatopoeic):

- (vb.) **gur-* ‘to rumble, to roar, to growl, to gurgle’;
 (n.) **gur-a* ‘rumbling, roaring, gurgling, growling noise or sound’

- A. Proto-Afrasian **gur-* ‘to rumble, to roar, to growl, to gurgle’: [Proto-Semitic (reduplicated) **gar-gar-* ‘to rumble, to roar, to growl, to gurgle’ > Arabic *ġarġara* ‘to gargle’, *ġarġara* ‘gargling, rumbling noise, rumble, clatter (of a wagon)’; Šheri / Jibbāli *egerġér* ‘to make a gurgling noise’, *əngerġér* ‘(stomach) to rumble’; Mehri *agárər* ‘to make a gurgling noise’, *engerġör* ‘(stomach) to rumble’; Geez / Ethiopic *ʔangʷargʷara* (**gʷar-gʷar-*) [ḵṛṛṛṛṛṛṛṛ] ‘to murmur, to mutter, to grumble, to complain, to claim, to be vexed, to be angry’; Tigrinya *ʔangʷärgʷärä* ‘to mutter, to mumble’; Amharic *angʷäraggʷärä* ‘to mutter’; Gurage *angəraggärä* ‘to grumble’, (*a*)*gʷarra* ‘to roar, to bellow, to howl’, *gurgurtä* ‘thunder’, (Masqan) *gurgur barä*, (Wolane) *gurgur balä* ‘to thunder, to murmur’; Harari *gūr bāya* ‘to thunder’, *gurur bāya* ‘to roar (animals), to thunder, to rumble (thunder)’, *gurgurti* ‘rumor’, *gurum gurum bāya* ‘to grumble, to groan’, *gurumti* ‘groan, rumor’. Leslau 1963:74, 75, 1979:288, 293, and 1987:202.] Note: The Semitic forms may belong either here or with Proto-Nostratic **gar-* (~ **gər-*) ‘to mutter, to groan, to grumble, to howl, to roar’. Berber: Tuareg *iġurhayən* ‘larynx, throat’; Tawlemmet *agurzay* ‘throat, salivary glands’; Tashelhiyt / Shilha *gurzu* ‘to be hoarse’, *agurza* ‘hoarseness’; Chaouia *iġərzi* ‘throat’. Chadic: Hausa *guṛnaanii* ‘growling (of lions, dogs, etc.)’.
- B. Dravidian: Tamil *kurai* ‘(vb.) to bark, to jubilate, to shout; (n.) noise, roar, shout’, *kuraippu* ‘noise’; Malayalam *kura* ‘disagreeable sound, cough, barking’, *kurekka* ‘cough, bark, hem’; Kota *kurv-* (*kurt-*) ‘to snore’, *kerv-* (*kert-*) ‘to bark’; Toda *kwarf-* (*kward-*) ‘to snore, to bark’; Kannaḍa *kure* an imitative sound; Koḍagu *kora-* (*korap-*, *korat-*) ‘to bark’; Tuḷu *korapuni*, *korepini*, *korepuni* ‘to bark, to roar’, *korejuni* ‘to make a noise’; Parji *kūr-* ‘to groan’; Malto *kūr-kūr-* ‘to call a dog’; Brahui *xurrukāv* ‘a snore’. Burrow—Emeneau 1984:162, no. 1796. Tamil *kurukuruppu*, *kurukuruppai* ‘snoring, stertorous breathing’, *kuṛaṭṭai* ‘snoring, snorting’, *korukkai* ‘snoring’; Malayalam *kurukurukka* ‘(vb.) to breathe with difficulty; (n.) the sound in the throat of a dying person’, *kuṛukkuka*, *kuṛuñnuka* ‘to purr, to coo (as a dove)’, *kurkku* ‘a snore’; Kannaḍa *guruguṭṭu* ‘to snore, to purr’, *gurruguṭṭu* ‘to growl, to snarl (as dogs, bears, tigers)’; Koraga *gūru* ‘to cry (wolf)’; Telugu *guraka* ‘snoring’, *gurrumanu* ‘to snore, to growl, to snarl’; Tuḷu *guranè* ‘the snarling of a dog’, *guraguṭṭuni*, *gurkuṭṭuni* ‘to grunt’, *gurukuṭṭuni* ‘to snore, to purr, to coo, to rattle phlegm in the throat, to roar’; Kolami *gurgaḍil-* (*gurgaḍilt-*) ‘(dog) to growl, (pig) to grunt’; Parji *gurr-* ‘to hiss, to hoot’; Gondi *gurrānā* ‘to snore, to sleep’; Konda *gōr-* ‘to snore’; Kuṛux *gurrārānā* ‘to roar (as a tiger), to snarl or growl fiercely, to utter angry words or shouts of anger’. Burrow—Emeneau 1984:169, no.

1852. Tamil *kūraṇ* ‘a dog’; Tuḷu *kūra* ‘a dog’, *kūri* ‘bitch’. Burrow—Emeneau 1984:173, no. 1901. Malayalam (Kanikkar) *kora* ‘asthma’; Kannaḍa *kora*, *gora* ‘sound produced in the throat by hoarseness, the purr of a cat’, *kore* ‘to snore’; Tuḷu *korapeli* ‘snoring’, *korape*, *korapele* ‘one who snores’. Burrow—Emeneau 1984:191, no. 2122.

- C. Proto-Kartvelian **gurgw-* (**gurgw-in-*, **gurgw-al-*) ‘to thunder’: Georgian *grgvín-* ‘to thunder’, (Xevsurian) *gurgwal-* ‘to thunder’; Mingrelian *gurgín-*, *gvirgvín-* ‘to thunder’; Laz *girgin-*, *gurgul-* ‘to thunder’; Svan *gurgw-n-* ‘to thunder’. Fähnrich 2007:117—118 **gurgw-*; Fähnrich—Sardshweladse 1995:94 **gurgw-*; Klimov 1964:64—65 **grgwín-*, 66 **gurgwal-* and 1998:32 **grgw-in-* ‘to thunder’.
- D. Proto-Indo-European **ghur-* ‘to rumble, to roar, to growl, to gurgle’: Sanskrit *ghurati* ‘to cry out frighteningly, to frighten with cries’, *ghuraghurāyate* ‘to utter gurgling sounds, to wheeze, to puff, to snort’, *ghurikā* ‘snorting’, *ghurghuraka-ḥ* ‘gurgling or murmuring sound’, *ghurghura-ḥ* ‘growling’, *ghurghurāyate* ‘to whistle’; Prakrit *ghōrai* ‘to snore’, *ghurughurai*, *ghuraghurai* ‘to cry out’, *ghuruḥai* ‘to growl’, *ghurukḥai* ‘to thunder’; Punjabi *ghurghur* ‘snarling’; Sinhalese *guguravanā* ‘to thunder’, *gigiriya* (< **ghurghurita-*) ‘thunder’; Oriya *ghuribā* ‘to gargle’; Armenian *grgrām*, *grgam* ‘to croak, to cackle’, *goṛam* ‘to growl’; Old English *gyrran* ‘to grunt, to creak, to clatter’, *gyrretan* ‘to roar (of lions)’; Middle High German *gurren* ‘to growl’ (New High German *gurren* ‘to coo’). Mann 1984—1987:349—350 **ghurgh-*, **ghurghul-*, **ghurghur-* ‘throat; to gurgle’, 350 **ghūr-* (**ghūrō*, -*īō*) (expressive variant: **ghurr-*) ‘to growl’; Kluge—Seebold 1989:282.

Buck 1949:1.56 thunder; 3.61 dog. Bomhard—Kerns 1994:397—398, no. 235.

409. Proto-Nostratic (Eurasian only) (n.) **gur-a* ‘gut, cord’:

- A. Proto-Indo-European **ghor-/gh̥-* ‘gut, cord’: Sanskrit *hīra-ḥ* ‘band, strip, fillet’, *hīrā* ‘vein, artery’; Greek χορδή ‘gut-string’; Latin *haruspex* ‘a soothsayer who foretold future events from inspection of the entrails of victims’, *hīra* ‘the empty gut’; Old Icelandic *görn* ‘gut’, *garn* ‘yarn’; Old English *gearn* ‘yarn’; Middle Dutch *gaern* ‘yarn’ (Dutch *garen*); Old High German *garn* ‘yarn’ (New High German *Garn*); Lithuanian *žarnà* ‘gut, intestine’. Pokorny 1959:443 **gher-* ‘bowel’; Walde 1927—1932.I:604 **gher-*; Mann 1984—1987:344 **ghrā*, **gh̥ru-* (**gh̥aru-*) (?), 423 **ghornos*, -*ā*, -*us* ‘gut, string, cord’; Watkins 1985:22 **gherā-* and 2000:30 **gherā-* ‘gut, entrails’; Mallory—Adams 1997:180 **ghorh₂neh_a-* entrails’; Boisacq 1950:1066; Frisk 1970—1973.II:1111—1112; Chantraine 1968—1980.II:1269; Hofmann 1966:421 **gher-*; Beekes 2010.II:1643—1644 **ghorH-*; Ernout—Meillet 1979:289—290 and 295; Walde—Hofmann 1965—1972.I:635—636 **gher-* and I:649; De Vaan 2008:280; Kroonen 2013:169

Proto-Germanic **garnō-* ‘intestines’; Orël 2003:127 Proto-Germanic **ǵarnan*, 127 **ǵarnō*; De Vries 1977:157 and 199; Onions 1966:1018; Klein 1971:836 **ǵher-*; Kluge—Mitzka 1967:233 **ǵher-*; Kluge—Seebold 1989:245; Smoczyński 2007.1:774; Fraenkel 1962—1965.II:1291.

- B. Proto-Uralic (?) **kur3* ~ **kurk3* (*-k3* is probably a suffix) ‘gut, cord’: Hungarian *húr* ‘intestine, string’, *hurka* ‘intestine, sausage’; (?) Yurak Samoyed / Nenets *hurku* ‘cord, cord made of reindeer tendons’; (?) Taigi *körü* ‘cord’. Collinder 1955:15 and 1977:36. See also Rédei 1986—1988:161, 216, and 219.

Buck 1949:9.19 rope, cord. Koskinen 1980:30, no. 95; Bomhard—Kerns 1994:394, no. 231. Different etymology in Dolgopolsky 2008, no. 655a, **gERV* ‘entrails’.

410. Proto-Nostratic root **gus-* (~ **gos-*):

- (vb.) **gus-* ‘to go outside of or forth from; to make to go outside or forth from, to drive away, to chase away’;
(n.) **gus-a* ‘outsider, stranger’

- A. Afrasian: Proto-Southern Cushitic **gus-* ‘to drive out, to chase away, to take out’ > Iraqw *gus-* ‘to drive out’; Alagwa *gusim-* ‘to chase away’; Ma’a *-gu* ‘to take out’; Dahalo *guḍ-* ‘to take out’. Ehret 1980:239. [Ehret 1995:186, no. 286, **gus-* ‘to drive away’; Orël—Stolbova 1995:204, no. 902, **gas-/gus-* ‘to move’.]
- B. Proto-Indo-European **ghos-tʰi-* (‘outsider’ >) ‘stranger’ > ‘guest’: Latin *hostis* originally ‘stranger’, later ‘enemy, opponent, foe’; Venetic **hosti-* in the personal name *ho.s.tihavo.s.*; Gothic *gasts* ‘stranger’; Runic *-gastir* [-𐌹𐌺𐌰𐌹𐌸] ‘guest’; Old Icelandic *gestr* ‘guest’; Swedish *gäst* ‘guest’; Danish *gjest* ‘guest’; Norwegian *gjest* ‘guest’; Old English *giest* ‘stranger, guest, enemy’; Old Frisian *jest* ‘guest’; Old Saxon *gast* ‘stranger, guest’; Old High German *gast* ‘enemy, guest’ (New High German *Gast* ‘guest, visitor; customer [at an inn], stranger’); Old Church Slavic *gostъ* ‘guest’; Russian *gost’* [гость] ‘visitor, guest’. Pokorny 1959:453 **ghosti-s* ‘stranger, guest’; Walde 1927—1932.I:640—641 **ghosti-s*; Mann 1984—1987:332 **ghostis* ‘stranger, guest’; Watkins 1985:23 **ghos-ti-* and 2000:31 **ghos-ti-* ‘stranger, guest, host’; Gamkrelidze—Ivanov 1984.I:168, II:754—755 **g[ʰ]ost[ʰ]i-* and 1995.I:144, I:657 **ghostʰi-* ‘host, guest’; Mallory—Adams 1997:249 **ghostis* ‘guest; stranger, enemy’; Benveniste 1973:75—79; Walde—Hofmann 1965—1972.I:662—663 **ghostis*; Ernout—Meillet 1979:301; De Vaan 2008:291 **ghosti-*; Derksen 2008:180—181 **ghost-i-*; Orël 2003:127—128 Proto-Germanic **ǵastiz*; Kroonen 2013:170 Proto-Germanic **gasti-* ‘guest’; Feist 1939:202 **ghosti-*; Lehmann 1986:149 **ghosti-* ‘stranger, guest’; De Vries 1977:165; Falk—Torp 1903—1906.I:228; Torp 1919:158; Onions 1966:418 **ghostis*; Klein 1971:326;

Kluge—Mitzka 1967:234 Common Germanic **gastiz*; Kluge—Seebold 1989:246; Wodtko—Irslinger—Schneider 2008:173 **g^host(h₂)i-*. Semantic development as in Dravidian: Tamil *veḷiyār* ‘outsiders, strangers’ ~ Telugu *velalu* ‘to go or come out, to start’, *velalucu* ‘to send out’, *velārincu*, *velār(u)cu* ‘to send or drive out, to cast out, to make public’, etc. (cf. Burrow—Emeneau 1984:500—501, no. 5498); or, within Semitic: Geez / Ethiopic *falasa* [ፈለሰ] ‘to depart, to emigrate, to go over to, to be transferred, to be removed, to be banished, to go into banishment, to go into exile, to be transformed, to be changed, to secede, to split off, to separate oneself, to withdraw, to sojourn aboard’, *falāsī* [ፈለሰ.] ‘an exile, stranger, alien, pilgrim, wanderer’, *falāsāwī* [ፈለሰዊ] ‘stranger’, *falāsīyāwī* [ፈለሰ.የዊ] ‘pilgrim, stranger’ (cf. Leslau 1987:160).

Buck 1949:19.55 stranger; 19.56 guest; 19.57 host. Bomhard—Kerns 1994: 399—400, no. 237.

411. Proto-Nostratic root **guw-* (~ **gow-*):

(vb.) **guw-* ‘to observe, to notice, to watch, to pay attention to, to heed, to be or become aware of’;

(n.) **guw-a* ‘observation, heed, awareness, attention, notice’

A. Proto-Kartvelian **gu-* ‘to become accustomed to; to train, to teach’: Georgian *gu(v)-* ‘to become accustomed to; to train, to teach’; Mingrelian *g(u)-* in *ge-g-ap-a* ‘to become accustomed to; to train, to teach’; Laz *g-* in *o-g-ap-u* ‘to become accustomed to; to train, to teach’, *gigaper-* ‘habitual, usual’. Klimov 1964:65 **gu-* and 1998:34 **gu-* ‘to get accustomed, to train’; Fähnrich—Sardshweladse 1995:92—93 **gu-*; Fähnrich 2007:114 **gu-*.

B. Proto-Indo-European **g^how-* ‘to observe, to notice, to watch, to pay attention to, to heed, to be or become aware of’: Latin *faveō* ‘to favor, to be favorable to, to help, to support’; Gothic *gaumjan* ‘to see, to observe’; Old Icelandic *gá* ‘to heed, to observe’, *geyma* ‘to heed, to mind’, *geymdir* ‘heed, attention’, *gaumr* ‘heed, attention’, *guma* ‘to heed, to pay attention to’; Old English *gīeman* ‘to take care of, to take notice of’, *gīeme* ‘care’; North Frisian *gumi* ‘christening, celebration’; Old Saxon *gōmian* ‘to guard’, *gōma* ‘entertainment’; Old High German *goumōn* ‘to foresee, to care for, to entertain guests, to eat’, *gouma* ‘attentiveness, banquet’; Old Church Slavic *govějō*, *gověti* ‘to honor, to worship’; Czech *hověju* ‘to care for, to favor’; Russian *govet’* [говетъ] ‘to fast and attend service before confession and communion’. Pokorny 1959:453 **ghou(ē)-* ‘to pay attention to, to be aware of’; Walde 1927—1932.I:635—636 **ghou-*; Mann 1984—1987:333 **ghoueīō* ‘to praise, to worship’, 378—379 **gūhauēīō* ‘to favor, to befriend, to watch, to heed, to care for’; Watkins 1985:23 **ghow-ē-* and 2000:31 **ghow-ē-* ‘to honor, to revere, to worship’;

Gamkrelidze—Ivanov 1984.II:803—804, fn. 3, *g^hlou- and 1995.I:704, fn. 6, *g^hou- ‘to pay attention to’; Mallory—Adams 1997:418 *ghou- ‘to perceive, to pay heed to’; De Vaan 2008:206 *b^hh₂u-eh₁- ‘to be favorable to’; Walde—Hofmann 1965—1972.I:464—465 *ghou(ē)-; Ernout—Meillet 1979:220—221; Orël 2003:128 Proto-Germanic *ǵaumipō, 128 *ǵaumjanan, 128—129 *ǵaum(j)ō(n); Kroonen 2013:171—172 Proto-Germanic *gauma- ‘heed, attention’; Feist 1939:207; Lehmann 1986:151 *ghow- ‘to perceive, to pay heed to’; De Vries 1977:151, 158, and 165—166; Derksen 2008:181.

Buck 1949:17.24 learn; 17.25 teach; 22.16 worship (vb.). Bomhard—Kerns 1994:400—401, no. 238.

412. Proto-Nostratic root *guw- (~ *gow-):

(vb.) *guw- ‘to hunt wild animals’;

(n.) *guw-a ‘wild animal, wild beast, game’; (adj.) ‘wild, untamed’

Extended form:

(vb.) *guw-V-r- ‘to hunt wild animals’;

(n.) *guw-r-a ‘wild animal, wild beast, game’; (adj.) ‘wild, untamed’

Notes:

1. The unextended stem is preserved in Egyptian.
2. The Afrasian (Cushitic and Chadic) and Indo-European forms are deverbatives: *guw-V-r-.

- A. Afrasian: Egyptian gw ‘(wild) bull’. Hannig 1995:896; Faulkner 1962:288; Erman—Grapow 1926—1963.5:159. Proto-Afrasian *g[u]war- ‘antelope’: West Chadic *gar- ‘oryx’ > Tsagu gaare ‘oryx’; Mburku gaari ‘oryx’. Central Chadic *gar- ‘antelope’ > Logone garia ‘antelope’. East Chadic *gawar- ‘antelope’ > Tumak garu ‘antelope’; Kwang gowor-to ‘antelope’. North Cushitic: Beja / Beḍawye gár-uwa ‘a kind of antelope’. Reinisch 1895:102. Southern Cushitic: Rift *gwar- ‘antelope’ > Iraqw gwaraay ‘antelope’. Omotic *gar- ‘antelope’ > Ome gaaraa ‘antelope’. Orël—Stolbova 1995:203, no. 898, *gar-/gawar- ‘antelope’.

Militarëv—Nikolaev (2021:235—236) reconstruct Proto-Afrasian *gawr- ‘a kind of bovid’ on the basis of the following evidence: Semitic *(ʔa-)gurr- > Akkadian gurr-atu, agurr-atu ‘ewe’. Egyptian ḏr ‘calf’ (if < *gVr). Berber *-gur- ‘small cattle’ > Ghadames a-ḡur ‘bouc’ (‘goat’); Zenaga ǝ-grərḥ ‘bélier’ (‘ram’). Chadic (a) *(ʔa-)garw/y- ‘a kind of bovid; animal, game’: West Chadic *(ʔa-)gary- > Hausa āgārē ‘a big, male red-fronted gazelle’ [*Eudorcas rufifrons*]; Tsagu gāre ‘reedbuck’ [*Redunca redunca*]; Mburku gāri ‘oryx’ [*Oryx leucoryx* ?]; Ngizim a-gare ‘gazelle’. Central Chadic *(ʔa-n-)gary- > Logone gari-a ‘antelope’; Makeri ingərii

‘antelope’; Buduma *ngəri* ‘gazelle’. East Chadic (a) **gVrw-* and **gVwVr-* (met.) > Tuma *gəru* ‘antelope’; Kwang *gowor-to* ‘antelope’; Ndam *gàrù* ‘ourebi’ [*Ourebia ourebi*]; (b) **garaw-* ‘herd of cattle’, West Chadic **gar(V)w-* > Hausa *gár-kei* ‘herd, flock’; Bolewa *gaarùw-à* ‘pack ox’; Karekare *gaarùw-à* ‘bull’; Tanagale *káarw-a* ‘cattle’. Central Chadic **garaw/y-* > Bana *gàrəw-à* ‘troupeau de boeufs’ (‘herd of cattle’); Gude *górà-nə* ‘herd of cattle’, *mà-górà* ‘shepherd, watchman’; Matakam *η-gwur* ‘ram’. East Chadic **garaw-* > Bidiya *gaaruw-o* ‘animal’; Migama *gáaraw* ‘bête, bétail’ (‘animal, livestock, cattle’); (c) Central Chadic **gwar-* and **g^warg^war-* (redupl.) ‘ram’ > Ouldem *g^wàr-à*; Mbuko *g^wàrg^wár-á*; Merey *g^waràg^wàr-a*; Muyang *g^wòròrg^wòr-à*; Mada *gurg^war-a*. East Chadic **gagar-* (redupl.) ‘small cattle’ > Sok *gaáger-o* ‘Schaf’ (‘sheep’); Mawa *gagar* ‘mouton’ (‘sheep’); Mubi *wegr-I* (met.) ‘chèvre’ ([she-]goat). Cushitic **garaw-* and **gwiraʔ-* (met.) ‘kind of larger bovid’ [*Taurotragus*, *Alcelaphus*, etc.]: North Cushitic **garuw-* > Beja *garuw-a* ‘male antelope, eland’ [*Taurotragus oryx*]. Central Cushitic **gar-* ‘calf’ > Bilin, Qwara, Qemant *gār*; Aungi *gara*. East Cushitic: Highland East Cushitic **gur(r)-* > Sidamo *gur-um* *ʔiččo* ‘gazelle’, *garr-ančo* ‘Agazen antelope’ [*T. buxtoni*]. Southern Cushitic **g^waraʔ-* > Iraqw *g^waraʔ-ai* ‘Hartebeest’ [*Alcelaphus caama*]; Burunge *geraʔ-i* ‘Grant’s gazelle’ [*Nanger granti*]. Omotic: North Omotic **gaHar-* ‘antelope dekulá’ [*Tragelaphus decula*] > Wolayta, Dawro *gaar-aa*.

Comment: The Proto-Afrasian form reconstructed by Militarev—Nikolaev cannot account for the phonological developments required to explain all of the forms they cite. This indicates that several similar, though unrelated, forms may be involved here.

- B. Dravidian: Kolami *kori* ‘antelope’; Parji *kuri* ‘antelope’; Gadba (Ollari) *kuruy* ‘deer’; Gondi *kurs* ‘antelope’; Kui *kruhu*, *krusu* ‘barking deer, jungle sheep’; Kuwi *kluhu*, *kruhu*, *kurhu* ‘antelope’; (?) Malayalam *kūran* ‘hog-deer’. Burrow—Emeneau 1984:161, no. 1785; Krishnamurti 2003:12 **kur-V-c-* ‘deer’.
- C. Proto-Indo-European **g^hwē̃r-* ‘wild animal, wild beast’: Greek θήρ (Lesbian θήρ, Thessalian θείρ) ‘a wild beast, beast of prey’, θήρα (Ionic θήρη) ‘a hunting of wild beasts, the chase’, θηράω, θηρεύω ‘to hunt’; Latin *fērus* ‘wild, untamed, rough, savage, uncivilized, cruel’, *fērox* ‘wild, unbridled, arrogant’, *fērīnus* ‘relating to a wild beast, wild’; Lithuanian *žvėris* ‘(wild) beast’, *žvėriáuju*, *žvėriáuti* ‘to hunt’; Old Church Slavic *zvěř* ‘wild animal’; Russian *zver’* [зверь] ‘(wild) beast’; Slovak *zver* ‘wild beast’; Serbo-Croatian *zvěr* ‘wild beast’; Slovenian *zvēr* ‘wild beast’. Pokorny 1959:493 **g^huē̃r-* ‘wild animal’; Walde 1927—1932.I:642—643 **g^huēr-*; Mann 1984—1987:408 **g^huhēr-* (**g^huhērs*, **g^huhēris*) ‘game animal, wild animal’; Watkins 1985:23 **ghwer-* and 2000:32 **ghwer-* ‘wild beast’; Gamkrelidze—Ivanov 1984.II:468, II:469, II:471, II:485,

II:491 **ḡ[h]uer-* and 1995.I:390, I:405, I:411 **ḡ^hwer-* ‘wild animal’; Mallory—Adams 1997:23 **ḡ^huér* ‘wild animal’; Boisacq 1950:344 **ḡ^huēr-*; Frisk 1970—1973.I:671—672 Greek (pl.) θῆρες < **ḡ^huér-es*; Chantraine 1968—1980.I:435—436 **ḡ^hwēr-*; Hofmann 1966:115 **ḡ^huēr*; Beekes 2010.I:547 **ḡ^hueh₁r-*; De Vaan 2008:215 **ḡ^hueh₁(-)*r-** ‘wild animal’; Walde—Hofmann 1965—1972.I:487—488 **ḡ^huēr-*; Ernout—Meillet 1979:230; Shevelov 1964:44; Derksen 2008:549—550 **ḡ^hueh₁r-* and 2015:524 **ḡ^hueh₁r-*; Smoczyński 2007.1:795 **ḡ^hueh₁r-*; Fraenkel 1962—1965.II:1327.

- D. Proto-Altaic **guri* ~ **gori* (~ -*rʸ-*; -*e*) ‘deer, game’: Proto-Tungus **gur-* *ma-*, **gur-na-* ‘hare, squirrel, ermine’ > Evenki *gurnun* ‘squirrel’; Lamut / Even *gurnata* ‘ermine’; Manchu *gulmaḡun* ‘hare’; Spoken Manchu (Sibo) *gulamahun* ‘rabbit, hare’; Nanay / Gold *gormaḡō* ‘hare’, *gorgo* ‘fox’. Mongolian loans in: Manchu *gurgu* ‘wild animal, beast’, *gurguše-* ‘to hunt wild animals’; Solon *gures* ‘wild animal’. Proto-Mongolian **görüye* ‘antelope, wild steppe animal, game’ > Mongolian *görügesü(n)* (Middle Mongolian *göreʔe*) ‘wild herbivorous animal, game, beast, antelope’, *görügeči-* ‘hunter, trapper’, *görüge(n)* ‘hunting, chasing; game’, *görügele-* ‘to hunt’; Ordos *görōs* ‘(wild) beast’; Khalkha *görōs(ön)* ‘antelope’; Buriat *gürōhe(n)* ‘antelope, wild animal, game’; Kalmyk *görē*, *görēsṇ* ‘antelope, wild animal, game’; Moghol *gor[ä]sun* ‘wild ass’; Shira-Yughur *görösən* ‘antelope, wild animal, game’; Dagur *gurēs*, *gurēse* ‘antelope, wild animal, game’; Monguor *korosə* ‘wild animal, ferocious beast’. Poppe 1960:25; Street 1974:13 **göregē* ‘wild animal’; Starostin—Dybo—Mudrak 2003: 574—575 **guri* (~ -*o-*, -*ṛ-*, -*e*) ‘deer, game’.

Buck 1949:3.11 animal (also wild beast); 3.79 hunt (vb.). Illič-Svityč 1971—1984.I:237, no. 93, **gUjRä* ‘wild (beast)’; Bomhard—Kerns 1994:398—399, no. 236; Dolgopolsky 1998:41, no. 36, **gurHa* ‘antelope, male antelope’ and 2008, no. 659, **güRV* ‘beast’.

22.22. PROTO-NOSTRATIC *k^h

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
k ^h -	k-	k-	k-	k ^h -	k-	k ^h -	k- q-
-k ^h -	-k-	-k(k)-	-k-	-k ^h -	-k(k)-	-k ^h -	-k(k)- -q(q)-

413. Proto-Nostratic 1st person pronoun stem (stative) *k^ha-:

- A. Proto-Afrasian *-k(a)- 1st person pronoun stem: Proto-Semitic *-ku marker of the 1st person sg. in the stative; *-ku in the 1st person sg. independent pronoun *ʔan-āku (also *ʔan-ā and *ʔan-ī), which consists of the stem *ʔan- followed by the suffixal element *-āku, which itself is composed of *-ā plus *-ku (cf. Moscati 1964:103—104). Egyptian -k in *ink* 1st person independent pronoun; also -kw(i), -kī, -k ending of the 1st person sg. of the old perfective (“pseudo-participle”); Coptic 1st person sg. independent pronoun *anok* [אַנוֹכ]. Hannig 1995:79—80 and 879; Faulkner 1962:24; Erman—Grapow 1921:15 and 1926—1963.1:101, 5:117; Gardiner 1957:53 (§64), 234—236 (§309), 554, and 597; Loprieno 1995:64—66 and 74; Černý 1976:9; Vycichl 1983:12. Berber: -k in, for example: Tuareg *nək*, *nəkkunan* 1st person independent pronoun ‘I, me’; Kabyle *nəkk*, *nəkki*, *nəkkini* 1st person independent pronoun ‘me’; Tamazight *nəkk*, *nəç* 1st person independent pronoun ‘me’; Tashelhiyt / Shilha *nki* 1st person independent pronoun ‘me’, 1st person suffixed personal subject pronoun -aγ (< *-ā-kV; cf. Diakonoff 1988:80—81, table and note c); Ghadames *nəc*, *nəccan* 1st person independent pronoun ‘me’; Mzab *nəcc*, *nəcci*, *nəccin* 1st person independent pronoun ‘me’. Note also Ongota *ka/-k* ‘I, me’ (cf. Fleming 2002b:50).
- B. Elamo-Dravidian: David McAlpin (1981:119—120, §542.1) reconstructs a 1st person singular appellative personal ending *-kə for Proto-Elamo-Dravidian, and this undoubtedly belongs here. Note the 1st person personal possessive pronominal enclitic in Brahui: -ka; note also the locutive -k in Elamite in, for example, *u...sunki-k* ‘I am king’ or *huttah halen-k* ‘I made it at great pains’ (*hutta-h*, predicate; *halen-k*, included form, locutive). For Proto-Dravidian, Zvelebil (1990:35—36) reconstructs a 1st person singular non-past personal ending *-N-ku, found, for example, in Old Tamil (archaic non-past) -Ø-ku and in Gondi (future) -k-ā, while the 1st person plural exclusive non-past personal ending was *-N-kum, found, for example, in Old Tamil (archaic non-past) 1st person plural exclusive -Ø-kum and in Gondi (future) 1st person plural exclusive -k-em, 1st person plural inclusive -k-āṭ. See also Krishnamurti 2003:290 and 301—304.

- C. Indo-European: Greek has a unique formation, the so-called “first perfect”, which would be better named the “κ-perfect”. As noted by Sihler (1995:576): “Its inception must belong to prehistoric G[reek], for it is already established, within limits, in Hom[er] and in the earliest records of other dialects.” Moreover, Sihler notes (1995:576): “In Hom[er] the formation is found in some 20 roots, all ending in long vowel (from the G[reek] standpoint), and in all of them the κ-stem is virtually limited to the SINGULAR stems which actually contain a long vowel... Later the formation, by now more accurately a κ α -perfect, spreads to other stems ending in a long vowel, then to stems ending in any vowel (including denominatives), and finally to stems ending in consonants, and to all persons and numbers.” This is very important, for Sihler here traces the expansion of this stem type within the history of Greek itself. Thus, we are dealing with developments specific to Greek. Buck (1933:289—290) agrees with Sihler. In Latin, we find 1st singular perfect forms *fēcī* ‘I did’ and *iēcī* ‘I threw’ (N.B. *faciō* and *iaciō* are “secondary elaborations based on these” [Sihler 1995:562]). As in Greek, the *-c-* [k] is found in all persons (cf. third singular *fecit*), and, as in Greek, the *-c-* [k] has given rise to secondary formations. The *-k-* forms are also found in Tocharian, as in 1st singular preterit active *tākā-* ‘I was’, and, as in Greek and Latin, the *-k-* is found in all persons and has given rise to secondary formations. Van Windekens (1976.I:495—496) goes so far as to posit Proto-Indo-European **dhēq-*, **dhəq-*, as does Rix (1998a:120—121). On the basis of the evidence from Greek, Latin, and Tocharian, we may assume that a “suffix” **-k-* is to be reconstructed for late-stage Proto-Indo-European — what I have referred to as “Disintegrating Indo-European”. This “suffix” originally had a very limited distribution — it seems to have appeared only in the perfect (< stative) singular of verbs that ended in a long vowel, when the long vowel originated from earlier short vowel plus laryngeal. All of the other formations found in Greek, Italic, and Tocharian are secondary elaborations. But, we can go back even farther — it is my contention that the *-k-* originally characterized the 1st person exclusively, from which it spread to other persons. Of course, this suggestion is not new. Sturtevant (1942:87—88) suggested that **-k-* developed in the 1st person singular when a root-final laryngeal was followed by the ending **-xe* (that is, **-H₂e* [Kurylowicz would write **-ǵ₂e*]). Though a laryngeal explanation along these lines has not been generally accepted (cf. Messing 1947:202—203), the suggestion that the *-k-* was originally confined to the 1st person singular is still worthy of consideration, especially in view of the evidence from other Nostratic languages.
- D. Uralic: Hungarian 1st person subjective ending *-k*; Selkup Samoyed 1st person subjective ending *-k*. The 1st person ending *-k* may also survive in the Permian languages in the negative verb: Zyrian / Komi *o-g* ‘I am not’,

e-g ‘I was not’; Votyak / Udmurt *u-g* ‘I am not’. Greenberg 2000:67—68; Collinder 1960:309, §996.

- E. Etruscan: First person singular passive preterite ending *-xe*, as in: *mi araθiale zixuxē* ‘I was written for Araθ’, *mi titasi cver menaxe* ‘I was offered as a gift to Tita’ or ‘I was offered as a gift by Tita’ (cf. Bonfante—Bonfante 2002:101). This ending is also found in Raetic: *tina-xe* ‘I have given, I gave’ (cf. Sverdrup 2002:98).

Greenberg 2000:67—70; Dolgopolsky 1984:89—90 *HVkE.

414. Proto-Nostratic demonstrative pronoun stem:

- Proximate: *k^ha- (~ *k^hə-) ‘this’;
Intermediate: *k^hi- (~ *k^he-) ‘that’;
Distant: *k^hu- (~ *k^ho-) ‘that yonder’

- A. Proto-Afrasian *ka-, *ki-, *ku- demonstrative pronoun stem: Semitic: Aramaic *-χ* (< *k) in *dēχ* ‘that’; Arabic *-k* in *ḏāka*, *ḏālika* ‘that’; Mehri *-k* in *ḏāk* ‘that’; Geez / Ethiopic *-(k)ku* [-**ḥ**] an element expressing distance as in *zəkkū* ‘that’; Gurage *ka* ‘that’, (Chaha) *kəm* in *kəməkəm* ‘such and such’, *-x* (< *k) in *zax* ‘that’; Amharic *-h* (< *k) in *zih* ‘this’. Barth 1913:80—83; Brockelmann 1908—1913.I:318 and I:323—324; Leslau 1979:331, 343 and 1987:271, 635. Highland East Cushitic: Burji (m. sg.) *kú* ‘this’, (m./f. sg./pl.) *káaci* ‘that, those’, (m./f. pl.) *cí* ‘these’; Gedeo / Darasa (m. sg./pl.) *kunni* ‘this, these’, (m. sg./pl.) *ikki* ‘that, those’; Hadiyya (m. sg./pl., f. pl.) *ku(k)* ‘this, these’, (m. sg./pl., f. pl.) *o(k)* ‘that, those’; Kambata (m. sg./pl., f. pl.) *ku* ‘this, these’; Sidamo (m. sg.) *kuni* ‘this’, (m. sg., m./f. pl.) *kuuʔu* ‘that, those’, (m. pl.) *kuni*, *kuri* ‘these’. Hudson 1976:255—256 and 1989:150—151, 153; Sasse 1982:111. Cushitic: Galla / Oromo (Wellegga) near demonstratives: (subject) *kun(i)*, (base) *kana* ‘this’. Proto-Southern Cushitic (m.) *ʔuukaa ‘this’, (m. bound) *kaa ‘this’ > Iraqw *ka* ‘this’ (neuter ?); Burunge (m.) *ki* ‘this’, (m.) *kaʔa* ‘that’; K’wadza *-(u)ko* masculine gender marker; Ma’a *ka* ‘this’; Asa *-(u)k*, *-ok* masculine gender marker; Dahalo *ʔuukwa* ‘this’. Ehret 1980:296. Omotic: Aari unaffixed 3rd person pronominal stems (m. sg.) *kí*, (f. sg.) *kó*, (m./f. pl.) *ké*. Ehret 1995:194, no. 309, *kaa ‘this’. Chadic: North Bauchi Chadic (Bu: / Zaranda) *aka* (adv.) ‘there’, *áki* (adv.) ‘here’, *kí*: (adv.) ‘here’ (cf. Caron 2008:98 and 102).
- B. Proto-Kartvelian *k- pronoun stem: Georgian [-k-]; Mingrelian [-k-]; Laz [-k-]. In the modern Kartvelian languages, *k- is only found in its historical derivatives (cf. Georgian *a-k-a* ‘here’, *i-k-i* ‘there’). Klimov 1964:194 *k- and 1998:211 *k- pronoun stem; Fähnrich—Sardshweladse 1995:368—369 *k-; Fähnrich 2007:453—454 *k-.
- C. Proto-Indo-European *k^he-/ *k^ho-, *k^hi- demonstrative pronoun stem: Hittite (nom. sg.) *ka-a-aš*, (nom.-acc. sg. neuter) *ki-i* ‘this, that’; Palaic *ka-*

‘this (one)’, *ki-i-at* ‘here’; Greek *κε in: ἐ-κεῖνος, (poet.) κεῖνος (Aeolian κῆνος) ‘that person or thing, that person there’, ἐ-κεῖ ‘there, in that place’, ἐ-κεῖθεν, (poet.) κεῖθεν ‘from that place, thence’; Latin *ce-* in *ce-do* ‘give here!’, *-c(e)* in: *hi-c*, *sī-c*, *illī-c*, *illū-c*, *tun-c*, *nun-c*, *ec-ce*; *ci-* in: *cis* ‘on this side’, *citer* ‘on this side’, *citrō* ‘to this side’, *citrā* ‘on this side, nearer’; Old Irish *cé* in *bith cé* ‘this world’; Gothic *hēr* ‘here, hither’, *hi-* pronominal stem preserved in the adverbial phrases *himma daga* ‘on this day, today’, *fram himma* ‘from henceforth’, *und hina dag* ‘to this day’, *und hita*, *und hita nu* ‘till now, hitherto’ and in *hiri* ‘come here!’, *hidrē* ‘hither’; Old Icelandic *hann* ‘he’, *hér* ‘here’, *heðra* ‘here, hither’, *hinn* ‘the other, (emphatically) that’; Old English *hē* ‘he’, *hīe* ‘they’, *hider* ‘hither’, *hēr* ‘here’; Old Frisian *hi*, *he* ‘here’, *hīr* ‘here’; Old Saxon *hi*, *he*, *hie* ‘he’, *hēr*, *hīr* ‘here’; Old High German *hia(r)* ‘here’ (New High German *hier*), *hin(n)a* ‘hence, thither, that way, over there’ (New High German *hin*), *hin(n)ān*, *hin(n)ana* ‘away from here, from hence’ (New High German *hinnen* — only in *aus hinnen*); Lithuanian *šis* ‘this’; Old Church Slavonic *se* ‘this’. Pokorny 1959:609—610 **kō-*, **ke-* ‘this’; Walde 1927—1932.I:452—454 **kō-*, **ke-*; Mann 1984—1987:606 **kei* (**kej*, **kein-*) ‘here, there; hither, thither’, 617 **kid* (**kide*, **kidā*) ‘hither, here’, 619 **kis*, (f.) **kīā*, **kīā*, (n.) **kid* ‘this, he (she), it’, 620 **kit* ‘this way, hither’, 621 **kīā*, **kīā*, 621 **kīē* ‘here, hither’, 622 **kīēmo*, **kīm-* ‘hither’, 622 **kīen-* (**kīon-*, **kin-*) ‘this’; Watkins 1985:32 **kō-* and 2000:43 **kō-* stem of demonstrative pronoun meaning ‘this’; Mallory—Adams 1997:458 **kīs* ‘this (one)’; Puhvel 1984— .4:3—12 **ke-*, **kō-*, **kī-*; Beekes 2010.I:397 **ke*, **kī*; Chantraine 1968—1980.I:329 **ke-/ki-*; Boisacq 1950:233 **kō-*, **kī-*, **kīo-* and 234; Frisk 1970—1973.I:475—476 **ke*, **kī* and I:476; Hofmann 1966:75—76 **kō-*, **kī-*, **kīo-*; Ernout—Meillet 1979:109 **ke* and 123; Walde—Hofmann 1965—1972.I:192—193 **ke*, **kō-*, **kī* (adv.), **k(i)o-* and I:222; De Vaan 2008:102 **ke*, **kī* ‘this, here’; Orël 2003:172 Proto-Germanic **xē₂r*, 172 **xī*; Kroonen 2013:225 Proto-Germanic **hi* ‘this, these’ and 225 **hiar* ‘here’; Feist 1939:254 **kēi-r* and 255 **kej-*, **kī-* (**kīo-*); Lehmann 1986:182 **key-* + adv. *-r* and 182—183 **key-* ‘here, this’; De Vries 1977:209 **ke-*, **kō-*, 215, 222—223, and 228; Onions 1966:432, 437, and 442; Klein 1971:337 **kī-* ‘this one’, 343 **kī-* ‘this; here’, and 348; Kluge—Mitzka 1967:307 **ke-* ‘here’ and 309; Kluge—Seebold 1989:309 under *hier*, **kei-* ‘here’; under *hin*, **kī-*; and 310; Fraenkel 1962—1965.II:990; Smoczyński 2007.1:639—640 **kī-*; Derksen 2008:484 **kī-* and 2015:450—451 **kī-*.

- D. Proto-Altaic **k^ho-* (~ **k-*) ‘this’: Proto-Mongolian **kū* deictic particle > Written Mongolian *ene kū* ‘exactly this’, *tere kū* ‘exactly that’; Khalkha *χū*; Ordos *kū*; Dagur *ke*, *kē*. Proto-Turkic **kō* ‘this’ > Salar *ku* ‘this’; Sary-Uighur *gu*, *go* ‘this’; Chuvash *ko*, *kuv* ‘this’. Starostin—Dybo—Mudrak 2003:709 **ko* (~ **k^c-*) ‘this’.
- F. Etruscan (archaic) *ika* ‘this’, (later) *eca*, *ca*.

Sumerian *ki* ‘there, where’.

Greenberg 2000:91—94; Dolgopolsky 2008, no. 982, *K[ü] demonstrative pronoun (animate ?); Bomhard—Kerns 1994:403—404, no. 241.

415. Proto-Nostratic (n.) **k^hab-a* ‘he-goat, male sheep, buck, ram’:

- A. Proto-Afrasian **kab-* ‘he-goat, male sheep, buck, ram’: Proto-Semitic **kab-at* ‘lamb, he-goat, male sheep, buck, ram’ > Hebrew *keḇeš* [כֶּבֶשׂ] ‘lamb’; Syriac *keḇšā* ‘lamb’ (Arabic loan); Akkadian *kabsu* ‘young (male) sheep’; Amorite *kabš(ān)um* ‘lamb’; Arabic *kabš* ‘ram, male sheep’; Harsūsi *kabš* ‘lamb’; Soqotri *kubš* ‘goat’; Šheri / Jibbāli *kabš* ‘lamb’; Mehri *kabš* ‘(male) lamb’. Militarëv—Kogan 2005.II:154—155, no. 114, Proto-Semitic **kabš-*, **kabĉ-* ‘young ram’; Murtonen 1989:227; Klein 1987:270.
- B. Proto-Indo-European **k^habh-ro-* > (with progressive voicing assimilation) **k^haph-ro-* ‘he-goat, buck’: Greek *κάπρος* ‘wild boar’; Latin *caper* ‘he-goat’; Umbrian *kabru* ‘he-goat’; Old Irish *gabor* ‘goat’; Welsh *gafr* ‘he-goat’; Old Icelandic *hafr* ‘he-goat, buck’; Faroese *havur* ‘he-goat, buck’; Old English *hæfer* ‘buck, he-goat’; East Franconian *Haberling* ‘year-old he-goat’; New High German (dial.) *Haber-* in *Habergeiß* ‘bogyman’. Pokorny 1959:529 **kapro-* ‘he-goat’; Walde 1927—1932.I:347—348 **kapro-*; Watkins 1985:27 **kapro-* and 2000:37 **kap-ro-* ‘he-goat, buck’; Mann 1984—1987:462 **kapros*, -ā ‘goat’; Mallory—Adams 1997:229 **kápros* ‘he-goat’; Frisk 1970—1973.I:782—783 **kápros*; Boisacq 1950:409 **qapro-s*; Chantraine 1968—1980.I:495; Hofmann 1966:132; Beekes 2010.I:639—640 **kapro-* (root **kh₂p-*); Walde—Hofmann 1965—1972.I:157—158 **kapros*; De Vaan 2008:89; Ernout—Meillet 1979:94—95; Orël 2003:148 Proto-Germanic **xabraz*; Kroonen 2013:198 Proto-Germanic **hafra-* ‘billy goat, buck’; De Vries 1977:201. Sanskrit *káprī* ‘penis’ may belong here as well (cf. Mayrhofer 1956—1980.I:157).

Buck 1949:3.26 ram; 3.37 he-goat. Bomhard—Kerns 1994:412, no. 253; Different etymology in Dolgopolsky 2008, no. 843, **kabV* ‘sheep, goat’.

416. Proto-Nostratic (n.) **k^hab-a* ‘foot, hoof’:

- A. Proto-Afrasian **kab-* ‘(sg.) foot, hoof; (pl.) shoes’: Egyptian *kbwī* ‘sole (of foot)’, *ṭbwt*, *ṭbt* ‘sole (of foot), sandal’. Hannig 1995:880 and 951; Faulkner 1962:304; Gardiner 1957:601; Erman—Grapow 1921:208 and 1926—1963.5:118, 5:361—363. West Chadīc **kab-* ‘shoes’ > Angas *kaap* ‘shoes’. Proto-East Cushitic **kab-/kob-* ‘(sg./sglt.) foot, hoof, footprint; (pl./coll.) shoes’ > Burji *kótt-ee* (< **kob-te*) ‘foot, hoof’; Saho *kab-ela* ‘shoes’; Afar *kab-el* ‘shoes’; Arbore *kob-o* ‘shoes’; Dasenech *kob* ‘shoes’;

Elmolo *kop* ‘shoes’; Sidamo *kotte* ‘shoe’; Somali *kab* ‘shoes’; Rendille *kob* ‘shoes’; Galla / Oromo *kop*’-ee ~ *kob*-ee ‘shoes’, *kotte* (< **kob*-tee) ‘paw, hoof, spoor’; Konso *xop*-ta ‘footprint, sandal’; Gidole (sglt.) *hof*-t ‘footprint’, (pl.) *hop*-a ‘shoe(s)’. Sasse 1979:12 and 1982:119; Hudson 1989:133. East Cushitic (Werizoid) **xop*- ‘shoe, sandal’ > Gawwada *xope* ‘shoe, sandal’. Orël—Stolbova 1995:307, no. 1406, **kab*- ‘shoe, sandal’. According to Orël—Stolbova, the -o- in East Cushitic **kob*- is a “secondary -o- before a labial”.

- B. Proto-Indo-European **k^hab^h*- > (with progressive voicing assimilation and with laryngeal suffix, as suggested by Mallory—Adams 1997:272 and Watkins 2000:43) **k^hāph*-Ho- ‘hoof’: Sanskrit *śaphá-h* ‘hoof’; Avestan *safa* ‘hoof of the horse’; Old Icelandic *hófr* ‘hoof’; Norwegian *hov* ‘hoof’; Swedish *hov* ‘hoof’; Danish *hov* ‘hoof’; Old English *hōf* ‘hoof’; Old Frisian *hōf* ‘hoof’; Old Saxon *hōf* ‘hoof’; Dutch *hoef* ‘hoof’; Old High German *huof* ‘hoof’ (New High German *Huf*). Pokorny 1959:530 **kāpho*- or **kōpho*- ‘hoof’; Walde 1927—1932.I:346 **kāpho*- or **kōpho*-; Mann 1984—1987:531 [**kōp*-]; Watkins 1985:27 **kap(h)o*- (lengthened-grade form **kāp(h)o*- in Germanic **χōfaz*) and 2000:43 **kop-ǵo*- ‘hoof’; Gamkrelidze—Ivanov 1984.I:31 **Kopho*- and 1995.I:28 **Kopho*- ‘hoof’; Mayrhofer 1956—1980.III:297; Falk—Torp 1903—1906.I:301; Mallory—Adams 1997:272 **koph₂ós* ‘hoof’; Orël 2003:181 Proto-Germanic **xōfaz*; Kroonen 2013:238—239 Proto-Germanic **hōfa*- ‘hoof’; Torp 1919:223; De Vries 1977:247; Onions 1966:447 Common Germanic **χōfaz*; Hoad 1986:220; Klein 1971:362; Kluge—Mitzka 1967:318 **kāpho*- or **kōpho*-; Kluge—Seebold 1989:318.

Buck 1949:6.51 shoe. Bomhard—Kerns 1994:412, no. 253; Dolgopolsky 2008, no. 1108, **Kap[ä]* ‘palm of hand, sole of foot; hoof’.

417. Proto-Nostratic root **k^had*- (~ **k^həd*-):

(vb.) **k^had*- ‘to cover, to wrap, to clothe’;

(n.) **k^had*-a ‘covering, shield, protection’

Perhaps identical to:

(vb.) **k^had*- ‘to tie, to bind’;

(n.) **k^had*-a ‘tie, band, fastening’

- A. Proto-Afrasian **kad*- ‘to cover, to wrap’: Proto-Semitic **kad-an*- ‘to cover, to wrap’ > Arabic *kadana* ‘to wrap oneself in clothes, to yoke oxen to the plow’; Akkadian *kidinnu* ‘divine protection’ (< **kadānu* ‘to protect’ < ‘to cover’); Geez / Ethiopic *kadana* [ክደኑ] ‘to cover, to wrap, to clothe, to hide, to veil, to close, to protect, to forgive (sins)’; Tigrinya *kādānā* ‘to cover, to clothe’; Tigre *kādna* ‘to cover’; Harari *xādāna* ‘to cover, to thatch’, *māxdañ* ‘cover of any kind, lid’; Amharic *kāddānā* ‘to cover the roof with

straw, to cover a pot'; Gurage *kādānā* 'to thatch a house, to cover with a lid'. Leslau 1963:96, 1979:337, and 1987:275—276.

- B. Dravidian: Tamil *kaṭi* 'protection, safeguard, defense', *kaṭikai* 'shield'; Kannaḍa *kaḍitale* 'shield'. Burrow—Emeneau 1984:106, no. 1127.
- C. Proto-Eskimo **qaḍəlir-* 'to cover': Central Siberian Yupik *qayəlir-* 'to cover'; Sirenik *qacir-* 'to heave up on (sled), to cover'; Seward Peninsula Inuit *qalliq-* 'to cover'; North Alaskan Inuit *qalliq-* 'to cover'; Western Canadian Inuit *qalliqtuq-* 'to heap up (on top)'; Eastern Canadian Inuit *qalli(C)-* 'to press down (once)'; Greenlandic *qattir-* 'to cover'. Fortescue—Jacobson—Kaplan 1994:274.

Buck 1949:10.14 wind, wrap (vb.); 12.26 cover (vb.). Bomhard—Kerns 1994:424—425, no. 267.

418. Proto-Nostratic root **k^had-* (~ **k^həd-*):

(vb.) **k^had-* 'to tie, to bind';

(n.) **k^had-a* 'tie, band, fastening'

Perhaps identical to:

(vb.) **k^had-* 'to cover, to wrap, to clothe';

(n.) **k^had-a* 'covering, shield, protection'

- A. Afrasian: Proto-Semitic (reduplicated) **kad-kad-* 'to tie, to bind' > Geez / Ethiopic *kʷadkʷada* [ḥ-ḡ-ḡ] 'to tie, to bind'; Tigrinya *kʷäkkwädä* (< *kʷadkʷada*) 'to tie'; Amharic *kʷädäkkwädä* 'to tie up (a criminal or prisoner)'. Leslau 1987:275.
- B. [Dravidian: Tamil *kaṭṭu* (*kaṭṭi-*) '(vb.) to tie, to fasten, to build, to wear, to put on, to bind by spells, to marry, to shut up, to store, to hug, to compare with, to be equal; (n.) tie, band, fastening, regulations, custom, building, marriage, bundle, packet, dam, causeway', *kaṭṭaṭam* 'building, binding of a book, setting of a jewel', *kaṭṭanam* 'building', *kaṭṭalai* 'code, rule, regulations', *kaṭṭai* 'dam'; Malayalam *keṭṭuka* 'to tie, to build, to clasp, to yoke, to dress, to marry, to make into a bundle, to stop, to restrain, to become entangled, to clot', *keṭṭikka* 'to cause to tie, to make to wear, to give in marriage', *keṭṭu* 'tie, bundle, band, connection (as in marriage), restraint, dam, bank, building', *keṭṭakam* 'house', *kaṭṭu* 'tie, bundle'; Kota *kaṭ-* (*kac-*) 'to tie, to build, to manage (house), to be equal', *kaṭ* 'knot, caste custom, case of which decision has been given', *kaṭaṛm* 'wall of brick or stone', *kaṭaṇ* 'caste custom, individual's habit'; Toda *koṭ-* (*koṭy-*) 'to tie, to build, to kill by witchcraft, to obstruct, to manage (a house)', *koṭ* 'knot, bundle, amulet', *koṭas* 'noose'; Kannaḍa *kaṭṭu* '(vb.) to tie, to bind, to yoke, to build, to shut up, to stop by magic, to bewitch, to amass (wealth), to obstruct, to shut, to dam, to be bound, to be stopped; (n.) building, tying, checking, restraint, band, tie, bundle, something built, regulation, rule, bewitching', *kaṭṭuvike* 'tying, etc.', *kaṭṭuka* 'man who ties', *kaṭṭaḍa*,

kaṭṭana, *kaṭṇa* ‘a building’, *kaṭṭal* ‘state of being bound, tied, surrounded’, *kaṭṭe* ‘structure of earth or stones to sit upon, embankment, dam, causeway’, *gaṭṭu* ‘dam, embankment’, *gaṭṭe* ‘bale, bundle’; Koḍagu *kēṭṭ-* (*kēṭṭi-*) ‘to tie, to build’, *kēṭṭi* ‘knot, bundle’, *kaṭṭe* ‘bund of tank, platform built under tree on village green’, *kaṭṭaḍa* ‘a building’; Tuḷu *kaṭṭuni* ‘to tie, to bind, to build, to amass (wealth)’, *kaṭṭāvuni* ‘to cause to bind or tie, to have a house built’, *kaṭṭu* ‘band, tie, bundle, regulation, bond’, *kaṭṭana*, *kaṭṭalme* ‘building’, *kaṭṭa* ‘a dam’, *kaṭṭale* ‘custom, rule’, *kaṭṭāṇi* ‘necklace’; Telugu *kaṭṭu* ‘(vb.) to tie, to bind, to wear (clothes), to build, to bewitch, to obstruct; (n.) tie, bond, knot, band, wearing of a garment, restraint, rule or regulation’, *kaṭṭincu* ‘to get built, to cause to be bound or tied’, *kaṭṭa* ‘dam, embankment; bundle’, *kaṭṭaḍa*, *kaṭṭaḍi* ‘rule, law, fashion, manner’, *kaṭṭaḍamu* ‘building’, *kaṭṭanamamu* ‘a tie’, *gaṭṭu* ‘dam, embankment’; Kolami *kaṭ-* (*kaṭṭ-*) ‘to tie, to build’, *kaṭṭā* ‘platform’, *kaṭṭa* ‘bund of field’; Naikri *kaṭṭ-* ‘to tie, to build’, *kaṭṭa* ‘bund of field, dam, dike’, *kaṭṭe* ‘necklace’; Naiki (of Chanda) *kaṭ-/kaṭṭ-* ‘to bind, to tie hair, to build, to attach bowstring’; Parji *kaṭṭ-* ‘to tie, to build’, *kaḍk-* ‘to tie, to fasten, to build’, *kaṭṭa* ‘bund of field’; Gadba (Ollari) *kaṭ-* ‘to tie, to build’, (Salur) *kaṭṭ-* ‘to bind’, *gaṭṭu* ‘bank’; Gondi *kaṭṭānā* ‘to be shut (of door), to close or come to grips (of two men fighting)’, *kaṭṭitānā* ‘to adhere, to be attached to’, *kaṭṭā* ‘a dam in the river for catching fish’, *kaṭṭa* ‘bund, embankment’, *kaṭ* ‘bank of a river’; Konḍa *kaṭa* ‘bundle (of hay, etc.)’, *gaṭu* ‘bund, bank (of a river, tank, etc.)’, *kaṭis-* ‘to yoke (plow)’; Pengo *kaṭa* ‘bank of a river’; Kui *kāṭ-* ‘to fix, to fasten, to secure’; Kuwi *gaṭṭu* ‘bund of a field’, *kādagattu* ‘bank of a river’, *gaṭu* ‘boundary, beach, shore; end of a table, field, etc.’; Malto *gaṭa* ‘rope, cord’. Burrow—Emeneau 1984:108, no. 1147; Krishnamurti 2003:199 **kaṭ-/kaṭṭ-* ‘to tie, to bind’, **kaṭṭ-ay-* ‘a dam’.] These forms may belong under Proto-Nostratic root **k’ad-* (~ **k’əd-*) ‘(vb.) to tie, to fasten; to build, to construct; (n.) tie, band, fastening’ instead.

Sumerian *kād* ‘to fasten, to tie, to bind’, *kad₅* ‘to tie, to fasten’.

Buck 1949:9.16 bind (vb. tr.). Bomhard—Kerns 1994:424—425, no. 267.

419. Proto-Nostratic (n.) **k^hal-a* ‘female in-law’:

Note also:

(n.) **k’el-a* ‘female in-law’

- A. Proto-Afrasian **kal-* ‘female in-law’: Proto-Semitic **kall-* ‘daughter-in-law, bride’ > Akkadian *kallatu*, *kallutu* ‘daughter-in-law, wife of son living in his father’s household, bride, sister-in-law’; Hebrew *kallāh* [כַּלָּה] ‘bride, betrothed; daughter-in-law’; Palmyrene *klh* ‘bride’; Jewish Aramaic *kalləθā* ‘bride, daughter-in-law’; Ugaritic *klt* ‘bride, daughter-in-law (?)’;

Sabaeen *hkl̥l̥n* ‘to give in marriage’; Soqotri *kālan* ‘bridegroom’; Mehri *kālōn* ‘bride, groom’; Hōbyōt *kūlūn* ‘bridegroom’, *kulūnt-* ‘bride’; Šheri / Jibbāli *kólūn* ‘bride, bridegroom’; Harsūsi *kelōn* ‘bridegroom’, *kelōnet* ‘bride’. Klein 1987:277. West Chadic **kalya-* ‘woman’ > Zakshi *kyel* ‘woman’; Zem *kal* ‘woman’; Zaar *kəl* ‘woman’; Buu *kəl* ‘woman’; Dokshi *kəli* ‘woman’. Orël—Stolbova 1995:310, no. 1419, **kal-* ‘female in-law’.

- B. Dravidian: Kurux *xallī* ‘father’s younger brother’s wife’; Malto *qali* ‘mother’s sister’, *qalapo* ‘sister’s son’, *qalapi* ‘sister’s daughter’. Burrow—Emeneau 1984:123, no. 1318.
- C. Kartvelian: Old Georgian *kal-i* ‘maiden’ (Georgian *kal-i* ‘woman, daughter’).
- D. Proto-Uralic **kälz* (**kälz-w3*) ‘sister-in-law’: Finnish *käly* ‘husband’s sister; wife’s sister; wife of the husband’s brother; wife of the wife’s brother’; Estonian *käli* ‘husband’s brother’s wife’; Lapp / Saami *galojædne* ‘husband’s brother’s wife’; Mordvin (Moksha) *kel* ‘wife’s sister; wife’s brother’s daughter’; Zyrian / Komi *kel* ‘wife’s sister; wife’s brother’s daughter’; Ostyak / Xanty *kūli* ‘wife’s sister; wife’s brother’s daughter’; (?) Yurak Samoyed / Nenets *seel* ‘brother-in-law (husbands of two sisters)’; (?) Tavgi Samoyed / Nganasan *sealuŋ* ‘brother-in-law’; (?) Yenisei Samoyed / Enets (Hantai) *seđi*, (Baiha) *seri* ‘brother-in-law’; (?) Selkup Samoyed *šäl* ‘the husband of the wife’s sister or female cousin; the wife of the wife’s brother or male cousin; the husband of the husband’s sister or female cousin; the wife of the husband’s brother or male cousin’. Collinder 1955:23, 1960:406 **kälū*, and 1977:43; Sammallahti 1988:538 **kälāw* ‘in-law’; Rédei 1986—1988:135—136 **kälz* (**kälz-w3*); Décsy 1990:100 **kälä(vä)* ‘sister-in-law’; Janhunen 1977b:67 **kelš*. Yukaghir (Northern / Tundra) *kel’il* ‘the husband of the wife’s sister or female cousin; the wife of the wife’s brother or male cousin; the husband of the husband’s sister or female cousin; the wife of the husband’s brother or male cousin’. Nikolaeva 2006:205.

Buck 1949:2.66 sister-in-law. Illič-Svityč 1971—1984.I:295—296, no. 162, **kālU* ‘female relation’; Koskinen 1980:19, no. 47; Dolgopolsky 1998:85—87 **kālu/ū* ‘a woman of the other exogamous moiety’ (→ ‘female relative-in-law, bride’) and 2008, no. 862, **kālū* ‘a woman of the opposite exogamous moiety’ (→ ‘female relative-in-law, bride’); Bomhard 1999a:65; Tyler 1968:811, no. 152; Hakola 2000:52, no. 186.

420. Proto-Nostratic root **k^hal-* (~ **k^həl-*):

- (vb.) **k^hal-* ‘to make a noise, to sound; to call out, to shout’;
(n.) **k^hal-a* ‘noise, sound’

- A. Proto-Afrasian **kal-* ‘to make a noise, to sound; to call out, to shout’:
Proto-Semitic **kal-ah-* ‘to call, to cry out, to shout’ > Geez / Ethiopic

kalha, *kalləha* [ḥḌḥ] ‘to cry out, to cry, to shout, to cry aloud, to howl’; Tigre *kālah* ‘little bell’; Tigrinya (*tä*)*kalhe* ‘to argue with one another, to quarrel’; Harari *kālaḥa* ‘to call someone by shouting’. Amharic (*a*)*klalla* ‘to make a thundering noise’, *källälä* ‘to resound’. Leslau 1987:282—283. Cushitic: Beja / Beḍawye *kaláʔ* (pl. *kálʔa*) ‘bell’; Saho *kalah* ‘to shout’; Awngi / Awiya *käläx-xʷa* ‘to shout’. According to Leslau (1987:283), the Cushitic forms may be loans from Ethiopian Semitic.

- B. Dravidian: Tamil (reduplicated) *kalakala* ‘to reiterate a sound, to rustle, to tinkle, to chink, to clink, to rattle’, *kali* ‘to sound, to clamor, to roar’, *kallu* (*kalli-*) ‘to cause to sound (as a drum)’, *kaḷakaḷa* ‘to rattle, to chatter, to gurgle’, *kaḷaṇ* ‘sound, noise’; Malayalam *kaḷakaḷa* ‘confused noise, buzz, din’; Kannaḍa *kalakala* ‘confused noise, the murmuring or buzz of a crowd’, *kaḷakaḷa* ‘noise, clamor, tumult, chattering of birds, the noise of rice when nearly boiled’; Tuḷu *kalakala* ‘a confused noise, hum’, *kalkuni*, *kaḷku*, *kālku* ‘to cry as a demon or one possessed by an evil spirit’; Telugu *kalakala* imitative word representing laughter; Kuwi *kālori a-* ‘to shout’, *kālovi* ‘sound’, *kalōvi* ‘noise’; Naiki (of Chanda) *kalla* ‘noise’. Burrow—Emeneau 1984:121—122, no. 1302; Krishnamurti 2003:486 **kala-kala-* ‘to rustle, to tinkle, to rattle’ (onomatopoeic).
- C. Proto-Indo-European **kʰel-/kʰol-*, **kʰal-* (vb.) ‘to make a noise, to sound; to call out, to shout; (n.) noise, sound’: Greek καλέω ‘to call, to summon’, κέλαδος ‘noise’; Latin *calō* ‘to call, to summon’, *clāmō* ‘to call, to shout, to cry aloud’; Old Icelandic *hjala* ‘to chatter, to talk’, *hlóa* ‘to bellow, to roar’; Old English *hiellan* ‘to make a noise’, *hlōwan* ‘to low, to make a loud sound’; Old Saxon *hlōwan* ‘to low, to roar’; Old Low Frankish *hluoien* ‘to roar’; Dutch *hloeien* ‘to roar’; Old High German *halōn* ‘to call, to fetch’, *hloujen* ‘to low, to roar’; Middle High German *hellen* ‘to resound’; Lithuanian *kalbà* ‘language’; Latvian *kaļuot* ‘to chatter’; Hittite *kalleš-*, *kalliš-* ‘to evoke, to summon’, (reduplicated) *kalgalinai-* ‘to clang, to clash’. Rix 1998a:321—322 **kleh₁-* ‘to call’; Pokorny 1959:548—550 **kel-* ‘to call’; Walde 1927—1932.I:443—446 **kel-*; Mann 1984—1987:464 **kal-* (**kalāijō*, **kalejō*) ‘to call, to name, to summon, to invite, to accuse’, 487 **kelō*, *-ijō* ‘to roar, to din, to shout’, 507 **klāmō*, *-ijō* ‘to shout’, 515 **k_l-* (**kəl-*) radical type: ‘to call, to name, to abuse’; Watkins 1985:28—29 **kelə-* (variant form **klā-* < **kla₂-*) and 2000:39 **kelə-* ‘to shout’ (with variant [metathesized] form **kle₂-*, colored to **kla₂-*, contracted to **klā-*); Gamkrelidze—Ivanov 1984.I:202 **k[h]l-e(s)-* and 1995.I:174 **kʰhl-e(s)-* ‘to call’; Mallory—Adams 1997:90 **kelh₁-* ‘to call out to’; Boisacq 1950:397—398 **qalā-*, **qel(ə)-* and 429; Frisk 1970—1973.I:762—763 and II:813; Chantraine 1968—1980.I:484—485 and I:511 **kel-₂-*; Beekes 2010.I:623—624 **klh₁-*; Hofmann 1966:129 and 138; Walde—Hofmann 1965—1972.I:141—142 **qel-* and I:227; De Vaan 2008:84—85; Ernout—Meillet 1979:87—88 and 124—125; Kroonen 2013:231 Proto-Germanic **hlōan-* ‘to low, to bellow’; Orël 2003:156

Proto-Germanic **xalōjanan*, 177—178 **xlōanan*; De Vries 1977:230; Onions 1966:538 **klā-*; Klein 1971:431; Kloekhorst 2008b:430—431; Puhvel 1984— .4:22—24 and 4:25—26; Fraenkel 1962—1965.I:207—208 **kel(ə)-*; Smoczyński 2007.1:247—248; Derksen 2015:220 **kelh₁-*.

- D. Proto-Eskimo **qalər-* ‘to make characteristic cry (animal)’: Alutiiq Alaskan Yupik *qallir-* ‘to yell, to ring, to whistle, to growl’; Central Alaskan Yupik *qalrir-* ‘to cry, to make inarticulate vocal sound’; Naukan Siberian Yupik *qalrir-* ‘to cry, to whistle, to shriek’; Central Siberian Yupik *qalrir-* ‘to cry, to whine, to twitter, to make characteristic sound (animal)’; Sireniki *qarlər-* ‘to make a characteristic animal sound’; Seward Peninsula Inuit *qarluq-* ‘to yell, to call (animal)’; North Alaskan Inuit *qalruq-* ‘to make characteristic sound (animal)’; Western Canadian Inuit *qalruq-* ‘to bark (dogs)’; Eastern Canadian Inuit *qarrulaaq-* ‘to yell, to make inarticulate cries’; Greenlandic Inuit *qarṭur-* ‘to twitter, to squeak, to squeal’. Fortescue—Jacobson—Kaplan 1994:279. Proto-Eskimo **qalmar-* ‘to call dogs’: Central Alaskan Yupik *qalmar-* ‘to summon a dog vocally, to try to attract a man by flirting (woman)’; Central Siberian Yupik *qalmar-* ‘to summon a dog vocally’; Western Canadian Inuit *qammaq-* ‘to call, to lure an animal’; Eastern Canadian Inuit *qammatuq-* ‘to call (dogs)’; Greenlandic Inuit *qarmar-* ‘to call, to lure (dog)’. Fortescue—Jacobson—Kaplan 1994:279. Proto-Inuit **qaləŋu-* ‘to growl’ > Seward Peninsula Inuit *qaliŋuzit-*, *qaliŋužaaq-* ‘to growl’; North Alaskan Inuit *qaliŋu-* ‘to growl’; Eastern Canadian Inuit *qaliŋulaaq-*, *qatiŋula(a)q-* ‘to growl’; Greenlandic Inuit *qaliŋuuq-* ‘to growl, to show the teeth (dog)’. Fortescue—Jacobson—Kaplan 1994:279.

Buck 1949:18.13 shout, cry out; 18.24 language; 18.41 call (vb. = summon). Möller 1911:126 and 133; Bomhard—Kerns 1994:406, no. 244; Dolgopolsky 2008, no. 1049, **ka[L]VhV* ‘to shout, to cry, to weep, to make noise’.

421. Proto-Nostratic root **k^hal-* (~ **k^həl-*):

(vb.) **k^hal-* ‘to guard, to hold (back), to watch’;

(n.) **k^hal-a* ‘protection, care, support; restraint, detention, custody, hold’

- A. Proto-Afrasian **kal-* ‘to guard, to hold (back), to watch’: Proto-Semitic **kal-a?* ‘to guard, to watch, to hold back’, (reduplicated) **kal-kal-* ‘to hold back, to withhold, to prevent’ > Hebrew *kālā?* [כָּלַף] ‘to shut up, to restrain, to withhold’; Syriac *kālā* ‘to hold back, to withhold’; Ugaritic *kl?* ‘to close, to shut’ (?); Arabic *kala?a* ‘to guard, to watch, to protect, to preserve’; Mandaic *kla* ‘to hold back, to withhold’; Akkadian *kalū* ‘to detain, to delay, to hold back (a person), to keep in custody, to confine, to prevent, to hinder; to withhold, to refuse goods, to keep, to deny a wish’; Geez / Ethiopic *kal?a* [አለ] ‘to hinder, to prohibit, to forbid, to prevent, to keep back, to hold back, to deprive, to restrain, to impede, to decline, to

reject, to refuse', (reduplicated) *kalkala* [ḥḏḥḏ] 'to hinder, to prevent, to prohibit'; Tigre *kälʿa* 'to hinder, to prevent', (reduplicated) *kälkälä* 'to hinder, to keep back'; Tigrinya *kälʿe* 'to prevent, to forbid', (reduplicated) *kälkälä* 'to hinder, to keep back'; Gurage (Soddo) *källa* 'to prohibit, to forbid, to refuse, to prevent, to deprive', (Soddo) (reduplicated) *(tä)klakkälä* 'to defend, to protect'; Amharic *källa* 'to hinder, to impede, to prevent', (reduplicated) *käläkkälä* 'to prevent, to prohibit, to forbid, to hinder, to impede, to deprive, to bar'; Argobba (reduplicated) *käläkkälä* 'to hinder, to keep back'. Murtonen 1989:231; Klein 1987:276; Zammit 2002:357; Leslau 1979:341, 342 and 1987:281—282, 283. Cushitic: Saho-Afar *kal*, *kale* 'to hold back'.

- B. Proto-Indo-European **k^hel-/k^hol-* 'to guard, to watch, to hold (back)': Common Germanic **χaldan-* 'to guard, to watch, to hold (back)' > Gothic *haldan* 'to hold, to take care of, to tend'; Old Icelandic *halda* 'to hold fast, to keep back, to restrain, to withhold, to keep, to retain, to preserve, to hold', *hald* 'hold, fastening; keeping in repair; support, backing; custody'; Old Swedish *halla* 'to hold'; Old English *healdan* 'to hold', *geheald* 'keeping, custody, protection'; Old Frisian *halda* 'to hold, to guard'; Old Saxon *haldan* 'to hold, to guard'; Dutch *houden* 'to hold'; Old High German *haltan* 'to hold, to guard' (New High German *halten*). Pokorny 1959:548 **kel-* 'to drive'; Walde 1927—1932.I:442—443 **qel-*; Watkins 1985:28 **kel-* and 2000:39 **kel-* 'to drive, to set in swift motion'; Orël 2003:155 Proto-Germanic **xaldan*, 155 **xaldanan*; Feist 1939:239—240; Lehmann 1986:173—174 **kel-* 'to drive'; De Vries 1977:204; Onions 1966:444; Klein 1971:349; Kluge—Mitzka 1967:285 **kel-*; Kluge—Seebold 1989:289; Mallory—Adams 1997:170 **kel-* 'to drive'.

Sumerian *kal* 'to hold, to keep, to retain'.

Buck 1949:11.15 hold; 11.25 preserve, keep safe, save. Bomhard—Kerns 1994:409, no. 248.

422. Proto-Nostratic root **k^hal-* (~ **k^həl-*):

- (vb.) **k^hal-* 'to point out, to make clear, to make known, to disclose, to explain';
(n.) **k^hal-a* 'study, learning; investigation, explanation, clarification'

- A. Proto-Afrasian **kal-* 'to point out, to make clear, to make known, to disclose, to explain': Proto-Semitic **kal-am-* 'to point out, to make clear, to make known, to disclose, to explain' > Akkadian *kullumu* 'to show, to reveal, to explain, to disclose'; Arabic *kalama* 'to address, to speak, to talk, to utter, to say', *kalima* 'word, speech, utterance, remark'; Geez / Ethiopic *kelamāṭe* [ḥḏḏḏ] 'language' (this may be a loan from Arabic); Tigre

kalāmāta ‘to incite to fight by praising speeches’, *kālamat* ‘song’. Leslau 1987:284; Zammit 2002:358.

- B. Dravidian: Tamil *kal* (*karp-*, *karr-*) ‘to learn, to study, to practice (as arts), to acquire skill in the use of arms’, *kalai* ‘arts and sciences, learning, erudition’, *kalvi* ‘studying, learning, erudition, science, practice, scientific work’; Malayalam *kalkka* (*karr-*) ‘to learn’, *kala* ‘art, science’; Kota *kal* (*kaɬ-*) ‘to learn’, *kalc-* (*kalc-*) ‘to teach’, *kalyv* ‘education’; Toda *kal-* (*kaɬ-*) ‘to learn’, *kalc-* (*kalč-*) ‘to teach’, *kalfy* ‘education’; Kannaḍa *kal* (*kalt-*), *kali* (*kalit-*) ‘to learn’, *kalisu*, *kalusu* ‘to teach’, *kal* ‘learning’, *kalike* ‘learning, skill’, *kalita*, *kalpi* ‘learning, erudition’, *kaliyuvike* ‘learning, act of learning’, *kale* ‘an art’; Tuḷu *kalpuni* ‘to learn, to study’, *kalpāvuni* ‘to teach, to investigate’, *kalpādi* ‘a learned man, sophist; hypocrite’. Burrow—Emeneau 1984:120, no. 1297; Krishnamurti 2003:14 **kal-/kaɬ-* ‘to learn’.
- C. Proto-Chukchi-Kamchatkan **kalyero-* ‘to boast, to brag, to show off’: Chukchi *kaler-* ‘to pretend or appear to be rich’, *kalyotke-* ‘to boast’; Kerek *in-kaaliju-u-* ‘to show’, *kal₁ru-ttu-* ‘to boast’; Koryak *kalejo-* ‘to boast’. Fortescue 2005:127.

Buck 1949:17.24 learn; 17.25 teach; 18.45 boast (vb.). Bomhard—Kerns 1994: 407, no. 245.

423. Proto-Nostratic (n.) **k^halv-a* ‘reed, stalk, stem, blade of grass, haulm’:

- A. Afrasian: Semitic: the following plant names in Akkadian may belong here (though some of them may be loanwords): *kalbānu* (*kalbannu*, *kulbānu*) a plant (possibly of foreign origin), *kallammehu* a plant, *kallašūdi* a plant, *kalū* a thorny plant.
- B. Dravidian: Kannaḍa *kaḷḷa* name of a plant; Tuḷu *kaḷḷè* a kind of grass. Burrow—Emeneau 1984:129, no. 1384.
- C. Proto-Indo-European **k^holH-mo-/k^hlH-mo-* ‘reed, stalk, stem, haulm’: Greek κάλαμος ‘reed’, καλάμη ‘the stem or stalk of corn’; Latin *culmus* ‘a stalk, haulm’, *calamus* ‘a reed’ (< Greek κάλαμος); Old Icelandic *hálmr* ‘straw, haulm’; Swedish *halm* ‘straw, haulm’; Norwegian *halm* ‘straw, haulm’; Danish *halm* ‘straw, haulm’; Old English *healm* ‘haulm, straw, stem’ (Middle English *halm*); Old Saxon *halm* ‘stalk, stem, straw’; Dutch *halm* ‘stalk, stem, straw’; Old High German *halm*, *halam* ‘stalk, stem, straw’ (New High German *Halm*); Old Prussian *salme* ‘straw’; Latvian *salms* ‘(a single) straw’; Old Church Slavic *slama* ‘straw’; Russian *solóma* [солома] ‘straw’. Pokorny 1959:612 **kolamos*, **kolēmā* ‘grass, reed’; Walde 1927—1932.I:464 **kolamos*, **kolēmā*; Mann 1984—1987:630 **k₁lm-* ‘stalk, straw, haulm’, 634 **kolmos*, *-ā* ‘straw, stalk, haulm’; Watkins 1985:32 **koləm-* (suffixal form **koləm-o-*) and 2000:43 **kolə-mo-* ‘grass, reed’ (oldest form **kol₂-mo-*); Mallory—Adams 1997:542 **kolh₂om*

- ‘stalk, stem, straw’; Boisacq 1950:397 **kʷlamo-s-*; Frisk 1970—1973.I:760—761 **kolamo-*, **kolāmā-*; Chantraine 1968—1980.I:483—484 **kolamo-*, **kolāmā-*; Beekes 2010.I:621—622 **kolh₂-m-*, **klh₂-em-*; Hofmann 1966:129 **kolā-mos*; De Vaan 2008:150; Walde—Hofmann 1965—1972.I:303—304 **kolā-mos*; Ernout—Meillet 1979:155; Orël 2003:156 Proto-Germanic **xalmaz*; Kroonen 2013:204—205 Proto-Germanic **halma-* ‘blade of grass’; Falk—Torp 1903—1906.I:267; Torp 1919:195; De Vries 1977:206; Onions 1966:430 **kolmos*; Klein 1971:181 and 336; Kluge—Mitzka 1967:285 **kolāmos*, **kolāmā-*; Kluge—Seebold 1989:289 **kolamo-*; Derksen 2008:459 **kolh₂-m-* and 2015:548 **kolh₂-m-*.
- D. Uralic: Proto-Finno-Volgaic **kalke* ‘(a single) hair; stalk, stem’ > Finnish *kalki* ‘(a single) hair; straw, haulm’; Lapp / Saami *guol'gâ-* ‘hair (but not the hair on the head of human beings); coat, covering of hair’; Mordvin *kalgo* ‘chive, shive (of flax)’. Collinder 1955:149 and 1977:158; Rédei 1986—1988:644 **kalke*.
- E. Proto-Altaic **khǎlvō* ‘reed, a kind of grass’: Proto-Mongolian **kal-* ‘reed, feather-grass’ > Written Mongolian *qaltalʒi* ‘reed, feather-grass’; Khalkha *χaltalʒ* ‘reed, feather-grass’; Buriat *χalaχan* ‘reed, feather-grass’. Proto-Turkic **KAlvak* ‘bulrush, reedmace’ > Karakhanide Turkic *qašaq* ‘bulrush, reedmace’; Kirghiz *qašaq* ‘bulrush, reedmace’, *qašeq* ‘aftergrass’. Starostin—Dybo—Mudrak 2003:758 **kʷǎlo* ‘reed, a kind of grass’. Due to problems with the semantics, the Tungus forms listed by Starostin—Dybo—Mudrak are not included here.

Buck 1949:8.51 grass. Hakola 2000:50, no. 178.

424. Proto-Nostratic root **kʰalv-* (~ **kʰəlv-*):

(vb.) **kʰalv-* ‘to rob, to steal, to hide’;

(n.) **kʰalv-a* ‘theft’

- A. Dravidian: Tamil *kaḷ* (*kaṭp-*, *kaṭṭ-*) ‘to rob, to steal, to deceive’, *kaḷavāṇi*, *kaḷavāḷi*, *kaḷvan* ‘thief’, *kaḷḷal* ‘stealing’, *kaḷavu* ‘robbery, theft, deceit, hypocrisy, stolen property’; Malayalam *kaḷkukka*, *kakkuka* ‘to steal’; Kota *kaḷv-* (*kaḷd-*) ‘to steal’; Toda *koḷ* (*koḷd-*) ‘to steal’; Kannada *kaḷ* (*kaḷd-*) ‘to steal’, *kaḷḷa*, *kaḷa* ‘thief’; Kodagu *kaḷ-* (*kapp-*, *kaṭṭ-*) ‘to steal’; Telugu *kalla* ‘falsehood, untruth, lie, fault, deceit’; Malto *qale* (*qaḍ-*) ‘to rob, to steal’, *qalwe* ‘thief’, *qalwi* ‘theft’; Brahui *xalling* ‘to lift (cattle)’, *kalp* ‘deceitful’. Burrow—Emeneau 1984:127—128, no. 1372; Krishnamurti 2003:95 **kaḷ-* ‘to steal’.
- B. Proto-Indo-European **kʰl-epʰ-/kʰl-opʰ-* ‘to rob, to steal, to hide’: Greek κλέπτω ‘to steal’, κλέπτης ‘thief’; Latin *clepō* ‘to steal, to conceal oneself’, *cleps* ‘thief’; Old Irish *cluain* (< **klopni-*) ‘deception’; Gothic **hlifan* ‘to steal’, *hliftus* ‘thief’; Tocharian B *kälyp-* ‘to steal’; Old Prussian *au-klipts* ‘hidden, concealed’. Rix 1998a:323—324 **klep-* ‘to steal (secretly)’;

Pokorny 1959:604 **klep-* ‘to secrete, to steal’; Walde 1927—1932.I:497 **klep-*; Mann 1984—1987:510 **klep-* ‘to carry off, to hide, to steal’; Watkins 1985:31 **klep-* and 2000:42 **klep-* ‘to steal’; Mallory—Adams 1997:595 **klep-* ‘± to lay a hand on’; Boisacq 1950:468 **qlep-*; Frisk 1970—1973.I:870—871; Chantraine 1968—1980.I:541—542; Hofmann 1966:147; Beekes 2010.I:713—714 **klep-*; Ernout—Meillet 1979:127; Walde—Hofmann 1965—1972.I:232 **klep-*; De Vaan 2008:120; Orël 2003:175 Proto-Germanic **xlefanan*; Kroonen 2013:230 Proto-Germanic **hlefan-* ‘to steal’; Feist 1939:263 **klep-*; Lehmann 1986:187 **klep-*; Adams 1999:175—176 **klep-* ‘± to touch with the fingers, to investigate’; Van Windekens 1976—1982.I:203.

Buck 1949:11.56 steal; 11.57 thief. Caldwell 1913:591; Bomhard—Kerns 1994:423—424, no. 266.

425. Proto-Nostratic root **k^ham-* (~ **k^həṃ-*) or **q^ham-* (~ **q^həṃ-*):

(vb.) **k^ham-* or **q^ham-* ‘to seize, to grasp, to grip, to clutch’;

(n.) **k^ham-a* or **q^ham-a* ‘grip, hold, hand(ful); bond, fetter’

- A. Proto-Afrasian **kam-* ‘to seize, to grasp, to grip, to clutch’: Proto-Semitic **kam-* (**kam-atʔ-*, **kam-aw/y-*) ‘to seize, to grasp, to grip, to clutch’ > Arabic *kamaša* ‘to seize, to grasp, to grip, to clutch’, *kamša* ‘a handful’; Akkadian *kamū* ‘to capture, to overcome, to ensnare’, *kamū* ‘fettters’, *kamū* ‘captured, captive’, *kāmū* (f. *kāmītu*) ‘ensnaring’, *kamītu* ‘bonds, captivity’, *kimītu*, *kimūtu* ‘captivity’. Berber: Tuareg *əkməm* ‘to hold on tightly to something vertical; to clench, to press, to squeeze (for example, to weigh down, to bother, to annoy, to worry, to cause difficulties or problems)’, *takmant* ‘a muzzle’; Mzab *takmant* ‘a muzzle’; Kabyle *kəm*, *kəmməm* ‘to muzzle, to suffocate, to stop someone from speaking’, *takmant* ‘a muzzle’. Proto-Southern Cushitic **kam-* ‘to hold’ > Iraqw *kom-* ‘to have’; Burunge *kom-* ‘to have’; Asa *kom-* ‘to have’; K’wadza *komos-* ‘to grip’; Dahalo *kam-* ‘to hold’. Ehret 1980:241. Chadic: North Bauchi Chadic (Bu: / Zaranda) *kam* ‘to take’ (cf. Caron 2008:102). Ehret 1995:198, no. 321, **kam-* ‘to hold’.
- B. Dravidian: Koraga *kamḍi* ‘to steal’; Telugu *kamucu* ‘to hold, to seize’. Burrow—Emeneau 1984:124, no. 1326.
- C. Proto-Indo-European **k^hem-t^h-*/**k^hom-t^h-*/**k^hṃ-t^h-* ‘(vb.) to seize, to grasp, to grip, to clutch; (n.) hand’: Gothic *handus* ‘hand’, *-hinþan* ‘to seize’ (used only in compounds: *fra-hinþan* ‘to capture, to imprison’, *fra-hunþans* ‘prisoner’), *hunþs* ‘booty’; Old Icelandic *hönd* ‘hand’, *henda* ‘to catch with the hand’; Old Swedish *hinna* ‘to obtain’; Swedish *hand* ‘hand’; Norwegian *hand* ‘hand’; Danish *haand* ‘hand’; Old English *hand* ‘hand’, *ge-hendan* ‘to hold’, *hentan* ‘to try to seize, to attack, to seize’, *hūþ* ‘plunder, booty’, *huntian* ‘to hunt’; Old Frisian *hand*, *hond* ‘hand’; Old

Saxon *hand* ‘hand’; Dutch *hand* ‘hand’; Old High German *hant* ‘hand’ (New High German *Hand*), *-hunda* in *herihunda* ‘spoils of war’. Mann 1984—1987:631 **kmt-* (or **kmt-*) ‘to hold, to seize’; Gamkrelidze—Ivanov 1984.II:850 **k[h]mt[h]-* and 1995.I:747 **k^hmt^h-* ‘hand (with outstretched fingers)’; Orël 2003:159 Proto-Germanic **xandĵanan*, 159 **xandĵlan* ~ **xandĵlō*, 159 **xandĵōjanan*, 159 **xanduz*, 169 **xenĵanan*, 194 **xunĵiz* ~ **xunĵō*; Kroonen 2013:207—208 Proto-Germanic **handu-* ‘hand’, 227 **hinĵan-* ‘to reach for’, and 257 **huntōn-* ‘to chase’; Lehmann 1986:122, 176—177, and 196; Feist 1939:161 **kent-*, **kend-*, 244—245 **kōmt-*, and 277 **kend-*, **kent-*; De Vries 1977:222 and 281; Falk—Torp 1903—1906.I:262—263; Torp 1919:198; Onions 1966:425—426 and 453 **kend-*; **kent-*, **knt-*; Klein 1971:333, 342, and 356; Kluge—Mitzka 1967:287; Kluge—Seebold 1989:290; Vercoullie 1898:103; Szemerényi 1960:69; Markey 1984:261—292.

- D. Uralic: Proto-Finno-Ugrian **kāme(-ne)* ‘hand; palm, flat of the hand’ > Finnish *kämmen* ‘palm, flat of the hand; paw’; Vote *čämmäl* ‘palm, flat of the hand’; Estonian *kämmal*, *kämmel* ‘palm, flat of the hand’; (?) Lapp / Saami (Kola) *kiem* ‘flat of the hand, hand’; Ostyak / Xanty (Eastern) *kōmən* in *kōmənkāγər* ‘the hollow hands as a measure’. Collinder 1955:87 and 1977:103; Rédei 1986—1988:137 **kāme(-ne)*.

Buck 1949:4.33 hand. Bomhard—Kerns 1994:412—413, no. 254.

426. Proto-Nostratic root **k^ham-* (~ **k^həṃ-*):

(vb.) **k^ham-* ‘to work, to labor, to toil; to do, to make’;

(n.) **k^ham-a* ‘work, labor, toil’

- A. (?) Afrasian: New Egyptian *kmt* ‘metal tool’. Hannig 1995:884.
- B. Proto-Kartvelian **kam-/km-* ‘to do’: Georgian *kam-/km-* ‘to do’; Mingrelian *kim-* ‘to do’; Laz *kom-*, *kum-*, *kip-* ‘to do’. Klimov 1964:196 **kam-/km-* and 1998:212 **kam-/km-* ‘to do’; Fähnrich—Sardshweladse 1995:370—371 **kam-/km-*; Fähnrich 2007:456—457 **kam-/km-*; Schmidt 1962:137—138. Proto-Kartvelian **km-en-/km-n-* ‘to make’: Georgian *kmna* (< **kmen-* < **kam-en-*) ‘to make’; Mingrelian *kimin-* ‘to make’; Laz (*n*)*kimin-* ‘to knead dough’. Klimov 1964:199 **kmn-* and 1998:218 **km-en-/km-n-* ‘to make’.
- C. Proto-Indo-European **k^hμηH-* ‘to work, to toil, to labor’: Sanskrit *śāmyati* ‘to toil at, to exert oneself’; Greek κάμνω ‘to work, to labor, to toil, to be weary’. Rix 1998a:287—288 **kēmh₂-* ‘to become tired, to tire’; Pokorny 1959:557 **kēm(ə)-* ‘to become tired’; Walde 1927—1932.I:387—388 **kēm(ā)-*; Mann 1984—1987:600 **kam-* ‘to do, to act, to toil, to languish’; Watkins 1985:29 **kemə-* ‘to be tired, to tire’; Mallory—Adams 1997:588 **kēmha-* ‘to grow tired, to tire oneself with work’; Mayrhofer 1956—1980.III:325—326; Boisacq 1950:403—404 **kṃn-*, **kēmā-*; Frisk 1970—

1973.I:773—774; Hofmann 1966:131 **k̂m-n-*; Chantraine 1968—1980.I:490 **k^om-ne*₂₂₋, **km-e*₂₂₋, **k^om-*₂₂₋; Beekes 2010.I:632 **k^hemh*₂₋.

Buck 1949:9.11 do, make; 9.12 work, labor, toil (sb. abstr.); work (sb. concr.); 9.13 work, labor, toil (vb. intr.). Bomhard—Kerns 1994:416, no. 258.

427. Proto-Nostratic root **k^ham-* (~ **k^ham-*):

(vb.) **k^ham-* ‘to gather together, to collect’; (adv.) ‘together, along with’;

(n.) **k^ham-a* ‘collection, assemblage, gathering’

- A. Proto-Afrasian **kam-* ‘to gather together, to collect’: Semitic: Akkadian *kamāsu* (Middle Assyrian *kamāšu*) ‘to gather, to collect, to bring in (barley, persons, animals, documents, or objects)’, *kummu* ‘to gather in barley, to collect or assemble persons; (in the stative) to be assembled, stationed’, *šukmu* ‘to collect, to place’, *nakmu* ‘to be gathered’. Berber: Tuareg *kamət* ‘to gather up, to collect, to pick up; to be picked up, to be gathered up, to be collected’, *akmu* ‘act of picking up, collecting’; Tamazight *kamməm* ‘to amass, to pick up and carry in one’s arms’, *tukkimt* ‘armful, load, burden’; Kabyle *kamməm* ‘to amass’, *takumma* ‘armful’, *ukkim* ‘fist, a punch’; Mzab *tçuma* ‘bundle, large package’.
- B. Kartvelian: Svan *kām-/km-* (inf. *li-km-e*) ‘to join or add something to somebody or something’, *kāma* ‘addition to a share’.
- C. Proto-Indo-European **k^hem-/k^hom-/k^hm-* ‘to gather together’: Albanian *qem* ‘to gather’; Latvian *k’ems* ‘bunch’. Mann 1984—1987:487 **kem-* ‘to gather’. Proto-Indo-European **k^hom-* ‘together, along with’: Latin *com-*, *cum* ‘together with’; Oscan *com-*, *kúm* ‘together with’; Umbrian *com* ‘with, along with’; Old Irish *com-* ‘with’; Welsh *cyf-*, *cyn-*, *cy-* ‘with’; Gaulish *com-* ‘with’. Pokorny 1959:612—613 **kom* ‘alongside’; Walde 1927—1932.I:458—460 **kom*; Mann 1984—1987:528 **kom*, **kom-* ‘with, together’; Watkins 1985:32 **kom* and 2000:43 **kom* ‘beside, near, by, with’; Mallory—Adams 1997:646 **ko(m)* ‘with, side by side’; Lindsay 1894:581; De Vaan 2008:128 **kōm* ‘with’; Ernout—Meillet 1979:156; Walde—Hofmann 1965—1972.I:251—253; Lewis—Pedersen 1937:78—79; Thurneysen 1946:502—504; Brugmann 1904:478—479 **ko*, **kom*.

Buck 1949:12.21 collect, gather; 12.22 join, unite. Bomhard—Kerns 1994:414—415, no. 256.

428. Proto-Nostratic (n.) **k^han^y-a* ‘stem, stalk, stick’:

- A. Proto-Afrasian **kan-* ‘stem, stalk, shoot’: Proto-Semitic **kann-* ‘stem, stalk, shoot’ > Akkadian *kannu* ‘slip (of a plant), stalk, shoot (of a tree)’; Syriac *kannā* ‘stem (of a tree), stalk, root (of a plant)’; Hebrew *kēn* [כֵּן] ‘base, pedestal; office, place’ (< ‘base [root] of a plant’), *kannāh* [כַּנָּה]

- ‘plant, shoot’ (a hapax legomenon in the Bible), *kannāh* [כַּנָּה] ‘base, stand’; Tigre *kanāt* ‘rowing-pole’. Murtonen 1989:235; Klein 1987:280. Berber: Tawlemmet *təkənīt* ‘a kind of plant’; Tamazight *takumət* ‘tan (bark of an oak)’. Cushitic: Bilin *kānā* ‘tree’; Kemant *kana* ‘tree’; Awngi / Awiya *kani* ‘tree’. Appleyard 2006:140.
- B. Dravidian: Tamil *kaṇṇi* ‘sprout, shoot, tender leaf’; Malayalam *kaṇṇi* ‘shoot of betel vines, palm leaves’. Burrow—Emeneau 1984:111, no. 1185. Kota *kaṇk* ‘thin dry sticks used as kindling or in a bunch as a torch’; Kannaḍa *kaṇike*, *kaṇuku* ‘stalk of the great millet when deprived of its ear’, *kaṇḍike* ‘a stalk or stem’; Tuḷu *kaṇaku* ‘fuel, firewood’; Telugu *kaṇika* ‘a stick’; (?) Kuwi *kandi* ‘stick (dried), twig’; Kuṛux *kaṇk* ‘wood, fuel, timber’; Malto *kanku* ‘wood’. Burrow—Emeneau 1984:110, no. 1165. Proto-Dravidian **kān-p-* > **kāmp-* ‘stem, stalk, stick’: Tamil *kāmpu* ‘flower-stalk, flowering branch, handle, shaft, haft’; Malayalam *kāmpu* ‘stem, stalk, stick of an umbrella’; Kannaḍa *kāmu*, *kāvu* ‘stalk, culm, stem, handle’; Telugu *kāma* ‘stem, stalk, stick, handle (of an axe, hoe, umbrella, etc.), shaft’; Gadba (Salur) *kāṇ* ‘butt of an axe’; Gondi *kāmē* ‘stalk of a spoon’, *kāme* ‘handle of a ladle’; Kuwi *kamba*, *kāmba* ‘handle’. Burrow—Emeneau 1984:135, no. 1454.
- C. Proto-Indo-European **k^hent^h-*/**k^hont^h-* ‘prick, point, spike’: Greek κεντέω ‘to prick, to goad, to spur on; to sting; to prick, to stab’, κέντρον ‘any sharp point’, κοντός ‘a pole’; Latin *contus* ‘a pole used for pushing a boat along; a long spear or pike’ (< Greek κοντός); Old Irish *cinteir* ‘spur’; Welsh *cethr* ‘nail, tip’; Breton *kentr* ‘spur’; Cornish *kenter* ‘spike’; Old High German *hantag*, *hantīg* ‘bitter, sharp’ (New High German *hantig*). Rix 1998a:290 **kent-* ‘to prick, to pierce’; Pokorny 1959:567 **kent-* ‘to prick, to pierce, to stab’; Walde 1927—1932.I:402 **kent-*; Mann 1984—1987:609 **kent-* ‘prick, point, spike’, 609 **kentrom*, *-ā* (**k^hētr-*) ‘point, spike, spur’; Watkins 1985:29 **kent-* and 2000:40 **kent-* ‘to prick, to jab’; Gamkrelidze—Ivanov 1984.I:236 **k^h[h]ent^h[h]-* and 1995.I:205 **k^hent^h-* ‘to stab’; Mallory—Adams 1997:509—510 **kent-* ‘sharp’; Boisacq 1950:434; Frisk 1970—1973.I:820—821; Chantraine 1968—1980.I:515; Hofmann 1966:139; Beekes 2010.I:672—673 **kent-*; Ernout—Meillet 1979:140—141; Kluge—Seebold 1989:293.
- D. (?) Uralic: Proto-Finno-Ugrian **kanta-* ‘stump’ > Finnish *kanta* ‘base, stump; standpoint’, *kanto* ‘stump’; Livonian *kand* ‘tree-trunk; stump; substructure of a hayrick’; Lapp / Saami *guoddol/gud’du-* ‘stump (of a tree)’; Mordvin *kando* ‘wind-fallen tree’; Vogul / Mansi *kōōnt* ‘vertical support of a storehouse; foot of a pillar (post) of a storehouse’. Collinder 1955:85 and 1977:102; Rédei 1986—1988:123 **kanta*.
- E. Proto-Gilyak / Nivkh **kant* or **qant* ‘stick’: Amur *k^hand^h* ‘stick, cane, crutch’; North Sakhalin *k^hət* ‘stick’; East Sakhalin *kad* ‘kind of ski pole’; South Sakhalin *qant* ‘walking stick’. Fortescue 2016:83.

Dolgopolsky 1998:69—70, no. 87, *kanV(-bV) ‘stalk, trunk’ (‘log’) and 2008, no. 894, *kan|ñV(-tV) ‘stalk, trunk of a tree’; Bomhard 1999a:62; Hakola 2000:53, no. 194.

429. Proto-Nostratic (n.) *k^han^y-a ~ *k^hin^y-a ~ *k^hun^y-a ‘bee, honey’:

- A. Afrasian: Proto-East Cushitic *kan(n)-, *kin(n)- ‘bee’ > Somali *šinn-i* ‘bee’; Konso *xan-ta* ‘bee’; Gidole *han-t(a)* ‘bee’; Galla / Oromo *kann-i-sa* ‘bee’ (Borana *kinn-ii-sa* ‘bee’ [< *kann-ii-sa]); Gedeo / Darasa *kinn-ii-sa* ‘bee’. Sasse 1979:6 and 24; Hudson 1989:25.
- B. Dravidian: Iruḷa *kunni* ‘bee’; Kota *kuny* ‘bee’; (?) Tuḷu *koṇi*, *koṇḍi* ‘a sting’. Burrow—Emeneau 1984:170, no. 1867.
- C. Proto-Indo-European *k^hḡH-k^ho- ‘honey, honey-colored’: Sanskrit *kāñcana-h* ‘golden’, *kāñcaná-m*, *kánaka-m* ‘gold’; Greek κηκός (Doric κῠκός) ‘pale yellow’; Old Icelandic *hunang* ‘honey’; Faroese *hunangur* ‘honey’; Norwegian *huning* ‘honey’; Old Danish *honni(n)g* ‘honey’; Swedish *honung*, *honing* ‘honey’; Old English *hunig* ‘honey’; Old Frisian *hunig* ‘honey’; Old Saxon *honeg*, *huneg* ‘honey’; Middle Dutch *honich*, *honinc* ‘honey’ (Dutch *honig*, *honing*); Old High German *honag*, *honang* ‘honey’ (New High German *Honig*). Pokorny 1959:564—565 *k_enəkó- ‘golden (color)’; Walde 1927—1932.I:400 *q_enəqó-; Watkins 1985:29 *k(e)nəko- and 2000:40 *k(e)nəko- ‘yellow, golden’; Mayrhofer 1956—1980.I:195 *qṇqenó-; Mallory—Adams 1997:271 *kḡh_aónks ‘honey-colored, golden’; Boisacq 1950:475—476; Chantraine 1968—1980.I:547; Frisk 1970—1973.I:882—883; Hofmann 1966:149; Beekes 2010.I:722—723 *kn_h₂kó-; Kroonen 2013:255—256 Proto-Germanic *hunanga- ‘honey’ (< *kḡh₂-onk-o-); Orël 2003:193 Proto-Germanic *xunažan; De Vries 1977:266; Falk—Torp 1903—1906.I:297 *kənakō-; Torp 1919:228; Klein 1971:352; Onions 1966:446 Common Germanic *χuna(η)gam; Boutkan—Siebinga 2005:185—186 *kḡHko-; Kluge—Mitzka 1967:315—316; Kluge—Seebold 1989:315—316 *kḡəko-.

Buck 1949:3.82 bee; 5.84 honey. Bomhard—Kerns 1994:411, no. 251; Dolgopolsky 2008, no. 1086a, *K[U]ñ[H]V or *k[U]ñ|ñV ‘bee’.

430. Proto-Nostratic root *k^haŋ- (~ *k^həŋ-):

- (vb.) *k^haŋ- ‘to make a noise, to sound’;
- (n.) *k^haŋ-a ‘noise, (ringing or tinkling) sound’

- A. Afrasian: Egyptian *kny* ‘to call’. Erman—Grapow 1926—1963.5:132.
- B. Dravidian: Tamil (reduplicated) *kaṇakana* ‘to sound, to rattle, to jingle, to tinkle’; Kannaḍa *kana* an imitative sound, (reduplicated) *kaṇakana* ‘the ringing sound of unbroken earthen or metal vessels, bells, etc., when struck with the knuckles’; Tuḷu *gaṇily* ‘tinkling’, *gaṇaṇṇu* ‘a tinkling sound’;

Telugu (reduplicated) *gaṇagaṇa* ‘the ringing or tinkling of bells’. Burrow—Emeneau 1984:110, no. 1162.

- C. Proto-Indo-European **k^han-* ‘to make a noise, to sound’: Greek *καναχή* ‘sharp sound, the ring or clang of metal’, *κανάσσω* ‘to pour with a gurgling sound’, *καναχέω*, *καναχίζω* ‘to ring, to clash, to clang (of metal)’, *ἡϊ-κανός* ‘cock, rooster’ (< ‘dawn-singer’); Latin *canō* ‘to sing, to sound, to play an instrument’; Umbrian *kanetu* ‘to sing, to play music’; Old Irish *canim* ‘to sing’; Gothic *hana* ‘cock, rooster’; Old Icelandic *hani* ‘cock, rooster’; Swedish *hane* ‘cock, rooster’; Old English *henn* ‘hen’, *henna* ‘fowl’, *hana* ‘cock, rooster’; Old Frisian *henne* ‘hen’, *hona* ‘cock, rooster’; Old Saxon *hano* ‘cock, rooster’, *hōn* ‘fowl, hen’; Dutch *haan* ‘cock, rooster’, *hen* ‘hen’; Middle Low German *henne* ‘hen’; Old High German *henna* ‘hen’ (New High German *Henne*), *hano* ‘cock, rooster’ (New High German *Hahn*), *huon* ‘fowl, hen’ (New High German *Huhn*). Rix 1998a:305—306 **kan-* ‘to sing, to sound’; Pokorny 1959:525—526 **kan-* ‘to sing’; Walde 1927—1932.I:351 **qan-*; Mann 1984—1987:600—601 **k^han-* ‘to sing, to hum, to bark, to echo’; Watkins 1985:27 **kan-* and 2000:36—37 **kan-* ‘to sing’; Mallory—Adams 1997:519 **kan-* ‘to sing’; Boisacq 1950:316 and 405; Hofmann 1966:131; Frisk 1970—1973.I:626 and I:776; Beekes 2010.I:634; Chantraine 1968—1980.I:408 and I:491; De Vaan 2008:87—88; Ernout—Meillet 1979:93—94 **k^hne/o-*; Walde—Hofmann 1965—1972.I:154—155; Orël 2003:161 Proto-Germanic **xanōn*; Kroonen 2013:207 Proto-Germanic **hanan-* ‘rooster, singer’; Feist 1939:243—244 **kan-*; Lehmann 1986:176 **kan-* ‘to sing’; De Vries 1977:208; Onions 1966:436; Klein 1971:342; Kluge—Mitzka 1967:282; Kluge—Seebold 1989:287, 305, and 319; Vercoullie 1898:101 and 109.
- D. Proto-Uralic **kaŋɜ-* ‘to call’: Hungarian *hív-/hivo-* ‘to call, to invite’; Yurak Samoyed / Nenets *haŋɜ-* ‘to ask, to request, to beg’; Yenisei Samoyed / Enets *kaŋɜ-* ‘to ask, to request, to beg’; Selkup Samoyed *kuera-* ‘to ask, to request, to beg’. Collinder 1955:14, 1960:406 **k^hɜɜ-*, and 1977:35; Rédei 1986—1988:125—126 **kanɜ-* (**kaŋɜ-*); Décsy 1990:100 **kanga* ‘(to) call’.
- E. Chukchi-Kamchatkan: Proto-Chukotian **kəŋ(læ)-* ‘to growl, to snarl’ > Chukchi *kəŋ-ʔejŋe-* ‘to growl, to snarl’; Koryak *kəŋla-* ‘to growl, to snarl’. Note also Kamchadal / Itelmen *keŋjai-* ‘to roar’ (this may be a loan from Chukotian). Fortescue 2005:150.

Buck 1949:18.12 sing. Bomhard—Kerns 1994:415—416, no. 257; Hakola 2000:53, no. 193; Dolgopolsky 2008, no. 1076, **K^hanV* ‘to sing, to sound’.

431. Proto-Nostratic root **k^hap^h-*:

- (vb.) **k^hap^h-* ‘to take, seize, or grasp with the hand; to press or squeeze with the hand’;
 (n.) **k^hap^h-a* ‘hand’

- A. Proto-Afrasian **kap-* ‘(vb.) to take, to seize; (n.) hand’: Proto-Semitic **kapp-* ‘palm, hand’ > Hebrew *kaṣ* [כַּס] ‘palm’; Phoenician *kpp* ‘palm of the hand’; Imperial Aramaic *kp* ‘hand’; Syriac *kappā* ‘palm of the hand’; Mandaic *kapa* ‘hand, palm of hand, handful’, *kapta* ‘fetter’; Ugaritic *kp* ‘palm, hand’; Akkadian *kappu* ‘hand’; Arabic *kaff* ‘palm of the hand, hand’; Šheri / Jibbāli *keff* ‘to withhold, to keep someone quiet’, *kef* ‘paw, claw, palm of the hand’; Harsūsi *kef* ‘flat of the hand, claw, paw’; Mehri *kaf* ‘to withhold, to keep someone quiet’, *kaf* ‘palm of the hand, paw, claw’. Diakonoff 1992:85 **kapp-* ‘palm of the hand’; Murtonen 1989:236–237; Klein 1987:283; Zammit 2002:356. Egyptian *kp* ‘enemy’s hands separated from his arms, cut off hands’. Erman—Grapow 1921:195 and 1926–1963.5:118; Hannig 1995:880. Orël—Stolbova 1995:312, no. 1428, **kap-* ‘hand’.

Comment: Militarëv—Kogan (2000.I:134, no. 148) reconstruct Proto-Semitic (n.) **kapp-* ‘palm, flat of hand or foot’. They do not list any non-Semitic cognates.

- B. Elamo-Dravidian: Royal Achaemenid Elamite *kap-pi* ‘catch, latch, clasp, brooch’. Dravidian: Kuṛux *kappnā* ‘to cover or press gently with the hand, to throw the hand or claws upon in order to catch, to feel with the hand or feet for knowing’, *kappar ērnā* ‘to feel, to touch’; Malto *kape* ‘to touch, to meddle’. Burrow—Emeneau 1984:114, no. 1225; Krishnamurti 2003:144 **kap-*, **kapp-*/**kaw-* ‘to cover, to overspread’.
- C. Proto-Indo-European **k^hap^h-* ‘to take, to seize’: Latin *capiō* ‘to take, to seize’; Old Irish *cachtaim* ‘to take captive’; Welsh *caeth* ‘slave’; Gothic **haftjan* ‘to hold fast to’; Old Icelandic *haft* ‘bond, chain’ (pl. *höft* ‘fettters’), *haftr* (f. *hafta*) ‘prisoner’, *hapt* ‘bond’, *hepta*, *hefta* ‘to bind, to fetter’; Old English *hæft* ‘bond, fetter; captivity’, *hæftan* ‘to bind; to confine, to imprison, to arrest’, *hæften* ‘custody’, *hæfnian* ‘to take captive’; Old Frisian *heft(e)* ‘captivity’; Old High German *gi-heftan* ‘to fetter’ (New High German *heften*), *haft* ‘captivity’ (New High German *Haft*). Rix 1998a:307–308 **keh₂p-* ‘to grasp, to seize, to grab, to snatch’; Pokorny 1959:527–528 **kap-* ‘to grasp’; Walde 1927–1932.I:342–345 **qap-*; Mann 1984–1987:471 **kapjō*, **kapmi* ‘to take, to seize, to lift’; Watkins 1985:27 **kap-* and 2000:37 **kap-* (suffixes form **kap-yo-*) ‘to grasp’; Gamkrelidze—Ivanov 1984.I:146 **k^h[ap^h]-* and 1995.I:125 **k^hap^h-* ‘to have, to catch’; Mallory—Adams 1997:90 **kaptos* ‘captive’, **kap-* ‘to take, to seize’ and 563 **kap-* ‘to seize’; De Vaan 2008:89–90; Ernout—Meillet 1979:95–97; Walde—Hofmann 1965–1972.I:159–160 **qap-*; Orël 2003:149 Proto-Germanic **xaftjanan*, 149 **xaftan* ~ **xaftaz*, 149 **xaftaz* I, 149 **xaftaz* II, 149 **xaftjan*, 149 **xaftjanan*, 149 **xaftnōjanan* ~ **xaftenōjanan*; Feist 1939:230; Lehmann 1986:167–168 and 168; De Vries 1977:209 and 222; Kluge—Mitzka 1967:280 and 296; Kluge—Seebold 1989:286 and 299.

- D. Uralic: Proto-Finno-Ugrian **kapp3-* ‘to take, to seize, to grasp’ > Finnish *kaappaus* ‘captive, coup, hijacking’; Mordvin (Erza) *kapode-* ‘to grab quickly’. Proto-Finno-Ugrian **käppä* ‘hand, paw’ > Finnish *käppä* ‘hand, paw’, *käpälä* ‘paw’; Estonian *käpp* (gen. *käpa*) ‘claw, paw, hand’; Mordvin (Erza) *kepe*, (Moksha) *käpä* ‘barefooted’. Rédei 1986—1988:651—652 **käppä*.
- E. Proto-Altaic **kʰapʰV-* ‘to press, to grasp’: Proto-Tungus **χap-ki-* ‘to strangle, to throttle’ > Evenki *apki-* ‘to strangle, to throttle’; Lamut / Even *apqʰ-* ‘to strangle, to throttle’; Negidal *apqu-* ‘to strangle, to throttle’; Oroq *χaqpi-* ‘to strangle, to throttle’. Proto-Mongolian **kab-* ‘to pinch, to squeeze, to grasp, to hold; to join, to press together’ > Mongolian *qabči-* ‘to compress, to press or squeeze together’, *qabčiγda-* ‘to be pressed, squeezed, jammed, pitched’, *qabčiγu* ‘narrow, tight, constricted’, *qabčiγurda-* ‘to compress, to squeeze, to pinch’, *qabčila-* ‘to squeeze, to press, to compress’, *qabčily-a* ‘oppression, pressure, squeezing, jamming’; Khalkha *χavči-*, *χavs-* ‘to join, to press together’, *χavt-*, *χavtγay* ‘flat’; Buriat *χabša-* ‘to pinch, to squeeze, to grasp, to hold’; Kalmyk *χapčə-*, *χawšə-*, *χawl-* ‘to pinch, to squeeze, to grasp, to hold’; Ordos *gabči-* ‘to pinch, to squeeze, to grasp, to hold’; *gābtāgā* ‘flat’, *gabtā-* ‘to be flat’; Dagur *karči-*, *χawči-* ‘to pinch, to squeeze, to grasp, to hold’, *kabtagē*, *kabteγay* ‘flat’, *kabtečiē-* ‘to pinch, to squeeze, to grasp, to hold’. Proto-Turkic **Kap-* ‘to snatch, to take; to bite’ > Old Turkic (Old Uighur) *qap-* ‘to grasp, to seize, to capture’; Karakhanide Turkic *qap-* ‘to snatch, to take’; Turkish *kap-* ‘to snatch, to seize, to carry off, to acquire’, *kapıcı* ‘one who seizes’, *kapın* ‘who seizes or grabs’, *kapış* ‘manner of seizing, looting’, *kapış-* ‘to snatch something from one another’; Gagauz *kap-* ‘to snatch, to take; to bite’; Azerbaijani *gap-* ‘to snatch, to take; to bite’; Turkmenian *gap-* ‘to snatch, to take; to bite’; Uzbek *qap-* ‘to snatch, to take; to bite’; Uighur *qap-* ‘to snatch, to take; to bite’; Tatar *qap-* ‘to snatch, to take; to bite’; Bashkir *qap-* ‘to snatch, to take; to bite’; Kirghiz *qap-* ‘to snatch, to take; to bite’; Kazakh *qap-* ‘to snatch, to take; to bite’; Noghay *qap-* ‘to snatch, to take; to bite’; Oyrot (Mountain Altai) *qap-* ‘to snatch, to take; to bite’; Chuvash *χip-* ‘to snatch, to take; to bite’; Yakut *χap-* ‘to snatch, to take; to bite’. Poppe 1960:43—44, 48, 89, 137, and 146; Street 1974:16 **kap-* ‘to grasp, to seize’, **kap-ti-* ‘to squeeze’; Starostin—Dybo—Mudrak 2003:766—767 **kʰapʰV* ‘to press, to grasp’.
- F. Proto-Eskimo **kapət-* and **kapəy-* ‘to be narrow, constricted; to be tight-fitting’: Alutiiq Alaskan Yupik *kapxitə-* ‘to be constricted, narrow’; Central Alaskan Yupik *kapxitə-* ‘to be narrow’; Central Siberian Yupik (with metathesis) *kaxpəsɣʷaaq*, *kaxpəstaaq* ‘narrow opening’; North Alaskan Inuit *kapit* ‘to be tight-fitting’; Western Canadian Inuit *kapit-* ‘to be tight (garment)’; Eastern Canadian Inuit *kapit-* ‘to pull outer garment over *atigi*’; Greenlandic Inuit *kapit-* ‘to pull outer garment over inner one’. Fortescue—Jacobson—Kaplan 1994:139.

Buck 1949:4.33 hand; 11.14 seize, grasp, take hold of; 12.62 narrow. Brunner 1969:39; Illič-Svityč 1971—1984.I:313—315, no. 190, **kaba*/**kap*‘a ‘to seize’; Dolgopolsky 2008, no. 1107, **KapV* ~ **ḲapV* ‘to seize’; Bomhard—Kerns 1994:404—405, no. 242; Hakola 2000:55, no. 201.

432. Proto-Nostratic (n.) **k^hap^h-a* ‘bowl, cup, jar, container; skull’:

- A. Proto-Afrasian **kap-* ‘bowl, cup, jar, container’: Proto-Semitic **kapr-* ‘bowl, cup, jar, container’ > Akkadian *kapru* ‘a type of sacrifice and a platter for it’; Hebrew *kəḫōr* [כְּחֹר] ‘small bowl (of gold or silver used in the temple)’; Syriac *kāḫūrā* ‘an earthen vessel, crock’; Arabic *kāfirā* ‘jar’; Geez / Ethiopic *kafar* [ክፈር] ‘basket, container for measuring, bushel’; Tigrinya *kāfār* ‘big basket’. Klein 1987:283; Leslau 1987:276—277.
- B. Proto-Indo-European **k^hap^h-* ‘bowl, cup, jar, container; head’: Sanskrit *kapāla-m* ‘cup, bowl; skull’, *kapūcchala-m* ‘tuft of hair on the back of the head (hanging down like a tail), the fore-part of a sacrificial ladle’; Latin *capis* ‘a one-handed vessel (used in sacrifices)’, *caput* ‘the head’; Old English *hafela*, *heafola* ‘head’, *hafud-* ‘head’. Probably also (with unexplained diphthong in the first syllable): Gothic *haubiþ* ‘head’; Old Icelandic *höfuð* ‘head’; Swedish *huvud* ‘head’; Old English *hēafod* ‘head’; Old Frisian *hāved*, *hād* ‘head’; Old Saxon *hōbid* ‘head’; Dutch *hoofd* ‘head’; Old High German *houbit* ‘head’ (New High German *Haupt*). Pokorny 1959:529—530 **kap-ut*, -(ē)lo- ‘head’; Walde 1927—1932.I: 346—347 **qap-ut*, -(ē)lo-; Mann 1984—1987:471 **kapitjos* (**kaputjos*) ‘top, head, hill’; Watkins 1985:27 **kaput* and 2000:37 **kaput-* ‘head’; Gamkrelidze—Ivanov 1984.II:813, fn. 3, **k^h[ap^h]ut^h[-]*, **k^h[ap^h]-el-* and 1995.I:713, fn. 26, **k^hap^hut^h-*, **k^hap^h-el-* ‘head’; Mallory—Adams 1997:260—261 **káput* ‘head’ and 261 **kapōlo-* ‘head, skull’; Mayrhofer 1956—1980.I:155 and I:156 **kaput-*; De Vaan 2008:90 and 91; Orël 2003:148 Proto-Germanic **xabuðan*, 165 **xaubūðan* ~ **xaubīðan* (secondary variants [taboo?] of **xabuðan*); Kroonen 2013:215 Proto-Germanic **ha(u)beda-* ~ **ha(u)buda-* ‘head’; Feist 1939:248; Lehmann 1986:178—179 **kap-ut-*; De Vries 1977:279; Onions 1966:432; Klein 1971:337; Kluge—Mitzka 1967:293—294; Kluge—Seebold 1989:297 **kapwet-/kaput-*; Boutkan—Siebinga 2005:155—156.
- C. Proto-Altaic **k^hap^ha* ‘vessel, container’: Proto-Tungus **χapsa* ‘container, box, bag’ > Manchu *absa* ‘a birchbark container’; Evenki *awsa* ‘box, bag’; Lamut / Even *awsṯ* ‘bag’; Negidal *awfsak* ‘box’; Nanay / Gold *χapsio* ‘box’; Orok *χapsaw* ‘bag’. Proto-Mongolian **kayurčag*, **kayirčag* ‘small box, chest’ > Written Mongolian *qayurčay*, *qayirčay* ‘small box, chest’; Khalkha *χūrcag*, *χaircag* ‘small box, chest’; Buriat *χūrcag* ‘coffin’; Kalmyk *χūrcəγ* ‘large box, chest’; Ordos *χārčag* ‘small box, chest’; Monguor *χāžə* ‘small box, chest’. Proto-Turkic **Kapirčak*, **Kapsak* ‘box, coffin; basket’ > Karakhanide Turkic *qapirčaq* ‘box, coffin; basket’;

Turkish [*koburčuk*] (dial. [*kapuržak*]) ‘box, coffin’, (dial.) [*kabzak, kabsak*] ‘basket’; Turkmenian *gapiržaq* ‘box, coffin’. Starostin—Dybo—Mudrak 2003:763 **kʷapʷa* ‘a kind of vessel, box’.

Buck 1949:4.20 head.

433. Proto-Nostratic root **kʰapʰ*- (~ **kʰəpʰ*-):

(vb.) **kʰapʰ*- ‘to buy; to pay back’;

(n.) **kʰapʰ-a* ‘recompense, tribute, pay-back’

A. Dravidian: Tamil *kappam* ‘tribute’; Malayalam *kappam* ‘tribute, taxes’; Kannada *kappa, kappu* ‘tribute’; Tulu *kappa* ‘tribute, an offering’; Telugu *kappamu* ‘tax, tribute, subsidy’. Burrow—Emeneau 1984:113, no. 1218; Krishnamurti 2003:8 **kapp-am* ‘a kind of tax, tribute’.

B. (?) Proto-Indo-European **kʰapʰ*- ‘to obtain’: Proto-Germanic **χabēn*- ‘to have’ > Gothic *haban* ‘to have, to hold’; Old Icelandic *hafa* ‘to have, to hold; to keep, to retain; to bring, to carry; to take, to carry off; to get, to gain, to win’; Faroese *hava* ‘to have’; Swedish *hava* ‘to have’; Norwegian *hava* ‘to have’; Danish *have* ‘to have’; Old English *habban* ‘to have, to hold; to take; to possess’; Old Frisian *hebban* ‘to have, to own, to get, to receive, to keep, to maintain’; Old Saxon *hebbian* ‘to have’; Dutch *hebben* ‘to have’; Old High German *habēn* ‘to have’ (New High German *haben*). Orël 2003:147 Proto-Germanic **xaban*, 147 **xabēnan*; Kroonen 2013:197 Proto-Germanic **habēn*- ‘to have’; Feist 1939:229 (etymology uncertain); Lehmann 1986:167 (etymology uncertain); De Vries 1977:201; Falk—Torp 1903—1906.I:276—277 **khabh*-; Torp 1919:202; Klein 1971:336; Onions 1966:431 Common Germanic **χabēn*, **χabda*, **ǵaχabdaz*; Boutkan—Siebinga 2005:157; Kluge—Mitzka 1967:287; Kluge—Seebold 1989:284; Walshe 1951:89 — “The relationship to LAT. *habēre*, which extends to the terminations, can only be fortuitous”. As noted by Lehmann (1986:167): “Since PIE lacked a verb corresponding to ‘have’ indicating possession and auxiliary function, [Gothic] *haban* must have originated in Gmc;...” The Germanic forms cited above have been contaminated by reflexes of Proto-Indo-European **kʰaph*- ‘to take, to seize’ (cf. Lehmann 1986:167).

C. Proto-Altaic **kʰapa*- ‘to buy; to pay back’: Proto-Tungus **χab*- ‘to buy; to complain, to start a lawsuit’ > Manchu *χabša*- ‘to accuse, to bring to court’, *χabšan* ‘accusation, complaint’; Ulch *χapsi*- ‘to complain, to start a lawsuit’; Oroch *χaw*- ‘to buy’, *χapsi*- ‘to complain, to start a lawsuit’; Nanay / Gold *χapsi*- ‘to complain, to start a lawsuit’. Starostin—Dybo—Mudrak 2003:760—761 **kʷapa* ‘to buy, to pay back’.

Buck 1949:11.11 have; 11.65 pay (vb.); 11.69 tax; 11.81 buy.

434. Proto-Nostratic root *k^har- (~ *k^har-):(vb.) *k^har- ‘to cut, to cut into, to cut off’;(n.) *k^har-a ‘cut, incision’

Derivative:

(n.) *k^har-a ‘skin, hide; bark, rind’

- A. Proto-Afrasian *kar- ‘to cut, to cut into, to cut off’: Proto-Semitic *kar-at- ‘to cut off, to cut down’ > Hebrew *kāraθ* [כָּרַח] ‘to cut off, to cut down’; Phoenician *krt* ‘woodcutter’ (?); Akkadian *karātu* ‘to strike, to cut off, to break off’, *kartu* ‘cut up’; Tigrinya *kārātā* ‘to cut’, *kārtātā* ‘to nibble’. Murtonen 1989:240; Klein 1987:288. Proto-Semitic *kar-ad- ‘to cut off’ > Arabic *karada* ‘to cut off, to shear’. Proto-Semitic *kar-ay- ‘to cut into, to make cuts or incisions, to dig’ > Hebrew *kārāh* [כָּרַח] ‘to dig’; Aramaic *kārā* ‘to dig’; Ugaritic *kry* ‘to dig’; Arabic *karā* ‘to dig’, *karw* ‘digging, excavation’; Geez / Ethiopic *karaya* [ካረየ] ‘to dig (a well, in the ground), to make holes, to dig up, to excavate, to peck (the eyes), to make cuts or incisions’; Tigre *kāra* ‘cut off (by digging)’; Amharic *kārāyyā* ‘to dig, to till the earth’; Gurage *kāre* ‘to dig a hole’; Harari *xara* ‘to dig a hole’. Murtonen 1989:239; Klein 1987:285; Leslau 1963:97, 1979:347, and 1987:294—295. Egyptian *krt* ‘carnage, massacre’, (reduplicated) *krkr* ‘knife’. Hannig 1995:887; Erman—Grapow 1926—1963.5:136. Chadic: Ngizim *kàrmú* ‘to chop, to cut down, to chop off’. Highland East Cushitic: Gedeo / Darasa *kar-* ‘to cut down a tree’; Sidamo *kar-* ‘to fell (a tree)’. Hudson 1989:249 and 376. Ehret 1995:200, no. 330, *kur-/ *kar- ‘to cut up’.
- B. Proto-Indo-European *k^her-/ *k^hor-/ *k^hr- ‘to cut off, to cut down’: Hittite (3rd sg. pres.) *kar-aš-zi* ‘to cut off’; Sanskrit *kartati*, *kṛntāti* ‘to cut, to cut off’, *kṛnāti* ‘to injure, to kill’; Avestan *kərəntaiti* ‘to cut, to flay; to clean, to dress (a slaughtered animal)’; Greek κείρω ‘to cut off, to clip, to hew down’; Old Icelandic *skera* ‘to cut, to shape’; Faroese *skera* ‘to cut’; Norwegian *skjera* ‘to cut’; Swedish *skära* ‘to cut’; Danish *skjære* ‘to cut’; Old English *sceran*, *scieran* ‘to cut, to shear’, *scēarra* ‘shears, scissors’, *sceard* ‘notched, with pieces broken off or out’, *scierdan* ‘to injure, to destroy’; Old Frisian *skera* ‘to cut, to shear’, *skēra* ‘shears, scissors, clippers’; Old Saxon *skerian* ‘to cut, to shear’, *skāra* ‘shears, scissors, clippers’; Dutch *scheren* ‘to cut, to shear’, *schaar* ‘shears, scissors, clippers’; Old High German *skeran* ‘to cut, to shear’ (New High German *scheren*), *scār(a)* ‘scissors, shears, clippers’ (New High German *Schere*); Lithuanian *kerpù*, *kiṛpti* ‘to cut (with scissors)’; Tocharian A *kāršt-*, B *kāršt-* ‘to cut off, to cut down, to terminate; to tear; to destroy utterly’. Rix 1998a:503 *(s)ker- ‘to cut off, to shear, to scrape (off)’; Pokorny 1959:938—947 *(s)ker-, *(s)kerə-, *(s)krē- ‘to cut’; Walde 1927—1932.II:573—587 *sqer-, *qer-; Mann 1984—1987:491 *kerō, -jō ‘to cut’, 611—612 *k^herjō ‘to strike, to stab, to cut, to sever’; Watkins 1985:59—60

*sker- (also *ker-) and 2000:77—78 *(s)ker- ‘to cut’; Gamkrelidze—Ivanov 1984.II:707 *sk^[h]er- and 1995.I:612 *sk^her- ‘to carve, to shear, to cut out’; Mallory—Adams 1997:143 *(s)ker- ‘to cut apart, to cut off’; Mayrhofer 1956—1980.I:257 *ker- and I:260; Frisk 1970—1973.I:810—811; Hofmann 1966:137 *(s)qer-; Chantraine 1968—1980.I:510; Boisacq 1950:427—428 *(s)qer-; Beekes 2010.I:665 *(s)ker-; Orël 2003:338—339 Proto-Germanic *skeranan, 340 *skērjan ~ *skērō; Kroonen 2013:443 Proto-Germanic *skēra- ‘pair of scissors’ and 443—444 *skeran- ‘to cut’; De Vries 1977:490 *(s)ker-; Falk—Torp 1903—1906.II:189 *(s)ker-; Torp 1919:602; Klein 1971:678 *(s)qer-; Onions 1966:818; Boutkan—Siebinga 2005:348—349; Kluge—Mitzka 1967:643; Kluge—Seebold 1989:629 and 630 *sker-; Derksen 2015:405 *(s)krH-; Fraenkel 1962—1965.I:257—258; Adams 1999:168—169 *kers- < *(s)ker- ‘to cut’; Van Windekens 1976—1982.I:207—208 *(s)qer-.

- C. Proto-Gilyak / Nivkh *k(ə)r- ‘to gouge out’: Amur *eyra-dy* / -*k^hra-dy* ‘to hollow out, to gouge a hole in’; East Sakhalin *extra-d* ‘to gouge out’. Fortescue 2016:87.

Buck 1949:8.22 dig; 9.22 cut (vb.). Brunner 1969:38, no. 159; Bomhard—Kerns 1994:407—408, no. 246; Dolgopolsky 2008, no. 939, *kāRtV ‘to cut (off), to notch’.

435. Proto-Nostratic (n.) *k^har-a ‘skin, hide; bark, rind’:

Derivative of:

(vb.) *k^har- ‘to cut, to cut into, to cut off’;

(n.) *k^har-a ‘cut, incision’

- A. Proto-Indo-European *k^her-/ *k^hor-/ *k^hṛ- ‘skin, hide; bark, rind’: Sanskrit *cārman-* ‘skin, hide, bark’, *kṛtti-h* ‘skin, hide’; Avestan *čarəman-* ‘skin, hide’; Latin *corium* ‘skin, hide; leather; (of plants) bark, rind’, *cortex* ‘rind, bark, shell’; Old Irish *coirt* ‘skin, bark’; Welsh *cwr* (pl. *cyroedd*) ‘skin’; Old Icelandic *hörund* ‘human flesh, skin, complexion’; Norwegian *hørøld*, *horong* ‘flesh, skin’; Old Swedish *harund* ‘flesh, skin’; Old Danish *harend* ‘flesh, skin’; Old English *heorða* ‘deer- (or goat- ?) skin’, *hyrð* ‘skin, hide’; Swiss German *Herde*, *Härde* ‘sheepskin, goatskin’; Russian *korá* [kopa] ‘crust; rind, bark’. Pokorny 1959:938—947 *(s)ker-, *(s)kerə-, *(s)krē- ‘to cut’; Walde 1927—1932.II:573—587 *sqer-, *qer-; Mann 1984—1987:490 *kermn- ‘cut, cutting; piece, part; skin, flesh’, 533 *korā, *korjom ‘skin, leather’, 536 *koros ‘skin, hide’, 568 *kṛt- ‘cut, strike; cutting; cutter, knife, dagger; cut piece, skin’; Mallory—Adams 1997:522 *kérmen- ‘skin’ < *(s)ker- ‘to cut (off)’; Watkins 1985:59—60 *sker- (also *ker-) and 2000:77—78 *(s)ker- ‘to cut’ (extended roots: *skert-, *kert-); Mayrhofer 1956—1980.I:17 and I:378; Walde—Hofmann 1965—1972.I:274 *qor- and I:279 *(s)qer-t-; Ernout—Meillet 1979:143 *sker-

and 144—145 **kert-*; De Vaan 2008:136; Orël 2003:170 West Germanic **xerđōn*; Kroonen 2013:213 Proto-Germanic **harunda/ō-* ‘flesh’; De Vries 1977:282 *(*s*)*ker-*; Torp 1919:239.

- B. Uralic: Proto-Finno-Ugrian **kere* ‘bark’ > Finnish *keri* ‘bark that grows on a birch after the first bark has been removed’, *kerma* (*kermä*) ‘thin crust, thin or soft shell’; Estonian *kirme(tis)* ‘thin coating, thin crust’; Lapp / Saami *gârrâ/gârâ-* ‘shell, crust; (conifer) bark’; Mordvin *keř* ‘linden bark’; Cheremis / Mari *kər, kür* ‘(thick) linden bark’; (?) Votyak / Udmurt *kur, kyr* ‘piece of bark’; Zyrian / Komi *kor* ‘bark (of floriferous tree)’; Vogul / Mansi *ker, keer* ‘bark, shell (of eggs, etc.)’; Ostyak / Xanty *kär* ‘bark, shell’; Hungarian *kérög* ‘crust, bark’. Collinder 1955:87 and 1977:104; Rédei 1986—1988:148—149 **kere* ‘bark’; Sammallahti 1988:543 **keri/ä* ‘bark’; Décsy 1990:100 **kerä* ‘bark; to flay, to strip off the skin of’.

Buck 1949:4.12 skin, hide. Bomhard—Kerns 1994:408—409, no. 247.

436. Proto-Nostratic root **k^har-* (~ **k^hər-*):

(vb.) **k^har-* ‘to twist, turn, spin, or wind around’;

(n.) **k^har-a* ‘ring, circle, curve’; (adj.) ‘round, curved, twisted’

Possible derivative:

(n.) **k^har-a* ‘edge, side, bank’

- A. Proto-Afrasian **kar-* ‘to twist, turn, or wind around’: Proto-Semitic **kar-ar-* ‘to twist, turn, or wind around’ > Arabic *karra* ‘to turn around and attack; to return, to come back’, *karr* ‘rope of bast or fibers of palm leaves’, *kura* ‘globe, sphere, ball’; Sabaean *krr* ‘to return to a campaign’; Hebrew **kārar* [כָּרַר] (participle *məḥarkēr* [מְחַרְכֵּר]) ‘to dance’; Tigrinya *kārārä* ‘to be twisted; to be round’; Harari *kārära* ‘to become tight (thread that is twisted by passing it through the palms)’; Amharic *kärrärä* ‘to become tight, twisted’, *kər* ‘thread’; Argobba *kər* ‘thread’; Gurage (*a*)*kärrärä* ‘to twist threads’, *kərr* ‘thread’. Klein 1987:288; Zammit 2002:352; Leslau 1963:94 and 1979:350. Proto-Semitic (reduplicated) **kar-kar-* ‘to twist, turn, wind, or roll around’ > Arabic *karkara* ‘to turn the millstone’; Sabaean *krkr* ‘a load or measure’; Hebrew *kikkār* [כִּכָּר] (< **kirkār*) ‘round loaf of bread; a round weight, a talent’; Aramaic *kakkārā* ‘ball’, *kəraḥ* ‘to go round, to encircle’; Akkadian *kakkaru* (< **karkaru*) ‘metal disk (weighing one talent); round loaf of bread’; Geez / Ethiopic *ʔankʷarkʷara* [አንክላራ] ‘to roll, to roll around, to roll along, to roll off, to revolve, to overturn’; Tigrinya *ʔankʷärkwärä* ‘to roll’; Tigre *kärkärä* ‘to roll’; Amharic (*tän*)*kʷäräkkʷärä* ‘to roll’, *mänkʷärakʷər* ‘wheel’; Gurage (Endegeñ) (*tä*)*kʷräkkʷärä* ‘to be lumpy (flour)’. Klein 1987:276; Murtonen 1989:238; Leslau 1979:349 and 1987:292. Berber: Tuareg *kurət* ‘to wrap around several times (as a turban around the head)’, *takārut* ‘turban’, *asəkkāru* ‘a piece of material which can be wrapped several times’.

around the head'; Tamazight *kur* 'to be wrapped up, to be wound into a ball', *sskur* 'to roll, to roll into a ball', *takurt*, *tacurt* 'ball, a spool of thread or yarn, balloon', *akur* 'paunch, gizzard'; Kabyle *kʷər* 'to be wrapped, to be wound into a ball', *akur* 'a large ball', *takurt* 'ball, a spool of thread or yarn'. Cushitic: Saho (reduplicated) *karkar* 'to be round'. Proto-Southern Cushitic **kar-* 'to turn around' > K'wadza *kangal-* 'to turn around'; Ma'a *kikarara* 'ring'. Ehret 1980:242. Omotic: Bench / Gimira *kar-* 'to be round', *kart-* 'to turn (intr.)'. Ehret 1995:200, no. 328, **kar-* 'to turn round, to go round'. [Orël—Stolbova 1995:323, no. 1481, **kor-* '(to be) round'.]

- B. Dravidian: Tamil *karāṅku* (*karāṅki-*) '(vb.) to whirl; (n.) whirling, gyration, kite', *karakku* (*karakki-*) 'to spin (as yarn)'; Malayalam *karāṇṇuka* 'to turn around, to whirl'; Kannaḍa *gara*, *garagara* 'whirlingly, around and around', (?) *korj*, *korē* 'to whirl'; Tuḷu *garu*, *gara*, *garagara*, *garranē* 'a whirling noise'. Burrow—Emeneau 1984:129, no. 1387.
- C. Proto-Indo-European **kʰer-/kʰor-/kʰj-* and **(s)kʰer-/*(s)kʰor-/*(s)kʰj-* 'to twist, turn, or wind around': Sanskrit *kartana-m* 'the act of spinning cotton or thread', *kṛṇāti* 'to twist, to spin'; Avestan *skarəna-* 'round'; Greek *κάραλλος* 'basket with a pointed bottom', *κορῶνός* 'crooked, curved'; Latin *crātis* 'wicker basket, hurdle-work', *corbis* 'wicker basket', *curvus* 'bent, bowed, arched, curved'; Welsh *crwn* 'round'; Gothic *haurds* '(woven) door'; Old Icelandic *hurð* 'door'; Old English *hyrd* 'door', *hyrdel* 'hurdle'; Old Saxon *hurth* 'door'; Old High German *hurd* 'wattle, hurdle' (New High German *Hürde*); Lithuanian *kraipai*, *kraipyti* 'to turn about', *kreivas* 'crooked, curved, wry', *krypstù*, *krypti* 'to bow, to bend'; Russian *koróbit'* [коробить] 'to warp', *krivít'* [кривить] 'to bend, to distort', *krivój* [кривой] 'curved, crooked', *kružít'* [кружить] 'to turn, to whirl, to spin', *krutít'* [крутить] 'to twist, to twirl, to roll up', *krug* [круг] 'circle', *krugóm* [кругом] 'round'; Slovenian *krétati* 'to turn'. Rix 1998a:317 **kert-* 'to twist, to turn, to rotate, to spin' and 504 **(s)kerb-* 'to be bent; to twist, to wrinkle, to crumple'; Pokorny 1959:584—585 **kert-*, **kerət-*, **krāt-* 'to twist or turn together' and 935—938 **(s)ker-* 'to turn, to bend'; Walde 1927—1932.I:421—422 **qer-*, **qerāt-* and II:568—573 **(s)qer-*; Mann 1984—1987:533 **kor-* 'bend, curve; bent, curved', 533 **korb-* (**korbis*, *-os*, *-ā*; **kreb-*, **kj-b-* ?) 'wicker, basket', 533 **korb-* 'ridge, furrow', 535 **korōn-*, **korən-* 'edge, rim, border', 534 **korbiō* (?) 'to bend, to twist, to deprave, to distort, to shrink', 538 **korūbhō*, *-jō* 'to bend, to turn, to depart', 546 **kreiūos* 'bent', 547 **krembō* (**kromb-*) 'to twist, to bend, to turn, to fold', 548 **kreng-* 'ring, circle, belt, girth', 548 **krentos* 'turned, bent; turn, bend', 551 **krib-* 'wicker, basketry', 552 **krik-* 'twist, cramp, varicosity', 555 **krīūos* 'twisted, with crumpled horn', 555 (**kr̥guo-*), 555 **kroip-* 'turn, bend', 555—556 **kroiūos* 'bent, crooked, lame; bent object', 556 **krok-* 'loop, curl, crook, hook', 557 **krongeiō* (**krongiō*) 'to turn, to twist', 557 **krongos*, *-ā*, *-is* 'twist, bend, curl, turn', 557—558 **krontos* 'turned, bent; turn, bend, edge', 560 **krumbos* 'bent, crooked;

bend, crook, crutch, haunch, joint’, 560 **krombilos*, -ā ‘bend, crease, fold, curve, crook’, 560 **krumos* ‘bent, lame’, 561 **krunk-* ‘bend, fold’, 568 **kṛt-* ‘plait, wicker, bentwork, frame, rack, truss’, 569 **kṛtālos*, -ios (**kṛtilo-*) ‘wicker, bentwork’, 1179 **skreblos*, **skrebāros* ‘twist, twine’, 1180 **skrebhō* ‘to go, to turn’; Watkins 1985:30 **kert-* ‘to turn, to entwine’, 60 **sker-* (also **ker-*) ‘to turn, to bend’ and 2000:41 **kert-* ‘to turn, to entwine’ (zero-grade form **kṛt-*), 78 *(s)*ker-* ‘to turn, to bend’; Mallory—Adams 1997:571 **kert-* ‘to plait, to twine’; Mayrhofer 1956—1980.I:257; Boisacq 1950:416—417 **qerāt-*, **qert-* and 499—500 **qere-*; Frisk 1970—1973.I:794 and I:927—928; Hofmann 1966:134 **qert-*, **qerāt-*; Chantraine 1968—1980.I:501 and I:570; Beekes 2010.I:650 and I:758—759; De Vaan 2008:135, 141, and 158; Walde—Hofmann 1965—1972.I:272—273 *(s)*qerebh-*, I:285—286 **qerāt-*, **qert-*, and I:317—318 *(s)*qer-*; Ernout—Meillet 1979:142, 147—148 **kṛt-*, **kṛāt-*, and 161; Orël 2003:194 Proto-Germanic **xurdiz* ~ **xurpiz*; Kroonen 2013:258 Proto-Germanic **hurdi-* ‘wickerwork door’; De Vries 1977:267—268 **kert-*; Lehmann 1986:179—180 **kert-*; Feist 1939:250 **kert-*; Onions 1966:453 **kṛt-*; Klein 1971:356—357 **qerāt-*, **qert-*; Hoad 1986:223; Kluge—Mitzka 1967:322 **kert-*, **kerāt-*; Kluge—Seebold 1989:321; Derksen 2008:251 **krongh-o-*, 251—252, 252 **kront-*, and 2015:256—257 **krei-uo-*.

- D. Uralic: Proto-Finno-Ugrian **kerä-* ‘(vb.) to turn, twist, or wind around; (adj.) round’ > Finnish *kierä*, *kiero* ‘twisted, wound, rolled up’, *kiertä-* ‘to turn, to twist, to wind (tr.); to circle, to go around, to rotate (intr.)’, *kiero* ‘not straight, twisted, wry; crooked, distorted’, *kierros* ‘round, circuit, turn’, *kierto* ‘circulation, round; cycle’, *kierre* ‘thread, worm’; (?) Mordvin *kiṛne-* ‘to bend (tr.)’; Hungarian *kerek* ‘round, circular’, *kerék* ‘wheel’, *kering-* ‘to revolve’; Ostyak / Xanty *körək* ‘round’, *köræg-* ‘to turn (intr.), to revolve’. Collinder 1955:88 and 1977:105; Rédei 1986—1988:147—148 **kerä*. Proto-Finno-Ugrian **kere* ‘any round thing or object’ > Finnish *keri* ‘circumference, (round) frame’; Hungarian *köré* ‘round, around’; Votyak / Udmurt *kury* ‘copper ring’. Collinder 1955:88 and 1977:104; Rédei 1986—1988:148 **kere*.

Buck 1949:10.12 turn (vb.); 10.13 turn around (vb.); 10.14 wind, wrap (vb.); 10.15 roll (vb.); 12.74 crooked; 12.81 round; 12.82 circle. Bomhard—Kerns 1994:420—421, no. 263; Illič-Svityč 1971—1984.I:321—323, no. 197, **ḱāra* ‘to tie (tightly)’; Dolgopolsky 2008, no. 917, **karV* ‘to twist, to turn around, to return’.

437. Proto-Nostratic (n.) **k^har-a* ‘edge, side, bank’:

Perhaps a derivative of:

(vb.) **k^har-* ‘to twist, turn, spin, or wind around’;

(n.) **k^har-a* ‘ring, circle, curve’; (adj.) ‘round, curved, twisted’

- A. Afrasian: Semitic: Geez / Ethiopic *karir* [ḥṛṛ], *kʷarir* [ḥṛṛ], *korār* [ḥṛṛ], *karer* [ḥṛṛ], *kerār* [ḥṛṛ] ‘(round) hill, ravine, rock’. Leslau 1987:294.
- B. Dravidian: Tamil *karai* ‘shore, bank, ridge of a field, border of a cloth’; Malayalam *kara* ‘shore, riverside, land (opposite to sea), colored border of a cloth’, *karal* ‘border, margin, edge’; Kannaḍa *kare* ‘bank, shore, boundary, border of a cloth’; Koḍagu *kare* ‘bank’; Tuḷu *karè* ‘seashore, bank of a river, border, colored border of a cloth’; Telugu *kara* ‘shore, bank’. Burrow—Emeneau 1984:120, no. 1293.
- C. Proto-Indo-European **kʰer-/kʰor-/kʰy-* ‘edge, shore, bank’: Avestan *karana-* ‘end, border, shore’; Farsi *karān* ‘shore, side’; Lithuanian *krāštas* ‘edge, verge, border, brim, bank’, *krañtas* ‘bank, seashore’; Latvian *krasts* ‘shore, bank (of a river)’, *krants* ‘cliff’; Russian *krutój* [крытой] ‘steep’, *krúča* [крыча] ‘steep slope’. Pokorny 1959:584—585 **kert-*, **kerət-*, **krāt-* ‘to twist or turn together’; Walde 1927—1932.I:421—422 **qer-*, **qerāt-*; Mann 1984—1987:535 **korōn-*, **korən-* ‘edge, rim, border’, 557—558 **krontos* ‘turned, bent; turn, bend, edge’; Watkins 1985:30 **kert-* ‘to turn, to entwine’ and 2000:41 **kert-* ‘to turn, to entwine’ (zero-grade form **kṛt-*); Fraenkel 1962—1965.I:288 and I:289; Smoczyński 2007.1:307 and 1:308.
- D. Uralic: Selkup Samoyed *kery* ‘edge, brim’. Rédei 1986—1988:148.
- E. Proto-Altaic **kʰāre* ‘edge’: Proto-Tungus **χāri-* ‘border, hem’ > Ulch *χāriča* ‘border, hem’; Nanay / Gold *χāri-*, *χāriča* ‘border, hem’. Starostin—Dybo—Mudrak 2003:767—768 **kʰāre* ‘edge’. Starostin—Dybo—Mudrak also include Proto-Mongolian **kira* ‘edge, ridge’ and Proto-Turkic **Kir* ‘isolated mountain; mountain top, mountain ridge; steppe, desert, level ground; edge’. However, the Mongolian and Turkic forms are separated from the Tungus forms in this book and are included instead under Proto-Nostratic (n.) **kʰir-a* ‘uppermost part (of anything): horn, head, skull, crown of head; tip, top, summit, peak’.

Sumerian *kar* ‘embankment, quay-wall, wall along a canal or moat, mooring-place, harbor’.

Buck 1949:1.27 shore. Illič-Svityč 1971—1984.I:340—341, no. 216, **Kara* ‘cliff, steep elevation’; Dolgopolsky 2008, no. 1161, **KarXV* ‘bank, edge’; Bomhard—Kerns 1994:422, no. 264.

438. Proto-Nostratic (n.) **kʰar-a* ‘hardness, strength, firmness, fortitude’; (adj.) ‘hard, strong, firm’:
Identical to:
(n.) **kʰar-a* ‘roughness, coarseness’; (adj.) ‘rough, coarse’

- A. Proto-Afrasian **kar-* ‘hard, dry’: Proto-Semitic **kar-ar-* ‘to be or become hard, dry’ > Geez / Ethiopic *karra* [hɛ], *karara* [hɛɛ] ‘to be dry, to dry up (spring)’, Tigrinya *kārārā* ‘to be hard, dry’, Amharic *kārrārā* ‘to become hard, to dry out’, Harari *kārāra* ‘to become stiff’. Leslau 1963:94 and 1987:293–294. Southern Cushitic: Proto-Rift **karaḥ-* ‘hard, dry’ > Burunge *karaḥadi* ‘hard, dry’, K’wadza *kalahayi* ‘dry, withered, hard’. Ehret 1980:366.
- B. Dravidian: Tamil *karumai* ‘strength, greatness’, Malayalam *karu*, *karu* ‘stout, hard’, *karuma* ‘hardness, strength of a man’, *karuman* ‘one who is strong and able’, *karuttu* ‘strength, vigor, power, fortitude, courage’, Kannada *kara*, *karu* ‘greatness, abundance, power’, Telugu *karamu* ‘much, great, very’. Burrow—Emeneau 1984:119, no. 1287. [(?) Tamil *kār-* ‘(vb.) to become hard, mature; to be firm or strong in mind; to be implacable; (n.) hardness, solidity or close grain (as of timber), core, strength of mind’, *kārppu* ‘close grain (as of the heart of timber), essence’, *kāri* ‘great strength, toughness, hardness’, *kāruntu* ‘heart or core of a tree’; Malayalam *kaṛampu* ‘pulp of fruit, pith, essence’; Kannada *kāṛime*, *kāḷime* ‘obstinacy, haughtiness’; (?) Parji *kār-* ‘to expand hood (serpent)’. Burrow—Emeneau 1984:138, no. 1491.]
- C. Proto-Indo-European **k^har-* ‘hard, strong, firm’: Sanskrit *karkaṭa-h* ‘crab’, *karkara-h* ‘hard, firm’; Greek *καρκίνος* ‘crab’, *κάρτος*, *κράτος* ‘strength, might’, *κατερός* ‘strong, stout, staunch, sturdy’, *κρατός* ‘strong, mighty’; Latin *cancer* (< **carcro-*) ‘crab’; Gothic *hardus* ‘hard, stern’; Old Icelandic *harðr* ‘hard, stern, severe’, *herða* ‘to make hard’; Norwegian *hard* ‘hard, strong’; Swedish *hård* ‘hard, strong’; Danish *haard* ‘hard, strong’; Old English *heard* ‘hard, strong, stern, severe, brave, stubborn’, *heardian* ‘to harden’, *heardnes* ‘hardness’, (adv.) *hearde* ‘hardly, firmly, very severely, strictly, vehemently; exceedingly, greatly; painfully, grievously’; Old Frisian *herd* ‘hard’, *herda* ‘to harden’; Old Saxon *hard* ‘hard’, *herdian* ‘to harden’; Old High German *hart* ‘hard’ (New High German *hart*), *harten* ‘to harden’ (New High German *härten*). Pokorny 1959:531–532 **kar-*, (reduplicated) **karkar-* ‘hard’; Walde 1927–1932.I:354–355 **qar-*, (reduplicated) **qarqar-*; Mann 1984–1987:475 **kark-* (?) ‘crab’, 475–476 **karkəros* ‘rough, tough, harsh, coarse’, 478 **kartus* ‘hard, harsh, bitter’, 544 **kratos*, *-is*, *-us* ‘strong; strength, power, force’; Gamkrelidze—Ivanov 1984.II:533 (reduplicated) **k^hark^har-* and 1995.I:451 **k^hark^har-* ‘rough, hard’; Watkins 1985:27 **kar-* and 2000:37 **kar-* ‘hard’; Mallory—Adams 1997:512 **karkr(o)-* ‘crab’, **kar-* ‘hard’; Mayrhofer 1956–1980.I:169 and I:170; Boisacq 1950:414 **qar-* and 510–511 **qar-*; Frisk 1970–1973.I:789–790 and II:8–10 **qartú-* or **qortú-* beside **qrtú-*; Chantraine 1968–1980.I:498–499 and I:578–579; Hofmann 1966:133 and 158 **gre-t-*, **qrt-* (root **qar-*); Beekes 2010.I:646 and I:772–773 **kret-s-*, **krt-u-*, **krt-ero-*; Ernout—Meillet 1979:91; Walde—Hofmann 1965–1972.I:151 **qar-*; De Vaan 2008:86—

87; Orël 2003:161 Proto-Germanic **xardīn*, 162 **xardjanan*, 162 **xarduz*; Kroonen 2013:211 Proto-Germanic **hardu-* ‘hard, severe’; Lehmann 1986:177 **kar-*; Feist 1939:246—247 **kar-*; De Vries 1977:210—211; Falk—Torp 1903—1906.I:265 **kortú-*; Torp 1919:199; Klein 1971:334 **qar-*; Onions 1966:427 Common Germanic **χarðuz*; Kluge—Mitzka 1967:290 **kar-*; Kluge—Seebold 1989:294.

Buck 1949:4.81 strong, mighty, powerful; 15.74 hard; 15.84 dry. Bomhard—Kerns 1994:425—426, no. 268; Dolgopolsky 2008, no. 1943, **qaH₂fV* ‘hard, firm’.

439. Proto-Nostratic (n.) **khar-a* ‘roughness, coarseness’; (adj.) ‘rough, coarse’:
 Identical to:
 (n.) **khar-a* ‘hardness, strength, firmness, fortitude’; (adj.) ‘hard, strong, firm’
 Derivative:
 (n.) **khar-a* ‘bitterness, pungency, harshness’; (adj.) ‘bitter, pungent, harsh, sharp, caustic, hot (of taste), acrid’
- A. Proto-Afrasian **kar-* ‘rough, coarse’: Proto-Semitic **kar-ad-* ‘rough, coarse’ > Geez / Ethiopic *kardada* [ከርደደ] ‘to be rough, coarse’, *kərdud* [ከርደደ] ‘rough, coarse’; Amharic *käräddädä* ‘to be rough’. Leslau 1987:290.
- B. Dravidian: Tamil *karaṭu* ‘roughness, unevenness, churlish temper’, *karaṭṭu* ‘rugged, uneven, unpolished’; Malayalam *karaṭu* ‘what is rough or uneven’, *karu* ‘rough’, *karuppu* ‘roughness’, *karukarukka* ‘to be harsh, sharp, rough, irritating’; Kannada *karaḍu* ‘that which is rough, uneven, unpolished, hard, or waste, useless, or wicked’; Tuḷu *karaḍu*, *karaḍu* ‘rough, coarse, worn out’, *kargōḷa* ‘hardness, hard-heartedness; hard, hard-hearted’, *garu* ‘rough’; Telugu *kara* ‘sharp’, *karusu* ‘rough, harsh, harsh words’, *karaku*, *karuku* ‘harshness, roughness, sharpness; rough, harsh, sharp’, *gari* ‘hardness, stiffness, sharpness’, *karaṭi* ‘stubborn, brutish, villainous’. Burrow—Emeneau 1984:117, no. 1265.
- C. Proto-Indo-European **khar-* ‘rough, hard, harsh’: Sanskrit *karkaśa-h* ‘rough, hard’; Pāli *kakkasa-* ‘rough, harsh’; Prakrit *kakkasa-* ‘rough, hard’; Lithuanian *kratūs* ‘rough, uneven’. Pokorny 1959:531—532 **kar-*, (reduplicated) **karkar-* ‘hard’; Walde 1927—1932.I:354—355 **qar-*, (reduplicated) **qarqar-*; Mann 1984—1987:475—476 **karkəros* ‘rough, tough, harsh, coarse’, 478 **kartus* ‘hard, harsh, bitter’; Mayrhofer 1956—1980.I:170.

Buck 1949:15.76 rough. Bomhard—Kerns 1994:426, no. 269.

440. Proto-Nostratic (n.) **khar-a* ‘bitterness, pungency, harshness’; (adj.) ‘bitter, pungent, harsh, sharp, caustic, hot (of taste), acrid’:

Derivative of:

(n.) *k^har-a ‘roughness, coarseness’; (adj.) ‘rough, coarse’

- A. Dravidian: Tamil *kār* ‘to be pungent, acrid, hot to the taste, very saltish or brackish’, *kāram* ‘pungency; caustic; alkali’, *kārppu* ‘pungency, saltiness’, *kari* ‘to be saltish to the taste, to smart (as the eyes from oil or soap or chili), to feel an irritating sensation in the throat due to acidity of the stomach; to nag, to worry’, *karippu* ‘pungency, worrying, nagging’, *karil* ‘pungency’, (reduplicated) *karakara* ‘to feel irritation (as from sand or grit in the eye), to feel irritation in the throat, to be hoarse’, *karakarappu* ‘irritation in the throat, hoarseness’, *karakar-eṇal* ‘being irritated in the throat’; Malayalam *kāram* ‘caustic; different salts; pungency (as of pepper)’, (reduplicated) *karukarukka* ‘to be harsh, sharp, rough, irritating (for example, of grating sensation in the eyes)’; Kota *ka-rm-* ‘hot taste (of peppers, chilies, etc.), burning sensation if pepper is put in the eye’; Toda *ko-rm* ‘curry’, *kary-* (*karc-*) ‘to tickle (nose)’; Kannaḍa *kāra* ‘pungency’, *karlu* ‘salt land’; Koḍagu *ka-ra* ‘hot (as the taste of curry)’; Tuḷu *kāra* ‘tasting or smelling hot; hot, pungent’, *kāruppu* ‘a strong or black sort of salt’; Telugu *kāru* ‘saltiness; salt, brackish’, *kāramu* ‘pungency; pungent, acrid, caustic’; Kolami *karot* ‘salty’; Konḍa *karya* ‘saltiness’; Pengo *kariya* ‘saltiness’; Maṇḍa *kariya* ‘salty’; Brahui *xarēn* ‘bitter’. Burrow—Emeneau 1984:137, no. 1466. Tamil *kār* ‘to be pungent, acrid’, *kārppu* ‘pungency’, *kāṭṭu* ‘pungency, acidity’ (Telugu loan); Kannaḍa *kāṭa*, *gāṭa*, *gāṭu* ‘strong stifling smell (as of tobacco, chilies, etc.)’; Tuḷu *gāṭu*, *gāṭi* ‘hot, pungent’; Telugu *gāṭu* ‘pungency, acidity’; Kolami *gāṭam* ‘hot, pungent’. Burrow—Emeneau 1984:138—139, no. 1491.
- B. Proto-Indo-European *k^har-/*k^hr- ‘sharp, pungent’: Sanskrit *kaṭu-h* (< *k^hrt-ú-) ‘sharp, pungent’; Lithuanian *kartūs* ‘bitter’. Mayrhofer 1956—1980.I:143; Walde 1927—1932.II:578; Mann 1984—1987:478 **kartus* ‘hard, harsh, bitter’; Fraenkel 1962—1965.I:225; Smoczyński 2007.1:260.
- C. Uralic: Proto-Finno-Ugrian **karwa* ‘bitter, sharp, pungent’ > Finnish *karvas* ‘acrid, pungent, bitter’, *karvaus* ‘bitterness, acidity’, *karvastele-* ‘to smart’; Lapp / Saami (Lule) *kaarvees* ‘bitter’ (Finnish loan); Votyak / Udmurt *kurit* ‘sharp, pungent; bitter’; Zyrian / Komi (Sysola) *kurid*, (Permyak) *kurit* ‘bitter’; Ostyak / Xanty *korəγ-* ‘to burn, to smart’, *korwaŋ* ‘burning’. Rédei 1986—1988:128—129 **karwa*.

Buck 1949:15.37 bitter; 15.38 acid, sour. Hakola 2000:58, no. 218.

441. Proto-Nostratic (n.) *k^har-a ‘blackness, darkness’; (adj.) ‘black, dark’:

- A. Proto-Afrasian **kar-* ‘black, dirty’: Egyptian (Demotic) *krky* ‘filth’; Coptic *čorğ(e)* [ḫopx(ε)], *ğerği* [xepxi] ‘dirt, filth’, *r-čorğ* [p-ḫopx] ‘to become

filthy'. Vycichl 1983:347; Černý 1976:336. Omotic: Yemsa / Janjero *kara* 'black'.

- B. Proto-Dravidian **kāl-*, **kār-*, **kār-* 'black, dark': Tamil *karu* 'to grow black, to darken, to become dirty, to become impure, to mature', (reduplicated) *karukaru* 'to become very black', *karuppu* 'blackness, darkness, spot, taint, moral defect', *kāru* (*kāri-*) 'to be blackened', *karai* 'spot, stain, rust, blemish, fault, blackness, darkness'; Malayalam *karukka* 'to grow black', *kara* 'blackness, spot, stain, rust', *karu* 'black', *kāru* 'darkness, black cloud'; Kota *karp* 'blackness, a demon'; Toda *kar* 'dirt, spot, rust', *karf-* (*kart-*) 'to become black, dark'; Kannaḍa *kaṛaṅgu* 'to turn black', *kaṛe*, *kaṛi* 'the color black, blackness, stain, blot', *kaṛrage*, *kaṛrane* 'blackly, blackness'; Koḍagu *kara-* (*karap-*, *karat-*) 'to become black', *karapī* 'blackness', *karatē* 'black', *kare* 'stain'; Telugu *kaṛa* 'blackness, a stain, blot; black', *kaṛi* 'black'; Koṇḍa *kaṛi* 'blackness', *kaṛ(i)ni* 'black'. Burrow—Emeneau 1984:130, no. 1395. Tamil *kār* 'blackness, blemish, defect', *kāṛakam* 'blackness'; Kannaḍa *kār*, *kāḍu* 'blackness; black', *kaṛgu*, *kargu* 'black'; Tuḷu *kāri*, *kāḷi* 'blackish'; Maṇḍa *kaṛindi* 'black'; Kuwi *kār-* 'to become black', *kāria* 'black'. Burrow—Emeneau 1984:139, no. 1494. Tamil *karu* 'black', *karukkal* 'darkness, twilight, cloudiness, sunburnt paddy crop', *karukku* (*karukki-*) 'to darken by heat, to burn, to scorch, to toast, to fry', *karuku* (*karuki-*) 'to be scorched, blackened by fire or sun, to become dark in the evening', *karumai* 'blackness'; Malayalam *kari*, *karu* 'black; charcoal, coal', *karikkal*, *karukkal* 'twilight, dusk, frying', *karima*, *karuma* 'blackness', *karimpu* 'dark color, gray'; Kota *kar* 'black'; Kannaḍa *karidu* 'black', *kargu* 'to turn black', *kare* 'blackness'; Tuḷu *kari* 'soot, charcoal', *kariya* 'black'; Koraga *kardi* 'black'; Telugu *kaggu* 'to fade, to turn black (through heat, smoking)'; Naiki (of Chanda) *karan*, *karen*, *kareyan* 'black'. Burrow—Emeneau 1984:118, no. 1278(a). Tamil *kār* 'blackness, darkness, cloud, rainy season', *kār* 'to darken, to grow black', *kāri* 'blackness; crow, black bull'; Kannaḍa *kār* 'blackness, rainy season'; Tuḷu *kāṛu*, *kāri* 'black, dark'; Gondī *kārial*, *kāryal*, *karial*, *kaṛial*, *kareyal*, *kari*, *karkāl* 'black'. Burrow—Emeneau 1984:118—119, no. 1278(c); Krishnamurti 2003:391 **kār-/ *kar-V-* 'dark, black, dark clouds'.
- C. Proto-Indo-European (**khar-s-*) **khy-s-* 'black, dark': Sanskrit *kṛṣṇá-h* 'black, dark, dark blue', *kṛṣṇaka-h* 'blackish'; Old Prussian *kirsnan* 'black'; Old Church Slavic *črъnъ* 'black'; Russian *černyj* [чёрный] 'black'; Slovak *čierny* 'black'; Slovenian *črni* 'black'. Probably also Tocharian B *krōre* 'dark, dark colored'; Proto-Germanic **χrōtaz* 'soot' > Old High German *ruoz* 'soot' (New High German *Ruß*); Old Saxon *hrōt* 'soot'; Middle Dutch *roet* 'grease, soot'. Pokorny 1959:583 **kers-* 'dirty color'; Walde 1927—1932.I:428—429 **qers-*; Mann 1984—1987:1029 **quērsnos* (**quṛsno-*) 'dark, black', 1052 **quṛsnos* (**quṛ'snos*, **quṛksnos*) 'black, dark'; Watkins 1985:30 **kers-* and 2000:41 **kers-* 'dark, dirty';

Mallory—Adams 1997:69—70 *k^wr̥snós ‘black’; Mayrhofer 1956—1980.I:264; Kroonen 2013:239; Kluge—Mitzka 1967:616.

- D. Proto-Altaic *k^haru (~ k-) ‘black’: Proto-Mongolian *kara ‘black’ > Written Mongolian *qara* ‘black, dark, obscure’; Dagur *χara*, *χar* ‘black’; Monguor *χara* ‘black’; Ordos *χara* ‘black’; Buriat *χara* ‘black’; Khalkha *χar* ‘black’; Kalmyk *χarъ* ‘black’; Moghol *qarō* ‘black’. Poppe 1955:131. Mongolian loans in: Manchu *qara* ‘black (of animals)’; Evenki *karā* ‘black’. Proto-Turkic *Kara ‘black’ > Old Turkic (Old Uighur) *qara* ‘black’; Turkish *kara* ‘black’; Gagauz *qara* ‘black’; Azerbaijani *gara* ‘black’; Turkmenian *gara* ‘black’; Uzbek *qorə* ‘black’; Uighur *qara* ‘black’; Karaim *qara* ‘black’; Tatar *qara* ‘black’; Bashkir *qara* ‘black’; Kirghiz *qara* ‘black’; Kazakh *qara* ‘black’; Noghay *qara* ‘black’; Tuva *qara* ‘black’; Chuvash *χora* ‘black’; Yakut *χara* ‘black’; Dolgan *kara* ‘black’. Starostin—Dybo—Mudrak 2003:651—652 *karu (~ k-) ‘black’. Initial consonant uncertain; hence, either here or with Proto-Nostratic *k’ar- ‘dark, dark-colored; dirty, soiled’.

Buck 1949:15.65 black; 15.88 dirty, soiled. Illič-Svityč 1971—1984.I:337—338, no. 213, *Qar/ä/ ‘black, dark colored’; Bomhard—Kerns 1994:429—430, no. 274; Dolgopolsky 2008, no. 1155, *QarhA ‘black’.

442. Proto-Nostratic (n.) *k^har-a ‘heart, core, essence’:

- A. Dravidian: Malayalam *karaḷ*, *karuḷ* ‘lungs and heart, liver, bowels; heart, mind’, *kariḷ* ‘heart’; Kota *karl* ‘heart, mind, desire’; Kannaḍa *karuḷ*, *karaḷu*, *karḷu*, *kaḷḷu* ‘an entrail, the bowels; love’; Koḍagu *kari* ‘intestines’; Tuḷu *karaly*, *karly* ‘the bowels, the liver’. Burrow—Emeneau 1984:118, no. 1274; Krishnamurti 2003:14 *kar-V/ ‘intestines, bowels’. [(?) Tamil *kār* ‘(vb.) to become hard, mature; to be firm or strong in mind; to be implacable; (n.) hardness, solidity or close grain (as of timber), core, strength of mind’, *kārppu* ‘close grain (as of the heart of timber), essence’, *kāri* ‘great strength, toughness, hardness’, *kāruntu* ‘heart or core of a tree’; Malayalam *kaṛampu* ‘pulp of fruit, pith, essence’; Kannaḍa *kāriṃe*, *kāḷime* ‘obstinacy, haughtiness’; (?) Parji *kār*- ‘to expand hood (serpent)’. Burrow—Emeneau 1984:138, no. 1491.]
- B. Proto-Indo-European *k^hert’-/k^hrt’- ‘heart’: Hittite (nom.-acc. sg.) *ki-ir* ‘heart’, (gen. sg. *kar-ti-ya-aš*); Palaic (dat.-loc. sg.) *ka-a-ar-ti* ‘heart’; Greek καρδία (poet. κήρ) ‘heart’; Armenian *sirt* ‘heart’; Latin *cor* ‘heart’ (gen. sg. *cordis*); Old Irish *críde* ‘heart’; Welsh *craidd* ‘center, heart’; Cornish *créz* ‘middle’; Gothic *hairtō* ‘heart’; Old Icelandic *hjarta* ‘heart’; Norwegian *hjarta* ‘heart’; Swedish *hjärta* ‘heart’; Danish *hjerter* ‘heart’; Old English *heorte* ‘heart’; Old Frisian *herte* ‘heart’; Old Saxon *herta* ‘heart’; Dutch *hart* ‘heart’; Old High German *herza* ‘heart’ (New High German *Herz*); Lithuanian *širdis* ‘heart’, *šerdis* ‘core, pith, heart’; Latvian

siřds ‘heart’; Old Church Slavic *srъdbce* ‘heart’, *srěda* ‘center, middle, midst’; Russian *sěrdce* [сердце] ‘heart’; Slovak *srdce* ‘heart’. The following (but with a different initial consonant: **ghert*’-/**ghyt*’- ‘heart’) may belong here as well: Sanskrit *hṛdaya*- ‘heart; mind, soul; breast, chest, stomach, interior’; Avestan *zərəd*- ‘heart’; Baluchi *zirdē* ‘heart’. Pokorny 1959:579—580 (**kēred*-) **kērd*-, **kērd*-, **kērd*-, **kred*- ‘heart’; Walde 1927—1932.I:423—424 (**kēred*-) **kērd*-, **kērd*-, **kred*-; Mann 1984—1987:610 **kērd*- (**kērd*is, -ā, -iə) ‘heart, core, center’, 637—638 **kērd*- ‘core, center, heart’; Watkins 1985:30 **kērd*- and 2000:41 **kērd*- ‘heart’; Lehmann 1986:171; Gamkrelidze—Ivanov 1984.I:173, I:186, I:273, II:801, II:812, II:878 **k[h]er-t*’- and 1995.I:148, I:160, I:238, I:702, I:712, I:775 **kher(-t)*’- ‘heart’, I:148, I:160, I:171 **khy-t*’-; Mallory—Adams 1997:262—263 **kērd* ‘heart’; Puhvel 1984— .4:189—191 **kērd(i)* : **kērd(y)*-; Kloekhorst 2008b:469—471; Boisacq 1950:412—413 **kērd*-, **kērd*-; Frisk 1970—1973.I:787—788 **kērd*; Hofmann 1966:133 **kērd*-; Chantraine 1968—1980.I:497—498 **kērd*; Beekes 2010.I:644 **kērd*-; Derksen 2008:485 **kērd*- and 2015:448—449 **kērd*-; Fraenkel 1962—1965.II:986—987; Smoczyński 2007.1:638—639 **kērd*-Ø; De Vaan 2008:134—135; Ernout—Meillet 1979:142; Kroonen 2013:222 Proto-Germanic **hertōn*- ‘heart’; Orël 2003:170 Proto-Germanic **xertōn*; Feist 1939:234—235; Lehmann 1986:171 **kērd*-; De Vries 1977:232 **kērd*- (beside **ghyd*- in Indo-Iranian); Falk—Torp 1903—1906.I:293—294; Torp 1919:216; Onions 1966:433 **kērd*-, **kērd*-; Klein 1971:338; Hoad 1986:212; Kluge—Mitzka 1967:306 **kērd*- (**kērd*-); Kluge—Seebold 1989:307 **kērd*-; Vercoullie 1898:105 **kērd*; Wodtko—Irslinger—Schneider 2008:417—423 **kērd*-, **kērd*-.

Buck 1949:4.44 heart.

443. Proto-Nostratic root **khas*- (~ **khas*-):

(vb.) **khas*- ‘to cut or break off, to divide, to separate’;

(n.) **khas-a* ‘cut, separation, division, break; cutting, clipping, fragment, piece, bit’

- A. Proto-Afrasian **k[a]s*- ‘to cut or break off, to divide, to separate’: Proto-Semitic **kas-am*- ‘to cut’ > Hebrew *kāsam* [קָסַם] ‘to shear, to clip’; Ugaritic *ksm* ‘portion’ (?); Akkadian *kasāmu* ‘to cut in pieces’. Murtonen 1989:236; Klein 1987:282. Proto-Semitic **kas-ah*- ‘to cut off, to cut away, to remove’ > Hebrew *kāsaḥ* [קָסַח] ‘to cut off, to cut away’; Aramaic *kasaḥ* ‘to cut off, to cut into pieces’; Syriac *kasaḥ* ‘to prune’; Arabic *kaṣaḥa* ‘to sweep, to clean’. Murtonen 1989:236; Klein 1987:281. Proto-Semitic **kas-as*- ‘to cut into pieces, to cut up, to divide’ > Hebrew *kāsas* [קָסַס] ‘to compute’ (< ‘to cut up, to divide’) also ‘to grind, to chew, to gnaw’; Aramaic *kāsas* ‘to break into small pieces, to chew, to munch’; Akkadian

- kasāsu* ‘to cut up, to chew up’, *kissatu* ‘fodder’; Arabic *kassa* ‘to grind or pound to powder, to pulverize’, (reduplicated) *kaskasa* ‘to pound, to grind, to pulverize’; Amharic (reduplicated) *kāsākkāsā* ‘to break up (the clods of earth)’; Gurage (reduplicated) *kāsākāsā* ‘to break a stone or clod of earth, to prick the gum with a needle and a colored substance, to hit a burning piece of wood on the ground in order to extinguish it, to throw to the ground and break into pieces’. Klein 1987:282; Leslau 1979:353. Proto-Semitic **kas-ab-* ‘to cut’ > Geez / Ethiopic *kasaba* [ḥāḥ] ‘to circumcise’; Tigre *kāšba* ‘to circumcise’; Tigrinya (with augmented *n*) *kānšābā*, *kānsābā* ‘to circumcise’; Gurage (*a*)*kāssābā* ‘to pound the shell of grain’. Leslau 1979:352—353 and 1987:295. Proto-Semitic **kas-ay-* ‘to cut, to separate, to divide’ > Geez / Ethiopic *kwasaya* [ḥāḥ] ‘to separate, to divide, to invalidate, to abrogate, to rescind, to repel, to abolish, to destroy, to dissolve, to decompose, to belittle, to disprove, to refute’; Tigrinya *kwasāyā* ‘to break to pieces’. Leslau 1987:296—297. Proto-Semitic **kas-ap-* ‘to cut, to trim, to break’ > Akkadian *kasāpu* ‘to chip, to break off a piece, to trim; to be cut, to be broken’; Arabic *kasafa* ‘to cut up’; Šheri / Jibbāli *ksəf* ‘to make something smaller’, *ekósf* ‘to humiliate’. Zammit 2002:354. [Orël—Stolbova 1995:324, no. 1485, **kos-* ‘to pierce, to cut’.]
- B. Dravidian: Kurux *kaccnā* ‘to divide (soft material) by force, to break by pulling, to pull to pieces, to break off, to bite off; to finish, to do thoroughly, definitely, or finally’, *kacrnā* ‘to be pulled off, to break short’; Malto *qace* ‘to break (as a cord), to cure an illness by exorcism, to end, to finish’, *qacre* ‘to be broken, to be done, to be over’, *qacro* ‘broken, torn cloth’. Burrow—Emeneau 1984:103, no. 1100.
- C. Proto-Indo-European **k^hes-*, **k^has-* ‘to cut’: Sanskrit *śāsati* ‘to cut down, to kill, to slaughter’; Greek κεάζω ‘to split, to cleave’; Latin *castrō* ‘to castrate’; Middle Irish *cess* ‘spear’; Old Church Slavīc *kosa* ‘scythe’; Russian *kosá* [koca] ‘scythe’; Czech *kosa* ‘scythe’; Polish *kosa* ‘scythe’; Serbo-Croatian *kòsa* ‘scythe’; Bulgarian *kosá* ‘scythe’. Rix 1998a:293 **kes-* ‘to cut (off)’; Watkins 1985:30 **kes-* (variant **kas-*) and 2000:41 **kes-* (variant **kas-*) ‘to cut’; Pokorny 1959:586 **kes-* ‘to cut’; Walde 1927—1932.I:448—449 **kes-*; Mallory—Adams 1997:336 (?) **kos-trom* ~ **kos-dhrom* ‘cutting instrument, knife’, **kes-* ‘to cut’; Mann 1984—1987:494 **kesō*, -*jō* ‘to cut, to chop’, 614 **kes-* ‘to cut, to stab’; Hofmann 1966:137 **kes-*; Boisacq 1950:424—425; Frisk 1970—1973.I:806 **kes-*; Chantraine 1968—1980.I:507—508 **kes-*; Beekes 2010.I:661—662 **kes-*; Ernout—Meillet 1979:104; Walde—Hofmann 1965—1972.I:179—180; De Vaan 2008:97; Mayrhofer 1956—1980.III:319; Derksen 2008:238 **kos-*.
- D. Proto-Altaic **k^häsi-* ‘(vb.) to cut; (n.) piece’: Proto-Tungus *(*χ*)*asu-* ‘to chop, to cut off; to bite’ > Manchu *asiḫiya-* ‘to trim off, to pare off, to prune’; Evenki *asu-* ‘to bite’. Proto-Mongolian **kasu-* ‘to cut off pieces, to adze, to diminish’ > Written Mongolian *qasu-* ‘to diminish, to decrease, to

abbreviate; to take away from, to cut down, to curtail; to shorten; to exclude, to eliminate; to subtract, to deduct; to delete', *qasuydal* 'deduction, diminution, decrease', *qasulta* 'reduction, diminution, decrease; deduction, exclusion', *qasuly-a* 'deduction, subtraction'; Khalkha *χas-* 'to cut off pieces, to adze, to diminish'; Buriat *χaha-* 'to cut off pieces, to adze, to diminish'; Kalmyk *χas-* 'to cut off pieces, to adze, to diminish'; Ordos *gasu-* 'to cut off pieces, to adze, to diminish'. Proto-Turkic **kes-* 'to cut' > Old Turkic (Yenisei) *kes-* 'to cut'; Karakhanide Turkic *kes-* 'to cut'; Turkish *kes-* 'to cut, to cut off; to interrupt, to intercept; to cut down, to diminish; to determine, to decide, to agree upon; to cut the throat of, to kill; to castrate', *kesim* 'the act of cutting, slaughter; cut, shape, form; make, fashion', *kesinti* 'clipping, cutting; chip; deduction (from a sum)', *keskin* 'sharp, keen; pungent, severe; decided; peremptory; edge (of a cutting instrument)', *kesme* 'cut, that can be cut; decided, definite; shears'; Azerbaijani *käs-* 'to cut'; Turkmenian *kes-* 'to cut'; Uzbek *kes-* 'to cut'; Uighur *kes-* 'to cut'; Tatar *kis-* 'to cut'; Bashkir *kiθ-* 'to cut'; Kirghiz *kes-* 'to cut'; Kazakh *kes-* 'to cut'; Chuvash *kas-* 'to cut'; Yakut *kehē-* 'to cut'. Starostin—Dybo—Mudrak 2003:769—770 **k'äsi* 'to cut; piece'.

Buck 1949:9.22 cut (vb.); 9.27 split (vb. tr.). Brunner 1969:36, no. 142; Bomhard—Kerns 1994:405—406, no. 243.

444. Proto-Nostratic root **k^hat^h-* (~ **k^hə^th-*):

(vb.) **k^hat^h-* 'to plait, to weave, to twist';

(n.) **k^hat^h-a* 'that which is plaited, woven, twisted: mat, net, knot'

Derivative:

(n.) **k^hat^h-a* 'rag, cloth'

- A. Proto-Afrasian **kat-* 'to plait, to weave, to twist': Proto-Semitic **kat-ap-* 'to tie, to bind' > Arabic *katafa* 'to fetter, to shackle, to tie up'; Soqotri *kātof* 'to tie (to the top of the back)'; Geez / Ethiopic *katafa* [ከተፋ] 'to bind firmly, to tie up', *kətuḥ* [ከተፍ] 'bound firmly, tied up'; Amharic *kutfat-ä əd* 'hands bound behind the back'; metathesis in: Hebrew *kāpaθ* [כַּפֹּת] 'to tie, to bind', *keṯeθ* [כֶּתֶב] 'knot, tie'; Mandaic *kpt* 'to tie, to bind'; Aramaic *kəpaθ* 'to tie, to bind'; Syriac *kəpaθ* 'to tie into a knot'. Klein 1987:285; Murtonen 1989:237; Leslau 1987:297.
- B. Dravidian: Gondi *kattī, ketti* 'mat', (?) *kattī* 'palmleaf mat'; Konḍa *kati* 'wall'; Kuwi *katti* 'mat-wall', *kati* 'wall'. Burrow—Emeneau 1984:113, no. 1205.
- C. Proto-Kartvelian **ket-/kt-* 'to twist, to turn': Mingrelian *rt-* 'to turn, to turn into'; Laz *kt-* 'to twist, to turn'; Svan *kešd-* : *kšd-* 'to turn'. Klimov 1998:214 **ket-* : **kt-* 'to turn'; Fähnrich 2007:459 **ket-/kt-*.

- D. Proto-Indo-European *k^hat^h- ‘to plait, to weave, to twist’: Latin *catēna* ‘chain, fetter’, *cassēs* ‘a hunter’s net, snare, trap’; (?) Old Icelandic *hadda* ‘pot hook, pot handle’; Old English *heaðor* ‘restraint, confinement’, *heaðorian* ‘to shut in, to restrain, to control’; Old Church Slavic *koтѣць* ‘pen, coop’. Pokorny 1959:534 *kat- ‘to plait’; Walde 1927—1932.I:338 *qat-; Mann 1984—1987:478—479 *kat- (*kāt-) ‘to hold, to keep; hold, holder, handle, pen, keep’; De Vaan 2008:97 and 98; Ernout—Meillet 1979:103 and 105; Walde—Hofmann 1965—1972.I:177—178 *qat-; De Vries 1977:200.

Buck 1949:6.33 weave; 9.75 plait (vb.). Dolgopolsky 1998:30—31, no. 22, *kadV ‘to wicker, to wattle’ (‘wall, building’) and 2008, no. 1006, *kadV ‘wickerwork, wattle’; Bomhard 1999a:55.

445. Proto-Nostratic (n.) *k^hat^h-a ‘rag, cloth’:

Derivative of:

(vb.) *k^hat^h- ‘to plait, to weave, to twist’;

(n.) *k^hat^h-a ‘that which is plaited, woven, twisted: mat, net, knot’

- A. Dravidian: Tulu *kadale* ‘(n.) a rag; (adj.) ragged, tattered’; Gondi *gatla*, *getli*, *getla*, *gette*, *gete*, *gende* ‘cloth’; Manda *kediya*, *kidiya* ‘cloth’; Pengo *kadiya*, *kediya* ‘waistcloth, cloth’. Burrow—Emeneau 1964:112, no. 1190.
- B. Indo-European: Proto-Germanic *χap^hrō ‘patch, rag’ > Old High German *hadara* ‘patch, rag’ (New High German *Hader*). Middle High German *hader*, also *hadel*, ‘rag, tatter’; Old Saxon *hadilīn* ‘rag, tatter’. Kluge—Mitzka 1967:280; Kluge—Seebold 1989:285.

Buck 1949:6.21 cloth.

446. Proto-Nostratic root *k^hat^h-:

(vb.) *k^hat^h- ‘to fall down, to set down, to drop down’;

(n.) *k^hat^h-a ‘lower part, lower place, lower thing’; (adj.) ‘lower, inferior’;

(particle) *k^hat^h- ‘down’

- A. Afrasian: Semitic: Akkadian *katātu* ‘to be low or short; to suffer physical collapse; to descend to the horizon’.
- B. Proto-Indo-European *k^hat^h- ‘down, below, under, beneath; along, downwards’: Hittite *kat-ta*, *ka-at-ta*, *kat-ta-an* (adverb and preverb) ‘down, below, under; along; down the line, subsequently’, (postposition with dat.-loc. or gen.) ‘beneath, below, under, down (along), alongside, by, (along) with, on the side of’, (with abl.) ‘(from) beneath; down from’, *kat-ta-an-da* ‘downwards, along’, (adj.) *kat-te-ra*, *kat-te-ir-ra* ‘lower, inferior; nether, infernal; along, close(r)’; Hieroglyphic Luwian *kata* ‘down, under’, *katanta* ‘below’; Lydian (preverb) *kat-*, *kat-*; Greek κατά, κάτω ‘down,

along, according to, against', (Homeric) *κάταντα* 'downhill'; Tocharian B *kätk-* 'to lower, to set (down)', *kätkare* '(adj.) deep, far (of height); (adv.) deep, far'. Pokorny 1959:612—613 **kom*; Walde 1927—1932.I:458—459 *kom*; Mann 1984—1987:516 **kmt-* (**kmtm*, **kmtō*, **kmti*) 'together, combined, total'; Watkins 1985:27 **kat-* 'something thrown down; offspring' and 2000:37 **kat-* 'down'; Mallory—Adams 1997:169 **kat-h_ae* 'down' and 2006:290, 292 **kat-h_ae* 'down'; Puhvel 1984— .4:125—130 and 4:131—133; Kloekhorst 2008b:463—464 and 465; Chantraine 1968—1980.I:504—505; Frisk 1970—1973.I:800; Boisacq 1950:420—421; Hofmann 1966:135 **kmta*; Beekes 2010.I:656 **kmt-*; Adams 1999:159 — according to Adams, Tocharian B *kätk-* 'to lower, to set (down)' is based upon a Proto-Indo-European verb stem **kat-ske/o-*, built on the preposition **kat-a* 'down(ward)'. Note: In view of the Tocharian cognate proposed by Adams, the traditional comparison of the Anatolian and Greek forms cited above with Old Irish (preposition) *cét-* 'with', Old Welsh *cant* 'with', and Latin *cum* 'with' is to be abandoned (so also Puhvel 1984— .4:130).

- C. Proto-Eskimo **katay-* 'to fall or drop': Alutiiq Alaskan Yupik *katay-* 'to dump or pour out, to fall'; Central Alaskan Yupik *katay-* 'to fall out or off, to drop'; Naukan Siberian Yupik *katə-*, *kataXtur-* 'to pour out, to drop, to fall out'; Central Siberian Yupik *katay-* 'to dump, to empty'; Sireniki *katəy-* 'to drop, to pour out'; Seward Peninsula Inuit *katak-* 'to fall, to drop'; North Alaskan Inuit *katak-* 'to fall, to drop'; Western Canadian Inuit *katak-* 'to fall, to drop'; Eastern Canadian Inuit *katak-* 'to fall, to drop, to go downwards'; Greenlandic Inuit *katay-* 'to drop, to fall, to shed hair (animal), to be loosened'. Fortescue—Jacobson—Kaplan 1994:160.

Buck 1949:10.23 fall (vb.). Greenberg 2002:53, no. 107.

447. Proto-Nostratic root **k^hath-*:

- (vb.) **k^hath-* 'to make a harsh, shrill screech or sound: to cackle, to caw, to screech, to cry, to yelp';
 (n.) **k^hath-a* 'cackling, cawing, screeching, crying, yelping'; (adj.) 'harsh, shrill, sharp, piercing (of sounds)'

- A. Afrasian: Semitic: Arabic *katkūt* 'chicken, chick'.
 B. Dravidian: Tamil *kattu* (*katti-*) '(vb.) to caw, to screech, to chatter, to yelp, to growl, to bray, to bleat, to croak, to cry, to scream, to babble, to roar; (n.) crying, brawling, chattering'; Kannaḍa *kattu* 'to cry, to croak, to caw, to bray, etc.'. Burrow—Emeneau 1964:113, no. 1206.
 C. Proto-Kartvelian **kat-* 'hen': Georgian *kat-am-i* 'hen'; Laz *kot-um-e* 'hen'; Mingrelian *kot-om-i* 'hen'; Svan *kat-al* 'hen'. Klimov 1964:195—196 **katam-* and 1998:211—212 **katam-* 'hen'; Fähnrich—Sardshweladse 1995:369—370 **kat-*; Fähnrich 2007:455 **kat-*; Schmidt 1962:137.

- D. Proto-Indo-European *k^hq^h-o-s ‘harsh, shrill, sharp, piercing (of sounds)’: Latin *catus* ‘sharp to the hearing, clear-sounding, shrill’, transferred to intellectual objects in a good and bad sense: (a) good sense: ‘clear-sighted, intelligent, sagacious, wise’; (b) bad sense: ‘sly, crafty, cunning, artful’. Of dialectal origin (Sabine). Thus, not related to Latin *cōs* ‘any hard stone, flintstone’. Same semantic development in Middle Irish *cath* ‘wise; a sage’. Pokorny 1959:541—542; Walde 1927—1932.I:454—455; Mann 1984—1987:479 **katos* ‘shrewd’; Walde—Hofmann 1965—1972.I:183—184; Ernout—Meillet 1979:106; Lindsay 1894:541; De Vaan 2008:99. Note: Mann stands alone in reconstructing a separate Proto-Indo-European form, preserved only in Latin and Middle Irish.

Buck 1949:3.51 hen, chicken (generic); 3.54 hen. Note: The words for ‘hen, chicken’ (Semitic and Kartvelian) may be Wanderwörter.

448. Proto-Nostratic root *k^haw- (~ *k^həw-):

(vb.) *k^haw- ‘to swell, to expand, to inflate, to grow, to increase’;

(n.) *k^haw-a ‘accumulation, inflation, expansion, growth; heap, pile; height’

- A. Proto-Afrasian *k[a]w- ‘to swell, to expand, to inflate, to grow, to increase’: Proto-Semitic *kaw- (*kaw-am-, *kaw-ad-, *kaw-ar-, *kaw-as-) ‘to swell, to expand, to inflate, to grow, to increase’ > Arabic *kawwama* ‘to heap, to stack up, to pile up, to accumulate’, *kawm* ‘heap, pile, hill’, *kūm* ‘heap, dung-hill, dung-pit’, *kāda* ‘to heap up, to pile up’, *kawda* ‘heap, pile’, *kāra* ‘to heap up’, *kawr* ‘plenty’, *kūs* ‘heaped-up sand-hill’; Geez / Ethiopic *kawama* [ḥawam] ‘to burst’; Tigre *kom* ‘heap’. Leslau 1987:299.
- B. Dravidian: Tamil *kō* ‘mountain’; Telugu *kōdu*, *kōduvāḍu* ‘a Khond, a man of a certain hill tribe’, *kōya* name of a certain tribe of mountaineers; Kui *kui* ‘above, aloft, over, atop, upon’, *kuiki* ‘to the place above’, *kuiti* ‘from the place above’; Kuwi *kui* ‘up, above, west’. Krishnamurti 2003:7 and 11 **kō*/**kō-n-tu* ‘king, god’ (also ‘mountain’); Burrow—Emeneau 1984:196, no. 2178.
- C. Proto-Indo-European *k^hew-/ *k^how-/ *k^hu- ‘to swell, to expand, to inflate, to grow, to increase’: Gothic *hūhjan* ‘to heap up, to store up’, *hiuhma* ‘heap, multitude’, *hauhs* ‘high’, *hauhei* ‘height’; Old Icelandic *hár* ‘high’, *haugr* ‘grave-mound’; Faroese *háur* ‘high’; Norwegian *høi* ‘high’; Swedish *hög* ‘high’; Danish *høg* ‘high’; Old English *hēah* ‘high’, *hīehþo*, *hīehð(u)* ‘height; above’; Old Frisian *hāch* ‘high’; Old Saxon *hōh* ‘high’; Dutch *hoog* ‘high’; Old High German *houc* ‘hill’, *hōh* ‘high’ (New High German *hoch*); Lithuanian *kaũkas* ‘swelling, boil’, *kaukarà* ‘hill’, *káugė* ‘large stack of hay’; Tocharian (adv.) A *koc*, B *kauc* ‘high, up, above’. Pokorny 1959:588—592 **keu-*, **keuə-* ‘to bend’; Walde 1927—1932.I:370—376 **qeu-*; Mann 1984—1987:282 **kūkijō* ‘to swell, to inflate’; Watkins 1985:30—31 **keu-* base of various loosely related derivatives with

assumed basic meaning ‘to bend’, whence ‘a round or hollow object’ and 2000:41 **keuə*- ‘to swell; vault, hole’; Mallory—Adams 1997:62 **keu-k*- ‘curve’; Orël 2003:165 Proto-Germanic **xauǵaz* ~ **xauǵan*, 166 **xauxaz*, 166 **xauxipō*, 166 **xauxīn*, 166 **xauxjanan*; Kroonen 2013:215 Proto-Germanic **hauha*- ‘high’; Lehmann 1986:179 **kew*- ‘to bend’, **kew-k*- ‘bend, curve’ and 185 **kew-H*- ‘to bend’; Feist 1939:249 **keuk*- and 258—259; De Vries 1977:210 **keu*- ‘to bend’, **kēu*- ‘to swell’; Torp 1919:238; Falk—Torp 1903—1906.I:321; Onions 1966:440 **koukos*; Klein 1971:347 **geu-q*-, enlargement of **geu*- ‘to bend’; Boutkan—Siebinga 2005:146—147; Kluge—Mitzka 1967:312 **koukó-s* ‘hill’, **keu*- ‘to bend’; Kluge—Seebold 1989:312; Adams 1999:209; Van Windekens 1976—1982.I:228 **gou-d*- parallel to **gou-q*- found in Gothic *hauhs* ‘high’; Fraenkel 1962—1965.I:229, I:229—230, and I:230; Smoczyński 2007.1:265.

- D. Yukaghir *kuwémoj* ‘to grow’, -*kúwoj* ‘big’. Nikolaeva 2005:230.
- E. Chukchi-Kamchatkan: Proto-Chukotian **kæwæ* ‘hill or bump’ (?) > Chukchi *ke(w)egej* ‘unevenness, hill’, *keere-cʔən* ‘unevenness’, *kewekej* ‘hill’, *ye-kewe-lin* ‘hilly’; Kerek *kawaana* ‘rough (place ?)’, *a-kaawa-kəlran* ‘smooth’; Koryak *kavet*, *kavat* ‘hills, bumps’; Alyutor (Palana) *kewetteyən* ‘edge of mountain seen from sea side’. Fortescue 2005:135.

Buck 1949:1.22 mountain, hill; 12.31 high. Bomhard—Kerns 1994:410—411, no. 250.

449. Proto-Nostratic (n.) **khay-a* ‘solitude, loneliness, separateness’; (adj.) ‘alone’:
Extended form (Afrasian and Indo-European):

(n.) **khay-w-a* ‘solitude, loneliness, separateness’; (adj.) ‘alone’

- A. Proto-Afrasian **kayw*- ‘alone’: Proto-East Cushitic **kaww*- (< **kayw*-) ‘alone’ > Somali *kaw* ‘one’; Konso *xaww-aa* ‘alone, separate, different’; Gidole *haww* ‘alone’; Rendille *kow* ‘one’. Sasse 1979:44.
- B. Dravidian: Tamil *kaimmai* ‘widowhood, widow, lovelorn condition’, *kaintalai*, *kayinī*, *kainī* ‘widow’, *kai-kkilai* ‘unreciprocated love’; Tulu *kai-ponjavu* ‘a single woman’ (*ponjavu*, *ponjevu* ‘a female in general, a grown-up woman’); Parji *kētal*, (NE.) *kēṭal* ‘widow’, *kētub* ‘widower’, *kētub cind* ‘orphan’; Gadba (Ollari) *kēṭal* ‘widow’. Burrow—Emeneau 1984:183, no. 2028.
- C. Proto-Indo-European **khay*- (extended form **khay-wo*-) ‘alone’: Latin *caelebs* ‘unmarried, single’; Sanskrit *kévala-h* ‘exclusively one’s own, alone’; Old Church Slavic *cě-glb* ‘alone’; Latvian *kails* ‘barren, childless’. Pokorny 1959:519 **kai*-, **kai-uo*-, **kai-uelo*- ‘alone’; Walde 1927—1932.I:326 **qai*-; Mann 1984—1987:459 **kai*- ‘alone, separate, only’, 460 **kailos* ‘single, alone, deprived’; Mayrhofer 1956—1980.I:267 **kaiwelo*-; Mallory—Adams 1997:12 **kai-uelos* ‘alone’; De Vaan 2008:80; Walde—

Hofmann 1965—1972.I:130 *qai^helo-, *qai-^huo-, *qai-lo-; Ernout—Meillet 1979:83.

Buck 1949:13.33 alone, only. Bomhard—Kerns 1994:411—412, no. 252; Dolgopolsky 2008, no. 1950, *qaywE(-LV) ‘exclusively one’s own’ (→ ‘alone’, ‘entire’).

450. Proto-Nostratic root *k^hay- (~ *k^hay-):

(vb.) *k^hay- ‘to put, to place, to set, to lay; to be placed, to lie’;

(n.) *k^hay-a ‘resting place, abode, dwelling; cot, bed’

- A. Afrasian: Proto-Southern Cushitic *kaay- ‘to put, to set, to lay’ > Ma’a -ke ‘to put, to set, to lay’; Dahalo kaaj- ‘to put, to set, to lay’. Ehret 1980:243.
- B. Dravidian: Tamil cē ‘to dwell, to lie, to remain, to sleep’, cēppu (cēppi-) ‘to abide, to remain’, cēkkai ‘cot, bed, roost, dwelling place, nest’; Kannaḍa kē (kēd-) ‘to lie down, to repose, to copulate with’, kēvu, kendu ‘copulation’; Tuḷu kedonuni ‘to lie down, to rest’, kēḷu ‘abode of a pariah’; Kolami ke-p- (ke-pt-) ‘to make (child) to sleep’; Malto kide ‘to lay down’; Kuṛux kīdnā, kīd’ānā ‘to allow or invite one to lie down to rest or sleep, to put to bed (child), to lay in the grave’. Burrow—Emeneau 1984:181, no. 1990.
- C. Proto-Indo-European *k^hey-/ *k^hoy-/ *k^hi- ‘to lie, to be placed’: Sanskrit śēte ‘to lie, to lie down, to recline, to rest, to repose’, (causative) śāyayati ‘to cause to lie down, to lay down, to put, to throw, to fix on or in’; Avestan saēte ‘to lie down, to recline’; Greek κεῖται ‘to lie, to be placed’, κοῖτη, κοῖτος ‘the marriage-bed’; Hittite (3rd sg. pres. mid.) ki-it-ta(-ri) ‘to lie, to be placed’; Palaic (3rd sg. pres. mid.) ki-i-ta-ar ‘to lie’. Rix 1998a:284 *kēi- ‘to lie, to rest, to repose’; Pokorny 1959:539—540 *kēi- ‘to lie, to camp’; Walde 1927—1932.I:358—360 *kēi-; Mann 1984—1987:606 *kēi- (*kēij-, *kēi-) ‘to lie, to fall’; Watkins 1985:27—28 *kēi- and 2000:38 *kēi- ‘to lie; bed, couch; beloved, dear’; Gamkrelidze—Ivanov 1984.I:295 *k^h[^h]ej- and 1995.I:256 *k^hei- ‘to lie’; Mallory—Adams 1997:352 *kēi- ‘to lie’; Boisacq 1950:426 *kēi-; Frisk 1970—1973.I:809—810; Chantraine 1968—1980.I:509—510; Hofmann 1966:37 *kēi-; Beekes 2010.I:663—664 *kēi-; Puhvel 1984— .4:169—173 *kēy-; Kloekhorst 2008b:473—475 *kēi-to, *kēinto; Mayrhofer 1956—1980.III:303—304.
- D. (?) Proto-Uralic *kuyi- ‘to lie’ > Cheremis / Mari ki(j)e- ‘to lie’; Votyak / Udmurt kyll’y- (< *kyjly-) ‘to lie, to be lazy’; Zyrian / Komi kujly- ‘to lie’; Vogul / Mansi kuj- ‘to lie, to sleep’; Ostyak / Xanty (North Obdorsk) hoj- ‘to lie’. Collinder 1955:89 and 1977:105; Rédei 1986—1988:197 *kuyz-; Zhivlov 2023:164 *kujji- ‘to lie’.

Buck 1949:12.12 put (place, set, lay); 12.14 lie. Koskinen 1980:22, no. 64; Bomhard—Kerns 1994:416—417, no. 259.

451. Proto-Nostratic root **k^hay-* (~ **k^həy-*):

(vb.) **k^hay-* ‘to be or become warm or hot; to make warm, to heat’;

(n.) **k^hay-a* ‘heat’

- A. Dravidian: Tamil *kāy* ‘to grow hot, to burn, to be warm (as body), to wither, to parch, to be dried up, to begin to heal (sore, wound, boil), to shine, to be indignant, to be angry, to be prejudiced, to hate’; Malayalam *kāyuka* ‘to be hot, heated, feverish; to shine; to grow dry; to warm oneself’; Kota *ka-y-* (*ka-c-*) ‘to become hot, to warm oneself, to bask in the sun’; Kannaḍa *kāy* (*kāyd-*, *kād-*) ‘to grow hot, to grow red-hot, to burn with passion, to be angry’; Koḍagu *ka-y-* (*ka-yuv-*, *ka-ñj-*) ‘to be hot, to boil, to bask in the sun’; Tuḷu *kāyuni* ‘to be hot, to burn, to be feverish, to be angry’; Telugu *kāka* ‘warmth, heat, anger’; Naiki (of Chanda) *kāy-* ‘to be hot’; Gadba (Ollari) *kāyp-* (*kāyt-*) ‘to boil’, *kāykir* ‘fever’; Kuwi *kaiyali* ‘to become hot’, *kaiyi* ‘hot’. Burrow—Emeneau 1984:135—136, no. 1458; Krishnamurti 2003:130 *kāy* ‘to grow hot’, and 181 **kā-y-/kā-*.
- B. Proto-Indo-European **k^hay-* (vb.) to heat; (n.) heat’: Gothic *hais* ‘torch’, *heitō* ‘fever’; Old Icelandic *heita* ‘to heat’, *heitr* ‘hot, burning’, *hiti* ‘heat, warmth’; Swedish *het* ‘hot’, *hetta* ‘heat’; Old English *hāt* ‘hot’, *hætan* ‘to heat’, *hæte* ‘heat, inflammation’, *hæto* ‘heat’; Old Frisian *hēt* ‘hot’, *hete* ‘heat’; Old Saxon *hēt* ‘hot’, *hittia* ‘heat’; Dutch *heet* ‘hot’, *hitte* ‘heat’; Old High German *heiz* ‘hot’ (New High German *heiß*), *hizz(e)a* ‘heat’ (New High German *Hitze*), *heizen* ‘to heat’ (New High German *heizen*); Lithuanian *kaistù*, *kaitaũ*, *kaĩsti* ‘to become heated, to get warm’. Pokorny 1959:519 **kǎi-*, **kĩ-* ‘heat’; Walde 1927—1932.I:326—327 **qǎi-*, **qĩ-*; Mann 1984—1987:460 **kaist-* ‘to burn, to purge, to purify, to refine’, 461 **kait-*; Watkins 1985:26 **kai-* and 2000:36 **kai-* ‘heat’ (extended form **kaid-*); Mallory—Adams 1997:264 **keh₁i-* ‘hot’; Feist 1939:235—236 **kǎi-* and 253 **kǎi-*; Lehmann 1986:171 **kǎy-* and 181 **kǎy-*, **kĩ-*; Orël 2003:153 Proto-Germanic **xaitaz*, 153 **xaitjanan*; Kroonen 2013:202 Proto-Germanic **haita-* ‘hot’; De Vries 1977:220 **kai-*, **kĩ-* and 229; Boutkan—Siebinga 2005:168—169; Onions 1966:433 and 449; Klein 1971:338 and 354 **qǎi-* ‘heat’; Kluge—Mitzka 1967:301 **kǎi-*, **kĩ-*, 302, and 311; Kluge—Seebold 1989:302 **kai-* and 312; Fraenkel 1962—1965.I:204; Fraenkel 1962—1965.I:204; Smoczyński 2007.1:244—245.
- C. Proto-Uralic **keye-* ‘to cook, to boil’: Finnish *keittää* ‘to cook, to boil’; Estonian *kee-* ‘to boil (intr.)’, *keeta-* ‘to boil (tr.)’; Lapp / Saami (Kola) *gypte-* ‘to boil’; Cheremis / Mari *küä-*, *küja-* ‘to boil (intr.)’, to ripen (intr.)’, *kükte-*, *küjunkte-* ‘to boil (tr.)’, to ripen (tr.)’; (?) Yurak Samoyed / Nenets *kuu-* ‘to ripen (of berries)’. Collinder 1955:23 and 1977:44; Rédei

1986—1988:143—144 Proto-Finno-Ugrian *keje-; Décsy 1990:100 *kejä ‘to cook; well done, ripe’.

Buck 1949:5.21 cook (vb.); 5.22 boil; 5.23 roast, fry; 5.24 bake; 15.85 hot, warm. Bomhard—Kerns 1994:419—420, no. 262; Hakola 2000:63, no. 242.

452. Proto-Nostratic root *k^hay-:

(vb.) *k^hay- ‘to scoop out’;

(n.) *k^hay-a ‘spoon, ladle’

Extended form:

(vb.) *k^hay-V-w- ‘to dig’;

(n.) *k^hay-w-a ‘cave, pit, hollow’

A. Dravidian: Malayalam *kayyil* ‘ladle, spoon’; Betta Kuruba *kīlī* ‘ladle’; Tuḷu *kaiḷy* ‘ladle, spoon’. Burrow—Emeneau 1984:117, no. 1257.

B. Proto-Indo-European *k^hay-wṛ-t^h, *k^hay-wṛ-t^h ‘cave, hollow’: Sanskrit *kévaṭa-h* ‘cave, hollow’; Greek *καιάδᾱς* ‘pit or underground cavern’, *καίετός* ‘fissure produced by an earthquake’. Pokorny 1959:521 **kaiūr-t*, **kaiūr-t*; Walde 1927—1932.I:327 **kaiūr-t* ‘cleft, hollow’; Mallory—Adams 1997:96 (?) **káiūr(t)* ‘cave, fissure’; Mayrhofer 1956—1980.I:267 **kaiwṛ-t*, **kaiwṛ-t*; Boisacq 1950:390 **qaiūr-t*; Hofmann 1966:128; Chantraine 1968—1980.I:479 **kai-wṛ/ṛ-t*; Beekes 2010.I:615; Frisk 1970—1973.I:753 **qaiūr-t*; Benveniste 1935:111 **kai-wṛ-t*, alongside **kai-wṛ-t* in Greek (Hesychius) (pl.) *καίατα ὀρύγματα*. Note: According to Joki (1973:130), the Indo-European forms are loans from Uralic.

C. Proto-Uralic *kayz ‘spoon, ladle, shovel’: (?) Livonian *koggi*, *kādi* ‘spoon, ladle’; (?) Votyak / Udmurt *kuj* ‘shovel, winnowing-shovel’; Zyrian / Komi *koj-* ‘to shovel (snow)’; (?) Yurak Samoyed / Nenets *huu* ‘spoon, ladle’; (?) Tavgi Samoyed / Nganasan *kui* ‘spoon, ladle’; (?) Selkup Samoyed *kujak* ‘spoon, ladle’; (?) Kamassian *kaigu* ‘spoon, ladle’. Rédei 1986—1988:117—118 **kajz* (**kojz*); Décsy 1990:99 [**kaja*] ‘spoon’; Janhunen 1977b:76 **kuj*. Proto-Uralic **kaywa-* ‘to dig’ > Finnish *kaivos* ‘mine, pit’, *kaiva-* ‘to dig, to delve, to burrow, to dig out’; Estonian *kaeva-* ‘to dig’; Cheremis / Mari *koe-* ‘to dig, to shovel’. Joki 1973:130; Rédei 1986—1988:117—118 and 170—171 **kojwa-*; Décsy 1990:100 Proto-Uralic [**kojva*] ‘to dig, to burrow, to scoop’; Zhivlov 2023:158 **kajwa-* ‘to dig’.

Buck 1949:5.37 spoon; 8.22 dig; 12.72 hollow. Illič-Svityč 1971—1984.I:333—334, no. 209, **Ḳajwa* ‘to dig’; Bomhard—Kerns 1994:427—428, no. 271; Hakola 2000:48, no. 168; Dolgopolsky 2008, no. 969, **koyV* ~ **kayV* ‘to draw; scoop, spoon’ and, no. 1241, **Ḳay[i]wa* ‘to dig’.

453. Proto-Nostratic root **k^hil-* (~ **k^hel-*):(vb.) **k^hil-* ‘to make a sound or a noise; to say, to speak, to talk’;(n.) **k^hil-a* ‘sound, noise; tongue, speech, language’

- A. Dravidian: Tamil *kiḷa* ‘to express clearly, to make special mention of, to state specifically’, *kiḷattu* (*kiḷatti-*) ‘to express clearly’, *kiḷappu* ‘speech, utterance’, *kiḷavu* ‘word, speech, language’; Kannaḍa *kiḷiṛ*, *kiḷiṛ* ‘to sound, to neigh’, *keḷar* ‘to cry out, to roar’; Gondi *kel-*, *kell-* ‘to tell’; Konḍa *kēṛ-* ‘(cock) to crow’; Pengo *kṛe-* ‘(cock) to crow’; Kui *klāpa* (*klāt-*) ‘(vb.) to crow, to coo, to lament; (n.) call of a male bird, to lament’, *kelpa* (*kelpi-*) ‘(vb.) to invoke, to petition a deity, to repeat incantations; (n.) incantation, invocation’. Burrow—Emeneau 1984:182, no. 2017(b). Tamil *cilai* ‘(vb.) to sound, to resound, to roar, to twang; to rage, to be angry; (n.) sound, roar, bellow, twang’, *cil* ‘sound, noise’, *cilampu* (*cilampi-*) ‘(vb.) to sound, to make a tinkling noise, to echo; (n.) sound, noise, resonance; tinkling anklets’, (reduplicated) *cilucilu* ‘to sound (as in frying), to talk without restraint, to make a hissing noise’, *cilumpu* (*cilumpi-*) ‘to sound’, *cilanke* ‘tiny bell’; Malayalam *cila*, *cilappu*, *cileppu* ‘ringing sound’, *cilekka* ‘to rattle, to tinkle, to chatter, to chirp, to bark’, *cilampu* ‘foot-trinket filled with pebbles for tinkling, worn by dancers’, *cilampuka* ‘to tinkle, to be out of tune’; Kota *kilc-* (*kilc-*) ‘to utter a shrill cry of joy’, *jelk* ‘anklet with bells’; Toda *kilk-* (*kilky-*) ‘to neigh’; Kannaḍa *kele* ‘to cry or shout with energy or for joy, to vociferate (abusively)’, *keleta* ‘abusive vociferation’, *cili* an imitative sound, *sele* ‘sound, noise, echo’; Tuḷu *kilevuni*, *kilēvuni* ‘to whistle, to resound’, *kelepuni*, *kilepuni* ‘to crow’; Koraga *kelappu* ‘to cry’; Telugu *celāgu* ‘to sound’, *kelayu* ‘to rage’, *kilāṛincu*, *kilāṛucu* ‘to make a noise, to shout’; Gondi *kiliyānā* ‘to shout’, *kiliyānā* ‘to weep loudly, to cry out, to scream’, *killitānā* ‘to chirp, to cry out’, *kilitānā* ‘to roar (as a tiger)’, *kil-/kill-* ‘to weep, (owl) to hoot, (animals) to cry’, *kil(i)-* ‘to scream, (child) to cry’, *kilānā* ‘to weep’; Kui *klāpa* (*klāt-*) ‘(vb.) to crow, to coo, to lament; (n.) call of a male bird, lament’, *klīri klīri ṛīva* ‘to shriek with fear’, *klīsi klīsi ṛīva* ‘to shout with vehemence’; Kuwi *kileri-kīali* ‘to shout, to yell’, *kileḍi kīnai* ‘to shout’, *klīrinai*, *klīri innai* ‘to yell’. Burrow—Emeneau 1984:144, no. 1574; Krishnamurti 2003:109 and 129 **kil-* ‘sound, noise’.
- B. Proto-Uralic **keli* ‘tongue, speech, language’: Finnish *kieli* ‘tongue, speech, language’; Lapp / Saami *kiella* ‘language’ (Fennic loan); Mordvin *kel’* ‘tongue, speech, language’; Votyak / Udmurt *kyl* ‘tongue, language, speech, word’; Zyrian / Komi *kyl* ‘tongue, language, speech, word’; Vogul / Mansi *kelä* ‘word, report’; Ostyak / Xanty *köl* ‘word, speech, news’. Collinder 1955:25, 1960:406 Proto-Uralic **kele*, 1965:139, and 1977:45; Décsy 1990:100 **kelä* ‘tongue, language’; Rédei 1986—1988:144—145 **kele* (**kēle*); Sammallahti 1988:538 **kǎxli* ‘tongue’; Zhivlov 2023:166 Proto-Uralic **käli* ‘tongue’, Proto-Finnic **kēle-*, Proto-Lapp / Saami **kiele-*, Proto-Komi **kijl-*, Proto-Udmurt **kil-*.

- C. Proto-Altaic **k^hǰǎli* ‘tongue’: Proto-Tungus **χilǰü* ‘tongue’ > Manchu *ileŋgu* ‘tongue’; Evenki *inní* ‘tongue’; Lamut / Even *ienǰɔ* ‘tongue’; Negidal *inǰi* ‘tongue’; Ulch *sińu* ‘tongue’; Oroch *sinu* ‘tongue’; Nanay / Gold *širmu*, *siǰmu* ‘tongue’; Oroch *iŋi* ‘tongue’; Udihe *iŋi* ‘tongue’; Solon *iŋi* ‘tongue’. Proto-Mongolian **kele-* ‘(vb.) to say; (n.) tongue, language’ > Mongolian *kele-* ‘to utter words, to express in words; to say, to speak, to tell, to narrate’, *keleleče-* ‘to speak, to talk, to converse, to discuss together’, *kelen* ‘tongue, language, dialect, speech’, *kelele-* ‘to speak’; Khalkha *xele-* ‘to say’, *xel* ‘tongue, language’; Buriat *xele-* ‘to say’, *xele(n)* ‘tongue, language’; Kalmyk *kelə-* ‘to say’, *kelɨ* ‘tongue, language’; Ordos *kele-* ‘to say’, *kele* ‘tongue, language’; Moghol *kelä-* ‘to say’, *kelän* ‘tongue, language’; Dagur *xele-* ‘to say’, *χeli*, *χel* ‘tongue, language’; Monguor *kile-* ‘to say’, *kile* ‘tongue, language’. Poppe 1955:142. Proto-Turkic **kele-* ‘(vb.) to speak; (n.) talk, conversation’ > Old Turkic *kele-čü* ‘talk, conversation’; Turkish (dial.) [*keleži*] ‘talk, conversation’; Chuvash *kala-* ‘to say’; Kirghiz *keleč-söz* ‘talk, conversation’. Starostin—Dybo—Mudrak 2003:796—797 **k^hǰǎli* ‘tongue’.
- D. (?) Proto-Eskimo **qiluy-* ‘to bark’: Alutiiq Alaskan Yupik *qiluy-* ‘to bark’; Central Alaskan Yupik *qiluy-* ‘to bark’; Central Siberian Yupik *qiluy-* ‘to bark’; Seward Peninsula Inuit *qiluk-* ‘to bark’; North Alaskan Inuit *qilvuk-* ‘to bark’; Western Canadian Inuit *qiluk-* ‘to bark’; Eastern Canadian Inuit *qiluk-* ‘to bark’; Greenlandic Inuit *qiluy-* ‘to bark’. Fortescue—Jacobson—Kaplan 1994:305.

Buck 1949:4.26 tongue; 18.21 speak, talk; 18.22 say; 18.24 language; 18.26 word. Illič-Svityč 1971—1984.I:346—347, no. 221, **Kä/H/ä* ‘language, speech’; Bomhard—Kerns 1994:407, no. 245; Hakola 2000:67—68, no. 267.

454. Proto-Nostratic root **k^hily-* (~ **k^hely-*):

(vb.) **k^hily-* ‘to rise, to ascend, to lift up’;

(n.) **k^hily-a* ‘hill, height’; (adj.) ‘raised, high’

- A. Proto-Afrasian **kil-* ‘to lift, to raise, to ascend’: Egyptian (**kil-* > **kvil-* > **pil-* >) *tni*, *tny* ‘to lift up, to raise’. Hannig 1995:956; Faulkner 1962:305; Erman—Grapow 1921:209 and 1926—1963.5:374—375. Highland East Cushitic: Gedeo / Darasa *kiil-* (< **kilo-* ?) ‘to weigh’. Hudson 1989:165 and 249.
- B. Dravidian: Tamil *kilar* ‘to rise, to ascend, to emerge, to shoot up, to increase, to shine, to be conspicuous, to be exalted, to be aroused’, *kiłarttu* (*kiłartti-*) ‘to raise up, to fill’; Malayalam *kilaruka* ‘to rise, to grow high, to burst’, *kiłarttuka* ‘to raise, to make high’, *kiłukka* ‘to grow up, to sprout’; Kannaḍa *kelar* ‘to gape, to open, to expand, to extend, to blossom, to appear, to rise’. Burrow—Emeneau 1984:145, no. 1583.

- C. Proto-Indo-European **k^hel-/k^hl-* (secondary *o*-grade form: **k^hol-*) ‘(vb.) to lift, to raise, to elevate; (n.) hill’: Greek κολώνος ‘hill’; Latin *celsus* ‘raised up, high, lofty’, *collis* ‘hill’, *columen* ‘that which is raised on high; a height, summit, ridge’, *-cellō* in: *antecellō* ‘to be outstanding, to excel’, *excellō* ‘to stand out, to excel, to be distinguished, to be eminent’, *praecellō* ‘to surpass, to excel’; Old English *hyll* ‘hill’; Frisian *hel* ‘hill’; Low German *hul* ‘hill’; Old Saxon *holm* ‘hill’; Middle Dutch *hille*, *hil*, *hul* ‘hill’; Lithuanian *keliù*, *kélti* ‘to lift, to raise’, *kálnas* ‘hill, mound’. Rix 1998a:312 **kelH-* ‘to rise up, to tower up’; Pokorny 1959:544 **kel-*, **kelā-* ‘to tower up, to lift’; Walde 1927—1932.I:433—434 **qel-*; Mann 1984—1987:486 **kelō*, *-jō* ‘to lift, to bear, to bring’, 485 **kelesā* ‘heights’, 527 **kolnos*, *-is*, *-us* ‘hill’; Watkins 1984:28 **kel-* and 2000:39 **kel-* ‘to be prominent; hill’; Mallory—Adams 1997:270 **kolh_x-ōn* ~ **k^hl_x-n-ós* ‘hill’ and 352 **kel(h₁)-* ‘to lift, to raise up’; Gamkrelidze—Ivanov 1984.II:669 **k^hl^hel-* and 1995.I:577 **k^hel-* ‘mountain; heights, high place’; Beekes 2010.I:741—742 **kolH-n-*; Hofmann 1966:153 **qol-ō(u)n-*, **qol-nis*; Frisk 1970—1973.I:906—907 **qol-(e)n-*, **q^l-n-*; Boisacq 1950:487—488 **qe^l-*; Chantraine 1968—1980.I:559; Ernout—Meillet 1979:111 **keldō*, 132 **kolān-*, and 134; Walde—Hofmann 1965—1972.I:197—198 **qel(e)-*, I:245 **q^l-nis*, **qolen-*, **qol-ō(u)n-*, and I:249—250 **qel-*; De Vaan 2008:105, 124, and 127; Orël 2003:191 Proto-Germanic **xulmaz*, 191—192 **xulniz*; Onions 1966:441 **k^l-*, **kel-*, **kol-*; Klein 1971:347 **qel-*; Fraenkel 1962—1965.I:237—238; Derksen 2015:221 **kolH-n-* and 236 **kelH-*; Smoczyński 2007.1:249 and 1:274 **kelH-*.
- D. Yukaghir (Northern / Tundra) *kilej-* ‘to fly or leap up high’. Nikolaeva 2006:210.

Buck 1949:1.22 mountain; hill; 10.22 raise, lift. Bomhard—Kerns 1994:460—461, no. 305.

455. Proto-Nostratic (n.) **k^hir-a* ‘uppermost part (of anything): horn, head, skull, crown of head; tip, top, summit, peak’:
- A. Proto-Afrasian **k[i]r-* ‘uppermost part (of anything): horn, head, skull, crown of head’: Egyptian *krty* (f. dual) ‘horns (on the crown of Amun)’. Erman—Grapow 1926—1963.5:134; Hannig 1995:885. Berber: Tuareg *takərkort* ‘skull, cranium’; Tashelhiyt / Shilha *takərkurt* ‘cock’s comb’. Cushitic: Bilin (reduplicated) *kirkirtā* ‘skull, crown of head’. Reinisch 1887:226. Chadic: Margi *k^hār/kār* ‘head’; Nzangi *kirre/kre/kre* ‘head’; Sukur *k^hur/kxər* ‘head’. Junggraithmayr—Ibrizimow 1994.II:182—183.
- B. Dravidian: Parji *kipra* ‘a snail’s shell’; Pengo *kipri* ‘shell (of snail, etc.)’, skull’; Maṇḍa *kirpi* ‘shell’; Kuwi *kirpā*, *girpa* ‘skull’. Burrow—Emeneau 1984:143, no. 1555. Metathesis in Parji and Pengo.

- C. Proto-Indo-European *k^her-/ *k^hṛ- (secondary *o*-grade form: *k^hor-), *k^herH-/ *k^hṛH- ‘uppermost part (of anything): horn, head, skull, crown of head; tip, top, summit, peak; horned animal’: Sanskrit *śīras-* (< *k^hṛHes-) ‘head, skull’, *śṛṅga-m* ‘the horn of an animal; the tusk of an elephant; the top or summit of a mountain, peak; the highest part of a building, pinnacle, turret; any peak or projection or lofty object, elevation, point, end, extremity’, *śīrśá-h* ‘the head, skull; the upper part, tip, top (of anything)’, *śīrśán-* (< *k^hṛHsen-) ‘the head’; Avestan *sarah-* ‘head’, *srū-, srvā-* ‘horn’; Greek κέρας ‘the horn of an animal’, κάρᾱ (Ionic κάρη) ‘the head; the head or top of anything’, κεράος (< *κεράός) ‘horned’, κρᾱνίον ‘the upper part of the head, the skull’, κόρυμβος ‘the uppermost point, head, end’, κορυφή ‘the head, top, highest point; the crown or top of the head; the top or peak of a mountain’; Armenian *sar* ‘top, summit, peak’; Latin *cornū* ‘a horn’, *cerebrum* ‘the brain’, *cervus* ‘deer’; Gothic *haur̥n* ‘horn’; Old Icelandic *horn* ‘horn’, *hjarsi* ‘the crown of the head’, *hjarni* ‘brain’, *hjörtr* ‘hart, stag’; Norwegian *horn* ‘horn’, *hjerne* ‘brain’; Swedish *horn* ‘horn’, *hjärna* ‘brain’; Danish *horn* ‘horn’, *hjerne* ‘brain’; Old English *horn* ‘horn’, *heor(o)t* ‘stag’; Old Frisian *horn* ‘horn’, *hert* ‘hart, stag’; Old Saxon *horn* ‘horn’, *hirot* ‘hart, stag’; Dutch *hert* ‘hart, stag’, *hoorn* ‘horn’; Old High German *horn* ‘horn’ (New High German *Horn*), *hirni* ‘brain’ (New High German *Hirn*), *hir(u)z* ‘stag, hart’ (New High German *Hirsch*); Hittite (nom.-acc. sg./pl.) *ka-ra-a-wa-ar* ‘horn(s), antler(s)’. Pokorny 1959:574—577 *k^her-, *k^herā- : *k^hrā-, *k^herei-, *k^hereu- ‘uppermost part of the body: head, horn’; Walde 1927—1932.I:403—408 *k^her-; Mann 1984—1987:609—610 *k^her- (*e*-grade of type *k^hṛ-, *k^har-) ‘head’, 611 *k^herād- (*k^herd-) ‘horned animal’, 611 *k^herāsṛ- ‘head, crown of head, brain’, 611 *k^herāuos ‘horned; horn, horned beast’, 612 *k^hern- ‘bone, horn’, 612 *k^herūt- ‘horn, horned animal’, 613 *k^hēros, -om, -ā, 614 (*k^heruos ‘horned beast’), 616 *k^har- ‘head, top, peak’, 638 *k^hṛn-, *k^hṛn- radical element of (1) ‘head’, (2) ‘horn, horny substance’, 638 *k^hṛnāt-, *k^hṛnt-, *k^hṛnitjo- (1) ‘head, headed’, (2) ‘horn, horned’, 638—639 *k^hṛn-gom (?) ‘horn, horniness, horny growth’, 639 *k^hṛnjom (*k^hṛnjo-), *k^hṛnjos ‘head, skull, horn, tip’, 639 *k^hṛnom (*k^hṛnu) ‘horn, tip, corner’, 639 *k^hros, -es- ‘head, tip, top’, 640 *k^hruos, -is ‘horn’; Gamkrelidze—Ivanov 1984.II:876 *k^h[h]er-, *k^h[h]ṛn- and 1995.I:149 and I:773 *k^her- ‘head, horn’, *k^herH- ‘head’, *k^hṛn- ‘horn’, I:97 *k^herw- ‘horned animal’; Watkins 1985:29 *k^her- and 2000:40 *k^her- ‘horn, head’; Mallory—Adams 1997:260 *k^hṛéh₂ ‘head’; (sg.) *k^hór_h₂sṛ, (collective) *k^hér_h₂or ‘head’; 272—273 *k^hṛnom ‘horn’, *k^hér_h₂(s) ‘horn’, *k^hér_h₂sṛ ‘horn’, *k^heru ‘horn’; Lehmann 1986:180; Burrow 1973:87 *k^hṛHsen- : *k^hṛHes-; Mayrhofer 1956—1980.III:341 and III:369—370; Boisacq 1950:410—411, 437 *k^herāuó-s, 438—439 *k^her-ās-, 498, 499, and 508; Frisk 1970—1973.I:784—785 *k^hṛro- (> Armenian *sar*), I:825—826 *k^herāu-o-, I:826—827, I:924—925, I:927—927, and II:6—7; Hofmann 1966:133, 140 *k^hereuos, 140 *k^her-ās-, 155, 156 *k^horu-bho-, and 158;

Beekes 2010.I:641 **k_{rh}₂-(e)s-n-*. I:676 **k_{erh}₂*, I:676—677 **k_{erh}₂-s-*, I:756, and I:770 **k_{erh}₂-*; Chantraine 1968—1980.I:495—496, I:496 **kre₂₂-*, **k_{er}₂₂-*, I:517, I:517—518 **ker-₂₂-s-*, I:569, I:569—570, and I:577; De Vaan 2008:136—137; Ernout—Meillet 1979:114—115, 117, and 143 **k_{rw}-n-*; Walde—Hofmann 1965—1972.I:203—204 **k_{er}-*, **k_{erā}-*, **k_{er}-s-*, **k_{er}-n-*, etc., I:208 **k_{er}-*, I:276 **k_{er}-(n- etc.)*; Puhvel 1984— .4:77—79 **ker-(H₁-)* ‘head, horn, summit’; Kloekhorst 2008b: 446—447 **k_r-ó-ur*, **k_r-ó-un-*; Orël 2003:170 Proto-Germanic **xersnōn* ~ **xersnan*, 171 **xerutuz* ~ **xerutaz*, 195 **xurnan*; Kroonen 2013:221 Proto-Germanic **hersan-* ~ **herzan-* ‘brain’ and 259 **hurna-* ‘horn’; Feist 1939:251 **k_{no}-* (> Gothic *haurn*), **k_{er}-*; Lehmann 1986:180 **k_{er}-* ‘tip, head, horn’; De Vries 1977:231—232 **k_{er}-*, 232, 234, and 249 **kor-* (gen. **kernés*); Falk—Torp 1903—1906.I:299—300; Torp 1919:221 Germanic **hurna-*; Onions 1966:429 and 448; Klein 1971:335 **k_{er}-* ‘the uppermost part of the body, head, horn, top, summit’ and 353 **k_{er}-*; Kluge—Mitzka 1967:310 and 317; Kluge—Seebold 1989:311 and 316.

- D. Altaic: Proto-Mongolian **kira* ‘edge, ridge’ > Written Mongolian *kira* ‘summit or ridge of a mountain, small mountain chain; foothills; slope; a strip (usually of horn) attached to the front and rear edges of a saddle’; Khalkha *ᠵar* ‘edge, ridge’; Buriat *ᠵara* ‘crest’; Kalmyk *kirā* ‘mountain pasture’; Ordos *kirā* ‘edge, ridge’; Dagur *ᠵargag*, *kira* ‘mound’. The following Tungus forms are Mongolian loans: Evenki *kira* ‘side’; Nanay / Gold *kérá* ‘edge, border, riverbank’. Proto-Turkic **Kīr* ‘isolated mountain; mountain top, ridge; steppe, desert, level ground; edge’ > Karakhanide Turkic *qīr* ‘isolated mountain; rising ground’; Turkish *kır* ‘country (as opposed to town or city), uncultivated land, wilderness’; Gagauz *qīr* ‘steppe, desert, level ground’; Turkmenian *gīr* ‘steppe, desert, level ground’; Uzbek *qīr* ‘mountain top, ridge’; Uighur *qīr* ‘steppe, desert, level ground; edge’; Tatar *qīr* ‘steppe, desert, level ground; edge’; Bashkir *qīr* ‘steppe, desert, level ground; edge’; Kirghiz *qīr* ‘mountain top, ridge; steppe, desert, level ground’; Kazakh *qīr* ‘mountain top, ridge; edge’; Noghay *qīr* ‘steppe, desert, level ground’; Chuvash *ᠵir* ‘steppe, desert, level ground’; Yakut *kīrtas* ‘mountain top, ridge’, *kīrdal* ‘hill’. The Turkic forms have been contaminated by derivatives of Proto-Altaic **gīru* ‘shore, road’. Poppe 1960:114; Street 1974:17 **kīr* ‘mountain(side), edge’; Starostin—Dybo—Mudrak 2003:767—768 **k‘āre* ‘edge’. Starostin—Dybo—Mudrak also include Proto-Tungus **ᠵāri-* ‘border, hem’. However, the Tungus forms are separated from the Mongolian and Turkic forms in this book and are included instead under Proto-Nostratic (n.) **k^har-a* ‘edge, side, bank’.
- E. Proto-Chukchi-Kamchatkan **kəratkən* ‘top’: Chukchi *kəratkən* ‘top of tree, end of hair, source of river’, *kəṛə-kwən*, *kəcə-kwən* ‘head scarf’; Kerek *kīitn* ‘top’; Koryak *kəjatkən* ‘tip, top of tree, bud’, *kəjæckən* ‘end’;

Kamchadal / Itelmen *ktxiŋ* ‘(human) head’, *ktxelxen* ‘crown of head’. Fortescue 2005:152.

- F. Proto-Gilyak / Nivkh **krə* ‘cliff, promontory’: Amur *k^hrə* / *krə* ‘cliff, rocky promontory’; South Sakhalin *křə* ‘cliff, promontory’. Fortescue 2016:88.

(?) Sumerian *kur* ‘mountain’.

Buck 1949:1.22 mountain; hill; 4.17 horn; 4.20 head; 4.202 skull; 4.203 brain. Dolgopolsky 2008, no. 1157, **ḲirHV* (= **q[i]rʕV* ?) ‘top, summit, crown (of head)’.

456. Proto-Nostratic root **k^hir-* (~ **k^her-*):

(vb.) **k^hir-* ‘to freeze, to be cold’;

(n.) **k^hir-a* ‘frost, cold’

- A. Dravidian: Parji (reduplicated) *girgira* ‘cold’; Gadba *girgira* ‘cold’; Gondi *kiriŋ-*, *kiriŋg-*, *kiḍāŋg-* ‘to be cold’, *kiriŋ-* ‘to become cool’; Kuṛux *kīrnā* ‘to be cold, to feel cool’. Burrow—Emeneau 1984:144, no. 1568.
- B. Proto-Kartvelian **kirsl-* ‘to snow’: Georgian *kirsl-* ‘to snow in tiny flakes’; Svan (Upper Bal) *kəs-e* ‘snow raised by wind’. Fähnrich 2007:467 **kirsl-*.
- C. Proto-Indo-European **k^hr-ew-*/**k^hr-ow-*/**k^hr-u-* ‘(vb.) to freeze, to form a crust; (n.) crust; coating of ice, frost’: Greek κρύος (< *κρύσος or *κρύφος) ‘icy cold, chill, frost’, κρυερός ‘icy, chilling’, κρυμός ‘icy cold, frost’, κρύεις ‘chilling; icy cold’, κρύσταλλος ‘clear ice, ice’; Latin *crusta* ‘crust, rind, shell, bark of any substance; coating of ice’; Old Icelandic *hrjósa* ‘to shake, to shudder’, *hrúðr* ‘crust, scab on a sore’; Old English *hrūse* ‘earth, ground’; Old High German (*h*)*roso* ‘ice, crust’; Latvian *kruvesis*, *kruesis* ‘rough frozen dung in the road’; Tocharian A (acc. sg.) *krośām*, B *krośce* (adj.) ‘cold’. Pokorny 1959:622; Walde 1927—1932.I:479; Watkins 1985:33 **kreus-* and 2000:44 **kreus-* ‘to begin to freeze, to form a crust’; Gamkrelidze—Ivanov 1984.II:682 and 1995.I:589; Mallory—Adams 1997:117—118 **k^wrustēn* ‘(freezing) cold’; Boisacq 1950:522; Frisk 1970—1973.II:28—29 **gru-s-*, **gruy-es-*; Chantraine 1968—1980.I:588—589 **grus-*, **greus-*; Hofmann 1966:162; Beekes 2010.I:786 **kreus-*; Ernout—Meillet 1979:153; Walde—Hofmann 1965—1972.I:295—296 **gru-s-*, **greu-*; De Vaan 2008:147; Orël 2003:189 Proto-Germanic **xrusōn*, 190 **xrūpaz* ~ **xrūpōn*; Kroonen 2013:251 Proto-Germanic **hrusōn-* ‘crust’; De Vries 1977:258 and 261 **kreu-*; Adams 1999:218—219 **k^wrus-* and 2013:236; Van Windekens 1976—1982.I:236.
- D. Uralic: Proto-Finno-Ugrian **kerte* (**kirte*) ‘ice, hoarfrost’ > Finnish *kirsi/kirte-* ‘frost on the ground’, *kerte* ‘thin snow-crust’; Estonian *kirs* ‘ice layer, ice deep down in moist places’; Livonian *kiṛt* ‘thin ice, which does not bear’; (?) Cheremis / Mari *kərt* ‘ice-crust on the snow’; (?) Ostyak /

Xanty (Tremyugan) *kærtəh*, (Southern) *kærtəm* ‘thin crust (on the snow)’. Collinder 1955:89 and 1977:105; Rédei 1986—1988:150 **kerte* (**kirte*). Dolgopolsky (1998:23) also cites Ostyak / Xanty (Eastern) *kir*, (Northern) *ker* ‘snow-crust’.

- E. Proto-Altaic **kʰirma* (~ -u, -o) ‘snow, hoarfrost’: Proto-Tungus **χima-ŋsa* (< **χirma-*) ‘snow’ > Manchu *nimaŋgi* ‘snow’, *nimaŋgi labsan* ‘snowflake’, *nimaŋgi ilxa* ‘snowflake, snow crystal’, *nimara-* ‘to snow’; Evenki *imana* ‘snow’; Lamut / Even *im̐nr̐* ‘snow’; Negidal *imana* ‘snow’; Ulch *šimana*, *šimata* ‘snow’; Oroch *šimana*, *šimata* ‘snow’; Nanay / Gold *šimana*, *šimata* ‘snow’; Oroch *imasa* ‘snow’; Udihe *imaha* ‘snow’; Solon *imanda* ‘snow’. Proto-Mongolian **kirmag* ‘first snow, new-fallen snow’ > Written Mongolian *kirmay* ‘fine or fluffy snow; first snow, new-fallen snow’; Khalkha *χarmag* ‘first snow’; Buriat *χarmag*, *χirmag* ‘first snow’; Kalmyk *kirməg* ‘first snow’; Ordos *kirmag* ‘light snow that barely covers the ground’; Dagur *kiarəmsən* ‘first snow’. Written Mongolian *qirayu* ‘hoarfrost’ and similar forms in other Mongolian languages are Turkic loans. Proto-Turkic **Kīr-* ‘hoarfrost, thin snow’ > Old Turkic (Old Uighur) *qirayu* ‘hoarfrost’; Karakhanide Turkic *qirayu* ‘hoarfrost’; Turkish *kırağı* ‘hoarfrost’; Gagauz *qrā* ‘hoarfrost’; Azerbaijani *gīrow* ‘hoarfrost’; Turkmenian *gīraw* ‘hoarfrost’, *gīrpaq* ‘thin snow’; Uzbek *qiraw* ‘hoarfrost’; Uighur *qiya*, *qira*, *qiro* ‘hoarfrost’; Karaim *qīraw*, *qoruw* ‘hoarfrost’; Tatar *qīraw* ‘hoarfrost’, *qīrpaq* ‘thin snow’; Bashkir *qīraw* ‘hoarfrost’, *qīrpaq* ‘thin snow’; Kirghiz *qīrō* ‘hoarfrost’; Kazakh *qīraw* ‘hoarfrost’, *qīrpaq* ‘thin snow’; Noghay *qīraw* ‘hoarfrost’, *qīrpaq* ‘thin snow’; Oyrot (Mountain Altai) *quru* ‘hoarfrost’; Tuva *χīrā* ‘hoarfrost’; Chuvash *χərbəχ* ‘thin snow’; Yakut *kīrīa* ‘hoarfrost’, *kīrpaχ*, *kīrpay* ‘thin snow’; Dolgan *kīrīa* ‘hoarfrost’. Starostin—Dybo—Mudrak 2003:793 **kʰirma* (~ -u, -o) ‘snow, hoarfrost’.
- F. Proto-Eskimo **qiru* (or **qiqu*) ‘to freeze’ (the second form could be contaminated with **qikə-* ‘to crunch snow underfoot’): Alutiiq Alaskan Yupik *qəXcu-* ‘to get frostbitten’, *qəXcunəq* ‘frostbite’; Central Alaskan Yupik *qəXcua-* ‘to get frostbitten’; Sirenik *qirəR-* ‘to shiver, to freeze’; Seward Peninsula Inuit *qirit-* ‘to freeze’, (Imaq) *qəRəʔəq* ‘thin ice’; North Alaskan Inuit *qiqi-* ‘to be frozen’, *qiqit-* ‘to freeze’; Western Canadian Inuit *qiqi* ‘the cold’, *qiqit-* ‘to freeze’, (Caribou ?) *qiqi-* ‘to be frozen’; Eastern Canadian Inuit *qiqi-* ‘to be frozen’; Greenlandic Inuit *qiri-* ‘to be frozen stiff’, *qirit-* ‘to freeze’. Fortescue—Jacobson—Kaplan 1994:308. Proto-Inuit **qirəʔəq-* (or **qiqəʔəq-*) ‘to get frostbitten’ > Seward Peninsula Inuit *qiritiq-* ‘to get frostbitten’; North Alaskan Inuit *qiqitiq-* ‘to get frostbitten’; Eastern Canadian Inuit *qiqitiq-* ‘to have frostbitten feet, chilblains’. Fortescue—Jacobson—Kaplan 1994:308. Proto-Inuit **qirəʔrar-* (or **qiqəʔrar-*) ‘to form hard crust (snow)’ > Alutiiq Alaskan Inuit *XəʔXar-* ‘to get hard crust (snow)’; Central Alaskan Yupik *qəʔXar-* ‘to form hard ice crust’; Central Siberian Yupik *aXqəʔXaq* ‘frozen crust on

snow, frozen ground in spring'. Fortescue—Jacobson—Kaplan 1994:308. Proto-Eskimo **qiru-* 'to freeze to death': Central Alaskan Yupik *qəXu-* 'to freeze to death'; Central Siberian Yupik *Xuu-* 'to freeze (to death)'; Sirenik *qirə-* 'to freeze to death'; Seward Peninsula Inuit *qiu-* 'to freeze to death'; North Alaskan Inuit *qi<γ>u-* 'to freeze to death', *qiunγu-* 'to shiver from illness', *qiruviaq* 'refrozen slush'; Western Canadian Inuit *qiu-* 'to freeze to death'; Eastern Canadian Inuit *qiu-* 'to freeze to death'; Greenlandic Inuit *qiu-* 'to freeze to death', *qiunγuyuur-* 'to be freezing cold', *qirut-* 'to get frostbite, frost sores'. Fortescue—Jacobson—Kaplan 1994:309. Proto-Yupik **qirutə-* 'to feel cold' > Central Alaskan Yupik *qəXutə-* 'to feel cold'; Naukan Siberian Yupik *Xutə-* 'to shiver from cold, to freeze'; Central Siberian Yupik *Xuutə-* 'to feel cold'. Fortescue—Jacobson—Kaplan 1994:309. Proto-Eskimo **qiruya-* 'to feel cold': Alutiiq Alaskan Yupik (Kodiak) *quyaXtə-* 'to be cold (person)'; Central Alaskan Yupik *qəXuyanaXqə-* 'to be cold (weather)'; Naukan Siberian Yupik *Xuyanaq* 'chill'; North Alaskan Inuit *qiiya-* 'to feel cold', *qiiyanaq-* 'to be cold (weather)'; Eastern Canadian Inuit (Iglulik) *qiiya-* 'to feel cold'; Greenlandic Inuit *qiiə-* 'to freeze (of person)', *qiiānar-* 'to be cold (weather)'. Fortescue—Jacobson—Kaplan 1994:309.

Buck 1949:1.77 ice; 15.86 cold. Illič-Svityč 1971—1984.I:353—354, no. 230, **KirA* 'hoarfrost'; Dolgopolsky 1998:23—24, no. 10, **kir[u]qa* 'ice, hoarfrost; to freeze' and 2008, no. 1158, **kir[U]qa* 'ice, hoarfrost; to freeze'; Bomhard 1999a:54; Hakola 2000:70—71, no. 282.

457. Proto-Nostratic (n.) **k^hiw-a* 'stone':

- A. Proto-Kartvelian **kwa-* 'stone': Georgian *kva-* 'stone'; Mingrelian *kua-* 'stone'; Laz (*n*)*kva-*, *mkva-* 'stone'. Fähnrich—Sardshweladse 1995:375—376 **kwa-*; Fähnrich 2007:463 **kwa-*; Klimov 1964:197 **kwa-* and 1998:215—216 **kwa-* 'stone'.
- B. Proto-Uralic **kiwi* 'stone' > Finnish *kivi* 'stone'; Estonian *kivi* 'stone'; Mordvin (Erza) *kev* 'stone'; Cheremis / Mari *kü, küj* 'stone'; Votyak / Udmurt *kö, kō* 'millstone'; Zyrian / Komi *iz-ki* 'millstone'; Vogul / Mansi *küü, kăw* 'stone'; Ostyak / Xanty *köh/kög-*, (Obdorsk) *kew* 'stone'; Hungarian *kő/köve-* 'stone'. Rédei 1986—1988:163—164 **kiwe*; Collinder 1955:89 and 1977:106; Sammallahti 1988:543 **kiwi* 'stone'; Zhivlov 2023:169 Proto-Uralic **kiwi* 'stone'.

Illič-Svityč 1971—1984.I:298, no. 166, **kiwi* 'stone'; Bomhard—Kerns 1994:409—410, no. 349; Hakola 2000:72, no. 288; Dolgopolsky 1998:67, no. 83, **kiw[V]hE* 'stone' and 2008, no. 968, **kiw[V]h[ê]* 'stone'.

458. Proto-Nostratic root **kʰolʷ-*:

(vb.) **kʰolʷ-* ‘to tie, bind, fasten, fit, combine, or join two things together; to couple, to pair’;

(n.) **kʰolʷ-a* ‘any combination of two things: couple, pair’

- A. Afrasian: Proto-Semitic **kalʷ-*, **kilʷ-* ‘two, both’ > Ugaritic *klāt* ‘both’, *klāt ydh* ‘both his hands’; Hebrew *kilʿayim* [כִּלְעַיִם] ‘of two kinds, both, junction of two’; Akkadian *kilallān*, (f.) *kilattān* ‘both’; Arabic *kilā*, (f.) *kiltā* ‘both of’; Sabaeen *klʷ* ‘two, both’; Mehri *kālō(h)*, (f.) *kālāyt* ‘both’, (followed by dual personal suffix, thus) *kālōhi* ‘both of them’; Harsūsi *kelō*, (f.) *kelāyt* ‘both’; Šheri / Jibbāli *kólló(h)* ‘both of’; Geez / Ethiopic *kalləʿa* [ክለአ], *kalləʿa* [ክለዐ] (denominative) ‘to make two, to make another; to change, to alter’, *kəlʷe* [ክለኤ] ‘two, both, double, twofold’, (f.) *kəlʷettu* [ክለኤቲ] ‘two (with m. and f. nouns), both, double’, *kāləʿ* [ክለአ], (f.) *kāləʿt* [ክለአት] ‘other, another, anyone else, second, successor, companion, friend, neighbor’; Tigrinya *kəlatte* ‘two’; Tigre *kəlʷot* ‘two’; Harari *koʷot*, *kōt* ‘two, both; pair’; Gafat *əlattä* ‘two’; Argobba *ket* ‘two’; Amharic *hulätt* ‘two’, *hulätte* ‘twice’, *hulättum* ‘both’; Gurage (Gogot) *kʷett*, *hʷett*, (Soddo) *kitt*, (Ennemor, Muher) *xʷett*, (Chaha, Gyeto, Masqan) *xʷet*, (Wolane, Zway) *hoyt* ‘two’. Murtonen 1989:232; Leslau 1963:90, 1979:356, and 1987:282; Klein 1987:276; Zammit 2002:358.
- B. Proto-Dravidian **kol-/*konʷ-* (< **kol-nt-*) ‘to take, to seize, to receive, to hold; to hook, to clasp, to fasten, to buckle’: Tamil *kol* (*kolʷ-*, *konʷ-*) ‘to seize, to receive, to buy, to acquire, to marry, to abduct, to contain; to learn, to think, to regard, to esteem’, *kolʷkai* ‘accepting, taking; opinion, doctrine’, *kolʷvōṇ* ‘buyer, student’, *kolʷlunar* ‘buyers, learners’, *kolʷlai* ‘robbery, plunder’, *kolʷuttu* (*kolʷutti-*) ‘(vb.) to cause to hold, apply, explain, teach; (n.) clasp of a jewel, joint of the body’, *kolʷuvu* (*kolʷuvi-*) ‘to cause to hold, to clasp, to buckle up, to hook up’, *kolʷuvi*, *kolʷukki* ‘hook, clasp’, *kolʷai* ‘hold (as a string in a bow); determination’, *konʷal* ‘receiving, taking’, *konʷi* ‘getting possession of, theft, plunder; corner pin of a door on which it swings, clamp, cleat of a doorlock, the pin that holds the share to the plow’, *kōl* ‘taking, receiving, accepting, holding; opinion, tenet, decision’, *kōli* ‘receiver’; Malayalam *kolʷka* (*konʷ-*) ‘to hold, to contain, to receive, to acquire, to marry; aux. with reflexive meaning’, *kolʷlikka* ‘to make to hold or receive’, *kolʷuttuka* ‘to make to hold, to hook, to clasp, to fasten a rope to a load’, *kolʷuttu* ‘that which holds: hook, link, stitch’, *kolʷla*, *konʷi* ‘plunder’, *kōl* ‘holding, taking, purchase’; Kota *kolʷ-/konʷ-* (*koḍ-*) ‘to marry (wife), to buy (cattle), to begin (funeral)’, *kolʷ* ‘robbery, state of being robbed’, *kolʷ gaḷ* ‘thief’; Toda *kwiḷ-* (*kwiḷ-*) ‘to carry (corpse), to wear (bell); aux. with continuative-durative meaning’, *kwiḷ-* (only in negative) ‘not to want, not to heed’, *kwiḷy* ‘loot’ (in songs); Kannada *kolʷ*, *koḷu*, *koḷlu* (*konʷ-*) ‘to seize, to take away, to take, to accept, to obtain, to buy, to undertake; aux. with reflexive meaning’, *kolʷ*, *koḷuha*, *koḷluvike* ‘seizing, preying, taking’, *koḷi*

‘holding, seizure’, *kolisu*, *kolliisu* ‘to cause to seize, etc.’, *kolle* ‘pillage, plunder’, *kolike*, *kolike*, *kulike* ‘a clasp, hook’, *konđi* ‘hook projecting from a wall, semicircular link of a padlock’, *kōl* ‘seizure, pillage, plunder’; Kodagu *kolli-* (*kovv-*, *konđ-*) ‘to take’, *kolit-* (*koliti-*) ‘to fasten (rope on horn, loop on shoulder)’, *konđa-* (*konđap-*, *ko-nd-*) ‘to bring’; Tułu *konuni* (*konđ-*) ‘to take, to hold, to keep; aux. with reflexive meaning’, *kolikè* ‘a clasp, hook and eye’, *kolavè*, *kolāyi*, *koltaḷè*, *koltulè* ‘a clasp’, *konđi* ‘hook, staple that holds the latch of a door, clasp of a bracelet’; Telugu *konu* (*kōnt-*) ‘to buy, to take, to hold, to take up, to rob, to care for (advice); to consider, to suppose; aux. with reflexive meaning’, (inscr.) *kon* ‘to take’, *konđi* ‘a hook, catch’, *koliki*, *kolki* ‘hook or clasp of a necklace’, *kolla* ‘plunder, pillage’, *kollari* ‘bandit, plunderer’, *kolupu* ‘to cause to do, to prompt, to set on; to be agreeable, (ideas) suggest themselves, to be inclined’, *koluvu* ‘an assembly; service, employment’; Kolami *kor-/ko-* (*kott-*) ‘to bring’, *kos-* (*kost-*) ‘to carry away, to take’, *kosi-* (*kosit-*) ‘to take and give (to someone)’; Naikri *koy-* (*kor-*) ‘to bring’, *kos-* ‘to take’; Naiki (of Chanda) *kor-/ko-* (*kott-*) ‘to bring’; Parji *konṭub* ‘a hook’; Konđa *kor-* (*kon-*, *koṭ-*) ‘to purchase’, (dial.) *kol-* (*koṭ-*) ‘to take’; Pengo *kor-* ‘to buy’; Maṇḍa *krag-* (*krakt-*) ‘to buy’; Kui *koḍa-* (*koḍi-*) ‘(vb.) to buy, to take away, to take off, to pull off, to pull up, to pluck; (n.) buying, taking, plucking’; Kuwi *kōdali*, *koḍḍinai* ‘to take, to buy’, *koḍ-* ‘to buy, to bring; reflexive auxiliary. Burrow—Emeneau 1984:194, no. 2151; Krishnamurti 2003:9 and 95 **kol-/konṭ-* (< **kol-nt-*) ‘to receive, to seize, to buy’. Semantic development as in Gothic *fāhan* ‘to capture, to seize’ < Proto-Indo-European **ph^hǵh^h-* ‘to join, to fit, to fasten’ (cf. Pokorny 1959:787—788 **pǵh^h-* and **pǵg^h-*).

- C. Proto-Altaic **k^hōlvba* ‘(vb.) to tie, bind, or join together; to couple, to combine; (n.) couple, pair’: Proto-Tungus **χulbū-* ‘to bind, to arrange’ > Evenki *ulbu-* ‘to bind, to arrange’; Lamut / Even *ulb^h-* ‘to bind, to arrange’; Negidal *ulbul-* ‘to move in tandem’; Oroch *ulbumži* ‘in tandem’; Nanay / Gold *χuelbi-* ‘to bind together, to wrap’; Oroch *ubbuna-* ‘to bind, to arrange’. Proto-Mongolian **kolbu-* ‘to tie, bind, or join together; to couple, to combine, to unite; to connect, to link to; to incorporate’ > Middle Mongolian *qulba-* ‘to couple, to bind together’; Written Mongolian *qolbu-* ‘to unite, to combine, to connect, to incorporate; to link to, to join in marriage’, *qolbuṣa(n)* ‘tie, link, combination, contact, connection; union, junction; federation, association; alliterative words or phrases; double, pair’, *qolbuṣda-* ‘to be united, connected, tied; to have relation to; to depend on; to be mixed up in another’s affairs; to be involved in an affair’, *qolbuṣdal* ‘connection, relation’; Khalka *χolbo-* ‘to join, to tie, to bind; to unite, to connect, to link to; to combine; to incorporate; to alliterate’; Buriat *χolbo-* ‘to couple, to bind together’; Kalmyk *χolwə-* ‘to couple, to bind together’; Dagur *χolbo-*, *χolbu-*; *holebe-* ‘to couple, to bind together’; Ordos *χolbo-* ‘to couple, to bind together’; Shira-Yughur *χolbo-* ‘to couple,

to bind together'; Monguor *χulō-* 'to couple, to bind together'. Proto-Turkic **Kolʷ-* '(vb.) to join, to unite; (n.) couple, pair, one of a couple' > Old Turkic (Old Uighur) *qoš-* 'to join, to unite'; Karakhanide Turkic *qoš* 'couple, pair, one of a couple', *qoš-* 'to join, to unite'; Turkish *koş-* 'to harness', *koş* 'pair of horses', *koşum* 'act of harnessing, harness'; Gagauz *qoš-* 'to join, to unite'; Azerbaijani *goş-* 'to join, to unite'; Turkmenian *goş* 'a pair of oxen or horses for plowing', *goşa* 'pair, two; double'; Uzbek *qoš* 'couple, pair, twin', *qoš-* 'to join, to unite'; Uighur *qoš* 'couple, pair, one of a couple', *qoš-* 'to join, to unite'; Karaim *qoš* 'pair', *qoš-* 'to join, to unite'; Tatar *quş* 'couple, pair, one of a couple', *quş-* 'to join, to unite'; Bashkir *qıwış* 'double', *quş-* 'to join, to unite'; Kazakh *qos* 'couple, pair, one of a couple', *qos-* 'to join, to unite'; Noghay *qos* 'pair', *qos-* 'to join, to unite'; Sary-Uighur *qos* 'couple, pair, one of a couple'; Oyrot (Mountain Altai) *qoš-* 'to join, to unite'; Tuva *qoš-* 'to join, to unite'; Chuvash *χoš-* 'to join, to unite'; Yakut *χos* 'double, again', *χohuy-* 'to join, to unite'; Dolgan *kohān* 'poem'. Poppe 1960:138; Street 1974:17 **kolʷi-* 'to add, to mix (in)'; Starostin—Dybo—Mudrak 2003:836 **k'ölba* '(n.) couple; (vb.) to couple, to combine'.

Buck 1949:9.16 bind (vb. tr.); 12.22 join, unite. Dolgopolsky 2008, no. 879, **kolʷ* 'pair, one of a pair'.

459. Proto-Nostratic roots **kʰon-k'-*, **kʰok'-*:

(vb.) **kʰon-V-k'-*, **kʰok'-* 'to be bent, curved, crooked';

(n.) **kʰon-k'-a*, **kʰok'-a* 'hook, clasp'; (adj.) 'bent, curved, crooked'

A. Dravidian: Tamil *kokki* 'hook, clasp (as of a necklace or earring)'; Malayalam *kokka* 'clasp, hook, crook (as for plucking fruits), neck-clasp'; Kannada *kokki*, *kokke* 'crookedness, perverseness, a crook, bend, hook', *koṅki* 'a hook, fish-hook, angle', *koṅku* 'to be bent; to get crooked, curved, distorted, deformed, or curled; to become perverse, untrue'; Koḍagu *kokke* 'crook, hook, anything bent', *kokk-* (*kokki-*) 'to be bent'; Telugu *kokki*, *koṅki* 'a hook'; Kuwi *koṅkaṭā* 'crooked, bent'; Tuḷu *kokkè* 'a hook, clasp', *koṅkè*, *kuṅkè* 'a hook, crookedness'; Malto *qonqe* 'to indent, to notch, to bend the knees slightly in dancing'. Burrow—Emeneau 1984:184, no. 2032.

B. Proto-Indo-European **kʰonk'-* (secondary *e*-grade form: **kʰenk'-*) 'hook': Farsi *čang* 'claw, fist'; Middle Irish *ail-cheng* 'rack for hanging up arms'; Old Icelandic *hanki* 'hasp or clasp', *hönk* (gen. *hankar*, pl. *henkr*) 'hank, coil, loop, ring', *sterkar henkr* 'strong clasps'; Old High German *hank* 'handle'; Lithuanian *kėngė* 'hook, clasp, latch'. Pokorny 1959:537—538 **keg-*, **keng-* 'to dangle'; Walde 1927—1932.I:382—383 **keg-*, **keng-*; Mann 1984—1987:488 **keng-* 'to seize, to grip, to hold; hold, hook, grapple, hobble'; Mallory—Adams 1997:272 **ko(n)gos* 'hook'; De Vries

1977:208—209 and 281; Orël 2003:161 Proto-Germanic **xankō*; Fraenkel 1962—1965.I:239.

- C. Proto-Altaic **k^hōki* ‘hinge, hook’: Proto-Tungus **kūhta* ‘rowlock’ > Evenki *kūhta* ‘rowlock’; Lamut / Even *kukte* ‘rowlock’. Proto-Mongolian **kōgene* ‘a string with a loop for binding animals’ > Written Mongolian *kōgene*, *kōgüne* ‘rope with ends attached to a stake driven in the ground to which lambs and kids are tied’; Khalkha *χōgnō* ‘rope for tying lambs or kids’; Ordos *kōgönō* ‘a string with a loop for binding animals’. Proto-Turkic **kök*, **kōken* ‘hinge, nail, peg, clasp; tether’ > Karakhanide Turkic *kök* ‘belt for fixing the saddle’, *kōgen* ‘rope for tethering calves, foals during milking’; Turkish *kök* ‘tuning-key of a stringed instrument’, (dial.) *kōken* ‘tether’; Turkmenian *kōken* ‘tether’; Middle Turkic *kök* ‘nail’; Uzbek *kukan* ‘tether’; Tatar *kügen* ‘hinge, nail, peg, clasp’; Bashkir *kügen* ‘hinge, nail, peg, clasp’; Kirghiz *kōgön* ‘tether’; Kazakh *kōgen* ‘tether’; Chuvash *kə^wgan* ‘loop’, (*alək*) *kəkə* ‘prop of a door hinge’; Yakut *kōgön* ‘tether’. Starostin—Dybo—Mudrak 2003:833—834 **k^hōki* ‘hinge, hook’.

Buck 1949:12.75 hook. Bomhard—Kerns 1994:418—419, no. 261.

460. Proto-Nostratic root **k^hul-* (~ **k^hol-*):

(vb.) **k^hul-* ‘to hear, to listen’;

(n.) **k^hul-a* ‘renown, fame; ear’

Possible derivative:

(vb.) **k^hul-* ‘to tell’;

(n.) **k^hul-a* ‘story, tale’

- A. Proto-Afrasian **kul-* ‘to hear’: Chadic: Sura *kəliɣ* ‘to hear’; Tal *k^wāl* ‘to hear’; Yiwon *kāl* ‘to hear’; Geruma *kùlāa* ‘to hear’; Kirfi *kwālú-wò* ‘to hear’; Bata *klɔ* ‘to hear’; Bachama *kúlò* ‘to hear’. Jungraithmayr—Ibriszimow 1994.II:184—185.
- B. (?) Dravidian: Tamil *kēl* (*kētp-*, *kētt-*) ‘to hear, to listen, to learn, to ask, to inquire, to question, to investigate, to require, to request, to be informed of, to obey, to be heard’, *kēlvi*, *kētpu* ‘hearing, question, learning, sound, word, rumor, ear’; Malayalam *kēlkkā* ‘to hear, to perceive, to listen, to obey, to ask’, *kēlvi*, *kēli* ‘hearing, obeying, report’; Kota *ke-l-* (*ke-t-*) ‘to hear, (noise) is heard’; Kannaḍa *kēl* (*kēld-*), *kēlu* (*kēli-*) ‘to hear, to listen to, to heed, to ask, to beg, to demand’, *kēlike*, *kēluvike*, *kēlvike*, *kēluha* ‘hearing, hearsay, asking’; Koḍagu *kē-l-* (*kēp-*, *ke-t-*) ‘to hear, to ask’, *kē-li* ‘fame, renown (in songs)’; Tuḷu *kēṇuni* ‘to hear, to be attentive to, to obey, to ask, to inquire, to request’. Burrow—Emeneau 1984:182, no. 2017; Krishnamurti 2003:15 and 95 **kēl-* ‘to ask, to hear’.
- C. Proto-Indo-European **k^hl-ew-*/**k^hl-ow-*/**k^hl-u-* ‘to hear’, **k^hl-ew-os* ‘fame, glory, renown’: Sanskrit *śṛṇóti* (< **k^hl-new-*) ‘to hear’, *śrutá-h* ‘heard’, *śrávas-* ‘praise, fame, glory’; Avestan *surunaoiti* ‘to hear’; Armenian *lsem*

‘to hear, to listen’, *lu* ‘heard, news, fame’; Greek κλύω ‘to hear’, κλέω ‘to make famous, to celebrate’, κλέος (< *κλέφος) ‘report, fame, glory’, κλυτός ‘heard’; Latin *cluō*, *clueō* ‘to be called, to be famous’; Old Irish *clú* ‘fame, renown’, *clúas*, ‘ear’, *cloth* ‘fame’; Gothic *hliuma* ‘hearing’, **hliup* ‘silence’ (only in dat. sg. *in hliupa* ‘in silence’); Old Icelandic *hljóð* ‘silence, hearing; sound’, *hljóða* ‘to sound’, *hljóðan* ‘sound, tune’, *hljóðr* ‘silent’, *hlómr* ‘sound, tune’, *hlust* ‘ear’, *hlusta* ‘to listen’, *hler*, *hlør* ‘listening’, *hlyða* ‘to listen’; Old English *hlūd* ‘loud, noisy’, *hlēoðor* ‘noise, sound’, *hlosnian* ‘to listen for; to listen in suspense, to be astonished’, *hlystan* ‘to hear, to listen’, *hlyst* ‘sense of hearing; listening, attention’, *hlysnan* ‘to listen’, *hlysnere* ‘hearer’; Old Frisian *hlūd* ‘loud’; Old Saxon *hlust* ‘hearing’, *hlūd* ‘loud’; Dutch *luisteren* ‘to listen’, *luid* ‘loud’; Old High German *hlosēn* ‘to listen’ (New High German [dial.] *losen* ‘to listen, to overhear, to eavesdrop’, [standard] *lauschen*), *hlūt* ‘loud’ (New High German *laut*), *hliumunt* ‘fame, reputation’ (New High German *Leumund*); Lithuanian *klausai*, *klausyti* ‘to listen’; Latvian *klāusīt* ‘to listen’; Old Prussian *klausiton* ‘to hear’; Old Church Slavonic *slovъ*, *shuti* ‘to be renowned’, *slovo* ‘word’; Russian *slúshat’* [слушать] ‘to listen’, *slóvo* [слово] ‘word’; Slovenian *slúšati* ‘to listen’; Tocharian A *klyos-*, B *klyaus-* ‘to listen, to hear’, A *klyw-*, B *kälywe* ‘reputation, renown’, A *klots*, B *klautso* ‘ear’, A *klāw-*, B *klāw-* ‘to be called, to be named’, B *klāwi* ‘fame’. Rix 1998a:297—298 **kley-* ‘to hear’; Walde 1927—1932.I:494—495 **kleu-*; Pokorny 1959:605—607 **kleu-*, **kleya-* : **klu-* (root **kel-*) ‘to hear’; Mann 1984—1987:624 **kleumn-*, **kleumnt-* ‘hearing, report, reputation’, 624 **kleus-* ‘to hear’, 624 **kleutos* (**kleutro-*) ‘heard, famous’ (variants **klēyatos*, **klutos*), 625 **klēyō*, -*īō* ‘noise abroad; to be heard, to be known’, 625 **kleyos*, -*es* ‘noise, sound, word, rumor, fame’, 627—628 **klousos*, -*ios* ‘hearing; obedient; obedience’, 628 **klout-* (**kleut-*) ‘hearing’, 628 **klōyā*, -*ios*, -*īā* ‘fame, rumor, glory’, 628—629 **klus-* (**klusō*, -*īō*, -*ēīō*; **klūsō*; **klusn-*) ‘to hear, to be heard’, 629 **klūsos*, -*us* ‘hearing; report, rumor’, 629 **klustis* ‘hearing; listening, ear’, 629 **klūtos* ‘heard, famous; report, rumor, noise’; Watkins 1985:31 **kleu-* and 2000:42 **kleu-* ‘to hear’; Gamkrelidze—Ivanov 1984.II:834 **k[h]leyo-* and 1995.I:33 **K^hleu-* ‘to hear’, I:96 **k^hleu-s-*/**k^hleu-s-* ‘to listen’, I:732—733 **k^hlewo-* ‘glory’; Mallory—Adams 1997:192 **kléyes-* ‘fame’, 262 **k^hleu-* ‘to hear’, **k^hleus-* ‘to hear’; Boisacq 1950:467 **kleyos*, **kleyes-* and 468—469 **k^hleu-*; Frisk 1970—1973.I:869—870 and I:877—878; Hofmann 1966:147 **kleyos* and 147—148 **k^hleu-*; Chantraine 1968—1980.I:541; Beekes 2010.I:719 **k^hleu-*; Walde—Hofmann 1965—1972.I:237—239 **k^hleu-*; Ernout—Meillet 1979:129 **k^hleu-*; De Vaan 2008:122—123; Orël 2003:176 Proto-Germanic **xleumōn* ~ **xleumaz*, 176 **xleumundaz*, 176 **xleupan*, 176 **xleupran*, 176 **xlewaz*, 176 **xlewedaz*, 178 **xludaz*, 178 **xlūdjanan*; Kroonen 2013:230 **hleupa-* ‘listening’ and 231—232 **hlūda-* ‘loud’; Feist 1939:264 **kley-*; Lehmann 1986:188

- **k̂lew*- ‘to hear’; De Vries 1977:238 **k̂leu*-, **k̂leu*- and 241; Klein 1971:425 **k̂leu*-, **k̂leu-s*- and 430 **kl̂u-to-s*; Onions 1966:531 **klus*-, **klu*- and 538 **k̂leu*-, **klu*-; Kluge—Mitzka 1967:427, 427—428 **k̂leu*-, 438, and 447; Kluge—Seebold 1989:431 **k̂leu*-, 440 **k̂lewos*, and 448 **k̂leu*-; Mayrhofer 1956—1980.III:372—374 and III:389—390; Van Windekens 1976—1982.I:221—222, I:223, and I:224; Adams 1999:222, 230, and 232—233; Fraenkel 1962—1965.I:265—266; Smoczyński 2007.1:293—294; Derksen 2008:453 **kl̂eu*-, 454 **k̂leu-os*-, 454—455, 455 **kl̂ous-o*-, and 2015:249 **kl̂ous*-; Wodtko—Irslinger—Schneider 2008: 425—432 **k̂leu*- and 432—434 **k̂leus*-.
- D. (?) Proto-Uralic **kuli*- (or **kuw|li*-) ‘to hear’ > Finnish *kuule*- ‘to hear’; Lapp / Saami *gullâ-/gulâ*- ‘to hear’; Mordvin *kule*- ‘to hear’; Cheremis / Mari *kola*- ‘to hear’; Votyak / Udmurt *kyl*- ‘to hear’; Zyrian / Komi *kyl*- ‘to hear’; Vogul / Mansi *hool*- ‘to hear’; Ostyak / Xanty *kol*- ‘to hear’. Collinder 1955:93 and 1977:109; Rédei 1986—1988:197—198 **kule*-; Décsy 1990:101 Proto-Uralic **kula* ‘to hear’; Sammallahti 1988:544 **kuuli*- ‘to hear’; Zhivlov 2023:164—165 Proto-Uralic **kuw|li*- ‘to hear’, Proto-Finnic **k̂l̂e*-. Note: Zhivlov considers this verb to be a derivative of an unattested root **kuwi*-.
- E. Proto-Altaic **k̂h̄ȳlu*- (~ -o-) ‘(vb.) to hear; (n.) ear’: Proto-Tungus **χ̄ül*- ‘to sound, to resound’ > Evenki *ül-ta*- ‘to sound, to resound’; Lamut / Even *ül-d̄*- ‘to sound, to resound’; Negidal *ol-bun*- ‘to sound, to resound’; Ulch *χol-d̄i*- ‘to sound, to resound’; Orok *χul-bun*- ‘to sound, to resound’; Nanay / Gold *χ̄öl-ž̄i*- ‘to sound, to resound’. Proto-Mongolian **kulki* ‘earwax; middle ear’ > Written Mongolian *qulki* ‘earwax; middle ear’; Ordos *χulugu(n)* ‘earwax’; Khalkha *χul̄xi*, *χul̄ga* ‘earwax; middle ear’; Buriat *χul̄xa*, *χul̄xi* ‘earwax’; Kalmyk *χul̄χə*, *χul̄χə* ‘earwax’; Dagur *χol̄gi* ‘earwax; middle ear’; Monguor *χongo* ‘earwax; middle ear’. Poppe 1955:156. Proto-Turkic **Kul-kak* ‘ear’ > Old Turkic (Old Uighur) *qulqaq* ‘ear’; Turkish *kulak* ‘ear’; Gagauz *qulaq* ‘ear’; Azerbaijani *gulağ* ‘ear’; Turkmenian *gulaq* ‘ear’; Uzbek *quləq* ‘ear’; Uighur *qulaq* ‘ear’; Karaim *qulaχ* ‘ear’; Tatar *qolaq* ‘ear’; Bashkir *qolaq* ‘ear’; Kirghiz *qulaq* ‘ear’; Kazakh *qulaq* ‘ear’; Tuva *qulaq* ‘ear’; Noghay *qulaq* ‘ear’; Chuvash *χ̄w̄lȳa* ‘ear’; Yakut *kulgāk* ‘ear’; Oyrot (Mountain Altai) *qulaq* ‘ear’. Poppe 1960:18, 75, and 86; Street 1974:19 **kulk*- ‘ear, earwax’; Starostin—Dybo—Mudrak 2003:847 **k̂ūjlu* (~ -o-) ‘ear; to hear’.
- F. (?) Chukchi-Kamchatkan: Proto-Chukotian **kakvel* ‘ear wax’ > Chukchi *kakwel* ‘ear wax, external ear’; Koryak *kakvel* ‘ear wax’. Fortescue 2005:126.

Buck 1949:4.22 ear; 15.41 hear; 18.26 word. Caldwell 1913:593 and 618; Koskinen 1980:17, no. 41; Bomhard—Kerns 1994:417—418, no. 260; Hakola 2000:86—87, no. 359; Fortescue 1998:154.

461. Proto-Nostratic root **k^hul-* (~ **k^hol-*):

- (vb.) **k^hul-* ‘to tell’;
 (n.) **k^hul-a* ‘story, tale’
 Perhaps a derivative of:
 (vb.) **k^hul-* ‘to hear, to listen’;
 (n.) **k^hul-a* ‘renown, fame; ear’

Assuming semantic development as in Greek κλέω ‘to tell of, to make famous, to celebrate’; or Pāli (causative) *sāvēti* (also *suṇāpēti*) ‘to cause to hear, to tell, to declare, to announce’ (*suṇāti* ‘to hear’); or Romany (Palestinian) *snaúār* ‘to inform’ — all ultimately from Proto-Indo-European **k^hl-ew-/k^hl-ow-/k^hl-u-* ‘to hear’.

- A. Afrasian: Proto-Highland East Cushitic **kul-* ‘to tell’ > Gedeo / Darasa *kul-* ‘to tell’; Hadiyya *kur-* ‘to tell’; Kambata *kul-* ‘to tell’; Sidamo *kul-* ‘to tell’. Hudson 1989:149—150.
 B. Proto-Eskimo **qulirar-* ‘to tell about’: Alutiiq Alaskan Yupik *qulirar-* ‘to tell about’; Central Alaskan Yupik *quliraaq* ‘story, legend’; Naukan Siberian Yupik *quliramsuk* ‘story, account’; Seward Peninsula Inuit *quliaq-* ‘to tell about’; North Alaskan Inuit *quliaq-* ‘to tell about’, *quliaqtuaq* ‘story, life experience’; Western Canadian Inuit *quliaq-* ‘story, especially a true one’. Fortescue—Jacobson—Kaplan 1994:315.

Buck 1949:18.21 speak, talk; 18.22 say.

462. Proto-Nostratic root **k^hum-*:

- (vb.) **k^hum-* ‘to heap up, to pile up, to accumulate’;
 (n.) **k^hum-a* ‘large amount, accumulation, heap; crowd, multitude’

- A. Proto-Afrasian **kum-* ‘to heap up, to pile up, to accumulate’: Proto-Semitic **kam-ar-* ‘to heap up, to pile up, to accumulate’ > Akkadian *kamāru* ‘to pile up’; Ugaritic *kmr* ‘pile’; Geez / Ethiopic *kamara* [ḥṾṾṾ] ‘to heap, to accumulate’; Tigrinya *k^wämmärä* ‘to pile up’; Tigre *kämmära* ‘to pile up’; Amharic *kämmärä* ‘to pile up, to accumulate’; Gafat *kimmärä* ‘to pile up, to accumulate’; Argobba *kemmära* ‘to pile up, to accumulate’; Gurage *kämärä* ‘to pile up, to heap up’. Leslau 1979:343 and 1987:286. Egyptian *km* ‘to total up, to amount to, to complete’, *kmt* ‘completion, final account’, *kmyt* ‘conclusion’. Hannig 1995:883; Gardiner 1957:597; Faulkner 1962:286; Erman—Grapow 1921:195 and 1926—1963.5:128—130. Proto-East Cushitic **kum-* ‘thousand’ > Burji *kúm-a* ‘thousand’; Somali *kun* (pl. *kum-an*) ‘thousand’; Sidamo *kum-e* ‘thousand’; Gedeo / Darasa *kum-a* ‘thousand’; Galla / Oromo *kum-a* ‘thousand’; Konso *kum-a* ‘thousand’; Hadiyya *kum-a* ‘thousand’; Kambata *kumi-ta* ‘thousand’. Sasse 1979:12, 25 and 1982:120; Hudson 1989:153—154. Proto-Southern Cushitic **kum-*

‘to expand, to spread’ > Iraqw *kumit-* ‘to continue, to progress’; Dahalo *kum-* ‘to puff out the cheeks (as with water)’. Ehret 1980:246. Proto-Southern Cushitic **kuma* ‘thousand’ > Iraqw *kuma* ‘thousand’. Ehret 1980:246. Proto-Southern Cushitic **kumura-* ‘many’ > K’wadza *kolombayo* (< **kombolayo*) ‘hundred’; Ma’a *-kumúre* ‘many’. Ehret 1980:246. (Ehret suggests that **kum-* ‘to expand, to spread’, may ultimately be the source of **kuma* ‘thousand’ and **kumura* ‘many’ — “but if so this derivation lies far back in Cushitic history”.) North Omotic **kum-* ‘to increase in volume’ > Ometo *kum-* ‘to fill’; Koyra *kum-* ‘to fill’. Ehret 1995:198, no. 322, **kum-* ‘to add together’.

- B. Dravidian: Tamil *kumi* (-v-, -nt-) ‘to be heaped up, to accumulate, to crowd’, *kumi* (-pp-, -tt-) ‘to heap up, to accumulate, to gather’, *kumiyal* ‘pile’, *kumpu* ‘crowd, collection, group’, *kumpal* ‘crowd, collection, group, heap, clump, cluster’, *kumpam*, *kumpi* ‘heap’; Kannaḍa *gumi*, *gummi*, *gummu*, *gumme*, *gumpu* ‘heap, crowd, multitude’; Tuḷu (reduplicated) *gumugumu* ‘noise of a multitude’, *gumpu* ‘flock, crowd, multitude, heap’; Telugu *gumi* ‘crowd, multitude’, *gumpu* ‘crowd, multitude, group’; Malayalam *kumi* ‘heap (as of rice), stack, pile’, *kumiyuka* ‘to be heaped together’, *kumikka*, *kumekka* ‘to heap up’, *kūmpal* ‘a heap’, *kūmpikka* ‘to heap’; Kolami *gum* ‘assembly’; Parji *kum-* ‘to heap on to’; Kuwi *kumbra* ‘clump of trees’, *gumomi*, *gombu* ‘heap’; Koṇḍa *kumba* ‘a small heap conical in shape’, *kuma* ‘a heap’. Burrow—Emeneau 1984:158—159, no. 1741.

Buck 1949:13.15 much; many; 13.19 multitude, crowd. Bomhard—Kerns 1994:413—414, no. 255.

463. Proto-Nostratic (n.) **k^hum-a* ‘man, male; penis’:

- A. Afrasian: Semitic: Arabic *kumurr* ‘having a large penis’, *kumurra-t*, *kamara-t* ‘penis’.
- B. Dravidian: Malayalam *kumpi* ‘penis’; Tuḷu *kumbi* ‘penis’. Burrow—Emeneau 1984:159, no. 1749.
- C. Proto-Kartvelian **kmar-* ‘husband’: Georgian *kmar-* ‘husband’; Laz *komož-*, *komonž-*, *kimož-* ‘husband’; Mingrelian *komonž-*, *komož-* (< **kmož-* < **kmor-*) ‘husband’. Klimov 1964:198 **kmar-* and 1998:218 **kmar-* ‘husband’; Fähnrich—Sardshweladse 1995:379 **kmar-*; Fähnrich 1994:221 and 2007:468—469 **kmar-*.

Buck 1949:2.1 man (human being); 2.21 man (vs. woman); 2.31 husband; 4.492 penis. Different etymology in Dolgopolsky 2008, no. 888, **kūmā* (or **kūHmā*) ‘man, person’.

464. Proto-Nostratic root **k^hum-* (~ **k^hom-*):(vb.) **k^hum-* ‘to char, to blacken; to burn, to smolder; to be or become hot’;(n.) **k^hum-a* ‘(hot or smoldering) ashes, embers, charcoal; heat, warmth’;

(adj.) ‘warm, hot; glowing, smoldering; black’

- A. Proto-Afrasian **kum-* ‘to be black’: Egyptian *km*, *kmm* ‘to be or become black’, *km* ‘black’, *kmmt*, *kmimūt* ‘darkness’, *Kmt* ‘the Black Land, Egypt’; Coptic *kmom* [ⲕⲙⲟⲙ] ‘to become black’, *kame* [ⲕⲁⲙⲉ] ‘black’, *kime* [ⲕⲙⲙⲉ] ‘the Black Land, Egypt’, *kmime* [ⲕⲙⲙⲙⲉ] ‘darkness’. Hannig 1995:882—883; Faulkner 1962:286; Erman—Grapow 1921:196 and 1926—1963.5:122—124, 5:126—127, 5:128, 5:130; Gardiner 1957:597; Černý 1976:58; Vycichl 1983:81. East Cushitic: Werizoid: Gawwada *kumma* ‘black’. Orël—Stolbova 1995:326, no. 1496, **kum-* ‘to be black’.
- B. Dravidian: Tamil *kumpu* (*kumpi-*) ‘to become charred (as food when boiled with insufficient water)’, *kumpal* ‘smell of charred rice’, *kumpi* ‘hot ashes’, *kumai* ‘to be hot, sultry’; Malayalam *kumpal* ‘inward heat’, *kummu* expression descriptive of heat, *kummal* ‘sultriness, mistiness’, *kumuruḱa*, *kumiruka* ‘to be hot, close’, *kumural* ‘oppressive heat’; Kannada *kome* ‘to begin to burn (as fire or anger)’; Tuḷu *gumulu* ‘fire burning in embers’, *gumuluni* ‘to be hot, to feel hot (as in a fit of fever)’; Telugu *kummu* ‘smoldering ashes’, *kumulu* ‘to smolder, to burn slowly underneath without flame; to be consumed inwardly, to grieve, to pine’; Gondi *kum* ‘smoke’, *kumpōḍ* ‘smoke’. Burrow—Emeneau 1984:159—160, no. 1752. Dravidian loan in Prakrit *kumulī-* ‘fireplace’.
- C. Uralic: Proto-Finno-Volgaic **kūma* ‘(adj.) hot, glowing; (n.) fever’ > Finnish *kuuma* ‘hot’, *kuume* ‘fever, temperature’, *kuumoitta-* ‘to make hot or warm’, *kuumuus* ‘heat, warmth’; Estonian *kuum* ‘(adj.) hot; (n.) heat’, *kuumus* ‘heat’, *kuuma-* ‘to be hot, to radiate heat, to glow with heat’, *kuumuta-* ‘to heat, to make hot, to subject to the action of heat’, *kuumene-* ‘to become heated, to become hotter’; Mordvin (Erza) *kumoka* ‘fever’, (Erza) *kumuḱa* ‘sick with fever’. Note: Lapp / Saami (Norwegian) *gumes-/gubmas-* ‘redhot (of hot iron), roasting hot (of the heat of the sun)’, *gumbo-* ‘to become roasting hot (weather)’ are loans from Finnish. Rédei 1986—1988:675—676 **kūma* ‘(adj.) hot, glowing; (n.) fever’.
- D. Proto-Altaic **k^hume* (~ *-ju-*) ‘black; charcoal’: Proto-Turkic **kōmür* ‘charcoal’ > Old Turkic (Old Uighur) *kōmür* ‘charcoal’; Karakhanide Turkic *kōmür* ‘charcoal’; Turkish *kōmür* ‘charcoal’; Gagauz *kōmür* ‘charcoal’; Azerbaijani *kōmür* ‘charcoal’; Turkmenian *kōmür* ‘charcoal’; Uzbek *kūmir* ‘charcoal’; Tatar *kūmer* ‘charcoal’; Bashkir *kūmer* ‘charcoal’; Uighur *kōmü(r)* ‘charcoal’; Kirghiz *kōmür* ‘charcoal’; Kazakh *kōmār* ‘charcoal’; Noghay *kōmār* ‘charcoal’; Oyrot (Mountain Altai) *kōmür* ‘charcoal’; Tuva *χōmür* ‘charcoal’; Chuvash *кӹмӹрӹк* ‘charcoal’; Yakut *kōmör* ‘charcoal’; Dolgan *kōmör* ‘charcoal’. Perhaps also Manchu *χūmara-*

‘to have a dirty face, to be soiled’. Starostin—Dybo—Mudrak 2005:852
 *k^hume (~-ju-) ‘black; coal’.

Sumerian *kúm(-ma)* ‘hot’, *kúm* ‘(vb.) to heat; (adj.) hot, boiling hot; (n.) heat; fever’.

Buck 1949:1.83 smoke (sb.); 1.84 ashes; 1.85 burn (vb.); 16.65 black; 15.85 hot, warm. Dolgopolsky 2008, no. 1966a, **ḲUmV* ‘black, dark’.

465. Proto-Nostratic (n.) *k^hur-a ‘blood’:

- A. (?) Afrasian: Egyptian *tr* ‘blood; red color (designation for blood)’. Erman—Grapow 1926—1963.5:386; Hannig 1995:959.
- B. Dravidian: Tamil *kuruti* ‘blood, red color’; Malayalam *kuruti* ‘blood’; Kannaḍa *kurudi* ‘colored red water’; Tuḷu *kurdi*, *kurudi* ‘red liquid prepared by mixing turmeric and lime, used for auspicious purposes’. Burrow—Emeneau 1984:162, no. 1788.
- C. Proto-Indo-European *k^hur-ew-H-/*k^hur-ow-H-/*k^hur-u-H- (> *k^hur-ū-) ‘blood, gore’: Sanskrit *kravīṣ-* ‘flesh’, *krūrā-h* ‘wounded, raw, blood’; Greek κρέας (< *κρέας) ‘flesh, meat’; Latin *cruor* ‘the blood that flows from a wound, gore’, *cruentus* ‘bloody’, *crūdus* ‘bleeding, uncooked, raw’; Old Irish *crú* ‘blood’; Old Icelandic *hrár* ‘raw’; Faroese *ráur* ‘raw’; Norwegian *raa* ‘raw’; Swedish *rå* ‘raw’; Danish *raa* ‘raw’; Old English *hrēaw* ‘uncooked, raw’; Old Saxon *hrāo* ‘raw’; Dutch *rau* ‘raw’; Old High German (*h*)*rao* ‘raw’ (New High German *roh*); Lithuanian *kraĩjas* ‘blood’, *krūvinas* ‘bloody’; Old Church Slavonic *krъvъ* ‘blood’; Russian *krov’* [кровь] ‘blood’. Pokorny 1959:621—622 *kreu-, *kreuə-, *krū- ‘thick (clotting) blood’; Walde 1927—1932.I:478—480 *greu-, *greuə-; Mann 1984—1987:551 *kreu₂os (*krəu₂os, *kruu₂os) ‘raw flesh, gore, blood’, 551 *kreu₂ūt-, 559 *krou₂ū-, 562—563 *kruu₂ūt- ‘bloody’, 563 *kruu₂os ‘blood’; Watkins 1985:32 *kreuə- and 2000:44 *kreuə- ‘raw flesh’ (oldest form *kreu₂-); Gamkrelidze—Ivanov 1984.II:698 *k^h[h]reuH-/*k^h[h]ruH- and 1995.I:604 *k^hreuH-/*k^hruH- ‘raw meat’; Mallory—Adams 1997:71 (nom.-acc.) *kréuha ‘blood (outside the body), gore’ (gen. *kruhaós), *kréuha-s, *kréuha-ijo-; Wodtko—Irslinger—Schneider 2008:444—448 *kreuh₂-; Frisk 1970—1973.II:11—12 *greuās-; Boisacq 1950:512—513 *greuās-; Beekes 2010.I:774 *kreuh₂-; Hofmann 1966:159 *greuās-; Chantraine 1968—1980.I:580 *grewās-; Mayrhofer 1956—1980.I:277 and 280; De Vaan 2008:146—147; Ernout—Meillet 1979:152; Walde—Hofmann 1965—1972.I:294—295 *greu-os; Kroonen 2013:244 *hrawa- ‘raw’; Orël 2003:185 Proto-Germanic *xrawaz; Falk—Torp 1903—1906.II:84—85 Germanic stem *hrāwa-; Torp 1919:518—519; De Vries 1977:251 *kreu-; Onions 1966:742 *krowos; Klein 1971:619 *grewə-, *greu-; Kluge—Mitzka 1967:605 *krouo-; Kluge—Seebold 1989:604;

Smoczyński 2007.1:308—309; Derksen 2008:253 **kruh₂-*, 254 **kruh₂-s*, **kreuh₂-*, and 2015:255 **kruh₂-s*, **kreuh₂-*, 262 **kruh₂-*; Fraenkel 1962—1965.1:290.

Sumerian *gu-ru-un*, *guru₁₁-un*, *kurin* ‘blood’.

Buck 1949:4.15 blood. Bomhard—Kerns 1994:422—423, no. 265; Illič-Svityč 1971—1984.1:360—361, no. 237, (?) **Kura* ‘blood’; Dolgopolsky 2008, no. 1163, **Kur[Xû]* ‘blood’.

466. Proto-Nostratic (n.) **k^huwan-a* or **k^hun-a* originally a generic term meaning ‘young (especially of animals)’; later specialized as ‘young dog, puppy’ (as in Kannada and Kolami within Dravidian [see below]) and then simply ‘dog’:

Note: This term may be an early borrowing.

- A. Proto-Afrasian **kuwan-* ~ **kun-* ‘dog’: East Chadic (**kuwán-* > **kwán-* > **kanya-* ‘dog’ > Dangla *kanya* ‘dog’; Jegu *kany-* ‘dog’. Omotic (**kuwán-* > **kwán-* >) **kan-* ‘dog’ > Ome *kana*, *kanaa* ‘dog’; Mao *kano* ‘dog’. Orël—Stolbova 1995:311, no. 1425, **kan-* ‘dog’. Berber **kun-* ‘dog’ > Guanche *cuna* ‘dog’. Omotic **kunan-* ‘dog’ > Kefa *kunano* ‘dog’; Mocha *kunano* ‘dog’. Orël—Stolbova 1995:327, no. 1498, **kun-* ‘dog’. West Chadic (**kuwan-* > **kuwen-* >) **kuHen-* ‘dog’ > Mogogodo *kwehen* ‘dog’; Fyer *k^weeŋ* ‘dog’. Omotic (**kuwan-* > **kuwen-* > **kuHen-* >) **keHen-* ‘dog’ > Dime *keenu* ‘dog’. Orël—Stolbova 1995:329, no. 1511, **küHen-* ‘dog’. Omotic: Yemsa / Janjero *kana* ‘dog’; Bench / Gimira *kyan* ‘dog’.

Militarëv—Nikolaev (2021:234 and 240) reconstruct Proto-Afrasian **k^wihan-* ‘dog’ [*Canis familiaris*] on the basis of the following evidence: Proto-Chadic **k^wiHan-* ‘dog’: West Chadic **k^wiHan-* > Fyer *k^wééŋ*. East Chadic **kany-* ~ **kayan-* > West Dangla *kàny-à*; East Dangla *kāny-à*; Migama *kānny-à*; Mabire *kany*; Jegu *kány*; Birgit *káyàŋ*. Proto-East Cushitic **k^wihan-* ‘dog’ > Yaaku *kwehen* ‘dog’. Proto-Omotic **k^wiHan-* ‘dog’: Proto-North Omotic **ku/iHan-* > Wolaita, Gamu, Dawro, Zala, Malo, Dache, Koyra, Zayse, Bench / Gimira *kyan*; Yemsa, Bworo *kan-a*; Kafa, Mocha *kun-ano*; Dizi / Sheko *kean-u*; Mao / Hozo *kan-a*, etc.; Proto-South Omotic **kan-* ‘dog’ > Dime *kən-ε*; Galila *kan-i*.

Comments: (1) The reconstruction of a Proto-Afrasian initial voiceless labiovelar **k^w/* by Militarëv—Nikolaev appears to be based primarily (though not exclusively) on the Chadic evidence, and that evidence is contradictory. (2) Though I reconstruct Proto-Afrasian **kuwan-* ~ **kun-* ‘dog’, **kuHan-* ~ **kun-* ‘dog’ is also possible.

- B. Dravidian: Tamil *kuñci* ‘anything small; young bird, chicken’, *kuñcu* ‘young of birds and various animals’; Malayalam *kuññu*, *kuñcu* ‘young, small, infant’, *kuññan* ‘boy; also endearingly of girls’, *kuññi* = *kuññu*, *kuññan*; Kota *kunj* ‘children as given by god, men as children of god’, *kun* ‘small’; Kannaḍa *kunni* ‘young of an animal, especially a young dog’, *gunna* ‘smallness’, *kuññi* ‘a young one’; Koḍagu *kuññi* ‘child’; Tuḷu *kundu* ‘young of pariahs’, *kuññi*, *kunni* ‘small’; Telugu *gunna* ‘young of an animal’, *kunna*, *kūna* ‘infant, young of an animal’, *kunnāḍu* ‘boy, lad’, *kunnulu* (pl.) ‘sucklings, children’; Kolami *ku-na* ‘puppy’. Burrow—Emeneau 1984:150, no. 1646.
- C. Proto-Indo-European *k^h(u)wōn-/ *k^hun- ‘dog’: Sanskrit *śván-* (nom. sg. *śvá*, *śuvā* gen. sg. *śúnaḥ*) ‘dog’; Avestan *span-* ‘dog’; Greek κύων (gen. sg. κυός) ‘dog’; Armenian *šun* ‘dog’ (oblique *šan-*); Latin *canis* ‘dog’; Old Irish *cú* (gen. sg. *con*) ‘dog’; Welsh *ci* ‘dog’; Cornish *cȳ* ‘dog’; Breton *kī* ‘dog’; Gothic *hunds* ‘dog’; Old Icelandic *hundr* ‘dog’; Norwegian *hund* ‘dog’; Swedish *hund* ‘dog’; Danish *hund* ‘dog’; Old English *hund* ‘dog’; Old Frisian *hund* ‘dog’; Old Saxon *hund* ‘dog’; Dutch *hond* ‘dog’; Old High German *hunt* ‘dog’ (New High German *Hund*); Lithuanian *šuō* (gen. sg. *šūns*) ‘dog’; Tocharian A *ku* (oblique *kon*) ‘dog’; Hittite *kuwan-* ‘dog’; Hieroglyphic Luwian *zú-wa/i-n(i)-* ‘dog’ (this may be a loan from Indo-Aryan [cf. Kronasser 1956:229, §208]). Pokorny 1959:632—633 *k^huon-, *k^hun- ‘dog’; Walde 1927—1932.I:465—466 *k^huon-; Mann 1984—1987:653—654 *k^huō (*k^huōn), obl. *k^hun-; variant *k^hunis ‘dog’; Watkins 1985:34 *kwon- and 2000:46 *kwon- ‘dog’; Mallory—Adams 1997:168 *k^h(u)uōn- (gen. *k^hunós) ‘dog’; Gamkrelidze—Ivanov 1984.I:184 *k^h[h]uon-s > *k^h[h]uōn-Ø and 1995.I:158 *k^hwon-s > *k^hwōn-Ø ‘dog’; Mayrhofer 1956—1980.III:403; Beekes 2010.I:811 *k^huon-; Chantraine 1968—1980.I:604; Boisacq 1950:540—542 *k^huon-, *k^huon-; Frisk 1970—1973.II:58—59 *k^huō(n), *k^hun-ós (-és); Hofmann 1966:167—168 *k^huon-, *k^huon-; Ernout—Meillet 1979:92; Walde—Hofmann 1965—1972.I:152—153 *k^huōn; De Vaan 2008:87; Kroonen 2013:256 Proto-Germanic *hunda- ‘dog’; Orël 2003:193 Proto-Germanic *xundaz; Feist 1939:276—277 Pre-Germanic base-form *k^h(u)uō-tó-; Lehmann 1986:195 *k^hwon-, *k^hun-; De Vries 1977:267; Falk—Torp 1903—1906.I:307—308; Torp 1919:228; Boutkan—Siebinga 2005:184; Onions 1966:449 Common Germanic *χundaz < *kwōtós; Klein 1971:354 *k^hwon-; Kluge—Mitzka 1967:320—321 *k^huon-; Kluge—Seebold 1989:320; Mayrhofer 1956—1980.III:402—403; Kloekhorst 2008b:505—506; Puhvel 1984— .4:305 *k^h(u)wōn(s); Melchert 1994a:234 and 252 Proto-Anatolian *k^hwon- ‘dog’; Adams 1999:179 *k^huōn; Smoczyński 2007.1:652—653 *k^huōn; Fraenkel 1962—1965.II:1033—1035; Derksen 2015:455 *k^huōn- (gen. *k^hun-ós; Van Windekens 1976—1982.I:238—239 *k^huon-, *k^hun-; Wodtko—Irslinger—Schneider 2008:436—440 *k^h(u)uōn-, *k^hun-, *k^huōn-.

- D. Uralic: Finno-Ugrian: Mordvin *kŷjon* ‘wolf’; Cheremis / Mari *kejin* ‘wolf’; Zyrian / Komi *kōjin*, *kōin* ‘wolf’; Votyak / Udmurt *kion*, *kijon*, *kyjon* ‘wolf’. Notes: (1) Illič-Svityč (1971—1984.I:361—362, no. 238) also cites Lapp / Saami *gâidne* ‘wolf’. (2) Napolskikh’s [Напольских] (2001:370—371) suggestion that the Uralic forms were borrowed from Tocharian is highly improbable, though borrowing from an unknown source cannot be ruled out. (3) Finally, it may be noted that several Finno-Ugrian languages have borrowed from Indo-European at different times and places: Estonian *hunt* ‘wolf’ (cf. Swedish *hund* ‘dog’); North Lapp / Saami *šūwon* ‘good (alert) dog’ (< Pre-Baltic **šūon(i)-* [cf. Lithuanian *šuõ* ‘dog’]).

Buck 1949:3.61 dog. Illič-Svityč 1971—1984.I:361—362, no. 238, **KūjnA* ‘wolf, dog’; Bomhard 1996a:233, no. 652; Blažek 1989b:208—209 and 2013: 43, no. 13 — Blažek reconstructs Proto-Afrasian **kun-/*kuwan-*.

22.23. PROTO-NOSTRATIC *k'

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
k'-	k'-	k-	k'-	k'-	k-	k-	k- q-
-k'-	-k'-	-k(k)-	-k'-	-k'-	-k-	-k-	-k- -q-

467. Proto-Nostratic root *k'ab- (~ *k'əb-):

(vb.) *k'ab- 'to seize, to take hold of; to seize with the teeth, to bite';

(n.) *k'ab-a 'seizure, grasp, grip, hold; bite'

- A. Proto-Afrasian *k'ab- 'to seize, to take hold of': Proto-Semitic *k'ab-aṭṭ- 'to seize, to take, to grab, to grasp, to take hold of' > Arabic *ḵabaḍa* 'to seize, to take, to grab, to grasp, to grip, to clutch, to take hold of, to take possession, to hold; to apprehend, to arrest; to receive, to collect', *ḵabḍ* 'seizing, gripping, grasping, seizure, holding; taking possession, appropriation; apprehension, arrest'; Sabaean *ḵbḍ* 'seizers' (branch of the military forces); Hebrew *ḵāḇaṣ* [ḵḇṣ] 'to gather, to collect'; Syriac *ḵəḇaṣ* 'to harvest'. Klein 1987:561; Zammit 2002:332. Proto-Semitic *k'ab-aṣ- 'to rob' > Hebrew *ḵāḇa'* [ḵḇṣ] 'to rob'; Aramaic *ḵəḇa'* 'to rob, to defraud'. Murtonen 1989:369; Klein 1987:561. Proto-East Cushitic *k'ab- 'to seize, to take hold of' > Saho *kab-* 'to take for oneself'; Somali *qab-* 'to catch, to seize, to hold'; Rendille *xab-* 'to catch, to seize, to hold'; Dasenech *ḡa(b)-* 'to catch, to seize, to hold'; Arbore *kab-* 'to hold, to take'; Galla / Oromo *k'ab-* 'to possess, to take hold of'; Konso *qap-* 'to possess, to take hold of'; Gidole *k'ap-* 'to possess, to take hold of'; Dullay *qap-* 'to possess, to take hold of'; Burji *k'af-* 'to have'. Sasse 1979:14, 48 and 1982:122—123; Hudson 1989:77. Proto-Southern Cushitic *k'ab- 'to restrain' > Burunge *qab-* 'to keep quiet'. Ehret 1980:331. Ehret 1995:233, no. 409, *k'ab- 'to take hold of'.
- B. Dravidian: Tamil *kappu* (*kappi-*) 'to gorge, to cram into the mouth', *kavvu* (*kavvi-*), *kauvu* (*kauvi-*) '(vb.) to seize with the mouth, to grasp with eagerness; (n.) bite, seizing by the mouth (as dog), eating'; Malayalam *kauvuka* 'to seize with the mouth, to bite', *kappuka*, *kammuka* 'to snap at, to eat as a dog or a madman'; Koḍagu *kabb-* (*kabbi-*) 'to seize with wide-open mouth (of dogs, tigers, etc.)'; Tuḷu *kappuni* 'to eat greedily'; Telugu *kavvu* 'to seize by the mouth'; Pengo *kap-* 'to bite'; Maṇḍa *kap-* 'to bite'; Kui *kappa* (*kapt-*) 'to swallow liquid hastily, to gulp, to drink'; Kuṛux *xappnā* 'to swallow, to drink', *habka'ānā* 'to bite', *habkā* 'a bite'. Burrow—Emeneau 1984:114, no. 1222.
- C. Proto-Kartvelian *k'b-en-, *k'b-in- 'to bite': Georgian *k'b-en-/k'b-in-* 'to bite', *k'benil-* 'a bite'; Mingrelian *k'ib-ir-* 'to bite' (reshaped after *k'ibir-* 'tooth'); Laz *k'ib-in-* 'to bite'. Klimov 1964:106—107 *ḵb-in- and 1998:87

**k̥b-* ‘to bite’, **k̥b-en-* : **k̥b-in-* ‘to bite’; Schmidt 1962:118; Fähnrich—Sardshweladse 1995:186—187 **k̥b-*; Fähnrich 2007:225 **k̥b-*. Proto-Kartvelian **k’b-il-* ‘tooth’: Georgian *k’b-il-* ‘tooth’ (dialect forms: Ajarian *k’ibil-* and Tushian *k’mil-*); Mingrelian *k’ib-ir-*, *k’əb-ir-* ‘tooth’; Laz *k’ibi(r)-*, *k’ibr-*, *k’irb-*, *č’ibr-* ‘tooth’. Klimov 1964:107 **k̥b-il-* and 1998:87 **k̥b-il-* ‘tooth’.

Buck 1949:4.207 jaw; 4.24 mouth; 4.58 bite (vb.). Illič-Svityč 1971—1984.I: 313—315, no. 190, **k̥aba/*k̥ap’a* ‘to seize’; Dolgopolsky 2008, no. 987, **k̥äb?ä* ‘to bite’ (→ ‘to eat’); Bomhard—Kerns 1994:443—444, no. 288.

468. Proto-Nostratic root **k’acʰ-* (~ **k’əcʰ-*):

- (vb.) **k’acʰ-* ‘to labor, to strain; to become fatigued, exhausted, wearied (from straining, laboring)’;
(n.) **k’acʰ-a* ‘trouble, difficulty, pain, strain’

- A. Afrasian: Egyptian *qsn* ‘troubled, difficult, painful’, *qsn* ‘pain’, *qsnt* ‘trouble, misfortune’; (?) Coptic *čons* [𐪖𐪓𐪏𐪐] (assuming metathesis from **čosn*) ‘might, violence’. Hannig 1995:866; Faulkner 1962:281; Erman—Grapow 1921:192 and 1926—1963.5:69—71; Gardiner 1957:596; Vycichl 1983:342; Černý 1976:332. Note: The Coptic form may be derived from Egyptian *gns* ‘violence, injustice’ instead.
B. Dravidian: Tamil *kāci* ‘difficulty, straits’ (Telugu loan); Kannaḍa *kāsi*, *ghāsi* ‘trouble, fatigue, pain’; Tuḷu *gāsi* ‘trouble, fatigue, pain’; Telugu *gāsi* ‘trouble, fatigue, pain’, *gāsincu* ‘to harass, to vex, to fatigue, to exhaust’, *gāsil(l)u* ‘to labor, to be wearied, to be harassed’. Burrow—Emeneau 1984:133, no. 1430.
C. Proto-Chukchi-Kamchatkan **kæcæt-* ‘to strain (dog on leash)’; Chukchi *kecet-* ‘to strain (dog on leash)’; (?) Alyutor *kasat-* ‘to get covered in mud or scabs’; Kamchadal / Itelmen *kse-kas* ‘to strain, to pull away (dog from chain)’. Fortescue 2005:129.

Buck 1949:9.97 difficult; 16.31 pain, suffering.

469. Proto-Nostratic root **k’ačʰ-* (~ **k’əčʰ-*):

- (vb.) **k’ačʰ-* ‘to put, join, fasten, wrap, fold, or tie together’;
(n.) **k’ačʰ-a* ‘tie, band, knot, fastening, wrapping’

- A. Dravidian: Kannaḍa *kaccu* ‘to join’; Tuḷu *kaccuni* ‘to be joined fast’, *kaccāvuni* ‘to join fast’, *gajipuni* ‘to fasten, to strengthen’; Gondi *kah-* ‘to tie, to fasten up, to secure’, *kācānā* ‘to be tied tight (e.g., clothes)’; Pengo *gac-* ‘to tie, to bind’; Maṇḍa *geh-*, *geḥpa-* ‘to bind’; Kui *gaspa* (*gast-*) ‘(vb.) to tie a knot, to hang, to suspend; (n.) hanging, suspension, suicide by hanging’, *gah-* (*gast-*) ‘to tie’; Kuwi *gah-* ‘to bind’, *gahpo* ‘fastening,

tying'; Kuṛux *xājnā* 'to tether, to bind the feet'. Burrow—Emeneau 1984:103, no. 1099.

- B. Proto-Kartvelian **k'ec*- 'to put together': Georgian *k'ec*- 'to put together'; Mingrelian *k'ič*-, *k'əč*- 'to put together, to fold; to roll', *k'ičua*-, *k'ičil*- 'folded, wrapped'. Fähnrich—Sardshweladse 1995:191—192 **kec*₁-; Fähnrich 2007:231 **kec*₁-; Klimov 1964:108 **kec*₁- and 1998:90 **kec*₁- 'to put together'.
- C. Proto-Chukchi-Kamchatkan **kəðtæl* 'braid, plait': Chukchi *kəttəl* 'braid, plait', *kəttəl-et*- 'to braid, to plait'; Kerek *kəci-kkun* 'braid, plait'; Koryak *kijtalat* 'braid, plait'; Alyutor *kəttalat* 'braid'; Kamchadal / Itelmen *t'k'lom* (pl. *t'k'lo'n*) 'braid' (with metathesis ?), *ktqaziin*, *qtklatknan* 'to braid', (Western) *tkodi* 'string', (Eastern) *xalelcac*, *xlelkat*, *kotelxc* 'to weave', (Southern) *tkoaduru* 'topknot'. Fortescue 2005:143.

Buck 1949:9.15 fold (vb. tr.); 9.16 bind (vb. tr.).

470. Proto-Nostratic root **k'ad*- (~ **k'əd*-):

(vb.) **k'ad*- 'to tie, to fasten; to build, to construct';

(n.) **k'ad-a* 'tie, band, fastening'

- A. Proto-Afrasian **k'[a]d*- 'to build, to construct': Egyptian *qd* 'to build, to fashion (pots)', *qd* 'to use the potter's wheel', *qd* 'builder, potter', *iqdw* 'potter, mason, creator'; Coptic *kōt* [κωτ] 'to build, to form', *ekōt* [εκωτ] 'builder, mason, potter', *se-kōt* [σε-κωτ] 'potter's workshop'. Hannig 1995:108 and 867; Faulkner 1962:32, 281, and 282; Gardiner 1957:596; Erman—Grapow 1921:19, 192 and 1926—1963.5:72—75; Vycichl 1983:89—90; Černý 1976:64 and 65.
- B. [Dravidian: Tamil *kaṭṭu* (*kaṭṭi*-) '(vb.) to tie, to fasten, to build, to wear, to put on, to bind by spells, to marry, to shut up, to store, to hug, to compare with, to be equal; (n.) tie, band, fastening, regulations, custom, building, marriage, bundle, packet, dam, causeway', *kaṭṭaṭam* 'building, binding of a book, setting of a jewel', *kaṭṭaṇam* 'building', *kaṭṭalai* 'code, rule, regulations', *kaṭṭai* 'dam'; Malayalam *keṭṭuka* 'to tie, to build, to clasp, to yoke, to dress, to marry, to make into a bundle, to stop, to restrain, to become entangled, to clot', *keṭṭikka* 'to cause to tie, to make to wear, to give in marriage', *keṭṭu* 'tie, bundle, band, connection (as of marriage), restraint, dam, bank, building', *keṭṭakam* 'house', *kaṭṭu* 'tie, bundle'; Kota *kaṭ*- (*kac*-) 'to tie, to build, to manage (house), to be equal', *kaṭ* 'knot, caste custom, case of which a decision has been given', *kaṭaṛm* (obl. *kaṭart*-) 'wall of brick or stone', *kaṭaṇ* 'caste custom, individual's habit'; Toda *koṭ*- (*koṭy*-) 'to tie, to build, to kill by witchcraft, to obstruct, to hug, to manage (a house)', *koṭ* 'knot, bundle, amulet', *koṭaṣ* 'noose' (in song unit: *mīṛ xoṭaṣ* '[to tie] a noose on the neck'); Kannada *kaṭṭu* '(vb.) to bind, to tie, to yoke, to build, to shut up, to stop by magic, to bewitch, to amass (wealth),

to obstruct, to shut, to dam, to be bound, to be stopped; (n.) binding, tying, checking, restraint, band, tie, bundle, something built, regulation, rule, bewitching', *kaṭṭuvike* 'tying, etc.', *kaṭṭuka* 'man who ties', *kaṭṭaḍa*, *kaṭṭaṇa*, *kaṭṭa* 'a building', *kaṭṭal* 'state of being bound, tied; building', *kaṭṭe* 'structure of earth or stones to sit upon, embankment, dam, causeway', *gaṭṭu* 'dam, embankment', *gaṭṭe* 'bale, bundle'; Koḍagu *kēṭṭi* (*kēṭṭi*-) 'to tie, to build', *kēṭṭi* 'knot, bundle', *kaṭṭe* 'bund of tank, platform built under a tree on village green', *kaṭṭaḍa* 'a building'; Tuḷu *kaṭṭuni* 'to tie, to bind, to build, to amass (wealth)', *kaṭṭāvuni* 'to cause to bind or tie, to have a house built', *kaṭṭu* 'band, tie, bundle, regulation, bond', *kaṭṭaṇa*, *kaṭṭalme* 'building', *kaṭṭa* 'a dam', *kaṭṭale* 'custom, rule', *kaṭṭāṇi* 'necklace'; Telugu *kaṭṭu* '(vb.) to tie, to bind, to wear (clothes), to build, to bewitch, to obstruct; (n.) tie, bond, knot, band, wearing of a garment, restraint, rule or regulation', *kaṭṭincu* 'to get built, to cause to be bound or tied', *kaṭṭa* 'dam, embankment', *kaṭṭaḍa*, *kaṭṭaḍi* 'rule, law, fashion, manner', *kaṭṭaḍamu* 'building', *kaṭṭanamu* 'a tie', *gaṭṭu* 'dam, embankment'; Kolami *kaṭ-* (*kaṭt-*) 'to tie, to build', *kaṭṭā* 'platform', *kaṭṭa* 'bund of field'; Naikri *kaṭt-* 'to tie, to build', *kaṭṭa* 'bund of field, dam, dike', *kaṭṭe* 'necklace'; Naiki (of Chanda) *kaṭ-/kaṭt-* 'to bind, to tie hair, to build, to attach bowstring'; Parji *kaṭt-* 'to tie, to build', *kaṭk-* 'to tie, to fasten, to bind', *kaṭṭa* 'bund of field'; Gadba (Ollari) *kaṭ-* 'to tie, to build', (Salur) *kaṭt-* 'to bind', *gaṭṭu* 'bank'; Gondi *kaṭṭānā* 'to be shut (of door), to close or come to grips (of two men fighting); to shut, to close (door)', *kaṭṭitānā* 'to adhere or be attached to', *kaṭṭā* 'a dam in the river for catching fish', *kaṭṭa* 'bund, embankment', *kaṭ* 'bank of a river'; Konda *kaṭa* 'bundle (of hay, etc.)', *gaṭu* 'bund, bank (of river, tank, etc.)', *kaṭis-* 'to yoke (plow)'; Pengo *kaṭa* 'bank of a river'; Kui *kāt-* 'to fix, to fasten, to secure'; Kuwi *gaṭṭu* 'bund of a field', *gaṭu* 'boundary, beach, shore; end of a table, field, etc.'; Malto *gaṭa* 'rope, cord'. Burrow—Emeneau 1984:108, no. 1147; Krishnamurti 2003:199 **kaṭ-/kaṭt-* 'to tie, to bind', **kaṭṭ-ay* 'a dam'.] These forms may belong under Proto-Nostratic **kʰad-* (~ **kʰəd-*) '(vb.) to tie, to bind; (n.) tie, band, fastening' instead.

- C. Proto-Kartvelian **k'ed-/k'd-* 'to build, to construct': Georgian [*k'ed-*] 'to build, to construct'; Mingrelian *k'id-* 'to partition off'; Laz *k'id-*, *k'od-* 'to build, to construct', *mk'idale-* 'constructor'. Klimov 1964:107 **kēd-* and 1998:87—88 **kēd-* : **kēd-* 'to build, to construct'; Fähnrich 2007:217—218 **kad-*; Fähnrich—Sardshweladse 1995:181—182 **kad-*. Proto-Kartvelian **k'ed-el-* 'wall': Georgian *k'edel-* 'wall'; Mingrelian *k'ida(la)-*, *k'ədala-* 'wall'; Laz *k'ida-*, *k'oda-* 'wall'. Klimov 1964:107—108 **kēdel-* and 1998:88 **k(e)d-el-* 'wall'.
- D. Proto-Altaic **kadu* 'a kind of harness (bridle)': Proto-Tungus **kada-la*, **kada-ra* 'bridle' > Manchu *ḡadala* 'horse's bridle'; Nanay / Gold *qadara*, *ḡadara* 'bridle'; Solon *ḡadal*, *kadala* 'bridle'. Proto-Mongolian **kada-* 'bridle' > Written Mongolian *qaḡayār* 'bridle'; Khalkha *ḡaḡār* 'bridle';

Buriat *χazār* 'bridle'; Kalmyk *χazār* 'bridle'; Ordos *χažār* 'bridle'; Moghol *qadār* 'bridle'; Dagur *χadāl* 'bridle'. Starostin—Dybo—Mudrak 2003:629
**kadu* 'a kind of harness (bridle)'.

Buck 1949:7.27 wall; 9.44 build. Illič-Svityč 1971—1984.I:316—317, no. 192, **kadA* 'to weave, to plait (with twigs)'; Bomhard—Kerns 1994:496—497, no. 344; Dolgopolsky 1998:30—31, no. 22, **kadV* 'to wicker, to wattle' ('wall, building') and 2008, no. 1006, **kadV* 'wickerwork, wattle'.

471. Proto-Nostratic root **k'ak'*- (onomatopoeic):

(vb.) **k'ak'*- 'to cackle, to chatter';

(n.) **k'ak'-a* 'crackling sound'

Derivative:

(n.) **k'ak'-a* (onomatopoeic bird name) 'partridge'

A. Proto-Afrasian **k'ak'*- 'to cackle, to make a noise': Proto-Semitic **k'a/wa/k'-*, **k'ak'-aw-* 'to cackle, to make a noise' > Arabic *kāka* 'to cackle, to cluck'; Syriac *kawkī* 'to strike or sound a bell'; Geez / Ethiopic *koḳḳha* [ቆቆሐ] 'to cackle, to neigh', ?*askoḳawa* [አስቆወ] 'to howl, to lament, to wail, to sing a dirge'; Tigrinya *kāḳāwā* 'to cackle'. Leslau 1987:439.

B. Dravidian: Kui *kapka* (< **kak-p-*, *kakt-*) 'to laugh, to laugh at, to ridicule'; Kuwi *kak-* 'to laugh', *kakpinai* 'to joke'. Burrow—Emeneau 1984:102, no. 1080.

C. Proto-Kartvelian **k'ak'a-n-* 'to cackle': Georgian *k'ak'an-* 'to cackle'; Laz *k'ark'al-* 'to cackle'; Mingrelian *k'ark'al-* 'to cackle'; Svan *k'ark'ac-* 'to cackle'. Klimov 1964:105—106 **kaḳa-n-*.

D. Proto-Indo-European **k'ak'*- 'to cackle, to chatter': Armenian *kakačem* 'to cackle', *kakazem* 'to stammer, to jabber, to lisp'; Middle High German *kachezen* 'to guffaw'; Dutch *kakelen* 'to cackle'; Old English *ceahhetan* 'to laugh loudly'; Lithuanian *gagù*, *gagėti* 'to cackle'; Russian *gogotát'* [гоготать] 'to cackle', *gógot* [гогот] 'cackle, loud laughter'. Pokorny 1959:407 **gha gha* 'to chatter'; Walde 1927—1932.I:526 **gha gha*; Mann 1984—1987:261 **gagədiō* (**gəgədiō*) 'to chatter', 261—262 **gagətiō* (**gəgətiō*), 262—263 **gagō*, *-iō* 'to cackle, to chatter'; Mallory—Adams 1997:345 **gag-* 'to cackle'; Onions 1966:133; Klein 1971:103; Fraenkel 1962—1965.I:127—128.

Bomhard—Kerns 1994:445—446, no. 291.

472. Proto-Nostratic (n.) **k'ak'-a* (onomatopoeic bird name) 'partridge':

Derivative of:

(vb.) **k'ak'*- 'to cackle, to chatter';

(n.) **k'ak'-a* 'crackling sound'

- A. Proto-Afrasian **k'ak'*- 'partridge': Proto-Semitic **k'a/wa/k'*- 'partridge' > Syriac *kūḳānā* 'partridge'; Geez / Ethiopic *koḳāh* [ቆቃሐ], *koḳəh* [ቆቃሐ], *koḳāh* [ቆቃሐ], *koḳəh* [ቆቃሐ] 'francolin'; Tigrinya *koḳah* 'partridge'; Tigre *koḳah* 'partridge'; Amharic *koḳ* 'partridge'; Gurage *koḳ* 'partridge'. Leslau 1979:492 and 1987:438. (?) Akkadian *kaḳānu*, *kaḳū*, *kaḳḳullu* 'a bird'. [Orël—Stolbova 1995:335, no. 1539, **kaḳ-*/**kuk-* 'cuckoo, hen'.]
- B. Dravidian: Kolami *kakkare* 'partridge'; Parji *kākrāl* 'partridge'; Gondi *kakrānj* 'partridge'. Burrow—Emeneau 1984:101, no. 1078.
- C. Proto-Kartvelian **k'ak'ab-* 'partridge': Georgian *k'ak'ab-* 'partridge'; Mingrelian *k'ok'obe-* 'partridge'. Schmidt 1962:117; Klimov 1964:105 **kaḳab-* and 1998:85 **kaḳab-* 'partridge'; Fähnrich—Sardshweladse 1995:183 **kaḳab-*; Fähnrich 2007:219 **kaḳab-*.
- D. Altaic: Proto-Turkic **kākālik* 'partridge' > Turkish *keklik* 'red-legged partridge'. Décsy 1998:89.
- E. Proto-Chukchi-Kamchatkan **kakac(o)* 'a kind of bird': Chukchi *kakac(o)* 'a kind of bird'; Alyutor *kakas* (Palana *notakakac*, *kakacon*) 'a kind of bird', (Palana) *kakac* 'magpie' (?); Kamchadal / Itelmen *kakac* 'a kind of bird', (Sedanka) *qaqac* 'a kind of jay'. Fortescue 2005:126.

Bomhard—Kerns 1994:446, no. 292. Loanwords in Indo-European: Hittite *kakkapa-* onomatopoeic bird name; Greek *κακκάβη* 'partridge' (cf. Akkadian *kakkabānu* name of a bird).

473. Proto-Nostratic root **k'al-* (~ **k'əl-*):

(vb.) **k'al-* 'to feed, to nourish';

(n.) **k'al-a* 'nourishment, sustenance, nutriment'

- A. Proto-Afrasian **k'[a]l-* 'to feed, nourish': Proto-Semitic **k'al-ab-* 'to feed, to nourish' > Geez / Ethiopic *kalaba* [ቀለበ] 'to nourish' (Amharic loan); Tigrinya *qälläbä* 'to feed'; Amharic *qälläbä* 'to feed (oxen), to provide support, to nourish', *qälläb* 'food, supplies, rations, stipend'; Argobba *qälläbä* 'to feed'; Gurage *qälläbä* 'to support by providing food, *to feed', *qälläb* 'feeding, subsistence'. Leslau 1979:475 and 1987:427. Ethiopian Semitic loans in Cushitic: Qabenna *k'allabbo* 'to feed'; Galla / Oromo *k'alabo* 'rations'.
- B. Proto-Indo-European **k'al-* 'to (breast-)feed, to nourish, to satisfy', **k'(a)lak^hth-* 'nourishment, milk': (?) Sanskrit *jālāṣa-h* 'appeasing, healing'; Hittite (nom.-acc. sg.) *kal(l)aktar*, *galaktar* 'soothing substance, balm, nutriment', *kala(n)k-*, *gala(n)k-* 'to soothe, to satiate, to satisfy'; Greek γάλα 'milk', (gen. sg. γάλακτος); Latin *lac* 'milk'; Middle Irish *lacht* 'milk' (Latin loan); Welsh *llaeth* 'milk' (Latin loan). Pokorny 1959:400—401 **glag-* or **glak-* 'milk'; Walde 1927—1932.I:659 **glag-* or **glak-*; Mann 1984—1987:387—388 **galakt-* (**gəlak^t-, *gəla*) 'milk'; Watkins 1985:41 **g(a)lag-*, **g(a)lakt-* 'milk' and 2000:54 (under **melg-*

‘to rub off’ also ‘to milk’) *g(a)lag-, *g(a)lakt- ‘milk’; Mallory—Adams 1997:381—382 *ġ(l)lakt- (gen. *ġlaktós) ‘milk’; Gamkrelidze—Ivanov 1984.I:148, II:568 and 1995.I:127, I:485; Mayrhofer 1956—1980.I:423; Puhvel 1984— .4:18—20; Hofmann 1966:41; Boisacq 1950:139; Frisk 1970—1983.I:283—284 *glakt-; Chantraine 1968—1980.I:206—207; Beekes 2010.I:256 *glkt(-); Walde—Hofmann 1965—1972.I:741—742; Ernout—Meillet 1979:335; De Vaan 2008:320. Note: Different etymology in Kloekhorst 2008b:428—429.

Buck 1949:5.86 milk (sb.). Bomhard—Kerns 1994:438—439, no. 283.

474. Proto-Nostratic (n.) *k'al-a ‘stone, rock’:

- A. Dravidian: Tamil *kal* (*kaḷ-*, *kaṇ-*) ‘stone, pebble, boulder, precious stone, milestone’; Malayalam *kal*, *kallu* ‘stone, rock, precious stone’, *kalla* ‘glass beads’, *kallan* ‘mason; hard-hearted’; Kolami *kal* ‘stone, milestone’; Toda *kal* ‘milestone, bead’, *kalir* ‘round river stone’; Kannaḍa *kal*, *kalu*, *kallu* ‘stone; hard, stiff state of mind’; Koḍagu *kalli* ‘stone’; Tuḷu *kallu* ‘stone’; Telugu *kallu* ‘stone’; Naikṛi *khalbada* ‘stone slab for pounding’; Parji *kel* ‘stone’; Gondi *kal*, *kall(i)*, *kalu* ‘stone’; Konda *kalu* ‘stone’; Pengo *kal* ‘stone’; Brahui *xal* ‘stone, boulder’. Burrow—Emeneau 1984:121, no. 1298; Krishnamurti 2003:92, 118, 179, and 196 **kal-* ‘stone’.
- B. Proto-Kartvelian *k'ld- ‘rock, cliff’: Georgian *k'ld* ‘rock, cliff’; Mingrelian *k'irde*, *k'ərde*, *k'irda*, *k'ərda* ‘rock, cliff’; (?) Svan *k'ož-* (< *k'óde < *k'ldé) ‘rock, cliff’. Klimov 1964:113 **k'ld-* and 1998:97 **k'ld-* ‘rock’; Fähnrich 2007:248 **k'ld-*; Fähnrich—Sardshweladse 1995:204—205 **k'ld-*.
- C. Proto-Indo-European *k'(e)l- ‘rock, stone’: Old Icelandic *klé* ‘one of the stones used to keep the warp straight in the old upright loom’, *klett* ‘rock, crag’, *kleif* ‘ridge, cliff’, *klif* ‘cliff’, *klett* ‘rock, cliff’; Old English *clif* ‘cliff, rock, promontory, steep slope’, *clūd* ‘rock, hill’; Old Saxon *klif* ‘cliff’; Dutch *klip* ‘cliff’; Low German *klint* ‘rock, cliff’; Old High German *klep* ‘cliff, crag, rock’ (New High German *Klippe* [< Middle Dutch *klippe*]); Polish *glaz* ‘stone’ (according to Shevelov 1964:148, < **gloġno-*). Pokorny 1959:357—363 **gel-* ‘to form into a ball’; Walde 1927—1932.I:612—621 **gel-*; Mann 1984—1987:279 **glōgh-* ‘spike, tip, crag’; Watkins 1985:18—19 **gel-* ‘to form into a ball’; Orël 2003:216 Proto-Germanic **klifan*; Kroonen 2013:292 Proto-Germanic **kliba-* ‘cliff’; De Vries 1977:315 and 316 **gel-d-*; Klein 1971:142; Onions 1966:182 Proto-Germanic **klibam*, **klibn-*; Kluge—Mitzka 1967:378; Kluge—Seebold 1989:377 and 378.
- D. (?) Uralic: Finnish *kallio* ‘rock’, *rantakallio* ‘cliff’; Estonian *kalju* ‘rock, boulder’, *rannakalju* ‘cliff, crag’, *kaljune* ‘rocky’; Lapp / Saami *kallo* ‘rock’. These forms are usually considered to be loans from Germanic (cf.

Gothic *hallus* ‘rock’; Old Icelandic *hallr* ‘big stone’, *hella* ‘flat stone, slab of rock’; Old English *heall* ‘rock’) (cf. Feist 1939:241; Lehmann 1986:174—175; Joki 1973:21).

- E. Proto-Eskimo **qalur* ‘rock’: Naukan Siberian Yupik *qa(a)luq* ‘stone’; Seward Peninsula Inuit *qaluq* ‘round rock or pebble on shore’. Fortescue—Jacobson—Kaplan 1994:280.
- F. Proto-Gilyak / Nivkh **kəl(vavr)* ‘pestle’ (cf. Proto-Gilyak / Nivkh **bav-* ‘to pound’ for the second part): Amur *kʰəl(vəvc)* ‘pestle’; East Sakhalin *kʰəl(vavr)* ‘pestle’. Fortescue 2016:90.

Buck 1949:1.44 stone; rock. Hakola 2000:50—51, no. 179; Dolgopolsky 2008, no. 1044, **kalʕV* ‘rock, hill, stone’.

475. Proto-Nostratic root **kʼal-* (~ **kʼəl-*):

- (vb.) **kʼal-* ‘to take away, to remove, to deprive of; to decrease, to diminish, to reduce; to be or become reduced or diminished’;
- (n.) **kʼal-a* ‘littleness, small quantity, scarcity; few things; lack, want, poverty, deficiency, insufficiency’; (adj.) ‘little, scanty, sparse, meager, insufficient, lacking, short of, wanting, needy’

- A. Proto-Afrasian **kʼal-* ‘to take away, to remove, to deprive of; to decrease, to diminish, to reduce; to be or become reduced or diminished’: Proto-Semitic **kʼal-al-* ‘to take away, to remove, to deprive of; to decrease, to diminish; to be or become little, small, few, meager’ > Arabic *qalla* ‘to decrease, to diminish; to be or become little, small, few (in number or quantity), trifling, insignificant, inconsiderable, scant, scanty, sparse, spare, meager; to be second, to be inferior; to pick up, to lift, to raise, to carry (off), to remove’, *kill*, *kull* ‘small number or quantity, little; scarcity, rarity’, *qilla* (pl. *qilal*) ‘littleness, small quantity, scarcity; few things; lack, want, poverty, deficiency, insufficiency’; Hebrew *qālal* [קָלַל] ‘to be small, insignificant, of little account’; Akkadian *qalālu* ‘to be or become light (in weight), few, little, small’, *qallu* ‘light; of low standing, of little value; small, few, young’, *qallalu* ‘small, little; of inferior quality’, *qullulu* ‘to make an inferior-quality product, to reduce, to diminish’, *qalmu* ‘small’; Sabaean *qll* ‘a little, a small quantity’; Ḥarsūsi *kel* ‘to be little, insufficient’; Šheri / Jibbāli *qell* ‘to become little’; Mehri *qətlōl* ‘to be little’, *qəl* ‘sparseness’; Soqotri *kel* ‘to be small’; Geez / Ethiopic *qalla* [ቀለ], *qalala* [ቀለለ] ‘to be light (in weight), easy, slight, swift, rapid’, *ʔaklala* [አቀለለ] ‘to lighten, to diminish a burden’, *qalil* [ቀለል] (f. *qallāl* [ቀለል]) ‘light (in weight), easy, swift, rapid, small, minor, of small value’; Harari *qālāla* ‘to be thin (object)’; Gurage *qālālā* ‘to be light (in weight)’, *qāl* ‘small, little, a bit, a little bit’; Gafat *qālliyä* ‘light’. Murtonen 1989:376; Klein 1987:580; Zammit 2002:344; Leslau 1963:124, 1979:476—477, and 1987:428. Berber: Tuareg *ɣələlət* ‘to be scrawny (person or animal)’, *ayələla* ‘a

scrawny person or animal', *tayələlat* 'a stalk of sorghum, corn, and similar plants'; Ghadames *yalal* 'stalk of grain'; Tamazight *iṣəll* 'culm, stems remaining after the harvest, long straw'; Kabyle *iylil* 'to be covered with culm', *iyləl* 'culm'; Mzab *iṣəlləl* 'long straw' (archaic); Riff *iṣəll* 'culm'. Proto-East Cushitic **k'all-* or **k'alʔ-* 'to be thin' > Burji *k'all-*, *k'alʔ-* 'to be thin, narrow', (vb. mid.) *k'alʔ-add-* 'to become thin'; Konso *qallaʔ-* 'thin'; Galla / Oromo *k'all-aa* 'subtle, thin, meager'; Gidole *k'allaʔ-* 'narrow'. Sasse 1979:22, 48 and 1982:124. West Chadic **k'al-* 'small' > Dera *kalla* 'small'. East Chadic **kal-* 'small' > Kabalay *kaale* 'small'. Diakonoff 1992:24 **kal-* 'petty, light'; Orël—Stolbova 1995:336, no. 1542, **kal-/kil-* 'to be small'.

- B. Proto-Kartvelian **k'el-/k'l-* 'to lack, to be short of': Georgian *k'el-/k'l-* (Xevsurian *k'al-/k'l-*) 'to lack, to be short of'; Mingrelian *k'al-* 'to come away empty-handed', *go-k'al-ip-er-i* 'empty-handed'; Svan *k'l-* 'to lack'. Schmidt 1962:119; Klimov 1998:85 **kal-/kl-* 'to lack, to be short of' and 89 **kel-/kl-* 'to lack, to be short of'; Fähnrich—Sardshweladse 1995:189 **kel-/kl-*; Fähnrich 2007:228 **kel-/kl-*. Proto-Kartvelian (Georgian-Zan) **m-k'l-e-* 'missing, deprived': Georgian *mok'le-* (Xevsurian *mk'le-*) 'short'; Mingrelian [*k'ule-*] 'deprived'; Laz *mk'ule-* 'short'. Fähnrich—Sardshweladse 1995:241—242 **mkle-*; Fähnrich 2007:292—293 **mkle-*; Klimov 1998:123 **m-kl-e-* 'missing, deprived'; Schmidt 1962:124—125.
- C. Uralic: Proto-Finno-Ugrian **kelke-* 'to be necessary; must, ought to' > Lapp / Saami *gál'gá-/gálgá-* 'shall, must, have to; (especially in prohibitions) ought, must be, be needed, ought to do'; Mordvin *kel'ge-* 'shall, must, ought to'; Cheremis / Mari (3rd sg.) *keleş, küleş* 'it is necessary, (I, you, etc.) must'; Votyak / Udmurt *kul-* 'to be necessary'; Zyrian / Komi *kol-* 'to be necessary; must, ought to'; Hungarian *kell(e)-* 'to be needed, to be wanting', *kéll* '(I, you, etc.) must', *kellék* '(pre)requisite, requirement, (pl.) necessities'. Collinder 1955:87 and 1977:103; Rédei 1986—1988:145 **kelke-*; Sammallahti 1988:543 **kelki-* 'must'.

Buck 1949:9.93 need, necessity; 9.94 ought, must (3rd sg.); 12.56 small, little; 12.62 narrow; 12.65 thin (in dimension); 12.66 thin (in density). Illič-Svityč 1971—1984.I:323, no. 198, **kel* 'to be insufficient'; Bomhard—Kerns 1994:452, no. 297; Dolgopolsky 2008, no. 1027, **kelV* (or **kelV*) 'to lack, to be insufficient' and, no. 1057, **ka[l]V* '(to be) few, (to be) too small/thin/light'.

476. Proto-Nostratic root **k'al-* (~ **k'al-*):

- (vb.) **k'al-* 'to burn, to warm, to cook, to roast';
(n.) **k'al-a* 'cooking, roasting, baking; glowing embers'

- A. Proto-Afrasian **k'[a]l-* 'to burn, to roast': Proto-Semitic **k'al-ay/w-* 'to burn, to roast' > Akkadian *kalū* (Assyrian *kalā'u*) 'to burn'; Hebrew *kālāh*

- [קָלָה] ‘to roast, to parch’; Aramaic *qālā* ‘to burn’; Mandaic *qla* ‘to burn, to roast’; Arabic *kalā* ‘to fry, to bake, to roast’; Soqotri *qale?* ‘to roast (grain)’; Šheri / Jibbāli *kélé* ‘to fry’; Mehri *qālō* ‘to cook, to fry’; Geez / Ethiopic *qalawa* [ቀለወ] ‘to roast, to parch’; Tigrinya *qālāwā* ‘to roast’; Tigre *kāla* ‘to roast’; Amharic *qʷälla* ‘to parch grain, to roast’; Gafat *kollä* ‘to roast’; Harari *qala* ‘to roast’; Argobba *qʷälla* ‘to roast’; Gurage *kollä* ‘to roast grain or coffee, to parch grain or coffee’. Murtonen 1989:376; Klein 1987:578; Leslau 1963:123, 1979:475, and 1987:431; Militarev 2010:56 Proto-Semitic **klw*. Central Chadic **kwalu-* ‘hotness’ > Bachama *kwul-* ‘hotness’. Orël—Stolbova 1995:344, no. 1584, **kol-* ‘to be hot, to burn’; Ehret 1995:236, no. 419, **kʼal-* ‘to burn (tr.)’.
- B. Dravidian: Malayalam *kāḷuka* ‘to burn, to flame’, *kāḷal* ‘high flame, love-fever’; Telugu *kālu* ‘to burn; to be burnt, scalded, scorched, baked’, *kāḷupu* ‘burning, setting on fire, roasting, baking’, *kālcu* ‘to burn (tr.), to set fire to, to scald, to singe, to scorch, to char, to bake’; Parji *kāl-* ‘to smart’. Burrow—Emeneau 1984:139, no. 1500; Krishnamurti 2003:181 **kā-l* ‘(vb.) to burn; (n.) flame’.
- C. Proto-Indo-European **kʼel(H)-/*kʼol(H)-/*kʼl(H)-* ‘to burn, to scorch, to char’: Common Germanic **kulan* ‘coal, charcoal’ > Old Icelandic *kol* ‘coals, charcoal’, *kola* ‘a small flat open lamp’; Swedish (dial.) *kola* ‘to burn slowly’; Old English *col* ‘(live) coal, piece of charcoal’; Old Frisian *kole* ‘coal’; Middle Low German *kol(e)* ‘coal’; Dutch *kool* ‘coal’; Old High German *kol, kolo* ‘coal’ (New High German *Kohle*); Alemannic *chollen* ‘to glimmer, to glow, to smolder’. Orël 2003:223 Proto-Germanic **kulan*; Kroonen 2013:309 Proto-Germanic **kula-* ‘coal, charcoal’; De Vries 1977:324; Onions 1966:185; Klein 1971:144; Kluge—Mitzka 1967:388; Kluge—Seebold 1989:388. Not, according to Walde (1927—1932.I:563), related to Sanskrit *jvālati* ‘to burn brightly, to blaze, to glow, to shine’, *jvāratī* ‘to be feverish’, which are assumed to be from a Proto-Indo-European **guer-* (see also Mayrhofer 1956—1980.I:450, who notes that the outside connections of *jvāratī* are uncertain). Problematic, from a phonological standpoint, is the comparison with Old Irish *gúal* ‘coal’, which is usually taken to be from **goulo-* or **geulo-*, and Welsh *glo* ‘coal’, which, according to Morris Jones (1913:108), stands for **gwloe* < Brit. **gylāuís* < **guel(ā)-*. However, these may be brought in as well if the Old Irish form is derived from a reduplicated **go-gl-o-* (< **kʼo-kʼl-o-*) or the like, with the Welsh representing unreduplicated **gl-o-* (< **kʼl-o-*).
- D. Yukaghir (Northern / Tundra) *qaalʼe-* ‘to get burnt’, *qaalʼes-* ‘to fry’, *qaalʼidere* ‘coal’, *qaalʼe* ‘partly burnt place’. Nikolaeva 2006:375.

Buck 1949:1.85 burn (vb.); 15.85 hot, warm. Illič-Svityč 1971—1984.I:332—333, no. 208, **Kajla* ‘hot; to burn’; Bomhard—Kerns 1994:453—454, no. 299.

477. Proto-Nostratic root *k'al- (~ *k'əl-):

(vb.) *k'al- 'to move, to tremble, to shake, to agitate, to stir, to mix';

(n.) *k'al-a 'agitation, trembling, perturbation, distress, confusion, uneasiness, disturbance'

- A. Proto-Afrasian *k'[a]l- 'to move, to tremble, to shake, to agitate, to stir, to mix': Proto-Semitic *k'al-ak- 'to totter, to be unsteady; to be uneasy, disquieted, apprehensive, anxious, agitated, upset, disturbed, perturbed, troubled; to be restless, sleepless' > Arabic *ḵaliḵa* 'to totter, to be unsteady; to be uneasy, disquieted, apprehensive, anxious, agitated, upset, disturbed, perturbed, troubled; to be restless, sleepless'. Proto-Semitic (reduplicated) *k'al-k'al- 'to move, to tremble, to shake, to agitate' > Arabic *ḵalkāla* 'to move, to shake, to convulse'; Hebrew *ḵilkēl* [ḵḵlḵl] 'to shake'; Geez / Ethiopic *ʾanḵalkāla* [ḵḵḵḵḵḵ] 'to move, to shake, to swing, to quake, to agitate, to make tremble, to vacillate, to totter, to stagger', *ḵʷalkʷala* [ḵḵḵḵḵḵ] 'to brandish, to agitate, to shake, to vibrate, to throw (a spear)'; Tigre *ʾanḵalkāla* 'to shake'; Tigrinya *ʾanḵalkālā* 'to tremble, to be agitated, to shake, to vibrate'; Amharic *tānḵālāḵḵālā* 'to be restless, to roam about'; Gurage (*a*)*ḵlāḵālā*, *anḵālāḵālā* 'to move, to shake, to swing'. Klein 1987:581; Leslau 1979:478 and 1987:430. Proto-Semitic (reduplicated) *k'al-k'al- 'to stir, to mix up, to confuse' > Syriac *ḵalkēl* 'to throw into confusion'; Geez / Ethiopic *ḵalkāla* [ḵḵḵḵḵḵ] 'to mix up, to confuse, to blend together, to destroy, to abolish'; Amharic *ḵālāḵḵālā* 'to mix, to stir'; Argobba *ḵālāḵḵālā* 'to mix, to stir'; Harari (*tä*)*ḵlāḵālā* 'to be mixed together, to be intermingled'; Gurage *ḵālāḵḵālā* 'to mix, to intermingle, to stir food, to knead dough'. Leslau 1963:124, 1979:478, and 1987:430. Berber: Tuareg *əyli* 'to spin'; Wargla *əlli* 'to surround, to encircle', *əyli* 'to embrace'; Kabyle *əyli* 'to fall down, to collapse, to knock down'; Tamazight *əyləy* 'to disappear, to be no longer visible, to set (sun), to drown', *aḡəlluy* 'disappearance, setting of the sun'; Mzab *əlli* 'to fall down, to collapse'. Orël—Stolbova 1995:352, no. 1524, *ḵVl- 'to spin'.
- B. Dravidian: [Tamil *kalāṅku* (*kalāṅki*-) 'to be stirred up, agitated, ruffled (as water), confused, abashed', *kalakku* (*kalakki*-) 'to confuse', *kalakkam*, *kalakku* 'being agitated (as surface of water), discomposure, distress, perplexity', *kalāvu* (*kalāvi*-) 'to be perturbed, confused, displeased, angry', *kalāṅkal* 'turbidity, muddiness, muddy water, perturbation', *kali* 'perturbation, discomposure, uneasiness, war, dissension, strife'; Malayalam *kalanṇuka* 'to be mixed, agitated, turbid (as water), embarrassed', *kalakkuka* 'to mix, to confound', *kalakku* 'muddy water', *kalacuka* 'to be disturbed'; Kota *kalg-* (*kalgy-*) 'to be mixed, confused (in relationship)', *kalk-* (*kalky-*) 'to mix'; Toda *kalx-* (*kalxy-*) 'to be stirred up (water so that it becomes muddy)', *kalk-* (*kalky-*) 'to stir up (water so that it becomes muddy)'; Kannaḍa *kalaku*, *kalāṅku* 'to agitate, to shake, to perturb, to make turbid, to stir up, to disturb', *kalakisu* 'to perturb, to stir',

kalaḍu ‘to be shaken or perturbed; to become turbid, muddy, unclean’; Koḍagu *kalang-* (*kalangi-*) ‘to be stirred up’, *kalak-* (*kalaki-*) ‘to stir up, to churn’; Tuḷu *kalaṅkuni*, *kaḷaṅkuni* ‘to be turbid’, *galjuni* ‘to confuse, to disturb’; Telugu *kalāgu* ‘to be in agitation, confusion, or trouble; to be turbid (as any liquid)’, *kalācu* ‘to stir, to agitate, to disturb, to trouble, to make turbid’; Kui *glahpa* (*glaht-*) ‘to mix by stirring, to stir, to confuse, to perplex, to confound, to cause to be confused’; Gondi *kallih-* ‘to shake (bottle, etc.)’; Kuṛux *xalaxnā* ‘to disturb, to make muddy (as water)’; Malto *qalge* ‘to disturb (as water)’. Burrow—Emeneau 1984:122, no. 1303; Krishnamurti 2003:172—173 **kal-a-nku* ‘to be stirred’, **kal-a-nkku* ‘to stir’. Tamil *kala* ‘to mix, to unite in friendship, to form friendly or matrimonial alliance with, to copulate’, *kalacu* (*kalaci-*) ‘to mingle’, *kalampakam* ‘mixture, combination’, *kalavu* (*kalavi-*) ‘to mix’, *kalaval* ‘mixing, combining’, *kalāvu* (*kalāvi-*) ‘to mix, to join together, to unite’; Malayalam *kalaruka* ‘to be mixed, united; to mix, to mingle (especially what is dry)’, *kalaval* ‘mixing, intermingling’, *kalarcca* ‘mixture’; Kota *kalv-* (*kald-*) ‘to knead, to mix (solid in water)’; Kannaḍa *kali*, *kale* ‘to join (intr.), to be mixed, to come together, to meet’, *kalaka*, *kalka* ‘mixture’, *kalasu* ‘to mix, to mingle’; Tuḷu *kalaḍuni* ‘to be mixed, kneaded’, *kalaḍāvuni* ‘to mix, to knead’, *kalapuni* ‘to mingle, to knead’; Telugu *kalayu*, *kaliyu* ‘to join, to unite, to meet, to mix, to mingle, to copulate’, *kalapu* ‘to mix, to join, to unite, to bring together, to reconcile’, *kalavuḍu* ‘to mix, to mingle’; Kolami *kalay-* (*kalayt-*) ‘to be mixed (liquids)’, *kalp-* (*kalapt-*) ‘to mix’; Naikṛi *kalay-* ‘to mix (intr.)’, *kalap-* ‘to mix (tr.)’; Koṇḍa *kali-* ‘to meet, to come together, to be mingled’, *kalp-* ‘to mix’; Kuwi *kalhali*, *kalhinai* ‘to be mixed, to mingle’, *kal-* ‘to mix together’, *kalp-* ‘to mix’, *kalh-* ‘to copulate’; Kuṛux *khalnā* ‘to dilute, to mix with water or other liquid’. Burrow—Emeneau 1984:121, no. 1299. Tamil *kalavaram* ‘confusion of mind, perturbation’, *kalavari* ‘to be confused, perturbed’; Kannaḍa *kaḷakaḷa*, *kaḷavaḷike* ‘agitation of mind, distress, confusion’, *kaḷavaḷisu* ‘to be agitated, to grieve, to be perplexed’; Koḍagu *kaḷavaḷa* ‘confusion’; Tuḷu *kaḷavaḷa* ‘anxiety, alarm, sorrow’; Telugu *kalavaramu* ‘confusion, state of being puzzled or perplexed, anxiety’, *kaḷavaḷincu* ‘to be perplexed, anxious’. Burrow—Emeneau 1984:122, no. 1306. Tamil *kalipali*, *kalipili* ‘uproar, disturbance, quarrel, wrangle’; Kannaḍa *galabe* ‘hubbub, clamor’, *galabali*, *galabili*, *galibili* ‘disorder, confusion’; Telugu *galibili*, *galaba* ‘noise, confusion, disturbance’; Tuḷu *galibili* ‘disorder, tumult, anarchy’, *galabu* ‘tumult, confusion, noise’. Burrow—Emeneau 1984:123, no. 1310.] Either here or with Proto-Nostratic **gal-* (~ **gəl-*) ‘(vb.) to stir up, to agitate, to disturb; to be stirred up, agitated, disturbed; (n.) agitation, disturbance, perturbation; quarrel, fight, battle’.

- C. Proto-Gilyak / Nivkh **klu-* ‘(to be) afraid’: Amur *iylu-dʷ* / *-kʰlu-dʷ* ‘to be afraid of’; North Sakhalin *kʰlu-t* ‘to be afraid’; East Sakhalin *ixlu(j)-d* ‘to be afraid’; South Sakhalin *klu-* ‘to be afraid’. Fortescue 2016:87.

Buck 1949:5.17 mix; 10.26 shake (vb. tr.); 16.53 fear, fright. Bomhard—Kerns 1994:450—452, no. 296.

478. Proto-Nostratic root **k'al-* (~ **k'əl-*):

(vb.) **k'al-* ‘to come into being, to be born’;

(n.) **k'al-a* ‘existence, presence, appearance, birth’

- A. Proto-Afrasian **k'al-* ‘to give birth, to beget’: Proto-Highland East Cushitic **k'al-* ‘to give birth, to beget’ > Burji *k'al-* ‘to give birth, to beget’, *k'al-a* ‘son, male child, young of animals’, *k'ala-go-* ‘to be pregnant’, *k'al-am-o* ‘birth’; Hadiyya *k'ar-* (< **k'al-*) ‘to give birth, to beget’; Kambata *k'al-* ‘to give birth, to beget (of animals)’, *k'alan-ca* ‘generation’; Sidamo *k'al-* ‘(of animals) to give birth, to beget’, *k'al-am-* ‘to breed, to multiply, to be pregnant (woman)’. Hudson 1989:70; Sasse 1982:123.
- B. Dravidian: Tamil *kala* ‘to appear, to come into being, to spread (as news)’, *kali* (vb.) ‘to grow luxuriantly, to sprout, to come into being, to appear, to increase; (n.) flourishing, prospering’; Telugu *kalugu* ‘to accrue, to happen, to occur, to be produced or caused, to be born, to be, to exist, to be able’, *kaligincu* ‘to cause, to produce, to effect, to bring about’, *kala* ‘existing, true, actual, possessing, having’, *kalimi* ‘existence, presence; possessions, wealth’; Kolami (neg.) *kal-*, *kalt-* (present-future paradigm, present-future or past in meaning) ‘possibly be, may be’, *kall-*, *kal-* ‘to do’; Konda *kalgi-* ‘to accrue (as prosperity), to happen’; Kuwi *kalg-* ‘to get, to become, to accrue’. Burrow—Emeneau 1984:121, no. 1300. (?) Pengo *karde* ‘boy, son’ (< **kalde* ?); Maṇḍa *karde* ‘boy’. Burrow—Emeneau 1984:127, no. 1371.
- C. Proto-Indo-European **k'al-* ‘pregnant, young of animals’: Gothic *kalbō* ‘calf’; Old Icelandic *kalfr* ‘calf’; Faroese *kálvur* ‘calf’; Norwegian *kalv* ‘calf’; Swedish *kalv* ‘calf’; Danish *kalv* ‘calf’; Old English *cealf* ‘calf’; Old North Frisian *calf* ‘calf’; Old Saxon *kalf* ‘calf’; Dutch *kalf* ‘calf’; Old High German *chalb* ‘calf’ (New High German *Kalb*), *kilbur* ‘ewe-lamb’; Gallo-Latin *galba* ‘fat paunch, big belly’. Orël 2003:209 Proto-Germanic **kalbaz*, 209 **kalbōn* I; Kroonen 2013:278 Proto-Germanic **kalbiz-* ‘calf’; Lehmann 1986:214 **golbh-ā/os*, **gelbhes-*; Feist 1939:305—306; Falk—Torp 1903—1906.I:346—347; Torp 1919:256 Germanic **kalbaz*; De Vries 1977:298 **geleb(h)-*; Onions 1966:136 West Germanic **kalbam*; Klein 1971:106; Kluge—Mitzka 1967:341; Kluge—Seebold 1989:348.

- D. Etruscan *clan* (pl. *clenar*) ‘son’, *clante*, *clanti*, *clanθi* ‘adoptive (?) son’; Rhaetic *kalun* ‘son’ (cf. Sverdrup 2002:107). Semantic development as in Burji *k'al-a* ‘son, male child, young of animals’, cited above.

Buck 1949:2.27 child; 2.43 child; 4.71 beget (of father); 4.72 bear (of mother); 4.73 pregnant.

479. Proto-Nostratic root **k'alʷ-* (~ **k'əʷ-*):

(vb.) **k'alʷ-* ‘to separate, to remove, to strip off or away: to pluck, tear, or pull off or out’;

(n.) **k'alʷ-a* ‘separation, removal, stripping off or away, etc.’

Derivative:

(n.) **k'alʷ-a* ‘bald spot’; (adj.) ‘bald, bare’

- A. Proto-Afrasian **k'al-* ‘to separate, to remove, to strip off or away: to pluck, tear, or pull off or out’: Proto-Semitic **k'al-af-* ‘to separate, to remove, to strip off or away: to pluck, tear, or pull off or out’ > Arabic *qalaʿa* ‘to pluck out, to tear out, to pull out, to weed out, to uproot (something); to root out, to exterminate, to extirpate (something); to take off (clothes)’; (?) Hebrew *qālaʿ* [קָלַע] ‘to uproot’; Geez / Ethiopic *qalʿa* [ቀለዐ] ‘to uncover, to bare, to open, to remove, to strip, to unveil; to be torn, to tear; to lift (curtain); to undo, to pull aside’; Tigrinya *qālʿe* ‘to disclose, to remove’; Tigre *qālʿa* ‘to disclose, to manifest, to show, to open’; Amharic *qālla* ‘to cut off (ears from the stalk)’ > ‘to open, to disclose’. Leslau 1987:426. Proto-Semitic **kal-ap-* ‘to strip, to peel’ > Akkadian *kalāpu* ‘to peel’, *qallupu* ‘peeled’, *kalpu* ‘stripped, peeled’, *qilpu* ‘rind, skin’, *qulpu* ‘rind, bark’; Arabic *qalafa* ‘to bark (a tree), to strip the bark (from a tree); to circumcise’, *qilf* ‘bark, rind (of a tree)’, *qulfa* ‘foreskin’; Harsūsi *qelfēt* ‘bark of certain trees’; Soqotri *qālifoḥ* ‘bark’; Mehri *qəlōf* ‘to peel (dry sardines)’, *qātlaḥ* ‘to be peeled, skinned’, *qələfūt* ‘bark of a tree’; Šheri / Jibbāli *qəlōf* ‘to skin, to decorticate; to skin (a dried sardine before eating it)’, *eqəlōf* ‘to skin, to decorticate; to make someone remove bark’, *qōtlaḥ* ‘to be skinned, to have the bark removed’, *qalfūn* ‘bare; husked; barkless’; Hebrew *qālaḥ* [קָלַח] ‘to peel, to shell’; Aramaic *qəlaḥ* ‘to peel, to strip’; Geez / Ethiopic *qʷalafa* [ቁለፈ] ‘to peel, to decorticate’; Gurage *qəlfī* ‘bark of a tree’. Murtonen 1989:378; Klein 1987:381; Leslau 1979:476 and 1987:427. [Orël—Stolbova 1995:345, no. 1585, **kolif-* ‘bark’.]
- B. Dravidian: Tamil *kaḷ* (*kaṭp-*, *kaṭt-*) ‘to weed, to pluck’, *kaḷai* ‘(vb.) to weed, to pull up, to pluck out, to remove, to extirpate, to exterminate; (n.) weeds’, *kaḷaiṇu* ‘weeding, stripping off, extirpation’, *kaḷaiṇaṇ* ‘one who weeds’; Malayalam *kaḷa* ‘weed, tares’, *kaḷayuka* ‘to get rid of, to abolish’; Kota *kaḷv-* (*kaḷt-*) ‘to take out or scoop out (with finger, stick, beak), to flick away dirt from liquid or semi-liquid (for example, clay)’, *kaḷ* ‘weeds’; Toda *koḷ* ‘without leaves (of a tree in winter), half dry, half green (when a

tree is being killed by stripping bark'; Kannada *kaḷe* '(vb.) to pull off, to remove, to destroy; (n.) weed', *kaḷacu* 'to remove, to pull off, to pull out, to let drop', *kaḷubu* 'weeds and grass standing in corn'; Koḍagu *kaḷe* 'weeds', (?) *kaḷe* 'to dig', *kaḷep* 'digging'; Tuḷu *kalepini*, *kalepuni* 'to strip off, to remove', *kalevuni* 'to be stripped'; Koraga *kaḷe*, *kale* 'to remove'; Telugu *kalupu* 'weeds', *kalvaṭam*, *kalsadam*, *kalsuḍu* 'the act of weeding'; Brahui *xalling* 'to uproot, to gather (vegetables, grass for fodder)'. Burrow—Emeneau 1984:128, no. 1373.

- C. Proto-Kartvelian **k'al-* 'threshing place': Georgian *k'al-o* 'threshing floor, threshing place'; Mingrelian *k'el-i* 'threshing board'. Fähnrich 2007:220 **kal-*.
- D. Proto-Indo-European **k'l-ew-bh-/k'l-ow-bh-/k'l-u-bh-* 'to separate, to remove, to strip off or away: to pluck, tear, or pull off or out; to split or tear apart': Latin *glūbō* 'to peel, to take off the rind or bark'; Greek γλύφω 'to cut, to carve out with a knife'; Old Icelandic *klauf* 'the cleft (between the toes); cloven foot', *kljúfa* 'to split, to cleave', *klofi* 'cleft, rift (in a hill); cleft stick', *klofna* 'to be cloven, to split', *klyfja* 'to split, to cleave'; Old English *clēofan* 'to split, to cleave, to separate', *gechlyfte* 'cloven'; Old Saxon *klioban* 'to split, to cleave'; Dutch *klieven* 'to split, to cleave'; Old High German *chliuban* 'to split, to cleave' (New High German *klieban*), *klūbōn* 'to pluck, to pull out' (New High German *klauben*). Rix 1998a:169 **gleubh-* 'to cut off, to split, to cleave'; Pokorny 1959:401—402 **gleubh-* 'to cut, to cleave'; Walde 1927—1932.I:661 **gleubh-*; Mann 1984—1987:276 **gleubhō*, **gloubh-* 'to strip, to split off', 282 **glubh-* 'to cut open, to split', 282 **glūbhō*, and 282 **glubhtós*; Watkins 1985:23 **gleubh-* and 2000:32 **gleubh-* 'to tear apart, to cleave'; Mallory—Adams 1997:143 **gleubh-* 'to cut off, to cut out' and 2006:377 **gleubh-* 'to cut off, to cut out'; Boisacq 1950:152 **gleubh-*; Hofmann 1966:46 **gleubh-*; Chantraine 1968—1980.I:229 **gleubh-*, **glubh-*; Frisk 1970—1973.I:315; Beekes 2010.I:278 **gleubh-*; Walde—Hofmann 1965—1972.I:610—611 **gleubhō*; Ernout—Meillet 1979:277—278; De Vaan 2008:266; Orël 2003:216 Proto-Germanic **kleubanan*; Kroonen 2013:292 Proto-Germanic **kleuban-* 'to cleave, to split'; De Vries 1977:315, 317, and 318; Onions 1966:180 **gleubh-*; Klein 1971:141; Skeat 1898:113; Barnhart 1995:130; Kluge—Mitzka 1967:374 and 377 **glūbh-* : **gleubh-*; Kluge—Seebold 1989:375 and 377. The following may ultimately belong here as well: Old Icelandic *klippa*, *klyppa* 'to clip, to cut; to shear sheep' (> Middle English *clippen* 'to clip, to shear'), *klýpa* 'to nip, to clip, to pinch'; Faroese *klípa* 'to nip, to clip, to pinch'; Norwegian *klippa* 'to cut, to clip; to shear sheep', *klypa* 'to nip, to clip, to pinch'; Swedish *klippa* 'to cut, to clip; to shear sheep'; Danish *klippe* 'to cut, to clip; to shear sheep'; Low German *klippen* 'to clip, to cut'. De Vries 1977:317 and 318; Torp 1919:286; Falk—Torp 1903—1906.I:379; Onions 1966:82; Klein 1971:243; Barnhart 1995:132; Skeat 1898:115.

Buck 1949:8.34 thresh; 8.35 threshing-floor; 9.27 split (vb. tr.); 9.28 tear (vb. tr.); 9.33 draw, pull; 12.23 separate (vb.).

480. Proto-Nostratic (Eurasian only) (n.) **k'alv-a* 'bald spot'; (adj.) 'bald, bare':

Derivative of:

(vb.) **k'alv-* 'to separate, to remove, to strip off or away: to pluck, tear, or pull off or out';

(n.) **k'alv-a* 'separation, removal, stripping off or away, etc.'

A. Proto-Indo-European **k'al-wo-*, **k'al-Ho-* 'bald, bare, naked': Old High German *kalo*, *chalo* 'bald, bare, naked' (New High German *kahl*); Old English *calu* 'bald, bare', *calwa* 'mange'; Middle Low German *kale* 'bald, bare'; Dutch *kaal* 'bald, bare'; Old Church Slavonic *golъ* 'naked'; Russian *gólýj* [голы́й] 'naked, bare', (dial.) *golotá* [го́лота] 'the poor'; Polish *goły* 'naked, bare', (obsolete) *golota* 'nakedness'; Serbo-Croatian *gól* 'bare, naked', *golota* 'nakedness'. Pokorny 1959:349—350 **gal-* 'bald, bare, naked'; Walde 1927—1932.1537—538 **gal-* (**gol-* ?); Mann 1984—1987:1615 **gal-*, **galuos* 'blank, bare, clear'; Watkins 1985:18 **gal-* and 2000:25 **gal-* 'bald, naked'; Mallory—Adams 1997:45 **gol(h_x)uos* 'bare, bald'; Derksen 2008:174—175 and 176—177 **golH-o-*; Orël 2003:209 Proto-Germanic **kalwaz*; Kroonen 2013:278 Proto-Germanic **kalwa-* 'bald'; Onions 1967:137; Klein 1971:107; Kluge—Mitzka 1967:339; Kluge—Seebold 1989:346—347. Note: Not related to words for 'head' (Proto-Nostratic [n.] **g^wal-a* 'round object: head, skull').

B. Proto-Altaic **kalv-* 'bald-headed; white spot, blaze on the forehead of an animal': Proto-Mongolian **kalža-* 'bald-headed; blaze on the forehead of an animal' > Written Mongolian *qalžan*, *qalžin* 'bald-headed; blaze on the forehead of an animal'; Khalkha *χalžan* 'bald-headed; blaze on the forehead of an animal'; Buriat *χalžan* 'bald-headed; blaze on the forehead of an animal'; Ordos *χalžan* 'bald-headed; blaze on the forehead of an animal'; Dagur *χalžin* 'bald-headed; blaze on the forehead of an animal'. Proto-Turkic **Kal'ga* 'white spot, white blaze' > Karakhanide Turkic *qašya* 'white spot, white blaze'; Turkish *kaşka* 'white spot, white blaze'; Azerbaijani *gaşga* 'white spot, white blaze'; Uzbek *qeşqe* 'white spot, white blaze'; Uighur *qaşqa* 'white spot, white blaze'; Tatar *qaşqa* 'white spot, white blaze'; Bashkir *qaşqa* 'white spot, white blaze'; Kirghiz *qaşqa*, *qačqa* 'white spot, white blaze'; Kazakh *qasqa* 'white spot, white blaze'; Noghay *qasqa* 'white spot, white blaze'. The following probably belong here as well: Tuva *χaš* 'worked thin leather'; Tofa *χaš* 'naked, napless (skin)'. Starostin—Dybo—Mudrak 2005:660—661 **kelžo* 'bald; bald spot'; Poppe 1960:17 and 86; Street 1974:15 **kal²* 'blaze on the forehead'.

Buck 1949:4.93 bald; 4.99 naked, bare. Bomhard—Kerns 1994:464—465, no. 310, **k'yalv-* 'bald; head'; Dolgopolsky 2008, no. 1061, **Kaľũ* 'bare, naked'.

481. Proto-Nostratic root *k'an- (~ *k'an-):

(vb.) *k'an- 'to get, to acquire, to create, to produce, to beget';

(n.) *k'an-a 'birth, offspring, child, young, produce'; (adj.) 'born, begotten, produced'

- A. Proto-Afrasian *k'an- 'to get, to acquire, to possess, to create, to produce': Proto-Semitic *k'an-aw/y- 'to get, to acquire, to possess, to create, to produce' > Hebrew *kānāh* [כָּנָה] 'to get, to acquire, to create, to produce'; Phoenician *kny* 'to acquire'; Biblical Aramaic *kənā* 'to acquire, to buy'; Ugaritic *kny* 'to create'; Akkadian *kanū* 'to gain, to acquire'; Amorite *kny* 'to create, to acquire' (basic stem, Qal *yaḳnī*); Arabic *kanā* 'to get, to acquire, to create'; Sabaean *kny* 'to possess, to acquire'; Geez / Ethiopic *kanaya* [ቀነላ] 'to acquire, to buy, to subjugate, to dominate, to rule, to subdue, to tame, to train, to make serve, to make toil, to reduce to servitude, to bring into bondage, to force to work, to create'. Murtonen 1989:380; Klein 1987:584; Leslau 1987:437; Zammit 2002:347. Egyptian *qn*, *qnī* 'to be strong, to make strong, to have power over, to possess, to overcome'. Hannig 1995:858; Faulkner 1962:279; Gardiner 1957:596; Erman—Grapow 1921:190 and 1926—1963.5:41—43. Berber: Tuareg *əγnu* 'to be created, to be started; to originate (from)'. Diakonoff 1992:23—24 *k_η (*k_{ny}/w) 'begetting, giving birth'.
- B. Dravidian: Tamil *kanru* 'calf, colt, young of various animals, sapling, young tree'; Malayalam *kannu* 'young of cattle (esp. buffalo calf), young plantain trees around the mother plant'; Kannaḍa *kanda* 'young child', *kandu* 'calf, young plantain trees around the mother plant'; Telugu *kandu* 'infant', *kanduvu* 'child', *kanu* 'to bear or bring forth, to beget', *kanubadi* 'produce', *kāncu* 'to bear, to produce, to bring forth', *kānupu* 'bringing forth a child'; Koṇḍa *kās-* 'to bring forth young (of human beings), to bear children'; Kuṛux *xadd* 'child, young animal or plant'; Malto *qade* 'son'; Brahui *xaning* 'to give birth to'. Burrow—Emeneau 1984:131—132, no. 1411.
- C. Proto-Indo-European *k'en-/*k'on-/*k'η- 'to beget, to produce, to create, to bring forth': Sanskrit *jānati* 'to beget, to produce, to create; to assign, to procure', *jānas-* 'race'; Avestan *zan-* 'to beget, to bear; to be born', *zana-* 'people'; Greek γίγνομαι 'to be born', γεννάω 'to beget, to bring forth, to bear', γένος 'race, stock, kin', γέννα 'descent, birth'; Armenian *cnanim* 'to beget', *cin* 'birth'; Latin *genō*, *gignō* 'to beget, to bear, to bring forth', *genus* 'class, kind; birth, descent, origin', *gēns*, *-tis* 'clan; offspring, descendant; people, tribe, nation'; Old Irish *gainethar* 'to be born', *gein* 'birth'; Welsh *geni* 'to give birth'; Gothic *kuni* 'race, generation'; Old Icelandic *kyn* 'kin, kindred; kind, sort, species; gender', *kind* 'race, kind'; Old English *cynn* 'kind, species, variety; race, progeny; sex, (grammatical) gender', *ge-cynd*, *cynd* 'kind, species; nature, quality, manner; gender; origin, generation; offspring; genitals', *cennan* 'to bear (child), to

produce'; Old Frisian *kinn*, *kenn* 'race, generation; class, kind'; Old Saxon *kunni* 'race, generation; class, kind'; Dutch *kunne* 'race, generation'; Old High German *chunni* 'race, generation', *kind* 'child; (pl.) children, offspring' (New High German *Kind*). Rix 1998a:144—146 **ġenh*₁- 'to produce, to beget, to procreate (offspring)'; Pokorny 1959:373—375 **ġen*-, **ġenā*-, **ġnē*-, **ġnō*- 'to produce'; Walde 1927—1932.I:576—578 **ġen*-, **ġenē*-, **ġenō*-; Mann 1984—1987:390—391 **ġen*- 'to beget, to be born, to happen', 391 **ġenātēr*- (-*tār*-, -*tōr*-) 'parent, kinsman', 391 **ġenātis* (**ġentis*) 'birth, race', 391—392 **ġenātos* (**ġentos*) 'born, produced, begotten', 392 **ġenis*, 392 **ġenitr*- (**ġenitēr*-, -*ōr*-) 'begetter, parent', 392 **ġenmn*- (**ġenimn*-, **ġenāmn*-) 'birth, offspring, product, yield', 392—393 **ġenos*-, -*ā*-, -*is* 'creature, man, creation', 393 **ġenos*-, -*es*- 'type, race, kind, tribe', 401 **ġnōtis* 'kinsman, acquaintance', 401—402 **ġn*-, 402 **ġnātos* (**ġntos*) 'born', 402—403 **ġn̄mos*-, -*ā* 'generation, mating', 403 **ġn̄tis* 'birth, race', 405 **ġonos*-, -*ā* 'child, offspring, birth'; Mallory—Adams 1997:46 **ġenh*₁- 'to beget a child, to be born'; Watkins 1985:19 **genā*- (also **gen*-) and 2000:26 **genā*- (also **gen*-) 'to give birth, to beget'; Gamkrelidze—Ivanov 1984.II:748 **k'en*- and 1995.I:652 **k'en*- 'to give birth; kin', I:674 **k'eno*- 'clan', I:151 **k'enH*- 'to give birth'; Mayrhofer 1956—1980.I:415 and I:416; Boisacq 1950:144 and 147—148 **ġenē*-, **ġenō*-; Frisk 1970—1973.I:296—297 and I:306—308; Chantraine 1968—1980.I:221—224; Hofmann 1966:43 and 44—45 *ġen*-, *ġenē*-; Beekes 2010.I:272—273 **ġenh*₂-; Ernout—Meillet 1979:270—273 **g'enā*-, **g'n*-; Walde—Hofmann 1965—1972.I:592 **ġntis*-, **ġenātis* (**ġntis*) and I:597—600 **ġen(ē)*-, **ġenō*-; De Vaan 2008:358 and 260—261; Orël 2003:210 Proto-Germanic **kannjanan* I, 212 **kendiz*-, 212—213 **kenpan*-, 224 **kundjan*-, 224 **kunjan*-; Kroonen 2013:279 Proto-Germanic **kanjan*- 'to bring forth', 288 **kindi*- 'kind', 288 **kinpa*- ~ **kinda*- 'child', and 310 **kunda*- 'born'; Feist 1939:516 **ġen*-; Lehmann 1986:222 **ġen*- 'to beget'; De Vries 1977:309 and 340; Onions 1966:505 **gen*-, **gon*-, **gn*- and 506; Klein 1971:402 **ġen*-; Skeat 1898:315; Vercoullie 1898:158; Boutkan—Siebinga 2005:211; Kluge—Mitzka 1967:369 **ġen*-; Kluge—Seebold 1989:370 **ġenā*-; Wodtko—Irslinger—Schneider 2008:139—153 **ġenh*₁-.

Sumerian *gan* 'to bear, to bring forth, to give birth to'.

Buck 1949:4.71 beget (of father); 4.72 bear (of mother). Bomhard—Kerns 1994:431—432, no. 275; Illič-Svityč 1971—1984.I:335—336, no. 211, **Ḫana* 'to give birth to, to be born'.

482. Proto-Nostratic (n.) *k'an-a 'jaw, cheek':

- A. Dravidian: Tamil *kannam* 'cheek, ear'; Malayalam *kannam* 'cheek, jaw'; Kannada *kanna* 'the upper cheek'. Burrow—Emeneau 1984:132, no. 1413.
- B. Proto-Indo-European *k'en-u- 'jaw, cheek': Sanskrit (with secondary *h*- instead of *j*-) *hānu-h* 'jaw, cheek'; Avestan *zānu-* 'jaw, chin'; Greek γένυς 'jaw, cheek', γνάθος, γναθμός 'jaw'; Armenian *cnaut* 'chin, jaw'; Latin *gena* 'cheek, cheeks and chin', (pl.) *genae* 'jaws'; Old Irish *gin*, *giun* 'mouth'; Welsh *gen* 'cheek, jaw', *genau* 'mouth'; Breton *gén* 'cheek', *genu*, *genaw* 'mouth'; Gothic *kinnus* 'cheek'; Old Icelandic *kinn* 'cheek'; Faroese *kinn* 'cheek'; Norwegian *kinn* 'cheek'; Swedish *kind* 'cheek'; Danish *kind* 'cheek'; Old English *cinn* 'chin'; Old Frisian *kinn* 'jaw, chin'; Old Saxon *kinni* 'jaw, chin'; Dutch *kin* 'jaw, chin'; Old High German *kinni*, *chinne* 'jaw, chin' (New High German *Kinn*); Lithuanian *žandas* 'jaw'; Latvian *zuōds* 'chin, jaw'; Tocharian A (dual) *śanw-e-m* 'jaws'. Pokorny 1959:381—382 **ġenu-* 'jaw, cheek'; Walde 1927—1932.I:587 **ġ(h)enu-s*; Mann 1984—1987:391 **ġendh-* 'wedge, wedge-shape, angle, jaw', 391 **ġenes-* 'chin', 393—394 **ġenus* (**ġenuā*, **ġenāuā*, **ġenā*) 'jaw, jowl, angle of the face, angle, wedge', 402 **ġnadhōs* (**ġandhos*) 'jaw'; Gamkrelidze—Ivanov 1984.I:183 **k'enu-s* and 1995.I:157 **k'enu-s* 'jaw, chin'; Watkins 1985:19 **ġenu-* and 2000:26 **ġenu-* 'jawbone, chin'; Mallory—Adams 1997:322 **ġenu-* 'jaw', **ġónh_adh-o-s* and **ġnh_adh-o-s* 'jaw'; Mayrhofer 1956—1980.III:574—575; Beekes 2010.I:267 **ġenu-* and I:279; Hofmann 1966:43 and 46 **ġenādh-*; Chantraine 1968—1980.I:215—216 and I:230 **gon(ə)-dh-*; Boisacq 1950:144; Frisk 1970—1973.I:298; Ernout—Meillet 1979:269—270; De Vaan 2008:257—258; Walde—Hofmann 1965—1972.I:589—590; Kroonen 2013:288 Proto-Germanic **kinnu-* 'cheek'; Orël 2003:212 Proto-Germanic **kennuz*; Feist 1939:312 **ġen-u-*; Lehmann 1986:218—219 **ġen-u-*; De Vries 1977:309 **ġenw-* : **ġenwés*; Falk—Torp 1903—1906.I:362; Torp 1919:267—268; Onions 1966:170 **ġenw-*; Klein 1971:131; Vercoullie 1898:136; Kluge—Mitzka 1967:369—370 **ġenu-*; Kluge—Seebold 1989:370 **ġenu-*; Van Windekens 1976—1982.I:470—471 **ġēnu-*; Smoczyński 2007.1:773—774; Fraenkel 1962—1965.II:1289—1290; Derksen 2015:512 **ġonH-d^{ho}-* (**ġon-do-* ?).

Buck 1949:4.207 jaw; 4.208 cheek; 4.209 chin. Bomhard 1996a:219—220, no. 626.

483. Proto-Nostratic (n.) *k'an-a 'thickness, density, fatness, abundance'; (adj.) 'thick, dense, fat, abundant, much':

- A. Afrasian: Egyptian *qn-w* 'much, many; very great', *qn*, *qny* 'to be or become fat', *qn*, *qny* 'fat'; Coptic (Sahidic) *knne* [KNNĖ], (Bohairic) *keni*

[**kɛni**] ‘(vb.) to be fat, sweet; (n.) fatness, sweetness’. Hannig 1995:858; Faulkner 1962:279; Erman—Grapow 1921:190 and 1926—1963.5:40, 5:41, 5:46—47; Vycichl 1983:83; Černý 1976:59.

- B. Dravidian: Tamil *kaṇa* ‘to be heavy, stout, abundant’, *kaṇam* ‘thickness, heaviness’, *kaṇati* ‘thickness, heaviness, gravity’, *kaṇappu* ‘being stout’, *kaṇai* ‘(vb.) to be crowded, intense; (n.) density, abundance’, *kaṇaivu* ‘closeness, thickness’, *kaṇal* (*kaṇalv-*, *kaṇanr-*) ‘to be close, crowded, densely packed’; Malayalam *kanam* ‘compact, hard’, *kanaka* ‘to become solid, hard, heavy’; Toda *ken* ‘densely (of shade) (in songs)’. Burrow—Emeneau 1984:130, no. 1404.
- C. Yukaghir (Northern / Tundra) *qad’iraa* (< **qanč’ir*) ‘enough’, *qad’ir* ‘so, finally; intensifying marker’. Nikolaeva 2006:378.

Buck 1949:12.63 thick (in dimension); 12.64 thick (in density); 13.15 much; many; 13.18 enough (adj. or adv.). Bomhard 1996a:220—221, no. 627.

484. Proto-Nostratic root **k’an-* (~ **k’an-*):

(vb.) **k’an-* ‘to pound, to beat, to strike’;

(n.) **k’an-a* ‘knock, strike, cuff, thump; mallet, club, cudgel, truncheon’

- A. Afrasian: Egyptian *qn* ‘to beat’, (reduplicated) *qnqn* ‘to beat, to pound up (medicaments), to beat out, to flatten out’, *qnqnyt* ‘mallet’. Hannig 1995:858 and 861; Faulkner 1962:280; Erman—Grapow 1921:191 and 1926—1963.5:44 and 55—56; Gardiner 1957:596.
- B. Proto-Indo-European (**k’en-/k’on-/k’n-*) ‘to pound, to beat, to strike’: Old Icelandic *knía* ‘to knock, to strike’, *kneyfa* ‘to quaff’, *knoka* ‘to knock, to thump’, *knosa* ‘to bruise, to beat’, *knúska* ‘to knock, to ill-treat’, *knylla* ‘to beat, to strike’, *knyja* ‘to knock’; Old English *cnocian* ‘to knock (at the door); to pound (in a mortar)’, *cnossian* ‘to dash, to strike’, *cnūwian* ‘to pound (in a mortar)’, *cnyssan* ‘to beat against, to dash against, to toss (storm...ship); to defeat, to crush (in battle), to overcome (temptation); to oppress, to trouble, to afflict’, *cnyllan* ‘to strike, to knock; to toll a bell’; New High German *knuffen* ‘to cuff, to pummel, to thump; to push, to nudge, to shove’, *Knüppel* ‘club, cudgel, truncheon; sculptor’s or carpenter’s mallet’, *Knebel* ‘club, cudgel, stick’, *Knüttel* ‘cudgel, club, big stick’; Polish *gnębić* ‘to oppress’. Watkins 1985:19 **gen-* and 2000:26 **g(e)n-* ‘to compress into a ball’; De Vries 1977:321, 322, and 323; Orël 2003:219 Proto-Germanic **knusjanan* ~ **knusōjanan*, 219 **knuzljanan*, 219 **knūwjanan*; Kroonen 2013:297 Proto-Germanic **knūjan-* ‘to press’; Kluge—Mitzka 1967:381, 385, and 385—386; Kluge—Seebold 1989:382, 385, and 386; Onions 1966:508; Klein 1971:404.
- C. (?) Chukchi-Kamchatkan: Proto-Chukotian **kænciq* ‘whip’ > Chukchi *kenciq* ‘whip’; Koryak *kenciq* ‘dog whip’. Fortescue 2005:132. These forms may be loans from Eskimo.

- D. (?) Proto-Gilyak / Nivkh **kant* (or **qant*) 'stick': Amur *kʰəndʷ* 'stick, cane, crutch'; North Sakhalin *kʰət* 'stick'; East Sakhalin *kad* 'kind of ski pole'; South Sakhalin *qant* 'walking stick'. Fortescue 2016:83.

Buck 1949:9.21 strike (hit, beat).

485. Proto-Nostratic root **k'ay-* (~ **k'əy-*):

(vb.) **k'ay-* 'to bend, twist, turn, or tie together';

(n.) **k'ay-a* 'wreath, rope, cord, fiber, tie, band, string'

Derivative:

(n.) **k'ay-a* 'knot, knob, joint'

- A. Proto-Afrasian **k'ay-* 'to bend, twist, turn, or tie together': Egyptian *qn* 'to weave', (pl.) *qnyw* 'weavers, mat-makers', *qn* 'mat'. Hannig 1995:859 and 860; Faulkner 1962:279; Gardiner 1957:596; Erman—Grapow 1926—1963.5:48 and 50. Berber: Tuareg *əqqən* 'to tie, to attach; to be tied', *ayən* 'cord'; Nefusa *əqqən* 'to tie, to attach'; Ghadames *əqqən* 'to tie, to attach'; Mzab *əqqən* 'to tie, to attach', *uqun* 'bond, string, strap'; Wargla *əqqən* 'to tie, to attach; to be tied, attached', *yan* 'bond, cord, string, strap'; Kabyle *əqqən* 'to tie, to attach, to shackle, to close the door'; Tamazight *qqən* 'to attach, to tie, to bind; to be attached, tied, bound'; Tashelhiyt / Shilha *əqqən* 'to tie, to close (the door, the eyes, etc.)', *asyun* 'cord'. West Chadic **k'anu-* 'to tie' > Tsagu *kun-* 'to tie'; Boghom *kan* 'to tie'; Buli *kənnu* 'to tie'. Central Chadic **kanwa-* 'to plait' > Lame *kənwā* 'to plait'; Mesme *kan* 'to plait'. East Chadic **kwan-* (< **kanwa-*) 'to twist, to plait' > Tumak *koŋ* 'to twist'; Mokilko *kini* 'to plait'. Orël—Stolbova 1995:336, no. 1546, **kan-* 'to plait'.
- B. Dravidian: Tamil *kaṇṇi* 'wreath, garland, neck-rope for bullock, rope', *kaṇṇu* (*kaṇṇi-*) 'to be attached to, to be fastened to'; Kota *kayn* 'yoke-rope for bullock'; Kannaḍa *kaṇṇi* 'rope, cord, neck-rope'; (?) Tuḷu *kaṇṇi* 'fiber'; Telugu *kāne-tāḍu* 'neck-rope (of calves, oxen)'; Konda *kane* 'a rope used to fasten cattle'. Burrow—Emeneau 1984:111, no. 1184. Tamil *kaṇṇi* 'snare, noose, net, knot, tie'; Malayalam *kaṇi* 'snare, gin', *kaṇikka* 'to lay a snare', *kaṇṇi* 'link of a chain, mesh of a net', *keṇi* 'snare, trap, stratagem', *keṇikka* 'to entrap'; Kannaḍa *kaṇi* 'knot, tie', *kaṇaya*, *kaṇe* 'the knot which fastens a garment around the loins', *keṇi* 'trick'; Koḍagu *kēṇi* 'bird-trap (bent sapling and noose with bait); trickiness, cunning', *kēṇi* (*kēṇiv-*, *kēṇiṇj-*) 'to get stuck, caught'; (*kēṇip-*, *kēṇic-*) 'to entangle, to get into trouble'; Tuḷu *keṇi* 'stratagem', *kiṇi* 'wit, cunning'. Burrow—Emeneau 1984:111, no. 1183.
- C. Proto-Indo-European (**k'en-/k'on-*)**k'n-* 'to bend, twist, turn, or tie together': Greek γνάμπτω 'to bend', γναμπτός 'bent, curved'; Old Icelandic *kneikja* 'to bend backwards with force', *knytja* 'to knit or tie together', *knýta* 'to knit, to fasten by a knot, to bind, to tie'; Swedish *kneka*

‘to be bent’; Old English *cnyttan* ‘to tie with a knot’, *cnyttels* ‘string, sinew’; Middle Low German *knutten* ‘to tie’; New High German *knicken* ‘to crease, to bend, to fold, to crack, to break, to split, to snap, to burst’, *knütten* (dial.) ‘to knit’. Pokorny 1959:370—373 **gen-* ‘to compress into a ball’; Walde 1927—1932.I:580—583 **gen-*; Mann 1984—1987:284 **gnabh-* ‘to bend, to twist’, 284 **gnabhēlos, -om* (**gnabhilo-*) ‘twist; strainer, tensile instrument’, 284 **gnambhijō* ‘to bend, to strain’; Watkins 1985:19 **gen-* and 2000:26 **g(e)n-* ‘to compress into a ball’; Boisacq 1950:152; Frisk 1970—1973.I:316; Chantraine 1968—1980.I:230; Hofmann 1966:46; Beekes 2010.I:279; Orël 2003:219 Proto-Germanic **knut(t)janan* ~ **knut(t)jōjanan*; Kroonen 2013:297 Proto-Germanic **knikkōn-* ‘to snap, to fold’; De Vries 1977:321 and 323; Onions 1966:508; Klein 1971:404; Kluge—Mitzka 1967:382; Kluge—Seebold 1989:383.

- D. Chukchi-Kamchatkan: Proto-Chukotian **kæŋ(æt)-* ‘to bend’ > Chukchi *keŋet-* ‘to bend, to bow’, *rəkeŋew-* ‘to bend (tr.)’, *kaŋat-γəryən* ‘bend in river’, *keŋu-neŋ* ‘staff, stick’, *keŋi-kupren* ‘drag-net’; Kerek *kaŋa(a)t-* ‘to twist, to wind, to bend, to lean forward’, *kaŋəiləpə-lkan* ‘hunched’, *kaŋəikan* ‘hook for hanging kettle’; Koryak *kaŋat-* ‘to bend’, *jə-kaŋ-av-* ‘to bend (tr.)’, *kaŋu-naŋ* ‘hook’, *kaŋat-γəjŋən* ‘bend, elbow’, (Kamen) *kanyati-nyi* ‘drag-net’; Alyutor *kaŋat-* (Palana *keŋet-*) ‘to bend’. Fortescue 2005:132.

Sumerian *gan* ‘band, tie’.

Buck 1949:9.14 bend (vb. tr.); 9.16 bind (vb. tr.); 10.14 wind, wrap (vb.).

486. Proto-Nostratic (n.) **k’ay-a* ‘knot, knob, joint’:

Derivative of:

(vb.) **k’ay-* ‘to bend, twist, turn, or tie together’;

(n.) **k’ay-a* ‘wreath, rope, cord, fiber, tie, band, string’

- A. Dravidian: Tamil *kaŋ* ‘joint in bamboo or cane’, *kaŋu* ‘joint of bamboo, cane, etc., knuckle, joint of the spine, vertebra’, *kaŋukkai* ‘wrist’, *kaŋukkāl* ‘ankle’; Malayalam *kaŋ*, *kaŋu*, *kaŋŋu*, *kaŋpu* ‘joint in knot or cane’, *kaŋavu* ‘node of bamboo, cane, etc.’, *kaŋakkai*, *kaŋaŋkai* ‘wrist’, *kaŋakkāl*, *kaŋaŋkāl* ‘ankle’, *kaŋippu* ‘articulation of limbs’; Kota *kaŋ* ‘joint of bamboo’; Toda *koŋ* ‘joint of bamboo or cane’; Kannaḍa *kaŋ* ‘joint in reeds, sticks, etc.’, *gaŋalu* ‘knuckle of the fingers, joint or knot of any cane’, *gaŋike* ‘knot or joint’; Tulu *kāra kaŋŋu* ‘ankle’; Telugu *kanu*, *kannu* ‘joint in cane or reed’, *kaŋupu*, *gaŋupu* ‘joint, knot, node (of bamboo, sugarcane, etc.)’; Kolami *gana* ‘knot in tree’; Naikri *khan* ‘joint in bamboo’; Gondi *gana*, *ganakay* ‘wrist’; Kuṛux *xann* ‘place on bamboo or cane where side shoot was cut away’; Brahui *xan* ‘knot in wood’. Burrow—Emeneau 1984:110, no. 1160.

- B. Proto-Indo-European (**k'en-/k'on-/*)**k'n-* 'knot, knob': Old Icelandic *knappr* 'knob', *knúi* 'knuckle', *knúta* 'knuckle-bone, joint-bone', *knútr* 'knot', *knýttr* 'knotted, crippled', *knykill* 'small knot', *knöttr* 'ball'; Norwegian *knast* 'knot'; Swedish *knagg* 'knot'; Old English *cnotta* 'knot'; Middle English *cnap* 'knob', *cnag* 'knot, peg', *cnarre* 'knot', *cnarri* 'knotty, gnarled', *cnobbe* 'knob', *cnobbel* 'knob', *cnop* 'knob', *cnoppe* 'knob, bud', *cnorre* 'knot, excrescence', *cnottel* 'little knot', *cnotti* 'knotty', *cnottien* 'knot', *cnurned* 'gnarled, knotty', *cnokil* 'knuckle'; Middle Dutch *knolle* 'clod, ball'; Middle Low German *knobbe* 'knot, knob, bud', *knotte* 'knot, knob', *knökel* 'knuckle'; Middle High German *knolle* 'clod, ball', *knotze* 'knot, knob'; New High German *Knast* 'knot', *Knorren* 'knot, knotty protuberance', *Knopf* 'knot, knob, button', *Knolle* 'clod, lump; knot, knob, protuberance; bulb, tuber', *Knöchel* 'knuckle, ankle (bone)', *Knochen* 'bone', *Knoten* 'knot', *Knubbe* 'knot'. Watkins 1985:19 **gen-* and 2000:26 **g(e)n-* 'to compress into a ball'; Orël 2003:219 Proto-Germanic **knuttōn*, 219 **knūtaz*; Kroonen 2013:298—299 Proto-Germanic **knūpan-* ~ **knuttan-* 'knot'; De Vries 1977:320, 322, and 323; Onions 1966:508 and 509; Klein 1971:404; Kluge—Mitza 1967:383—384, 384, and 385; Kluge—Seebold 1989:384 and 385.
- C. (?) Chukchi-Kamchatkan: Proto-Chukotian **kæŋkæl* 'tip of pole for driving reindeer' > Chukchi *keŋkel* 'tip of pole for driving reindeer'; Kerek *kaŋkali* 'tip of pole for driving reindeer'; Koryak *kaŋkal* 'tip of pole for driving reindeer'; Alyutor *kaŋkal(i)* 'tip of pole for driving reindeer'. Fortescue 2005:133.

Buck 1949:4.16 bone; 9.192 knot (sb.).

487. Proto-Nostratic root **k'an^y*- (~ **k'an^y*-):

(vb.) **k'an^y*- 'to observe, to perceive';

(n.) **k'an^y*-a 'the act of observing, perceiving; that which observes, perceives: eye; perception, observation, recognition, comprehension'

- A. Proto-Afrasian **k'an-* 'to observe, to perceive': East Cushitic: Burji (prefix verb) *ak'an-d-*, *ak'an-ʔ-* (v. mid.) 'to learn', *ak'an-s-* (v. caus.) 'to teach'; Somali -*qiin-/qaan-* 'to know'; Yaaku *qeen-* 'to know'. Sasse 1982:25.
- B. Dravidian: Tamil *kaṇ* 'eye, aperture, orifice, star of a peacock's tail'; Malayalam *kaṇ*, *kaṇṇu* 'eye, nipple, star in a peacock's tail, bud'; Kota *kaṇ* 'eye'; Toda *koṇ* 'eye, loop in string'; Kannada *kaṇ* 'eye, small hole, orifice'; Koḍagu *kaṇṇi* 'eye, small hole, orifice'; Tuḷu *kaṇṇu* 'eye, nipple, star in peacock's feather, rent, tear'; Telugu *kanu*, *kannu* 'eye, small hole, orifice, mesh of net, eye of a peacock's feather'; Kolami *kan* 'eye, small hole in ground, cave'; Naikri *kan* 'eye, spot in a peacock's tail'; Naiki (of Chanda) *kan* 'eye'; Parji *kan* 'eye'; Gadba (Ollari) *kaṇ* 'eye', (Salur) *kanu* 'eye'; Gondi *kan* 'eye'; Konda *kaṇ* 'eye'; Pengo *kaṇga* 'eye'; Maṇḍa *kan*

‘eye’; Kui *kanu* ‘eye’; Kuṛux *xann* ‘eye, eye of a tuber’, *xannērnā* ‘(of newly-born babies or animals) to begin to see, to have the use of one’s eyesight’; Malto *qanu* ‘eye’; Brahui *xan* ‘eye, bud’. Burrow—Emeneau 1984:109, no. 1150(a); Krishnamurti 2003:100 **kaṇ* ‘eye’. Tamil *kāṇ* (*kāṇp-*, *kaṇṭ-*) ‘(vb.) to see, to consider, to investigate, to appear, to become visible; (n.) sight, beauty’, *kāṇkai* ‘knowledge’, *kāṇpu* ‘seeing, sight’, *kaṇṇu* (*kaṇṇi-*) ‘to purpose, to think, to consider’; Malayalam *kāṇuka* ‘to see, to observe, to consider, to seem’, *kāṇikka* ‘to show, to point out’; Kota *kaṇ-/ka-ṇ-* (*kaḍ-*) ‘to see’; Toda *ko-ṇ-* (*koḍ-*) ‘to see’; Kannaḍa *kāṇ* (*kaṇḍ-*) ‘(vb.) to see, to appear; (n.) seeing, appearing’, *kāṇike*, *kāṇke* ‘sight, vision, present, gift’, *kaṇi* ‘sight, spectacle, ominous sight, divination’; Koḍagu *ka-ṇ-* (*ka-mb-*, *kaṇḍ-*) ‘to see, to seem, to look’; Telugu *kanu* (allomorph *kān-*), *kāncu* ‘to see’; Kolami *kaṇḍt*, *kaṇḍakt* ‘seen, visible’; Parji *kaṇḍp-* (*kaṇḍt-*) ‘to search, to seek’; Naikṛi *kank er-* (< **kaṇḍk-* or the like) ‘to appear’; Kuṛux *xannā* ‘to be pleasant to the eye, to be of good effect, to suit well’; Brahui *xaning* ‘to see’. Krishnamurti 2003:95 and 196 **kāṇ* (< **kaHṇ-*) ‘to see’; Burrow—Emeneau 1984:134—135, no. 1443.

- C. Proto-Indo-European **k'en(H)*-/ **k'on(H)*-/ **k'ṇ(H)*-, **k'n-oH-* (> **k'nō-*) ‘to perceive, to recognize, to understand, to know’: Sanskrit *jānāti* ‘to know, to have knowledge, to become acquainted with, to experience, to recognize, to perceive, to apprehend, to understand, to ascertain, to investigate’, *jñā-tá-h* ‘known, acquainted, apprehended, comprehended, perceived, understood’, *jñā-tí-h* ‘knowledge’; Khowār *noik* (3rd sg. *naūr*) ‘to become visible, to appear’; Avestan *zan-* ‘to know’; Greek γι-γνώσκω ‘to learn, to know, to perceive, to discern, to distinguish; to observe, to form a judgment on (a matter), to judge or think (so and so)’, (aorist) ἔγνων ‘I understand’, γινώσκω ‘perceived, understood, known’; Armenian (aorist) *can-eay* ‘knew’, *an-can* ‘unknown’; Albanian *njoh* ‘to know’; Latin *nōscō* (old form *gnōscō*) ‘to become acquainted with, to get knowledge of; (in the perfect tenses) to be acquainted with, to know’; Gothic *kannjan* ‘to make known’, *kunnan* ‘to know’, *kunþs* ‘known’; Old Icelandic *kenna* ‘to know, to recognize’, *kunna* ‘to know, to understand’, *kunnr*, *kuðr* ‘known’; Old English *cnāwan* ‘to know, to understand, to recognize’, *cūþ* ‘known’; Old Frisian *kenna*, *kanna* ‘to know, to recognize’, *kunna* ‘to know’, *kūth* ‘known’; Old Saxon *ant-kennian* ‘to recognize’, *kunnan* ‘to know’, *kūth* ‘known’; Old Dutch *kund* ‘known’; Dutch *kennen* ‘to know, to recognize’, *kunnen* ‘to know how to, to be able’; Old High German *kunnan* ‘to know how to, to be able’ (New High German *können*), *bi-chnāan*, *ir-chnāan* ‘to know’, *ar-chennan* ‘to recognize’ (New High German *kennen*), *kund* ‘known’ (New High German *kund*); Lithuanian *žinaũ*, *žinóti* ‘to know’; Old Church Slavic *znajō*, *znati* ‘to know’; Tocharian A *knā-* ‘to know’, A *kñā-* in (pres. act.) *kñasäšt* ‘to be acquainted with’, A *ā-knats*, B *a-knātsa* ‘unknown’; Hittite (3rd sg. pres. act.) *ga-ni-eš-zi* ‘to recognize, to discern, to identify; to

acknowledge'. Rix 1998a:149—150 **ġneh*₃- 'to perceive, to recognize, to know'; Pokorny 1959:376—378 **ġen*-, **ġenə*-, **ġnē*-, **ġnō*- 'to perceive, to recognize, to know'; Walde 1927—1932.I:578—580 (**ġen*-), **ġenē*-, **ġenō*-; Mann 1984—1987:399—400 **ġnō*-mi (**ġn*-, **ġnōiō*-, **ġnəu*-, **ġnōu*-) 'to know', 400—401 **ġnōskō* (**ġn*-) 'to know, to get to know', 401 **ġnōstis* (**ġn*-) 'knowledge, recognition, declaration', 401 **ġnōu*- (**ġnōum*-, **ġnōuəi*-) 'to know', 402 **ġnāu*- theme of nouns and adjectives of general sense 'knowing', 402 **ġnətos*-, **ġnōtos* 'known', 402 (**ġnəu*-), 402 (**ġn*- 'knowledge'), 403 **ġntis*-, **ġntus* 'knowledge', **ġntos* 'known'; Watkins 1985:23—24 **gnō*- (contracted from **gnoə*-) and 2000:32—33 **gnō*- (oldest form **ġneə*₃-, colored to **ġnoə*₃-, contracted to **ġnō*-) 'to know'; Mallory—Adams 1997:336—337 **ġneh*₃- 'to know, to be(come) acquainted with'; Gamkrelidze—Ivanov 1984.II:804—805 **k'en*-/**k'n*-, I:171 **k'n-oH*^o- > **k'n-oHu*-, I:175 **k'enH*-/**k'anH*- > **k'ḡH*- and 1995.I:147 **k'n-oH*^o- > **k'n-oHw*- 'to know', I:151 **k'enH*- 'to know', I:705, I:774, I:776 **k'en*-/**k'n*- 'to know'; Mayrhofer 1956—1980.I:429, I:446, and I:446—447; Boisacq 1950:148—149 **ġenē*-, **ġenō*-; Frisk 1970—1973.I:308—309 **ġnō*-; Hofmann 1966:45 **ġnēiō*-, **ġnō-iō*-, Chantraine 1968—1980.I:224—225; Beekes 2010.I:273 **ġneh*₃-; Walde—Hofmann 1965—1972.II:176—177 **ġenē*-, **ġenō*-; **ġnō-tós*-, **ġnō-tos*-, Ernout—Meillet 1979:445—446 **g'enə*-, **g'nē*-, **g'nō*-; De Vaan 2008:413—414; Adams 1999:3 and 333; Van Windekens 1976—1982.I:159 **ḡġnō-tjā* and I:224—225 **ġnō*-; Orël 1998:305 and 2003:210 Proto-Germanic **kanna*, 210 **kanningō*, 210 **kannjanan*, 218 **knēanan*, 224 **kunnēnan*, 224 **kunpaz*, 224 **kunþjan*, 224 **kunþjanan*; Kroonen 2013:279—280 Proto-Germanic **kannjan*- 'to make known', 295 **knēan*- 'to know', 311—312 **kunnan*- 'to know (how), to be able', and 312 **kunþa*- 'known'; Feist 1939:307 **ġen*-, 316—317 **ġen*-, **ġenē*-, **ġenō*-, and 317; Lehmann 1986:215 **ġen*- 'to know', 222—223, and 223; De Vries 1977:306 and 334; Onions 1966:139—140 **gn*-, **gnē*-, **gnō*-, 503, and 508 **gnē*-, **gnō*-; Klein 1971:109 **genē*-, **genō*- and 404 **genē*-, **genō*-; Kluge—Mitzka 1967:364, 392 **ġen*-, and 412 **ḡnto*-; Kluge—Seebold 1989:366, 398, and 419 **ḡnə-to*-; Boutkan—Siebinga 2005:207—208; Puhvel 1984— .4:42—46 **ġnē*-, **ġnō*-; Kloekhorst 2008b:434—436; Smoczyński 2007.1:768 **ġneh*₃-C; Fraenkel 1962—1965.II:1310—1311; Derksen 2008:546 **ġneh*₃- and 2015:519—520 **ġn-ne/n-h*₃- (> **ġnh*₃-ne/n-h₃-); Wodtko—Irslinger—Schneider 2008:154—162 **ġneh*₃-.

Buck 1949:4.21 eye; 15.51 see; 17.17 know. Illič-Svityč 1971—1984.I:296—297, no. 163, **kEN*_A 'to know'; Bomhard—Kerns 1994:449—450, no 295; Blažek 1989c:206.

488. Proto-Nostratic (n.) **k'aph-a* and/or **k'eph-a* 'jaw, jawbone':

Note: The Altaic cognates seem to point to Proto-Nostratic **k'eph-a*, while the Indo-European cognates can be derived from either **k'aph-a* or **k'eph-a*.

- A. Dravidian: Tamil *kavul* 'cheek, temple or jaw of elephant'; Malayalam *kaviḷ* 'cheek'; Tuḷu *kaṭṭu* 'the cheek', *kavunḍrasa*, *kavunḍrasa* 'cancer of the cheek'; Parji *gavla*, (metathesis in) *galva* 'jaw'; (?) Telugu *gauda* 'the cheek'; (?) Kui *kūlu* 'cheek'. Burrow—Emeneau 1984:124, no. 1337. Either here or with Proto-Nostratic **q'ab-a* 'jaw'.
- B. Proto-Kartvelian **(ni-)k'ap-* 'lower jaw, chin': Georgian *nik'ap-*, *ni-k'ap-* 'chin'; Mingrelian *nək'ə* (< **nuk'u* < **nu-k'up*) 'chin'; Laz *nuk'u* (< **nuk'up*), *nunk'u* 'chin'; Svan *ki-k'p'a* 'chin', *k'ap'rāj* 'lower jaw, chin'. Schmidt 1962:128 (according to Schmidt, *p* in Svan is due to assimilation with *k*); Klimov 1964:148 **ni-kaṭ-* and 1998:142 **ni-kaṭ-* 'chin'; Fähnrich—Sardshweladse 1995:184 and 265 **kaṭ-*; Fähnrich 2007:220—221 **kaṭ-*.
- C. Proto-Indo-European **k'eph-/k'oph-* 'jaw, mouth': Old Icelandic *kjaptr* (older forms: *kjöptr*, *keyptr*) 'mouth, jaw'; Faroese *kjaftur* 'jaw'; Norwegian *kjeft* 'jaw'; Swedish *käft* 'jaw'; Danish *kjæft* 'jaw'; Old English *cēafl* 'jaw'; Low German *keve* 'jaw'; New High German *Kiefer* 'jaw, jawbone'; Avestan *zafarə*, *zafan-* 'mouth (of evil beings)'. Pokorny 1959:382 **gēp(h)-*, **gēbh-* 'jaw, mouth; to eat'; Walde 1927—1932.I:570—571 **gēp(h)-*, **gēbh-*; Mann 1984—1987:389 **gēbh-* (**gēbhl-*, **gōbh-*) 'jaw'; Watkins 1985:19 **gēp(h)-*, **gēbh-* and 2000:26 **gēp(h)-* (also **gēbh-*) 'jaw, mouth'; Mallory—Adams 2006:255 **gēP-* 'to eat, to masticate'; Orël 2003:212 Proto-Germanic **kebran*; De Vries 1977:311; Falk—Torp 1903—1906.I:369 Germanic base form **kebut-* ~ **kefut-*; Torp 1919:271—272; Onions 1966:498; Klein 1971:396; Kluge—Mitzka 1967:367 **gēph-*; Kluge—Seebold 1989:368.
- D. Yukaghir (Southern / Kolyma) *qappu*: 'Adam's apple, larynx'. Nikolaeva 2006:379.
- E. Proto-Altaic **kēpha* 'jaw, face': Proto-Tungus **kepe* 'jaw, gills' > Evenki *kewe* 'jaw'; Lamut / Even *kewē* 'jaw'; Ulch *kepi(n)* 'gills; boards (on boat's front)'; Oroch *kepi* 'boards (on boat's front)'; Nanay / Gold *kepi* 'gills; boards (on boat's front)'. Proto-Mongolian **kepe* 'ornament, form, example' > Written Mongolian *kege(n)* 'pattern, design, ornament'; Khalkha *χē* 'ornament, form, example'; Buriat *χē* 'ornament, form, example'; Kalmyk *kē* 'ornament, form, example'. Proto-Turkic **gēp* 'form, example, image' > Old Turkic (Old Uighur) *kep*, *kip* 'form, example, image'; Karakhanide Turkic *keb*, *kib* 'form, example, image'; Turkmenian *gāp* 'form, example, image'; Kirghiz *kep* 'form, example, image'; Noghay *kep* 'form, example, image'; Tuva *χep* 'form, example, image'; Chuvash *kap* 'form, example, image'; Yakut *kiep* 'form, example,

image'. Starostin—Dybo—Mudrak 2003:668 **kēp'a* 'face, shape'. Starostin—Dybo—Mudrak note: "...the original meaning is 'face' or 'jaws', with a more abstract meaning 'shape' in the Western area (a very usual semantic development)".

Buck 1949:4.204 face; 4.207 jaw; 4.24 mouth; 4.58 bite (vb.). Bomhard—Kerns 1994:444, no. 289; Illič-Svityč 1971—1984.I:313—315, no. 190, **kaba/* **kap'a* 'to seize'; Dolgopolsky 2008, no. 914, **kep[H₂]/V* (= **kepʕV* ?) 'jaw, chin'.

489. Proto-Nostratic (n.) **k'ap^h-a* 'nape of the neck, back of the head':

- A. Proto-Afrasian **k'ap-* 'nape of the neck, back of the head': Proto-Semitic **k'ap-aw/y-* 'nape of the neck, back of the head' > Arabic *kaḥan* 'nape; occiput, back of the head; back; reverse; wrong side (of a fabric)', *kaḥān* 'nape; occiput; back of the head'; Ḥarsūsi *keḥē* 'back'; Šheri / Jibbāli *keḥē* 'back, behind'; Mehri *kaḥē* 'back'. Berber: Tuareg *əɣəf* 'head'; Siwa *axfi* 'head'; Nefusa *iɣf* 'head'; Ghadames *iɣəf* 'head'; Mzab *iɣəf*, *ixəf* 'head'; Wargla *iɣəf*, *ixəf* 'head'; Tamazight *ixf* 'head'; Riff *ixf* 'head'; Kabyle *ixəf* 'head, summit'. East Chadic **kwap-* (< **kapwa-*) 'occiput' > Dangla *kopo* 'occiput'; Migama *kupo* 'occiput'; Jegu *kofo* 'occiput'. Orël—Stolbova 1995:337, no. 1548, **kap-* 'head, occiput'.

Comment: Militarëv—Kogan (2000.I:148—149, no. 164) reconstruct Proto-Semitic (n.) **kaḥy-* 'occiput, back of the head' and Proto-Afrasian **kaḥay-* 'occiput, back of the head'.

- B. Proto-Kartvelian **k'ep-* 'nape of the neck, back of the head': Georgian *k'epa* 'back of the head'; Mingrelian *k'ope*, *k'op'e* 'crown (of the head)'; Svan *k'ak'äp* 'nape of the neck'.
- C. (?) Eskimo-Aleut: Proto-Inuit **kapəlruq* or **kapəlruk* 'neck part of an animal' (?) > Seward Peninsula Inuit *kavirluk* 'upper chest'; Western Canadian Inuit (Car Baker Lake) *kapilruq* 'front part of caribou'; Greenlandic Inuit *kapirluk* 'backbone of bird'; North Greenlandic / Polar Eskimo *kapirluk* 'front part of salmon behind gills; part of backbone (e.g., seal's)'. Fortescue—Jacobson—Kaplan 1994:159.

Buck 1949:4.28 neck. Illič-Svityč 1971—1984.I:319—320, no. 195, **kap'a* 'nape of neck, head'; Bomhard—Kerns 1994:453, no. 298.

490. Proto-Nostratic root **k'ap^h-* (~ **k'əp^h-*):
 (vb.) **k'ap^h-* 'to cover; to shut, to close';
 (n.) **k'ap^h-a* 'covering'

- A. Proto-Afrasian **k'ap-* 'to cover; to shut, to close': Proto-Semitic **k'ap-al-* 'to cover; to shut, to close' > Arabic *ḵafala* 'to shut, to close; to latch, to lock, to shut up', *ḵufl* 'padlock; lock, latch, bolt'; Ḥarsūsi *ḵefōl* 'to close, to lock, to shut', *ḵefl* 'lock'; Mehri *ḵəfūl* 'to close, to lock', *ḵāfəl* 'lock'; Šheri / Jibbāli *ḵəfəl* 'to close, to lock', *ḵəfəl* 'lock'; Geez / Ethiopic *ḵafala*, *ḵaffala* [፳፭፮] 'to overlay, to cover (with plate), to cover, to gild, to plate'. Leslau 1987:424.
- B. Dravidian: Tamil *kappu* (*kappi-*) 'to overspread (as a cloud)'; Malayalam *kappuka* 'to cover, to overspread'; Kota *kavc-* (*kavc-*) 'to cover with a garment'; Toda *koŋc-* (*koŋc-*) 'to cover; to be in great numbers, (crowd) to come in great numbers', *koŋy-* (*koŋs-*) 'to surround in great numbers or on all sides'; Kannaḍa *kappu* 'to cover; to spread, to extend, to overspread, to surround'; Tuḷu *kabiyuni* 'to besiege, to surround, to overwhelm, to overspread (as clouds)'; Telugu *kappu* '(vb.) to cover, to overspread, to envelope, to conceal; to spread, to extend, to collect or settle in a thick covering (as clouds); (n.) a cover, darkness, blackness', *kappuḍu* 'a cover or covering', *kappiri* 'duskiness, partial darkness', (inscr.) *kapurālu* 'the stone beams covering the sanctum'; Parji *kapp-* 'to cover, to overspread'; Kōṇḍa *kap-* '(clouds) to overcast the sky'; Kuṛux *khapnā* 'to cover exactly, to fit upon hermetically, to stick fast to or together'. Krishnamurti 2003:98 **kap-* ~ **kapp-/kaww-V-* 'to cover, to over-spread' and 144 **kap(p)-* ~ **kaw-V-* 'to cover, to overspread'; Burrow—Emeneau 1984:113—114, no. 1221.
- C. Kartvelian: Georgian *k'epan-i* 'a cover (for covering food)'.
- D. Proto-Altaic **k[ā]p^ha* '(vb.) to cover; to shut, to close; (n.) covering; container, bag, sack': Proto-Tungus **kup-* '(vb.) to cover; (n.) covering' > Evenki *kuptu-*, *kupu-* 'to cover', *kupu* 'cover', *kupō* 'knee covering', *kupe* 'cloth'; Lamut / Even *kupke* 'bag, sack', *kubi* 'knee covering', *quptu* 'hat', *kōbže* 'cloth'; Negidal *kuptin-* 'to cover', *koptin* 'cover'; Manchu *ḵubtu* 'a long cotton padded gown'; Ulch *kup-* 'to cover'; Oroch *quptu-* 'to cover', *qōpomī* 'cloth'; Nanay / Gold *koptō* 'sheath'. Proto-Mongolian **kabt-* 'bag, sack' > Written Mongolian *qabtaγ-a(n)* 'bag, pouch, purse; pocket'; Khalkha *kavtga* 'bag, purse, pouch'; Kalmyk *ḵaptəḵə*, *ḵaptɪɣə* 'bag, sack'; Ordos *gabtaga* 'bag, sack'; Dagur *ḵartag* 'bag, sack'; Monguor *sdarga* 'a little bag, pouch, pocket'. Poppe 1955:52. Proto-Turkic **Kāp-* '(vb.) to surround; (n.) bag, sack' > Karakhanide Turkic *qap* 'bag, sack'; Turkish *kap* 'bag, sack', *kapak* 'cover, lid', *kapalı* 'shut, covered, secluded', *kapa-* 'to shut, to close, to shut up; to cover up', *kapalık* 'shut in, confined (place); cloudy, overcast; dark; unsociable, shy; gloomy', *kapatma* 'shut up, confined'; Gagauz *qap* 'bag, sack'; Azerbaijani *gab* 'bag, sack'; Turkmenian *gāp* 'bag, sack', *gāba-* 'to surround'; Uzbek *qəp* 'bag, sack'; Uighur *qap* 'bag, sack', (dial.) *qaba-* 'to surround'; Karaim *qap* 'bag, sack'; Tatar *qap* 'bag, sack'; Bashkir *qap* 'bag, sack'; Kirghiz *qap* 'bag, sack'; Kazakh *qap* 'bag, sack'; Noghay *qap* 'bag, sack'; Sary-Uighur *qap*

‘bag, sack’; Oyrot (Mountain Altai) *qap* ‘bag, sack’; Tuva *χap* ‘bag, sack’; Yakut *χappar* ‘bag, sack’. Poppe 1955:17, 43, 89, 97, and 133; Street 1974:16 **kāp* ‘container’, **kāp-á-* ‘to close, to block’; Starostin—Dybo—Mudrak 2003:646—647 **k[ā]p’a* ‘(vb.) to cover; (n.) sack’. Starostin—Dybo—Mudrak note: “Mergers with phonetically close roots ... were possible, which may explain some vocalic and prosodic irregularities.”

Buck 1949:1.62 darkness; 12.25 shut, close (vb.); 12.26 cover (vb.). Dolgopolsky 2008, no. 1106, **[k]apa* ‘to cover, to close’.

491. Proto-Nostratic root **k’ar-* (~ **k’ər-*):

(vb.) **k’ar-* ‘to shout, to screech, to call (out to), to cry (out)’;

(n.) **k’ar-a* ‘call, cry, invocation, proclamation; roar, lamentation’

- A. Proto-Afrasian **k’ar-* ‘to call to’: Proto-Semitic **k’ar-aʔ-* ‘to call to’ > Hebrew *kārāʔ* [כָּרָא] ‘to call, to proclaim’; Phoenician *krʔ* ‘to call’; Aramaic *kārā* ‘to call, to shout, to name, to crow; to read, to recite’; Ugaritic *krā* ‘to call, to invite’; Arabic *karaʔa* ‘to recite, to read’; Amorite *krʔ* ‘to call’; Akkadian *karū*, *kerū* ‘to call to, to invite’; Sabaeen *krʔ* ‘to call upon, to summon’. Murtonen 1989:385; Klein 1987:590—591; Zammit 2002:336. Berber: Tuareg *əɣər* ‘to read’, *təɣərɪt* ‘a shrill (and prolonged) cry, expressing enthusiasm and ardor, characteristic war-cry of the Tuaregs of Ahaggar’; Nefusa *ɣər* ‘to call out, to read, to cry out, to recite’; Ghadames *ʕər* ‘to read’, *tayrit* ‘cry of joy, jubilation’; Mزاب *ɣiru* ‘time of prayer at dawn’; Wargla *ɣər* ‘to call out, to be called’; Tamazight *ɣər* ‘to read, to study’; Tashelhiyt / Shilha *ɣər* ‘to read, to study, to know how to read; to call out, to call to eat’, *tiɣri* ‘study, reading; call, cry’; Kabyle *ɣər* ‘to call, to cry out; to read, to study’, *tiɣri* ‘call, cry’. Cushitic: Bilin *qarʔ-* ‘to read, to learn’ (Arabic loan ?). Reinisch 1887:242. West Chadic: Hausa *kaara* ‘to cry out’, *kaaraa* ‘complaint, grievance’. Orël—Stolbova 1995:338, no. 1555, **kar-* ‘to call, to shout’.
- B. Dravidian: Tamil *karai* (-v-, -nt-) ‘to sound, to roar, to weep, to lament, to call, to invite’, *karai* (-pp-, -tt-) ‘to call, to summon’; Malayalam *karayuka* ‘to cry, to lament, to neigh, to caw, to caterwaul’, *karaccil* ‘weeping, crying, lamentation; cry of certain animals or birds’, *karaḷuka* ‘to mumble’; Kota *karv-* (*kard-*) ‘to bellow, to caw’; Toda *kar-* (*karθ-*) ‘to bellow’, *kark* ‘bellowing’; Tuḷu *kareyuni*, *karevuni* ‘to crow’, *karmbuni* ‘to mutter’; Kannaḍa *kare*, *kari* ‘to emit a sound; to sound, to call, to invite’, *karaha*, *kareyuvike* ‘calling, etc.’; Telugu *kraṅgu* ‘the sound of a bell’, *krandu* ‘to sound, to ring, to lament’; Nāiki (of Chanda) *karug-/karuk-* ‘to call, to crow, to invite, to summon’, *karup-* ‘to cause to summon (a physician)’; Parji *kerip-* (*kerit-*) ‘to cackle’; Gondi *karṅg-* ‘to call’, *karingi* ‘calling’; Kui *krāva* ‘the tongue of a bell’; Kuṛux *xarxnā* ‘to ring, to jingle, to clink,

to give a sound', *xarxaʔānā* 'to make ring, to perform music'; Malto *qarǧre* 'to cry out'. Burrow—Emeneau 1984:119—120, no. 1291.

- C. Proto-Indo-European **k'er-/k'or-/k'r-* 'to cry out, to call, to screech': Sanskrit *járate* 'to call out to, to address, to invoke; to crackle (fire)'; Crimean Gothic *criten* 'to cry'; Old Icelandic *krutr* 'murmur', *krytja* 'to murmur, to grumble', *krytr* 'noise, murmur'; Old English *ceorran* 'to creak', *ceorian* 'to murmur, to grumble', *ceorcian* 'to complain', *cracian* 'to resound', *crācettan* 'to croak', *crāwian* 'to crow'; Old Saxon **krāian* 'to crow'; Dutch *kraaien* 'to crow', *krijs* 'shriek, cry', *krijzen* 'to shriek, to screech', *krijten* 'to weep, to cry'; Old High German *crāen*, *krāhen*, *chrāen*, *chrāen* 'to crow' (New High German *krāhen*); Middle High German *krīzen* 'to cry loudly, to groan' (New High German *kreissen* 'to be in labor'); Old Church Slavonic *grajō*, *grajati* 'to crow, to caw'. Pokorny 1959:383—385 **ger-* 'to call hoarsely'; Walde 1927—1932.I:591—593 **ger-*; Mann 1984—1987:265 **garmō* 'to shout, to screech, to call', 266 **gars-* 'shout, cry, resound, echo', 266 **garsmos*, *-is* (**garsmn-*) 'cry, call', 269—270 **gerō*, *-iō* 'to cry, to shout', 270 **gersō* 'to cry, to screech'; Watkins 1985:20 **gerā-* and 2000:27 **gerā-* 'to cry hoarsely'; Mayrhofer 1956—1980.I:421; Orël 2003:213 Proto-Germanic **kerranan*, 222 **krītanan*, 222 **krutjanan*; Kroonen 2013:285 Proto-Germanic **kerzan-* 'to creak, to cry (of birds)'; Feist 1939:112; Lehmann 2008:85; De Vries 1977:332; Onions 1966:226, 229, and 231; Klein 1971:174—175, 177, and 178; Skeat 1898:141, 143, and 144 **gar-* 'to cry out'; Kluge—Mitzka 1967:399 and 403 **ger-*; Kluge—Seebold 1989:408 and 412; Vercoullie 1898:151 and 154; Derksen 2008:185—186.

Buck 1949:18.41 call. Bomhard—Kerns 1994:432—433, no. 276.

492. Proto-Nostratic (n.) **k'ar-a* 'blackness, darkness, obscurity; dark cloud, rainy weather; dirt, grime'; (adj.) 'dark, dark-colored; dirty, soiled':

- A. Proto-Afrasian **k'ar-* 'dark, dark-colored; dirty, soiled': Egyptian *qr*, *qri* 'storm, storm cloud', *qrm* 'smoke', *qrmt* 'ashes', *qrmts* (Demotic *qrmts*) 'darkness', *qrṯt* 'dung'; Coptic *kromrm* [ⲕⲣⲟⲙⲣⲙ], *krmr̄m* [ⲕⲣⲙⲣⲙ] 'to become dark', *krmrōm* [ⲕⲣⲙⲣⲟⲙ] 'to be dark' (reduplication of *kōrm* [ⲕⲟⲣⲙ] 'smoke'), (Sahidic) *krmes* [ⲕⲣⲙⲉⲥ], (Bohairic) *kermi* [ⲕⲉⲣⲙⲓ] 'ash, soot, dust', *krōm* [ⲕⲣⲟⲙ] 'fire', *krmts* [ⲕⲣⲙⲧⲥ] 'smoke, mist; darkness, obscurity', *kōrm* [ⲕⲟⲣⲙ] 'smoke', *kerēt* [ⲕⲉⲣⲙⲧ], *čerēt* [ⲉⲣⲙⲧ] 'dirt, dung'. Hannig 1995:862 and 863; Faulkner 1962:280; Erman—Grapow 1926—1963.5:57, 5:58, and 5:60; Gardiner 1957:596; Vycichl 1983:86; Černý 1976:62 and 335. The following Cushitic forms may belong here as well, assuming semantic development as in Kannaḍa *kār* 'blackness, rainy season': Burji *k'āraar-i* 'rainy season'; Hadiyya *k'araat'o* 'autumn, fall, season of small rains'; Kambata *k'araa-tu* 'spring season'. Perhaps also:

Central Cushitic: Bilin *qīr* 'night'; Xamir *xar* 'night'; Quara *xērā* 'night'; Kemant *xir/xer* 'night'; Awngi / Awiya *ɣar* 'night'. Appleyard 2006:105; Reinisch 1887:242. Sasse 1982:124; Hudson 1989:120 and 140. West Chadic **k'ar-* 'cloud' > Bolewa *kəriya* 'cloud'. Orël—Stolbova 1995:337, no. 1550, **kar-* 'cloud'.

- B. Proto-Indo-European **k'r-u-k'o-s*, *-eA* [-*aA*] (> *-ā*) 'dirt, grime': Greek (Hesychius) γρῦξ 'dirt in the nails'; Modern English (regional) *crock* 'smut, soot, dirt'; Latvian *gruzis* 'dirt, smut; rubbish'. Mallory—Adams 1997:160 **grúgs* 'dirt'; Mann 1984—1987:300 **gruḡos*, *-ā* 'dirt, grime'.
- C. Proto-Altaic **karu* (~ *kʰ-*) 'black': Proto-Mongolian **kara* 'black' > Written Mongolian *qara* 'black, dark, obscure'; Dagur *χara*, *χar* 'black'; Monguor *χara* 'black'; Ordos *χara* 'black'; Buriat *χara* 'black'; Khalkha *χar* 'black'; Kalmyk *χarə* 'black'; Moghol *qarō* 'black'. Poppe 1955:131. Mongolian loans in: Manchu *qara* 'black (of animals)'; Evenki *karā* 'black'. Proto-Turkic **Kara* 'black' > Old Turkic (Old Uighur) *qara* 'black'; Turkish *kara* 'black'; Gagauz *qara* 'black'; Azerbaijani *gara* 'black'; Turkmenian *gara* 'black'; Uzbek *qorə* 'black'; Uighur *qara* 'black'; Karaim *qara* 'black'; Tatar *qara* 'black'; Bashkir *qara* 'black'; Kirghiz *qara* 'black'; Kazakh *qara* 'black'; Noghay *qara* 'black'; Tuva *qara* 'black'; Chuvash *χora* 'black'; Yakut *χara* 'black'; Dolgan *kara* 'black'. Starostin—Dybo—Mudrak 2003:651—652 **karu* (~ *kʰ-*) 'black'. Initial consonant uncertain; hence, either here or with Proto-Nostratic **kʰar-a* '(n.) blackness, darkness; (adj.) black, dark'.

Buck 1949:1.62 darkness; 1.73 cloud; 15.63 dark (in color); 14.42 night; 15.88 dirty, soiled. Bomhard 1996a:205—207, no. 603.

493. Proto-Nostratic root **k'ar-* (~ **k'ər-*):

(vb.) **k'ar-* 'to twist, to turn, to bend, to wind; to tie (together), to bind';

(n.) **k'ar-a* 'that which is tied or bound together: bunch, bundle'; (adj.) 'bent, curved, crooked; tied, bound'

Possible derivative:

(n.) **k'ar-a* 'protuberance, lump, hump, breast'

- A. Proto-Afrasian **k'ar-* 'to twist, to turn, to bend, to wind; to tie (together), to bind': Proto-Semitic **k'ar-an-* 'to tie or bind two things together' > Geez / Ethiopic *ʾastakwārana* [አስተቋረነ] 'to bind in pairs'; Tigrinya *kʷārānā* 'to bind two things together'; Amharic *kʷarāññā* 'to fetter, to shackle'; Harari *kurāññā āša* 'to tie together creditor with debtor, to tie two things together'; Gurage (*tä*)*kʷrañā* 'to bind together creditor with debtor'. Leslau 1963:129, 1979:498, and 1987:442. Egyptian *qrf* 'to bend, to twist, to curve, to wind', *qrft* 'contractions' (medical term), (pl.) *qrḫw* 'facial wrinkles'. Hannig 1995:863; Faulkner 1962:280; Erman—Grapow 1926—1963.5:60. Berber: Tuareg *əyrəh* 'to keep, to store away, to put in a

safe place'; Tamazight *γraz* 'to tack, to baste, to sew, to stitch up a suture'; Kabyle *əγraz* 'to set a trap, to gather together'.

- B. Dravidian: Kota *karv-* (*kard-*) 'to become tight (rope)', *karv-* (*kart-*) 'to tighten (knot)'; Toda *kar-* (*karθ-*) 'to become tight', *karf-* (*kart-*) 'to tighten (tr.)'. Burrow—Emeneau 1984:130, no. 1399. Tamil *karrai* 'collection (as of hair, rays of the sun), bundle (as of straw, grass, paddy seedlings), coconut leaves braided together like ropes as bands for hedging'; Malayalam *karra* 'bundle (as of grass, straw), sheaf of corn'; Kannada *kante* 'bundle (as of grass, straw, etc.)'. Burrow—Emeneau 1984:130, no. 1400.
- C. Proto-Kartvelian **k'ar-/k'r-* 'to bind, to tie together': Georgian *k'ar-/k'r-* 'to bind, to tie together'; Mingrelian *k'ir-/k'ər-* 'to bind'; Laz *k'or-/k'ir-* 'to bind'; Svan *č'ar-/č'r-* 'to bind'. Schmidt 1962:117; Klimov 1964:106 **kar-* : **kr-* and 1998:86 **kar-* : **kr-* 'to bind'; Fähnrich—Sardshweladse 1995:185 **kar-/kr-*; Fähnrich 2007:222 **kar-/kr-*.
- D. Proto-Indo-European **k'ər-/k'or-/k'r-* '(vb.) to twist, to turn, to bend, to wind; to tie (together), to bind; (adj.) curved, bent, crooked; tied, bound; (n.) that which is tied or bound together: bunch, bundle': Sanskrit *grathna-h* 'bunch, tuft', *granth-*, *grathnāmi*, *granthāyati* 'to fasten, to tie or string together', *grantha-h* 'tying, binding, stringing together, knot', *granthi-h* 'a knot, tie, knot of a cord; bunch or protuberance'; Prakrit *gamṭhai*, *gamṭhai* 'to tie, to knot', *gamṭhi-* 'knot, joint, bundle', *gamṭhilla-* 'knotted'; Assamese *gāṭhi-* 'knot, joint, protuberance', *gāṭhiba-* 'to string together'; Greek γρῦπός 'hook-nosed'; Latin *grūmus* 'a little heap, hillock (of earth)'; Old Irish *grinne* 'bundle'; Old Icelandic *krá*, *kró* 'nook, corner', *kring* 'round', *kringja* 'to encircle, to surround', *kringr* 'circle, ring', *krókr* 'hook, barb', *kryppil* 'cripple', *krækja* 'to hook'; Old English *crampiht* 'crumpled, wrinkled', *crumb*, *crump* 'crooked', *crymbing* 'curvature, bend, inclination', *crympan* 'to curl', *cranc-stæf* 'weaving implement, crank', *cryppan* 'to bend, to crook (finger)', *crymban* 'to bend', *cradol* 'cradle'; Old Saxon *krumb* 'crooked, bent, curved, twisted'; Dutch *krom* 'crooked, bent, curved, twisted'; Old High German *kratto* 'basket' (New High German [dial.] *Kratten*, *Kretten*), *krezzo* 'basket' (New High German *Krätze*), *krumb* 'crooked, bent, curved, twisted' (New High German *krumm*); Lithuanian *gárbana*, *garbanà* 'curl, lock, ringlet', *grandis* 'ring, link (of a fence)'. Rix 1998a:170 (?) **grenĝh-* 'to twist, to turn' and 170 (?) **grenth₂-* 'to fasten, to tie or string together'; Pokorny 1959:385—390 **ger-* 'to turn, to wind'; Walde 1927—1932.I:593—598 **ger-*; Mann 1984—1987:293 **grengħ-* 'twist, knot', 293 **grinĝhəlos*, *-ā* 'circle, circuit', 295 **grinĝhō*, *-iō* 'to turn, to circle', 295 **grōĝos*, *-ā*, *-iā* 'twist, bend; rope; wicker; tangle; trap', 296 **groiĝō*, *-iō* 'to turn, to wind, to bend', 297 **gronĝh-* 'to twist, to turn', 298 **gronĝhəlos* 'circle, ring, twist, roller, cylinder', 299—300 **gruĝos*; **grugos*, *-ā*, *-iā* 'bend', 300—301 **grumbhos*, *-ā*, *-iā* 'bend, turn, twist; bent'; Watkins 1985:19—20 **ger-*

and 2000:27 *g(e)r- ‘curved, crooked’; Chantraine 1968—1980.I:239; Boisacq 1950:157; Hofmann 1966:48; Beekes 2010.I:289; Frisk 1970—1973.I:329—330; De Vaan 2008:273; Walde—Hofmann 1965—1972.I:623 *gr-eu-, *ger-; Ernout—Meillet 1979:283; Orël 2003:221 Proto-Germanic *krempanan, 221 *krenḡaz, 221 *krenḡlōn 222 *kruppilaz; Kroonen 2013:301—302 Proto-Germanic *kranga- ~ *kranka- ‘bent, crooked, weak’, 302 *krangjan- ‘to make bend’, 307 *krup(p)ila- ‘cripple’, and 308 *kruppjan- ‘to bend, to stoop’; De Vries 1977:327—328 *ger-, 330 *ger-, 331, and 332; Klein 1971:173, 176, 177, and 179; Onions 1966:224, 225, 228, 229, 230, and 232; Kluge—Mitzka 1967:401 *greth-, *ger- and 408; Kluge—Seebold 1989:410 and 415; Mayrhofer 1956—1980.I:352; Fraenkel 1962—1965.I:135; Smoczyński 2007.1:157 and 1:194—195.

- E. Uralic: Proto-Finno-Ugrian *kärz- ‘to twist or tie (together), to bind, to thread’ > Mordvin (Moksha) *kärks* ‘garland, string’, *kärksa-* ‘to twist (rope), to wrap up, to roll up’; Cheremis / Mari *kerä-*, *kera-* ‘to draw or pull through, to thread (a needle)’; Votyak / Udmurt *gerd-* ‘knot, loop’; Zyrian / Komi *gered* ‘knot’; Vogul / Mansi *keer-* ‘to plait, to weave together’. Rédei 1986—1988:139—140 *kärz-.
- F. Proto-Altaic *kera- (~ -ry-) ‘to bind, to wind around’: Proto-Tungus *kerge- (*kergi-) ‘(vb.) to wind around, to bind (into bunches); (n.) circle, ring, bunch’ > Manchu *χergi-*, *χerči-* ‘to wind (thread)’; Negidal *keygeli* ‘circle, ring’; Ulch *kergi* ‘bunch’, *kergin-* ‘to bind into bunches’; Orok *keygeli* ‘circle, ring’; Nanay / Gold *kergi* ‘bunch’; Oroch *keže-* ‘to wind’. Proto-Mongolian *kere- ‘to bind, to join, to unite’ > Mongolian *kerü-* ‘to attach, to bind, to weave’ (distinct from *kerü-* ‘to roam, to wander’), *kerüdesüle-* ‘to bind into a ball (of thread, etc.)’, *kerüdesü(n)* ‘ball (of thread, etc.)’; Khalkha *χere-* ‘to bind, to join, to unite’; Buriat *χere-* ‘to bind, to join, to unite’; Kalmyk *ker-* ‘to bind, to join, to unite’; Ordos *kere-*, *kerü-* ‘to bind, to join, to unite’. Starostin—Dybo—Mudrak 2003:669—670 *kera (~ -r-) ‘to wind around, to bind’.

Sumerian *garadin*, *kàradin*, *karadin*₅ ‘bundle, sheaf’.

Buck 1949:9.14 bend (vb. tr.); 9.16 bind (vb. tr.); 10.12 turn (vb.); 12.74 crooked. Illič-Svityč 1971—1984.I:321—323, no. 197, *kärā ‘to tie (tightly), to tighten’; Bomhard—Kerns 1994:446—448, no. 293; Hakola 2000:65, no 255.

494. Proto-Nostratic (n.) *k’ar-a ‘protuberance, lump, hump, breast’:
Possibly derived from (in the sense ‘curved shape, swelling’):
(vb.) *k’ar- ‘to twist, to turn, to bend, to wind; to tie (together), to bind’;
(n.) *k’ar-a ‘that which is tied or bound together: bunch, bundle’; (adj.) ‘bent, curved, crooked; tied, bound’

- A. Dravidian: Tamil *karaṭu* ‘ankle, knot in wood’; Malayalam *karaṇa* ‘knot of sugar-cane’, *kurattā* ‘knuckle of hand or foot’; Kannaḍa *karaṇe*, *kaṇṇe* ‘clot, lump’; Telugu *karuḍu* ‘lump, mass, clot’. Burrow—Emeneau 1984:117, no. 1266.
- B. Proto-Kartvelian **m-k’erd-* ‘breast, chest’: Georgian *mk’erd-* ‘breast, chest’; Mingrelian *k’idir-*, *k’ədər-* (< **k’ird-* < **k’erd-*) ‘breast, chest’; Svan *muč’ōd*, *muč’wed* ‘breast, chest’. Schmidt 1962:124; Klimov 1964:135—136 **mķerd-* and 1998:123 **mķerd-* : **mķrd-* ‘breast, chest’; Fähnrich—Sardshweladse 1995:241 **mķerd-*; Fähnrich 2007:234 **ķward-*.
- C. Proto-Indo-European **k’er-/k’or-/k’r-* ‘protuberance, lump, hump, breast’: Armenian *kurc* ‘core, stump’, (pl.) *kurck^h* ‘breasts’; Old Icelandic *kryppa* ‘hump, hunch’; Lithuanian *grūbas* ‘hump, lump, hillock’; Old Church Slavic *grudb* (< **grōdb*) ‘breast’; Russian *gorb* [гopб] ‘hump’, *grud’* [грудъ] ‘breast, chest, bosom, bust’; Serbo-Croatian (pl.) *grudi* ‘breasts’; Polish *garb* ‘hump, lump’. Mann 1984—1987:288 **gord-* (**gordis*, *-jus*) ‘lump’, 298 **grubalos* ‘lumpy, rough, knotty; lump, hump’, 298 **grubos*, *-jə* ‘lumpy, swollen; lump’, 300 **grūgos*, *-is* ‘lump, stump, core’, 300 **grum-* ‘hump, hunch’, 300 **gumbalos* ‘hump, lump’, 301 **grūmālos*, *-ā* ‘lump, hump, mass’; Kroonen 2013:307 Proto-Germanic **kruppa-* ‘compact object’; Orël 2003:222 Proto-Germanic **kruppaz* I, 222 **krūwilaz* ~ **krawwilaz*; De Vries 1977:332; Derksen 2008:193; Fraenkel 1962—1965.I:172—173; Smoczyński 2007.1:157.

Buck 1949:4.40 breast (front of chest); 4.41 breast (of woman).

495. Proto-Nostratic root **k’at^h-* (~ **k’ə^ht^h-*):

(vb.) **k’at^h-* ‘to add, join, bring, come, gather, or mix together’;

(n.) **k’at^h-a* ‘blend, mixture, conglomeration, gathering’

- A. Afrasian: Semitic: Arabic *ḵatta* ‘to prepare, to make ready; to gather by degrees; to follow the track’.
- B. Dravidian: Tamil *katuvu* (*katuvi-*) ‘to be troubled, perturbed’; Kannaḍa *kade* ‘to join, to be contiguous, to meet, to approach, to copulate, to be pressed or squeezed’, *kaduku* ‘to press, to squeeze’, *kadubu* ‘to press, to distress, to trouble’; Telugu *kadiyu* ‘to approach, to meet, to come together’, *kadiyincu* ‘to bring together’; Kolami *gaddī-* ‘to reach’. Burrow—Emeneau 1984:112, no. 1201.
- C. Proto-Kartvelian **k’et-* ‘to add; to mix’: Georgian *k’et-* ‘to make, to create’ (Old Georgian *k’et-* ‘to decorate’), *k’etil-* ‘good, kind’, *uk’etur-* ‘evil’; Mingrelian *k’at-* ‘to add, to gather, to produce’; Laz *k’at-* ‘to add, to gather; to accompany’. Klimov 1964:108 **ķet-* and 1998:88 **ķet-* ‘to add; to mix’; Fähnrich 1994:233; Fähnrich—Sardshweladse 1995:188 **ķet-*; Fähnrich 2007:226 **ķet-*.

- D. Proto-Altaic **kath[a]* (~ -t-) ‘to add, join, tie, or mix together’: Proto-Tungus **kata-* ‘(vb.) to tie together; (n.) band’ > Evenki *qataq-* ‘friend’; Negidal *kataya-* ‘to tie together’, *katixa* ‘friend’; Manchu *χata* ‘a thin belt or strip of cloth’; Ulch *qatara-* ‘to tie together’; Orok *qatara-* ‘to tie together’; Nanay / Gold *qatara-* ‘to grasp one’s hair’. Proto-Mongolian **kudku-* ‘to stir, to mix’ > Written Mongolian *qudqu-* ‘to stir, to mix, to mingle, to blend’, *qudqula-* ‘to mix, to mingle, to stir by beating; to trouble, to embarrass, to put in disorder’; Khalkha *χutgaχ-* ‘to stir, to mix, to mingle, to blend; to put in disorder, to confuse; to agitate, to embroil, to stir up trouble; to ladle, to scoop up, or to spoon something’, *χutgalaχ-* ‘to mix, to mingle, to stir by beating; to trouble, to embarrass, to put in disorder’; Buriat *χudxa-* ‘to stir, to mix’; Kalmyk *χutχə-* ‘to stir, to mix’; Ordos *gudxu-* ‘to stir, to mix’; Dagur *korku-* ‘to stir, to mix’; Dongxiang *quduyu-* ‘to stir, to mix’; Shira-Yughur *qudgə-* ‘to stir, to mix’; Monguor *gusgu-* ‘to stir, to mix’. Proto-Turkic **Kat-* ‘to add, join, or mix together’ > Old Turkic (Old Uighur) *qat-* ‘to add, join, or mix together’; Karakhanide Turkic *qat-* ‘to add, join, or mix together’; Turkish *kat-* ‘to add, to join, to mix, to embroil’; Azerbaijani *gat-* ‘to add, join, or mix together’; Turkmenian *gat-* ‘to add, join, or mix together’; Uighur *qat-* ‘to add, join, or mix together’; Tatar *qat-* ‘to add, join, or mix together’; Bashkir *qat-* ‘to add, join, or mix together’; Kirghiz *qat-* ‘to add, join, or mix together’; Kazakh *qat-* ‘to add, join, or mix together’; Noghay *qat-* ‘to add, join, or mix together’; Oyrot (Mountain Altai) *qat-* ‘to add, join, or mix together’; Chuvash *χodbš* ‘mixture’; Yakut *χat-* ‘to add, join, or mix together’; Dolgan *kat-* ‘to add, join, or mix together’. Starostin—Dybo—Mudrak 2003:654 **kat[a]* (~ -t-) ‘to mix, to join’. Starostin—Dybo—Mudrak note: “The Mong[olian] vocalism is not quite clear.”
- E. Proto-Eskimo **katə-* ‘to meet’: Naukan Siberian Yupik *kaasur-* ‘to arrive’, *kaasutə-* ‘to bring’; Central Siberian Yupik *kaatə-* ‘to arrive’, *kaatutə-* ‘to arrive with’; Sirenik *katə-* ‘to approach’; Seward Peninsula Inuit *kati-* ‘to bump head’; North Alaskan Inuit *kati-* ‘to bump head(s)’; Western Canadian Inuit *kati-* ‘to bump head against something’; Eastern Canadian Inuit *kati-* ‘to join, to come after’; Greenlandic Inuit *kattut(i)-*, (Northwest Greenlandic) *katut(i)-* ‘to join, to attack in a group’. Fortescue—Jacobson—Kaplan 1994:160. Proto-Eskimo **katəma-* ‘to be gathered’: Naukan Siberian Yupik *katəma-* ‘to gather’, *kasima-* ‘to meet’; Central Siberian Yupik *kasima-* ‘to have arrived’; Sirenik *kasəmjani* ‘approaching’; Seward Peninsula Inuit *katuma-*, (Imaqliq) *katəma-* ‘to hold a meeting’; North Alaskan Inuit *kasima-*, (Point Hope) *katima-* ‘to hold a meeting’; Western Canadian Inuit *katima-* ‘to be gathered, to be piled up’; Eastern Canadian Inuit *katima-* ‘to meet, to remain continually with’; Greenlandic Inuit *katima-* ‘to be gathered in a cluster’. Fortescue—Jacobson—Kaplan 1994:160. Proto-Inuit **katəqšat* ‘collection’ > Seward Peninsula Inuit *katiqšat* ‘collection’; North Alaskan Inuit *katiqšat* ‘pile,

collection'; Western Canadian Inuit *katiXXi*- 'cluster'; Eastern Canadian Inuit *katirsu(q)*- 'to assemble'; Greenlandic Inuit *katiršat*- 'collection, gathering'. Fortescue—Jacobson—Kaplan 1994:160—161. Proto-Eskimo **katət*- 'to join': Central Alaskan Yupik *kacətə*- 'to arrive from the wilderness' (Norton Sound Unaliq 'to gather'); Naukan Siberian Yupik *katətə*- 'to join, to gather'; Seward Peninsula Inuit *katit*- 'to join, to assemble, to marry'; North Alaskan Inuit *katit*- 'to gather, to get married'; Western Canadian Inuit *katit*- 'to gather'; Eastern Canadian Inuit *katit*- 'to join'; Greenlandic Inuit *katit*- 'to join, to get married'. Fortescue—Jacobson—Kaplan 1994:161. Proto-Eskimo **kat̪ur*- and **katur*- 'to assemble': Alutiiq Alaskan Yupik *katuXtə*- 'to gather', *katunkət* 'flock'; Central Alaskan Yupik (Nunivak, Norton Sound) *katur*- 'to be gathered', (post root) *katuŋqa*- 'to be gathered', *kat̪at* 'herd'; Central Siberian Yupik *kat̪ur*- 'to be gathered, assembled'; North Alaskan Inuit *kannuq*-, (Nunamiut) *kat̪uq*- 'to assemble', *kannut*, (Nunamiut) *kat̪ut* 'herd'. Fortescue—Jacobson—Kaplan 1994:161. Proto-Eskimo **katyay* 'the place where two things come together': Central Alaskan Yupik *kasiy*- 'fork (river)'; Sirenik *kasix* 'the place where two poles meet'; Seward Peninsula Inuit *kassaaq* 'fork in river'; North Alaskan Inuit *kayyaaq*, (Malimiut) *katyaaq* 'fork in river'. Fortescue—Jacobson—Kaplan 1994:161. Proto-Eskimo **katyuyutə*- 'to come together': Alutiiq Alaskan Yupik *kasuutə*- 'to meet each other'; Sirenik *kas̪yut(ə)*- 'to hit with something, to knock up against something'; North Alaskan Inuit *kasuuti*- 'to meet'; Eastern Canadian Inuit *kasuut(i)*- 'to join'; Greenlandic Inuit *kasuut(i)*- 'to knock into, to clink glasses (toast)'. Fortescue—Jacobson—Kaplan 1994:161—162.

Buck 1949:2.33 marry; 12.21 collect, gather; 12.22 join, unite; 19.65 meet (vb.). Slightly different etymology in Dolgopolsky 2008, no. 1215, **katV* (or **kaʔ[V]tV*) 'to mix, to adjoin, to gather'. The Dravidian forms cited by Dolgopolsky do not belong here.

496. Proto-Nostratic root **k'aw*- (~ **k'əw*-):

- (vb.) **k'aw*- 'to bend, twist, curve, or turn round; to rotate';
- (n.) **k'aw-a* 'any round object'; (adj.) 'bent, curved, round'

- A. Proto-Afrasian **k'aw*- (adj.) bent, curved, round; (n.) any round object: a hole': Proto-East Cushitic **k'aw*- or **k'aaw*- 'a hole' > Somali *qaw* 'a hole'; Gidole *k'aaw* 'a hole'; Konso *qaawa* 'a hole'; Galla / Oromo *k'a(w)a* 'a hole'; Burji *k'aw-a* 'a hole'. Sasse 1979:43.
- B. Dravidian: Tamil *kevi* 'deep valley, cave'; Kannada *gavi* 'cave'; Tuḷu *gavi* 'cave, hole, cell'; Telugu *gavi* 'cavern'. Burrow—Emeneau 1984:124, no. 1332.

- C. Proto-Kartvelian **k'w-er-*, (reduplicated) **k'wer-k'wer-* 'round object': Georgian *k'ver-* 'flat cake, cookie (round)', *k'verk'ver-a-* 'round pie'; Mingrelian *k'var-* 'small round loaf, cookie (maize)', *k'vark'valia-* 'round'; Laz *k'var-*, *nk'var-* 'cookie (round, for children)', *k'ork'ol-a-* 'curls, sheep droppings'; Svan (Lower Bal) *k'urp'i* 'round', *k'wāši* 'cornbread' (< **k'wāl-*, cf. Gamkrelidze—Mačavariani 1982:37, §1.2.2.3) (Mingrelian loan). Schmidt 1962:119; Klimov 1964:110 **k'wer-*, 110 **k'werk'wer-* and 1998:92 **k'wer-* 'flat cake, cookie (round)', 93 **k'wer-k'wer-* 'round object'; Fähnrich—Sardshveladse 1995:198 **k'wer-*; Illič-Svityč 1971—1984.I:326—327, no. 202, Proto-Kartvelian **k'wer-/k'wal-* 'round'; Fähnrich 2007:239 **k'wer-*.
- D. Proto-Indo-European **k'ew-/k'ow-/k'u-*, also **k'ewH-/k'owH-/k'uH-* > **k'ū-* '(adj.) bent, curved, round; (n.) any round object': Sanskrit *gulī* 'globe, pill', *gola-h* 'globe, ball, jar in the form of a ball'; Greek γύπη 'vulture's nest; cave, den, hole', γῦρός 'round', γῦρος 'ring, circle', γῦρεύω 'to run around in a circle'; Old Icelandic *kúfóttir* 'convex', *kofi* 'hut, shed', *kúla* 'knob, ball', *kúlu-bakr* 'humpback'; Old English *cýf* 'tub, vat, cask, bushel', *cýfl* 'tub, bucket', *cofa* 'closet, chamber'; Middle High German *kobe* 'stable, pigsty' (New High German *Koben*). Pokorny 1959:393—398 **gēu-*, **gəu-*, **gū-* 'to bend, to curve'; Walde 1927—1932.I:555—562 **geu-*; Mann 1984—1987:309—310 **guu-* 'to bend; bent'; Watkins 1985:20 **gēu-* 'to bend'; Mayrhofer 1956—1980.I:341 and I:349; Boisacq 1950:159 **geu-*; Beekes 2010.I:292 and I:293 **gu(H)-*; Hofmann 1966:49 **geu-*; Chantraine 1968—1980.I:243 and I:243—244 **geu-/gu-*; Frisk 1970—1973.I:335 and I:335—336 **geu-*; Orël 2003:222 Proto-Germanic **kubbōn*, 222 **kubōn*, 226 **kūbaz*, 226 **kūlō(n)*; Kroonen 2013:308 Proto-Germanic **kuban-* 'shed'; De Vries 1977:323—324 and 333; Onions 1966:222; Klein 1971:172 **geu-*; Kluge—Mitzka 1967:386; Kluge—Seebold 1989:386—387.
- E. Yukaghir (Northern / Tundra) *qawarqa* 'pit, container'. Nikolaeva 2006:381.
- F. Chukchi-Kamchatkan: Proto-Chukotian **kawra-* 'to go round' > Chukchi *kawra-* 'to go round', *kawra-lʔat-* 'to rotate'; Kerek *kauja-* 'to go round'; Koryak *kawja(tko)-* 'to go round', *kawja-jyən* 'whirlwind'; Alyutor *kora-* (Palana *kawra-*) 'to go round', *nə-kora-qin* 'crooked'. Fortescue 2005:129.

Buck 1949:12.82 circle; 12.85 hole. Bomhard—Kerns 1994:436—437, no. 281.

497. Proto-Nostratic root **k'aw-* (~ **k'əw-*):

- (vb.) **k'aw-* 'to take, to seize, to grasp, to hold';
(n.) **k'aw-a* 'hand'

- A. Proto-Kartvelian **k'aw-/k'w-* 'to take': Georgian *k'av-* 'to take, to occupy, to hold'; Mingrelian [*k'-*] 'to hold'; Laz [*k'-*] 'to snatch'; Svan

k'āw-/k'w- 'to take, to catch', *lə-k'āw* 'taken, seized'. Fährnrich 2007:218
**kaw-*; Klimov 1998:84 **kaw-* : **kw-* 'to take'; Fährnrich—Sardshweladse
 1995:182 **kaw-*.

- B. Proto-Indo-European **k'ow(H)-/*k'u(H)-* (or **k'aw[H]-/*k'u[H]-*) '(vb.)
 to take, to seize, to grasp, to hold; (n.) hand': Avestan *gava* 'hand'; Greek
 ἐγ-γυάω 'to give or hand over as a pledge'; Lithuanian *gáunu, gáuti* 'to get,
 to receive'; Latvian *gūnu, gūt* 'to catch, to seize, to capture'. Pokorny
 1959:403—404 **gomə-* (or **gamə- ?* :) **gū-* 'hand; to seize'; Walde 1927—
 1932.I:636—637 **gomā-* (or **gamā- ?* :) **gū-*; Beekes 2010.I:369
**g(w)ou-*; Boisacq 1950:211; Frisk 1970—1973.I:436—437; Smoczyński
 2007.I:163—164 **geuH-*; Fraenkel 1962—1965.I:141—142; Derksen
 2015:166.

Buck 1949:4.33 hand; 11.13 take; 11.14 seize, grasp, take hold of.

498. Proto-Nostratic (Eurasian only) (n.) **k'el-a* 'female in-law: husband's sister,
 sister-in-law; daughter-in-law':

Note also:

(n.) **k^hal-a* 'female in-law'

- A. Proto-Indo-European **k'elHowV-*, **k'elHōC-* 'husband's sister': Greek
 (Attic) γάλως, (Aeolic) γάλοως 'husband's sister or brother's sister, sister-
 in-law'; Phrygian γέλαρος 'brother's wife' (= ἀδελφοῦ γυνή); Latin *glōs*
 'husband's sister, sister-in-law' (attested only in glosses); Late Church
 Slavic *zъlъva* 'husband's sister'; Russian *zolónka* [золонка] 'husband's
 sister' (Old Russian *zólva* [золва]); Old Czech *zelva* 'husband's sister';
 Polish *żelw, żolwica*, alongside *zehl, zohlwica* 'husband's sister'; Serbian
zàova 'husband's sister'. Pokorny 1959:367—368 **ĝ(ē)lōu-* 'husband's
 sister'; Walde 1927—1932.I:631 **ĝ(ē)lōu-*; Mann 1984—1987:396 **ĝəlōu-*,
**ĝəlōu-* 'sister-in-law on husband's side'; Gamkrelidze—Ivanov
 1984.II:760 **k'al(ou-)* and 1995.I:662 **k'al(ou-)* 'husband's sister';
 Benveniste 1969.I:251 and 1973:203; Mallory—Adams 1997:521—522
**ĝ₁h₃-mos-* 'husband's sister'; Frisk 1970—1973.I:286—287; Hofmann
 1966:41; Boisacq 1950:140; Chantraine 1968—1980.I:208; Beekes
 2010.I:258—259 **ĝlH-ōus*; De Vaan 2008:266; Walde—Hofmann 1965—
 1972.I:610 **ĝ(e)lōu-*; **ĝlōuōs*, **ĝelōuōs*, **ĝeleuōs*; Pre-Proto-Slavic
**g_{el}uūā*, alongside **ĝ_{el}uūā*; Ernout—Meillet 1979:277; Preobrazhensky
 1951:255; Derksen 2008:551 **ĝlh₂-u-*.
- B. Proto-Altaic **kele* (~ -i, -o) 'daughter-in-law, bride': Proto-Tungus **keli*
 'in-law; girl, sister' > Manchu *keli* 'men who have married sisters;
 brothers-in-law'; Evenki *keli(n)* 'in-law', *kiliwlī* 'girl, sister'; Lamut / Even
keli 'in-law'; Negidal *keli* 'in-law', *kelewli* 'girl, sister'; Ulch *keli(n)* 'in-
 law'; Oroch *keli(n)* 'in-law'; Nanay / Gold *keli* 'in-law'; Oroch *keli* 'in-law'.
 Proto-Turkic **g_{el}in* 'bride, daughter-in-law' > Old Turkic (Orkhon; coll.)

keliŋ-ün, (Old Uighur) *kelin* 'bride, daughter-in-law'; Karakhanide Turkic *kelin* 'bride, daughter-in-law'; Turkish *gelin* 'bride, daughter-in-law'; Gagauz *gelin* 'bride, daughter-in-law'; Azerbaijani *gälin* 'bride, daughter-in-law'; Turkmenian *gelin* 'bride, daughter-in-law'; Khalay *kälin* 'bride, daughter-in-law' (Azerbaijani loan); Uzbek *kelin* 'bride, daughter-in-law'; Uighur *kelin* 'bride, daughter-in-law'; Karaim *kelin* 'bride, daughter-in-law'; Tatar *kilen* 'bride, daughter-in-law'; Bashkir *kilen* 'bride, daughter-in-law'; Kirghiz *kelin* 'bride, daughter-in-law'; Kazakh *kelin* 'bride, daughter-in-law'; Noghay *kelin* 'bride, daughter-in-law'; Khakas *kelän* 'bride, daughter-in-law'; Oyrot (Mountain Altai) *kelin* 'bride, daughter-in-law'; Tuva *kelin* 'bride, daughter-in-law'; Chuvash *kin*, *kilän* 'bride, daughter-in-law'; Yakut (pl.) *kiyūt* 'brides, daughters-in-law'. Starostin—Dybo—Mudrak 2003:659 **kele* (~ -i, -o) 'daughter-in-law, bride'.

Buck 1949:2.66 sister-in-law. Illič-Svityč 1971—1984.I:295—296, no. 162, **kälU* 'female relation'; Koskinen 1980:19, no. 47; Dolgopolsky 1998:85—87, no. 109, **kälu/ü* 'a woman of the other exogamous moiety' ('female relative-in-law', 'bride') and 2008, no. 862, **kälü* 'a woman of the opposite exogamous moiety within an exogamic system of tribes' (in descendant languages → 'female relative-in-law', 'bride'); Bomhard 1999a:65; Hakola 2000:52, no. 186.

499. Proto-Nostratic (n.) **k'enʷ-a* 'knot, joint':

- A. Dravidian: Tamil *keṇṭai* 'ankle'; Malayalam *keṇippu* 'joint, articulation'; Kannada *giṇṇu*, *geṇṇu* 'knot, joint (as of sugarcane, finger, etc.)', *gaṇṭu* 'knot of cord; joint of reed, bamboo, cane; joint or articulation of body'; Kodagu *giṇṇi* 'joint in wrist or fingers, knot in sugarcane'; Tuḷu *gaṇṭu*, *gaṇṭu* 'knot in string, ankle, knot or joint of reed or cane'; Telugu *gaṇṭu*, *gaṇṭa* 'a knot'; Naikṛi *kaṇḍe* 'joint in bamboo'. Burrow—Emeneau 1984:177, no. 1946.
- B. Proto-Indo-European **k'enu-/k'nu-* (secondary *o*-grade form: **k'onu-*) 'knee, bend of the leg; angle': Sanskrit *jānu*, *jñu-* 'knee'; Avestan (acc. sg.) *žnūm* 'knee'; Armenian *cunr* (< **k'ōnu-r-*) 'knee'; Greek γόνυ 'knee', γωνία 'a corner, angle'; Latin *genū* 'knee'; Gothic *kniu* 'knee'; Old Icelandic *kné* 'knee'; Faroese *knæ* 'knee'; Norwegian *kne* 'knee'; Swedish *knä* 'knee'; Danish *knæ* 'knee'; Old English *cnēo* 'knee'; Old Frisian *kniu*, *knī*, *knē* 'knee'; Old Saxon *kneo*, *knio* 'knee'; Dutch *knie* 'knee'; Old High German *chniu* 'knee' (New High German *Knie*); Hittite *gi-e-nu*, *gi-nu* 'knee'; Tocharian A (dual) *kanweṃ*, B (dual) *kenī(ne)* 'knees'. Pokorny 1959:380—381 **ḡenu-*, **ḡneu-* 'knee, angle'; Walde 1927—1932.I:586—587 **ḡeneu-*; Mann 1984—1987:393 **ḡenu* (**ḡōn-*, **ḡān-*) 'bend of the leg, knee; angle', 401 **ḡnu* 'knee'; Watkins 1985:19 **ḡenu-* and 2000:26 **ḡenu-* 'knee' (also 'angle') (variant form **ḡneu-*; *o*-grade form **ḡonu-*); Gamkrelidze—Ivanov 1984.I:100, I:173, I:233, II:815 **k'enu-*, **k'onu-*,

**k̂'n-eu-* and 1995.I:86, I:149, I:202, I:688, fn. 13, **k̂'enu-*, **k̂'onu-*, **k̂'n-ew-* 'knee'; Mallory—Adams 1997:336 **gónu* 'knee'; Mayrhofer 1956—1980.I:429 and I:447; Boisacq 1950:153—154 **geneu-*; Frisk 1970—1973.I:321 and I:336—337; Chantraine 1968—1980.I:232—233 and I:244; Hofmann 1966:47; Beekes 2010.I:283 **genu*, **gonu* and I:294 Greek γωνία < *γovF-ía; Ernout—Meillet 1979:273; Walde—Hofmann 1965—1972.I:592—593 **gōn-u*; De Vaan 2008:259; Orël 2003:218 Proto-Germanic **knewan*; Kroonen 2013:296 Proto-Germanic **knewa-* 'knee'; Feist 1939:313 Gothic *kniu* < **gn-eu-*, base **geneu-*; Lehmann 1986:220 **genu-*, **gnew-* 'knee, angle'; De Vries 1977:320 **genu-*; Falk—Torp 1903—1906.I:395 Germanic stem **knewa-*; Torp 1919:295 Germanic **knewa-*; Onions 1966:507 **gneu-*, **geneu-*, **goneu-*; Klein 1971:403—404; Boutkan—Siebinga 2005:219—220; Kluge—Mitzka 1967:382; Kluge—Seebold 1989:383 **genu-*; Sturtevant 1951:40, §62d, **génw*; Puhvel 1984— .4:146—151 **gonu-* or **g̃(ŋ)nu-*; Kloekhorst 2008b:467—468; Van Windekens 1976—1982.I:187 **gonu*; Adams 1999:193 **gonu*.

- C. Proto-Altaic **kēnʷa* 'front leg, armpit, angle': Proto-Tungus **kenʷe-/kunʷe-* 'shin, stockings' > Evenki *keñete*, *kuñetu* 'stockings'; Lamut / Even *kēñeče*, *kōñčen* 'shin'. Proto-Mongolian **ka(i)* 'front legs' > Written Mongolian *qa* 'the part of a foreleg of an animal between the shoulder and knee'; Khalkha *χaa* 'front legs'; Buriat *χα* 'front legs'; Kalmyk *χā* 'front legs'. Proto-Turkic **Kāynat* 'wing, fin' > Old Turkic (Old Uighur) *qanat* 'wing'; Karakhanide Turkic *qanat* 'wing'; Turkish *kanad* 'wing, fin'; Gagauz *qanat* 'wing'; Azerbaijani *ganad*, (dial.) *gānād* 'wing'; Turkmenian *gānat* 'wing'; Uzbek *qanot* 'wing'; Karaim *qanat* 'wing, fin'; Tatar *qanat* 'wing'; Bashkir *qanat* 'wing'; Kirghiz *qanat* 'wing'; Kazakh *qanat* 'wing'; Noghay *qanat* 'wing'; Oyrot (Mountain Altai) *qanat* 'wing, fin', *qanar* 'fin'; Chuvash *sonat* 'wing, fin'; Yakut *kīnat*, *kijīat* 'wing'; Dolgan *kīnat* 'wing'. Starostin—Dybo—Mudrak 2003:664—665 **kēña* 'front leg, armpit, angle'.

Buck 1949:4.36 knee; 9.192 knot (sb.).

500. Proto-Nostratic root **k'ep'*:-

- (vb.) **k'ep'*- 'to cut, chop, split, or break into small pieces; to munch, to chew';
 (n.) **k'ep'-a* 'the act of cutting, chopping, splitting, or breaking into small pieces, the act of mincing; chewing (the cud), rumination'

A. Afrasian: Semitic: Arabic *kabaʔa* 'to eat, to fill oneself with drink'.

B. Proto-Kartvelian **k'ep'*- 'to cut or chop into small pieces, to mince': Georgian *k'ep'*- 'to cut or chop into small pieces, to mince'; Svan *k'əp'*- 'to cut or chop into small pieces, to mince'. Fähnrich—Sardshweladse 1995:190 **kep-*; Fähnrich 2007:229 **kep-*.

- C. Proto-Altaic **kēpu-* ‘to chew’: Proto-Tungus **keb-* ‘to gnaw, to bite (with front teeth); to pierce through’ > Manchu *keifule-* ‘to pierce, to go through (arrows)’, *keifu* ‘a type of arrow used for shooting tigers, bears, and buck deer’; Evenki *kewde-* ‘to pierce through’; Lamut / Even *kēwri-* ‘to gnaw, to bite (with front teeth)’. Proto-Mongolian **kebi-* ‘to chew’ > Mongolian *kebi-* ‘to chew the cud, to ruminate’, *kebidesü* ‘rumination, cud’, *kebilge* ‘cud, rumination’; Khalkha *xeve-* ‘to chew’; Buriat *χibe-* ‘to chew the cud, to ruminate’; Kalmyk *kew-* ‘to chew’; Ordos *kewe-* ‘to chew’; Monguor *kēyi-* ‘to chew’. Proto-Turkic **gēb-* ‘to chew’ > Turkish *geviş* ‘chewing the cud, ruminating’, *gevele-* ‘to chew’; Karakhanide Turkic *kev-* ‘to chew’; Gagauz *gevše-* ‘to chew’; Azerbaijani *göyüş* ‘cud’; Turkmenian *gāvū-š* ‘cud’; Uzbek *kawša-* ‘to chew’; Uighur *köyši-* ‘to chew’; Karaim *kövše-n-* ‘to chew’; Tatar *küşä-* ‘to chew’; Bashkir *köyöš* ‘cud’; Kirghiz *küy-š-ö-* ‘to chew, to chew the cud, to ruminate’; Kazakh *küis* ‘cud’; Noghay *küyze-* ‘to chew’; Chuvash *kavle-* ‘to chew’; Yakut *kebi-* ‘to chew’. Poppe 1960:20, 46, and 135; Street 1974:16 **kebi-* ‘to ruminate, to chew the cud’; Starostin—Dybo—Mudrak 2003:667 **kēpu-* ‘to chew’.

Buck 1949:4.58 bite (vb.); 5.11 eat.

501. Proto-Nostratic root (Eurasianic only) **k'ér-*:

- (vb.) **k'ér-* ‘to decay, to wear out, to wither, to waste away, to become old’;
(n.) **k'ér-a* ‘old age, old person’; (adj.) ‘decayed, worn out, withered, wasted, old’

- A. Proto-Indo-European **k'ér(H)-*/**k'or(H)-*/**k'ṛ(H)-* ‘to decay, to wear out, to wither, to waste away, to become old’: Sanskrit *járatī* ‘to grow old, to become decrepit, to decay, to wear out, to wither, to be consumed, to break up, to perish’, *jāra-h* ‘becoming old, wearing out, wasting’, *jaraṇá-h* ‘old, decayed’, *jīrṇá-h* ‘old, worn out, withered, wasted, decayed’, *jūrṇá-h* ‘decayed, old’, *járat-* ‘old, ancient, infirm, decayed, dry (as herbs), no longer frequented (as temples) or in use’, *jará* ‘old age’; Avestan *zar-* ‘to grow old, to waste away’; Armenian *cer* ‘old’; Greek γεραίός ‘old’, γέρον (n.) an old man; (adj.) old, γῆρας ‘old age’; Old Icelandic *karl* ‘man, old man’; Old English *carl* ‘man’ (Norse loan), *ceorl* ‘free man of the lowest class; free man; common man; husband; man, hero’; Old Frisian *tzerl*, *tzirl* ‘free man without rank’; Dutch *kerel* ‘free man without rank’; Old High German *karl* ‘man, husband’; New High German *Kerl* ‘fellow, chap, guy’ (< Middle Low German *kerle* ‘free man without rank’); Old Church Slavic *zbrěti* ‘to ripen, to mature’, *zbrěb* ‘ripe’; Slovenian *zoríti* ‘to ripen’; Tocharian B (pl.) *śrāy* ‘older men, mature men, adult men’. Walde 1927—1932.I:599—600 **ġer-*, **ġerē-*; Pokorny 1959:390—391 **ġer-*, **ġerā-*, **ġrē-* ‘to decay, to mature, to grow old’; Rix 1998a:146—147 **ġerh₂-* ‘to decay, to become old’; Mann 1984—1987:394 **ġer-* (**ġerōnt-*, **ġerant-*,

gernt-* ‘old; old man’, 394 **geralos* (gorl-*) ‘old, mature; old age, old man’, 394 **gergeros* ‘old, mellow’, 394—395 **geruos* ‘old; age’, 405 **gor-* ‘ripe, old, mature’; Watkins 1985:20 **gerə-* and 2000:27 **gerə-* ‘to grow old’; Gamkrelidze—Ivanov 1984.I:224 **k’erH-/k’_ɣH-* and 1995.I:151, I:177, I:187, I:194 **k’erH-/k’_ɣH-* ‘old’; Mallory—Adams 1997:152 **gerh_a-* ‘to age, to mature’, 237 **gerh_a-* ‘to ripen, to age’, 248 **gerh_a-* ‘to grow, to age, to mature’, 409 **gerh_a-ont-* ‘old man’, 409—410 **gerh_a-o-s* ‘old man’, **gerh_a-* ‘to age’; Mayrhofer 1956—1980.I:420, I:421, I:422, I:439, and I:443; Frisk 1970—1973.I:301—302; Boisacq 1950:145 **gerē-*; Hofmann 1966:43—44; Chantraine 1968—1980.I:217—218; Beekes 2010.I:268—269 **gerh₂-*; Orël 2003:210 Proto-Germanic **karlaz* ~ **kerlaz*; Kroonen 2013:285 Proto-Germanic **kerla-* ~ **karla-* ‘man, freeman’; Onions 1966:175; Klein 1971:136 **ger(ē)-*; Kluge—Mitzka 1967:365; Kluge—Seebold 1989:366 **gerə-*; Vercoullie 1898:133; Derksen 2008:548 **gorh₂-eie-* and 552—553 **grh₂-*; Adams 2013:705.

- B. Proto-Altaic **kěru* (~ *kh-*) ‘old, worn out’: Proto-Mongolian **kari-*, **kar-si-* ‘to weaken, to become old’ > Written Mongolian *qari-* ‘to weaken, to become old’; Khalkha *χari-*, *χarši-* ‘to weaken, to become old’; Buriat *χaraši-* ‘to weaken, to become old’; Kalmyk *χär-* ‘to weaken, to become old’. Proto-Turkic **Karī-* ‘(adj.) old; (n.) old man or woman; (vb.) to become old’ > Old Turkic (Old Uighur) *qarī* ‘old’, *qarī-* ‘to become old’; Karakhanide Turkic *qarī* ‘old’, *qarī-* ‘to become old’; Turkish *kart* ‘dry, hard, tough, wizened, old’, *kart-* ‘to become dry, tough, shriveled, old’, *kartlık* ‘dryness, toughness; loss of the freshness of youth’, *kari* ‘woman, wife’; Gagauz *qarī* ‘old; old man or woman; woman’; Azerbaijani *garī* ‘old woman’; Turkmenian *garri* ‘old’, *garra-* ‘to become old’; Uzbek *qari* ‘old’, *qari-* ‘to become old’; Uighur *qeri* ‘old; old man or woman’, *qeri-* ‘to become old’; Tatar *qarī*, *qart* ‘old’; Bashkir *qarī*, *qart* ‘old’; Kirghiz *qarī*, *qart* ‘old’, *qarī-* ‘to become old’; Kazakh *qarī* ~ *qerī*, *qart* ‘old’; Noghay *qart* ‘old’; Tuva *qiri-* ‘to become old’; Yakut *kiri-* ‘to become old’; Dolgan *kiri-* ‘to become old’. Décsy 1998:124 Proto-Turkic **qary* ‘old’. Starostin—Dybo—Mudrak 2003:671—672 **kěru* (~ *k^c-*) ‘old, worn out’.

Buck 1949:14.15 old. Greenberg 2002:124, no. 283.

502. Proto-Nostratic root **k’er-*:

- (vb.) **k’er-* ‘to gather, to collect; to take a handful, to pick, to pluck’;
(n.) **k’er-a* ‘collection, gathering, handful’

- A. Proto-Afrasian **k’[e]r-* ‘to gather, to collect; to take a handful, to pick, to pluck’: Proto-Semitic **k’ar-ad-* ‘to gather, to collect; to take a handful, to pick, to pluck’ > Arabic *ḵarada* ‘to collect, to gather, to hoard up’; Akkadian *ḵarādu* ‘to pluck wool’, *ḵerdu* ‘plucked wool’, *ḵurrudu* ‘with

hair falling out in tufts' (for the etymology, cf. Von Soden 1965—1981.II:901—902). Proto-Semitic **k'ar-am-* 'to glean' > Geez / Ethiopic *ḵarama*, *ḵarrama* [፳፻፳፱] 'to glean, to harvest', *ḵarmāy* [፳፻፷፪] 'briar, weeds, oats', *taḵrām* [፳፻፷፱] 'gleanings, crop, harvest'; Tigrinya *ḵārāmā* 'to glean'; Amharic *ḵārrāmā* 'to glean', *ḵārm* 'stubble, gleaning'; Argobba *ḵārrāmā* 'to glean'; Gurage *ḵerrāmā* 'to glean', (Wolane) *ḵārma* 'gleanings'; Tigre *ḵārim* 'plowed field, arable land' (probably 'gleaned' > 'arable'). Leslau 1979:497—498 and 1987:441.

- B. Elamo-Dravidian: Middle Elamite *ki-ir-pi* 'hands'; Royal Achaemenid Elamite *kur-pi* 'hands'. Dravidian: Konda *ker-* 'to take handfuls or small quantities out of a mass (of grain, etc.), to take into a ladle before serving, to collect into a heap and pick up'; Pengo *gre-* 'to scoop up with the hand'; Manda *grepa-* 'to scoop up'; Kui *grāpa* (*grāt-*), *grēpa* (*grēt-*) 'to scoop up, to shovel into with the hands, to scrape together'; Kuwi *grecali* (*gret-*) 'to gather up, to take a handful'. Burrow—Emeneau 1984:178, no. 1959.
- C. Proto-Kartvelian **k'er-b-/k'r-eb-* 'to gather, to collect': Georgian *k'reb-/k'rib-/k'rb-*, *k'erb-* 'to gather'; Mingrelian *k'orob-* 'to gather'; Laz *k'orob-* 'to gather'. Schmidt 1962:120 **ḵereb-*; Klimov 1964:115 **ḵerb-* and 1998:100 **ḵreb-* : **ḵrb-* 'to gather, to get together'; Fähnrich—Sardshweladse 1995:207—208 **ḵrab-*; Fähnrich 2007:253 **ḵrab-*. Proto-Kartvelian **k'r-ep-/k'r-ip-* 'to gather, to pick (fruit, flowers)': Georgian *k'rep-/k'rip-* 'to gather, to pick (fruit, flowers)'; Mingrelian *k'orop-* 'to gather, to pick (fruit, flowers)'. Schmidt 1962:120; Klimov 1964:115 **ḵrep-* and 1998:100 **ḵrep-* : **ḵrip-* 'to gather, to pick (fruit, flowers)'. Perhaps also Georgian *k'ert'-/k'rt'-* 'to pluck (out)'. Klimov 1998:90 **ḵert-* : **ḵrt-* 'to pluck (out)'.
- D. Proto-Indo-European **k'er-/k'or-/k'ṛ-* 'to gather (together), to collect, to take a handful': Greek ἀγείρω (< **ḡ-ger-iō*) 'to come together, to assemble; to gather, to collect', ἀγορά (Ionic ἀγορή) 'an assembly of the people; place of assembly (like the Roman *Forum*)'; Latin *grex* 'flock, herd'; Welsh *gre* 'herd'; Old Icelandic *kremja* 'to squeeze (especially of berries, grapes, etc.)'; Old English *crammian* 'to cram, to stuff'; Latvian *gūrste* 'bundle of flax'; Russian *gorst'* [горсть] 'cupped hand'; Ukrainian (*pry*)*hortáty* 'to clasp'; Polish *garnąć* 'to gather'; Sanskrit *grāma-h* 'heap, crowd, community'. Rix 1998a:246 (?) **h₂ger-* 'to gather, to collect; to come together, to assemble'; Pokorny 1959:382—383 **ger-* 'to collect'; Walde 1927—1932.I:590—591 **ger-*; Mann 1984—1987:302 **grt-* 'to gather, to assemble'; Mallory—Adams 1997:217 **ger-* '(vb.) to gather; (n.) herd, crowd'; Watkins 1985:19 **ger-* and 2000:27 **ger-* 'to gather'; Boisacq 1950:6—7; Frisk 1970—1973.I:8—9 and I:13—14; Chantraine 1968—1980.I:9 and I:12—13; Hofmann 1966:2; Schwyzler 1953.I:433, note 5; Beekes 2010.I:10 **h₂ger-*; Mayrhofer 1956—1980.I:353; De Vaan 2008:273; Ernout—Meillet 1979:283 **gre-g-*; Walde—Hofmann 1965—1972.I:622 **gre-g-* < **gere-*; Derksen 2008:199 Balto-Slavic **gursti-*; Orël

2003:220 Proto-Germanic **krammjanan*, 220 **krampjanan*; Kroonen 2013:301 Proto-Germanic **krammōn-* ‘to squeeze’; De Vries 1977:330 **ger-*; Skeat 1898:140; Onions 1966:224; Klein 1971:173 **ger-* ‘to gather together’.

- E. Uralic: Finnish *kerätä-* ‘to collect, to gather together, to gather up; to pick’, *keruu* ‘collection, gathering’, *keräys* ‘collection’, *kertyä-* ‘to accumulate, to pile up’, *kerääntyä-* ‘to collect, to gather; to assemble’; Karelian *kereä-* ‘to gather, to collect’.
- F. (?) Proto-Gilyak / Nivkh **k(ə)r-* ‘to accompany’: Amur *iyrə-dʷ* / *-kʰrə-dʷ* / *-xrə-dʷ* ‘to accompany’; North Sakhalin [*urgut* (*humnə-dʷ*)] ‘to (live) together with’; East Sakhalin *phiyragu-* ‘to accompany’; South Sakhalin *ugr* / *igrʸ* ‘together’ [*uyrə-* ‘two people together’]. Fortescue 2016:87. Assuming semantic development from ‘to gather together’.

Buck 1949:12.21 collect, gather. Illič-Svityč 1971—1984.I:330—331, no. 206, **karpʰa* ‘to gather fruit’; Bomhard—Kerns 1994:441—442, no. 286; Hakola 2000:65, no. 253.

503. Proto-Nostratic root **k’ir-* (~ **k’er-*) or **k’ur-* (~ **k’or-*):

- (vb.) **k’ir-* or **k’ur-* ‘to cut, to cut into, to incise, to engrave, to notch; to cut off, to sever, to nip off, to clip; to cut in two, to split’;
(n.) **k’ir-a* or **k’ur-a* ‘cut, slit, notch; chip, piece cut off’

- A. Proto-Afrasian **k’e(e)r-*, **k’o(o)r-* ‘to cut, to cut into, to incise, to engrave, to notch; to cut off, to sever, to nip off, to clip; to cut in two, to split’: Proto-Semitic **k’ar-* ‘to cut, to cut into, to incise, to engrave, to notch; to cut off, to sever, to nip off, to clip; to cut in two, to split’ > Arabic *qarasha* ‘to pinch, to nip, to bite’, *qaraha* ‘to wound’, *qarada* ‘to cut, to sever, to cut off, to clip, to gnaw, to nibble, to bite’, *qarasha* ‘to gnash, to grind (one’s teeth), to nibble, to crunch, to chew’, *qarama* ‘to gnaw, to nibble’, *qarmaša* ‘to eat, to crunch, to nibble’, *qaraṭa* ‘to cut into small pieces, to chop, to mince’, *qarṭama* ‘to cut off, to clip’, *qarkada* ‘to gnaw, to bite’; Hebrew *qaras* [קָרַשׁ] ‘to nip, to pinch’, *qarah* [קָרַח] ‘to shave oneself bald, to make bald’, *qardom* [קָרְדֹּם] ‘adze, axe’, *qeres* [קֶרֶשׁ] ‘board, plank’; Akkadian *qarāšu* ‘to nip off, to gnaw’, *qarāšu* ‘to trim, to cut wood, to carve (meat)’; Ugaritic *krš* ‘to bite’; Harsūsi *kerōš* ‘to nip’, *kerōh* ‘to shave, to cut’, *kerōz* ‘to cut up’, *kerōt* ‘to bite’; Šheri / Jibbāli *kérh* ‘to cut off all the hair’, *kérōš* ‘to nip’, *kérōz* ‘to cut, to cut all the hair off something’; Mehri *káwrəh* ‘to cut, to shave’, *kəruš* ‘to nip’, *kəruṭ* ‘to chop’, *kəruz* ‘to reive (camels); to cut (hair) with scissors’; Geez / Ethiopic *qarada* [ቀረደ] ‘to lacerate, to tear away, to cut off, to shear, to shave’, *kʷārafa* [ቀረፈ] ‘to cut into little pieces, to tear, to bite from an oversize piece’, *qarrəha* [ቀርሐ], *qarha* [ቀርሐ] ‘to shave, to make bald’, *qarasha* [ቀረሰ] ‘to incise, to scar, to scalp, to engrave, to carve, to cut, to chisel, to shear, to shave’.

ḱarṭama [ᠰᠠᠷᠲᠠᠮᠠ] ‘to munch, to chew food that is hard’; Tigrinya *ḱwarräfä* ‘to eat, to browse, to eat the *ḱwarf*- root’, *ḱäräšä*, *ḱwäräšä* ‘to cut, to make an incision’, *ḱwärtätä* ‘to pinch, to break off leaves’; Amharic *ḱwärräfä* ‘to bite an oversize piece’, *ḱwärrätä* ‘to cut off’, *ḱwärtätätä* ‘to be nibbled, to be indented’, *ḱwärtätämä* ‘to munch, to crush’, *ḱwärrämmätä* ‘to nibble, to tear’; Gurage *ḱwärrärä* ‘to become bald’, *ḱärätämä* ‘to crush, to crush a member of the body of a living being’, *ḱäräsä* ‘to break bread, *to break off a piece’, *ḱwärtätämä* ‘to crunch’, *ḱärätätä* ‘to amputate, to cut off’. Murtonen 1989:386 and 388; Klein 1987:592, 592—593, 596, and 597; Leslau 1979:500, 501, 502—503 and 1987:440—441, 441, 444, 445; Zammit 2002:338. Berber: Tuareg *əyrəs* ‘to slit the throat of an animal as part of a ritual’. Proto-East Cushitic **k’er*-/ **k’ur*- or **k’uur*- ‘to cut’ > Galla / Oromo *k’or*- ‘to write’; Somali *qor-i* ‘to carve, to cut, to write’; Rendille *xor/xora* ‘to carve skin’. Sasse 1979:5. Proto-Southern Cushitic **k’eer*- ‘to cut (meat)’ > Iraqw *qer*- ‘to give an animal for slaughter’; Dahalo *k’eer*- ‘to cut (meat ?)’. Ehret 1980:252. Ehret 1995:238, no. 425, **k’eer*-/ **k’oor*- ‘to cut into’. [Orël—Stolbova 1995:338, no. 1556, **ḱaraḱ*- ‘to cut’.]

- B. Proto-Kartvelian **k’r-eč’k’*-/ **k’r-ič’k’*-/ **k’r-č’k’*- ‘to cut, to cut off’: Georgian *k’reč’*-/ **k’rič’*- ‘to cut, to cut off’; Mingrelian *k’irač’*-/ **k’irič’*-/ **k’irč’*- ‘to cut’; Laz *k’rič’*- ‘to cut, to cut off’. Klimov 1998:100 **kreč’*-/ **krič’*-/ **krč’*- ‘to cut, to cut off’; Fähnrich—Sardshweladse 1995:208—209 **kreč’*-/ **krič’*-; Fähnrich 2007:254 **kreč’*-/ **krič’*-. The expected cluster -č’k’- in Mingrelian and Laz has been reduced to -č’- through dissimilation with initial *k’*-.
- C. Proto-Indo-European **k’er*-/ **k’or*-/ **k’r*- (extended form: **k’er-bh*-/ **k’or-bh*-/ **k’r-bh*-) ‘to cut, to carve, to notch’: Greek γράφω ‘to write’; Old Icelandic *krota* ‘to engrave’, *kurfr* ‘chip, cut-off piece’; Old English *ceorfan* ‘to cut’, *cyrf* ‘cutting’; Old Frisian *kerva* ‘to cut’; Dutch *kerven* ‘to cut’; Middle High German *kerban* ‘to cut, to notch’ (New High German *kerben*). Rix 1998a:165 **gerbh*- ‘to scratch, to incise, to notch’; Pokorny 1959:392 **gerebh*- ‘to slit’; Walde 1927—1932.I:606—607 **gerbh*-; Mann 1984—1987:269 **gerbh*- ‘to cut; fate’, 289—290 **grabhō* ‘to scratch, to scrape’; Watkins 1985:20 **gerbh*- and 2000:27 **gerbh*- ‘to scratch’; Gamkrelidze—Ivanov 1984.II:624 *(s)*k’reb*[^h]- and 1995.I:536 *(s)*k’rebh*- ‘to scratch, to scrape, to draw’ (also **k’rbh*-); Mallory—Adams 1997:143 *(s)*grebh*- ‘to scratch, to cut’; Chantraine 1968—1980.I:235—236 **gerbh*-; Boisacq 1950:155 **gerph*-; Frisk 1970—1973.I:324—326 **gerbh*-; Hofmann 1966:47; Beekes 2010.I:285—286 **gerbh*-; Orël 2003:213 Proto-Germanic **kerbanan*; Kroonen 2013:285 Proto-Germanic **kerban*- ‘to carve’; De Vries 1977:331—332 **ger*- and 335 **ger*-; Onions 1966:149 West Germanic **kerfan*; Klein 1971:116 **gerbh*- ‘to scratch’; Kluge—Mitzka 1967:364 **gerbh*-; Kluge—Seebold 1989:366.

- D. Proto-Altaic **kīro-* ‘to cut, to mince’: Proto-Tungus **kire-* ‘to mince; to be broken off, to break off; to gnaw’ > Evenki *kirge-* ‘to gnaw’; Lamut / Even *qirgɣ-* ‘to gnaw’; Ulch *kirki-čū-* ‘to gnaw’, *kiri* ‘front tooth’; Orok *keren-* ‘to mince’, *kirī-* ‘to grin, to show one’s teeth’; Nanay / Gold *qiarqialī-*, *kerkieli-* ‘to gnaw’, *kermē-* ‘to be broken off, to break off’. Proto-Mongolian **kiru-* ‘to mince, to cut into small pieces’ > Written Mongolian *kira-*, *kiru-* ‘to cut into small pieces, to mince’, *kirbe-* ‘to shorten gradually; to trim or clip evenly; to level up’; Khalkha *ḡar-* ‘to cut into small pieces, to mince’; Buriat *kirma-* ‘to cut into small pieces, to mince’; Kalmyk *kur-* ‘to cut into small pieces, to mince’, *kirwə-* ‘to cut off’; Dagur *kereči-* ‘to cut into small pieces, to mince’. Proto-Turkic **Kīr-* ‘(vb.) to break, to demolish; to scrape, to shave; (adj.) small’ > Karakhanide Turkic *qīr-* ‘to break, to demolish; to scrape; to tear out’; Turkish *kır-* ‘to break, to split; to kill, to destroy’, *kıran* ‘breaking, destructive’, *kırık* ‘broken, cracked; break, fracture, fragment’; Gagauz *qīr-* ‘to break, to demolish’; Azerbaijani *gīr-* ‘to break, to demolish’; Turkmenian *gīr-* ‘to break, to demolish; to scrape, to shave’; Uzbek *qīr-* ‘to scrape, to shave’; Uighur *qī(r)-* ‘to scrape, to shave’; Tatar *qīr-* ‘to scrape, to shave’; Bashkir *qīr-* ‘to break, to demolish; to scrape, to shave’; Kirghiz *qīr-* ‘to scrape, to shave’; Kazakh *qīr-* ‘to scrape, to shave’; Noghay *qīr-* ‘to scrape, to shave’; Oyrot (Mountain Altai) *qīr-* ‘to scrape, to shave’; Tuva *qīr-* ‘to scrape, to shave’; Chuvash *ḡar-* ‘to break, to demolish’; Yakut *kīrīy-* ‘to shear, to cut’, *kīra* ‘small’; Dolgan *kīrīy-* ‘to shear, to cut’, *kīra* ‘small’. Starostin—Dybo—Mudrak 2003:679—680 **kīro* ‘to cut, to mince’.
- E. Proto-Gilyak / Nivkh **k(ə)r-* ‘to gouge out’: Amur *eyra-dy* / *-kʰra-dy* ‘to hollow out, to gouge a hole in’; East Sakhalin *exra-d* ‘to gouge out’. Fortescue 2016:87.

Buck 1949:4.58 bite (vb.); 9.22 cut (vb.). Bomhard—Kerns 1994:437—438, no. 282.

504. Proto-Nostratic (Eurasian only) (n.) **kʷom-a* ‘hand, fist’:

Perhaps related to:

(vb.) **kʷum-* ‘to seize, to grasp, to press together’;

(n.) **kʷum-a* ‘heap, mass, lump, clump; pressure, compression’

- A. Proto-Uralic **kom3(r3)* ‘handfull, cupped hand’: (?) Finnish *kahmalo*, *kamahlo* ‘double handfull’; (?) Estonian *kamal* ‘cupped hands, the hollow of the two hands joined; double handfull’; Lapp / Saami (Norwegian) *goabmer* ‘the two curved open hands put together to receive or catch something’; Mordvin (Erza) *komoro* ‘handfull’, (Moksha) *komor* ‘hollow of the hand’; (?) Zyrian / Komi *kamj̄r* ‘handfull’; Yenisei Samoyed / Enets *hammara* ‘hand’. Collinder 1955:22 and 1977:42; Rédei 1986—1988:175 **kom3(r3)*; Décsy 1990:100 **komara* ‘handfull, cupped hand’.

- B. Proto-Altaic **kompo* ‘fist, wrist’: Proto-Tungus **komba-* ‘hand, wrist, spoke-bone’ > Negidal *komboxī* ‘hand, wrist, spoke-bone’; Orok *qomū* ‘wrist, hand, spoke-bone’; Nanay / Gold *qombjo* ‘hand, wrist, spoke-bone’; Udihe *komugu* ‘hand, wrist, spoke-bone’. Proto-Turkic **Kop-* ‘fist, wrist’ > Kirghiz *qobuq* ‘arthritis of the metacarpus’; Oyrot (Mountain Altai) *qoboq* ‘wrist’; Tuva *qowades* ‘fist’. Starostin—Dybo—Mudrak 2005:718 **kompo* ‘fist, wrist’. The putative Mongolian cognates cited by Starostin—Dybo—Mudrak are not included here.

Buck 1949:4.33 hand. Dolgopolsky 2008, no. 631, **goŋmV* ⇌ **gomŋV* ‘hand, fist’.

505. Proto-Nostratic (n.) **k'or-a* or **k'ar-a* ‘crane’:

- A. Dravidian: Tamil *kokku* (< **kor-kku* < **korV-nk/-nkk-*) ‘common crane’, *kuruku* ‘heron, stork, crane, bird, gallinaceous fowl’; Malayalam *kokku*, *kokkan*, *kocca*, *kuriyan* ‘paddy bird, heron’, *kuru* ‘heron’; Kannaḍa *kokku*, *kokkare* ‘crane’, *kukku* ‘heron, crane’; Telugu *koṅga*, *kokkera*, *kokkarāyi* ‘crane’; Kolami *koṅga* ‘crane’; Tulu *korṅgu* ‘crane, stork’; Parji *kokkal* ‘crane’; Gondi *koruku* ‘crane’. Burrow—Emeneau 1984:191, no. 2125; Krishnamurti 2003:13 and 16 **korV-nk/-nkk-* ‘a stark, crane’.
- B. Proto-Indo-European **k'or-/k'or-/k'r-* ‘crane’: Greek γέρανος ‘crane’; Latin *grūs* ‘crane’; Armenian *k'unk* ‘crane’; Gaulish *-garanos* in *tri-garanos* ‘three cranes’; Welsh *garan* ‘crane’; Old English *cran* ‘crane’, *cranoc*, *cornuc* ‘crane’; Old Saxon *krano* ‘crane’; Middle Low German *krān*, *krōn* ‘crane’, *kranek* ‘crane’; Dutch *kraan* ‘crane’; Old High German *kran* ‘crane’ (New High German *Kran*), *kranuh*, *kranih* ‘crane’ (New High German *Kranich*); Lithuanian *gėrvė* ‘crane’; Latvian *dzērve* ‘crane’; Old Prussian *gerwe* ‘crane’; Old Church Slavic *žeravъ* ‘crane’. Pokorny 1959:383—385 (especially 383—384) **ger-* (onomatopoeic) ‘to cry hoarsely’; Walde 1927—1932.I:591—593 (especially I:592) **ger-*; Mann 1984—1987:269 **gerānos* ‘crane’, 269 **gerāuis*, **gerūjā*; Watkins 1985:20 **gerā-* and 2000:27 **gerā-* (oldest form **gerā₂-*) ‘to cry hoarsely’; Mallory—Adams 1997:140—141 **ger-* ‘crane’; Boisacq 1950:144 **ger-*; Frisk 1970—1973.I:299; Chantraine 1968—1980.I:216; Hofmann 1966:43 **ger-*; **geren-*, **g(e)rōu-*; Beekes 2010.I:267 **gerh₂-en-/eu-*; Ernout—Meillet 1979:284 **gerā-*; Walde—Hofmann 1965—1972.I:624; De Vaan 2008:274—275; Kroonen 2013:301 Proto-Germanic **krana/ōn-* ‘crane’; Orël 2003:220 Proto-Germanic **kranōn*; Onions 1966:225 **ger-*; Klein 1971:173 **ger-*; Kluge—Mitzka 1967:400 **ger-*; Kluge—Seebold 1989:409; Fraenkel 1962—1965.I:137—138; Smoczyński 2007.1:174 **gerh₂-u-*, **gerh₂-no-*, **grh₂-u-s*; Derksen 2008:558.
- C. Proto-Uralic **kork₃* (~ **karke*) ‘crane’: Finnish *kurki/kurje-* ‘crane’; Estonian *kurg* ‘crane’; Lapp / Saami *guor'gâ* ‘crane’; Mordvin *kargo*

‘crane’; Yurak Samoyed / Nenets *harü* ‘crane’; Selkup Samoyed *kara* ‘crane’; Kamassian *kuro* ‘crane’. Collinder 1955:29, 1960:407 **korkō*, and 1977:48; Rédei 1986—1988:128 **karke*; Janhunen 1977b:54 **kârā-*; Décsy 1990:100 **karka* ‘crane’. Yukaghir (Southern / Kolyma) *kurčəŋ* ‘Siberian white crane’. Nikolaeva 2006:228.

Illič-Svityč 1965:341 and 1971—1984.I:292—293, no. 159, **karA/*kura* ‘crane’ (the putative Semitic cognates cited by Illič-Svityč are loans from Sumerian [cf. von Soden 1965—1981.I:510—511 and Leslau 1987:291]); Bomhard—Kerns 1994:445, no. 290; Hakola 2000:84, no. 346, **kurkz*; Dolgopolsky 2008, no. 921, **kurV ~ *karV* ‘crane’.

506. Proto-Nostratic (n.) **k’os-a* ‘bone’:

- A. Proto-Afrasian **k’os-* (~ **k’as-*) ‘bone’: (?) Semitic: Arabic *kašš* (< **k’ass-*?) ‘sternum, breastbone’. Egyptian *qs* ‘bone’; Coptic *kas* [ⲕⲁⲥ] ‘bone’. Erman—Grapow 1921:192 and 1926—1963.5:68—69; Hannig 1995:865; Faulkner 1962:281; Gardiner 1957:596; Vycichl 1983:87—88; Černý 1976:63. Berber: Tuareg *əḡas* ‘bone’; Tamazight *iḡas* ‘bone’; Kabyle *iḡass* ‘bone’; Nefusa *ḡass* ‘bone’; Ghadames *ḡass* ‘bone’; Mzab *iḡas* ‘bone’; Wargla *iḡas* ‘bone’; Riff *iḡas* ‘bone’; Zenaga *isi* ‘bone’. West Chadic **(k’a-)k’as-* ‘bone’ > Hausa *kàšii* ‘bone’; Tal *ḡas* ‘bone’; Yiwom *ḡas*, *ḡās* ‘bone’; Fyer *k’ēēs* ‘bone’; Dafo-Butura *kyās* ‘bone’; Bokkos *kyas* ‘bone’; Geruma *ókaši* ‘bone’; Warji *kààsüünà* ‘bone’; Tsagu *kékésən* ‘bone’; Kariya *káásù* ‘bone’; Miya *kúsi* ‘bone’; Siri *kessi*, *k’āsī*, *kàsi* ‘bone’; Mburku *kákásà* ‘bone’; Jimbin *kàkási* ‘bone’. East Chadic **kas-* ‘bone’ > Kwang *kīsigī* ‘bone’; Kera *káskəŋ* ‘bone’; Dangla *kāso*, *káasi*, *kààsò* ‘bone’. Jungraithmayr—Ibrizimow 1994.II:36—37. Lowland East Cushitic **k’as-* ‘bone, leg’ > Geleba *k’as* ‘bone, leg’. Omotic: Nao *k’us* ‘bone’; Dime *k’üs* ‘bone’; Dizi *us* ‘bone’; Sheko *ʔus* ‘bone’. Fleming 1976a:317. Orël—Stolbova 1995:338—339, no. 1557, **kas-* ‘bone’; Ehret 1995:240, no. 428, **k’os-* ‘bone’; Takács 2011a:191 **kas-* ‘bone’.
- B. Proto-Dravidian **kōcc-* ‘bone’: Kuṛux *xōcol* ‘bone’; Malto *qoclu* ‘bone’. Burrow—Emeneau 1984:197, no. 1288.
- C. (?) Proto-Indo-European **kʰos-th-* (< **k’os-th-*?) ‘rib, bone’: Latin *costa* ‘rib’; Old Church Slavic *kostb* ‘bone’; Russian *kost’* [кость] ‘bone’; Polish *kość* ‘bone’; Czech *kost* ‘bone’; Bulgarian *kost* ‘bone’; Serbo-Croatian *kōst* ‘rib’; Macedonian *koska* ‘bone’. Pokorny 1959:616 **kost-* ‘bone’; Walde 1927—1932.I:464 **qost-*; Mann 1984—1987:539 **kosthjos* (**kost-*) (?) ‘wood, stem, base, leg, bone’; Watkins 1985:32 **kost-* and 2000:44 **kost-* ‘bone’; Ernout—Meillet 1979:146; Walde—Hofmann 1965—1972.I:281; De Vaan 2008:140 — De Vaan rejects the comparison of Latin *costa* with Old Church Slavic *kostb*; Derksen 2008:239 Pre-Slavic **kosti-*.

Buck 1949:4.16 bone. Blažek 2002:178, no. 41; Illič-Svityč 1971—1984.I:344, no. 219, **ḲaSa* ‘bone’; Dolgopolsky 2008, no. 999, **k[o]čV* (or **k[o]čV* ?) ‘bone’. Note: the putative Mordvin cognates cited by Illič-Svityč do not belong here — they go back to Proto-Finno-Permian **kaskə* ‘sacral region, lumbar region, small of the back’ (cf. Rédei 1986—1988:648).

507. Proto-Nostratic root **k'ud-* (~ **k'od-*):

(vb.) **k'ud-* ‘to strike’;

(n.) **k'ud-a* ‘stroke, blow, knock, cuff, thump’

- A. Dravidian: [Tamil *kuṭṭu* (*kuṭṭi-*) ‘to cuff, to strike with the knuckles on the head or temple’; Malayalam *kuṭṭuka* ‘to pound, to cuff’; Kota *kuṭ-* (*kuc-*) ‘to pound’; Toda *kuṭ-* (*kuty-*) ‘to knock, to pound’; Kannaḍa *kuṭṭu* ‘(vb.) to beat, to strike, to pound, to bruise; (n.) a blow, a pulverized substance’, *kuṭṭuvike*, *kuṭṭuha* ‘beating’; Koḍagu *kuṭṭ-* (*kuṭṭi-*) ‘to pound’; Tuḷu *kuṭṭuni* ‘to thump, to give a blow, to strike with the fist, to pound, to bruise’; Kolami *kuḍk-* (*kuḍukt-*) ‘to pound grain’, *kuḍkeng* ‘to knock on the door’; Naikṛi *kuṛk-* ‘to pound, to knock’; Parji *kuṭip-* (*kuṭit-*) ‘to punch, to knock (door)’; Konda *guṭ-* ‘to knock with the fist’; Kui *guṭ-* ‘fist’. Burrow—Emeneau 1984:153, no. 1671. Tamil *koṭṭu* (*koṭṭi-*) ‘(vb.) to beat (as a drum, tambourine), to hammer, to beat (as a brazier), to clap, to strike with the palms, to pound (as paddy); (n.) beat, stroke, drumbeat, time-measure’, *koṭṭāṇ*, *koṭṭaṇ* ‘mallet’, *koṭu* ‘to thrash, to abuse roundly’, *koṭai* ‘blows, round abuse’; Malayalam *koṭṭuka* ‘to beat so as to produce a sound (a drum, metals, bells), to clap hands’, *koṭṭu* ‘beating a drum, clapping hands, buffet, knocking of knees against each other’, *koṭṭi* ‘mallet’, *koṭukka* ‘to flog’; Kota *koṭk-* (*koṭky-*) ‘to strike (with small hammer), to knock on (door), to strike tipcat in hole in ground’; Toda *kwīṭk-* (*kwīṭky-*) ‘to tap (on door, something with stick)’, *kwīṭ fiṭ* ‘woodpecker’; Kannaḍa *koḍati*, *koḍanti* ‘a wooden hammer’, *koṭṭaṇa* ‘beating the husk from paddy’, *koṭṭuha* ‘beating’, *kuḍu* ‘to beat’; Koḍagu *koṭṭ-* (*koṭṭi-*) ‘to tap, to beat (drum)’; Tuḷu *koḍapuni* ‘to forge, to hammer’; Telugu *koṭṭu* ‘(vb.) to beat, to strike, to knock; to strike (as a clock); (n.) a blow, stroke’; Parji *koṭṭ-* ‘to strike with an axe’; Gadba (Ollari) *koṭ-* ‘to strike with an axe’; Gondi *koṭ-* ‘to cut with an axe’, *koṭela* ‘mallet’; Pengo *koṭ-* ‘to thresh with flail’; Kuwi *koṭoli* ‘mallet’; Kuṛux *xoṭṭnā* (*xoṭṭyas*) ‘to break, to smash, to pierce, to break open’; Malto *qoṭe* ‘to break, to knock, to strike’, *qoṭure* ‘to knock against’. Burrow—Emeneau 1984:187, no. 2063.] Either here or with **k'wad-* (~ **k'wad-*) ‘(vb.) to strike, to beat, to smash, to pound; (n.) knock, stroke, thrust’.
- B. Proto-Kartvelian **k'od-* ‘to hew, to hollow’: Georgian *k'od-* ‘to castrate, to hew, to hollow’; Mingrelian [*k'od-*] ‘to hew, to hollow’; Laz [*k'od-*] ‘to hew, to hollow’. Klimov 1964:113 **ḱod-* and 1998:97 **ḱod-* ‘to hew, to hollow’; Fähnrich 2007:249 **ḱod-*; Fähnrich—Sardshweladse 1995:205—

206 **ḱod-*; Schmidt 1962:119. Proto-Kartvelian **k'od-al-* 'woodpecker': Georgian *k'odal-* 'woodpecker'; Mingrelian *k'ədə*, *k'idu-* 'woodpecker'; Laz *k'id-*, (*m*)*k'ud* 'woodpecker'. Klimov 1964:113 **ḱodal-* and 1998:98 **ḱodal-*.

Buck 1949:9.21 strike (hit, beat). Bomhard 1996a:228—230, no. 646.

508. Proto-Nostratic (n.) **k'ud-a* (~ **k'od-a*) 'vessel, pot':

- A. Proto-Afrasian **k'od-* 'vessel, pot': Egyptian *qd* 'vessel, pot'. Hannig 1995:867; Faulkner 1962:281; Erman—Grapow 1921:192. Lowland East Cushitic **k'od-* 'receptacle' > Galla / Oromo *k'odaa* 'receptacle'. Southern Cushitic: Dahalo *k'oodo* 'a kind of calabash'. West Chadic **kwad-* (< **k'wad-*) 'calabash' > Kirfi *kòdò* (Orël—Stolbova 1995:343, no. 1579, write *kwaḍo*) 'calabash'; Geruma *koddo* 'calabash'; Gera *kwada* 'calabash'; Siri *k'āti* 'calabash'. East Chadic **kwad-* (< **k'wad-*) 'pot' > Dangla *kòdà* 'pot'. Central Chadic (with prefix **nV-*) **nV-k'wad-* 'bottle' > Logone *ḡ-kooda* 'bottle'. Jungraithmayr—Ibriszimow 1994.I:25 **k'wd/*kwd* 'calabash', II:56—57. Orël—Stolbova 1995:343, no. 1579, **ḱod-* 'vessel'.
- B. Dravidian: Tamil *kuṭam* 'waterpot, hub of a wheel', *kuṭaṅkar* 'waterpot', *kuṭantam* 'pot', *kuṭukkai* 'coconut or hard shell used as a vessel, pitcher', *kuṭikai* 'ascetic's pitcher', *kuṭuvai* 'vessel with a small narrow mouth, pitcher of an ascetic'; Malayalam *kuṭam* 'waterpot', *kuṭukka* 'shells (as of gourds) used as vessels, small cooking vessel with a narrow mouth', *kuṭuka*, *kuṭuva* 'small vessel'; Kota *koṛm* 'waterpot with a small mouth'; Toda *kurky* 'small pot'; Kannaḍa *koḍa* 'earthen pitcher or pot', *kuḍike* 'small earthen, metal, or wooden vessel', *guḍāṇa*, *guḍuvana* 'large water-vessel (used also for storing grain); earthen pot used for churning'; Koḍagu *kuḍike* 'pot in which food (especially rice) is cooked'; Tuḷu *kuḍki*, *kuḍkè*, *guḍke* 'small earthen vessel'; Telugu *kuḍaka*, *kuḍuka* 'cup, bowl, scoop, any cup-like thing', *guḍaka* 'a coconut or other similar shell', *guḍaka*, *kuḍaka* 'shell of a fruit prepared to serve as a snuff-box, etc., a small metal box', *kuḍalu* 'small earthen vessels'; Kuwi *ḍōka*, *ḍoka*, *dōkka* 'pot' (Telugu *kuḍaka* > **kḍōka* > *ḍōka*). Burrow—Emeneau 1984:151, no. 1651. Malayalam *kuṭṭakam*, *kuṭṭukam* 'cauldron, large vessel with a narrow mouth (especially for treasure)'; Koḍagu *kuṭṭuva* 'big copper pot for heating water'. Burrow—Emeneau 1984:153, no. 1668.
- C. Proto-Kartvelian **k'od-* 'vessel carved from a single piece of wood': Georgian *k'od-* 'vessel used for dry measures'; Mingrelian *k'od-* 'vessel carved from a single piece of wood'; Laz *k'od-* 'vessel used for dry measures'. Fähnrich 2007:249 **ḱod-*; Klimov 1964:113 **ḱod-* and 1998:98 **ḱod-* 'vessel made of one piece of wood, tub'; Fähnrich—Sardshweladse 1995:206 **ḱod-*.

Buck 1949:5.26 pot. Bomhard 1996a:230—231, no. 647.

509. Proto-Nostratic (n.) **k'ug-n-a* (~ **k'og-n-a*) 'gnat, mosquito':

- A. Dravidian: Kannaḍa *guṇḡāḍa*, *guṇḡāḍi*, *guṇḡāṇi* 'mosquito', *guṇḡuru* 'eye-fly; mosquito, gnat'; Tuḷu *gugguru* 'small insect infecting grain'; Kui *gungu* 'a large wood-boring insect'; Kuwi *gongara viha* 'a kind of mosquito'. Burrow—Emeneau 1984:149, no. 1634(a). Assuming metathesis from **gugnu-* (originally **kuknu-*).
- B. Proto-Kartvelian **k'ogo-* 'gnat, mosquito': Georgian *k'oγo-*, *k'oγona-* 'gnat, mosquito'; Mingrelian *k'oγo(na)-*, *k'oγunia-* 'gnat, mosquito'. Laz *k'o(r)γon-* 'gnat, mosquito' and Svan *k'oγon-*, *k'uγun-*, *k'əγən-* 'gnat, mosquito' are Georgian loanwords. Klimov 1964:114 **k'oγon-* and 1998:99 **k'oγo-* 'gnat'.

Bomhard 1996a:231, no. 648.

510. Proto-Nostratic root **k'ul-* (~ **k'ol-*):

(vb.) **k'ul-* 'to lift, to raise, to pick up; to rise, to ascend; to make high, to elevate';

(n.) **k'ul-a* 'highest point'

- A. Proto-Afrasian **k'ul-* '(vb.) to lift, to raise, to make high; (n.) highest point': Semitic: Arabic *qalla* 'to pick up, to lift, to raise; to carry', *qallāš* 'rising', *qulla* 'highest point, tip, summit; apex; vertex'. Berber: Tashelhiyt / Shilha (Semlal) *əyli* 'to climb, to rise'; Tamazight *yuliy* 'to rise, to ascend'. Central Chadic **kul-* 'to lift' > Higi Nkafa *kulu* 'to lift'; Kapiski *kəl-te* 'to lift'; Higi Futu *kəli-* 'to lift'; Fali Kiria *kəltu?* 'to lift'. Orël—Stolbova 1995:349, no. 1604, **kul-* 'to lift'.
- B. Kartvelian: Svan (Upper Bal) *k'əltxi* 'high', *nak'lətxi* 'height'.
- C. Proto-Indo-European (**k'el-/k'ol-/*)**k'l-* 'to lift, to raise, to pick up; to climb' (found only in derivatives, such as: **k'lembh-/k'lombh-/k'lmbh-* 'to climb'): Proto-West Germanic **klimban-* 'to climb' > Old English *climman*, *climban* 'to climb' (3rd sg. pret. *clamb*; past participle *clumben*); Middle Dutch *klimmen* 'to climb'; Middle High German *klimben*, *klimmen* 'to climb' (New High German *klimmen*). Pokorny 1959:360 **glembh-*; Walde 1929—1932.I:616—617 **glembh-*; Mann 1984—1987:276 **glembhō*; Watkins 1985:18 **gel-* 'to form into a ball'; Orël 2003:215—216 Proto-Germanic **klembanan*; Kroonen 2013:293 Proto-Germanic **klimman-* ~ **klimb/pan-* 'to clamp; to climb'; Onions 1966:182 West Germanic **klimban*, nasalized variant of **kliḃan* 'to stick fast, to adhere, to cleave to'; Klein 1971:142; Kluge—Mitzka 1967:377; Kluge—Seebold 1989:377; Walshe 1951:122. Old Icelandic *klífa* 'to climb'; Faroese *klíva* 'to climb'; Norwegian *kliva* 'to climb'; Swedish *kliva* 'to climb'; Danish

klyve ‘to climb’. De Vries 1977:316—317; Falk—Torp 1903—1906.I:384; Torp 1919:286. Note: Not related to Proto-Indo-European **k’el-* ‘to form into a ball’ as often assumed. The forms found in the daughter languages meaning ‘to hold onto, to grasp; to cling to, to adhere; etc.’ are further derivatives of Proto-Indo-European (**k’el-/k’ol-/k’l-* ‘to lift, to raise, to pick up; to climb’ (cf. Orël 2003:216 Proto-Germanic **klibēnan* ~ **klibōjanan*, 216 **klibrōjanan*, 216 **klibanan*).

- D. Proto-Eskimo **qulvar-* ‘to rise or raise’: Alutiiq Alaskan Yupik *qulwar-* ‘to rise’; Central Alaskan Yupik *qulvar-* ‘to elevate’, *qulvani* ‘high up’; Central Siberian Yupik *qulvar-* ‘to raise, to go up’, (Chaplinski) *qulvaq* ‘top’; Sirenik *qulvanir-* ‘to raise, to rise, to go up’; Seward Peninsula Inuit *quvlaq-* ‘to ascend, to rise’; North Alaskan Inuit *qulvaq-*, *qužvaq-* ‘to move up into room further from door; to roll sleeves up’, *qulvasik-* ‘to be high up’; Eastern Canadian Inuit *quvva(q)-* ‘to raise’, *quvvasik-* ‘to be situated higher up’; Greenlandic Inuit *qullar-* ‘to raise (for example, on line), to be hung up’. Fortescue—Jacobson—Kaplan 1994:315. Proto-Eskimo **qulā-* ‘area above’: Alutiiq Alaskan Yupik *qulā-* ‘area above’; Central Alaskan Yupik *qulā-* ‘area above’; Naukan Siberian Yupik *qulā-* ‘area above’; Central Siberian Yupik *qula* ‘upper part, gunwale’; Sirenik *qulā-* ‘area above’; Seward Peninsula Inuit *quli-* ‘area above’; North Alaskan Inuit *quli-* ‘area above’; Western Canadian Inuit *quli-* ‘area above’; Eastern Canadian Inuit *quli-* ‘area above’; Greenlandic Inuit *quli-* ‘area above’. Fortescue—Jacobson—Kaplan 1994:314. Proto-Eskimo **qulḍiy-* ‘to be high up’: Alutiiq Alaskan Yupik (Koniag) *qussiy-*, (Chugach) *qussay-* ‘to be high up’; Central Alaskan Yupik *quyiy-*, (Nunivak) *qusi-* ‘to be high up’; Seward Peninsula Inuit *qussik-* ‘to be high up’; North Alaskan Inuit *qutcik-* ‘to be high up’; Western Canadian Inuit (Siglit) *qutsik-* ‘to be high up’; Eastern Canadian Inuit (Labrador) *qutsik-* ‘to be above’; Greenlandic Inuit *qutsiy-* ‘to be high up’. Fortescue—Jacobson—Kaplan 1994:314. Proto-Eskimo **qulir* ‘upper part’: Central Alaskan Yupik *quliq* ‘upper side rail of sled’, (Hooper Bay-Chevak) *quliit* ‘back’; Naukan Siberian Yupik *qulik* ‘spine, back’; Central Siberian Yupik [*qulirnaq** ‘upper part’]; Sirenik *quliXpiyaX* ‘high place’; Seward Peninsula Inuit *quliq* ‘gunwale, upper sled rail’; North Alaskan Inuit (Nunamiut) *quliit* ‘back (of man, animal, or fish)’; Eastern Canadian Inuit *quliiq* ‘back’; Greenlandic Inuit (Southwest Greenlandic) *qulit* ‘knee pieces of trousers’. Fortescue—Jacobson—Kaplan 1994:315. Proto-Inuit **quliruaq* ‘shelf’ (?) > North Alaskan Inuit (Point Hope) *quliruaq* ‘first level of ice cellar’; Western Canadian Inuit (Caribou Eskimo Point) *quliruaq* ‘shelf’; Eastern Canadian Inuit *quliruaq* ‘shelf’; Greenlandic Inuit *quliruaq* ‘gunwale’. Fortescue—Jacobson—Kaplan 1994:315. Proto-Eskimo **qullir* ‘upper-most one’: Alutiiq Alaskan Yupik *qulliq** ‘upper part’; Central Alaskan Yupik *quliq** ‘topmost one, attic’; Seward Peninsula Inuit *qulliq* ‘highest’; North Alaskan Inuit *qulliq** ‘uppermost, lamp’ [the uppermost oil lamp in the

traditional house]; Western Canadian Inuit *qulliq* 'lamp'; Eastern Canadian Inuit *qulliq* 'lamp'; Greenlandic Inuit *qutliq** 'uppermost, lamp'. Fortescue—Jacobson—Kaplan 1994:315. Proto-Yupik **qulqin* 'raised platform or shelf' > Central Alaskan Yupik *qulqin* 'shelf'; Central Siberian Yupik *quulqin* 'loft in a semi-subterranean house'. Fortescue—Jacobson—Kaplan 1994:315.

- E. Chukchi-Kamchatkan: Proto-Chukotian **kəlyəkəl* 'rung, step (of ladder)' > Kerek *kəlləyəkəl* 'step (of ladder)'; Koryak *kəlyəkəl* 'step; ledge of mountain'; Alyutor *kəlyəkəl* 'steps, notch, groove' (according to Fortescue, there has been some entanglement with **kəlvə-* 'notch or mark' here). Fortescue 2005:145.

Buck 1949:10.22 raise, lift; 11.13 take; 12.31 high; 12.33 top; 12.35 end; 12.352 point. Different etymology in Dolgopolsky 2008, no. 1046, **ka[h]i* 'high; to be high'.

511. Proto-Nostratic root **k'ulv-* (~ **k'olv-*):

(vb.) **k'ulv-* 'to be or become cold; to freeze';

(n.) **k'ulv-a* 'cold, coldness, chill, frost'

- A. Dravidian: Tamil *kuḷircci*, *kuḷirtti*, *kuḷutti* 'coldness, cold, act of cooling or refreshing, numbness', *kuḷir* '(vb.) to feel cool; to be cool, refreshing; to get numbed; (n.) coldness, chilliness, ague, shivering', *kuḷirppu*, *kuḷirmai*, *kuḷumai* 'coolness, kindness', *kuḷir* 'a fan', (reduplicated) *kuḷla-kkuḷir-* 'to be intensely cool and refreshing'; Malayalam *kuḷir*, *kuḷur* 'coldness; cool, refreshing', *kuḷiruka* 'to be chilly, refreshed', *kuḷirma* 'freshness', *kuḷirppu*, *kuḷuppam* 'chilliness', *kuḷirppikka* 'to chill, to quiet, to refresh, to comfort', (reduplicated) *kuḷukulu* 'intense cold'; Kota *kuḷak in-*, (reduplicated) *kuḷkuḷ in-* '(hands, feet, body) to feel cool, (mind) to feel calm and peaceful'; Kannaḍa *kuḷir* '(vb.) to be cool or cold; (n.) coldness, coolness, cold, snow, frost'; Koḍagu *kuḷi-* (*kuḷip-*, *kuḷit-*) 'to feel cold', *kuḷiri ka-la* 'cold season'. Burrow—Emeneau 1984:166, no. 1834.
- B. Proto-Indo-European **k'ol-/k'el-* (secondary *e*-grade form: **k'el-*) '(vb.) to be or become cold; to freeze; (n.) cold, coldness, chill, frost': Latin *gelidus* 'cold, icy-cold, frosty', *gelō* 'to cause to freeze, to congeal; to be frozen, to freeze', *gelū* 'frost, icy cold'; Gothic *kalds* 'cold'; Old Icelandic *kala* 'to freeze', *kalda* 'to become cold', *kaldr* 'cold', *klaki* 'hard-frozen ground', *kuḷ* 'breeze', *kólna* 'to become cold', *kylr* 'gust of cold air', *kæla* 'to cool'; Faroese *kaldur* 'cold'; Norwegian *kald* 'cold'; Swedish *kall* 'cold'; Danish *kold* 'cold'; Old English *calan* 'to be cold', *ceald* 'cold', *cēlan* 'to cool', *ciele* 'cold', *cielīan* 'to be cold, chilly', *cōl* 'cool', *cōlian* 'to become cold'; Old Frisian *kald* 'cold'; Old Saxon *kald* 'cold', *kōlōn* 'to become cold'; Dutch *koud* 'cold', *koel* 'cool'; Old High German *kalt* 'cold' (New High German *kalt*), *kuoli* 'cool' (New High German *kühl*). Pokorny 1959:365—

366 **gel(ə)*- ‘cold; to freeze’; Walde 1927—1932.I:622 **gel*-; Mann 1984—1987:268 **gel*- ‘to freeze; frost; frozen’, 268 **geldos*, -*jos* ‘cold, frost’, 287 **golātis* (**golt-*) ‘chill, cold, frost’; Watkins 1985:19 **gel*- and 2000:25—26 **gel*- ‘cold; to freeze’; Mallory—Adams 1997:113 **gel*- ‘(adj.) cold; (vb.) to freeze’; Ernout—Meillet 1979:268; Walde—Hofmann 1965—1972.I:585—586 **gel*-; De Vaan 2008:256; Orël 2003:208—209 Proto-Germanic **kalanan*, 219 **kōlaz* ~ **kōliz*, 219 **kōljanan*, 223 *kuļjaz*; Kroonen 2013:277 Proto-Germanic **kalān*- ‘to be cold’, 278 **kaldā*- ‘cold’, 299 **kōlu*- ‘cool’, and 309 **kula*- ‘cool wind’; Feist 1939:306; Lehmann 1986:214 **gel*-; Falk—Torp 1903—1906.I:398—399; Torp 1919:255; De Vries 1977:297—298 **gel*-, 298, 313 **gel*-, 325, 333, 340, and 342; Onions 1966:169, 190 **gol*-, **gel*-, and 213; Klein 1971:131, 147 **gel*-, and 165 **gel*- ‘(adj.) cold; (vb.) to freeze’; Boutkan—Siebinga 2005:206; Kluge—Mitzka 1976:343 and 411; Kluge—Seebold 1989:349 and 417.

- C. Proto-Uralic **kūlmä* ‘(adj.) cold, chilly; (n.) frost; (vb.) to become cold, to freeze’ > Finnish *kylmä* ‘cold, chilly’, *kylmyys* ‘coldness’, *kylmetä* ‘to become colder, to become cold’; Estonian *külm* ‘cold, chilly; coldness, frost’, *külmus* ‘coldness’, *kylmetama* ‘to freeze, to be freezing, to feel (or be) cold’; Lapp / Saami (N.) *gālmās-/gāl’bm-*, (attr.) *gāl’bmā* ‘frozen’, *gāl’bme-/gālm-* ‘to freeze, to form (intr.) a layer of ice on, to freeze over’; Mordvin (Moksha) *kel’mä*, (Erza) *kel’me* ‘cold; coldness, frost’; Cheremis / Mari *kəlmə* ‘frozen’. Sammallahti 1988:552 **kūlmä* ‘cold’; Rédei 1986—1988:663 **kilmä* (**kūlmä*); Zhivlov 2023:170 Proto-Uralic **kūlmä* ‘cold; to freeze’, Proto-Finnic **kūlmä*.
- D. Proto-Altaic **kol’i-* (~ *kh-*, -*i-*, -*e-*) ‘to freeze’: Proto-Mongolian **köl-de-* ‘to freeze’ > Mongolian *köl-de-*, *köl-dü-* ‘to freeze, to congeal’, *köldüge-* ‘to freeze, to congeal’, *köldül* ‘freezing, congealing’, *köldügü* ‘frozen, congealed, frosted’, *köldümel* ‘frozen’, *köl-mü-* ‘to freeze over’; Khalkha *χöldö-* ‘to freeze’; Buriat *χülde-* ‘to freeze’; Kalmyk *köld-* ‘to freeze’; Ordos *köldö-* ‘to freeze’; Dagur *kułde-* ‘to freeze’. Proto-Turkic **Kölv-* ‘to freeze’ > Tatar *küşek-* ‘to freeze, to become stiff with cold’; Bashkir *küşek-* ‘to freeze’; Kazakh *köšü-* ‘to freeze’; Tuva *köžü-* ‘to freeze’; Yakut *köhüy-* ‘to freeze’. Menges 1968b:96. Starostin—Dybo—Mudrak 2003:716—717 **kol’i* (~ *kʰ-*, -*i-*, -*e-*) ‘to freeze’.

Buck 1949:15.86 cold. Illič-Svityč 1971—1984.I:304—305, no. 176, **kül’ä* ‘to freeze; cold’; Koskinen 1989:20, no. 51; Caldwell 1913:593; Bomhard—Kerns 1994:442—443, no. 287; Hakola 2000:370.

512. Proto-Nostratic root **k’um-* (~ **k’om-*):
 (vb.) **k’um-* ‘to sigh, to weep, to lament, to moan, to groan’;
 (n.) **k’um-a* ‘sigh, mourning, lamentation, moan, groan, roar, grumble’

- A. Proto-Afrasian **k'um-* 'to sigh, to weep, to lament, to moan, to groan': Proto-Semitic **k'am-aḥ-* 'to be in despair' > Ḥarsūsi *eḳtōmeh* 'to be in despair'; Šheri / Jibbāli *eḳmāḥ* 'to disappoint, to be disappointed'; Mehri *aḳōmeh* 'to disappoint, to foil, to frustrate', *aḳtōmeh* 'to be unlucky, to be in despair; (wolf, attacker) to be foiled'. Egyptian *qm* 'to mourn', *qmd* 'to mourn'. Hannig 1995:856—857 and 857; Faulkner 1962:278 and 279; Erman—Grapow 1926—1963.5:37 and 40. Proto-Southern Cushitic **k'um-* or **k'uum-* or **k'im-* or **k'iim-* 'to grumble' > Ma'a -*xumuka* 'to grumble'; Iraqw *qununu'* 'to grumble'; Alagwa (reduplicated) *qunqumis-* 'to grumble'. Ehret 1980:254. Ehret 1995:236, no. 420, **k'um-* or **k'uum-* 'to grumble, to sigh, to make sounds of complaint'.
- B. (?) Dravidian: Tamil *kumuru* (*kumuri-*) 'to resound, to trumpet, to bellow, to crash (as thunder), to have confused uproar', *kumural* 'roaring, resounding', *kumiru* (*kumiri-*) 'to resound, to roar'; Malayalam *kumuruḱa* 'to make thundering sound'. Burrow—Emeneau 1984:159, no. 1744.
- C. Proto-Kartvelian **k'um-in-* 'to moan, to grumble': Georgian *k'min-* 'to moan, to grumble'; Mingrelian *k'umin-* 'to moan, to grumble'. Klimov 1998:104 **kumin-* 'to moan, to grumble'; Fähnrich—Sardshweladse 1995:212 **kum-*; Fähnrich 2007:257—258 **kum-*.
- D. Proto-Indo-European **k'om-/k'm-* (secondary *e*-grade form: **k'em-*) 'to sigh, to weep, to lament, to moan, to groan': Latin *gemō* 'to sigh, to groan, to lament, to moan, to bemoan; to roar (of animals); to creak, to groan (of inanimate objects)'; Armenian *cmrim* 'to grieve', *cmam* 'to sigh'; Irish *geamh* 'prattle', *geamhaire* 'prattler'. Mann 1984—1987:390 **gemō* 'to roar, to groan'; Mallory—Adams 1997:247 (?) **gem-* 'to weep, to lament, to moan'. Note: Different etymology in De Vaan 2008:257.
- E. (?) Chukchi-Kamchatkan: Proto-Chukotian **kumjə(kum)* 'voice, sound' (?) > Kerek *kumjəil-* 'to sing'; Koryak *kumjəkum* 'voice, sound', *kumj-at-* 'to cry, to shout'; Alyutor *kumjəkum* 'voice, sound', *kumj-at-* 'to cry, to shout'. Fortescue 2005:141.

Buck 1949:16.37 cry, weep; 16.39 groan (vb.). Bomhard—Kerns 1994:434—435, no. 279.

513. Proto-Nostratic root **k'um-* (~ **k'om-*):

(vb.) **k'um-* 'to seize, to grasp, to press together';

(n.) **k'um-a* 'heap, mass, lump, clump; pressure, compression'

Perhaps related to:

(n.) **k'om-a* 'hand, fist'

- A. Proto-Afrasian **k'[u]m-* 'to press together; to seize, to grasp': Proto-Semitic **k'am-at-* 'to press together; to seize, to grasp' > Hebrew *qāmaṭ* [קָמַט] 'to seize, to press together'; Aramaic *qamaṭ* 'to seize, to compress'; Arabic *qamaṭa* 'to swaddle, to bind together, to fetter, to shackle; to dress

(a wound)', *kimt* 'rope, fetter', *kimāt* 'swaddle, diaper'; Akkadian *kamādu* 'to seize, to press together'. Klein 1987:582; Murtonen 1989:378—379. Proto-Semitic **k'am-ac-* 'to seize, to grasp' > Hebrew *kāmaš* [כָּמַשׁ] 'to enclose with the hand, to grasp, to take a handful, to close, to shut'; Post-Biblical Hebrew *kaṣṣūs* [כָּצָר] 'a pinch, a very small quantity'; Ugaritic *kṃš* 'heap, pile'. Murtonen 1989:379; Klein 1987:583. Proto-Semitic **k'am-aṣ-* 'to seize, to grasp' > Arabic *kaṣaṣa* 'to scrape together and pick up with the fingertips, to gather'. Berber: Tamazight *ḡmaš* 'to cover, to wrap, to hide by covering', *aḡamus* 'the act of covering, cover, veil, lid, roof'; Kabyle *ḡmuməs* 'to be wrapped up in one's burnoose, to be entirely covered'; Tawlemmet *ḡmaš* 'to wrap, to cover'.

- B. Proto-Kartvelian **k'um-* 'to press together': Georgian *k'um-* 'to press together, to close (lips, mouth)'; Svan *k'um-* 'mute'. Klimov 1998:104 **kum-* 'to press (on lips, fist)'; Fähnrich—Sardshweladse 1995:212 **kum-*; Fähnrich 2007:258 **kum-*.
- C. Proto-Indo-European **k'om-/k'm-* (secondary *e*-grade form: **k'em-*) 'to press together; to seize, to grasp': Greek γέμω 'to be full', (Homeric) γέντο (< *γέμτο) 'he grasped' (this form only is attested); Armenian *čmlem* 'to press together'; Latvian *gūmstu* 'to seize, to grasp'; Old Church Slavic *žbmō, žeti* 'to press'; Russian Church Slavic *gomola, gomula* 'lump, clump, heap'; Czech *hmota* (< *g̃mota) 'mass'; Slovenian *gomóla* 'barren ground, wasteland', *gomólja* 'lump'. Rix 1998a:165 **gem-* 'to squeeze, to press together; to grasp, to seize'; Walde 1927—1932.I:572—574 **gem-*; Pokorny 1959:368—369 **gem-* 'to grasp'; Mann 1984—1987:269 **gemō* 'to squeeze'; Mallory—Adams 1997:450 **gem-* 'to press, to squeeze together, to squeeze'; Chantraine 1968—1980.I:215 **gem-*; Hofmann 1966:43; Boisacq 1950:143 and 144 **gem-*; Frisk 1970—1973.I:296 and I:297—298; Beekes 2010.I:265 (?) **gem-*.
- D. Chukchi-Kamchatkan: Proto-Chukotian **kəmyət-* 'to bunch up' (?) > Chukchi *kəmyət-* 'to bunch up, to screw up one's face', *kəmyət-cir-* 'to writhe in pain'; Koryak *kəmyət-* 'to screw up, to wrinkle'; Alyutor *kəmyət-* 'to squeeze, to compress'. Note also Kamchadal / Itelmen *kimmat-kas* 'to pinch'. Fortescue 2005:147.

Sumerian *gum* 'to take hold of'.

Buck 1949:9.342 press (vb.); 11.13 take; 11.14 seize, grasp, take hold of; 13.19 multitude, crowd; 13.21 full. Bomhard—Kerns 1994:434, no. 278.

514. Proto-Nostratic root **k'um-* (~ **k'om-*):

(vb.) **k'um-* 'to bend, to curve; to bend the head or body, to bow or stoop down';

(n.) **k'um-a* 'bend, curve; the act of bending, bowing, stooping'

Identical to:

(n.) **k'um-a* 'a bent or curved object: hollow, cavity; knob, lump, hump; etc.'

- A. Afrasian: Proto-Semitic **k'am-ac* 'to bend' > Geez / Ethiopic *ḡammāṭa* [ḡḡḡḡ] 'to hold tightly, to clasp sheaves, to bend' (from Amharic), *ḡamṭarā* [ḡḡḡḡ], *ḡamṭarā* [ḡḡḡḡ], *ḡamṭorā* [ḡḡḡḡ] 'clasp, fastener, box, chest'; Amharic *täḡāmmäṭä* 'to sit, to sit down, to seat oneself, to settle'; Akkadian *kamāṣu* 'to bend the knee, to kneel, to squat down', *kamṣu* 'squatting, crouching', *kimṣu* 'shin, lower leg'. Leslau 1987:433. Berber: Tuareg *taḡmārt* 'elbow'; Nefusa *taḡmart* 'elbow'; Ghadames *taḡmārt* 'corner, angle'; Tamazight *tiḡmārt* 'elbow'; Tashelhiyt / Shilha *tiḡmārt* 'elbow'; Riff *taḡammart* 'elbow, angle, corner'; Kabyle *tiḡmārt* 'elbow'; Chaouia *tiḡammārt* 'elbow, angle, corner'. North Omotic: Bench / Gimira *k'um* 'knee'.
- B. Dravidian: Tamil *kump-iṭu* (*iṭuv-*, *iṭṭ-*) '(vb.) to join hands in worship, to perform obeisance with the hands joined and raised, to beg, to entreat; (n.) worship'; Malayalam *kump-iṭuka*, *kumm-iṭuka* 'to bow down, to prostrate oneself, to worship'; Kota *kub-iṭ-* (*iṭ-*) 'to bow down, to pray', *kumiṭe-* 'salutation used by Kota to Badaga or Kurumba'; Toda *kub-iṭ-* (*iṭ-*) 'to salute (not used of religious salutation)'; Kannaḍa *kumbu* 'bending, bowing down, obeisance', *kumbiḍu* 'to bow down, to perform obeisance'. Burrow—Emeneau 1984:159, no. 1750.
- C. Proto-Uralic **kuma* 'to bow, to stoop, to bend down': Finnish *kumossa* (inessive) 'prone, in a falling or lying position, upside down', *kumara* 'hunched, stooped, bent', *kumarta-* 'to bow, to make a bow', *kumartu-* 'to stoop down, to bend down; to bend, to stoop'; Estonian *kummardama* 'to bow, to worship, to adore; to bow down, to incline', *kummarduma* 'to bow (down), to stoop, to bend down', *kummardus* 'obeisance, bow', *kummargil* 'stooping, in a stooping position'; Lapp / Saami (attributive) *gomo*, (partitive) *gobmot* 'turned with the rounded, convex side up; turned upside down; which lies with the bottom up; very steep (of a hillside); who lies on his stomach, face downward'; Mordvin *koma-* 'to lean down, to bend down', *komafto-* 'to overturn, to upset'; Cheremis / Mari *kōmōk*, *kumōk* 'upside down', *kōmōkte-*, *kumōkte-* 'to overturn, to upset', *kōmala-*, *kumala-* 'to bow, to bend over, to greet; to pray'; Votyak / Udmurt *kymal-* 'to upset, to overturn, to knock down'; Zyrian / Komi *kym-* 'to upset (for example, a cup, a boat), to turn upside down', *kymal-* 'to upset (for example, several cups)'; Vogul / Mansi *qamowt-* 'to throw about, to overturn', *kam-*, *kami*, (Northern) *homi* 'on one's stomach, face downward'; Ostyak / Xanty *komtah*, (Southern) *hōmta* 'with the face to the ground; prone, upside down; stooping'; (?) Tavgi Samoyed / Nganasan *kamagu* 'a felled (lying) tree'; (?) Yurak Samoyed / Nenets *hawa-*, (Forest) *kama-* 'to fall over, to fall down', *hawaha* 'fallen (for example, of a tree)', *hawada-* 'to overturn, to knock over'; Yenisei Samoyed / Enets (Hantai) *ka'aḍa*, (Baiha) *ka'ara* 'to fell, to overturn'; (?) Selkup Samoyed *qamd*

‘face downward’; (?) Yurak Samoyed / Nenets *hobo-nugode-* ‘to throw to the ground, to lay down’ (*nugo-* = ‘to fall’), *hobotaj* ‘that lower (one)’ (*taj* = ‘that’). Collinder 1955:27—28 and 1977:47; Rédei 1986—1988:201—202 **kuma* ‘to bow’; Sammallahti 1988:537 **kumå* ‘to face down’; Décsy 1990:101 **kuma* ‘to bow’; Janhunen 1977b:52 **kāmâ-*.

- D. Chukchi-Kamchatkan *(*tə*)*kəm-* ‘to be hunched up or rolled up’ (?): Chukchi *kəm-*, *tkəm-* ‘to sit hunched up’, *kəmkəm* ‘clump, ball, kind of sausage’; Alyutor *kəmkəm-at-* ‘to lie rolled up in a ball’, *kəmkəm* ‘lump ball’; Koryak (*t*)*tāmā-tva-* ‘to lie rolled up in a ball’; Kamchadal / Itelmen **kmesem* ‘ring’, **kmevic* ‘hoop’. Fortescue 2005:147.
- E. Eskimo-Aleut: Proto-Inuit **qumaq-* ‘to be hunched over’ > North Alaskan Inuit *qumaq-* ‘to bend forwards, to crouch’; Western Canadian Inuit *qumaŋa-* ‘to be hunchbacked’; Eastern Canadian Inuit *qumaq-* ‘to pull one’s head down between one’s shoulders, to bend down’, *qumaŋa-* ‘to be hunched over’; Greenlandic Inuit *qumar-* ‘to become shorter when pushed together (for example, a person with his head pulled down)’. Fortescue—Jacobson—Kaplan 1994:316.

Sumerian *gum* ‘to pray; to greet, to salute; to bless; to consecrate’.

Buck 1949:9.14 bend (vb. (tr.). Illič-Svityč 1965:352 (?) [‘опрокинуть(ся)’]; Hakola 2000:80, no. 330.

515. Proto-Nostratic (n.) **k’um-a* ‘a bent or curved object: hollow, cavity; knob, lump, hump; etc.’:

Identical to:

(vb.) **k’um-* ‘to bend, to curve; to bend the head or body, to bow or stoop down’;

(n.) **k’um-a* ‘bend, curve; the act of bending, bowing, stooping’

- A. Proto-Indo-European **k’um-* ‘a bent or curved object: hollow, cavity (> basin, bowl, trough; valley); knob, lump, hump; etc.’: Armenian *kumb* ‘knob, hump’; Albanian *gumë* ‘shelf (ledge) of rock, reef, submerged reef’; Old Icelandic *kumpi*, *kumpri* ‘lump’, *kumbl*, *kuml* ‘sepulchral monument, cairn’; Norwegian *kuml* ‘lump, clod’; Old English *cumb* ‘valley’ (if not from Celtic), *cuml*, *cumul*, *cumbl* ‘swelling (of wound)’; Middle High German *kumpf* ‘blunt’; New High German *Kumme* ‘basin, bowl’, (dial.) *Kumpen*, *Kumpf* ‘deep basin, bowl; feeding trough’; Lithuanian *guñbas* ‘bump; lump, knob, growth; (medical) tumor’, *gūmulas* ‘lump’; Latvian *gums* ‘lump’. Rix 1998a:165 **gem-* ‘to grasp, to squeeze, to press together’; Pokorny 1959:368—369 **gem-* ‘to grasp, to squeeze, to press together’; Walde 1927—1932.I:563 **gu-m-bh-*; Mann 1984—1987:305 **gumb-* (**gumbh-*) ‘swelling, lump; lumpy, swollen’; **gumbstos* ‘swollen’, 305 **gum-* (**gumos*, -ā) ‘lump, mass’, 305—306 **gumbulos*, **gumbalos*

(**gumbh-*, **gum-*) ‘swelling’, 306 **gumbhos*, 306 **gumbhros* (**gumuros*) ‘mass’; Martirosyan 2008:333—334 **gumbh-*; Kroonen 2013:310 Proto-Germanic **kumb/pan-* ‘basin, bowl’; De Vries 1977:333—334 and 334; Torp 1919:335—336; Kluge—Mitzka 1967:412 Germanic **kump-*, **kumb-*; Kluge—Seebold 1989:419 Pre-Germanic **kumpa-*; Smoczyński 2007.1:210—211; Fraenkel 1962—1965.I:176.

- B. Uralic: Proto-Finno-Ugric **k[u]m3* ‘hollow’ > (?) Finnish *komi*, *komo* ‘hollow’, *komero* ‘cupboard; wardrobe, closet’; (?) Lapp / Saami *goabmâ* ‘overhanging arched edge (of earth, rock, snow, etc.)’; (?) Cheremis / Mari *kom* in *palkom* ‘sky, the vault of heaven’, *koman* ‘with vaulted surface’; (?) Ostyak / Xanty (Vah) *kōmər* ‘hollow space under ice’, (Vasyugan) *kōm* in *rjtkom* ‘space under an overturned boat’, *kōməl* ‘concavity’, (Upper Demyanka) *χōm* ‘hollow space (for example, under an overturned boat)’; (?) Hungarian *homorú* ‘concave, hollow’. Rédei 1986—1988:227 **kxm3* ‘hollow’.
- C. Proto-Altaic **kumi* (~ -o-) ‘hollow, cavity, inner angle’: Proto-Tungus **kum-* ‘edge; hollow, cavity; precipice’ > Evenki *kumdika* ‘edge’, *kumja* ‘hollow, cavity’; Lamut / Even *kumtutti* ‘precipice’; Manchu *kumdu* ‘empty, hollow’. Proto-Mongolian **kömüg* ‘edge, overhang (of a mountain), shelter’ > Written Mongolian *kömüg*, *kömügei* ‘shed; roof, especially roof over a patio; eaves; shelter; awning, canopy; overhang of a mountain’; Buriat *χūmeg* ‘canyon, ravine, hollow’; Kalmyk *kōmæg* ‘edge, overhang (of a mountain), shelter’. Starostin—Dybo—Mudrak 2005: 737—738 **kumi* (~ -o-) ‘hollow, cavity, inner angle’.

Buck 1949:12.72 hollow (= concave). Dolgopolsky 2008, no. 886, **komV* ‘something hollow’.

516. Proto-Nostratic root **k'un-* (~ **k'on-*):

(vb.) **k'un-* ‘to bend; to bend or fold together; to tie or bind together’;

(n.) **k'un-a* ‘that which is bent, folded, crooked, curved, hooked: bend, fold, curve, curvature, angle, wrinkle’

- A. Proto-Afrasian **k'[u]n-* ‘to bend’: Semitic: Arabic *ḵaniya* ‘to be hooked, aquiline (nose)’, *ʔaḵnā* ‘bend, curved, crooked, hooked’. Egyptian *qnb* ‘to bend, to bow, to incline (oneself); to subjugate’, *qnb* ‘corner, angle’, *qni* ‘sheaf, bundle’; Coptic *knaaw* [ⲕⲛⲁⲱ] (< *qniw*) ‘sheaf’. Hannig 1995:860; Faulkner 1962:279 and 280; Erman—Grapow 1926—1963.5:53; Vycichl 1983:83; Černý 1976:60.
- B. Dravidian: Tamil *kūṇ* ‘bend, curve, hump on the back, humpback, snail’, *kūṇu* (*kūṇi-*) ‘to curve, to become crooked, to bend down, to become hunchbacked’, *kūṇal* ‘bend, curve, hump’, *kūṇan* ‘humpback’, *kūṇi* (-v-, -nt-) ‘to bend (as a bow), to bow, to stoop’; (-pp-, -tt-) ‘to bend (tr.), to stoop’, *kūṇi* ‘curvature, bow (weapon)’; Malayalam *kūnuka* ‘to stoop, to be

crookbacked', *kuni* 'semicircle, curve', *kuniyuka* 'to bow, to stoop, to bend', *kunikka* 'to make a curve, to cause to stop stooping'; Kannaḍa *kūn* (*kūnt-*), *kūnu* 'to bend, to stoop, to crouch, to contract oneself, to shrivel up'; Koḍagu *kūn* 'hunchback'; Tuḷu *gūnu* 'a hump'; Telugu *gūnu* 'a hump, a crooked back'; Gondī *gun-* 'to bend'. Burrow—Emeneau 1984:175, no. 1927.

- C. Proto-Kartvelian **k'on-* 'to tie together': Georgian *k'on-* 'to tie together', *k'on-a* 'bundle, bunch'; Svan *č'wēn-* 'to tie together' (action nouns: *li-č'wēn-i* 'to tie together', *lə-č'ōn-e* 'to be wrapped', *li-č'ōn-i* 'to wrap up'). Fähnrich—Sardshweladse 1995:206 **kon-*; Klimov 1964:114 **kon-* and 1998:98 **kon-* 'to tie together'; Fähnrich 2007:250 **kon-*.
- D. Proto-Altaic **kunu-* (*~ k^h-*) 'to fold, to twist' > Proto-Mongolian **kuni-* 'to fold, to plait' > Written Mongolian *quni-* 'to fold, to lay in folds, to draw into folds by a string', *quniya-* 'to make plaits or folds', *qunira-* 'to wrinkle, to fold, to contract', *quniyar* 'plait, fold, wrinkle'; Khalkha *χuni-* 'to fold, to plait'; Buriat *χuni-* 'to fold, to plait'; Monguor *χunāzə* 'fold, wrinkle, furrow'. Proto-Turkic **Kun-da-* '(vb.) to swaddle; (n.) swaddling clothes' > Turkish *kundak* 'bundle of rags, swaddling clothes'; Gagauz *qundaq* 'swaddling clothes'; Azerbaijani *gundag* 'swaddling clothes'; Uzbek *qundəq* 'swaddling clothes'; Turkmenian *gunda-* 'to swaddle', *gundaq* 'swaddling clothes'; Uighur *qondaq* 'swaddling clothes'; Karaim *qindaq* 'swaddling clothes'; Tatar (dial.) *qontiq* 'swaddling clothes'; Kirghiz *qundaq* 'swaddling clothes'; Oyrot (Mountain Altai) *qındaq* 'swaddling clothes'; Kazakh *qundaq* 'swaddling clothes'; Noghay *qundaq* 'swaddling clothes'. Starostin—Dybo—Mudrak 2003:740 **kunu* (*~ k^c-*) 'to fold, to twist'.

Buck 1949:9.14 bend (vb. tr.); 9.15 fold (vb. tr.); 9.16 bind (vb. tr.); 10.14 wind, wrap (vb.); 12.74 crooked. Bomhard 1996a:234—235, replacement for no. 311.

517. Proto-Nostratic (n.) **k'uŋ-a* 'buttocks, rump, anus':

- A. Dravidian: Tamil *kunṭi* 'buttocks, rump; bottom (as of a vessel), end of a fruit or nut opposite to the stalk'; Malayalam *kunṭi* 'posterior, anus; bottom (of a vessel)'; Kannaḍa *kunḍe* 'buttocks, anus; bottom (of a vessel)'; Telugu *kuṭṭe* 'anus'; Gadba *kunḍ* 'anus'; Kuwi *kūna* 'buttock'. Burrow—Emeneau 1984:155, no. 1693a.
- B. Proto-Indo-European **k'un-k'o-s* 'rump, buttocks': Czech *huzo* 'rump, buttocks'; Slovenian *góza* 'rump, buttocks'; Old Polish *gqz* 'protuberance, hump' (Modern Polish *guz* 'lump', *guza* 'posterior'); Russian *guz* [гуз] 'rump, buttocks', *gúzka* [гузка] 'rump (of a bird)', *gúzno* [гузно] (vulgar) 'ass, bum'. Mann 1984—1987:306 **gungos*, *-ā* 'lump, swelling' and 307 **gunḡos*, *-ā* (variant of **gungos*, *-ā* [1]) 'knot, bunch, lump'; Derksen

2008:184; Preobrazhensky 1951:168 (ръзъ). Perhaps also Old Icelandic *kunta* 'vulva'; Swedish (dial.) *kunta* 'vulva'; Danish (dial.) *kunte* 'vulva'; Middle Low German *kunte* 'vulva'. De Vries 1977:334; Falk—Torp 1903—1906.I:424.

- C. Proto-Altaic **kuntʰV* (~ -o-) 'rump, anus': Proto-Tungus **kundu-* 'rump; cunnus, pudendum muliebre' > Evenki *kunʰukī*, *kunduki* 'rump'; Lamut / Even *qoñña* 'pudendum muliebre'. Proto-Mongolian **koñdu-*, **koñži-* 'rump, buttocks; anus; posterior' > Written Mongolian *qondulai* 'rump, hip', *qoñžusu* 'junction of two thighs, crotch'; Khalkha *χondloi* 'rump, buttocks'; Buriat *χondoloy* 'buttocks, rump', *χonzōhon* 'anus, posterior'; Kalmyk *χondasñ* 'the joint between the legs'; Ordos *χondolō* 'rump, buttocks'; Monguor *gonžosə*, *gwənžasə* 'rear end'. Proto-Turkic **Koñ* 'thick part of the thigh, muscles; backside, buttocks' > Karakhanide Turkic *qoñ* 'thick part of the thigh, muscles'; Uighur *qoñ* 'backside, buttocks'; Kazakh *qoñ* 'thick part of the thigh, muscles; backside, buttocks'; Sary-Uighur *qoñir*, *qoñqir* 'backside, buttocks'; Tuva *qoñ* 'animal body'; Yakut *kuy* 'thick part of the thigh, muscles'. Poppe 1955:58 and 1960:18, 71, and 85; Street 1974:17 **koñ* 'fat at the thighs; rump'; Starostin—Dybo—Mudrak 2003:742—743 **kuntʰV* (~ -o-) 'rump, anus'.

Bomhard—Kerns 1994:428—429, no. 272.

518. Proto-Nostratic (n.) **k'ut'-a* 'shortness, smallness'; (adj.) 'short, small':

- A. Proto-Afrasian **k'ut'-* 'short, small': Proto-Semitic **k'at'-an-* 'small, thin' > Hebrew *kāṭōn* [כָּטֹן] 'small, insignificant', *kāṭān* [כָּטָן] 'little, small'; Syriac *kəṭan* 'to grow thin'; Mandaic *koṭāna* 'small'; Arabic *kaṭṭīn* 'servant, slave'; Sabaeen *kṭn* 'small'; Mehri *káyṭan* 'to become thin'; Šheri / Jibbāli *kéṭan* 'to become thin'; Ḥarsūsi *káyṭen* 'to become thin', *keṭīn* 'thin'; Geez / Ethiopic *kaṭana* [ቀጠነ] 'to be thin, fine, lean, subtle, emaciated', *kaṭṭin* [ቀጠኑ] 'fine, thin, subtle, delicate, transcendent'; Tigrinya *kāṭānā* 'to be thin'; Tigre *kāṭna* 'to be thin'; Amharic *kāṭṭānā* 'to be thin'; Argobba *kāṭṭānā* 'to be thin'; Gurage *kāṭānā* 'to be thin, slender, slim, lean, meager, skinny'. Murtonen 1989:374; Klein 1987:575; Leslau 1979:508 and 1987:453. Highland East Cushitic: Sidamo *k'uut'a* 'short'. Hudson 1989:133. Central Chadic **kut'un-* 'short, small' > Tera *kutun* 'short, small'. Orël—Stolbova 1995:351, no. 1615, **kutun-* 'to be small'.
- B. Dravidian: Tamil *kuṭṭam* 'smallness, young of a monkey', *kuṭṭan* 'laddie, lassie (as a term of endearment)', *kuṭṭi* 'young of a dog, pig, tiger, etc.; little girl; smallness', *kuṭṭai* 'shortness, dwarfishness'; Malayalam *kuṭṭan* 'boy, lamb, calf', *kuṭṭi* 'young of any animal, child (chiefly girl); pupil of eye', *kuṭu* 'small, narrow'; Kota *kuṭ* 'short, small'; Kannaḍa *giḍḍu*, *guḍḍu* 'shortness, smallness', *giḍḍa* 'dwarf', *guḍḍa* 'dwarf, a boy; smallness, shortness'; Koḍagu *kuṭṭi* 'child of any caste except Coorgs, young of

animals (except dog, cat, pig)'; Tuḷu *giḍḍa* 'small, short'; Telugu *giḍḍa*, *giḍḍaka* 'short, dwarfish', *guḍḍa* 'child'; Kui *gūṭa* 'short, dwarfish', *gūṭi* 'stumpy, short, shortened'; Kuṛux *guḍrū*, *guṛrū* 'dwarfish (of persons and animals only)'; Brahui *ghuḍḍū*, *guḍḍū* 'small, urchin'. Burrow—Emeneau 1984:153, no 1670.

- C. Proto-Kartvelian **k'ut*- 'little, small' > 'boy; (boy's) penis': Georgian *k'ut'a*- 'boy', *k'ut'u*- '(boy's) penis'; Mingrelian *k'ut'u*- '(boy's) penis'; Laz *k'ut'u*- '(boy's) penis'; Svan *k'ot'ōl* (adj.) 'little', (adv.) 'a little', *k'oč'ōl* (adv.) 'a little'. Klimov 1964:118 **kutu*- and 1998:105 **kutu*- 'boy, penis (pueri)'; Fähnrich—Sardshweladse 1995:214 **kut*-; Fähnrich 2007: 260 **kut*-.
- D. Proto-Altaic **kjūta* (~ -*th*-) 'insufficiency, debt': Proto-Tungus **kōta* 'debt; miserly, greedy' > Evenki *kōta* 'debt'; Lamut / Even *qōt* 'debt'; Ulch *qota* 'miserly, greedy'; Orok *quta* 'miserly, greedy'; Nanay / Gold *qota* 'miserly, greedy'. Proto-Turkic **Kit*- 'not enough, insufficient' > Turkish *kit* 'little, few, scarce, deficient', *kıtlas*- 'to become scarce', *kıtlık* 'scarcity, dearth, famine', *kıtlıyos* 'common, poor, trifling, insignificant'; Azerbaijani *gīt* 'not enough, insufficient'; Uighur *qitiyir* 'miserly'; Karaim *qīt* 'not enough, insufficient'; Turkmenian *gīt* 'not enough, insufficient'; Bashkir (dial.) *qitliq* 'hunger'; Kirghiz *qidiq* 'dwarf', *qitiy*- 'secretive', *qitiray*- 'lean and small'; Kazakh *qitiqtan*- 'to be offended'; Noghay *qīt* 'not enough, insufficient'; Chuvash *χədəχ* 'compulsion'; Tuva *qidiγ* 'oppressed'. Starostin—Dybo—Mudrak 2003:708—709 **kjūta* (~ -*t*-) 'insufficiency, debt'.

Sumerian *gud₄da*, *gud₈da* 'short'.

Buck 1949:12.56 small, little; 12.59 short. Illič-Svityč 1971—1984.I:329—330, no. 205, **kU₁Λ* 'small'; Bomhard 1996a:231—232, no. 649; Dolgopolsky 2008, no. 1227, **kU₁V* 'small'.

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*With Special Reference
To Indo-European*

VOLUME 3

Allan R. Bomhard



FIFTH EDITION
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By Allan R. Bomhard

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PART THREE

COMPARATIVE VOCABULARY
(SECOND HALF)

22.24. PROTO-NOSTRATIC *g^w

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
g ^w -	g ^w -	k-	gw/u-	g ^{wh} -	k-	g-	k- q-
-g ^w -	-g ^w -	-k-	-gw/u-	-g ^{wh} -	-x-	-g-	-ɣ-

519. Proto-Nostratic (n.) *g^wal-a ‘snake’:

- A. Proto-Kartvelian *gwel- ‘snake’: Georgian *gvel-i* ‘snake’; Mingrelian *gver-* ‘snake’; Laz *mgver-* ‘snake’. Klimov 1964:61—62 *gwel- and 1998:29 *gwel- ‘snake’; Schmidt 1962:101; Fähnrich—Sardshweladse 1995:83 *gwel-; Fähnrich 2007:105 *gwel-.
- B. Proto-Uralic *kulʒ ‘(intestinal) worm’: Votyak / Udmurt *kōl* ‘intestinal worm’; Zyrian / Komi *kol* ‘intestinal worm’; Ostyak / Xanty *kul* ‘tapeworm’; Yurak Samoyed / Nenets *haly* ‘(long) worm’, *sæw̄hsej kaly* ‘tapeworm’; Selkup Samoyed *kāā* ‘intestinal worm, especially tapeworm’. Rédei 1986—1988:227 *kʸʒ ‘intestinal worm’; Décsy 1990:101 *kula ‘a kind of intestinal worm’; Collinder 1955:25, 1960:407 *kulʒ, and 1977:45. Yukaghir (Southern / Kolyma) *kelid'e* ‘worm’. Nikolaeva 2006:205.
- C. Proto-Gilyak / Nivkh *gələŋa ‘snake’: Amur *kəlaŋa* ‘snake’; North Sakhalin *kəlaŋa* ‘snake’; East Sakhalin *kəlaŋa* ‘snake’. Fortescue 2016:64.

Buck 1949:3.83 worm; 3.85 snake. Bomhard—Kerns 1994:389—390, no. 227.

520. Proto-Nostratic root *g^wan- (~ *g^wən-):

(vb.) *g^wan- ‘to hit, to strike, to slay, to kill, to wound, to harm, to injure’;
(n.) *g^wan-a ‘strike, harm, injury’

- A. Proto-Afrasian (?) *g^wan- ‘(vb.) to hit, to strike, to slay, to kill, to wound, to harm, to injure; (n.) strike, harm, injury’: Proto-Semitic *gan-ay- ‘to harm, to injure’ > Akkadian *genū* ‘to butt, to gore’; Arabic *ġanā* ‘to commit a crime, to harm, to inflict’, *ġanāya* ‘perpetration of a crime, felony’; Modern Hebrew (pi.) *ginnāh* [גִּנָּה] ‘to denounce, to deprecate; to condemn, to censure, to take to task, to put to shame, to disgrace, to defame; to be denounced, deprecated, disgraced’; Syriac *gannī* ‘to blame, to reproach’; Mandaic *ganī* ‘to denounce, to condemn, to blame; to abuse, to insult’. D. Cohen 1970— :147—150; Murtonen 1989:138; Klein 1987:104. Egyptian *gns* ‘violence, injustice’; Coptic *čons* [ḠONC] ‘violence, injustice; strength, might, force’, *ġinčons* [XINḠONC] ‘to use violence, to act violently; to hurt, to harm, to injure’. Hannig 1995:902; Erman—Grapow 1926—1963.5:177; Vycichl 1983:342; Černý 1976:332.

Proto-Highland East Cushitic **gan-* ‘to hit’, **gan-am-* ‘to fight’ > Gedeo / Darasa *gan-* ‘to hit, to whip’, *gan-em-* ‘to fight’, (reduplicated) *gan-gan-* ‘to knock, to pound in a mortar’; Hadiyya *gan-* ‘to hit, to thresh by driving ox’, *gan-am-* ‘to fight’; Sidamo *gan-* ‘to hit’, *gan-am-* ‘to hit, to fight’, (reduplicated) *gan-gan-* ‘to knock’; Kambata *ganno* ‘harm’. Hudson 1989:63, 80, and 116.

- B. Dravidian: Malayalam *kaṇṭi* ‘gap in a hedge or fence, breach in a wall, mountain pass’; Kannaḍa *kaṇḍi*, *kiṇḍi*, *gaṇḍi* ‘chink, hole, opening’; Koḍagu *kaṇḍi* ‘narrow passage (for example, mountain pass, hole in a fence)’; Tuḷu *kaṇḍi*, *khaṇḍi*, *gaṇḍi* ‘hole, opening, window’, *kaṇḍeriyuni* ‘to make a cut’; Telugu *gaṇḍi*, *gaṇḍika* ‘hole, orifice, breach, gap, lane’, *gaṇṭu* ‘(vb.) to cut, to wound; (n.) cut, wound, notch’, *gaṇṭi* ‘wound’, *gaṇḍrincu* ‘to cut, to divide’, *gaṇḍrikalu* ‘pieces, fragments’; Kuwi *gundra* ‘piece’, *gandranga rath’nai* ‘to cut in pieces’, *gaṇḍra* ‘piece’. Burrow—Emeneau 1984:111, no. 1176.
- C. Proto-Indo-European **g^{wh}en-/g^{wh}on-/g^{wh}η-* ‘(vb.) to hit, to strike, to slay, to kill, to wound, to harm, to injure; (n.) strike, blow, wound’: Hittite (3rd sg. pres.) *ku-en-zi* ‘to strike, to kill’; Sanskrit *hānti* ‘to smite, to slay, to hurt, to kill, to wound’; Avestan *jainti* ‘to beat, to kill’; Greek *θεῖνω* ‘to strike, to wound’, *φόνος* ‘murder, homicide, slaughter’; Armenian *ganem* ‘to strike’; Latin *dēfendō* ‘to repel, to repulse, to ward off, to drive away; to defend, to protect’, *offendō* ‘to strike, to knock, to dash against’, *offensō* ‘to strike, to dash against’; Old Irish *gonim* ‘to wound, to slay’, *guin* ‘a wound’; Old Icelandic *gunnr* ‘war, battle’; Old English *gūp* ‘war, battle’; Old Saxon *gūdea* ‘battle, war’; Old High German *gund-* ‘battle, war’; Lithuanian *genù*, *giñti* ‘to drive’, *geniù*, *genėti* ‘to lop, to prune, to trim’. Rix 1998a:194—196 **g^uhen-* ‘to beat, to strike, to hit’; Pokorny 1959:491—493 **g^uhen-(ə)-* ‘to hit’; Walde 1927—1932.I:679—681 **g^uhen-*; Mann 1984—1987:379—380 **g^uhen-* ‘to drive, to beat, to kill’, 380 **g^uhentūā*, 381 **g^uh^η-*, 381—382 **g^uh^ηtis*, *-jos*, *-jə* ‘blow, wound, slaughter’, 382 **g^uh^ηtos* ‘struck, wounded, killed, driven’, 382 **g^uhondh-* ‘to strike’, 382—383 **g^uhonos*, *-ā*, *-is* ‘blow, chase, slaughter’; Watkins 1985:25 **g^when-* and 2000:35 **g^when-* ‘to strike, to kill’; Gamkrelidze—Ivanov 1984.II:740 **g^[h]en-* and 1995.I:87, I:107, I:644, I:780 **g^hen-* ‘to kill, to destroy, to pursue (enemy)’, I:779 **g^h(e)n-* ‘to break, to strike; battle’; Mallory—Adams 1997:548 **g^when-* ‘to strike’; Chantraine 1968—1980.I:425—426 **gh^wen-*; Frisk 1970—1973.I:657—658 **g^uhen-iō* and II:1035—1036 **g^uhónos*; Boisacq 1950:336 **g^uhen-* and 1033 **g^uhono-s*; Hofmann 1966:112 **g^uhen-* and 402 **g^uhonos*; Beekes 2010.I:536—537 **g^when-* and II:1586 **g^when-*; Ernout—Meillet 1979:224—225 **gh^wen-*; Walde—Hofmann 1965—1972.I:332—333 **g^uhen-*; De Vaan 2008:210—211; Mayrhofer 1956—1980.III:575—577; Puhvel 1984— .4:206—212 **gh^wen-* ‘to smite, to slay, to pursue’; Kloekhorst 2008b:485—486; Orël 2003:146 Proto-Germanic **zunp^z*; Kroonen 2013:196 Proto-Germanic

**gun̥pi-* ~ **gun̥p̥jō-* ‘fight’; De Vries 1977:195 **g^uhen-*; Fraenkel 1962—1965.I:152—153; Smoczyński 2007.1:180—181 **g^uhen-/g^uh̥n-*; Derksen 2015:170—171 **g^{wh}en-* and 177 **g^{wh}h̥n-*; García Ramón 1998 **g^{wh}en-*.

- D. Proto-Altaic **guna-* ‘to rob, to attack, to torture’: Proto-Tungus **gun-* ‘to punish, to avenge’ > Evenki *gun̥ča-* ‘to punish, to avenge’. Proto-Mongolian **gani-* ‘(vb.) to strive, to endeavor; (adj.) berserk, frenzied’ > Mongolian *gani-* ‘to make efforts, to endeavor, to strive’, *gani* ‘frenzied, mad’, *ganira-* ‘to be mad, to be intoxicated; to be lonely or depressed’, *ganiral* ‘madness; mental obscuration’, *ganiraltu* ‘mad’; Khalkha *gañ* ‘berserk, frenzied’, *gani-* ‘to strive, to endeavor’; Buriat *gani(g)* ‘berserk, frenzied’; Kalmyk *gāñr-* ‘to become mad’; Dagur *gāni* ‘berserk, frenzied’. Proto-Turkic **Kun-* ‘to rob, to plunder, to attack’ > Old Turkic (Old Uighur) *qun-* ‘to rob, to plunder, to attack’; Karakhanide Turkic *qun-* ‘to rob, to plunder, to attack’; Turkmenian (dial.) *gunuṣ-* ‘to rob, to plunder, to attack’; Kirghiz *qun-* ‘to rob, to plunder, to attack’; Tuva *χunā-* ‘to rob, to plunder, to attack’. Starostin—Dybo—Mudrak 2003:571 **guna* ‘to rob, to attack, to torture’.

Buck 1949:9.21 strike (hit, beat); 11.28 harm, injure, damage (vb.). Bomhard—Kerns 1994:467—468, no. 312; Dolgopolsky 2008, no. 638, **g[o]ʔiñV* ‘to beat, to strike’.

521. Proto-Nostratic root **g^wan-* (~ **g^wən-*):

(vb.) **g^wan-* ‘to swell, to abound’;

(n.) **g^wan-a* ‘swelling, abundance, large quantity, prosperity’

- A. Proto-Afrasian (?) **g^wan-* ‘to swell, to abound’: Proto-Semitic **gan-an-* ‘to swell, to abound’ > Arabic *ḡanna* ‘to abound (in plants and herbs)’, *ḡanma-t* ‘plenty, abundance; the whole’; Geez / Ethiopic *ganna* [ገን] ‘to be important, to be proud’; Gurage (Wolane) *genä* ‘large’ in *genä kuṭäl* ‘large leaf of the *äsät* in which dough is placed’, *gännänä* in *səm-äw yägännänä* ‘famous’, literally, ‘a man whose name (*səm*) is exceeding’; Tigre *gänna* ‘to exceed the measure’; Tigrinya *gänänä* ‘to be numerous, to be strong’; Amharic *gännänä* ‘to be abundant, to be large in quantity, to augment, to increase, to grow (of fame), to be famous’. D. Cohen 1970—:147—150; Leslau 1979:281, 284 and 1987:198; Militarev 2008a:197 and 2010:75. (?) Geez / Ethiopic *g^wanak^{wa}*, *g^wannak^{wa}* [ገንኩ] ‘to heap up, to accumulate, to make a large amount’; Tigrinya *g^wänäk^{wä}* ‘to make a pile of mown hay or grain’. Leslau 1987:198. Egyptian *gn* ‘to be big, great, mighty’. Hannig 1995:901; Erman—Grapow 1926—1963.5:173. East Cushitic: Somali *gen* ‘age’; Konso *kaan-* ‘to be left to grow big’; Dullay *kaan-* ‘to grow’, *kaan-a* ‘big’; Burji *gann-an-ee* ‘big, great, mighty’, *gaan-* ‘to be or become big’, (causative) *gaan-is-* ‘to make big, to enlarge’. Sasse 1982:73 and 78.

- B. Dravidian: Kui *gunda* (*gundi-*) ‘(vb.) to sprout, to bud, to shoot forth into bud or ear; (n.) a sprouting, budding’; (?) Kuwi *kunda* ‘a very small plot of ground (for example, for seed-bed)’; Kuṛux *kundnā* ‘to germinate, to bud, to shoot out’, *kundrnā* ‘to be born’, *kundrkā* ‘birth’, *kundrta’ānā* ‘to generate, to beget, to produce’; Malto *kunde* ‘to be born, to be created’. Burrow—Emeneau 1984:157, no. 1729.
- C. Kartvelian: Svan *gun* ‘very; plenty of’.
- D. Proto-Indo-European **g^{wh}en-/ *g^{wh}on-/ *g^{wh}η-* ‘to swell, to abound; to fill, to stuff, to cram’: Sanskrit *ā-hanā́-h* ‘swelling, distended’, *ghaná-h* ‘solid, compact, hard, firm, dense; full of (in compounds), densely filled with (in compounds)’; Greek εὐθηνέω (Attic εὐθενέω) ‘to thrive, to prosper, to flourish, to abound’; Armenian *yogn* (< **i-* + **o-g^{wh}on-* or **o-g^{wh}no-*) ‘much’; Lithuanian *ganà* ‘enough’. Perhaps also in Germanic: Proto-Germanic **gundaz* (< **g^{wh}η-to-*) ‘abscess’ > Gothic *gund* ‘gangrene’; Norwegian (dial.) *gund* ‘scurf’; Old English *gund* ‘matter, pus’; Old High German *gunt* ‘pus’. Pokorny 1959:491 **g^uhen-* ‘to swell’; Walde 1927—1932.I:679 **g^uhen-*; Watkins 1985:25 **g^when-* ‘to swell, to abound’; Mayrhofer 1956—1980.I:84 and I:357; Boisacq 1950:294 **g^uhen-*; Frisk 1970—1973.I:586—587 **g^uhen-*; Hofmann 1966:98 **g^uhen-*; Chantraine 1968—1980.I:384 **g^when-*; Beekes 2010.I:478—479; Orël 2003:146 Proto-Germanic **gundān* ~ **gundaz*; Kroonen 2013:195—196 Proto-Germanic **gunda-* ‘pus; decaying skin’ (?); Feist 1939:226; Lehmann 1986:163; Torp 1919:190; Jacques 2017; Smoczyński 2007.1:155—156 **g^uhen-*; Fraenkel 1962—1965.I:132—133; Derksen 2015:163 **g^whon-*.

Buck 1949:12.53 grow (= increase in size); 12.55 large, big (great); 13.18 enough. Dolgopolsky 2008, no. 637a, **g[oʔa]nV* ‘much, big’; Bomhard—Kerns 1994:468, no. 313.

522. Proto-Nostratic root **g^war-* (~ **g^wər-*):
 (vb.) **g^war-* ‘to turn, to twist, to wind, to wrap, to roll’;
 (n.) **g^war-a* ‘any round or circular object’; (adj.) ‘rolling, round, bent, twisted, turned’
- A. Proto-Afrasian **g^war-* ‘to roll, to revolve’: Proto-Semitic (reduplicated) **gar-gar-* ‘to roll, to revolve’ > Ugaritic *t-grgr* ‘to bustle about, to make haste’; Geez / Ethiopic *ʔangargara* [ḵḵḵḵḵḵ] ‘to wallow, to revolve, to roll, to roll oneself, to make roll about, to spin, to drive around, to flop around, to wriggle’, *nagargār* [ḵḵḵḵḵḵ] ‘rolling, spinning, epilepsy, palsy, possession by an evil spirit, evil spirit’; Amharic *nägärgar* ‘epilepsy’; Tigre *ʔangärgära* ‘to roll, to wallow’; Tigrinya *ʔangärgärä* ‘to roll, to wallow’. D. Cohen 1970—:181; Leslau 1987:202. Proto-Semitic **gar-ar-* ‘to turn, to roll’ > Akkadian *garāru* ‘to turn or roll over (intr.); to roll’, *garru* ‘round’. D. Cohen 1970—:191—192. Berber: Kabyle *grirəb* ‘to

roll'. Southern Cushitic: Proto-Rift *g^war- 'to turn (intr.)' > Iraqw (reduplicated) gwangwara? 'to roll (downhill)'; K'wadza golat- 'to bend (intr.)'. Ehret 1980:372. Cushitic: Somali girāngir 'wheel'; Saho gur- 'to roll', gargar- 'to roll'; Bilin gargar- 'to move, to stir; to sway back and forth', 'engirgír 'epilepsy'. Reinisch 1887:161. North Omotic: Bench / Gimira gart- 'to roll (intr.)', gars- 'to roll (tr.)'. Chadic: Hausa gaṛaa 'to roll a circular object along the ground', gaṛe 'any circular object used by children to roll along the ground'. Ehret 1995:192, no. 302, g^war- 'to turn (intr.)'; Diakonoff 1992:25 *g^wVr, *gVr 'rolling, round, bent'; Militarev 2012:90—91 Proto-Afrasian *gVr(gVr)-.

- B. (?) Proto-Kartvelian *gor-/ *gr- 'to roll, to rotate': Georgian gor- 'to roll, to rotate, to turn'; Mingrelian gorgol- 'to roll'; Laz ngor-, gr- 'to roll, to wallow', ngorebul- 'wallowing'; Svan gwr-, gur- 'to roll, to rotate', gur-na 'round stone'. Schmidt 1962:102; Klimov 1964:64 *gor-/ *gr- and 1998:31 *gor-/ *gr- 'to roll, to wallow'; Fähnrich 2007:110—111 *gor-; Fähnrich—Sardshweladse 1995:88—89 *gor-. Proto-Kartvelian *grex-/ *grix- 'to roll, to twist', *grex-il- 'twisted, rolled': Georgian grex-/grix- 'to roll, to twist', grexil- 'twisted, rolled'; Mingrelian girax-/grix- 'to roll, to twist', giraxil-, giroxil- 'twisted, rolled'; Laz ngrix- 'to roll, to twist'. Fähnrich 2007:111—112 *grax-; Fähnrich—Sardshweladse 1995:89—90 *grax-; Klimov 1998:32 *gr-ex-/ *gr-ix- 'to roll, to twist' and 32—33 *grex-il- 'twisted, rolled'. Proto-Kartvelian *grgw- 'ring; round': Georgian rgol-i 'ring' (Old Georgian grgol-i), m-rgv-al-i 'round'; Mingrelian rgv- in mo-rgv-i 'part of a wheel, coil; round'; Svan girg-od 'ring on a wicket', girgweld 'link (in a chain)'. Klimov 1998:32 *grgw- 'round artifact, ring'; Fähnrich 2007:117 *gurgw-; Fähnrich—Sardshweladse 1995:90 *grgw-.
- C. Proto-Uralic *kure- 'to twist, to turn, to plait, to tie (together), to twine together, to braid': Finnish kuro- 'to fold, to plait, to crease, to pull together, to tie shut; to baste (sew), to patch up, to stitch together'; Lapp / Saami gorrâ-/gorâ- 'to tie together without actually making a knot, to tie shut, to fasten'; (?) Zyrian / Komi kôr- 'to plait, to gather'; Yurak Samoyed / Nenets hura- 'to tie up'; Selkup Samoyed kura- 'to plait, to twist together'; Kamassian kür- 'to plait, to braid, to twist'. Collinder 1955:29 and 1977:49; Rédei 1986—1988:215—216 *kure-; Décsy 1990:101 *kura 'to bind'. Proto-Uralic *kur3 'basket': Votyak / Udmurt kür 'basket made of the inner bark of the linden'; Cheremis / Mari (Eastern) kurukš 'basket made of bark'; Vogul / Mansi kuri, huri 'sack, bag, pouch'; Ostyak / Xanty kyræg, (North Kazym) hyr 'sack'; Yurak Samoyed / Nenets hoor 'keg, receptacle, bucket', täekuseä koor 'bucket made of birch bark'; Tavgi Samoyed / Nganasan kur 'vat, tub', koare 'box'; Selkup Samoyed koromže 'basket made of birch bark'. Collinder 1955:28 and 1977:49; Rédei 1986—1988:219 *kur3 (*kor3); Décsy 1990:101 *kura 'basket, barrel made of bark'; Janhunen 1977b:74 *kor. Note: The Uralic forms are phonologically

ambiguous — they may either belong here or with Proto-Nostratic **k^whir-* (~ **k^wher-*) ‘to twist or twine together, to tie together, to bind, to fasten’.

- D. (?) Proto-Altaic **gūr^yi-* ‘to tie, to bind, to plait, to twine’: Proto-Tungus **gurē-* ‘(vb.) to unfasten; to tie (a band); (n.) string, cord’ > Manchu *gūran* ‘cord for tying a bundle’; Evenki *gurē-* ‘to unfasten’, *gurewu-* ‘to tie (a band)’, *guren* ‘string, cord’; Lamut / Even *gurelge-* ‘to unfasten’, *gur^hn* ‘string, cord’; Ulch *gure-li-* ‘to unfasten’; Oroch *gure-li-* ‘to unfasten’; Nanay / Gold *gure-li-* ‘to unfasten’, *gori* ‘string, cord’; Oroch *guže* ‘string, cord’; Udihe *gue-* ‘to tie (a band)’. Proto-Mongolian **görü-*, **gürü-* ‘to plait, to spin’ > Mongolian *gürü-* ‘to braid, to twine, to weave’, *gürüge* ‘wickerwork’, *gürümel* ‘braided, woven, plaited’; Khalkha *görü-* ‘to plait, to spin’; Buriat *güre-* ‘to plait, to spin’; Kalmyk *gür-* ‘to plait, to spin’; Ordos *gürü-* ‘to plait, to spin’; Monguor *guru-*, *gurə-* ‘to plait, to spin’. Proto-Turkic **gür^y-* ‘(vb.) to lace, to bind; (n.) part of a loom’ > Turkmenian *göze-* ‘to lace, to bind’; Kirghiz *küzük-* ‘part of a loom’; Oyrat (Mountain Altai, Northern dialect) *küzüg* ‘part of a loom’; Chuvash *kəwrəw* ‘part of a loom’. Poppe 1960:25, 107, and 126; Street 1974:13 **göre-* ‘to weave, to twist’; Starostin—Dybo—Mudrak 2003:575 **gūri* ‘to unfasten, to (un)tie’.

Sumerian *gur* ‘to bend (tr.)’, *gur* ‘to wind up, to roll up, to turn, to twist’, *gur* ‘basket’, *gūr* ‘ring, circle’, *gūr* ‘to bend, to bow (intr.)’, *gur₄* ‘to wriggle, to writhe’, *gurum* ‘to bend, to bow (intr.); to bend (tr.)’.

Buck 1949:10.12 turn (vb.); 10.13 turn around (vb.); 10.14 wind, wrap; 10.15 roll (vb.). Bomhard—Kerns 1994:401—402, no. 239.

523. Proto-Nostratic root **g^wir-* (~ **g^wer-*):

- (vb.) **g^wir-* ‘to be or become hot, to warm’;
(n.) **g^wir-a* ‘heat, fire’

- A. Proto-Afrasian (?) **g^wir-* ‘(vb.) to be or become hot, to warm; (n.) fire’: Proto-Semitic **gar-ar-* ‘(vb.) to be or become hot, to warm; (n.) fire’ > Akkadian *girru* ‘fire’, (adv.) *girrāniš* ‘like fire’; Amharic *gärrärä* ‘to be scorching (sun)’; Gurage (Chaha) *g’irg’ir* **balä*, (Endegeñ) *gərgər barä* ‘to blaze, to flicker, to burn in a bright and wavy way, *to burn easily (dry wood)’. D. Cohen 1970—:191—192; Leslau 1979:310. Egyptian (**gir-* > **g^yir-* > **d^yir-* >) *ḏj* ‘fire-drill’, *ḏf* (Demotic *ḏf*) ‘to heat, to cook, to burn’, *ḏf* ‘scorched meat’; Coptic *ḡuf* [xoyq] ‘to burn, to scorch’, (reduplicated) *ḡofḡf* [xoqxq] ‘to burn, to cook’. Hannig 1995:992 and 993—994; Faulkner 1962:318 and 319; Erman—Grapow 1921:218 and 1926—1963.5:511, 5:522; Gardiner 1957:603; Vycichl 1983:333; Černý 1976:322. Saho-Afar **gir-* ‘fire’ > Saho *gira* ‘fire’; Afar *gira* ‘fire’. Highland East Cushitic **gir-* ‘fire’ > Burji *jür-a* ‘fire’, *jüranta arraaba*

- ‘flame’; Sidamo *giir-a* ‘fire’, *giir-* ‘to burn (tr.)’, *girr-am-* ‘to burn (intr.)’; Hadiyya *giir-a* ‘fire’, *giir-* ‘to burn (tr.)’, *girr-am-* ‘to burn (intr.)’; Kambata *giira(ta)* ‘fire’, *giir k’as-aancu* ‘torch’; Gedeo / Darasa *giir-a* ‘fire’. Sasse 1982:110; Hudson 1989:64. Proto-Chadic (reduplicated) **gir-gir-* ‘hot’ > Maha *girgir* ‘hot’; Dera *gərgət* (< **gərgər*) ‘hot’; Tera *gərgər* ‘hot’; Bura *gərgər* ‘hot’. Hausa *guura* ‘to set fire’. Orël—Stolbova 1995:210, no. 930, **gir-* ‘fire’ and 210, no. 931, **gir-* ‘to be hot’.
- B. Elamo-Dravidian: Middle Elamite *ku-ra-* ‘to singe, to scorch; to grill, to roast’, *ku-ra-am-ma* ‘in the kiln’, *ku-ra-na* ‘with the kiln’. Dravidian: Parji *kerj-* ‘to warm oneself by the fire’, *kercip-* (*kercit-*) ‘to warm somebody else’; Konda *rēs-* (with loss of initial *k*) ‘to warm by the fire’; Kui *grehpa* (*greht-*) ‘(vb.) to warm, to warm by the fire, to broil, to foment; (n.) act of warming by the fire, fomentation’; Kuwi *kērnjali* ‘to warm oneself in the sun’, *krenj-* (*-it-*) ‘to warm oneself’, *kreh-* (*krest-*) ‘to warm another’. Burrow—Emeneau 1984:179, no. 1967.
- C. Proto-Indo-European **g^wher-/g^wh₁-* (secondary *o*-grade form: **g^whor-*) ‘(vb.) to burn, to be hot; (n.) heat, fire’: Sanskrit *gharmá-h* ‘heat, warmth, sunshine’, *jigharti* ‘to shine, to burn’, *ghṛṇá-h* ‘heat, ardor, sunshine’, *hāras-* ‘flame, fire’; Hindi *ghām* ‘heat, sunshine, sweat’; Avestan *garəma-* ‘heat’; Greek θέρμη ‘heat, feverish heat’, θερμός ‘hot, warm’, θέρος ‘summer, summertime’, θέρω ‘to heat, to make hot’; Armenian *ǰerm* ‘warm, hot’; Albanian *zjarm, zjarr* ‘fire’; Latin *formus* ‘warm’, *forŋāx* ‘furnace, oven’, *furnus* ‘oven, bake-house’; Old Irish *gorim* ‘to make warm’; Old Prussian *gorme* ‘heat’, *goro* ‘fire-place’; Old Church Slavic *gorěti* ‘to burn’; Russian *gorět’* [гореть] ‘to burn’, *gret’* [греть] ‘to give out warmth, to warm (up), to heat (up)’, *žar* [жар] ‘heat’; Serbo-Croatian *gòreti* ‘to burn’. Rix 1998a:196—197 **g^uher-* ‘to heat, to make hot’; Pokorny 1959:493—495 **g^uher-* ‘hot, warm’; Walde 1927—1932.I:687—689 **g^uher-*; Mann 1984—1987:380—381 **g^uhermos* (**g^uherm₁*, **g^uherm₂*) ‘warm, hot; heat’, 381 **g^uheros* ‘hot; heat’, 383 **g^uhorejō* ‘to warm, to heat’, 383 **g^uhormos* ‘hot, warm’, 383 **g^uhoros, -is* ‘heat, warmth; hot place, burn’, 383 **g^uhrējō* ‘to heat, to warm; to get hot’, 386 **g^uh₁nos* ‘ashpit, firepit, clay oven, earthen pot, crucible’; Watkins 1985:25 **g^wher-* and 2000:35 **g^wher-* ‘to heat, to warm’; Gamkrelidze—Ivanov 1984.I:91, I:176, II:708 **g^[h]er-*, II:683 **g^[h]er-mo-* and 1995.I:79, I:151, I:613 **g^her-* ‘heat, warmth’, I:590 **g^her-mo-* ‘hot’; Mallory—Adams 1997:263 **g^whermós* ‘warm’, **g^whrensós* ‘warm’; Mayrhofer 1956—1980.I:357—358 and I:360; Boisacq 1950:341 **g^uher-*, **g^uhormo-*, **g^uheres-*; Hofmann 1966:113—114 **g^uher-*; Frisk 1970—1973.I:664—665 **g^uhermo-*, **g^uhormo-*; Chantraine 1968—1980.I:431—432 **g^hwer-*; Beekes 2010.I:541—542 **g^wher-mo-*; Orël 1998:524—525; De Vaan 2008:235; Ernout—Meillet 1979:248; Walde—Hofmann 1965—1972.I:532—534 **g^uher-*, **g^uhermo-*; Derksen 2008:178—179 **g^whor-* and 534; Wodtko—Irslinger—Schneider 2008:196—199 **g^uher-*.

D. Altaic: Manchu *guru-* ‘to redden, to become inflamed’.

Buck 1949:1.81 fire; 1.85 burn (vb.); 15.85 hot, warm. Bomhard—Kerns 1994:468—469, no. 314; Illič-Svityč 1971—1984.I:239, no. 95, **gUrɫ* ‘hot coals’.

22.25. PROTO-NOSTRATIC *k^{wh}

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
k ^{wh} -	k ^w -	k-	kw/u-	k ^{wh} -	k-	k ^h -	k- q-
-k ^{wh} -	-k ^w -	-k(k)-	-kw/u-	-k ^{wh} -	-k(k)-	-k ^h -	-k(k)- -q(q)-

524. Proto-Nostratic post-positional intensifying and conjoining particle *k^{wh}a- (~ *k^{wh}ə-):

- A. Elamo-Dravidian: Elamite coordinating conjunction: Neo-Elamite *ku-da*, Royal Achaemenid Elamite *ku-ud-da*, *ku-ut-te* ‘and’, assuming that it is a compound form composed of the elements *ku- ‘and’ plus *da* ‘also’.
- B. Proto-Kartvelian *k^we intensifying and affirming particle: Middle Georgian *kue*, Georgian Dialects: (Xevsuruli, Rač’uli) *-kve*, (Imeruli) *-ke*; Mingrelian *ko*; Laz *ko*. Klimov 1964:198 *k^we- and 1998:216 *k^we affirmative particle; Fähnrich 2007:464 *k^we-; Fähnrich—Sardshweladse 1995:376—377 *k^we-. Fähnrich—Sardshweladse also include Svan *ču* (< *č^we).
- C. Proto-Indo-European *k^{wh}e intensifying and conjoining particle: ‘moreover, and, also, etc.’: Sanskrit *ca* ‘and, both, also, moreover, as well as’, *ca...ca* ‘though...yet’; Pāli *ca* ‘and, then, now’; Avestan *-čā* ‘and’, *-čā...-čā* ‘both...and’; Old Persian *-čā* ‘and’, *-čā...-čā* ‘both...and’; Hittite *-k(k)u* enclitic particle: ‘now, even, and’, *-k(k)u...-k(k)u* ‘(both...) and; if...if; whether...or’, (?) *kuišku* ‘someone’ (if not a scribal error for *kuiški*); Palaic *-ku* ‘and’; Luwian *-ku(-wa)* ‘also, furthermore’ (cf. Melchert 1993b:105); (?) Lydian *-k* ‘and, also’; Greek *τε* ‘and’, *τε...τε* ‘both...and’, *καί τε* ‘and also’; Latin *-que* enclitic conjoining particle: ‘and’, *-que...-que* ‘both...and, and so’; *-que, -c* enclitic intensifying particle in *quis-que* ‘each, every, everyone, everybody, everything’, *ne-que, ne-c* ‘not, and not’, etc.; Oscan *ni-p, ne-p* ‘and not’; Umbrian *nei-p, ni-p* ‘and not’; Old Irish *-ch* enclitic particle in *na-ch* ‘any’; Gothic *-h* enclitic particle in *-uh* ‘and’, *ni-h* ‘not’, *hva-h* ‘each, every’, etc. Pokorny 1959:635—636 *k^ue (enclitic) ‘and, somehow’; Walde 1927—1932.I:507—508 *q^ue; Mann 1984—1987:1021 *q^ue (*quə, *qu-) ‘and’ (enclitic); ‘if, or’; Watkins 1985:33 *k^we and 2000:44 *k^we ‘and’ (enclitic); Gamkrelidze—Ivanov 1984.I:353—354, I:365, I:366 *-k[h]^oe and 1995.I:188 *-k^ho^e ‘and’ (coordinating pronominal particle); Mallory—Adams 1997:20 *k^we ‘and’; Mayrhofer 1956—1980.I:365; Puhvel 1984— .4:173—174 *k^we and 4:203—205 *k^we; Beekes 2010.II:1457 *k^we; Boisacq 1950:946—947 *q^ue; Chantraine 1968—1980.II:1098 *k^we; Hofmann 1966:355 *q^ue; De

Vaan 2008:506 **-k^we* ‘and, -ever’; Frisk 1970—1973.II:862—863 **q^ue*; Ernout—Meillet 1979:555 **k^we*; Walde—Hofmann 1965—1972.II:401—402 **q^ue*; Feist 1939:514 **k^ue*; Lehmann 1986:374 **k^we*; Brugmann 1904:621—622, no. 853, **q^ue*; Kloekhorst 2008b:483—484.

- D. Proto-Uralic **-ka/*-k^a* intensifying and conjoining particle: Finnish *-ka/-k^a* in: *ei-k^a* ‘and...not, nor’ (*ei...eik^a* ‘neither...nor’), *jo-ka* (indefinite pronoun) ‘who?’; Lapp / Saami (Norwegian) *juo-kke ~ juo-kk^e* ‘each, every’; Vogul / Mansi *ää-k, ää-ki* (in combination with a finite verb in the indicative mood) ‘not’. Proto-Yukaghir **k* predicative. Nikolaeva 2006:81.
- E. Altaic: Evenki *-ka/-k^a/-k^o* intensifying particle.
- F. Etruscan *-c* ‘and’.
- G. (?) Proto-Chukchi-Kamchatkan **qu(n)* emphatic particle: Chukchi *qun* ‘well’ (also emphatic enclitic); Kerek *qun* ‘well’, *q[?]un, q[?]in* strengthening or questioning particle; Koryak *qun* (emphatic particle) ‘and’; Alyutor *qun, qon* ‘well, all right, and so’; Kamchadal / Itelmen *qu* ‘hallo!, halloo!’, *qunix* ‘after all’. Fortescue 2005:339—340.

Illič-Svityč 1971—1984.I:325—326, no. 201, **k/o/* post-positional intensifying and conjoining particle; Bomhard—Kerns 1994:480—481, no. 326.

525. Proto-Nostratic root **k^whal-* (~ **k^whəl-*):

- (vb.) **k^whal-* ‘to go, to walk, to move about’;
 (n.) **k^whal-a* ‘walking, walk, wandering, roaming’
 Probably identical to:
 (vb.) **k^whal-* ‘to revolve, to go around, to roll’;
 (n.) **k^whal-a* ‘circle, circuit’

- A. Proto-Afrasian **k^wal-* ‘to go, to walk, to move about’: Berber: Tuareg *əkəl* ‘to go, to spend the hours in the middle of the day at, to spend the day at home’, *sikəl* ‘to travel, to go on foot (animal)’; Siwa *ukel-* ‘to go, to walk’, *tikli* ‘step, footstep’; Wargla *kəl* ‘to spend the middle of the day’, *sikəl* ‘to go on foot, to walk along’, *tikli* ‘walk, gait, going’; Mزاب *çəl* ‘to spend the middle of the day, to spend the day’; Tamazight *kəl, cəl* ‘to spend the day, to spend the day doing something; to take place, to happen’, *akəl, acəl* ‘to step on, to stamp (one’s foot), to trample’; Kabyle *tikliwin* ‘walking, pace; conduct; walk’. Cushitic: Saho-Afar **kalah-* ‘to travel’ > Saho *kalaah-, kalaah-* ‘to travel’. Central Chad **kal-* ‘to run, to go (quickly)’ > Mbara *kal-* ‘to run, to go (quickly)’; Mafa *kəl-* ‘to run, to go (quickly)’; Gisiga *kal-* ‘to run, to go (quickly)’. East Chad **kVl-* ‘to enter’ > Kera *kele-* ‘to enter’. Orël—Stolbova 1995:310, no. 1418, **kal-* ‘go’ and 310, no. 1420, **kalah-* ‘go’.
- B. Dravidian: Tamil *kulavu (kulavi-)* ‘to walk, to move about’; Toda *kwal- (kwad-)* ‘to go round and round (millet in a mortar pit, buffaloes in a pen),

to frisk about, to run about wasting time'. Burrow—Emeneau 1984:163, no. 1803.

- C. Proto-Indo-European *k^{wh}el-/ *k^{wh}ol-/ *k^{wh}l₁- 'to go, to walk, to move about': Sanskrit *cáratī*, *calatī* 'to move one's self, to go, to walk, to move, to stir, to roam about, to wander'; Avestan *carāiti* 'to go, to move'; Greek *πολέω* 'to go about, to range over', *πολεύω* 'to turn about, to go about'. Rix 1998a:345—347 *k^uelh₁- 'to twist, to turn, to turn round'; Pokorny 1959:639—640 *k^uel-, *k^uelā- 'to turn'; Walde 1927—1932.I:514—516 *q^uel-; Mann 1984—1987:1024 *q^uelō 'to turn, to move, to go'; Watkins 1985:33 *k^wel- and 2000:45 *k^wel- (also *k^welā-) 'to revolve, to move around, to sojourn, to dwell'; Gamkrelidze—Ivanov 1984.I:220 *k^[h]°el- and 1995.I:190, I:225, I:622 *k^h°el- 'to rotate, to move'; Mallory—Adams 1997:606—607 *k^wel- 'to turn'; Mayrhofer 1956—1980.I:376; Hofmann 1966:260—261 *q^uelō; Beekes 2010.II:1168—1169 *k^wlh₁-; Chantraine 1968—1980.II:877—878 *k^welō; Boisacq 1950:764 *q^uel-; Frisk 1970—1973.II:500—501 *q^uelō, *q^uolejō.
- D. Proto-Uralic *kulki- 'to ramble about, to move about, to roam or wander about': Finnish *kulke-/kulje-* 'to go, to walk, to travel, to stroll, to ramble'; Estonian *kulg* 'course, process, run, motion, going', *kulgema-* 'to proceed, to take one's course, to run, to pass'; Lapp / Saami *gol'gâ-* 'to float (with the current), to run; to shower down; to leak very much; to ramble, to roam, to wander about'; Mordvin *kolge-* 'to drip, to run; to leak, to be leaky'; Ostyak / Xanty *kogəl-* 'to walk, to stride'; Zyrian / Komi *kylal-* 'to float, to drift (on water); to flood; to swim; to travel or drift downstream', *kylt-* 'to drift or swim with the current'; Hungarian *halad-* 'to depart, to proceed, to move forward'; Yurak Samoyed / Nenets *huuly-* 'to swim; to move by ship; to travel downstream'. Rédei 1986—1988:198 *kulke-; Décsy 1990:101 *kulka 'to go, to progress'; Sammallahiti 1988:544 Proto-Finno-Ugrian *kulki- 'to run'; Collinder 1955:26—27 and 1977:46; Zhivlov 2023:164 Proto-Uralic *kulki- 'to move', Proto-Finnic *kulke- 'to go, to move, to travel'.
- E. Proto-Chukchi-Kamchatkan *(ðə)kələ- 'to follow or chase': Chukchi *kəle-* 'to follow, to chase, to catch, to copy', *ye-rkəle-lin* 'followed', *kəle-l'etə-tku-*, *keel'e-tku-* 'to chase', *kəla-jo-lqəl* 'pattern (to follow)'; Kerek *kəla-lra(a)t-* 'to chase', *klaa-ju-lXəl* 'pattern'; Koryak *kəle-* 'to follow', *kəlelret-* 'to chase'; Alyutor *(t)kəla-*, *kəla-l'at-* 'to follow'; Kamchadal / Itelmen (Western) *kalkaz* 'to follow'. Fortescue 2005:144.

Buck 1949:10.45 walk; 10.52 follow; 10.53 pursue. Bomhard—Kerns 1994: 471—473, no. 317.

526. Proto-Nostratic root *k^{wh}al- (~ *k^{wh}əl-):
 (vb.) *k^{wh}al- 'to revolve, to go around, to roll';
 (n.) *k^{wh}al-a 'circle, circuit'

Probably identical to:

(vb.) **k^{wh}al-* ‘to go, to walk, to move about’;

(n.) **k^{wh}al-a* ‘walking, walk, wandering, roaming’

Derivative:

(n.) **k^{wh}al-a* ‘that which turns, rolls, revolves, or goes round and round’ (> ‘wheel’ in the daughter languages)

- A. Proto-Afrasian **k^wal-* ‘to revolve, to go around, to roll’: Proto-Semitic **kal-al-* ‘to revolve, to go around, to surround’ > Geez / Ethiopic *kallala* [ħʌʌ] ‘to surround, to surround for protection, to cover over, to protect, to encompass, to encircle, to fence in, to crown’; Tigre *källa* ‘to go around’, *kälkäla* ‘to encircle’, *kälal* ‘circuit’; Tigrinya *kʷällälä* ‘to go around’; Amharic *källälä* ‘to surround, to crown, to guard, to protect’. Note: the words for ‘crown’ associated with this root are considered to be of Aramaic origin. Leslau 1987:283. Proto-Semitic **kal-al-* ‘to roll’ > Geez / Ethiopic **kolala*, **k^walala*, *ʔankolala* [ħʔʌʌ], *ʔank^walala* [ħʔh-ʌʌ] ‘to roll (intr.), to roll down (tears), fall (fruit, tears), to be or become giddy, to be tossed about, to turn (one’s head)’, *ʔakolala* [ħʔʌʌ] ‘to be dizzy’; Tigre *ʔanköläla* ‘to turn’; Tigrinya *kolälä*, *k^wälälä* ‘to go around’, *ʔänkäliliw* ‘round’; Amharic (*tän*)*k^wallälä* ‘to roll, to make turn’, (*an*)*k^wallälä*, *k^wälälä alä* ‘to roll, to make turn’; Harari *kulul bāya* ‘to roll’; Gurage (*at*)*kuläle* ‘to roll (tr.)’. Leslau 1963:82, 1979:342, and 1987:283—284; Militarev 2012:91 Proto-Semitic **k^wVIVl-*. Cushitic: Beja / Beḍawye *k^walāl* ‘round; ball’; Galla / Oromo *konkoladā-* ‘to roll, to roll downhill’; Hadiyya *kulill-*, *kullul-* ‘to turn (around)’; Saho *kulel* ‘circle’; Bilin *kaläl-* ‘to surround’. According to Leslau (1987:283), the Saho and Bilin forms are loans from Ethiopian Semitic. [Orël—Stolbova 1995:322, no. 1474, **kol-* ‘to return, to go around’.] Militarev 2012:91 Proto-Afrasian **k^wVl-*.
- B. Dravidian: Tamil *kulavu* (*kulavi-*) ‘(vb.) to bend, to curve; (n.) bend, curve’; Kuṛux *xolkhnā*, *xol^oxnā* ‘to cause to bend the head’, *xolkhrnā*, *xol^oxrnā* ‘to bend the head, to stoop’; Kui *klōnga* (*klōngi-*) ‘to be contracted, drawn in, bent up’, *klōpka* (< **klōk-p-*; *klōkt-*) ‘to contract, to draw up, to depress’; Malto *qolgru* ‘below, beneath, underneath’, *kolge* ‘to curve, to bend’, *kolgro* ‘bent, curved’. Burrow—Emeneau 1984:192, no. 2136.
- C. Proto-Indo-European **k^{wh}el-/k^{wh}ol-/k^{wh}l-* ‘to revolve, to go around, to roll’: Greek πέλω, πέλωμαι ‘to be’ (originally ‘to be in motion’), πόλος ‘pivot, hinge, axis’, πολέω ‘to revolve’, πολεῖν ‘to turn up the earth with a plow’; Latin *colō* ‘to cultivate, to till, to tend; to dwell (in a place), to inhabit’; Albanian *sjell* ‘to turn’; Tocharian B *klutk-* ‘to turn’, *klautk-* ‘to turn, to become’. Rix 1998a:345—347 **k^uelh₁-* ‘to twist, to turn, to turn round’; Pokorny 1959:639—640 **k^uel-*, **k^uelə-* ‘to turn’; Walde 1927—1932.I:514—516 **q^uel-*; Mann 1984—1987:1023 **q^uēl-*, 1923 **q^uel-ēnom* ‘turning, bend, knee’, 1023 **q^uelətrom* (**q^ueləstr-*) ‘turn, change, exchange, requital’, 1023—1024 **q^uelmn-* ‘turn, roll; roller, cylinder’,

1024 **quel̥t-* (**quel̥nd-*) ‘entourage, family circle; turning, environment’, 1024 **quelō* ‘to turn, to move, to go’, 1024 **quelos*, -*es-* ‘turn, turning’, 1024—1025 **quelpō* ‘to bend, to curve’, 1036 **qulēm̥n-*, **qulēn-*, 1036—1037 **qul-* (**qulos*, -*ā*; **qul̥n-*), 1037 **qul̥pos*, -*ā* ‘bend, turn, twist’, 1041 **quolejō* ‘to turn’, 1042 **quolesi-*, 1042 **quolesno-* ‘turning-point’, 1042 **quoleu-*, **quoley-*, 1042 **quolis* ‘turning’, 1042 **quolmn-* ‘turned; turning; turn, bend, twist; pole, post, trunk, column’, 1042—1043 **quolos*, -*es-* ‘turning, turn, wheel, axis, center, community’, 1043 **quolpos* ‘hollow, bend, vault, arch’, 1043 **quolt-* (**quelt-*, **quol̥t-*) ‘turn, bend, curve’; Gamkrelidze—Ivanov 1984.I:220 **k^hel-* and 1995.I:190, I:225, I:622 **k^hel-* ‘to rotate, to move’; Mallory—Adams 1997:606—607 **k^wel-* ‘to turn’; Watkins 1985:33 **k^wel-* and 2000:45 **k^wel-* (also **k^wel̥-*) ‘to revolve, to move around, to sojourn, to dwell’; Boisacq 1950:764 **q^uel-*; Beekes 2010.II:1168—1169 **k^wlh₁-*; Frisk 1970—1973.II:500—501 **q^uelō*, **q^uolejō*; Chantraine 1968—1980.II:877—878 **k^welō*; Hofmann 1966:260—261 **q^uelō*; Walde—Hofmann 1965—1972.I:245—247 **q^uel-*; Ernout—Meillet 1979:132—133; De Vaan 2008:125; Orël 1998:397; Adams 1999:225—226; Van Windekens 1976—1982.I:267.

- D. Proto-Altaic **k^hulo-* ‘to roll, to turn’: Proto-Tungus **χul-*, **χol-* ‘(vb.) to dance; to climb down, to climb out; to walk around, to turn around; (n.) bend (in a river)’ > Evenki *olo-nmū-* ‘to dance’, *uli-sin* ‘bend (in a river)’; Lamut / Even *ul̥ina* ‘bend (in a river)’; Ulch *χōl̥i-* ‘to walk around, to turn around’, *χolon-o-* ‘to climb down, to climb out (from a vehicle or boat)’; Negidal *ol̥i-sin-* ‘to walk around, to turn around’; Oroch *χulon-* ‘to climb down, to climb out (from a vehicle or boat)’, *χōl̥i-* ‘to walk around, to turn around’; Nanay / Gold *χulun-* ‘to climb down, to climb out (from a vehicle or boat)’, *χōl̥i-* ‘to walk around, to turn around’; Oroch *χolon-o-* ‘to climb down, to climb out (from a vehicle or boat)’ (Orok loan), *uli-* ‘to walk around, to walk about’; Udihe *χoli-* ‘to walk around, to turn around’ (Nanay loan). Proto-Mongolian **kol-ki-* ‘to be restless, to go round and round’ > Written Mongolian *qolkida-* ‘to move loosely, to move to and fro’; Khalkha *χol̥xi-* ‘to be restless, to go round and round’, *χol̥xi* ‘loose, loosened’; Buriat *χol̥xi* ‘shaky, wobbly’; Kalmyk *χol̥gəḍə-* ‘to be restless, to go round and round’; Ordos *gol̥xido-* ‘to be restless, to go round and round’. Proto-Turkic **Kol-* ‘(vb.) to roll (down), to fall; (adj.) round’ > Uzbek *qulā-* ‘to roll (down), to fall’; Uighur *qula-*, *γula-* ‘to roll (down), to fall’; Bashkir *qola-* ‘to roll (down), to fall’; Kirghiz *qula-* ‘to roll (down), to fall’; Kazakh *qula-* ‘to roll (down), to fall’; Oyrot (Mountain Altai) *qula-* ‘to roll (down), to fall’; Salar *gulilūχ* ‘round’. Starostin—Dybo—Mudrak 2003:850 **k^hulo* ‘to roll, to turn’.

Buck 1949:9.14 bend (vb. tr.); 10.12 turn (vb.); 10.13 turn around; 10.15 roll (vb.). Bomhard—Kerns 1994:471—473, no. 317.

527. Proto-Nostratic (n.) **k^{wh}al-a* ‘that which turns, rolls, revolves, or goes round and round’ (> ‘wheel’ in the daughter languages):
 Derivative of:
 (vb.) **k^{wh}al-* ‘to revolve, to go around, to roll’;
 (n.) **k^{wh}al-a* ‘circle, circuit’
- A. Afrasian: Semitic: Tigre *ʔankəlolo*, *ʕankəlolo* ‘hoop, wheel’. Littmann—Höfner 1962:473.
- B. Dravidian: Tamil *kāl* ‘wheel, cart’; Kannaḍa *gāli* ‘wheel’; Tuḷu *gāli* ‘wheel’; Telugu *kalu* ‘a carriage wheel’, *gānu*, *gālu* ‘wheel’. Burrow—Emeneau 1984:138, no. 1483.
- C. Proto-Indo-European **k^{wh}elo-*, **k^{wh}olo-*, (reduplicated) **k^{wh}e-k^{wh}lo-*, **k^{wh}o-k^{wh}lo-* ‘wheel’: Sanskrit *cakrá-ḥ* ‘wheel’; Pāli *cakka-* ‘wheel’; Hindi *cāk* ‘any kind of wheel, millstone’; Avestan *caxra-* ‘wheel’; Greek κύκλος ‘a ring, circle; round; a wheel’, (adv.) κύκλῳ ‘in a circle or ring, round about’; Latin *colus* ‘spinning wheel’; Old Icelandic *hvel* ‘wheel’, *hjól*, *hvél* ‘wheel’; Faroese *hjól* ‘wheel’; Norwegian *hjul* ‘wheel’; Swedish *hjul* ‘wheel’; Danish *hjul* ‘wheel’; Old English *hwēol* ‘wheel’; Middle Low German *wēl* ‘wheel’; Dutch *wiel* ‘wheel’; Tocharian A *kukäl*, B *kokale* ‘cart, wagon, chariot’; Old Church Slavonic *kolo* ‘wheel’; Russian *kolesó* [колесо] ‘wheel’; Czech *kolo* ‘wheel’; Serbo-Croatian *kōlo* ‘wheel, circle’. Pokorny 1959:640 **k^uek^ulo-*, **k^uok^ulo-* (?) ‘wheel’; Walde 1927—1932.I: 514—516 **q^uelo-s*, **q^uolo-s*, **q^ue-q^ulo-s* ‘wheel’; Mann 1957:40 **q^uelos* and 1984—1987:1027 **q^uequolos* (**q^uequalos*, **q^uqułos*, -ā, -om) ‘turning, wheel, rim’; Watkins 1985:33 **k^w(e)-k^wl-o-* ‘circle’ and 2000:45 **k^w(e)-k^wl-o-* ‘wheel, circle’; Mallory—Adams 1997:640 **k^wek^wlóm* ‘wheel’; Gamkrelidze—Ivanov 1984.I:220, II:718 **k^[h]°ek^[h]°lo-* and 1995.I:190, I:622 **k^h°ek^h°lo-* ‘circle, wheel, wheeled carriage/cart’; Chantraine 1968—1980.I:597 **k^we-k^wl-o-*, **k^welo-m*; Boisacq 1950:531 **q^ueq^ulo-s*; Frisk 1970—1973.II:44—45 **q^ue-q^ulo-*, **q^uo-q^ulo-*, **q^uélo-m*; Hofmann 1966:164—165 **q^ue-q^ulos*, **q^uel-*; Beekes 2010.I:798—799 **k^we-k^wl-o-*; De Vaan 2008:125 and 127; Ernout—Meillet 1979:134—135; Walde—Hofmann 1965—1972.I:250 **q^uolos*, **q^uelos*; Orël 2003:199—200 Proto-Germanic **xweǵwlan* ~ **xwexwlan*; Kroonen 2013:264—265 Proto-Germanic **hwehla-* ~ **hweula-* ‘wheel’; De Vries 1977:232—233 and 270 **k^uel-*; Falk—Torp 1903—1906.I:294—295; Torp 1919:217; Klein 1971:825 **q^we-q^wlos*; Onions 1966:1001 **q^weq^wlo-*; Mayrhofer 1956—1980.I:366; Van Windekens 1976—1982.I:239—240 **q^ueq^ulo-*; Adams 1999:200 **k^wek^wló-*; Derksen 2008:229—230.

Buck 1949:10.76 wheel.

528. Proto-Nostratic root *k^{wh}al- (~ *k^{wh}əl-):

(vb.) *k^{wh}al- ‘to end, to come to an end; to bring to an end, to complete, to finish’;

(n.) *k^{wh}al-a ‘end, finish, completion, fulfillment’

- A. Proto-Afrasian (?) *k^wal- ‘to end, to bring to an end, to complete, to finish’, (?) *k^wal- ~ *k^wul- ‘all, whole, entire’: Proto-Semitic *kal- (*kal-al-, *kal-ay-) ‘to end, to bring to an end; to complete, to finish’, *kull- ‘all, whole, entire’ > Akkadian *kalu*, *kulu* ‘whole, entirety, all’, *kullatu* ‘all, totality’, *kalū* ‘to finish, to bring to an end, to stop’, *kalama* ‘all, everything’, *kališ* ‘everywhere, anywhere’; Hebrew *kālāh* [כָּלָה] ‘to come to an end; to be complete, at an end, finished, accomplished’, *kālāl* [כָּלַל] ‘to complete, to perfect’, *kōl* [כֹּל] ‘(n.) the whole, totality; (adj.); all whole’; Phoenician *kly* ‘to end, to be complete’, *kl* ‘all’; Aramaic *kullā* ‘totality, the whole, all’; Ugaritic *kl* ‘every, all’, **kly*: (reciprocal/passive) *nkly* ‘to be spent’, (factitive active) *ykly*, *tkly*, *tkl* ‘to finish with, to annihilate’, *klkl* ‘everything’, *kll* ‘whole’; Mandaic *kul* ‘all’; Arabic *kull* ‘whole, entire, all’; Sabaean *kll* ‘to bring to completion’, *kll* ‘all, every, all of, the whole (of)’; Šheri / Jibbāli *kell* ‘to be fed up, bored’, *kə(h)l*, *kəl*-, *kal*- ‘all’; Harsūsi *kal*, *kāl*, *kall* ‘all’; Soqotri *kal*, *kol* ‘all’; Mehri *kāl*, *kali*- ‘all’; Geez / Ethiopic *kʷall*- [ኩል-] ‘all, whole, every’, *kʷallo* [ኩሉ] ‘altogether, completely’, *kʷallu* [ኩሉ] ‘everything, everybody, anything, all’; Tigrinya *kʷall-u* ‘all’; Tigre *kəl* ‘all’; Gurage *kull-əm* ‘all, whole, every, everything’; Amharic *hullu* ‘all, every, everybody’; Harari *kullu* ‘all’; Gafat *əl-əm* ‘all’. Murtonen 1989:231; Klein 1987:276, 277, and 278; Leslau 1963:92, 1979:341—342, and 1987:281; Militarev 2010:46 Proto-Semitic **kʷall-u*, Proto-Afrasian **kʷal*- ‘all, each, much’; Zammit 2002: 358. (?) Egyptian *tnw*, *trw* (**tlw*) ‘each, every’ (distinct from *tnw* ‘number; counting, numbering’ [cf. Vycichl 1983:175]). Hannig 1995:956; Erman—Grapow 1921:209 and 1926—1963.5:377—379; Faulkner 1962:305; Gardiner 1957:601. (?) Berber: Kabyle *akkʷ* ‘all’; Tamazight *akkʷ* ‘all’; Ghadames *ikk*, *akk* ‘each’; Wargla *akk* ‘everything, entirety’; Nefusa *ak* ‘each’; Mzab *acc* ‘each, all’; Tuareg *ak* ‘each’; Chaouia *akk* ‘each’. South Omotic: Dime *kull* ‘all’. Ehret 1995:197, no. 317, **kal*/**kul*- ‘all’.
- B. Proto-Indo-European **kʷhel*-/**kʷhol*-/**kʷhl*- ‘to bring to an end’: Greek τέλος (< **kʷhelo*-s) ‘the fulfillment or completion of anything, that is, its consummation, issue, result, end; the end (of life), death’, τέλειος ‘having reached its end, finished, complete; (of animals) full-grown, (of persons) absolute, complete, accomplished, perfect’, τελέω ‘to complete, to fulfill, to accomplish’, τελέως ‘at last’, τελήεις ‘perfect, complete’, τελευταῖος ‘last’, τελευτάω ‘to complete, to finish, to accomplish’, τελευτή ‘finishing, completion, accomplishment; a termination, end; the end, extremity (of anything)’; Luwian *ku(wa)lana*- ‘course, (life)time’, (1st sg. pres. act.) *ku-la-ni-wi* ‘to bring to an end’. Pokorny 1959:640 **kʷel*- ‘swarm, crowd’;

Walde 1927—1932.I:517 **q^uel-*; Chantraine (1968—1980.II:1101—1103), Beekes (2010.II:1463—1464), and Lejeune (1972:29, fn. 36-1) argue against deriving the Greek forms from **k^whel-*, but cf. Boisacq 1950:952, Hofmann 1966:358, Rix 1992:88 (Greek τέλος < **k^uel^hos*), and Frisk 1970—1973.II:871—873 (Greek τέλος < **q^uel-*); Puhvel 1984— .4:237—238 Luwian *ku(wa)lana-* < **k^wélono-*.

- C. Uralic: Proto-Finno-Ugrian **kul³-* ‘to come to an end, to be worn (away), to pass (by)’ > Finnish *kulu-a* ‘to be worn, to wear (away), to pass, to go by, to elapse, to be used up’, *kulu-ttaa* ‘to consume, to use, to spend’, *kulutua* ‘after, later’, *kulunut* ‘worn, shabby’, *kulutus* ‘consumption, use’; Estonian *kuluma* ‘to be spent, expended; to wear out; to be worn out’, *kulu* ‘cost, expenditure’, *kulunud* ‘worn out’; Lapp / Saami *gollâ-/golâ-* ‘to go, to pass, to pass by (of time), to decrease, to become exhausted through being used, to get used up’; Zyrian / Komi *gylal-* ‘to fall off or out or disperse (intr.) little by little (of leaves, hair, etc.)’; Vogul / Mansi *hol-* ‘to be worn, to disappear, to pass away’; Ostyak / Xanty *kõl-* ‘to come to an end, to pass away’. Collinder 1955:92 and 1977:108; Rédei 1986—1988:199—200 **kul³-*; Sammallahti 1988:544 **kuli-* ‘to wear’.

Buck 1949:13.13 whole; 14.26 end (sb., temporal); 14.27 finish (vb.). Bomhard—Kerns 1994:470—471, no. 315; Hakola 2000:80, no. 329.

529. Proto-Nostratic (Eurasianic only) (adv.) (?) **k^whal-* ‘far off, far away, distant’:

- A. Proto-Indo-European **k^whel-* ‘far off, far away, distant’: Sanskrit *caramá-h* ‘outermost, last, ultimate, final’, *cirá-h* ‘long, lasting a long time’; Greek τῆλε, τηλοῦ ‘far off, far away’; Welsh *pell* ‘far’, *pell-af* ‘farthest’. Pokorny 1959:640 **k^uel-* ‘far’; Walde 1927—1932.I:517 **q^uel-*; Mann 1984—1987:1023 **q^uēle-* ‘far’; Watkins 1985:33 **k^wel-* and 2000:45 **k^wel-* ‘far’; Mayrhofer 1956—1980.I:377 and I:390 **q^wel-* ‘far’; Chantraine 1968—1980.II:851 and II:1113—1114 **k^wel-*; Boisacq 1950:740 and 966 **q^uēl-*; Hofmann 1966:250 and 364; Frisk 1970—1973.II:465 **q^uel-* and II:891—892 **q^uēl-*; Beekes 2010.II:1477—1478 **k^wel-*; Falileyev 2000:128—129 **k^uel-s-o-*, **k^uel-*.
- B. Proto-Altaic **k^hiolo* (~ *k-*; *-ly-*, *-ju-*) ‘far off, distant’: Proto-Mongolian **kolo* ‘far off, distant’ > Written Mongolian *qola* ‘far, distant, remote’; Dagur *χolo*, *χol* ‘far’; Khalkha *χol* ‘far, distant’; Buriat *χolo* ‘far, distant’; Kalmyk *χolə* ‘far off, far away, distant’; Ordos *χolo* ‘far’; Monguor *χulo* ‘far’; Moghol *qolō* ‘far’. Poppe 1955:29, 53, 88, and 131. Poppe 1960:18 and 98; Street 1974:17 **kola* ‘far, distant’; Starostin—Dybo—Mudrak 2003:695—696 **k^hiolo* (~ *k^c-*; *-l̥-*, *-ju-*) ‘long, far’.

Buck 1949:12.44 far (adv.). Koskinen 1980:19, no. 15; Bomhard—Kerns 1994:471, no. 316.

530. Proto-Nostratic (n.) *k^{wh}al-a ‘a large fish’:

Note: The Indo-European evidence requires the reconstruction of a Proto-Nostratic initial labiovelar */k^{wh}-/.

- A. Proto-Afrasian *k^wal-, *k^(w)ul- ‘a large fish’: Semitic: Mehri *kell* ‘whale’; Šheri / Jibbāli *kāl* ‘whale’. Lowland East Cushitic **kullum*- ‘fish’ > Somali *kalluun* ‘fish’; Bayso *kunnum-i* ‘fish’ (assimilation). Bender 2020:38, no. 45. Saho-Afar **kullum*- ‘fish’ > Afar *kullum*, *kulluum* ‘fish’. West Chadic **kulum*- ‘fish’ > Hausa *kulmaa* ‘fish’. Skinner 1996:151. Orël—Stolbova 1995:326, no. 1494, **kulum*- ‘fish’.

Militarëv—Nikolaev (2021:256) reconstruct Proto-Afrasian **kal*- and **kalul*- (redupl.) ‘kind of large fish’ on the basis of the following evidence: Semitic **kalul*- (redupl.) > Akkadian *kulīl*-, *kulull*- ‘a fabulous creature, part man and part fish’; Mehri *kell*; Jibbāli *kāl* ‘whale’. Chadic **kVl*:- West Chadic **kul-m*- > Hausa *kulm-a/e/i* ‘the name of a large fish’. Central Chadic **kalik*- (redupl.) > Bura *kalik-o*, *kalikil-a* ‘a kind of fish’. East Cushitic **kallu-m* ‘fish’: Saho-Afar **kullu-m* > Afar *kullu(u)m*. Lowland East Cushitic **kallu-m*- > Somali *kalluum* (pl. *kalluum-o*); Bayso *kunnum-i* (assim.).

Comment: Akkadian *kulīlu*, *kulullu* ‘a fabulous creature, part man and part fish’ is a Sumerian loanword (cf. *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*, vol. 8, K, pp. 526—527).

- B. Dravidian: Tuḷu *kalkorē* ‘a kind of fish’; Kuṛux *xalxō* ‘a kind of fish’. Burrow—Emeneau 1984:123, no. 1314.
- C. Proto-Indo-European *k^{wh}alo- ‘large fish’: Avestan *kara*- ‘a mythological fish’; (?) Latin *squalus* ‘a kind of fish’; Old Icelandic *hvalr* ‘whale’; Faroese *hvalur* ‘whale’; Swedish *val* ‘whale’; Danish *hval* ‘whale’; Old English *hwæl* ‘whale’; Old Saxon *hwal* ‘whale’; Dutch *walvis* ‘whale’; Old High German (*h*)*wal*, *walfisc* (rare) ‘whale’ (New High German *Wal*, *Walfisch*); Old Prussian *kalis* ‘shad’. Pokorny 1959:635 **k^ualos* and 958 **(s)k^ualos* ‘a rather large kind of fish’; Walde 1927—1932.II:541 **(s)q^ualos*; Mann 1984—1987:1018 **q^ualos*, -is ‘sea-monster’; Watkins 1985:61 **(s)k^walo*- and 2000:79 **(s)k^walo*- ‘big fish’; Mallory—Adams 1997:510 **(s)k^wálos* ‘sheatfish’; Ernout—Meillet 1979:645; Walde—Hofmann 1965—1972.II:581—582; De Vaan 2008:584; Orël 2003:197 Proto-Germanic **xwalaz* (partly **xwaliz*); Kroonen 2013:262 Proto-Germanic **hwali*- ‘whale’; De Vries 1977:268—269; Falk—Torp 1903—1906.I:311; Vercoullie 1898:318; Onions 1966:1000—1001 Common Germanic **χwalis*; Klein 1971:825; Kluge—Mitzka 1967:834; Kluge—Seebold 1989:774.

- D. Proto-Uralic **kala* ‘fish’: Finnish *kala* ‘fish’; Lapp / Saami *guolle/guole-* ‘fish’; Mordvin *kal* ‘fish’; Cheremis / Mari *kol* ‘fish’; Vogul / Mansi *kul*, *huul* ‘fish’; Ostyak / Xanty *kul* ‘fish’; Hungarian *hal* ‘fish’; Yurak Samoyed / Nenets *haale* ‘fish’; Tavgi Samoyed / Nganasan *kole* ‘fish’; Selkup Samoyed *qəəly* ‘fish’; Kamassian *kola* ‘fish’. Joki 1973:266 **kala*; Collinder 1955:21, 1965:138, and 1977:42; Rédei 1986—1988:119 **kala*; Décsy 1990:99 **kala* ‘fish’; Sammallahti 1988:538 **kālā* ‘fish’; Janhunen 1977b:59 **kālā*; Zhivlov 2023:159 **kala* ‘fish’. (?) Yukaghir (Northern / Tundra) *qal-dawe* ‘(tree) bark, fish scales’. Nikolaeva 2006:375.
- E. Proto-Altaic **khula* ‘a kind of big fish’: Proto-Tungus **χol-sa* ‘fish; boiled fish’ > Evenki *ollo* ‘fish’; Lamut / Even *olr̥* ‘fish’; Negidal *olo* ‘fish’; Ulch *χolto(n)* ‘boiled fish’; Orok *χolto* ‘boiled fish’; Nanay / Gold *χolto* ‘boiled fish’; Oroch *okto* ‘boiled fish’; Udihe *oloho* ‘boiled fish’. Proto-Mongolian **kalimu* ‘whale’ > Written Mongolian *qalimu* ‘whale’; Khalkha *χalim* ‘whale’; Buriat *χalim* ‘whale’; Kalmyk *χalim* ‘whale’. Starostin—Dybo—Mudrak 2003:848 **k’ula* ‘a kind of big fish’.
- F. Chukchi-Kamchatkan: Proto-Chukotian **kalal(e)* ‘humpback salmon’ > Chukchi *kalal* ‘humpback salmon’; Kerek *ka(a)lal* ‘humpback salmon’; Koryak *kalal(e)* ‘humpback salmon’. Note also Kamchadal / Itelmen *kajluzic* ‘a kind of salmon’. Fortescue 2005:126—127.

Buck 1949:3.65 fish. Illič-Svityč 1971—1984.I:288—289, no. 155, **kala* ‘fish’; Bomhard—Kerns 1994:483—484, no. 330; Hakola 2000:49, no. 172.

531. Proto-Nostratic (n.) **k^whal-a* ‘dog’

Extended form:

(n.) **k^whal-p’-a* ‘dog’

- A. Proto-Afrasian **k^wal-* ‘wolf, dog’: Proto-Semitic **kal-b-* ‘dog’ > Akkadian *kalbu* ‘dog’; Ugaritic *klb* ‘dog’, (f.) *klbt* ‘bitch’; Phoenician *klb* ‘dog’; Hebrew *keleḇ* [כֶּלֶב] ‘dog’; Aramaic *kalbā* ‘dog’; Mandaic *kalba* ‘dog’; Arabic *kalb* ‘dog’; Šheri / Jibbāli *kəb* (dim. *kéléb*) ‘wolf, dog’; Soqotri *kalb* ‘dog’; Harsūsi *kawb* ‘wolf, dog’; Mehri *kawb* ‘wolf, dog’; Geez / Ethiopic *kalb* [ክልብ] ‘dog’; Tigre *kälb* ‘dog’; Tigrinya *kalbi* ‘dog’. Note: Proto-Semitic **-b-* < **-p’-*. Klein 1987:276; Murtonen 1989:232; Leslau 1987:282; Militarev—Kogan 2005.II:156—158, no. 115, Proto-Semitic **kalb-* ‘dog’ (not in Militarev—Nikolaev 2021) — according to Militarev—Kogan, the **-b-* in the Semitic proto-form is a suffix. They reconstruct Proto-Afrasian **k^wl-* ‘wolf, dog’. Proto-Cushitic **ta-k^wl-* ‘wolf’ > North Cushitic: Beja / Beḏawye *ták^wla* ‘wolf’. Central Cushitic: Bilin *täg^wla*, *təγ^wla* ‘wolf’; Qwara *tax^wəla* ‘wolf’; Kemant *takwila* ‘wolf’. East Cushitic: Saho *takla*, *taxla* ‘wolf’. Berber: Ayer *ä-kūlen* ‘wolf’. Blažek 2003b:273.

- B. Proto-Indo-European *k^{whelp}- ‘whelp, puppy’ (Germanic only): Proto-Germanic *χwelpaz ‘whelp, puppy’ > Old Icelandic *hvelpr* ‘whelp, puppy’; Faroese *hvølpur* ‘puppy’; Norwegian *kvelp*, *valp* ‘puppy’; Swedish *valp* ‘whelp, cub, puppy, pup’; Danish *hvalp* ‘puppy’; Old English *hwelp* ‘whelp, cub’; Old Saxon *hwelp* ‘whelp, puppy’; Dutch *welp* ‘whelp, cub’; Old High German *welf*, *welpf* ‘whelp, puppy’ (New High German *Welf*, *Welp*). Orël 2003:200 *χwelpaz — “The Germanic form appears to reflect a consonantly shifted *k^{uelb}-”; De Vries 1977:271; Falk—Torp 1910—1911.I:437; Torp 1919:345 Germanic *hwelpa-; Onions 1966:1001 — “a CGerm. word (exc. in Gothic) of which no cogns. are known”; Klein 1971:826; Kluge—Mitzka 1967:850—851; Kluge—Seebold 1989:786.
- C. (?) Proto-Yukaghir *kulempəj ‘black polar fox’ [*Felis arcticus*]: Tundra (Northern) Yukaghir *kulebej*, *kulubej* ‘black polar fox’. Nikolaeva 2006:226.

Buck 1949:3.61 dog; 3.612 puppy. Bomhard—Kerns 1994:474, no. 319 (not in subsequent iterations. However, in view of the new evidence from Afrasian pointing to an initial labiovelar /*k^w-/ in the Afrasian proto-form /*k^wal-/, I have reinstated this etymology.)

532. Proto-Nostratic root *k^{whar}- (~ *k^{whər}-):

(vb.) *k^{whar}- ‘to cut’;

(n.) *k^{whar}-a ‘piece cut off; knife’

Derivatives:

(vb.) *k^{whar}- ‘to cut a groove, to hollow out, to dig’;

(n.) *k^{whar}-a ‘cut, hole, hollow, digging, excavation, pit, groove, trench’

(vb.) *k^{whar}- ‘to cut short, to reduce, to decrease, to diminish, to lessen’;

(n.) *k^{whar}-a ‘shortness’; (adj.) ‘short’

- A. Proto-Afrasian (?) *k^war- ~ *k^wur- ‘to cut’: East Chadic *kur- ‘knife’ > Somray *kura* ‘knife’. West Chadic: Ngizim *kàrmú* ‘to chop, to cut down, to chop off’. Proto-Southern Cushitic *kur- ‘to mince’ > K’wadza *kulunso* ‘mortar’; Dahalo *kur-* ‘to mince’. Ehret 1980:247. Ehret 1995:200, no. 330, *kur-/ *kar- ‘to cut up’; Orël—Stolbova 1995:328, no. 1503, *kur- ‘knife’.
- B. Dravidian: Tamil *kurai* ‘(vb.) to cut, to reap; (n.) piece, section’, *kurū* (*kuruv-*, *kurr-*) ‘to pluck’; Malayalam *kurekka* ‘to cut off’; Kodagu *korv-* (*kort-*) ‘to make a fallen branch into a club’; Toda *kwarf-* (*kward-*) ‘to cut’; Kannada *kore*, *kori* ‘to cut, to break through, to bore, to pierce’, *kori* ‘a large branch cut off from a thorn-bush’, *kore* ‘cutting, cut-off piece’, *koreyuvike* ‘cutting, etc.’, *korēta*, *korata* ‘act of cutting, etc.; the piercing of cold’, *korcu*, *koccu* ‘to cut away, to cut up, to cut to pieces’; Tuḷu *kudupuni* ‘to cut, to reap’, *kudē* ‘a piece of wood’, *kujimbu*, *kujumbu* ‘a chip, fragment’; Telugu *kōra* ‘a cut-off portion’; Kui *krāpa* (*krāt-*) ‘(vb.) to cut, to saw; (n.) the act of sawing’. Burrow—Emeneau 1984:169—170, no.

1859. Tamil *kūru* ‘section, division, part, share’; Telugu *kōru* ‘a share, the king’s or government’s portion’; Malayalam *kūru*, *kūr* ‘part, share, division of time, party, partnership’, *kūrrān* ‘partner’; Kota *ku-r* (obl. *ku-t*) ‘share’; Toda *ku-ɽ* ‘share, share inherited from father’; Kannaḍa *kōru* ‘part, portion, share in cultivation’. Burrow—Emeneau 1984:174—175, no. 1924.

- C. Proto-Indo-European **k^{wh}er-/k^{wh}or-/k^{wh}ɹ-* ‘to cut’: Hittite (3rd sg. pres. act.) *ku-e-ir-zi* ‘to cut, to cut up, to cut off’, (3rd pl. pres. act.) *ku-ra-an-zi*, (instr. sg.) *ku-ru-uz-zi-it* ‘cutter’, (1st sg. pret. act.) *ku-e-ir-šu-un* ‘to cut (off)’, (acc. sg.) *ku-ra-an-na-an* ‘section, area’, (nom. sg.) *ku-e-ra-aš*, *ku-ra-aš* ‘field, parcel, territory, (land) area, precinct, subdivision’; Luwian (3rd sg. pres. act.) *ku-wa-ar-ti* ‘to cut’ (?), *kursawar* ‘cut (off)’; Hieroglyphic Luwian *kura/i-* ‘to cut’; Welsh *pryd* (< **k^{wh}ɹ-thu-*) ‘time’; Oscan *-pert* in *petiro-pert* ‘four times’; Sanskrit *-kṛt* ‘...time(s)’ in *sa-kṛt* ‘once’. Rix 1998a:350—351 **k^wer-* ‘to cut, to carve’; Mann 1984—1987:1027 **quer-* ‘to cut, to detach, to strip, to scrape’; Mallory—Adams 1997:144 **k^wer-* ‘to cut’; Bomhard 1984:114; Kronasser 1956:65, §81; Puhvel 1984— .4:212—218; Kloekhorst 2008b:486—487 **k^wer-/k^wr-*. Note: Forms meaning ‘to do, to make’ are often included here, but a more plausible derivation is from Proto-Nostratic **k^{wh}ir-* (~ **k^{wh}er-*) ‘to twist or twine together, to tie together, to bind, to fasten’ (see below).
- D. Proto-Uralic **kur₃* ‘knife’: Finnish *kuras/kurakse-* ‘club, saber, broadsword, knife’; Vote *kuras* ‘knife’; Estonian *kuurask* ‘knife’; Lapp / Saami (Southern) *korr* ‘small knife, common knife’; Forest Yurak Samoyed / Forest Nenets *kar* ‘knife, dagger’; Yenisei Samoyed / Enets *kooru* ‘knife’; Motor *kuro* ‘knife’. Collinder 1955:29 and 1977:48; Rédei 1986—1988:218—219 **kur₃*; Décsy 1990:101 **kura* ‘knife’; Sammallahti 1988:537 **kurå* ‘knife’; Janhunen 1977b:54 **kârâ*.

Sumerian *kur₅* ‘to cut, to cut off, to cut through, to separate, to divide’.

Buck 1949:15.78 sharp. Bomhard—Kerns 1994:481—482, no. 328; Hakola 2000:83, no. 344.

533. Proto-Nostratic root **k^{wh}ar-* (~ **k^{wh}ar-*):

- (vb.) **k^{wh}ar-* ‘to cut a groove, to hollow out, to dig’;
 (n.) **k^{wh}ar-a* ‘cut, hole, hollow, digging, excavation, pit, groove, trench’
 Derivative of:
 (vb.) **k^{wh}ar-* ‘to cut’;
 (n.) **k^{wh}ar-a* ‘piece cut off; knife’

- A. Proto-Afrasian (?) **k^war-* ~ **k^wur-* ‘to cut a groove, to hollow out, to dig’: Proto-Semitic **kar-aw/y-* ‘to dig’ > Hebrew *kārāh* [כָּרַח] ‘to dig (a well)’; Aramaic *kārā* ‘to dig’; Punic *kr?* ‘to dig’; Ugaritic *kry* ‘to dig’; Mandaic *kra* ‘to dig’; Arabic *karā* ‘to dig, to dig out earth, to dig a canal’; Geez /

Ethiopic *karaya* [ከረየ] ‘to dig (a well, in the ground), to make cuts or incisions, to make holes, to excavate’, *makrit* [መከረት] ‘shovel, spade’, *makrəy* [መከረይ] ‘instrument for digging, pickaxe, spade’, *kəryat* [ከርየት] ‘digging, excavation, hole, pit’; Tigre *kāra* ‘to cut off (by digging)’; Gurage (Selti) *kāre* ‘to dig a hole’; Harari *xara* ‘to dig a hole’, *māxra* ‘pick’; Amharic *kāräyyä* ‘to dig, to till the earth’. Murtonen 1989:239; Klein 1987:285; Leslau 1963:97, 1979:347, and 1987:294—295; Jean—Hoftijzer 1965:127. Egyptian *ḳr* name of the Earth-god; Coptic *črē* [Ⲫⲣⲏ] ‘to dig’ (Černý considers this to be a loan from Semitic). Hannig 1995:16; Faulkner 1962:6; Gardiner 1957:550; Erman—Grapow 1921:4 and 1926—1963.1:22; Vycichl 1983:346; Černý 1976:335. Berber: Ghadames *krəz*, *crəz* ‘to sow, to cultivate, to till’; Nefusa *əkrəz* ‘to plow, to be plowed’, *tagursa* ‘plowshare’; Chaouia *tigərsiwin* ‘plowshare’; Kabyle *əkrəz* ‘to plow’. Proto-Southern Cushitic **kur-* or **kuur-* ‘to cultivate’ > Iraqw *kurumo* ‘hoe’; Alagwa *kurumo* ‘hoe’; Asa *kurim-* ‘to cultivate’; Ma’a *kúru* ‘to cultivate’, *ukurumé* ‘cultivation’, *mkurumé* ‘cultivator, farmer’. Ehret 1980:247. Ehret 1995:200, no. 329, **kur-* ‘to dig out’.

- B. (?) Dravidian: Kannāḍa *gūṛu* ‘to turn or uproot the earth with horns or tusks’. Burrow—Emeneau 1984:174, no. 1922.
- C. Proto-Indo-European **k^{wh}er-*/**k^{wh}or-*/**k^{wh}r-* ‘(vb.) to draw or make furrows, to plow; (n.) furrow’: Sanskrit *kārṣati*, *kṛṣāti* ‘to draw, to drag, to pull, to drag or tear away; to draw or make furrows, to plow’, *karṣū-ḥ* ‘furrow, trench’, *kṛṣi-ḥ* ‘plowing, cultivation of the soil, agriculture’; Avestan *karša-* ‘furrow’, *karšū-* ‘field’; Czech *čára* ‘line’, *čarati* ‘to draw a line’; Old Sorbian *čara* ‘furrow, line’. Walde 1927—1932.I:429 **qers-* ‘(vb.) to draw, to drag; (n.) furrow’; Mann 1984—1987:492 (**quers-*, **quors-* ‘to cut’); Mayrhofer 1956—1980.I:176, I:177, and I:263.
- D. Uralic: Proto-Finno-Ugrian **kur3-* (or **kara-*) ‘to dig, to plow’ > Mordvin *kara-* ‘to dig, to plow, to make an opening, to hollow out, to excavate’; Cheremis / Mari *kare-*, *kore-* ‘to flute, to channel (grooves); to furrow, to trace furrows’, *karem*, *korem* ‘hollow ravine, small stream’; Votyak / Udmurt *kyrem* ‘ditch, drain, conduit’; Zyrian / Komi *kyr-* ‘to dig up, to break up, to dig all around, to draw a ditch’, *kyrōm* ‘new riverbed dug out by water, point of a bank where water has broken through’. Collinder 1955:85 and 1977:102; Rédei 1986—1988:221—222 **kur3-* (or **kara-*). Proto-Finno-Ugrian **kurnʷa* ‘groove, furrow’ > Finnish *kuurna*, *kurna* ‘groove, furrow, trough, gutter’; Karelian *kuurna* ‘groove, furrow, trough, gutter’; Estonian *kurn* ‘strainer, sieve’; Cheremis / Mari *korno* ‘furrow, way, path’; Hungarian (dial.) *horny*, *horony* ‘furrow’, *hornyol-* ‘to cut a groove, to notch’. Collinder 1955:93 and 1977:109; Rédei 1986—1988:216 **kurnʷa*.

Buck 1949:8.21 plow; 8.212 furrow; 8.22 dig; 9.33 draw, pull; 12.84 line.
Bomhard—Kerns 1994:476—477, no. 322; Hakola 2000:87, no. 362.

534. Proto-Nostratic root **k^{wh}ar-* (~ **k^{wh}ar-*):(vb.) **k^{wh}ar-* ‘to cut short, to reduce, to decrease, to diminish, to lessen’;(n.) **k^{wh}ar-a* ‘shortness’; (adj.) ‘short’

Derivative of:

(vb.) **k^{wh}ar-* ‘to cut’;(n.) **k^{wh}ar-a* ‘piece cut off; knife’

- A. Proto-Afrasian (?) **k^war-* ~ **k^wur-* ‘to cut short, to shorten’: Semitic: Akkadian *karū* ‘to become short (said of time); to be short, shrunken (said of parts of the body); to be short (said of breath, temper)’, *kurrū* ‘to make shorter, to cut short, to cause hardship, to reduce in size or number’, *šukrū* ‘to cut short’, *kurrū* ‘short’, *kurū*, (f.) *kurītu* ‘short (in time or size); short person’; Šheri / Jibbāli *kérós* ‘to take up, to shorten (clothes)’, *kórtas* ‘(clothes) to be taken up, to be shortened’.
- B. Dravidian: Tamil *kurū* ‘short, dwarfish, defective’, *kurū* ‘to become short, to contract; to shrink’, *kurumai* ‘shortness, dwarfishness, defectiveness’, *kuruku* (*kuruki-*) ‘to grow short, stumpy, dwarfish; to shrink, to be reduced, to decrease’, *kurukkam* ‘shortness, abbreviation’, *kurukkal* ‘reduction, contraction’, *kurukku* (*kurukki-*) ‘to shorten, to reduce, to abbreviate’, *kurai* ‘lack, deficiency’, *kurai* (-v-, -nt-) ‘to diminish, to dwindle, to be reduced, to prove insufficient, to be defective, to droop in affliction, to languish from worries, to lose courage, to suffer defeat’, *kurai* (-pp-, -tt-) ‘to lessen, to shorten’; Malayalam *kurū* ‘short, little, brief’, *kurukkuka* ‘to shorten, to diminish, to boil down, to contract, to pull in’, *kuruppam* ‘shortness’, *kurayuka* ‘to dwindle, to sink in price; to be deficient, short, little’, *kuraccal* ‘want, scarcity’, *kuravu* ‘deficiency, disgrace’, *kurukka* ‘to diminish, to lower, to disgrace’, *kurāl* ‘shortness’, *kurālan* ‘dwarf’; Kota *kurg-* (*kurgy-*) ‘to become small, diminished’, *kur-* (*kurky-*) ‘to make small, to diminish’, *korv-* (*kord-*) ‘to be reduced in size or number, (voice) to become hoarse’; Toda *kurx-* (*kurxy-*) ‘to be short’, *kurk-* (*kurky-*) ‘to shorten’, *kwā-* (*kwāθ-*) ‘to be reduced in size or esteem’, *kwā-* ‘defective in physique, character, status’; Kannaḍa *kurū* ‘smallness’, *koṛe* ‘smallness, shortness, deficiency, defect, remainder’, *koṛe* ‘to grow little or less or short; to diminish’; Koḍagu *korate* ‘diminishing’, *koru*, *koravu* ‘defect, deficiency’; Tuḷu *kuru* ‘little, small’, *kora* ‘brief, short’, *korati*, *koratē* ‘defect, want, need’; Telugu *kurucca*, *kurū-* ‘short, dwarfish, small’, *kuradā* ‘deficiency’, *koṛa* ‘defect, want’, *koṛāta* ‘deficiency, want, incompleteness’, *krūyū* ‘to grow lean, to diminish, to droop, to sink’; Gondi *kurrā* ‘short of stature’; Konḍa *kurī* ‘short, shortness’; (?) Kui *krōpka-* (< **krōkp-*; *krōkt-*) ‘to lower, to reduce’, *krōpka* ‘reduction’. Burrow—Emeneau 1984:168—169, no. 1851; Krishnamurti 2003:192 Proto-South Dravidian **kuray* ‘to be reduced in size’.
- C. Proto-Altaic **k^horu-* (vb.) to diminish, to lessen; (adj.) short’: Proto-Tungus **χurumü-* ‘short’ > Evenki *urumkūn* ‘short’; Lamut / Even

urumkun ‘short’; Negidal *uyumkūn* ‘short’; Ulch *χurmi* ‘short’; Orok *χurdumi* ‘short’; Nanay / Gold *χurm’i* ‘short’; Oroch *ūmi* ‘short’; Solon *urūŋkū* ‘short’. Proto-Mongolian **koru-* ‘to diminish’ > Mongolian *qoru-* ‘to diminish, to decrease, to become depleted, to wane, to lessen, to die’, *qoruŋa-* ‘to diminish, to lessen, to decrease, to retrench, to abridge, to destroy, to annihilate, to assassinate’, *qoruŋdal* ‘decrease, reduction, diminution, loss’, *qorul* ‘decreasing, diminution, loss, harm’, *qorulta* ‘decrease, waning, diminution, lessening, depletion’, *qorumži* ‘diminution, loss, detriment’; Khalkha *χoro-* ‘to diminish’; Buriat *χoro-* ‘to diminish’; Kalmyk *χor-* ‘to diminish’; Ordos *χoro-* ‘to diminish’. Proto-Turkic **Kor(a)-* ‘(vb.) to diminish, to decrease; (n.) harm, loss’ > Old Turkic (Old Uighur) *qor* ‘harm, loss’, *qora-* ‘to diminish, to decrease’; Karakhanide Turkic *qora-* ‘to diminish, to decrease’, *qor* ‘harm, loss’; Kirghiz *qoro-* ‘to diminish, to decrease’; Oyrot (Mountain Altai) *qoro-* ‘to diminish, to decrease’, *qor* ‘harm, loss’; Tuva *χor* ‘harm, loss’; Chuvash *χor* ‘insult, offense, grief’; Yakut *qoron-* ‘to diminish, to decrease’, *qor* ‘harm, loss’. Starostin—Dybo—Mudrak 2003:843—844 **k’oru* ‘short; to diminish, to grow less’.

Buck 1949:12.59 short. Illič-Svityč 1971—1984.I:367—368, no. 244, **Kura* ‘short’; Bomhard—Kerns 1994:482—483, no. 329; Hakola 2000:83, no. 344.

535. Proto-Nostratic (n.) **k^{wh}ar-a* ‘vessel, pot’:

- A. Afrasian: Semitic: Akkadian *karpu*, *karpātu* ‘pot, vase, jug’; Ugaritic *krpn* ‘cup, goblet’.
- B. Dravidian: Gondi *karvi* ‘narrow-mouthed earthen vessel for oil or liquor’; Kodagu *karava* ‘clay pot with narrow neck’. Burrow—Emeneau 1984:118, no. 1273(a). Telugu *gurigi* ‘a very small earthen pot’; Gondi *kurvi* ‘earthen cooking pot’, *kurvī* ‘earthen jar’, *kurvī* ‘pitcher (black, for cooking)’; Kui *kui* ‘pot’. Burrow—Emeneau 1984:162, no. 1797; Krishnamurti 2003:8 **kur-Vwi* ‘small pot’.
- C. Proto-Indo-European **k^{wh}er-/k^{wh}or-* ‘vessel, pot’: Sanskrit *carú-h* ‘vessel, pot’; Old Icelandic *hverr* ‘kettle, cauldron’; Old English *hwer* ‘pot, bowl, kettle, cauldron’; Old High German (*h*)*wer* ‘cauldron’; Old Irish *co(i)re* ‘cauldron’; Middle Welsh *peir* ‘cauldron’. Pokorny 1959:642 **k^uer-* ‘dish’; Walde 1927—1932.I:518 **q^uer-*; Mann 1984—1987:1028 **quernā*, *-is* (**querān-*) ‘pot, shell, skull’, 1028 **queros*, *-is*, *-us* ‘pot, pan, vessel, cauldron’; Watkins 1985:34 **k^wer-* ‘something shaped like a dish or shell’; Mallory—Adams 1997:443 **k^werus* ‘large cooking pot, cauldron’; Mayrhofer 1956—1980.I:377; Orël 2003:200 Proto-Germanic **xweraz*; Kroonen 2013:265 Proto-Germanic **hwera-* ‘kettle’; De Vries 1977:272.

- D. Proto-Altaic **khure* ‘basket, vessel’: Proto-Tungus **χurid-* ‘a vessel for berries’ > Evenki *uridīk* ‘a vessel for berries’; Nanay / Gold *χordaxī* ‘a vessel for berries’. Proto-Turkic **Kūri-* ‘a measure of capacity; a kind of basket for vegetables’ > Old Turkic (Old Uighur) *kūri* ‘a measure of capacity, a peck (2½ bushels)’; Karakhanide Turkic *kūrin* ‘a kind of basket for vegetables’; Uighur *küre* ‘a measure of capacity’; Sary-Uighur *khōr* ‘a measure of capacity’. Starostin—Dybo—Mudrak 2003:854 **kūre* ‘basket’.

Buck 1949:5.26 pot; 5.27 kettle; 5.34 pitcher, jug; 5.35 cup. Bomhard—Kerns 1994:481, no. 327.

536. Proto-Nostratic root **kwhar-* (~ **kwhar-*):

(vb.) **kwhar-* ‘to procure’;

(n.) **kwhar-a* ‘payment, procurement’

- A. Afrasian: Proto-Semitic **kar-ay-* ‘to rent, to buy’ > Hebrew *kārāh* [כָּרָה] ‘to buy’; Arabic *kariya* ‘to rent, to lease, to let, to let out, to farm out, to hire out’, *kirāʾ* ‘rent, hire, hiring; lease; rental; wages, pay’; Sabaeen *kry* ‘rent’; Ḥarsūsi *kerē* ‘fare’; Šheri / Jibbāli *ekōri* ‘to rent, to lease’, *kéréʾ* ‘rent’; Mehri *kōri* ‘to take fare from someone’, *škēri* ‘to hire, to rent (a house, camel)’, *kīrēʾ* ‘rent, hire’. Klein 1987:285. Berber: Tuareg *əkrəz* ‘to acquire, to have’; Tawlemmet *əkrəz* ‘to acquire’, *akruz* ‘acquisition’. Cushitic: Gedeo / Darasa *karra* ‘property, wealth’. Hudson 1989:249.
- B. Proto-Indo-European **kwhrey(H)-*/**kwhroy(H)-*/**kwhri(H)-* (> **kwhrī-*) ‘to buy, to purchase’: Greek *πρίαμαι* ‘to buy, to rent’; Sanskrit *krīṇāti* ‘to buy, to purchase’, *krayá-h* ‘purchase, purchase-price’, *kreya-h* ‘purchasable’; Old Irish *crenaid* ‘to buy’; Old Welsh *prynaf* ‘to buy’; Old Russian *krenuti* [кренути] ‘to buy’; Tocharian A *kuryar* ‘commerce’, Tocharian B *kāry-* ‘to buy’, *kāryorttau* ‘trader, merchant’, *karyor* ‘buying, business, negotiation’. Rix 1998a:354—355 **kureih₂-* ‘to barter, to exchange’; Pokorny 1959:648 **kurei-* ‘to buy’; Walde 1927—1932.I:523—524 **qurei-*; Mann 1984—1987:1050 **qurīnō-*, *-jō* (variant **qurijā-*) ‘to buy’; Mallory—Adams 1997:185 **kurei(hₐ)-* ‘to pay’; Mayrhofer 1956—1980.I:277 and I:279; Hofmann 1966:283 **quriā-* : **qurī-*; Boisacq 1950:813 **quri-*; Frisk 1970—1973.II:594—595; Beekes 2010.II:1233 **kureih₂-*; Chantraine 1968—1980.II:938; Adams 1999:165 **kureihₐ-* ‘to buy’; Van Windekens 1976—1982.I:209—210 **qurijā-* and I:246 **qurei-*, **qurijā-*; Falileyev 2000:133 **kurei-*.
- C. Chukchi-Kamchatkan: Proto-Chukotian **(ǝ)kur-* ‘to buy’ > Chukchi *kur-* ‘to buy’; Kerek *kuj-* ‘to buy, to pay’; Koryak *kuj-* ‘to buy, to pay for’; Alyutor *ina-tkur-γəŋəŋ* ‘price’. Fortescue 2005:142.

Buck 1949:11.81 buy. Möller 1911:141—142; Bomhard—Kerns 1994:475—476, no. 321.

537. Proto-Nostratic root *k^{wh}at^h- (~ *k^{wh}ə^h-):

(vb.) *k^{wh}at^h- ‘to move rapidly, to shake’;

(n.) *k^{wh}at^h-a ‘rapid movement, shaking’

- A. Afrasian: Egyptian *ktkt* ‘to shake, to quiver’. Hannig 1995:890; Faulkner 1962:287; Erman—Grapow 1921:197 and 1926—1963.5:146. (?) Proto-Southern Cushitic *k^waat- ‘to make with the hands’ > Iraqw *kwatit*- ‘to touch’; Ma’a -*kwa* ‘to build’. Ehret 1980:265.
- B. Dravidian: Tamil *kuti* ‘(vb.) to jump, to leap, to bound, to frolic, to escape from, to splash (as water), to spurt out; (n.) jump, leap’, *kutippu* ‘leaping’; Malayalam *kuti* ‘leap, gallop’, *kutikka* ‘to jump, to skip, to boil, to bubble up’, *kutukkuka* ‘to take a spring in order to leap’; Kannada *gudi* ‘to jump, to stamp, to make a noise with the feet’, *kuduku* ‘(vb.) to trot; (n.) trotting’, *gudiku* ‘to jump’; Tulu *guttu* ‘a leap, jump; a stride’; Telugu *kudupu* ‘(vb.) to shake (tr.), to agitate, to jolt; (n.) shaking, jolting’, *kudulu* ‘to be shaken, to jolt; to shake while walking, to flutter in agony’, *kudilincu* ‘to shake (tr.)’, *kudilika* ‘shaking, agitation, jolting’; Konḍa *gudlis*- ‘to shake violently’; Kurux *kuddnā* ‘to move about’, *kudāba’ānā* ‘to make run’, *kudākudī* ‘in hot haste’, *kudur-kudur* ‘at a trot’. Krishnamurti 2003:12 **kut*-i ‘to jump’; Burrow—Emeneau 1964:156, no. 1705.
- C. Proto-Kartvelian **kwet*- ‘to move, to shake, to swing’: Mingrelian *kvat*- ‘to swing, to sway, to shake’; Svan *kw*- ‘to shake, to move something’. Fähnrich 2007:464—465 **kwet*-.
- D. Proto-Indo-European *k^{wh}at^h- ‘to move, to shake’: Latin *quatiō* ‘to shake; to agitate, to move, to touch, to affect, to excite’; Middle Irish *caithim* ‘to throw, to hurl, to fling, to cast’; Old Czech *kot* ‘throw, dash, rush’. Rix 1998a:510—511 *(s)k^{ue}h₁t- ‘to shake thoroughly, to shake up’; Pokorny 1959:632 *k^uēt- : *k^uət- : *k^ūt- ‘to shake, to sift’; Walde 1927—1932.I:511 *q^uēt-, *q^uət-; Mann 1984—1987:1020—1021 **quatiō* ‘to move, to shake, to rattle, to impel, to throw, to roll’; Walde—Hofmann 1965—1972.II:399—400 **squət*- (according to Persson); Ernout—Meillet 1979:552—553; De Vaan 2008:504—505.

Buck 1949:10.25 throw (vb.); 10.26 shake (vb. tr.); 10.43 jump, leap (vb.); 15.71 touch (vb.); 15.72 feel (vb.), feel of; 15.73 touch (sb. — act or sense of touch).

538. Proto-Nostratic (particle) *k^{wh}ay- ‘when, as, though, also’:

Possibly derived from:

Relative pronoun stem *k^{wh}i-; interrogative pronoun stem *k^{wh}a-

- A. Proto-Afrasian (?) **k^way-* ‘when, as, though, also’: Proto-Semitic **kay-* ‘in order that, for, when, so that’ > Akkadian *kī* ‘according to, concerning’; Hebrew *kī* [כִּי] ‘that, for, when’; Syriac *kay* ‘therefore’; Ugaritic *k, ky* ‘for, because, when, if, that’; Arabic *kay* ‘in order that, so that’; Sabaeen *ky* ‘when’. Klein 1987:275; Zammit 2002:361. Egyptian non-enclitic particle *k3* ‘so, then’. Hannig 1995:871; Erman—Grapow 1921:194 and 1926—1963.5:84—85; Faulkner 1962:283; Gardiner 1957:597.
- B. Proto-Indo-European **k^whay-* ‘when, as, though, also’: Lithuanian *kaĩ* ‘when, as’; Old Prussian *kai* ‘how; as; so that’; Latvian (dial.) *kaĩ* ‘so’; Old Church Slavic *cě* ‘as, as also’. Pokorny 1959:519 **kai* ‘and’ (?); Walde 1927—1932.I:327 **qai* (?); Mann 1984—1987:1039 **quoi* (**quoi-*) ‘when, where; that; any-’; Endzelins 1971:262, §431d. Greek καί, καὶ ‘and; also, even’ does not belong here (cf. Palmaitis 1986b:309).
- C. Proto-Gilyak / Nivkh **-qaj* or **-gaj* (conditional) ‘if’: Amur *-qa / -ra* (also *-tara*) (conditional) ‘if’; East Sakhalin *-qaj* (conditional) ‘if’; South Sakhalin *-χai* (conditional) ‘if’. Fortescue 2016:174 (table of affixes).

Brunner 1969:38, no. 157; Bomhard—Kerns 1994:479—480, no. 325.

539. Proto-Nostratic root **k^whey-*:

(vb.) **k^whey-* ‘to repay in kind, to return an equal measure’;

(n.) **k^whey-a* ‘payment, repayment’

- A. Afrasian: Proto-Semitic **kay-al-* ‘to measure out, to repay in kind, to return an equal measure’ > Syriac *kayl* ‘a measure’; Arabic *kāla* ‘to measure, to weigh; to measure out, to mete out, to allot, to apportion; to return like for like, to repay in kind’, *mikyāl* ‘measure; dry measure for grain’; Sabaeen *kyl* ‘measurement’; Šheri / Jibbāli *kēl* ‘to give a measure of something’; Harsūsi *keyōl* ‘to give a measure, to give (someone) his deserts’; Geez / Ethiopic *maklit* [መክለት] ‘talent (of silver)’; Tigre *käyyälä* ‘to measure’ (Arabic loan); Amharic *mäklit* ‘talent (of silver)’ (Geez loan). Leslau 1987:339.
- B. Proto-Indo-European **k^whey-/k^whoy-/k^whi-* ‘(vb.) to repay in kind, to return like for like; (n.) payment, repayment’: Sanskrit *cáyate* ‘to revenge, to punish’, *citi-h* ‘retaliation’; Avestan *čikayaŋ* ‘to atone for’, *kaēnā* ‘punishment, revenge’; Greek τίω ‘to requite, to atone for, to repay; to pay a price, to pay a penalty’, τίω ‘to pay honor to (a person), to honor’, ποινή ‘retribution, penalty’; Middle Irish *cin* ‘fault, liability’; Lithuanian *káina* ‘cost, price’; Old Church Slavic *cěna* ‘reward’. Rix 1998a:339—340 **k^uej-* ‘to pay a penalty, to punish, to avenge’; Pokorny 1959:636—637 **k^uei-(t-)* ‘to pay attention to, to regard with respect, to punish, to avenge’; Walde 1927—1932.I:508—509 **q^uei-*; Mann 1984—1987:1022 **quējō* (**quij-*) ‘to punish’, 1034 **quīm-* ‘tax, payment’, 1040 **quoinos, -ā* ‘equivalent, estimate, worth, cost, payment, price, prize’; Watkins 1985:33

- *k^{wei}- and 2000:44—45 *k^{wei}- ‘to pay, to atone, to compensate’, (suffixed *o*-grade) *k^{woi-nā}-; Gamkrelidze—Ivanov 1984.II:809 *k^[h]^oe/o_i-(nā-) and 1995.I:710, fn. 18, *k^h^oe_i- ‘to punish, to compensate, to pay a price, to avenge’ and I:709, I:710 *k^h^oe/o_i-(nā-) ‘payment, compensation, vengeance’; Mallory—Adams 1997:123 *k^{woineh}_a- ‘compensation’, *k^{wei}- ‘to fine, to punish’; Mayrhofer 1956—1980.I:376 and II:387; Boisacq 1950:801 *q^uoinā ‘vengeance, punishment’, *q^ue_i-, 971—972, and 973—974 *q^ue_i- ‘to repay; to punish, to avenge’; Frisk 1970—1973.II:573—574 *q^uoinā, II:902—903, and II:906—907 *q^ue_i-, *q^uĩ-; Beekes 2010.II:1486—1487 *k^{wei}-; Hofmann 1966:279 *q^uoinā, *q^ue_i-, 367, and 368 *q^ue_i-; Chantraine 1968—1980.II:925 *k^{wei}-, II:1120—1121, and II:1123; Smoczyński 2007.1:243 *k^uo_i-neh₂-, *k^uej_i-; Fraenkel 1962—1965.I:203; Derksen 2008:75 *k^{woi}-neh₂ and 2015:217—218 *k^{woi}-neh₂.
- C. Yukaghir (Southern / Kolyma) *kej*- ‘to give’, *keči*- ‘to bring’, (Northern / Tundra) *kii*- ‘to give’, *keči*- ‘to bring’. Nikolaeva 2006:203.

Buck 1949:21.37 penalty, punishment. Bomhard—Kerns 1994:473—474, no. 318.

540. Proto-Nostratic root *k^{wh}ey-:

(vb.) *k^{wh}ey- ‘to do, to make, to create; to form, to fashion’;

(n.) *k^{wh}ey-a ‘act, deed, creation’

- A. Afrasian: Semitic: Arabic *kayyafa* ‘to form, to shape, to fashion, to mold, to fit, to adjust, to adapt’.
- B. Proto-Dravidian *key- ‘to do, to make’: Tamil *cey* ‘to do, to make, to create, to cause’; Kota *gey*- (*gec*-), *key*- (*kec*-) ‘to do, to make’; Malayalam *ceyka* ‘to do, to act’; Kannada *key*, *kai*, *gey* ‘to perform, to do, to make, to work’; Toda *kij*- (*kis*-) ‘to do, to make’; Kodagu *key*- (*keyyuv*-, *kejj*-) ‘to work’; Telugu *cēyu* ‘to do, to perform, to make, to create’; Gadba *key*- (*ked*-, *ken*-) ‘to do’; Konḍa *ki*- ‘to do, to make’. Burrow—Emeneau 1984:178, no. 1957; Krishnamurti 2003:128 *key- ‘to do, to make, to create’.
- C. Proto-Indo-European *k^{wh}ey-/k^{wh}i- (secondary *o*-grade form: *k^{wh}oy-) ‘to do, to make, to create; to form, to fashion’: Sanskrit *cinóti*, *cáyati* ‘to arrange in order, to heap up, to construct, to gather, to collect’; Punjabi *ciṇṇā* ‘to pile up, to lay (bricks), to gather (clothes), to arrange’, *cunṇā* ‘to build up in layers, to plait’; Gujarati *ciṇvū*, *cunvū* ‘to fold into long strips’, *caṇvū* ‘to build, to make, to erect’; Marathi *cunṇē* ‘to pile up orderly, to fold, to plait’; Greek ποιέω ‘to make, to produce; to create, to bring into existence; to make ready, to prepare, to do’; Old Church Slavic *činiti* ‘to arrange, to construct’, *činь* ‘row, order, rank, rule’; Czech *činiti* ‘to do, to make, to carry out, to act’; Russian *činít’* [чинить] ‘to make; to administer, to execute; to commit, to perpetrate; to mend, to repair’, *čin* [чин] ‘rank,

dignity, grade'. Rix 1998a:338—339 **k^uei-* 'to gather, to collect, to arrange'; Pokorny 1959:637—638 **k^uei-* 'to pile up, to build, to make'; Walde 1927—1932.I:509—510 **q^uei-*; Mann 1984—1987:1040 **q^uoi^uejō* 'to shape, to stylize'; Watkins 1985:33 **k^wei-* and 2000:45 **k^wei-* 'to pile up, to build, to make'; Mallory—Adams 1997:87 **k^wei-* 'to pile up, to build'; Mayrhofer 1956—1980.I:388; Beekes 2010.II:1216 **k^wi-eu-*, **k^wei-u-*; Boisacq 1950:799—800 **q^uoi-*; Frisk 1970—1973.II:570—572 **q^uei-*; Chantraine 1968—1980.II:922—923 **k^wei-*; Hofmann 1966:278 **q^uei-*; Derksen 2008:89 **k^wei-n-*, **k^wei-no-*.

- D. Proto-Altaic **k^hi-* (~ *k-*) 'to do, to make': Proto-Mongolian **ki-* 'to do, to make' > Written Mongolian *ki-* 'to do, to act, to perform'; Khalkha *χiy-* 'to do, to make'; Buriat *χe-* 'to do, to make'; Kalmyk *ke-* 'to do, to make'; Ordos *kī-* 'to do, to make'; Moghol *ki-* 'to do, to make'; Dagur *χī-*, *kī-* 'to do, to make'; Monguor *gi-*, *gə-* 'to do, to make'. Poppe 1955:36, 74, and 142. Proto-Turkic **Kil-* 'to do, to make' > Old Turkic (Old Uighur) *qil-* 'to do, to make'; Karakhanide Turkic *qil-* 'to do, to make'; Turkish *kıl-* 'to do, to perform'; Azerbaijani *gil-* 'to do, to make'; Turkmenian *qil-* 'to do, to make'; Uzbek *qil-* 'to do, to make'; Uighur *qil-* 'to do, to make'; Karaim *qil-* 'to do, to make'; Tatar *qil-* 'to do, to make'; Bashkir *qil-* 'to do, to make'; Kirghiz *qil-* 'to do, to make'; Kazakh *qil-* 'to do, to make'; Noghay *qil-* 'to do, to make'; Oyrot (Mountain Altai) *qil-* 'to do, to make'; Tuva *qil-* 'to do, to make'; Yakut *kin-* 'to do, to make'; Dolgan *gīn-* 'to do, to make'. Poppe 1960:19 and 114; Street 1974:17 **kī-* 'to do, to make'; Starostin—Dybo—Mudrak 2003:675—676 **ki* (~ **kⁱ*) 'to do, to make'.

Buck 1949:9.11 do, make. Dolgopolsky 2008, no. 1949, **qoyV* 'to heap up, to build, to make'; Bomhard—Kerns 1994:474—475, no. 320.

541. Proto-Nostratic relative pronoun stem **k^{wh}i-* (~ **k^{wh}e-*); interrogative pronoun stem **k^{wh}a-* (~ **k^{wh}ə-*):

- A. Proto-Afrasian **k^wa-* interrogative stem: This stem is not widespread in Afrasian. It is preserved in relic forms in several Semitic languages: Proto-Semitic **ka-m* 'how much?, how many?' > Arabic *kam* 'how much?, how many'; Harsūsi *kem* 'how much?, how many?'; Mehri *kəm* 'how much?'; Soqotri *kəm* 'how much?'. Zammit 2002:358—359. It also occurs in Cushitic: Rendille interrogative suffix *-koh* 'which?'; Arbore *kaakó* 'how much?, how many?'; Galla / Oromo interrogative pronoun *kam(i)* 'which?' (cf. Ali—Zaborski 1990:139; Praetorius 1893:96—97). Finally, it occurs in the Kefoid branch of Omotic (cf. *kon(n)e*, *koonni*, *ko* 'who?') and in the Dizoid branch as well (cf. *yiki* 'who?'). Bender 2000:209 and 226.
- B. Proto-Indo-European **k^{wh}e-*/**k^{wh}o-*, **k^{wh}i-* stem of interrogative and relative pronouns: Sanskrit *ká-h*, *ká* 'who?', *káti* 'how many?', *kīm* 'what?', *kútra* 'where?', *cid* 'even, also'; Avestan interrogative-indefinite

pronoun stem *ka-* ‘who’, *čaiti* ‘how many?’; Old Persian interrogative-indefinite pronoun stem *ka-* ‘who’; Latin *quis* ‘who?’, *quid* ‘what?’, *quod* ‘that, wherefore, why’, *quot* ‘how many?’, *quisquis* ‘whoever, whichever, whatever’; Greek τίς ‘who?’, τί ‘what?’, ποῦ ‘where?’, πόσος ‘of what quantity?, how much?, how many?’; Armenian *k^hani* ‘how many?’; Old Irish *cía* ‘who?’, Welsh *prwy* ‘who?’, Cornish *pyw* ‘who?’, Breton *piou* ‘who?’, Gothic *hvas* ‘who?’, *hwō* ‘what?’, *hvan* ‘when?’, *hvar* ‘where?’, *hvarjis* ‘which?’, *hvaþ* ‘whereto?’; Old Icelandic *hverr* ‘who?, which?, what?’, *hvé* ‘how?’, *hvat* ‘what?’, Old Swedish *ho* ‘who?’, Old Danish *hwa* ‘who?’, Old English *hwā* ‘who?’, *hwæt* ‘what?’, Old Frisian *hwā* ‘who?’, Old Saxon *hwē*, *hwie* ‘who?’, Old High German (*h*)*wer* ‘who?’ (New High German *wer*), (*h*)*waz* ‘what?’ (New High German *was*); Lithuanian *kàs* ‘who?, what?’, *kuĩ* ‘where?, whither?’; Old Church Slavic *kъto* ‘who?’, Hittite interrogative pronoun (nom. sg.) *ku-iš* ‘who?’ (acc. *ku-in*), (neuter) *ku-it* ‘what?’, *ku-(u-)wa-at* ‘why?’, *ku-wa-(at-)tin* ‘where?, whither?’, *ku-wa-(a-)pi* ‘where?, whither?, when?’; Palaic interrogative and relative pronoun *kuiš*; Luwian *ku-(i-)iš* ‘who?’, interrogative adverb *ku-wa-(a-)ti(-in)* ‘how?’, relative adverb *ku-wa-at-ti* ‘where, whence’; Lycian interrogative and relative stem *ti*; Lydian relative pronoun *qis*; Tocharian A interrogative stem (nom.) *kus* (acc. *kuc*) ‘who?, which?, what?’, relative stem (nom.) *kusne* (acc. *kucne*) ‘who, which’, B interrogative and relative stem (nom.) *kuse* ‘who(?)’, whoever, no matter who; the one who, those who’, (acc.) *kuce* ‘whom?, what?, which?; whom, what, which’, also used as a conjunction: ‘because; (so) that’. Pokorny 1959:644–648 **k^{uo}-*, **k^{ue}-* interrogative and relative particle; Walde 1927–1932.I:519–523 **k^{uo}-*, **k^{ue}-*; Mann 1984–1987:1017 **quā* ‘by what, by which, how’, 1019 **quam*, **quan*, 1019 **quam-de*, -*dō*, 1021 **qu-dhē*, -*dho*, -*dhə*, -*dh* ‘where, whither, whence’, 1021–1022 **quēi* (**quēi*) ‘how, why’, 1030–1031 **quə* ‘what’, 1031 **qui*, (enclitic) **-qui* ‘any, not-, -soever’, 1031–1032 **quid* ‘what, something’, 1032 **quijā* (**quijā*, **quī*, **qui*) ‘how, why; as if, or, since, as though’, 1035–1036 **quis* ‘who, which’, 1036 **quisquis*, 1037–1038 **quo*, **quō* ‘in what, by what, where’, 1038 **quod* ‘what, that’, 1039 **quodō* ‘when’, 1039 **quodquid* ‘whatever, anything’, 1039 **quo-dhen* (**-dhən-*, **-dhə*) ‘by, in what; to, from, what, where’, 1039 **quo-dhi*, **qu-dhi* ‘where, there’, 1039 **quoi* (**quoi-*) ‘when, where; that; any-’, 1040–1041 **quojos* (**quojos*) ‘of whom, whose’, 1043–1044 **quom*, 1045 **quō-que* (**-quə*), 1048 **quos* ‘who’, 1048 **quosis*, **quosjos*; Watkins 1985:34 **k^{wo}-*, also **k^{wi}-* and 2000:46 **k^{wo}-*, also **k^{wi}-* stem of relative and interrogative pronouns; Gamkrelidze–Ivanov 1984.I:117 **k^[h]is* and 1995.I:100 **k^his* ‘who’; Mallory–Adams 1997:456–457 **k^wós* ‘who’, **k^wóm* ‘whom’, **k^wód* ‘what’, **k^wíd* ‘what, what one’, **k^wóteros* ‘which (of two)’, **k^wóm* ‘when’, **k^wodéha* ‘when’, **k^wór* ‘where’, **k^wu-* ~ **k^wú* ‘where’, **k^wóti* ~ **k^wéti* ‘how much, how many’, **k^wehali* ‘of what sort, of what size’, (?)

**k^weh_ak-* ‘of what sort’, **k^woih_xos* ‘pertaining to whom/what’; Brugmann 1904:402 **q^uo-*, **q^ui-*, **q^uu-*; Szemerényi 1996:208—211 **k^wi-*, **k^we-/k^wo-*; Watkins 1998:67 **k^wis*, **k^wid*, **k^wo(s)*, **k^wod*; Beekes 1995:203—207 **k^we-/k^wi-*, (adj.) **k^wo-* and 2010.II:1215 **k^wo-*, II:1487 **k^wi-*; Meillet 1964:328 **k^we-*, **k^wo-*, **k^wei-*; Fortson 2004:130 **k^wo-*; Meier—Brügger 2003:227—228 **k^wi-*, **k^wo-*; Adrados 1975.II:823—824 **k^ui-*, **k^uo-*; Schmitt-Brandt 1998:223—228 **k^ui-*, **k^ue/o-*; **k^uis*, **k^uid*; Mayrhofer 1956—1980.I:148 **q^woti*, **q^weti*, I:192, I:209—210 **q^wi-*, I:228, and I:387 **q^wi-s*; Puhvel 1984— .4:218—232; Boisacq 1950:806—807 **q^uoti* and 972 **q^ui-s*, **q^ui-d*; **q^ui-m*; Frisk 1970—1973.II:585 **q^uóti* and II:903—904 **q^ui-s*, **q^ui-d*; **q^ue-so*; Chantraine 1968—1980.II:921—922 **k^wo-*, **k^wi-* and II:1121; Hofmann 1966:281 **q^uoti* and 367 **q^uis*, **q^uid*; **q^uim*; Ernout—Meillet 1979:556 **k^wo-*, 559—560 **k^wo-*, **k^wi-*, and 561 **k^woty-o-*; Walde—Hofmann 1965—1972.II:404—405, II:410 **q^ui-*, **q^uo-*, II:411—412, and II:412—413 **q^uoti*; De Vaan 2008:507—508 and 510—511; Orël 2003:198 Proto-Germanic **xwan(n)ai*, 198 **xwar* ~ **xwēr*, 199 **xwat*, 199 **xwape*, 199 **xwaz* ~ **xwez*, 201 **xwē*, 201 **xwī*; Kroonen 2013:261 Proto-Germanic **hwa-* ‘who?, what?’ and 264 **hwapera-* ‘who of two?’; Feist 1939:281—282, 282 **k^uo-*, **k^uej-*, 282—283, 283, and 284; Lehmann 1986:198 **k^wo-* and 198—199 **k^wo-*, **k^wi-*; De Vries 1977:269, 270, and 271; Falk—Torp 1903—1906.I:312, I:313. I:314, I:314—315; Klein 1971:825 and 827 **q^wo-*, **q^we-*; Onions 1966:1001 **q^wod* and 1004 **q^wos*, **q^wes*; **q^wi-*; Kluge—Mitzka 1967:853; Kluge—Seebold 1989:778 **quod* and 787 **qui-/quo-*; Van Windekens 1976—1982.I:246 **q^uu-*; Adams 1999:181—182 and 187—188 **k^wusó*; Burrow 1973:273—274; Buck 1933:226—228 **q^wo-*, **q^wi-*, **q^wu-* (in adverbs); Rix 1992:186—188 **k^ui-/k^uéj-*; **k^ué-/k^uó-*; **k^uú-* (in adverbs); Sihler 1995:397—401 **k^wi-/k^we-*; Lindsay 1894:443—452 **q^uo-* (with **q^ui-*, **q^uu-*); Palmer 1954:257—258 and 1980:286—287 **q^wis/q^wid*; Mendeloff 1969:62—81; Prokosch 1939:278—279; Streitberg 1963:267; Krause 1968:199—200 **q^ue-* : **q^uo-*, **q^uā-*; **q^uo-s*, **q^ui-s*, **q^uo-d*; Hirt 1931—1934.II:76—78 **k^we-*, **k^wo-*, **k^wi-* and II:80; Wright—Wright 1925:248—249 **q^wos*, **q^wod*, **q^wis*; Endzelins 1971:195—200; Stang 1966:236—237 **k^wo-*; Smoczyński 2007.1:262 and 1:326; Fraenkel 1962—1965.I:199; Derksen 2008:264 **k^wo-* and 2015:230 **k^wo-*; Meillet 1965a:442—445 **k^wo-*, **k^wi-*; Sturtevant 1933:202—203 and 1951:115; Kronasser 1956:148; Kimball 1999:266; Luraghi 1997:26; J. Friedrich 1960.I:68—69; Kloekhorst 2008b:488—491; Held—Schmalstieg—Gertz 1988:33; Carruba 1970:60; Laroche 1959:55; Meriggi 1980:325—327. Note: Derivatives of this stem are abundantly represented in the Indo-European daughter languages — only a small sampling is given here. For more information, the references cited above should be consulted.

- C. Proto-Uralic **ki-* ~ **ke-* relative pronoun stem: Finnish *ken/kene/ke-* ‘who’; Estonian *kes* ‘who’; Lapp / Saami *gi/gæ-* ‘who, which, what’;

Mordvin *ki* ‘who, somebody’; Cheremis / Mari *ke, kö, kü* ‘who’; Votyak / Udmurt *kin* ‘who’; Zyrian / Komi *kin* ‘who’; Hungarian *ki* ‘who, who?’; Kamassian *giʔiʔ* ‘which (of two)’, *giʔgeʔ* ‘what sort of’, *giʔin, kijen, gin* ‘where’, *gildi* ‘how much, how many’. Collinder 1955:24, 1965:138–139, and 1977:44; Joki 1973:268; Rédei 1986–1988:140–141 **ke* (**ki*); Décsy 1990:100 **ke* ‘who’. Proto-Uralic **ku-* ~ **ko-* interrogative pronoun stem: Finnish *kuka/ku-* ‘who?’, *kussa* ‘where?’, *koska* ‘when?’; Lapp / Saami *gutti* ‘who?’, *gost* ‘where?, from where?’, *gok’tě* ‘how?’; Mordvin *kodamo* ‘which?, what kind of?’, *kona* ‘which?’, *koso* ‘where?’, *koda* ‘how?’; Cheremis / Mari *kudō* ‘who?, which?’, *kuštō* ‘where?’, *kuze* ‘how?’; Votyak / Udmurt *kudiz* ‘which?’, *ku* ‘when?’; Zyrian / Komi *kod* ‘which?’, *ko* ‘when?’; Vogul / Mansi *hoo, kon* ‘who?’, *hoot* ‘where?’, *kun* ‘when?’; Ostyak / Xanty *koi* ‘who?’, *kōti* ‘what?’; Hungarian *hol* ‘where?’, *hova* ‘whither?’, *hogy* ‘how?’; Yurak Samoyed / Nenets *hu* ‘who?’, *huñay* ‘which?’, *huna, huñana* ‘where?’, *hañaʔ* ‘whither?’; Tavgi Samoyed / Nganasan *kua, kunie* ‘which?’, *kuninu* ‘where?’, *kuniʔaay* ‘how?’; Yenisei Samoyed / Enets *huju* ‘one of two, either’, *kuu* ‘whither?’, *kune, kunne* ‘when?’, *kunnoʔ* ‘how?’; Selkup Samoyed *kutte, kudō* ‘who?’, *kun* ‘where?, from where?’, *ku* ‘whither?’, *kutar* ‘how?’; Kamassian *kojət* ‘what kind of?’, *kammōn* ‘when?’, *kōdaʔ* ‘how?’. Collinder 1955:26, 1965:139, and 1977:46; Rédei 1986–1988:191–192 **ku-* (**ko-*); Décsy 1990:100 **ko* ‘who?’; Janhunen 1977b:75 **ku-*. Yukaghir (Southern / Kolyma) *kin* ‘who’, *kil’l’a* ‘whose’, *qadi* ‘which?’, *qanin* ‘when?’, *qondet* ‘from where?, whence?’, *qanjide* ‘where to?, whither?’, *qadungə* ‘where?’, *qam-* ‘how much?, how many?’, *qamlo:-* ‘how much?, how many?’, *qaml’id’a* ‘how many times?’, *qo-* ‘where’, *qodo, qode* ‘how’, *qod-a:-* (interrogative verb) ‘to do what?’, *qodime:-* ‘what kind of’, *qododə* ‘somehow, in every possible way’, *qodit* ‘why’; (Northern / Tundra) *kin* ‘who’, *kinid’eŋ* ‘to nobody’, *kinolelk* ‘nobody, somebody’, *qaduŋ* ‘which?’, *qanin* ‘when?’, *qaduŋdet* ‘where?’, *qawde* ‘what kind of?, how?’, *qadaa* ‘where?’, *qabun* ‘how much?, how many?’, *qamla-* ‘how much, how many?’, *qamlid’e* ‘how many times?’, *quode-* ‘how’, *quodede* ‘somehow, in every possible way’, *qodiet* ‘why’. Nikolaeva 2006:211–212, 373, 376, and 382.

- D. Proto-Altaic **k^{ha}(y)* interrogative pronoun: ‘who?, what?’: Proto-Tungus **χia* (**χai*) ‘who?, what?’ > Manchu *ai, ya* ‘who?, what?, which?’; Evenki *ē* ‘who?’, *ēkūn* ‘what?’; Lamut / Even *āq* ‘what?’; Negidal *ēχun, ēkun* ‘who?, what?’, *ēwa* ‘what?’; Ulch *χay* ‘what?’; Oroch *χai* ‘what?’; Nanay / Gold *χai* ‘what?’; Solon *ī* ‘what?’. Proto-Mongolian **ken, *ka-* ‘who?, which?’ > Written Mongolian *ken* ‘who?, which?’; Khalkha *χen* ‘who?, which?’; Buriat *χen* ‘who?, which?’; Kalmyk *ken* ‘who?, which?’; Ordos *ken* ‘who?, which?’; Moghol *ken* ‘who?, which?’; Dagur *ken, χen* ‘who?, which?’, *χā-, hā-* ‘where?’; Monguor *ken* ‘who?, which?’. Poppe 1955:45 and 229. Proto-Turkic **kem-, *ka-* ‘who?, which?’ > Old Turkic (Old

Uighur) *kem* ‘who?’, *qayu*, *qanu* ‘which?’, Karakhanide Turkic *kem*, *kim* ‘who?’, *qayu* ‘which?’, Turkish *kim* ‘who?’, Gagauz *kim* ‘who?’, Azerbaijani *kim* ‘who?’, Turkmenian *kim* ‘who?’, *qay* ‘which?’, Uzbek *kim* ‘who?’, *qay* ‘which?’, Uighur *kim* (dial. *kem*) ‘who?’, *qay* ‘which?’, Karaim *kim* ‘who?’, Tatar *kem* ‘who?’, *qay* ‘which?’, Bashkir *kem* ‘who?’, (dial.) *qay* ‘which?’, Kirghiz *kim* ‘who?’, *qay* ‘which?’, Kazakh *kim* ‘who?’, *qay* ‘which?’, Noghay *kim* ‘who?’, Oyrot (Mountain Altai) *kem* ‘who?’, *qay* ‘which?’, Tuva *qim* ‘who?’, *qayı* ‘which?’, Chuvash *kam* ‘who?’, Yakut *kim* ‘who?’, *χaya* ‘which?’, Dolgan *kim* ‘who?’, *kaya* ‘which?’. Menges 1968b:134—135. Starostin—Dybo—Mudrak 2003:754 **k’a(j)* interrogative pronoun: ‘who’.

- E. Proto-Eskimo **ki(na)* ‘who’: Alutiiq Alaskan Yupik *kinaq* ‘who’; Central Alaskan Yupik *kina* ‘who’; Naukan Siberian Yupik *kina* ‘who’; Central Siberian Yupik *kina* ‘who’; Sirenik *kin* ‘who’; Seward Peninsula Inuit *kina* ‘who’; North Alaskan Inuit *kin’a* ‘who’; Western Canadian Inuit *kina* ‘who’; Eastern Canadian Inuit *kina* ‘who’; Greenlandic Inuit *kina* ‘who’. Aleut *kiin* ‘who’. Fortescue—Jacobson—Kaplan 1994:173—174. Proto-Eskimo **kitu* ‘who’ or ‘which’: Alutiiq Alaskan Yupik *kitu-* ‘who’; Central Alaskan Yupik *kitu-* ‘who’; Naukan Siberian Yupik *kitu-* ‘who’; Central Siberian Yupik *kitu-* ‘who’; Seward Peninsula Inuit *kitu* ‘which’; North Alaskan Inuit *kisu* ‘which’; Eastern Canadian Inuit *kituuna* ‘who is that’; Greenlandic Inuit (North Greenlandic / Polar Eskimo) *kihu* ‘what’. Fortescue—Jacobson—Kaplan 1994:174. Proto-Inuit **qanuq* ‘how’ > Seward Peninsula Inuit *qanuq* ‘how’; North Alaskan Inuit *qanuq* ‘how’; Western Canadian Inuit *qanuq* ‘how’; Eastern Canadian Inuit *qanuq* ‘how’; Greenlandic Inuit *qanuq* ‘how’. Fortescue—Jacobson—Kaplan 1994:284. Proto-Eskimo **qana* ‘when (in past)’: Sirenik *qanən* ‘when (in past?)’; Seward Peninsula Inuit *qana* ‘when (in past)’; North Alaskan Inuit *qana* ‘when (in past)’; Western Canadian Inuit *qana* ‘when (in past)’; Eastern Canadian Inuit *qana* ‘when’; Greenlandic Inuit *qana* ‘when (in past)’. Aleut *qana-* ‘which, where’, *qanayaam* ‘when’, *qanaay* ‘how many’. Fortescue—Jacobson—Kaplan 1994:284. Proto-Eskimo **qaku* ‘when (in future)’: Alutiiq Alaskan Yupik *qaku* ‘when (in future)’; Central Alaskan Yupik *qaku* ‘when (in future)’; Naukan Siberian Yupik *qaku* ‘when’; Central Siberian Yupik *qakun* ‘when (in future)’; Sirenik *qaku* ‘when’; Seward Peninsula Yupik *qayu(n)*, *qayurun* ‘when (in future)’; North Alaskan Inuit *qakuyu* ‘when (in future)’; Western Canadian Inuit (Siglit) *qaku(yu)* ‘when (in future)’; Eastern Canadian Inuit *qaku* ‘when (at last, after lengthy waiting)’; Greenlandic Inuit *qaquyu* ‘when (in future)’. Fortescue—Jacobson—Kaplan 1994:278. Proto-Yupik-Sirenik **qayu(q)* ‘how’ > Alutiiq Alaskan Yupik *qayu* ‘how’; Central Alaskan Yupik *qayumi* ‘indeed, as expected’; Naukan Siberian Yupik *qay* ‘I wonder, is that so?’, *qaywa* ‘really?, is that so?’; Central Siberian Yupik *qayuq* ‘how’; Sirenik *qaynun* ‘really?’. Fortescue—Jacobson—Kaplan 1994:293.

Illič-Svityč 1971—1984.I:355—356, no. 232, **Ko* ‘who’; Dolgopolsky 2008, no. 981, **Ko* ‘who’; Koskinen 1980:22; Bomhard—Kerns 1994:478—479, no. 324; Möller 1911:125; Hakola 2000:64, no. 251; Fortescue 1998:153 and 154.

542. Proto-Nostratic root **k^{wh}ir-* (~ **k^{wh}er-*):

(vb.) **k^{wh}ir-* ‘to twist or twine together, to tie together, to bind, to fasten’;

(n.) **k^{wh}ir-a* ‘twist, tie, bundle, rope; the act of twisting or twining together: work, craft, act, action’

A. Proto-Afrasian **k^wir-* ‘to twist or twine together, to tie together, to bind, to fasten’: Proto-Semitic **kar-as-* ‘to tie, to fasten’ > Akkadian *karāsu* ‘to tie, to fasten’, *kurussu* (*kursū*) ‘strap (of leather or metal)’. Proto-Semitic **kar-ab-* ‘to twist or twine together’ > Arabic *karaba* ‘to tighten one’s bonds, to twist a rope’; Ḥarsūsi *kerōb* ‘to screw, to screw up’; Mehri *kārūb* ‘to screw, to screw a rifle butt tight through the muzzle’; Šheri / Jibbāli *kārōb* ‘to screw, to screw a rifle butt tight (through the muzzle)’; Geez / Ethiopic *karabo* [ḥḏḏ] ‘woven basket, pouch’; Tigrinya *karibbo* ‘small skin used as a bag’; Amharic *kārābo* ‘basket’. Leslau 1987:290. Proto-Semitic **kar-ak-* ‘to twist or twine together, to tie together, to bind, to fasten’ > Hebrew *kāraḥ* [כָּרַח] ‘to encircle, to twine around, to embrace, to wrap’, *kereḥ* [כֶּרֶח] ‘twining; scroll, volume; bundle’; Aramaic *kəraḥ* ‘to enwrap, to surround’, *kəṛḫā* ‘bundle; scroll’; Akkadian *karāku* ‘to intertwine; to obstruct, to dam; to immerse, to soak; to do promptly (?)’; Geez / Ethiopic *k^wark^wada* [ḥ-ḥ-ḥ-ḥ] ‘to embrace, to take in one’s arms’; Amharic *k^wärkk^wädä* ‘to tie up, to shackle’. Klein 1987:287; Leslau 1987:291; Murtonen 1989:239. Egyptian *k³-t* ‘work, construction; craft, profession’, *k³wṯy* ‘workman, laborer, artisan, craftsman, *weaver’. Hannig 1995:874—875 and 875; Gardiner 1957:597; Faulkner 1962:283; Erman—Grapow 1921:193 and 1926—1963.5:98—101, 5:102. Berber: Tuareg *kurāt* ‘to wind or wrap several times (as a turban around the head)’, *takārut* ‘turban’; Ghadames *akraru* ‘stick used to stir sauces’; Wargla *sskur* ‘to wind into a ball, to wrap’, *akur* ‘large ball, ball of wool’, *takurt* ‘ball’; Mزاب *sseḥur* ‘to wind into a ball’, *aḥur* ‘ball’, *taḥrart* ‘skein’; Tamazight *kur* ‘to be wrapped, to be wound into a ball’, *tikurin* ‘ball, spool of thread’; Riff *skur* ‘to wind into a ball’, *takurt* ‘ball (of thread, wool)’; Kabyle *k^wər* ‘to be wound into a ball’, *akur* ‘large ball’; Zenaga *kurer* ‘to be round, circular; to walk in a circle’. Proto-Southern Cushitic **k^wirih-*, **k^wirih-* ‘to turn (intr.)’ > Ma’a -*kiri’i* ‘to come back’, -*kiri’i* ‘to turn (something); to give back; to ask’; Iraqw *kwirihis-* ‘to twist (something)’. Ehret 1980:266. Ehret 1995:207, no. 346, **k^wir-* ‘to turn’.

B. Proto-Indo-European **k^{wh}er-*/**k^{wh}y-* (secondary *o*-grade form: **k^{wh}or-*) ‘to do, to make, to build’: Sanskrit *karóti*, *kṛṇóti* ‘to do, to make, to perform, to cause, to accomplish, to effect, to prepare, to undertake; to execute, to carry out; to manufacture, to work at, to elaborate, to build; to form or

construct one thing out of another; to employ, to use, to make use of', *kṛtá-ḥ* 'done, made, accomplished, performed, prepared, made ready; obtained, gained, acquired, placed at hand', *kará-ḥ* 'doing, making', *kárman-* 'act, action, performance, business', *kṛtyá* 'act, action, deed, performance, achievement; enchantment, magic'; Avestan *kərənaoiti* 'to do, to make'; Old Persian *kar-* 'to do, to make, to build'; Lithuanian *kuriù*, *kūrti* 'to make, to create, to build'. Rix 1998a:350—351 **k^uer-* 'to cut, to carve'; Pokorny 1959:641—642 **k^uer-* 'to make, to form'; Walde 1927—1932.I:517—518 **q^uer-*; Mann 1984—1987:1027 **q^uer-* 'to do, to make, to perform, to act', 1046 **q^uoros* 'doer, maker', 1051 **q^urō*, -*īō*, 1051 **q^uros* 'set, putting, act, fact', 1052 **q^urt-* 'made, making, formation, form; maker, wright'; Watkins 1985:34 **k^wer-* and 2000:45 **k^wer-* 'to make'; Gamkrelidze—Ivanov 1984.I:176, I:178, II:706 **k^[h]er-* and 1995.I:151, I:153, I:611 **k^her-* 'to do, to make; to connect; to make by hand'; Mallory—Adams 1997:362 **k^wer-* 'to do, to make, to build'; Mayrhofer 1956—1980.I:166, I:169 **q^wer-eu-*, **q^wrr-u-*, I:176, I:258, and I:259; Fraenkel 1962—1965.I:319; Smoczyński 2007.1:327—328 **k^uer-*.

- C. Proto-Uralic **kure-* 'to twist, to turn, to plait, to tie (together), to twine together, to braid': Finnish *kuro-* 'to fold, to plait, to crease, to pull together, to tie shut; to baste (sew), to patch up, to stitch together'; Lapp / Saami *gorrâ-/gorâ-* 'to tie together without actually making a knot, to tie shut, to fasten'; (?) Zyrian / Komi *kôr-* 'to plait, to gather'; Yurak Samoyed / Nenets *hura-* 'to tie up'; Selkup Samoyed *kura-* 'to plait, to twist together'; Kamassian *kür-* 'to plait, to braid, to twist'. Collinder 1955:29 and 1977:49; Rédei 1986—1988:215—216 **kure-*; Décsy 1990:101 **kura* 'to bind'; Janhunen 1977b:55 **kârâ* ~ **kârâ*. Proto-Uralic **kur3* 'basket': Votyak / Udmurt *kür* 'basket made of the inner bark of the linden'; Cheremis / Mari (Eastern) *kurukš* 'basket made of bark'; Vogul / Mansi *kuri*, *huri* 'sack, bag, pouch'; Ostyak / Xanty *kyræg*, (North Kazym) *hyr* 'sack'; Yurak Samoyed / Nenets *hoor* 'keg, receptacle, bucket', *täekuseä koor* 'bucket made of birch bark'; Tavgi Samoyed / Nganasan *kur* 'vat, tub', *koare* 'box'; Selkup Samoyed *koromže* 'basket made of birch bark'. Collinder 1955:28 and 1977:49; Rédei 1986—1988:219 **kur3* (**kor3*); Décsy 1990:101 **kura* 'basket, barrel made of bark'. Note: The Uralic forms are phonologically ambiguous — they may either belong here or with Proto-Nostratic **g^war-* (~ **g^wər-*) 'to turn, to twist, to wind, to wrap, to roll'. (?) Yukaghir (Southern / Kolyma) *kur-* 'to clutch'. Nikolaeva 2006:228.

Sumerian *kur₄* 'to tie, to bind'.

Buck 1949:9.11 do, make; 9.15 fold (vb. tr.); 9.16 bind (vb. tr.); 9.44 build. Illič-Svityč 1971—1984.I:359—360, no. 236, **Ḫura* 'to plait, to tie, to bind'; Bomhard—Kerns 1994:484—485, no. 331.

543. Proto-Nostratic (n.) (?) *k^{wh}ur-a ‘body, belly’:

- A. Afrasian: Proto-Semitic *k^{art}l-, *k^{irt}l- ‘body, belly’ > Akkadian *karšu* ‘body, belly, womb, stomach’; Hebrew *kārēš* [כָּרֶשׁ] ‘belly’; Aramaic *karsā* ‘belly’; Ugaritic *krs* ‘belly’ (?); Mandaic *karsa* ‘belly’; Arabic *kariš*, *kirš* ‘stomach, paunch, belly’; Ḥarsūsi *kēreš* ‘stomach’; Šeri / Jibbāli (dim.) *kéršūt* ‘belly’; Mehri *kīrās* ‘belly, (dim.) tummy’; Soqotri *šéreš* ‘stomach’; Geez / Ethiopic *karš* [ካርሥ] ‘belly, stomach, womb, abdomen, interior’; Tigrinya *kārsi* ‘belly’; Tigre *kārəs*, *kāršāt* ‘belly, stomach, interior’; Amharic *kārs* ‘belly’; Gurage (Soddo) *kārs* ‘abdomen, belly, stomach’; Harari *kārsi* ‘abdomen, belly’; Argobba *kārs* ‘belly’; Gafat *ərsā* (*k* > *h* > *Ø*) ‘belly’. Murtonen 1989:239–240; Klein 1987:288; Leslau 1963:94, 1979:351, and 1987:294; Militarëv 2010:49 Proto-Semitic *kar(i)š-.

Comment: Militarëv—Kogan (2000.I:136—137, no. 151) reconstruct Proto-Semitic (n.) *kariš- ~ *karič- ‘belly, stomach’. They do not list any non-Semitic cognates.

- B. Proto-Indo-European *k^{wh}rep^h-/*k^{wh}rp^h- ‘body, belly’: Sanskrit (instr. sg.) *kṛpā* ‘shape, beautiful appearance’; Avestan *kəhrp-* ‘body, corpse’; Latin *corpus* ‘body’; Old Irish *crí* ‘body, shape, frame’; Old English *hrif* ‘womb, stomach’, also -(h)rif in *mid(h)rif* ‘diaphragm, entrails’; Old Frisian *href*, *hrif* ‘stomach’, also -ref in *midref* ‘diaphragm’; Old High German *href* ‘belly, womb, abdomen’. Pokorny 1959:620 *krep-, *kṛp- (or *k^uerp- ?) ‘body, abdomen, belly, shape’; Walde 1927—1932.I:486—487 *qrep-, *qṛp- (or *q^uerp- ?); Mann 1984—1987:1051—1052 *qurp- ‘turn, shape, form, body’; Watkins 1985:34 *k^wrep- and 2000:46 *k^wrep- ‘body, form, appearance’; Mallory—Adams 1997:76 *kréps ‘body’; Mayrhofer 1956—1980.I:260; Ernout—Meillet 1979:144 *kṛp-; Walde—Hofmann 1965—1972.I:277—278 *q^urep-, *q^urp-; De Vaan 2008:137—138; Orël 2003:185 Proto-Germanic *xrefaz; Kroonen 2013:244 Proto-Germanic *hrefiz- ‘stomach’; Onions 1966:575; Klein 1971:168 *q^wrep-, *q^wrp- and 464.
- C. Proto-Uralic *kur3 ‘body, form, figure’: Lapp / Saami *gorod* ‘body, especially the carcass of a slaughtered animal’; Vogul / Mansi *qwar* ‘form, figure’; Ostyak / Xanty *kör* ‘form, figure’. Collinder 1955:13 and 1977:34; Rédei 1986—1988:216—217 *kur3; Décsy 1990:101 *kura/*kerä ‘body’.

Buck 1949:4.11 body; 4.46 belly, stomach. Möller 1911:138—139; Bomhard—Kerns 1994:477—478, no. 323.

544. Proto-Nostratic (n.) *k^{wh}ur-a ‘worm, grub, maggot, insect’:

- A. Dravidian: Malayalam *kūra*, *kūrān* ‘insect, moth, cockroach’; Kannaḍa *kūre* ‘a kind of cloth-louse’. Burrow—Emeneau 1984:175, no. 1926.

- B. Proto-Indo-European **k^{wh}₂-mi-* ‘worm’: Sanskrit *kṛmi-h* ‘worm, insect’; Sindhi *kĩḍ* ‘worm, maggot, snail’, *kĩāri* ‘worms, moths’, *kĩāro* ‘maggoty’; Sinhalese *kimiyā* ‘worm, insect’; Farsi *kirm* ‘worm’; Albanian *krimb* ‘worm’; Old Irish *cruim* ‘worm’; Welsh *pryf* ‘worm’; Old Prussian *girmis* (for **kirmis*) ‘maggot’; Old Lithuanian *kirmis* ‘worm, grub’ (= Modern Lithuanian *kirmėlė* ‘worm’). Proto-Indo-European **k^{wh}₂-wi-* ‘worm’: Old Church Slavic *črѣvъ* ‘worm’; Czech *červ* ‘worm’; Polish *czerv* ‘grub, maggot’; Macedonian *crv* ‘worm’; Bulgarian *červej* ‘worm’; Russian *červ* [червь] ‘worm’. Pokorny 1959:649 **k^u₂mi-* ‘worm, maggot’; Walde 1927—1932.I:523 **q^u₂mi-*; Mann 1984—1987:1051 **q^u₂rmis* ‘worm, grub’, 1053 **q^u₂ruis* ‘worm’; Watkins 1985:34 **k^w₂mi-* ‘mite, worm’ and 2000:46 **k^w₂mi-* ‘worm’; Gamkrelidze—Ivanov 1984.II:533 **k^h₂mi-* and 1995.I:451 **k^h₂mi-* ‘worm’; Mallory—Adams 1997:649 **k^w₂rmis* ‘worm, insect’; Mayrhofer 1956—1980.I:261—262; Orël 1998:197; Huld 1984:82 **k^w₂mi-*; Shevelov 1964:475 and 478; Derksen 2008:93—94; Fraenkel 1962—1965.I:257; Smoczyński 2007.1:288—289 **k^u₂mi-*.
- C. Proto-Altaic **k^h₂ōro* ‘worm, gadfly’: Proto-Tungus **χirga-* ‘gadfly’ > Manchu *iža* ‘gadfly’; Evenki *irgakta* ‘gadfly’; Lamut / Even *irgɔt* ‘gadfly’; Negidal *iygakta* ‘gadfly’; Ulch *sižaqta* ‘gadfly’; Oroq *sižiqta* ‘gadfly’; Nanay / Gold *siğaqta* ‘gadfly’; Udihe *iga* ‘gadfly’. Proto-Mongolian **koro-kai* ‘worm, insect’ > Written Mongolian *qoruqai* ‘insects and worms in general’; Khalkha *χorχoy* ‘worm, insect’; Buriat *χorχoy* ‘worm, insect’; Kalmyk *χorχā* ‘worm, insect’; Ordos *χoroχō* ‘worm, insect’; Dagur *χorgō* ‘worm, insect’; Monguor *χorgwī*, *χorgui*, *χurgoi* ‘worm, insect’. Proto-Turkic **Kūrt* ‘worm’ > Old Turkish (Old Uighur) *qurt* ‘worm’; Karakhanide Turkish *qurt* ‘worm’; Turkish *kurt* ‘worm, maggot’; Gagauz *qurt* ‘worm’; Azerbaijani *gurd* ‘worm’; Turkmenian *gūrt* ‘worm’; Uzbek *qurt* ‘worm’; Uighur *qurut* ‘worm’; Karaim *qurt* ‘worm’; Tatar *qort* ‘worm’; Kirghiz *qurt* ‘worm’; Kazakh *qurt* ‘worm’; Tuva *qu’rt* ‘worm’; Chuvash *χort* ‘worm’; Yakut *kuržaya* ‘small parasites’. Starostin—Dybo—Mudrak 2003:807—808 **k^h₂ōro* ‘worm, gad-fly’.

Buck 1949:3.84 worm. Illič-Svityč 1971—1984.I:358, no. 234, **Kora* ‘to gnaw; worm’; Bomhard—Kerns 1994:485—486, no. 332.

22.26. PROTO-NOSTRATIC *k'w

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
k'w-	k'w-	k-	k'w/u-	k'w-	k-	k-	k- q-
-k'w-	-k'w-	-k(k)-	-k'w/u-	-k'w-	-k-	-k-	-k- -q-

545. Proto-Nostratic root *k'wad- (~ *k'wad-):

(vb.) *k'wad- 'to strike, to beat, to smash, to pound';

(n.) *k'wad-a 'knock, stroke, thrust'

Note also:

(vb.) *k'wed- 'to destroy, to damage, to ruin; to decay, to rot, to spoil';

(n.) *k'wed-a 'death, destruction, damage, ruin, decay'

- A. Dravidian: [Tamil *kuṭṭu* (*kuṭṭi*-) 'to cuff, to strike with the knuckles on the head or temple'; Malayalam *kuṭṭuka* 'to pound, to cuff'; Kota *kuṭ-* (*kuc-*) 'to pound'; Toda *kuṭ-* (*kuty-*) 'to knock, to pound'; Kannaḍa *kuṭṭu* '(vb.) to beat, to strike, to pound, to bruise; (n.) a blow, a pulverized substance', *kuṭṭuvike*, *kuṭṭuha* 'beating'; Koḍagu *kuṭṭ-* (*kuṭṭi*-) 'to pound'; Tuḷu *kuṭṭuni* 'to thump, to give a blow, to strike with the fist, to pound, to bruise'; Kolami *kuḍk-* (*kuḍukt-*) 'to pound grain', *kuḍkeng* 'to knock on the door'; Naikri *kuṛk-* 'to pound, to knock'; Parji *kuṭip-* (*kuṭit-*) 'to punch, to knock (door)'; Koṇḍa *guṭ-* 'to knock with the fist'; Kui *guṭ-* 'fist'. Burrow—Emeneau 1984:153, no. 1671. Tamil *koṭṭu* (*koṭṭi*-) '(vb.) to beat (as a drum, tambourine), to hammer, to beat (as a brazier), to clap, to strike with the palms, to pound (as paddy); (n.) beat, stroke, drumbeat, time-measure', *koṭṭāṇ*, *koṭṭaṇ* 'mallet', *koṭu* 'to thrash, to abuse roundly', *koṭai* 'blows, round abuse'; Malayalam *koṭṭuka* 'to beat so as to produce a sound (a drum, metals, bells), to clap hands', *koṭṭu* 'beating a drum, clapping hands, buffet, knocking of knees against each other', *koṭṭi* 'mallet', *koṭukka* 'to flog'; Kota *koṭk-* (*koṭky-*) 'to strike (with small hammer), to knock on (door), to strike tipcat in hole in ground'; Toda *kwīṭk-* (*kwīṭky-*) 'to tap (on door, something with stick)', *kwīṭ fiṭ* 'woodpecker'; Kannaḍa *koḍati*, *koḍanti* 'a wooden hammer', *koṭṭaṇa* 'beating the husk from paddy', *koṭṭuha* 'beating', *kuḍu* 'to beat'; Koḍagu *koṭṭ-* (*koṭṭi*-) 'to tap, to beat (drum)'; Tuḷu *koḍapuni* 'to forge, to hammer'; Telugu *koṭṭu* '(vb.) to beat, to strike, to knock; to strike (as a clock); (n.) a blow, stroke'; Parji *koṭṭ-* 'to strike with an axe'; Gadba (Ollari) *koṭ-* 'to strike with an axe'; Gondi *koṭ-* 'to cut with an axe', *koṭela* 'mallet'; Pengo *koṭ-* 'to thresh with flail'; Kuwi *koṭoli* 'mallet'; Kurux *xoṭṭnā* (*xoṭṭyas*) 'to break, to smash, to pierce, to break open'; Malto *qoṭe* 'to break, to knock, to strike', *qoṭure* 'to knock

against'. Burrow—Emeneau 1984:187, no. 2063.] Either here or with **k'ud-* (~ **k'od-*) '(vb.) to strike; (n.) stroke, blow, knock, cuff, thump'.

- B. Proto-Indo-European **k'wedh-/k'wodh-* 'to strike, to beat, to smash': Middle High German *quetzen*, *quetschen* 'to bruise, to mash, to crush' (New High German *quetschen*); Middle Low German *quetsen*, *quessen*, *quetten* 'to crush, to squeeze'; Dutch *kwetsen* 'to injure, to wound'; Swedish *kvadda* 'to smash to pieces'. Pokorny 1959:466—467 **g^uedh-* 'to thrust, to injure'; Walde 1927—1932.I:672—673 **g^uedh-*; Mann 1984—1987:351 **g^uādhs-* 'to squeeze; tight, close'; Kluge—Mitzka 1967:574—575 **g^uedh-*; Kluge—Seebold 1989:575; Rietz 1867.I:368; Vercoullie 1898:160; Schiller—Lübben 1875—1881:3:404 and 3:406.
- C. Proto-Eskimo **kaḍuy-* 'to strike (with an instrument)': Alutiiq Alaskan Yupik *kauy-* 'to strike with an object'; Central Alaskan Yupik *kauy-* 'to strike with an object'; Naukan Siberian Yupik *kaaw-* 'to strike with a hammer'; Central Siberian Yupik *kaaw-* 'to strike with a hammer'; Seward Peninsula Inuit *kauk-* 'to strike with a hammer'; North Alaskan Inuit *kažuk-* 'to hit on the head', *kauk-* 'hammer'; Western Canadian Inuit *kauk-* 'hammer'; Eastern Canadian Inuit *kauk-* 'to hit with an object'; Greenlandic Inuit *kaat-* 'hammer'. Fortescue—Jacobson—Kaplan 1994:151. Proto-Eskimo **kaḍ(ḍ)uyun* and **kaḍuyutar* 'hammer': Alutiiq Alaskan Yupik *kau<y>utaq* 'club'; Central Alaskan Yupik *kauyun* 'hammer'; Central Siberian Yupik *kaayusiq* 'hammer'; Seward Peninsula Inuit *kažžuun*, *kažžuutaq* 'hammer'; North Alaskan Inuit *kautaq* 'hammer', *kažžuutaq* 'stone hammer'; Western Canadian Inuit *kautaq* 'hammer'; Eastern Canadian Inuit *kautaq* 'hammer'; Greenlandic Inuit *kaataq* 'hammer'. Fortescue—Jacobson—Kaplan 1994:151. Proto-Inuit **kauyaq-* 'to pound' > Seward Peninsula Inuit *kauya(q)-* 'to knock at the door'; Western Canadian Inuit *kauyaq-* 'to beat blubber, etc.'; Eastern Canadian Inuit *kauyaq-* 'to beat frozen blubber or peat for runners'; Greenlandic Inuit *kauyar-* 'to beat frozen blubber'. Fortescue—Jacobson—Kaplan 1994:151.

Buck 1949:9.21 strike (hit, beat); 9.49 hammer (sb.). Bomhard—Kerns 1994:495—496, no. 342.

546. Proto-Nostratic (n.) **k'wad-a* 'hind part, end, tail':

- A. Afrasian: Highland East Cushitic: Burji *k'ud-ee* (adv.) 'in back of, behind' (< 'hind-part, back, end'). Sasse 1982:128; Hudson 1989:208.
- B. (?) Dravidian: Tamil *kūti* 'pudendum muliebre'; Malayalam *kūti* 'posteriors, membrum muliebre'; Toda *ku-ṭy* 'anus, region of the buttocks in general'; Tuḷu *kūdi* 'anus, posteriors, membrum muliebre'. Burrow—Emeneau 1984:172, no. 1888.

- C. Proto-Kartvelian *k'wad- 'tail': Georgian *k'ud-* 'tail, end'; Mingrelian *k'ud-el-* 'tail'; Laz *k'ud-el-* 'tail'; Svan *ha-k'wäd, hä-k'ed, a-kwed, a-kwaṭ* 'tail'. Klimov 1964:117 **kud-* and 1998:103 **kud-* (**kwed-*) 'tail'; Schmidt 1962:120 **kod-*; Fähnrich 1994:222 and 2007:232 **kwad-*; Fähnrich—Sardshweladse 1995:192 **kwad-*.

Sumerian *gu-di, gu-du, gú-du, gudu₅* 'hind-quarters, backside, buttock'.

Buck 1949:4.18 tail. Illič-Svityč 1971—1984.I:327—328, no. 203, **kudi* 'tail'; Bomhard 1996a:232, no. 650.

547. Proto-Nostratic root *k'wāh- (~ *k'wāh-):

- (vb.) *k'wāh- 'to hit, to strike, to beat, to pound; to push or press in';
 (n.) *k'wāh-a 'club, cudgel'; (adj.) 'hit, beaten, pounded, pushed or pressed together, crammed, filled'
- A. Proto-Afrasian *k'wāh- 'to hit, to strike, to beat, to pound; to push or press in': Proto-Semitic *k'āh- (*k'āh-am-, *k'āh-at-, *k'āh-ap-, *k'āh-a3-) 'to hit, to strike, to beat, to pound; to push or press in' > Arabic *kaḥama* 'to push, to drag (someone into something), to involve; to introduce forcibly, to cram (something into); to plunge, to rush, to hurtle (into something); to jump, leap, or dive into something', *kaḥaṭa* 'to beat violently', *kaḥafa* 'to beat on the skull, to break one's skull, to wound at the head', *kaḥaza* 'to cudgel', *kaḥzala* 'to throw down and cudgel', *kaḥzana* 'to cudgel one so as to make him drop down'; Šheri / Jibbāli *kaḥām* 'to jump'. Zammit 2002: 333—334. Egyptian *qhqh* 'metal workers', *qhqh* 'to hew stones, to beat metal, to drive'; Coptic *kahkh* [kʌʔkʔ] 'to hew out, to smooth'. Hannig 1995:865; Faulkner 1962:281; Erman—Grapow 1921:192 and 1926—1963.5:67; Vycichl 1983:92; Černý 1976:68. Proto-Southern Cushitic *k'wāh- or *k'ooḥ- 'to throw down and club' > Iraqw *kwaḥ-* 'to throw'; Burunge *kwaḥ-* 'to throw'; Alagwa *kwaḥ-* 'to throw'; Dahalo *k'ook'oh-* 'to club'. Ehret 1980:269 *k'wāh- or *k'ooḥ- 'to wield, to swing'. Ehret 1995:244, no. 441, *k'wāh- 'to pound'.
- B. Proto-Kartvelian *k'wex- 'to push in, to fill in': Georgian *k'vex-* 'to push in, to fill in'; Mingrelian *k'vax-* 'to push in, to fill in'. Klimov 1998:94 **kwex-* 'to push, to fill in'; Fähnrich—Sardshweladse 1995:201 **kwex-*; Fähnrich 2007:242 **kwex-*.
- C. Proto-Indo-European *k'wēh₂-dh- [*k'wāh₂-dh-] (> *k'wād₂-) 'to push or press in, to dive or plunge into': Sanskrit *gāhate* 'to dive into, to bathe in, to plunge into; to penetrate, to enter deeply into', *gādhā-h* 'pressed together, close, fast, strong, thick, firm'; Prakrit *gāhadi* 'to dive into, to seek'; Sindhi *gāhanu* 'to tread out grain'; Punjabi *gāhnā* 'to tread out, to tread under foot, to travel about'; Hindi *gāhnā* 'to tread out, to caulk'; Serbo-Croatian *gāziti* 'to wade, to tread', *gaz* 'ford'. Mann 1984—

1987:351 **gūādh-* ‘deep; depth; to plunge, to immerse’, 351 **gūādh-* ‘to squeeze; tight, close’; Mayrhofer 1956—1980.I:333 and I:334—335.

Buck 1949:10.65 drive (vb. tr.); 10.67 push, shove (vb.).

548. Proto-Nostratic root **kʷal-* (~ **kʷəl-*):

(vb.) **kʷal-* ‘to go: to go away from, to go after or behind’;

(n.) **kʷal-a* ‘track, way’

- A. Afrasian: Proto-Southern Cushitic **kʷaal-* ‘to come from’ > Iraqw *qwal-* ‘to come along’; Kʷadza *kʷalas-* ‘to send (person)’; Maʿa *kwa* ‘from’. Ehret 1980:268.
- B. Proto-Kartvelian **kʷal-* ‘track, trace’: Old Georgian *kʷalad* ‘then, again’, *kʷalta* ‘after, following’; Georgian *kʷal-* ‘track, trace’, *kʷal-da-kʷal* ‘right behind’; Mingrelian [*kʷul-*] in *u-kʷul-i* ‘after, then’; Laz [*kʷul-*] in *o-kʷul-e* ‘after’, (postposition) *-kʷule* ‘after’. Klimov 1998:90—91 **kʷal-* ‘track, footprint’; Fähnrich—Sardshweladse 1995:193 **kʷal-*; Fähnrich 2007:232 **kʷal-*.
- C. Indo-European: Tocharian A *kälk-*, *kalk-* used to form the non-present tenses of *i-* ‘to go’, B *kālak-* ‘to follow’. Assuming development from Proto-Indo-European **kʷel-/kʷol-/kʷl-* ‘to go, to follow’, attested only in Tocharian (cf. Adams 1999:147 and 2013:155—156). Van Windekens (1976—1982.I:625—626), on the other hand, assumes that the Tocharian forms are loans from Uralic. However, this proposal is rejected by Adams.

Buck 1949:10.49 go away, depart; 10.52 follow; 10.63 send.

549. Proto-Nostratic root **kʷalv-* (~ **kʷəlv-*):

(vb.) **kʷalv-* ‘to gush forth, to overflow; to flow, to leak, to ooze, to drip, to trickle’;

(n.) **kʷalv-a* ‘gush, flow, drip, trickle; river, stream, spring’

- A. Dravidian: Kolami *ku-l-* (*ku-ṭ-*) ‘(water) to run from a punctured vessel or tap’, *ku-lp-* (*ku-lupt-*) ‘to puncture (vessel) so that water runs out’; Naikri *kūḷ-* ‘to leak’. Burrow—Emeneau 1984:174, no. 1919. Perhaps also: Tamil *kuḷi* ‘(vb.) to bathe, to wash one’s body up to the neck, to take purificatory bath after menstruation, to dive for pearls; (n.) bath, ablution, diving’, *kuḷippu*, *kuḷiyal* ‘washing, bathing’; Malayalam *kuḷi* ‘bathing, ablution’, *kuḷikka* ‘to wash, to bathe, to plunge into water’; Koḍagu *kuḷi* (*kuḷip-*, *kuḷic-*) ‘to take bath’, *kuḷipēkī* ‘menstruation’ (literally, ‘need to bathe’), *kuḷi mane* ‘menstrual hut’, *kuḷip* ‘bathing’, *kuḷiyame* ‘pregnancy’ (literally, ‘need not to bathe’); Tuḷu *kuḷuṅkuni* ‘to wet, to moisten’, *koḷambē* ‘bath’. Burrow—Emeneau 1984:166, no. 1832. For the semantics, cf. Greek βαλανείον ‘bath, bathing-room’, cited below.

- B. Proto-Indo-European **k'wel(H)-/*k'wol(H)-/*k'w̥l(H)-* 'to gush forth, to overflow; to flow, to leak, to ooze, to drip, to trickle': Sanskrit *gálati* 'to drip, to drop, to ooze, to trickle, to distill', *gāla-h* 'flowing, liquefying', *galana-h* 'dropping, flowing'; Greek βλύω, βλύζω (future βλύσω) 'to bubble up, to gush forth', βλύσις 'a bubbling up', (?) βαλανεῖον 'bath, bathing-room'; Old Danish *kval* 'steam, vapor, mist, haze'; Old English *collen-* in *collen-fer(h)þ* 'proud, elated, bold' (< **cwellan* 'to swell') and *collen-ferhtan* 'to embolden', *cwylla* 'well, spring'; Old Saxon *quella* 'well, spring'; Old High German *quellan* 'to gush (forth), to well (up); to issue, to flow, to spring (from)' (New High German *quellen*), *quella* 'spring, source, fountain, well' (New High German *Quelle*). Rix 1998a:185 **g^uelH-* 'to gush (forth), to well (up)'; Pokorny 1959:471—472 **g^uel-*, **g^uelə-*, **g^ulē-* 'to drip, to drop, to trickle; to gush (forth), to well (up); to issue, to flow, to spring (from)'; Walde 1927—1932.I:690—692 **g^uel-*, **g^uelē(i)-*; Mallory—Adams 1997:207 **g^wel(s)-* 'to well up, to flow' and 2006:393, 394 **g^wel(s)-* 'to well up, to flow'; Boisacq 1950:113 **g^uelē-* and 124; Hofmann 1966:31 and 36; Beekes 2010.I:195 and I:222—223 — Beekes rejects the comparison of Greek βλύω, βλύζω 'to bubble up, to gush forth' with Sanskrit *gálati* 'to drip, to drop, to ooze, to trickle, to distill' and Old High German *quellan* 'to gush (forth), to well (up); to issue, to flow, to spring (from)'; Frisk 1970—1973.I:212 and I:246; Chantraine 1968—1980.I:159—160 and I:182; Orël 2003:227 Proto-Germanic **kwellanan*; Kluge—Mitzka 1967:574 **g^uel-*; Kluge—Seebold 1989:575; Mayrhofer 1956—1980.I:329.
- C. (?) Chukchi-Kamchatkan: Proto-Chukotian **kujul* 'narrow river' (?) > Chukchi *kuul(kuul)* 'small, deep river'; Koryak *kujul* 'small bay, creek'. Fortescue 2005:140.

Sumerian *gul* 'to flow, to stream'.

Buck 1949:1.36 river; stream; brook; 9.36 wash; 10.32 flow (vb.). Bomhard—Kerns 1994:513—514, no. 362; Dolgopolsky 2008, no. 877a, **kuÍV* 'to flow, to gush, to leak'.

550. Proto-Nostratic root **k'wam-* (~ **k'wəm-*):

- (vb.) **k'wam-* 'to burn slowly, to smolder; to be hot, to be red-hot, to be glowing; to smoke';
 (n.) **k'wam-a* 'embers, ashes; heat; smoke'

A. Afrasian: Semitic: Akkadian *ḫamū* 'to burn, to consume by fire'.

B. Dravidian: Tamil *kumpu* (*kumpi-*) 'to become charred (as food when boiled with insufficient fire)', *kumai* 'to be hot, sultry'; Malayalam *kumpal* 'inward heat', *kummu* expression descriptive of heat, *kumuruka*, *kumiruka* 'to be hot, close', *kumural* 'oppressive heat'; Kannada *kome* 'to begin to

burn (as fire or anger)'; Tuḷu *gumulu* 'fire burning in embers', *gumuluni* 'to be hot, to feel hot (as in a fit or fever)'; Telugu *kummu* 'smoldering ashes', *kumulu* 'to smolder, to burn slowly underneath without a flame, to be consumed inwardly, to grieve, to pine'; Gondi *kum* 'smoke'. Burrow—Emeneau 1984:159—160, no. 1752.

- C. Proto-Kartvelian **k'wam-/k'wm-* 'to smoke': Georgian *k'm-* 'to smoke' (Old Georgian *k'um-* 'to smoke', *k'umeva-* 'to burn [incense]', *sak'umevel-* 'fragrance, perfume'); Mingrelian *k'um-* 'to smoke', *k'um-a* 'smoke', *o-k'umap-u* 'censer'; Laz *(m)k'om-* 'to smoke', *k'om-a* 'smoke'; Svan *k'wām-* 'to smoke'. Klimov 1964:108—109 **kwam-/kwm-* and 1998:91 **kwam-/kwm-* 'to smoke'; Fähnrich—Sardshweladse 1995:193—194 **kwam-*; Fähnrich 2007:233—234 **kwam-*; Schmidt 1962:119. Proto-Kartvelian **k'wam-l-* 'smoke': Georgian *k'vaml-* 'smoke'; Svan *k'wām* 'smoke, smut'. Klimov 1964:108 **kwaml-* and 1998:91 **kwam-l-* 'smoke'.
- D. Uralic: Proto-Finno-Volgaic **kūma* 'hot, red-hot; fever' > Finnish *kuuma* 'hot', *kuume* 'fever', *kuumoitta-* 'to make hot, to heat', *kuumuus* 'heat'; Estonian *kuum* 'hot, red-hot', *kuuma-* 'to be red-hot, to glow', *kuumata-* 'to make red-hot'; Mordvin (Erza) *kumoka* 'fever'. Rédei 1986—1988:675—676 **kūma*.

Buck 1949:1.83 smoke (sb.); 1.85 burn (vb.). Bomhard 1996:213—214, no. 613; Hakola 2000:87, no. 360.

551. Proto-Nostratic root **k'wan-* (~ **k'wən-*):

(vb.) **k'wan-* 'to suckle, to nurse; to suck';

(n.) **k'wan-a* 'udder, bosom, breast'

Derivative:

(n.) **k'wan-a* 'woman, wife'

- A. Proto-Afrasian **k'wan-* '(vb.) to suckle, to nurse; to suck; (n.) udder, bosom, breast': Proto-Semitic **k'an-aw/y-* 'to suckle, to nurse; to rear, to bring up' > Mehri *ḵənū* 'to rear, to look after; to suckle'; Soqotri *ḵāne* 'to suckle, to bring up', *ḵānhoh* 'baby animal'; Šheri / Jibbāli *ḵéní* 'to rear, to look after, to bring up; to suckle', *məḵəni* 'baby'; Ḥarsūsi *ḵenō* 'to bring up, to rear', *meḵnáyw* 'baby boy'. (?) Egyptian *qní* '(vb.) to embrace; (n.) bosom, embrace', *qníw* 'embrace, bosom', *qnqn* 'to eat, to feed'; Demotic *qn* 'breast'; Coptic *kun(t)-* [ⲕⲟϥⲛ(ⲧ)-] 'bosom, breast', also sometimes 'genitals'. Hannig 1995:859 and 862; Faulkner 1962:280; Erman—Grapow 1921:190 and 1926—1963.5:50—51, 5:56; Gardiner 1957:596; Vycichl 1983:82; Černý 1976:59. East Cushitic: Kambata *k'an-* 'to suck (tr.), to nurse (intr.)', *k'an-s-* 'to nurse (tr.)'; Sidamo *k'an-* 'to suck (tr.), to nurse (intr.)', *k'an-s-* 'to nurse (tr.)'. Proto-East Cushitic **k'and₁-* 'udder' > Burji *k'án?-i*, *k'ánd-i* 'clitoris'; Somali *qanj-id* 'lymphatic gland'; Dasenech *fan-* 'udder'; Konso *qand-itta* 'udder; swollen or abnormally big "gland"';

Hadiyya *gan-ce* ‘udder’; Gollango *gan-te* ‘udder’. Sasse 1982:124; Hudson 1989:106 and 146.

Comment: Militarëv—Kogan (2000.I:148, no. 163) reconstruct Proto-Semitic (n.) **kaṇṭīr*- ‘clitoris’ on the basis of the following: Arabic (Daḡina) *kantār* ‘clitoris’; Tigrinya *kəntər*, *kəntirāt* ‘clitoris, female genital organ’; Amharic *kinṭər* ‘clitoris’; Harari *kəntər* ‘male organ’; Gurage *kəntər* ‘clitoris, female genital organ’; Soqotri *kənthir* ‘vulva’. They remark: “Note Arb. *kaṇṭ*- ‘verge chez un petit garçon’ [‘boy’s penis’] [BK 2 822] probably pointing to an original form without the *-r* element; note also a meaning shift in Harari.” These forms may ultimately go back to Proto-Semitic (unextended forms) (vb.) **k’an*- ‘to suckle, to nurse; to rear, to bring up’, (n.) **k’an*- ‘breast, bosom’; (extended form) (n.) **k’an-t*- ‘female genital organ’ — obvious semantic shifts in Arabic *kaṇṭ*- ‘boy’s penis’ and Harari *kəntər* ‘male organ’. Militarëv—Kogan do not list any non-Semitic cognates.

- B. Dravidian: Tamil *koṅkai* ‘woman’s breast, protuberance of a tree’; Malayalam *koṅka* ‘woman’s breast’, *koṅkacci*, *koṅkicci* ‘woman with full breasts’; Kui *kanguṛi* ‘nipple, teat’. Burrow—Emeneau 1984:184, no. 2038.

Buck 1949:4.41 breast (of woman); 4.42 udder; 5.16 suck. Bomhard—Kerns 1994:498—499, no. 347.

552. Proto-Nostratic (Eurasian only) (n.) **k^wan-a* ‘woman, wife’:

Derivative of:

(vb.) **k^wan*- ‘to suckle, to nurse; to suck’;

(n.) **k^wan-a* ‘udder, bosom, breast’

Semantic development as in Latin *fēmina* ‘female, woman’ from the same root as in *fēlō* ‘to suck’, hence, ‘one who gives suck’.

- A. Proto-Indo-European **k^wen*- ‘woman, wife, female’: Sanskrit *gnā* ‘wife’, *jāni-h* ‘woman, wife’, *jāni-h* ‘wife’; Avestan *gənā*, *γnā* ‘woman, wife’, *jaini-* ‘wife’; Armenian *kin* ‘woman, wife’; Greek γυνή (Doric γυνά, Boeotian βανᾶ) ‘woman, wife’, γύννις ‘a womanish man’; Albanian *zonjë* ‘wife, lady, mistress (of a house), house-keeper’; Old Irish *ben* ‘woman’; Gothic *qinō* ‘woman, female’, *qineins* (adj.) ‘female’, *qēns* ‘wife’; Old Icelandic *kona* ‘woman, wife’, *kvæn*, *kván* ‘wife’; Faroese *kona* ‘woman, wife’; Norwegian *kona* ‘woman, wife’, (dial.) *kvaan* ‘wife’; Swedish *kona* ‘woman, wife’; Danish *kone* ‘woman, wife’; Old English *cwene* ‘woman, female, serf; prostitute’, *cwēn* ‘queen, wife’; Old Saxon *cwena* ‘wife, woman’, *quān* ‘queen, wife’; Old High German *quena* ‘woman, wife’; Old Prussian *genno* ‘woman’; Old Church Slavic *žena* ‘woman, wife’; Russian

žená [жена] ‘wife’; Tocharian A *śām*, B *śana* ‘wife’; Hittite **ku(w)an(a)-* ‘woman’; Luwian (dat.-loc. sg.) *wa-a-ni* ‘woman’; Lydian *kāna-* ‘wife’. Pokorny 1959:473—474 **g^uēnā* ‘woman, wife’; Walde 1927—1932.I:681—682 **g^uenā*; Mann 1984—1987:355—356 **g^uenā*, **g^uənā*, **g^unā* ‘woman’, 356 **g^uen-*, 356 **g^uendhiyā* (**g^uendhiy-*) ‘woman, goddess’, 356 **g^uēnis*; Watkins 1985:25 **g^wen-* and 2000:34 **g^wen-* ‘woman’ (suffixed form **g^wen-ā-*); Gamkrelidze—Ivanov 1984.I:92, II:758 **k[’]oen-* and 1995.I:80 **k[’]oen-* ‘woman; wife’, I:660—661; Mallory—Adams 1997:648 **g^wénh_a* ‘woman’ and 2006:204 **g^wénh_a* ‘woman’; Mayrhofer 1956—1980.I:351, I:416, and I:429; Boisacq 1950:158 **g^uenā*; Beekes 2010.I:291—292 **g^wen-h₂*; Chantraine 1968—1980.I:242—243 **g^wen-*; Frisk 1970—1973.I:333—335 **g^uen-*; Hofmann 1966:49 **g^uenā*; Orël 2003:228 Proto-Germanic **kwenīnan*, 228 **kwenōn*; Kroonen 2013:316—317 Proto-Germanic **kwēni-* ‘wife’; Feist 1939:386 **g^uenā-*, **g^ueni-* and 388 **g^uenā*; Lehmann 1986:275—276 **g^wēnā* ‘woman, wife’ and 277; De Vries 1977:325, 336, and 339; Torp 1919:307; Falk—Torp 1903—1906.I:401; Onions 1966:731 **g^wen-*, **g^wn-*; Klein 1971:609 **g^wenā-*, **g^wūnā* ‘woman’; Kloekhorst 2008b:501—505; Puhvel 1984— .4:306—308 **g^won-s* or **g^wen-s*; Adams 1999:621 **g^wenh_a*; Van Windekens 1976—1982.I:476—477 **g^uenā*; Derksen 2008:558 **g^wen-eh₂* and 2015:558 **g^wen-eh₂*; Huld 1983:136; Wodtko—Irslinger—Schneider 2008:177—185 **g^uén-*, **g^uon-*, **g^u(e)n(a)h₂-*.

- B. Proto-Altaic **kune* (~ **g-*) ‘one of several wives’: Proto-Turkic **gūni* ‘(n.) co-wife; envy, jealousy; jealous, envious person; (vb.) to be jealous, envious’ > Old Turkic (Old Uighur) *kūni* ‘envy, jealousy’; Karakhanide Turkic *kūni* ‘co-wife’; Turkish *gönü* ‘co-wife; envy, jealousy’; Azerbaijani *günü* ‘co-wife’; Turkmenian *gūni* ‘co-wife’; Uzbek *kundaš* ‘co-wife’, *kunči* ‘jealous, envious person’; Uighur *kündäš* ‘co-wife’, *kün-lü-* ‘to be jealous, envious’, *kün-či* ‘jealous, envious person’; Tatar *köndäš* ‘co-wife’, *kön-če* ‘jealous, envious person’, (dial.) *kene* ‘envy, jealousy’; Bashkir *köndäš* ‘co-wife’, *kön-lä-* ‘to be jealous, envious’, *könsö* ‘jealous, envious person’; Karaim *kündeš* ‘co-wife’, *kün-le-*, *künü-le-*, *könü-le-* ‘to be jealous, envious’; Kirghiz *künü*, *kündöš* ‘co-wife’, *künü-lö-* ‘to be jealous (of women)’; Kazakh *kündes* ‘co-wife’, *kün-de-* ‘to be jealous, envious’; Noghay *kündes* ‘co-wife’, *kün-le-* ‘to be jealous, envious’; Oyrot (Mountain Altai) *künü* ‘envy, jealousy’; Tuva *χün-ne-* ‘to be jealous, envious’; Yakut *künü* ‘envy, jealousy’. Starostin—Dybo—Mudrak 2003:739—740 **kune* (~ **g-*) ‘one of several wives’.

Buck 1949:2.22 woman; 2.32 wife; 4.41 breast (of woman); 4.42 udder. Bomhard—Kerns 1994:498—499, no. 347; Illič-Svityč 1965:340 **k/u/na* [‘женщина’] ‘woman’ and 1971—1984.I:306—308, no. 178 **kūni* ‘woman’; Dolgopolsky 2008, no. 896, **koñi* (or **kuñi*) ‘woman, wife’; Greenberg 2002:187, no. 431.

553. Proto-Nostratic root *k'war- (~ *k'wər-):

(vb.) *k'war- 'to be cold';

(n.) *k'war-a 'cold, coldness'

- A. Proto-Afrasian *k'war- (~ *k'wər-) 'to be cold': Proto-Semitic *k'ar-ar- 'to be cold' > Hebrew *kārar* [כָּרַר] 'to be cold', *kar* [קָר] 'cool', *kōr* [קָר] 'cold', *kerer* [כֶּרֶר] 'cold'; Aramaic *kərar* 'to be cold', *kārīrā* 'cold'; Syriac *karīr* 'cold'; Arabic *karra* 'to be cold, chilly, cool', *kurr* 'cold, coldness, chilliness, coldness', *kirra* 'cold, coldness, chilliness, coldness'; Mandaic *karir(a)* 'cold'; Geez / Ethiopic *kwarra* [ቁረ], *kwarara* [ቁረረ] 'to be cold, cool; to cool down (anger), to subside (fire)', *kwarra* [ቁረ] 'cold, coldness', *kwarir* [ቁረር] 'cold, cool', *korar* [ቁረር] 'ice'; Tigre *kārra* 'to become cool'; Tigrinya *k'wārrārā* 'to become cool' (Geez loan), *k'warri*, *kurri* 'cold'; Amharic *k'wārrārā* 'to be cold', *k'warra* 'cold'; Gurage *korra* 'morning frost'. Murtonen 1989:384; Klein 1987:597; Leslau 1979:495 and 1987:443—444; Militarev 2010:59 Proto-Semitic *k'wrr-; Zammit 2002:337. Proto-Semitic *k'ar-ax- '(vb.) to freeze; (n.) frost, ice' > Akkadian *karhu* 'ice', *karāhu* 'to become iced up'; Hebrew *kerah* [כֶּרֶח] 'frost, ice'; Syriac *karhā* 'frost, ice'. Murtonen 1989:386—387; Klein 1987:593. Arabic *karisa* 'to be severe, fierce, biting, grim (the cold); to freeze, to make torpid; to (be) numb; to nip (someone, something; of cold)', *kāris* 'severe, fierce, biting, grim (of the cold), very cold, bitterly cold, freezing, frozen'. Militarev 2010:59 Proto-Semitic *krš-. West Chadic *k'arar- 'cold (of water, weather)' > Hausa *karara* 'cold (of water, weather)'. Highland East Cushitic *k'or(r)- 'cold' > Sidamo *k'orra* 'frost'. Hudson 1989:381. Lowland East Cushitic *k'or(r)- 'intense cold' > Galla / Oromo *k'orro* 'intense cold'. Orël—Stolbova 1995:338, no. 1554, *kar- '(to be) cold', 346, no. 1591, *kor- (n.) 'cold' (derived from *kar- 'to be cold'), and 353, no. 1627, *kVrVs- 'to freeze'.
- B. Dravidian: Kannada *kore*, *kori* 'to pierce (as cold)', *koreta*, *korata* 'the piercing of cold'; Kota *korv-* (*kord-*) 'to be cold', *kor*, *korv* 'coldness'; Gondi *kharrā* 'frost', *karīng*, *koring* 'cold'; Toda *kwar-* (*kwarθ-*) 'to feel cold', *kwar* 'cold', *kwar-* (*kwarθ-*) 'to be cold (in songs)'; Kolami *korale* 'cold'. Burrow—Emeneau 1984:195, no. 2168; Krishnamurti 2003:110 *koṭ-ay 'to pierce'.
- C. Kartvelian: Georgian (Lečxumian) *k'rux-wa* 'cold'; Svan *k'warem* 'ice', *k'warmob* 'frost, freezing', *lik'wremi* 'to freeze'.

Buck 1949:1.77 ice; 15.86 cold. Bomhard—Kerns 1994:492—493, no. 340.

554. Proto-Nostratic root *k'war- (~ *k'wər-):

(vb.) *k'war- 'to rest, to stay, to remain';

(n.) *k'war-a 'stillness, quietude, repose, rest, resting place'; (adj.) 'still, quiet, at rest'

- A. Proto-Afrasian (?) **k'war-* 'to stay, to remain, to rest, to settle down': Proto-Semitic **k'ar-ar-* 'to stay, to remain, to rest, to settle down' > Moabite *kr* 'town'; Ugaritic *kr* 'dweller (?)', dwelling (?); Arabic *qarra* 'to settle down, to establish oneself, to become settled or sedentary, to take up one's residence, to rest, to abide, to dwell, to reside, to remain, to stay, to linger', *maqarr* 'abode, dwelling, habitation; residence; storage place; seat, center; site, place; station; position (at sea)', *qarār* 'fixedness, firmness, solidity; sedentariness, settledness, stationariness, sedentation; steadiness, constancy, continuance, permanency, stability; repose, rest, stillness, quietude; duration; abode, dwelling, habitation; residence, resting place'; Sabaeen *krr* 'settlement'. Zammit 2002:337. Proto-Semitic **k'ar-ay-* '(vb.) to stay, to remain, to settle down; (n.) town, village, settled area' > Arabic *qarya* 'village, hamlet, small town, rural community'; Hebrew *qiryāh* [קִירְיָה] 'town, city'; Palmyrene *qry* 'settled area'; Tigrinya *qārāyā* 'to remain'; Amharic *qārrā* 'to be left, to remain, to be missing, to be absent; to stay away, to absent oneself'; Gurage (Muher) *qārrā*, (Gogot) *qerrā*, (Soddo) *qirrā* 'to be absent, to stay away, to remain behind, to disappear, to vanish, to be lost'. Murtonen 1989:385; Klein 1987:593—594; Leslau 1979:494. Berber: Tuareg *ayrām* 'town, village', *tayrāmt* 'a small village, small castle'; Mzab *ayrām* 'city, town, village, town surrounded by ramparts'; Nefusa *ayrām* 'town'; Zenaga *irmi* 'village, settlement'; Tamazight *iyrām* 'village, fortified village, granary', *tiyrāmt* 'fortified house'. Cushitic: Highland East Cushitic: Hadiyya *k'arar-* 'to settle (out)'; Kambata *k'arar-* 'to settle (out)'. Hudson 1989:288 and 328.
- B. (?) Dravidian: Kannada *kūr* 'to sit down', *kūrisu* 'to cause to sit'; Telugu *kūr(u)cunḍu* 'to sit, to be seated'; Pengo *kuc-* 'to sit'; Maṇḍa *kuh-* 'to sit'. Burrow—Emeneau 1984:173, no. 1900.
- C. Proto-Indo-European **k'wer-/k'wor-/k'w̥r-* 'gentle, mild, calm, at rest, still': Gothic *qairrus* 'friendly, gentle', *qairrei* 'gentleness'; Old Icelandic *kvirr*, *kyrr* 'still, quiet, at rest', *kyrra* (f.) 'calmness, calm', *kyrra* 'to calm, to still; to become calm'; Faroese *kyrrur* 'still, quiet', *kyrra* 'to calm, to domesticate, to tame'; Norwegian *kyrr*, *kjorr*, *kvar*, *kver* 'still, quiet', *kjorra* 'to domesticate, to tame'; Swedish *kvar* 'still, quiet'; Danish *kvær* 'still, quiet'; Middle Low German *querre* 'tame'; Middle High German *kürre* 'tame, docile, gentle, mild' (New High German *kirre*). Mann 1984—1987:357 **guersos* (**guors-*, **guys-*) 'sweet, soft, pleasant'; Orël 2003:229 Proto-Germanic **kwerruz*; Kroonen 2013:318 Proto-Germanic **kwerru-* 'quiet, still'; Feist 1939:386; Lehmann 1986:275; De Vries 1977:341; Falk—Torp 1903—1906.I:434 Germanic base **kwerru-*; Torp 1919:279; Kluge—Mitzka 1967:371 **g̥uersu-*; Kluge—Seebold 1989:371 Proto-Germanic **kwerru-* 'quiet, tame'.

Buck 1949:12.16 remain, stay, wait; 12.19 quiet (adj.). Möller 1911:97; Bomhard—Kerns 1994:489—490, no. 337.

555. Proto-Nostratic root *k'war- (~ *k'wər-):

(vb.) *k'war- 'to crush, to grind';

(n.) *k'war-a 'grinding pestle, grinding stone; stone, rock'

- A. Dravidian: Tamil *kuṛavi* 'grinding pestle'; Malayalam *kuṛavi* 'small rolling stone to grind with'. Burrow—Emeneau 1984:164, no. 1819. Tamil *kuruv-*, *kur-* 'to pound in a mortar, to husk', *kurru* (*kurri-*) 'to pound, to strike, to hit, to crush'; Kota *kur-* (*kuṭ-*) 'to pound (clay in preparation for making pots)'; Gadba *kurk-* (*kuruk-*) 'to beat like a carpet'; Gondi *kurkal* 'stone pestle'. Burrow—Emeneau 1984:167, no. 1850a.
- B. Proto-Kartvelian *k'werčx- 'to break up, to split, to crush, to smash': Georgian *k'vercx-* 'to pile up'; Mingrelian [*k'vačx-*] 'to break to pieces'; Laz *k'ančx-* (< *k'vančx- < *k'varčx-) 'to smash, to crumble'. Klimov 1964:111 **kwerč₁x-* and 1998:93—94 **kwerč₁x-* 'to break up, to split, to crush, to smash'; Fähnrich—Sardshweladse 1995:199 **kwerč₁x-*; Fähnrich 2007:240 **kwerč₁x-*. Proto-Kartvelian **na-k'werčx-al-* 'fragment, splinter': Georgian *nak'vercxal-* 'spark'; Mingrelian *nak'vačxir-* 'charred log'; Laz *nok'ančxule-* 'charred log'. Klimov 1964:145 **na-kwerč₁x-al-* and 1998:137 **na-kwerč₁x-al-* 'fragment, splinter'.
- C. Proto-Indo-European **k'werAn-/k'wṛAn-*, **k'wreAn-* [**k'wraAn-*] (> **k'wṛān-*), **k'wreAwṇ-* [**k'wraAwṇ-*] (> **k'wṛāwṇ-*) 'mill, millstone': Sanskrit *grāvan-* 'stone for pressing out the Soma'; Armenian *erkan* (metathesized from *(*e*)*kran*) 'millstone'; Old Irish *bráu*, *bró* 'mill'; Old Welsh *breuan* 'mill'; Cornish *brou* 'mill'; Breton *breo* 'mill'; Gothic (*asilu-*)*qairnus* '(donkey-)mill'; Old Icelandic *kvern* 'millstone, handmill'; Faroese *kvørn* 'millstone, handmill'; Norwegian *kvern* 'millstone, handmill'; Swedish *kvarn* 'millstone, handmill'; Danish *kvern* 'millstone, handmill'; Old English *cweorn* '(hand)mill'; Old Frisian *quern* 'handmill'; Old Saxon *quern* 'handmill'; Dutch *kweern* 'handmill'; Old High German *quirn*, *quirna* 'handmill'; Old Church Slavonic *žr̃novъ* 'millstone', *žr̃ny* 'mill'; Lithuanian *gìrna* 'millstone'; Latvian *dziřnavas* 'mill'; Tocharian B *kärweñe* 'stone, rock', *kärweñäšse* 'stony'. Pokorny 1959:476—477 **g^uer-*, **g^uerə-*, **g^uerəu-*, **g^uerī-* 'heavy'; Walde 1927—1932.I:684—686 **g^uer-* 'heavy'; Mann 1984—1987:375 **g^uṛ-nəu-* (analytical form of) **g^uṛnūs-*, -ā; **g^uṛūnā*; **g^uernus-*, -ā; **g^uernəuos*, etc., 370 **g^uṛāun*, **g^uṛāun*, **g^uṛān-* 'heavy stone, millstone'; Gamkrelidze—Ivanov 1984.I:228 **k'°er-H-*, **k'°r-eH-*, II:693 **k'°ṛāu-* and 1995.I:198 **k'°er-H-*, **k'°r-eH-* 'grindstone', I:599 **k'°ṛāu-* 'millstone, mill'; Mallory—Adams 1997:474 **g^werh_a-u-on-* ~ **g^werh_a-n-u-s* 'quern'; Watkins 1985:25 **g^werə-* 'heavy' (suffixed full-grade form **g^werə-nā* 'millstone') and 2000:34 **g^werə-* (oldest form **g^wer₂-*) 'heavy' (suffixed full-grade form **g^werə-nā* 'millstone'); Mayrhofer 1956—1980.I:353; Orël 2003:228 Proto-Germanic **kwernuz* ~ **kwernō*; Kroonen 2013:318 Proto-Germanic **kwernu-* 'mill; millstone'; Lehmann 1986:44—45 **g^wṛnu-*, **g^wernā-*; Feist 1939:59

**g^uṛnu-*, **g^uernā*; De Vries 1977:337 **g^uer-a-*; Falk—Torp 1903—1906.I:431; Torp 1919:347; Onions 1966:731; Klein 1971:609; Skeat 1898:484; Adams 1999:166 **g^wṛh_xwon-en-*, **g^wreh_xwen-*; Van Windekens 1976—1982.I:209 **g^uer₁uon-*; Derksen 2008:566; Fraenkel 1962—1965. I:153—154; Smoczyński 2007.1:183 **g^uṛh₂-nuH-*.

Sumerian *gur(-gur)* ‘to rub off, to abrade, to rub down, to grind’, *guru₅* ‘to rub, to grate, to grind’.

Buck 1949:5.56 grind; 5.57 mill. Bomhard—Kerns 1994:497—498, no. 345.

556. Proto-Nostratic (n.) **k^war-b-a* ‘the inside, the middle, interior, inward part’:

- A. Proto-Afrasian (?) **k^warb-* ‘the inside, the middle, interior, inward part’: Proto-Semitic **k^wirb-* (< **k^warb-*) ‘midst, inward part’ > Hebrew *kereḇ* [כֶּרֶב] ‘inward part, midst’; Ugaritic *kṛb* ‘midst, female genitalia’; Akkadian *kerbu* ‘intestines, insides’; Moabite *b-kṛb* ‘inside’. Murtonen 1989:386; Klein 1987:591. Egyptian *qḥb* (< **qrb*) ‘intestines, interior of the body, middle of anything’. Faulkner 1962:275; Erman—Grapow 1921:188 and 1926—1963.5:9; Hannig 1995:849 and 2006:2507—2508; Gardiner 1957:596.

Comment: Militarëv—Kogan (2000.I:149—150, no. 165) reconstruct Proto-Semitic (n.) **k^wirb-* ‘inner part, middle of the body’. Militarëv—Kogan consider the meanings ‘inside, (in the) middle’ in Akkadian to be secondarily derived. They do not list any non-Semitic cognates.

- B. Dravidian: Tamil *karu* ‘fetus, embryo, egg, germ, young of animal’, *karupai* ‘womb’, *karuvam* ‘fetus, embryo’; Malayalam *karu* ‘embryo, yolk’; Kota *karv* ‘fetus of animal, larva of bees, pregnant (of animals)’; Telugu *karuvu* ‘fetus’, *kari* ‘uterus of animals’; Parji *kerba* ‘egg’; Gadba (Ollari) *karbe* ‘egg’; Gondi *garba* ‘egg’. Burrow—Emeneau 1984:119, no. 1279.
- C. Proto-Indo-European **k^werbh-/k^worbh-/k^wrbh-*, **k^wrebh-* ‘the inside, the middle, interior, inward part’: Sanskrit *gárbha-h* ‘womb, the inside, middle, interior’; Avestan *garəwō* ‘womb’, *garəbuš* ‘the young of an animal’; Greek βρέφος ‘the babe in the womb, fetus’; Old Church Slavic *žrěbъ*, *žrěbъcъ* ‘foal’. Mallory—Adams 1997:615 **g^werbhen-*, **g^wrebhos*; Mann 1984—1987:370 **gurebhnos, -es-* (**gurebhm̥n̥, -ōn*) ‘fetus, infant, animal’; Hofmann 1966:39; Frisk 1970—1973.I:266 **g^urebh-*, **g^uerbh-*; Boisacq 1950:133 **g^urebh-os*; Beekes 2010.I:238 **g^werbh-/g^wrebh-*; Chantraine 1968—1980.I:195 **g^wer-bh-/g^wr-ebh-*; Prellwitz 1905:84. Mayrhofer (1956—1980.I:329), on the other hand, compares Sanskrit *gárbha-h* with Greek δελφύς ‘womb’, as does Frisk (1970—1973.I:363),

while Chantraine (1968—1980.I:195) notes that Sanskrit *gárbha-h* can go with either Greek βρέφος or δελφύς.

Buck 1949:4.47 womb; 12.37 middle. Möller 1911:101; Bomhard—Kerns 1994:489, no. 336.

557. Proto-Nostratic root *k'warʷ- (~ *k'wərʷ-):

(vb.) *k'warʷ- 'to thunder, to rumble';

(n.) *k'warʷ-a 'rain, storm, stormy weather, thunderstorm'

- A. Proto-Afrasian *k'war- 'rain, storm': Highland East Cushitic: Burji *k'áaraar-i* 'rainy season'. Sasse 1982:124—125; Hudson 1989:207. Egyptian *qri* 'storm, storm-cloud; thunder'. Hannig 1995:862; Faulkner 1962:280; Gardiner 1957:596; Erman—Grapow 1926—1963.5:58.
- B. Dravidian: Tamil *kaṛaṛu* (*kaṛaṛi*-) 'to thunder'; Kolami *karadil-* (*karadilt-*) 'lightning strikes' (subject *abar* 'sky'); Naiki (of Chanda) *tj karalil-* 'lightning strikes' (*tj* 'lightning' < Indo-Aryan). Burrow—Emeneau 1984:126, no. 1354.
- C. (?) Proto-Kartvelian *k'urcx- 'hail': Georgian *k'urcxal-* 'tears'; Mingrelian *k'ircx-*, *k'ərcx-* 'hail'; Laz *k'icx-* 'hail'; Svan *k'icx* 'fragment, scrap'. Klimov 1998:104—105 **kurcx-* 'hail'.
- D. (?) Proto-Indo-European *k'wer-/ *k'wor-/ *k'wɪr- 'to thunder, to rumble, to roar': Sanskrit *gáṛjati* 'to thunder, to rumble, to roar', *garjana-h* 'thundering, rumbling, roaring', *garjā-* 'roaring, thunder'; Prakrit *gajjai* 'to thunder, to roar', *gajjana-* 'thunder', *gajji-* 'thunder'; Hindi *gājnā* 'to thunder, to roar; to revel, to be pleased', *gājan* 'thundering', *gāj* 'thunderbolt, wrath'; Avestan *gram-* 'to rage, to be angry'; Greek βρέμω 'to roar (of a wave); to clash, to ring; to shout, to rave', βρόμος 'any loud noise: the crackling of a fire, the roaring of a storm; rage, fury', βροντάω 'to thunder', βροντή (< *βρομ-τā) 'thunder', βρόντημα 'thunderclap'; Irish *breim* (pl. *breamanna*) 'rumbling of bowels'; Welsh *bref* 'bleat'; Old High German *queran* 'to moan, to sigh' (New High German *quarren*); Old Church Slavic *grъmѣti* 'to thunder', *gromъ* 'thunder'; Russian *gremét'* [греметь] 'to thunder', *gremúčij* [гремучий] 'thundering, roaring', *grom* [гром] 'thunder'. Mann 1984—1987:371 **gyremō*, **gurēm-* 'to roar, to rumble'; Mayrhofer 1956—1980.I:327 onomatopoeic; Boisacq 1950:132 **mrem-* or **grem-*; Frisk 1970—1973.I:264—265; Chantraine 1968—1980.I:194 etymology uncertain; Hofmann 1966:39 **bhrem-*; Beekes 2010.I:237 onomatopoeic; Kluge—Mitzka 1967:572—573 **ger-*; Kluge—Seebold 1989:574; Preobrazhensky 1951:157; Derksen 2008:195. Note: All of these forms present multiple difficulties, and, consequently, different etymologies have been proposed in the literature. No one explanation can be considered definitive. Hence, some, none, or all of these forms may belong here.

- E. Proto-Altaic **kūr^{ye}* (~ *-i*) ‘autumn; rain, storm’: Proto-Tungus **kure-* ‘storm, whirlwind’ > Evenki *kur-ge-kūn* ‘storm, whirlwind’; Lamut / Even *qurgī*, *kur* ‘storm, whirlwind’; Ulch *kūre(n)* ‘storm, whirlwind’; Nanay / Gold *kūre* ‘storm, whirlwind’. Proto-Mongolian **kura* ‘rain’ > Written Mongolian *qura* ‘rain’; Khalkha *χur* ‘rain, precipitation’; Buriat *χura* ‘rain’; Kalmyk *χur* ‘rain’; Ordos *χura* ‘rain’; Dagur *χuar* ‘rain’; Dongxiang *gura* ‘rain’; Shira-Yughur *χura* ‘rain’; Monguor *χurā* ‘rain’. Proto-Turkic **gūr^{y-}* ‘autumn’ > Old Turkic (Orkhon, Old Uighur) *küz* ‘autumn’; Karakhanide Turkic *küz* ‘autumn’; Turkish *güz* ‘autumn’; Gagauz *güz* ‘autumn’; Azerbaijani *güz-ām* ‘autumn wool’; Turkmenian *güz* ‘autumn’; Uzbek *kuz* ‘autumn’; Uighur *küz* ‘autumn’; Karaim *küz* ‘autumn’; Tatar *köz* ‘autumn’; Bashkir *köd* ‘autumn’; Kirghiz *küz* ‘autumn’; Kazakh *küz* ‘autumn’; Noghay *küz* ‘autumn’; Sary-Uighur *kuz* ‘autumn’; Oyrot (Mountain Altai) *küs* ‘autumn’; Tuva *küs* ‘autumn’; Chuvash *kə^wr* ‘autumn’; Yakut *kühün* ‘autumn’. Starostin—Dybo—Mudrak 2003:747—748 **kūr^e* (~ *-i*) ‘autumn; rain, storm’.

Buck 1949:1.56 thunder; 1.75 rain (sb.). Different etymology in Dolgopolsky 2008, no. 948, **kuhr^rV* (or **küh^rV* ?) ‘rain clouds, rainy weather, rainy season’.

558. Proto-Nostratic root **k^was-* (~ **k^was-*):

- (vb.) **k^was-* ‘to strike fire, to put out (fire)’;
(n.) **k^was-a* ‘spark, fire’

- A. (?) Afrasian: Proto-Semitic (reduplicated) **k^was-k^was-* ‘to stroke or stir up (a fire)’ > Geez / Ethiopic *k^wask^wasa* [ቁስቁስ] ‘to stir a fire’; Tigre *käskäsä* ‘to stir up, to shake’; Tigrinya *käskäsä*, *k^wäsk^wäsä* ‘to stir a fire’; Amharic *käsäkkäsä* ‘to awaken, to wake up, to awake, to arouse, to stimulate (interest), to activate, to stir up, to excite, to inspire, to provoke (incite), to bring about’; Gurage *käsäkkäsä* ‘to rouse, to wake up’. Leslau 1979:504 and 1987:446.
- B. Dravidian: Konḍa *kas-* ‘to be lit (as fire), to burn’, *kasis-* ‘to light (lamp, fire)’; Pengo *kacay ki-* ‘to light (lamp)’; Kuwi *hiccu kahinomi* ‘we kindle fire’. Burrow—Emeneau 1984:102—103, no. 1090.
- C. Proto-Kartvelian **k^wes-* ‘to strike fire’: Georgian *k^wes-* ‘to strike fire’, *k^wes-* ‘steel’, *na-k^wes-* ‘spark’; Mingrelian *k^was-* ‘to strike fire’. Klimov 1998:94 **k^wes₁-* : **k^wes₂-* ‘to strike fire’; Fähnrich—Sardshweladse 1995: 199 **k^wes-*; Fähnrich 2007:240 *k^wes-*.
- D. Proto-Indo-European **k^wes-/k^wos-* ‘to extinguish, to put out (originally, of fire)’: Sanskrit *jāsate* ‘to be exhausted, starved; to exhaust, to weaken, to cause to expire; to hurt, to strike’; Greek σβέννυμι (fut. σβέσω) ‘to quench, to put out; to be quenched, to go out (of fire); to become extinct, to die (metaphorically, of men)’, σβεστήριος ‘serving to quench (fire)’; Lithuanian *gėsti*, *gėsti* ‘to go out, to die out, to become dim (of light)’.

(causative) *gesaĩ*, *gesyĩti* ‘to extinguish’; Latvian *dziestu* ‘to go out, to be extinguished, to expire’; Old Church Slavic **gašq*, **gasiti* in *u-gasiti* ‘to extinguish, to go out’; (?) Tocharian A *käs-*, B *käs-* ‘to come to extinction, to be extinguished, to go out’. Pokorny 1959:479—480 **g^ues-*, **zg^ues-* ‘to extinguish’; Walde 1927—1932.I:693—694 **g^ues-*; Mann 1984—1987:358 **g^uesō*, *-jō* ‘to extinguish, to be extinguished’; Watkins 1985:25 **g^wes-* ‘to extinguish’ and 2000:78 **(s)g^wes-* ‘to be extinguished’ (suffixed [causative] form **sg^wes-nu-*); Mallory—Adams 1997:188 **g^wes-* ‘to extinguish’; Mayrhofer 1956—1980.I:425; Frisk 1970—1973.II:685—686 **zg^ues-*; Boisacq 1950:856 **(z)g^uēs-*, **(z)g^uōs-*; Hofmann 1966:307—308; Chantraine 1968—1980.II:991—992 **g^wes-*; Beekes 2010.II:1314—1315 **(s)g^wes-*; Fraenkel 1962—1965.I:149; Smoczyński 2007.1:175; Derksen 2008:161 **(s)g^wes-*; Van Windekens 1976—1982.I:210 **(z)g^ues-*; Adams 1999:177 **(z)g^wes-* ‘extinguish’.

559. Proto-Nostratic root **k'was-* (~ **k'wās-*) (onomatopoeic):

(vb.) **k'was-* ‘to sigh, to moan, to groan; to whisper, to murmur, to mumble’;

(n.) **k'was-a* ‘sigh, moan, groan, whisper, murmur, mumble’

- A. Proto-Afrasian (?) **k'was-* ‘to sigh, to moan, to groan; to whisper, to murmur, to mumble’: Semitic: Gurage *kesātā* ‘to groan, to moan, to sigh’; Amharic (*ak*)*kassātā* ‘to sigh, to moan’. Leslau 1979:505. Egyptian (reduplicated) *qsqs* ‘to whisper’; Coptic *kaskes* [ⲕⲁⲕⲉⲥ] ‘to whisper’. Vycichl 1983:88—89; Černý 1976:64 (Černý considers the Egyptian and Coptic forms to be loans from Semitic).
- B. Dravidian: Tamil (reduplicated) *kucukucu* (*-pp-*, *-tt-*) ‘to whisper’, *kucukucuppu* ‘whispering’, *kacu-kuc-enal* onomatopoeic expression signifying whispering; Malayalam *kuśukuśukka*, *kucukucukka* ‘to whisper’, *kuśalikka* ‘to whisper, to mumble’, *kaśukuśu* imitative sound of whispering; Kota *guc guc in-* (*id-*) ‘to whisper’, *gucgucn* ‘in a whisper, secretly’; Kannaḍa *kucu*, *kusa*, *kusu*, *guja*, *guju*, *gusa*, *gusu*, *kisu*, *gisu* a sound imitating whispering (frequently reduplicated); Tulu *guji*, *guju*, *gujji*, *guju*, *gusu*, *kusukusu* ‘whispering’; Telugu *gusagusa* ‘whisper; in a whisper or a low voice’; Gondi *kuskusa varḱ-* ‘to whisper’, *kusai* ‘silently’, *kusāy* ‘in a low voice, secretly’; Kuṛux *kusmusaʔanā* ‘to whisper’. Burrow—Emeneau 1984:150, no. 1638.
- C. Proto-Kartvelian **k'wes-/k'ws-* ‘to moan’: Georgian *k'(r)us-* ‘to moan’; Laz *k'us-* ‘to moan’; Mingrelian *k'us-* ‘to moan’; Svan *k'wec-* (< **k'wes-*) ‘to moan’. Klimov 1964:117—118 **kus-* and 1998:94 **kwes-/kws-* ‘to moan’; Fähnrich—Sardshweladse 1995:200 **kwes-/kws-*; Fähnrich 2007:240—241 **kwes-/kws-*.
- D. Indo-European: Old Icelandic *kvis* ‘rumor, tattle’, *kvisa* ‘to gossip, to whisper’; Norwegian *kviskre* ‘to whisper’; Swedish (dial.) *kvisa* ‘to whisper’; Low German *quesen* ‘to grumble’; New High German (dial.)

queisen ‘to sigh, to moan, to groan’. Orël 2003:230 Proto-Germanic
**kwisōjanan*; De Vries 1977:338—339; Torp 1919:351.

Buck 1949:16.39 groan.

560. Proto-Nostratic root **k^wat’-* (~ **k^wət’-*):

(vb.) **k^wat’-* ‘to burn, to smolder, to smoke’;

(n.) **k^wat’-a* ‘burning, heat, smoke’

- A. Proto-Afrasian **k^wat’-* (vb.) to burn, to smolder, to smoke; (n.) smoke’:
 Proto-Semitic **k’at’-ar-* ‘to burn, to smolder, to smoke’, **k’ut’r-* (<
**k^wət’-*) ‘smoke, incense’ > Hebrew *kīṭōr* [קִיטֹר] ‘thick smoke’, *kəṭōreṯ*
 [תִּקְוֹרֶת] ‘smoke, odor (of burning), incense’, *muḳṭār* [מִקְטָר] ‘sacrificed by
 burning incense’; Phoenician *kīrt* ‘incense’; Ugaritic *kīr* ‘smoke, incense’;
 Akkadian (with progressive deglottalization [Geers’ Law]) *kuṭru* ‘smoke’,
kaṭāru ‘to rise, to billow, to roll in (said of smoke, fog)’, *kutturu* ‘to cause
 something to smoke, to make an incense offering, to cense, to fumigate, to
 fume incense’, *kaṭāru* ‘incense’; Arabic *kuṭr*, *kuṭur* ‘agalloch, aloeswood’,
miḳṭar ‘censer’; Sabaean *kīr* ‘to burn incense’; Geez / Ethiopic *kaṭara*,
kaṭtara [ቀተረ] ‘to fumigate, to give off an odor’, *kaṭtāre* [ቀተረ], *kaṭtār*
 [ቀተር] ‘incense, fumigation, odiferous substance’; Tigre *kaṭare* ‘fragrance,
 spice’; Amharic *kaṭṭārā* ‘to burn incense in church’. Murtonen 1989:375;
 Klein 1987:576; Leslau 1987:452; Militarev 2010:47. Diakonoff 1992:81
**k^wəṭr-* ‘smoke’. Proto-Semitic **k’at’-am-* ‘to burn, to smolder, to smoke’,
**k’it’-am-* ‘ash(es)’ > Hebrew *kaṭam* [כַּטָּם] (denominative) ‘to cover with
 ashes or powder’, *kaṭam* [כַּטָּם] ‘ashes, powder’, *keṭūm* [כֶּטֹם] ‘covered
 with ashes’ (the Hebrew forms are borrowed from Aramaic); Aramaic
kaṭam ‘to cover with ashes or powder’, *kaṭmā* ‘ashes’; Syriac *keṭmā*
 ‘ashes’. Related to Arabic *kaṭām* (< **k’at’ām-*) ‘dust’. Klein 1987:574 and
 575; Biberstein-Kazimirski 1875.3:856; Militarev 2010:47 Proto-Semitic
 (Aramaic-Arabic) **kiṭam-*. (?) Berber (root **yḍ*, if for **yḍ*): Tuareg *əqqəd*
 ‘to burn, to be burnt, to be dried out’, *suḡəd* ‘to make burn’, *taqqit* ‘burn’;
 Mzab *əqqəd* ‘to be about to make fire’, *iḡəd* ‘ash(es)’; Tamazight *qqəd* ‘to
 be about to make fire, to cauterize, to be warm, to be red-hot’, *nyəd* ‘to
 crush, to reduce to powder; to be crushed, to be reduced to powder’, *anyud*
 ‘crushing, pulverization’, *iḡəd* ‘ash(es)’; Tashelhiyt / Shilha *qəd* ‘to
 cauterize, to be about to make fire’, *aḡad* ‘cauterization’, *nyəd* ‘to
 pulverize; to be pulverized’, *iḡəd* ‘ash(es)’; Riff *əqda* ‘to burn’, *iḡəd*
 ‘ash(es)’; Kabyle *əqqəd* ‘to be about to make fire, to cauterize, to apply a
 hot compress, to fire pottery; to be cauterized, to be fired (pottery)’, *uyud*
 ‘hole for firing pottery’, *nyəd* ‘to crush, to reduce to powder; to be
 crushed’, *iḡəd* ‘ash(es)’; Chaouia *qqəd* ‘to be about to apply fire, to
 cauterize’, *iḡəd* ‘ash(es)’, *nyəd* ‘to be crushed or ground, to be powdery’;
 Zenaga *yəd* ‘to be warm, burning’, *təssuḡəd* ‘droppings, manure, dung’.

Cushitic: Highland East Cushitic: Sidamo *k'at'abaaré*, *k'at'awaré* 'fire-wood'. Hudson 1989:379.

- B. Dravidian: Malayalam *kattuka* 'to kindle, to burn', *kattal* 'burning, heat, appetite', *kattikka* 'to set on fire, to burn'; Kota *kat-* (*katy-*) 'to burn (intr.), to light (lamp)', *katc-* (*katc-*) 'to set fire to'; Toda *kot-* (*koty-*) 'to burn with flame, to glitter, to flash, to light (lamp)'; Kannaḍa *kattu* 'to begin to burn with flame, to cause to burn with intensity, to inflame, to kindle', *kattisu* 'to inflame, to kindle'; Koḍagu *katt-* (*katti-*) 'to burn with a blaze (intr.)'. Burrow—Emeneau 1984:113, no. 1207.
- C. Proto-Indo-European **k^wət'-/k^wat'-* > (with regressive deglottalization) *k^{wh}et'-/k^{wh}ot'-* '(vb.) to burn, to smoke, to smolder; (n.) smoke': Sanskrit *kádru-ḥ* 'reddish brown'; Old Church Slavic *kaditi* 'to burn incense'; Russian *čad* [чад] 'fumes, smoke', *kadilo* [кадило] 'censer'. Pokorny 1959:537 **ked-* 'to smoke'; Walde 1927—1932.I:384—385 **qed-*; Mann 1984—1987:1628 **kēd-/kōd-* or **quēd-/quōd-* (?); Gamkrelidze—Ivanov 1984.I:155 **k[h]et'-/k[h]ot'-* and 1995.I:133 **k^{het}et'-/k^{het}ot'-* 'smoke'; Mayrhofer 1956—1980.I:150; Derksen 2008:218—219.

Buck 1949:1.83 smoke (sb.); 1.85 burn (vb.). Bomhard—Kerns 1994:488—489, no. 335.

561. Proto-Nostratic root **k^wat'-* (~ **k^wət'-*):

(vb.) **k^wat'-* 'to cut';

(n.) **k^wat'-a* 'knife, cutting instrument'; (adj.) 'sharp'

- A. Proto-Afrasian **k^wat'-* 'to cut': Proto-Semitic **k'at'-at'-* 'to cut, to carve' > Arabic *kaṭṭa* 'to carve, to cut, to trim, to chip, to pare; to mend the point (of a pen), to nib, to sharpen (a pen)'; Sabaean *kṭt* 'to cut, to hew out'; Šheri / Jibbāli *keṭṭ* 'to cut'; Mehri *káttat* 'to be cut off'; Geez / Ethiopic *k^watata* [ፋጠጠ] 'to cut (grass)'; Harari *kātātu* 'splinters of wood'; Amharic *kāttātā*, *k^wāttātā* 'to cut, to shear'. Leslau 1987:455. Proto-Semitic **k'at'-ab-* 'to cut' > Arabic *kaṭaba* 'to cut'; Hebrew *keṭeβ* [כִּטֵּב] 'destruction'; Aramaic *kaṭaβ* 'to chop, to cleave'; Harsūsi *keṭtebōt* 'doll (carved from wood or bone)'; Šheri / Jibbāli *kaṭbēt* '(carved, wooden) doll'; Mehri *kaṭabbūt* 'doll; formerly, a doll carved from wood'; Geez / Ethiopic *kaṭaba* [ፋጠጠ] 'to make a mark in order that woven cloth be symmetrical, to trim, to shorten'; Amharic *kāttābā* 'to trim, to shorten, to make a mark in order that woven cloth be symmetrical'. Klein 1987:574; Leslau 1987:453. Proto-Semitic **k'at'-aṣ-* 'to cut' > Arabic *kaṭa'a* 'to cut, to cut off, to chop off; to amputate; to cut through, to cut in two, to divide; to tear apart, to disrupt, to sunder, to disjoin, to separate; to fell; to break off, to sever; to break off one's friendship; to snub; to cut short, to interrupt'; Modern Hebrew *kāṭa'o* [כִּטֵּא] 'to cut, to fell, to lop off'; Aramaic *kaṭa'o* 'to cut off, to shorten'; Šheri / Jibbāli *kéṭa'o* 'to cut'; Mehri *kāwṭa* 'to cut, to cut off, to

saw off; to breach (a contract); to refuse to give', *kātta* 'to be cut, to be discontinued; (rain) to stop; to stop (visiting someone); to be cut off in the desert without food or drink', *kātāt* 'piece'; Tigre *kāṭ'a* 'to cut off'; Tigrinya *kāṭ'i* 'a cut'; Amharic *kātta* 'to cut off'; Gurage *kātta* 'to make incisions'. Murtonen 1989:374; Klein 1987:575; Leslau 1979:506; Zammit 2002:342. Proto-Semitic **k'at'-ap-* 'to cut, to pick, to pluck' > Akkadian *katāpu* 'to pluck out'; Hebrew **kāṭaṣ* [קטץ] 'to pluck off (twigs, etc.), to pluck out'; Aramaic *kāṭaṣ* 'to pluck, to tear off'; Arabic *kaṭaṣa* 'to pick (flowers, fruit); to gather, to harvest (fruit); to pluck off, to pull off, to tear off (something, e.g., leaves)'; Mehri *kāṭāwṣ* 'to earmark, to take a snip out of an animal's ear as an identification mark'; Ḥarsūsi *kaṭf* 'snip taken out of a goat's ear as a marker'; Šheri / Jibbāli *kāṭṣ* '(animal) to eat only the best pasture; to fell, to lop, to chop off; to take a snip out of an ear'; Geez / Ethiopic *kaṭaṣa* [ቀጠፈ] 'to pick, to cut (flowers, leaves), to pluck, to snap'; Tigrinya (with augmented *n*) *kāntāṣfā* 'to pluck off'; Amharic *kāntāṣfā* 'to pick flowers'. Murtonen 1989:375; Zammit 2002:342; Klein 1987:575—576; Leslau 1987:453. Arabic *kaṭama* 'to cut off, to break off', *kaṭma* 'piece, bite, morsel', *kaṭala* 'to cut off'. Egyptian *qdf* 'to gather flowers' (this may be a Semitic loan); Coptic *kōṭf* [ⲕⲟⲩⲧ] 'to gather (grain, fruit, wood, etc.)'. Hannig 1995:869; Faulkner 1962:282; Erman—Grapow 1926—1963.5:81; Vycichl 1983:90; Černý 1976:66. Proto-East Cushitic **k'ad₁-* 'to cut' > Dullay *qatt-* 'to cut, to hoe up, to fold'; Yaaku *qat-* 'to cut'; Saho-Afar *aḍ-* 'to cut the hair'. Sasse 1979:31 and 48. Proto-Southern Cushitic **k'wat-* 'to shape, to mold, to fashion' > Alagwa *qwatsit-* 'to shape, to mold, to fashion'; Ma'a *vukasila* 'iron'. Ehret 1980:267. [Orël—Stolbova 1995:339, no. 1558, **kaṭ-/kūṭ-* 'to cut'; Ehret 1995:240, no. 431, **k'at-* 'to cut'.]

- B. Dravidian: Tamil *katti* 'knife, cutting instrument, razor, sword, sickle'; Malayalam *katti* 'knife'; Kota *katy* 'billhook, knife', *kati-r* 'to cut'; Kannada *katti* 'knife, razor, sword'; Koḍagu *katti* 'knife'; Tuḷu *katti*, *katte* 'knife'; Telugu *katti* 'knife, razor, sword'. Krishnamurti 2003:9 **katti* 'knife'; Burrow—Emeneau 1984:112—113, no. 1204. Kolami *katk-* (*katakt-*) 'to strike down (man), to break down (tree)'; Naiki (of Chanda) *katuk-/katk-* 'to cut with an axe'; Parji *katt-* 'to cut down (tree), to slaughter, to sacrifice'; Gondi *kad-* 'to cut (hair)'; Konḍa *kat-* 'to cut down (tree) with an axe, to fell', *katki-* 'to cut down (trees)'; Pengo *kat-*, *katka-* 'to cut (with an axe)'; Maṇḍa *kat-* 'to cut (with axe)'; Kui *kata* (*kati-*) 'to cut down, to fell, to cut, to hew'; Kuwi *katt-*, *kuttali* (i.e., *kattali*) 'to cut (with axe, etc.)', *kat-* 'to cut (trees, bushes, etc.)', *katk-* 'to chop to pieces'. Burrow—Emeneau 1984:113, no. 1208.
- C. Proto-Kartvelian **k'wet-* > (with progressive deglottalization) **k'wet-/k'wt-* 'to chop, to cut off': Georgian *k'vet-/k'vt-* 'to chop, to cut off'; Mingrelian *k'vat-* 'to chop, to cut off'; Laz *k'vat-* 'to chop, to cut off'; Svan *k'wt-* 'to cut into small pieces'. Klimov 1964:111 **kwe(s)ḍ-* and

1998:92 **kwet*/**kwt*- 'to chop, to cut off'; Fähnrich—Sardshweladse 1995:196—197 **kwet*-; Fähnrich 2007:238 **kwet*-; Schmidt 1962:75 and 119. Proto-Kartvelian **k'wet-il*- 'chopped off, cut off': Georgian *k'vetil*- 'chopped off, cut off'; Mingrelian *k'vatil*- 'chopped off, cut off'. Klimov 1998:92 **kwet-il*- 'chopped off, cut off'. Proto-Kartvelian **na-k'wet*- 'piece, cut, section; lump': Georgian *nak'vet*- 'piece; lump'; Mingrelian *nok'vet*- 'piece; lump'. Klimov 1998:137 **na-kwet*- 'piece, cut, section; lump'.

- D. Proto-Indo-European **k'wat*/**kwat*- > (with regressive deglottalization) **k'whet*/**k'whot*- 'to whet, to sharpen': Gothic *ga-hvatjan* 'to sharpen, to incite, to entice', *hassaba* 'sharply'; Old Icelandic *hvass* 'sharp, keen', *hvetja* 'to whet, to sharpen'; Faroese *hvassur* 'sharp', *hvøtja* 'to whet, to sharpen'; Norwegian *kvass* 'sharp', *kvetja* 'to whet, to sharpen'; Swedish *vass* 'sharp', *vättja* (dial. *hvättia*) 'to whet, to sharpen'; Danish (dial.) *hvæde* 'to whet, to sharpen'; Old English *hwæss* 'sharp, prickly', *hwæt* 'quick, active, brave, bold', *hwettan* 'to whet, to sharpen, to incite'; Middle Dutch *wetten* 'to sharpen'; Old High German (*h*)*waz* 'sharp, rough, severe', *wezzan* 'to sharpen' (New High German *wetzen*); Latin *triquetrus* (< **tri-quedros*) 'triangular'. Pokorny 1959:636 **k'wēd*-, **k'wōd*- 'to stab, to bore'; Walde 1927—1932.I:513 **q'wēd*-, **q'wōd*-, **q'wəd*- or **q'wēd*-, **q'wōd*-; Mann 1984—1987:1017 **quads*- 'sharp; sharpness, sharpener'; Watkins 1985:33 **k'wed*- and 2000:44 **k'wed*- 'to sharpen'; Mallory—Adams 1997:510 **k'wed*- 'to whet, to sharpen'; Orël 2003:199 Proto-Germanic **xwatjanan*; Kroonen 2013:264 Proto-Germanic **hwassa*- 'sharp', 264 **hwata*- 'quick', and 266 **hwētan*- 'to stab, to pierce'; Feist 1939:184—185 **k'wēd*-, Lehmann 1986:139 **k'wō/ūd*- 'to prick, to whet; to incite'; De Vries 1977:269 and 272; Torp 1919:342; Klein 1971:826 **q'wedo*-, **q'wēd*-, **q'wōd*-, **q'wəd*-, Onions 1966:1002 Common Germanic **χwatjan* 'to sharpen', **χwattaz* 'sharp'; Kluge—Mitzka 1967:856; Kluge—Seebold 1989:789; De Vaan 2008:630; Walde—Hofmann 1965—1972.II:706 **q'wēd* : **q'wōd* : **q'wəd* (: **q'wēd*); Ernout—Meillet 1979:703.

Buck 1949:15.78 sharp. Bomhard—Kerns 1994:493—495, no. 341.

562. Proto-Nostratic root **k'wed*-:

(vb.) **k'wed*- 'to destroy, to damage, to ruin; to decay, to rot, to spoil';

(n.) **k'wed-a* 'death, destruction, damage, ruin, decay'

Note also:

(vb.) **k'wad*- 'to strike, to beat, to smash, to pound';

(n.) **k'wad-a* 'knock, stroke, thrust'

- A. Dravidian: Tamil *keṭu* (*keṭuv*-, *keṭt*-) 'to perish, to be destroyed, to decay, to rot, to become damaged, to become spoiled, to fall on evil days, to degenerate, to be reduced, to run away defeated', *keṭu* (-*pp*-, -*tt*-) '(vb.) to

destroy, to squander, to extinguish, to spoil, to corrupt, to defeat, to lose; (n.) peril, poverty', *keṭṭa* 'bad, spoiled, ruined', *keṭṭavan* 'a bad, immoral person', *keṭṭal* 'ruin, damage, danger, degeneracy', *keṭṭuti* 'ruin, loss, damage, thing lost, danger, affliction, evil', *keṭṭumpu* 'ruin, evil', *kēṭu* 'ruin, loss, damage, adversity, death, evil'; Malayalam *keṭu* 'ruin', *keṭuka* 'to be extinguished, ruined, spoiled, damaged', *keṭuti* 'ruin, danger, weakness, misery', *keṭumpu* 'depravity, rottenness', *keṭumpikka* 'to be spoiled by drying up', *keṭṭa* 'lost, bad', *keṭukka* 'to quench, to do away with, to damage, to ruin', *kēṭu* 'destruction, loss, damage, hurt'; Kota *keṭ-* (*keṭ-*) 'to die, to be ruined, to be lost', *keṭc-* (*keṭc-*) 'to ruin, to destroy, to lose', *ke-ṛ* (obl. *ke-ṭ-*) 'ruin, harm, danger, loss, funeral, corpse'; Toda *kōṛ-* (*kōṭ-*) 'to be spoiled, to become bad in conduct, to be extinguished, to die (others than Todas)', *kōṛc-* (*kōṛc-*) 'to kill by witchcraft, to extinguish, to make go the wrong way and lose property', *kōḍḍil* 'misfortune, evil', *kōḍc-* (*kōḍc-*) 'to destroy', *kō-ḍ* (obl. *kō-ṭ-*) 'dead person (corpse at first funeral, relics at second funeral), funeral', *kō-ṛ o-x-* 'to die (used of Todas)'; Kannada *keḍu*, *kiḍu* (*keṭṭ-*) 'to be destroyed, ruined, spoiled; to become bad, vicious; to be extinguished, to cease (as sorrow, etc.)', *keḍisu*, *kiḍisu* 'to destroy, to ruin, to spoil, to extinguish', *keṭṭa* 'ruined, spoiled, foul, bad', *keṭṭe* 'evil, misfortune, ruin', *keḍaku*, *keḍuku* 'corruption, ruin, evil', *keṭṭatana* 'bad, wicked, lewd disposition or conduct', *keḍuvike* 'being destroyed, etc.', *keḍuha* 'ruin, disappearance', *kiḍi*, *kiḍuka* 'one who ruins or destroys', *kēḍu* 'ruin, destruction, evil, loss'; Kodagu *kē-ḍi* 'ruin, rottenness', *kēḍ-* (*kēṭṭ-*) 'to be spoiled, ruined, extinguished', *kēḍit-* (*kēḍiti-*) 'to spoil, to ruin, to extinguish'; Tulu *keḍaguni* 'to ruin, to spoil', *keḍuku*, *keḍa*, *keḍaku* 'damage, loss', *keṭṭa* 'bad, vile', *kēḍu*, *kēḍu* 'mischievous, evil, danger, disaster, loss, perdition'; Telugu *ceḍu* 'to be spoiled, destroyed; to become bad, useless; to be a loser or sustain a loss', *ceḍḍa*, *ceḍu* 'bad, wicked, wrong, spoiled, damage', *ceṭṭa* 'evil, harm; wicked', *cēṭu* 'ruin, misfortune, destruction', *keḍayu* 'to die', *keḍayika* 'death', *keḍapu* 'to kill', *giṭṭu* 'to die, to perish'; Kolami *kiṭ-* (*kiṭṭ-*) 'to be extinguished', *kiṭip-* 'to extinguish'; Naiki (of Chanda) *kiṛ-* (*kiṭṭ-*) 'to go out (fire)', *kiṭup-/kiṭp-* 'to put out (fire)'; Parji *ciṭ-* 'to go out (fire)', *ciṭip-* 'to put out (fire)'; Gadba (Ollari) *siṭ-* 'to go out (fire)', *siṭp-* (*siṭṭ-*) 'to make (fire) go out', *ciṭṭ-* 'to be put out (fire)'. Burrow—Emeneau 1984:176—177, no. 1942; Krishnamurti 2003:128 and 199 **keṭ-u* (vb.) 'to perish, to decay', **kēṭu* (n.) 'damage', **keṭ-al* (n.) 'evil', **keṭu-ti* (n.) 'ruin', **keṭ-ṭa* (n.) 'evil'.

- B. Proto-Kartvelian **k'wed-/k'wd-* (vb.) to die, to lose; (n.) death, loss': Georgian *k'ved-/k'vd-* 'to die', (verbal noun) *xi-k'vd-il-* 'death', (part.) *mom-k'vd-ar-* 'dead', (adj.) *m-k'vd-ar-* 'dead'; Svan *k'wäd* (< **k'wed-*) 'loss (caused by death)'. Schmidt 1962:119; Klimov 1998:91—92 **k'wed-/k'wd-* 'to lose (caused by death)'; Fähnrich 1994:233 and 2007:237—238 **k'wed-/k'wd-*; Fähnrich—Sardshweladse 1995:196 **k'wed-/k'wd-*.

- C. Proto-Indo-European *k'wēdh-/*k'wōdh- 'rotten, bad, repulsive': Old English *cwēad* 'dung, dirt, filth'; Middle English *cwēd* 'bad'; Old Frisian *kwād* 'dung'; Dutch *kwaad* 'bad, repulsive', *kwetteren* 'to rot, to go bad (of fruit)'; Middle High German *quāt, quōt, kāt, kōt* 'bad; dung' (New High German *Kot*). Mann 1984—1987:353 *gūēdhos, -ā 'bad; badness'; Orël 2003:229 Proto-Germanic *kwēdaz; Vercoullie 1898:158; Kluge—Mitzka 1967:397 *gūōu-, *gūū-; Kluge—Seebold 1989:407 *gewə-, *gwē-; *gūə-, *gouə-.
- D. (?) Proto-Gilyak / Nivkh *kedr- 'to rub on, to grate': Amur *xedr-d* 'to rub on, to grate'; East Sakhalin *xērker-d* 'to rub on, to grate'; South Sakhalin *xerr-* 'to rub on, to grate'. Fortescue 2016:84.

Buck 1949:4.75 die; dead; death; 4.76 kill.

563. Proto-Nostratic root *k'wīy- (~ *k'wey-):

(vb.) *k'wīy- 'to be putrid, purulent';

(n.) *k'wīy-a 'pus'

- A. Afrasian: Proto-Semitic *k'ay-aḥ- 'to fester, to be purulent' > Arabic *kāḥa* 'to fester, to be purulent', *ḵayḥ* (pl. *ḵuyūḥ*) 'pus, mucous matter'.
- B. Dravidian: Tamil *cī* 'pus, mucous matter'; Malayalam *cī* 'putrid matter, secretion of the eyelids'; Kannada *kī* 'to become pus, to become putrid'; Kodagu *ki-y-* (*ki-yuv-*, *ki-ñj-*) 'to become rotten'; Telugu *cīku* 'to rot', *cīmu* 'pus'. Burrow—Emeneau 1984:147, no. 1606.
- C. Proto-Indo-European *k'wey-/ *k'wi- 'to be putrid, purulent': Greek δεισσα 'slime, filth'; Old Icelandic *kveisa* 'boil, whitlow'; Middle Low German *quēse* 'blood blister'; Old Church Slavic *židьkь* 'succosus'. Pokorny 1959:569 *gʷeid(h)- 'mud'; Walde 1927—1932.I:671 *gʷeid(h)-; Boisacq 1950:1105 *gʷeidh-ja or *gʷeidh-sā; Hofmann 1966:54 Greek δεισσα perhaps from *gʷendh-ja; Chantraine 1968—1980.I:259; Frisk 1970—1973.I:359; Beekes 2010.I:311 etymology unknown; Orël 2003:227 Proto-Germanic *kwaisōn; De Vries 1977:337; Derksen 2008:562 — Derksen rejects comparison of Old Church Slavic *židьkь* 'succosus' with Greek δεισσα 'slime, filth'.

Bomhard—Kerns 1994:488, no. 334.

564. Proto-Nostratic (n.) *k'wōw-a 'bullock, ox, cow':

- A. Dravidian: Telugu *kōḍiya*, *kōḍe* 'young bull'; Kolami *kōḍi* 'cow', *kōre* 'young bullock'; Pengo *kōḍi* 'cow'; Maṇḍa *kūḍi* 'cow'; Kui *kōḍi* 'cow, ox'; Kuwi *kōḍi*, *kōḍi* 'cow'. Burrow—Emeneau 1984:197, no. 2199.
- B. Proto-Indo-European *k'wōw- 'bullock, ox, cow': Sanskrit *gáuḥ* 'bull, cow'; Avestan *gāuš* 'cow'; Greek (Attic) βοῦς 'bullock, ox, bull, cow';

Armenian *kov* ‘cow’; Latin *bōs* ‘ox, bullock, cow’; Umbrian (acc. sg.) *bum* ‘ox’; Old Irish *bó* ‘cow’; Old Icelandic *kýr* ‘cow’; Faroese *kúgv* ‘cow’; Norwegian *ku*, *kýr* ‘cow’; Swedish *ko* ‘cow’; Danish *ko* ‘cow’; Old English *cū* ‘cow’; Old Frisian *kū* ‘cow’; Old Saxon *kō* ‘cow’; Dutch *koe* ‘cow’; Old High German *chuo* ‘cow’ (New High German *Kuh*); Latvian *gūovs* ‘cow’; Tocharian A *ko* ‘cow’, B *ke_u* ‘cow’, B *kewiye* ‘(adj.) pertaining to a cow or cows; (n.) butter’. Pokorny 1959:482—483 **g^uou-* ‘bullock, ox, cow’; Walde 1927—1932.I:696—697 **g^uou-*; Mann 1984—1987:368 **g^uōu-ēdā* (-ēdis, -ēdā, -dā) ‘ox, cattle, beef, cattle-fodder’, 368—369 **g^uōuēlos* (**g^uōuēl-*) ‘head of cattle; bull, ox, buffalo’, 369 **g^uōuēios* ‘bovine’, 369 **g^uōuēinos*, -ā ‘of oxen; ox; beef; cow dung’, 369 **g^uōuēs* ‘head of cattle, ox, cow’, 370 **g^uōutos*, -ā, -om, -ios, -iā (**g^uōt-*, **g^uūt-*), 370 **g^uōutros*, -om (**g^uutro-*); Watkins 1985:26 **g^wou-* and 2000:35 **g^wou-* ‘ox, bull, cow’; Mallory—Adams 1997:134—135 **g^wōus* ‘cow’; Gamkrelidze—Ivanov 1985.I:191, II:565, II:566, II:574, II:575, II:579, II:868, II:869, II:876 **k^oou-* and 1995.I:164, I:482, I:484, I:491, I:495, I:765, I:766, I:773 **k^oou-* ‘cow, bull’; Boisacq 1950:129—130 **g^uōu-*, **g^uou-*; Frisk 1970—1973.I:260—261 **g^uōu-s*; Chantraine 1968—1980.I:190—191 **g^wōu-s*; Beekes 2010.I:232—233 **g^weh₂-u-*; Hofmann 1966:38 **g^wōus*; Ernout—Meillet 1979:74 **g^wōus*; Walde—Hofmann 1965—1972.I:112; De Vaan 2008:74—75; Poultney 1959:299 **g^wōu-*; Kroonen 2013:299 Proto-Germanic **kō-* ~ **kū-* ‘cow’; Orël 2003:219—220 Proto-Germanic **kōwz* ~ **kūz*; De Vries 1977:340—341; Falk—Torp 1903—1906.I:396; Torp 1919:333; Onions 1966:223 **g^wōus*; Klein 1971:172; Kluge—Mitzka 1967:410 **g^uōu-*; Kluge—Seebold 1989:417 Proto-Germanic **k(w)ōu-*; Walshe 1951:131; Adams 1999:189 **g^wou-*; Van Windekens 1976—1982.I:226—227 **g^uou-*; Wodtko—Irslinger—Schneider 2008:177—185 **g^uōu-*.

Sumerian *gu₄* ‘ox, bull, cow’, *gud* ‘bull, bullock, cow’.

Buck 1949:3.20 cattle; 3.21 bull; 3.22 ox; 3.23 cow. Bomhard—Kerns 1994:498, no. 346.

565. Proto-Nostratic (Eurasian only) (n.) **k^woy-a* ‘outer covering: skin, hide, leather; bark (of a tree), shell, crust’:

- A. Proto-Indo-European **k^woyH-*/**k^wiH-* > **k^wī-* (secondary *e*-grade form: **k^weyH-*) ‘skin, hide, leather’: Sanskrit *jī-na-m* ‘leather bag’, *jī-la-h* ‘a leather bag’; Middle Irish *bīan* ‘skin, hide’. Pokorny 1959:469 **g^uēi-* (or **g^uejā-*): **g^uī-* ‘skin, hide’ (?); Walde 1927—1932.I:666 **g^uēi-* (or **g^uejā^x-*): **g^uī-*; Mayrhofer 1956—1980.I:437 and I:439.
- B. Uralic: Proto-Finno-Ugrian **koya* ‘outer covering: skin, hide, leather; bark (of a tree), shell, crust’ > Finnish *koja* ‘bark (of a tree)’; Karelian *koja*

‘bark (of a tree)’; Ostyak / Xanty *kōj* ‘leather from the forehead of reindeers, cows, or bears from which the soles of shoes are made’; Hungarian *héj/héja-*, *haj* ‘bark, shell, crust’. Collinder 1955:90 and 1977:106; Rédei 1986—1988:166 **koja*.

Buck 1949:4.12 skin; hide. Illič-Svityč 1971—1984.I:299—300, no. 169, **kojHa* (?) ‘skin, leather, bark’; Bomhard—Kerns 1994:499—500, no. 348.

566. Proto-Nostratic root **k^wur^y-* (~ **k^wor^y-*):

(vb.) **k^wur^y-* ‘to be heavy, weighty, solid, bulky’;

(n.) **k^wur^y-a* ‘heaviness, weight, solidity, thickness’; (adj.) ‘heavy, weighty, solid, bulky’

A. Proto-Afrasian **k^wur-* ‘to be heavy, weighty’: Proto-Semitic **w/ya-k^war-* ‘to be heavy, weighty, precious’ > Arabic *waḳara* ‘to load, to burden, to overload; to oppress, to weigh heavily upon’, *wiḳr* ‘heavy load, burden’; Akkadian *akāru* ‘to become scarce, expensive, precious, valuable’, *šukuru* ‘to make rare; to value; to hold in esteem, to give honor (to gods)’; Amorite *ykr* ‘to be dear, valuable’; Hebrew *yāḳar* [יָקָר] ‘to be precious, prized, costly’, *yāḳār* [יָקָר] ‘precious, rare, splendid, weighty’; Aramaic *yəḳar* ‘to be heavy, precious’; Ugaritic *ykr* ‘precious, dear’. Murtonen 1989:220; Klein 1987:263—264; Zammit 2002:439. Egyptian *iqr* ‘trustworthy; well-to-do; excellent, superior’. Gardiner 1957:555; Hannig 1995:107; Erman—Grapow 1921:19 and 1926—1963.1:137; Faulkner 1962:131—132. East Cushitic: Burji *k’urk’-aa* ‘heavy’, *k’urk’-eed-* ‘to become heavy, to conceive, to become pregnant’, *k’urk’-éed-aa* ‘heavy’, *k’urk’-e* ‘weight’. Sasse 1982:129.

B. Dravidian: Tamil *koṟu* ‘(adj.) fat, flourishing, prosperous; (n.) fat; (vb.) to prosper, to flourish, to be rich or fertile (as soil), to grow fat, to be plump, to be of thick consistency (as sandal paste), to be saucy, to be insolent’, *koṟumai* ‘plumpness, luxuriance, thickness, fertility’, *koṟuppu* ‘richness, fat, grease, plumpness, thickness in consistency, sauciness, impudence’; Malayalam *koṟukka* ‘to grow thick, solid, stiff by boiling; to grow fat, stout, arrogant’, *koṟuppu* ‘solidity (as of broth or curry), fatness, stoutness, pride’, *koṟu* ‘fat, thick, solid’; Kannada *korvu*, *korbu*, *kobbu* ‘(vb.) to grow fat, thick, stout; to increase, to grow; to be rank in growth; to become proud, presumptuous, arrogant; (n.) fat, fatness, rankness, pride, arrogance’; Tuḷu *kommè* ‘corpulence, fatness; corpulent, fat’; Telugu *k(r)ovvu* ‘(vb.) to become fat, to fatten, to become fat; (n.) fat, grease, lust, pride, arrogance’, *krovinna* ‘fat, plump, headstrong, ungovernable’; Parji *koṟ-*, *koṟv-* ‘to be fat’, *koṟukuḍ* ‘fatness, fat’; Kolami *koru* ‘fat’; Naikri *koru* ‘fat’; Konda *korvu* ‘fat of animals’; Pengo *kṛō-* ‘to be fat’, *koṟva* ‘fat’. Burrow—Emeneau 1984:193, no. 2146.

- C. Proto-Indo-European **k^wor(H)-*/**k^wr(H)-* (secondary *e*-grade form: **k^wer(H)-*) ‘heavy, weighty’: Sanskrit *gurú-h* ‘heavy, weighty; valuable, highly prized; venerable, respectable’, (comp.) *gárīyas* ‘heavier’, *garimán-* ‘heaviness, weight’; Kashmiri *gor^u*, (f.) *gūr^{ai}* ‘dense, solid’; Avestan *gouru-* in *gouru-zaoθra-* ‘viscous libation’; Greek βαρύς ‘heavy, burdensome, weighty, grievous’; Latin *gravis* ‘heavy, weighty, ponderous, burdensome; important, eminent, venerable, great’; Gothic *kaurus* ‘heavy’; Old Irish *bair* ‘heavy’; Welsh *bryw* ‘strong, strength’; Tocharian A *krāmārts*, B *kramartse* ‘heavy’, B *krāmār* ‘weight, heaviness’. Pokorny 1959:476—477 **g^uer-*, **g^uerə-*, **g^uerəu-*, **g^uerī-* ‘heavy’; Walde 1927—1932.I:684—686 **g^uer-*; Mann 1984—1987:370—371 **gurējō*, **gurējō* ‘to be heavy’, 371 **gurəst-* (?) ‘heavy; weight, heavy substance’, 371 **gurīu-* ‘heavy; weight’, 372 **gurūtos* ‘heavy, big’, 375 **gurīndis* ‘heavy, bulky’, 375 **gurō* (**gurūō*, **gurējō*) ‘to load, to weigh down, to burden’, 376 **gurōundh-*, 376 **gurūs*, **gurus* ‘solid, heavy’; Watkins 1985:25 **g^werə-* and 2000:34 **g^werə-* ‘heavy’ (oldest form **g^werə₂-*); Mallory—Adams 1997:264 **g^wreh_x-u-*, **g^wr_h-u-* ‘heavy’; Gamkrelidze—Ivanov 1984.I:199 **k^orru-* and 1995.I:172 **k^orru-* ‘heavy’; Boisacq 1950:115 **g^ur^u-s*; Frisk 1970—1973.I:221—222; Chantraine 1968—1980.I:165—166; Hofmann 1966:33 **g^urey-*; Beekes 2010.I:202—203 **g^wrh₂-u-*; Walde—Hofmann 1965—1972.I:620—621 **g^uer(ə)-*, **g^u(e)rā(u)-* ‘heavy’; Ernout—Meillet 1979:282—283 **g^wrəw-*; De Vaan 2008:272; Orël 2003:225 Proto-Germanic **kuruz*; Kroonen 2013:312 Proto-Germanic **kuru-* ‘heavy’; Lehmann 1986:217; Feist 1939:310 **g^uarú-*; Van Windekens 1976—1982.I:233—234 **g^uerə₁-*; Adams 1999:214—215. Proto-Indo-European **k^wrondh-* ‘hard to bear, harsh, severe, difficult’: Latvian *grūts* ‘difficult’; Old Church Slavic *grōst-okъ* ‘hard to bear, grievous, painful, harsh, severe’. Mann 1984—1987:371 **gurondh-* (?) ‘severe, outrageous’.

Sumerian *gur* ‘hefty’, *gur₄*, *gur₁₃*, *gur₁₄* ‘thick; to be or make thick’; *gur* ‘difficult, hard, severe, tough, burdensome, arduous’.

Buck 1949:9.97 difficult; 11.87 price; 11.88 dear (= costly, expensive); 12.63 thick (in dimension); 15.81 heavy. Möller 1911:98—99; Bomhard—Kerns 1994:491—492, no. 339; Dolgopolsky 2008, no. 922, **ku|orV* ‘thick, fat’.

22.27. PROTO-NOSTRATIC *G

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
G-	G- (?)	k-	G-	g ^h -	k-	g-	k- q-
-G-	-G- (?)	-k-	-G-	-g ^h -	-x-	-g-	-ʃ-

567. Proto-Nostratic root **gad-* (~ **gəd-*):(vb.) **gad-* ‘to make a loud sound or loud noise’;(n.) **gad-a* ‘loud noise, clap of thunder, loud clatter, loud rumble’

Reduplicated (Semitic and Dravidian):

(vb.) **gad-gad-* ‘to make a loud sound or loud noise’;(n.) **gad-gad-a* ‘loud noise, clap of thunder, loud clatter, loud rumble’

- A. Proto-Afrasian **gad-* ‘to make a loud sound or loud noise’: Proto-Semitic (reduplicated) **gad-gad-* ‘to make a loud sound or loud noise’ > Geez / Ethiopic *g^wadg^wada* [ገጥጥጥጥ] ‘to knock (at the door), to clap hands rhythmically, to strike, to accompany a dance with hand clapping’, *ʔang^wadg^wada* [ጎጥጥጥጥ] ‘to thunder’, *nag^wadg^wād* [ጎጥጥጥጥ] ‘thunder, clap of thunder, striking, noise’; Gurage *näg^wädg^wad* ‘thunder’; Amharic *täng^wädägg^wädä* ‘to thunder’, *näg^wädg^wad* ‘thunder’; Tigrinya *g^wädg^wəd bälä* ‘to thunder’, *näg^wädg^wad* ‘thunder’. D. Cohen 1970— :99; Leslau 1979:453 and 1987:182.
- B. Dravidian: Tamil (reduplicated) *kaṭakaṭav-eṇal*, *kaṭakaṭ-eṇal* (onomatopoeic) ‘clattering, rattling, rumbling, sounding rapidly’, *kaṭakaṭa* ‘to rattle (as a pin in a jewel)’, *kaṭakaṭappu* ‘clatter, rattling, rumbling’; Kota *gaṛum guṛum in-* ‘to thunder; imitative of noise of rock rolling down a hillside’; Kannaḍa *kaṭakuṭa* ‘noise in the stomach arising from drinking much water’, *gaḍagaḍa enu-* ‘to rumble or rattle (as thunder, carts, etc.)’, *gaḍāvaṇe* ‘loud sound, noise’; Telugu *kaṭakaṭa* ‘a rattling sound’, *gaḍagaḍa* ‘trembling, quaking, or quivering’; Kuṛux *xarxar-xarxar* ‘the sound of articles loosely packed and rattling against one another (the creaking of a cart, etc.)’, *xarxar-xarxar^arnā* ‘to rattle loosely together’, *xarbaṛ^arnā* ‘to rattle’; Malto *qarqarre* ‘to purl, to murmur’. Burrow—Emeneau 1984:102—103, no. 1110(a). Tamil *kaṭapaṭāv-eṇal* ‘hullabaloo, bustling, sounding confusedly’; Kannaḍa *gaḍa*, *gaḍi* a term expressing disorder, *gaḍabaḍa*, *gaḍabaḍi*, *gaḍabiḍi*, *gaḍibiḍi* ‘confusion, puzzle, tumult, vexation’; Tuḷu *gaḍabaḍi*, *gaḍibiḍi* ‘bustle, confusion, disorder, tumult, disturbance’; Telugu *gaḍabaḍa*, *gaḍabiḍa* ‘noise, bustle, tumult, confusion, disorder’. Burrow—Emeneau 1984:105, no. 1112.
- C. Proto-Kartvelian: **gad-/gə-* ‘to speak (loudly)’: Georgian [*γad-*] ‘to speak, to appeal’: *γad-eb-u-* ‘to appeal, to shout’, *m-γd-el-* ‘priest,

clergyman'; Laz *γod-* 'to do; to report'; Svan *γd-* 'to confer'. Klimov 1998:220 **γad-/γd-* 'to do; to speak (loudly)'; Fähnrich—Sardshweladse 1995:383 **γad-/γd-*; Fähnrich 2007:475—476 **γad-/γd-*.

Buck 1949:1.56 thunder; 15.44 sound (sb.); 15.45 loud.

568. Proto-Nostratic root **gal-* (~ **gəl-*):

(vb.) **gal-* 'to come, to go';

(n.) **gal-a* 'the act of coming or going; trip, voyage'

- A. Proto-Afrasian **gal-* 'to come, to go; to come in, to enter; to go out, to go away, to leave, to depart': Proto-Semitic **ga-/wa-/l-* 'to roam, to rove, to wander about' > Arabic *ġāla* 'to roam, to rove, to wander about; to move freely, to be at home, to occupy oneself, to be circulated, to make the rounds; to pass (through the mind)', *ġawla* 'circuit, round, patrol; excursion, outing; tour; trip, voyage', *taġwāl* 'migration, wandering, roving, traveling; nomadic life, nomadism'; Sabaean *gyl* 'course, period'; Šheri / Jibbāli *egtel* '(usually animals) to gather; to wander, to tour around'; Hebrew *gīl* [גִּיל] 'circle, age' (a hapax legomenon in the Bible). D. Cohen 1970— :108; Murtonen 1989:133; Klein 1987:98. Proto-Semitic **gal-aw-* 'to go out or away from' > Hebrew *gālāh* [גָּלָה] 'to go away, to disappear, to go into exile'; Aramaic *gālā* 'to go into exile, to go away, to disappear'; Ugaritic *gly* 'to leave, to depart'; Arabic *ġalā* 'to move away, to go away (from a place), to leave (a place); to depart, to leave, to quit, to evacuate (a place)'. Perhaps also Geez / Ethiopic (passive) *tagalgala* [ተገለገለ] 'to be taken into captivity, to go into exile'. Leslau 1987:190; Murtonen 1989:134—135; D. Cohen 1970— :120—122. Berber: Tuareg *əgəl* 'to leave, to go, to walk; (by extension) to be lost (animal, thing); to go past', *tagəllawt* 'departure'; Tawlemmet *aglu* 'to leave, to go past, to continue on one's way', *saglu* 'to make go, to send away'; Kabyle *əglu* 'to go'; Tamazight *gulu* 'to arrive, to await, to reach'; Ghadames *təgğəli* 'a short while ago, a month ago'. Proto-East Cushitic **gal-* 'to enter, to come home' > Burji *gal-* 'to enter'; Somali *gal-* ~ *gel-* 'to enter'; Rendille *gel-* 'to enter'; Boni *kal-* 'to enter'; Dasenech *gal-* 'to enter'; Bayso *gal-* 'to enter'; Galla / Oromo *gal-* 'to enter'; Konso *kal-* 'to enter'; Gidole *kal-* 'to enter'; Gedeo / Darasa *gal-* 'to pass the night, to spend the night'; Kambata *gal-* 'to pass the night, to spend the night'; Sidamo *gal-* 'to pass the night, to spend the night'. Sasse 1979:17 and 1982:76; Hudson 1989:110. Proto-Southern Cushitic **gaal-* 'to go home' > Ma'a -*gale* 'to go home'; Dahalo *gaalij-* 'to go home'. Ehret 1980:235. Omotic: Ometo *gal-* 'to enter'; Anfilla *gal-* 'to enter'. Orël—Stolbova 1995:199, no. 879, **gal-* 'to go, to enter'.
- B. Yukaghir (Northern / Tundra) *qalyatej-* 'to let escape, to let go', *qalyudu-* 'to escape, to run away'. Nikolaeva 2006:375.

- C. (?) Proto-Altaic **gěle* (if from **gale*) ‘to come, to go’: Proto-Tungus **gel-* ‘to get hardly on one’s way’ > Evenki *gel-* ‘to get hardly on one’s way’; Orok *gilin-* ‘to get hardly on one’s way’. Proto-Mongolian **gel-* ‘to walk slowly’ > Written Mongolian *geldüri-* ‘to walk slowly, to saunter’; Khalkha *geldre-* ‘to walk slowly, to saunter’; Kalmyk *geldr-* ‘to walk slowly’; Dagur *geldure-* ‘to walk slowly’. Proto-Turkic **gel-* ‘to come’ > Old Turkic (Orkhon, Old Uighur) *kel-* ‘to come’; Karakhanide Turkic *kel-* ‘to come’; Turkish *gel-* ‘to come’; Gagauz *gel-* ‘to come’; Azerbaijani *gäl-* ‘to come’; Turkmenian *gel-* ‘to come’; Uzbek *kel-* ‘to come’; Uighur *käl-/kil-* ‘to come’; Karaim *kel-* ‘to come’; Tatar *kil-* ‘to come’; Bashkir *kil-* ‘to come’; Kirghiz *kel-* ‘to come’; Kazakh *kel-* ‘to come’; Noghay *kel-* ‘to come’; Sary-Uighur *kel-* ‘to come’; Oyrot (Mountain Altai) *kel-* ‘to come’; Tuva *kel-* ‘to come’; Yakut *kel-* ‘to come’; Dolgan *kel-* ‘to come’; Chuvash *kil-* ‘to come’. Starostin—Dybo—Mudrak 2005:538 **gěle* ‘to come, to go’.
- D. Chukchi-Kamchatkan: Proto-Chukotian **yal-* ‘to go past’ > Chukchi *yal-* ‘to go past, to overtake’, *yal-jan* ‘way past’, *yal-ce(tko)cet-* ‘to compete at a race (with reindeer or dogs)’; Kerek *ha(a)la-* ‘to go past, to overtake’; Koryak *yal-*, *yal-cet-* ‘to go past, to overtake’, *yal-na* ‘way past’; Alyutor *yal-* ‘to go past’. Fortescue 2005:82.

Buck 1949:10.47 go; 10.48 come; 10.49 go away, depart; 10.54 overtake; 10.57 enter. Dolgopolsky 2008, no. 616, **gûlE* ‘to go (away), to start (going away), to set out’.

569. Proto-Nostratic root **gal-* (~ **gəl-*):

(vb.) **gal-* ‘to flow’;

(n.) **gal-a* ‘ravine, gully, watercourse, river’

- A. Proto-Afrasian **gal-* ‘river, lake’: Berber: Tuareg *ağəlmam* ‘any body of water occurring naturally (lake, basin, pool, puddle)’; Nefusa *agəlmam* ‘depression in the earth filled with water from rain; pond, lake’; Tamazight *agəlmam* ‘pond, lake, large pool’; Kabyle *aggwəlmam* ‘lake, pond, pool’, *agwəlmim* ‘depression in the earth, hole filled with water’. Highland East Cushitic: Gedeo / Darasa *galaana* ‘river’ (according to Hudson 1989:124, this is a loan from Oromo). Lowland East Cushitic: Galla / Oromo *galaana* ‘sea’. Hudson 1989:124 and 241. Central Chadic **galan-H-* ‘swampy river branch’ > Mbara *goloŋay* ‘swampy river branch’. Orël—Stolbova 1995:200, no. 884, **gal-an-* ‘river, lake’.
- B. Dravidian: Tamil *kāl*, *kāl-vāy*, *vāy-kkāl* ‘irrigation channel’; Malayalam *kāl-vā(y)* ‘river mouth; irrigation channel’, *vāy-kkāl* ‘small or narrow canal’; Kannaḍa *kāl*, *kālive*, *kāluve*, *kālve*, *kāvale* ‘watercourse, channel, brook’; Tuḷu *kālivē* ‘channel for irrigation, canal’; Telugu *kālava*, *kāluva* ‘canal, channel, gutter, drain, sewer’; Gondi *kālva* ‘irrigation channel’ (Telugu loan). Burrow—Emeneau 1984:138, no. 1480; Krishnamurti

2003:13 **kāl* ‘canal’. Tamil *kāl* (*kālv-*, *kānr-*) ‘to flow (as saliva from the mouth, blood from a vein, tears from eyes), leap forth (as a waterfall)’, *kali* ‘to trickle, to flow gently’; Malayalam *kāluka* ‘to trickle, to ooze, to drain, to leak’, *kālca* ‘oozing out’, *kālikka* ‘to ooze through’; Gondi *kālum* ‘sweat’. Burrow—Emeneau 1984:138, no. 1478. Tamil *kalīnku*, *kalīñcu*, *kalūnku* ‘sluice or water-weirs for surplus water’, *kalīnkilu* ‘sluice-weirs’; Malayalam *kalūnku* ‘culvert’; Telugu *kalūju* ‘sluice, flood-gate’, *kaḷiṅga* ‘sluice’. Burrow—Emeneau 1984:122, no. 1309; Krishnamurti 2003:13 **kal-Vnk-* ‘covered drain, sluice’.

- C. Proto-Kartvelian **gelo-* ‘ravine, gully, stream, river’: Georgian *γelo-*, *yele* ‘ravine, gully’, *γelovan-* ‘covered with ravines’; Mingrelian *yal(u)-* ‘stream, rivulet’; Laz *yal-* ‘rivulet, river’. Schmidt 1962:138; Klimov 1964:202 **yele-* and 1998:222—223 **yele-* ‘ravine, gully’; Fähnrich—Sardshweladse 1995:387—388 **yel-*; Fähnrich 1994:228 and 2007:481—482 **yel-*.
- D. (?) Indo-European: Old Irish *glaiss* ‘brook, rivulet’.

Buck 1949:1.36 river, stream, brook; 10.32 flow (vb.).

570. Proto-Nostratic root **gal-* (~ **gəl-*):

- (vb.) **gal-* ‘to stir up, to agitate, to disturb; to be stirred up, agitated, disturbed’;
 (n.) **gal-a* ‘agitation, disturbance, perturbation; quarrel, fight, battle’

- A. Proto-Afrasian **gal-* ‘to stir up, to agitate, to disturb; to be stirred up, agitated, disturbed’: Proto-Semitic (reduplicated) **gal-gal-* ‘to stir up, to mix’ > Arabic *ḡalḡala* ‘to shake, to move; to mix; to frighten, to confuse’ (also ‘to reverberate, to resound, to ring out, to rattle’). D. Cohen 1970— : 118. (?) Proto-Semitic **gal-as-* ‘to quarrel’ > Šheri / Jibbāli *ḡlōs* ‘to quarrel, to nag, to be quarrelsome, to tell off’; Mehri *ḡlōs* ‘to quarrel, to nag at someone, to be quarrelsome, to be disagreeable with someone’; Ḥarsūsi *ḡateles* ‘to quarrel with one another’. D. Cohen 1970— :131. Akkadian *galātu* (*galādu*) ‘to twitch, to quiver, to have a premature emission, to be or become restless or nervous, to be or become frightened, to fear’, (adv.) *galtiṣ* ‘violently’, *galtu* ‘angry, terrifying’, *gilittu* ‘fright, terror’. D. Cohen 1970— :118—119.
- B. Dravidian: [Tamil *kalānku* (*kalānki-*) ‘to be stirred up, agitated, ruffled (as water), confused, abashed’, *kalakkam*, *kalakku* ‘being agitated (as surface of water), discomposure, distress, perplexity’, *kalakku* (*kalakki-*) ‘to confuse, to nonplus’, *kalānkal* ‘turbidity, muddiness, muddy water, perturbation’, *kalāvu* (*kalāvi-*) ‘to be perturbed, confused, displeased, angry’, *kalāy* ‘to get angry, to quarrel’, *kalāpam* ‘disturbance, uproar, raid’, *kalām* ‘war, battle, rivalry, rage’, *kali* ‘perturbation, discomposure, uneasiness, war, dissension, strife’, *kaluṛ* (vb.) to become turbid (as

water), to be disturbed in mind, to weep; (n.) weeping, muddiness', *kalurcci*, *kalurvu* 'sorrow, weeping', *kaluri* 'disturbed water, puddle, flood, tears, confusion', *kalir* '(vb.) to weep, to be troubled (in mind); (n.) muddy water'; Malayalam *kalaññuka* 'to be mixed, agitated, embarrassed, turbid (as water)', *kalaññal* 'turbidity', *kalakkuka* 'to mix (tr.), to confound', *kalakkam* 'turbidity, confusion, quarrel', *kalacuka* 'to be disturbed', *kalaśal*, *kalāpam* 'confusion, quarrel', *kalakku* 'muddy water', *kalampuka* 'to get confused, to quarrel, to anoint the body with perfumes', *kalampal*, *kalampu* 'uproar, quarrel'; Kota *kalk* 'muddy (of water)', *kalg-* (*kalgy-*) 'to be mixed, confused (in relationship)', *kalk-* (*kalky-*) 'to mix'; Toda *kalx-* (*kalxy-*) 'to be stirred up (water so that it becomes muddy)', *kalk-* (*kalky-*) 'to stir up (water so that it becomes muddy)'; Kannaḍa *kalaku*, *kalañku* 'to agitate, to shake, to perturb, to make turbid, to stir up, to disturb', *kalakisu* 'to perturb, to stir', *kalaku* 'turbidity', *kalaḍu* 'to become turbid, muddy, unclean; to be shaken or perturbed', *kalumbu* '(vb.) to perturbate, to make turbid; (n.) turbidity, contamination, defilement', *kaluhe* 'turbidity, impurity'; Koḍagu *kalang-* (*kalangi-*) 'to be stirred up', *kalak-* (*kalaki-*) 'to stir up, to churn', *kalak* 'stirring up'; Tuḷu *kalañky*, *kaḷaṅky* 'turbidity, muddiness', *kalañkuni*, *kaḷaṅkuni* 'to be turbid', *kalañkāvuni* 'to render turbid', *kalambuni* 'to quarrel, to fight'; Telugu *kalāgu* 'to be in agitation, confusion, or trouble; to be turbid (as any liquid)', *kalācu* 'to stir, to agitate, to disturb, to trouble, to make turbid', *kalāka*, *kalākuva* 'confusion, trouble, turbidity', *kalāta* 'agitation, disturbance, quarrel, dissention, strife, turbidity', *kalaguṇḍu* 'confusion, disorder, commotion, tumult', *kallih-* 'to shake (bottle, etc.)'; Kui *glahpa* (*glaht-*) '(vb.) to mix by stirring, to stir, to confuse, to perplex, to confound, to cause to be confused; (n.) the act of stirring, confusing'; Kuṛux *xalaxnā* 'to disturb, to make muddy (as water)', *xalxnā* 'to be wet and muddy'; Malto *qalge* 'to disturb (as water)', *qalgro* 'disturbed or muddy'. Burrow—Emeneau 1984:122, no. 1303; Krishnamurti 2003:123, fn. 5 (no. 2), **kal-ac-* 'to quarrel'. Tamil *kalavaram* 'confusion of mind, perturbation', *kalavari* 'to be confused, perturbed'; Kannaḍa *kaḷakaḷa*, *kaḷavaḷike* 'agitation of the mind, distress, confusion', *kaḷavaḷisu* 'to be agitated, to grieve, to be perplexed'; Koḍagu *kaḷavaḷa* 'confusion'; Tuḷu *kaḷavaḷa* 'anxiety, alarm, sorrow'; Telugu *kalavaramu* 'confusion, state of being puzzled or perplexed, anxiety', *kalavara-paḍu/pōvu* 'to be confused', *kaḷavaḷamu* 'anxiety, confusion, perplexity', *kaḷavaḷincu* 'to be perplexed, anxious'. Burrow—Emeneau 1984:122, no. 1306. Tamil *kalipali*, *kalipili* 'uproar, disturbance, quarrel, wrangle'; Kannaḍa *galabali*, *galabili*, *galibili* 'disorder, confusion', *galabe* 'hubbub, clamor'; Tuḷu *galibili* 'disorder, tumult, anarchy', *galabu* 'noise, tumult, confusion'; Telugu *galibili*, *galaba* 'confusion, noise, disturbance'. Burrow—Emeneau 1984:123, no. 1310.] Either here or with Proto-Nostratic **k'al-* (~ **k'əl-*) (vb.) 'to move, to tremble, to shake, to agitate, to

stir, to mix; (n.) agitation, trembling, perturbation, distress, confusion, uneasiness, disturbance’.

- C. Proto-Kartvelian **gel-* ‘to be nervous, frightened’: Old Georgian *γelva-* ‘wave’; Georgian *γel-* ‘to be nervous’; Mingrelian *γal-* ‘to get frightened’. Klimov 1998:222 **yel-* ‘to be nervous, frightened’; Fähnrich 2007:481 **yel-*; Fähnrich—Sardshweladse 1995:387 **yel-*.
- D. Yukaghir (Northern / Tundra) *qaaluu-* (< **qa:lə-*) ‘terrible, frightful; strong’, *qallid’e* ‘wolf; something terrible’. Nikolaeva 2006:375—376.
- E. Proto-Altaic **gāli-* ‘(vb.) to hate; (adj.) wild’: Proto-Tungus **galu-* ‘to hate’ > Lamut / Even *galut-* ‘to hate’; Ulch *galu-* ‘to hate’; Oroch *galu-* ‘to hate’; Nanay / Gold *galo-* ‘to hate’; Oroch *galu-* ‘to hate’; Udihe *galu-* ‘to hate’. Proto-Mongolian **galžayu* ‘wild, rabid’ > Mongolian *γalžayu*, *γalžiyu* ‘rabid, insane; possessed by a demon; frenzied, enraged; violent, tempestuous’, *γalžayura-* ‘to be(come) rabid, enraged; to fly into a rage; to be(come) insane’, (causative) *γalžayurayul-* ‘to madden, to enrage; to cause one to lose his reason’, *γalžayural* ‘madness, insanity’; Khalkha *galzū* ‘wild, rabid’; Buriat *galzū* ‘wild, rabid’; Kalmyk *γalzū* ‘wild, rabid’; Ordos *galzū* ‘wild, rabid’; Dagur *galžō* ‘wild, rabid’; Monguor *garžū*, *galžū* ‘wild, rabid’. Proto-Turkic **K(i)al* ‘wild, rough’ > Old Turkic (Old Uighur) *qal* ‘wild, rough’; Karakhanide Turkic *qal* ‘wild, rough’; Turkmenian *galdav* ‘wild, rough’; Khakas *χal* ‘wild, rough’; Oyrot (Mountain Altai) *qal* ‘wild, rough’; Tuva *χal-mal* ‘wild, rough’; Yakut *χal* ‘wild, rough’. Starostin—Dybo—Mudrak 2003:628 **gāli* ‘to hate; wild’.
- F. (?) Chukchi-Kamchatkan: Proto-Chukotian **γəlo-* ‘to be sad’ > Chukchi *γəlo-* ‘to be sad, bored’, *γəlo-lʔən* ‘sad’, *γəlo-n* ‘sorrow’; Kerek *həlu-lran* ‘sad’; Alyutor (Palana) *γloyəl* ‘sorrow, boredom’. Fortescue 2005:89. Semantic development as in New High German *trüb(e)* ‘sad’, originally ‘troubled, turbid’ — note *Trubel* ‘confusion, turmoil, turbulence; bustle, hubbub, hurly-burly; milling throng’.

Buck 1949:5.17 mix; 16.33 anxiety; 16.36 sad; 16.53 fear, fright.

571. Proto-Nostratic root **gam-* (~ **gəm-*):

(vb.) **gam-* ‘to gather together, to bring together, to put together, to join together, to come together, to do together’;

(n.) **gam-a* ‘gathering, collection, crowd, multitude, throng’

- A. Proto-Afrasian **gam-* ‘to gather together, to bring together, to put together, to join together, to come together’: Proto-Semitic **gam-aʕ-* ‘to gather together, to bring together’ > Arabic *ġamaʕa* ‘to gather (something); to collect (for example, money); to unite, to combine, to bring together (parts into a whole); to put together, to join (things); to set, to compose (type); to compile (a book); to summarize, to sum up (something); to rally, to round up (people); to pile up, to amass, to accumulate (something); to assemble

(several persons); to add (numbers), to add up (a column); to make plural, to pluralize (a word); to convoke, to convene, to call (a meeting); to unite, to link, to bring together (several things of persons); to combine; to contain, to hold, to comprise (something), *ḡam* ‘gathering; collection; combination; connection, coupling, joining; accumulation; addition; union, merger, aggregation, integration; holding together; gathering (of people), crowd, throng; gang, troop; plural (in grammar)’, *ʔaḡma* ‘entire, whole, all’; Sabaeen *gm* ‘to assemble, to bring together’; Šheri / Jibbāli *gī* ‘to gather’, *egū* ‘to collect’, *gótma* ‘to gather’, (collective) *gīʔat* ‘company, band of robbers’; Mehri *gūma* ‘to gather (tr.)’, *gátma*, *gátama*, *-maʔ*, *gátmam/lyəgtámam* ‘to gather (intr.)’; Harsūsi *egtōma*, *egtemáʔ*, *gátma* ‘to collect, to gather’. D. Cohen 1970— :143; Zammit 2002:125. Arabic *ḡumla* (pl. *ḡumal*) ‘totality, sum, whole; group, troop, body; crowd’. D. Cohen 1970— :139; Zammit 2002:126. Arabic *ḡamhara* ‘to gather, to collect; to assemble’, *ḡamhara* ‘multitude, crowd, throng; the great mass, the populace’, *taḡamhara* ‘to gather, to flock together (crowd)’, *ḡumhūr* ‘multitude; crowd, throng; general public, public’, *taḡamhur* ‘gathering (of people), crowd’. D. Cohen 1970— :137. Arabic *ḡamara* ‘to gather, to unite; to tie together (the back of the hair); to unite for a purpose’, *ḡamār* ‘crowd, people’. D. Cohen 1970— :144. Berber: Tawlemmet *əgmər* ‘to hunt, to go hunting, to collect’, *tagmər* ‘hunting’, *ənəgmər* ‘hunter, collector’; Ghadames *əgmər* ‘to pick fruit, dates’, *aḡəmmər* ‘ancient festival celebrating the first picking of dates’; Tamazight *gmər* ‘to hunt, to steal, to steal game’, *tagəmriwt* ‘prey, game’, *tanəgmart* ‘hunting, stealing game’; Kabyle *əgmər* ‘to gather, to gather cardoon’, *tagmər* ‘picking, gathering’; Riff *əgmər*, *əymar* ‘to hunt, to fish’, *taḡəmrəwt*, *tayəmrəwt* ‘hunting, fishing’. West Chadic: Hausa *gàmu* ‘to meet’, *gàmo* ‘meeting, encounter’; Montol *kwam* ‘to meet together’; Angas *gwom* ‘to meet together’; Bole *gom* ‘to meet together’; Karekare *gam* ‘to meet together’; Tangale *komb-* ‘to meet together’; Bade *gam-* ‘to meet together’. Orël—Stolbova 1995:213, no. 952, **gomaʃ-* ‘to gather, to meet’; Ehret 1995:184, no. 280, **gim-* ‘to come upon, to meet with’.

- B. Dravidian: Kota *kabałm* ‘communal work in one man’s garden’; Kannaḍa *kambaḷa* ‘daily hire or wages’; Koḍagu *kambaḷa* ‘feast given in field at transplantation time; picnic’. Burrow—Emeneau 1984:115, no. 1238.
- C. Chukchi-Kamchatkan: Proto-Chukotian **yəmyæ-* ‘every, any’ > Chukchi *yemye-* ‘every, any’; Koryak *yemye-* ‘every, any’; Alyutor *yamyä-* ‘every, any’. Fortescue 2005:407. Semantics as in Arabic *ʔaḡma* ‘entire, whole, all’, cited above.

Buck 1949:12.21 collect, gather’ 13.19 multitude, crowd. Dolgopolsky 2008, no. 629, **g[A]mV* (and **g[A]mʃV* ?) ‘altogether, full’ and 613, no. 630, **g[e]mV* ‘strong, firm’.

572. Proto-Nostratic root **gar-* (~ **gər-*):
- (vb.) **gar-* ‘to mutter, to groan, to grumble, to howl, to roar’;
- (n.) **gar-a* ‘groan, howl, murmur, roar, cry’
- Reduplicated (Semitic and Kartvelian):
- (vb.) **gar-gar-* ‘to mutter, to groan, to grumble, to howl, to roar’;
- (n.) **gar-gar-a* ‘groan, howl, murmur, roar, cry’
- A. Proto-Afrasian **gar-* ‘to mutter, to groan, to grumble, to howl, to roar’:
[Proto-Semitic (reduplicated) **gar-gar-* ‘to mutter, to groan, to grumble, to howl, to roar’ > Arabic *ğarğara* ‘to grunt, to grumble’; Geez / Ethiopic *ʔangʷargʷara* [አገረዳ] ‘to murmur, to mutter, to grumble, to complain, to claim, to be vexed, to be angry’; Tigrinya *ʔangʷärgʷärä* ‘to mutter, to mumble’; Amharic *angʷäraggʷärä* ‘to mutter’; Gurage *angəraggärä* ‘to grumble’, (*a*)*gʷarra* ‘to bellow, to howl, to roar’, *gur balä* ‘to thunder’, *gurgur balä* ‘to murmur’; Harari *girgir bāya* ‘to be noisy, to be unsettled (country)’, *gurur bāya* ‘to roar (animal), to rumble (thunder), to thunder’, *gurum gurum bāya* ‘to grumble, to groan’, *gurgurti* ‘rumor’. D. Cohen 1970— :175—177; Leslau 1963:75, 1979:288, 293, and 1987:202.] Note: The Semitic forms may belong either here or with Proto-Nostratic **gur-* ‘to rumble, to roar, to growl, to gurgle’.
- B. Proto-Kartvelian **gar-/Gr-* ‘to cry (out), to howl’: Georgian *m-γer-* ‘to sing’; Mingrelian *γor-, γvar-* ‘to cry, to howl’; Laz *mγor-* ‘to cry, to howl’; Svan *γar-/γr-* ‘to sing’. Schmidt 1962:125; Klimov 1964:201 **γar-/Gr-* and 1998:221 **γar-/Gr-* ‘to cry, to sing’; Fähnrich 2007:479 **γar-/Gr-*; Fähnrich—Sardshweladse 1995:385—386 **γar-/Gr-*. Proto-Kartvelian (reduplicated) **gargar-* ‘to cry (out), to howl’: Georgian *γayad-* ‘to cry, to howl’; Mingrelian *γaryal-* ‘to chat’; Laz *γa(r)γal-* ‘to speak’. Klimov 1964:201 **γaryar-* and 1998:221—222 **yaryar-* ‘to talk a lot’. Proto-Kartvelian **Gr-en-/Gr-in-* ‘to snarl (refers to dogs and other animals)’: Georgian *γren-/γrin-* ‘to snarl’; Mingrelian *γirin-/γərin-* ‘to snarl’; Laz *γi(r)in-* ‘to snarl’. Klimov 1964:206 **γrin-* and 1998:233 **γr-en-/Gr-in-* ‘to snarl (refers to dogs and other animals)’; Fähnrich—Sardshweladse 1995:397 **γren-/Gr-in-*; Fähnrich 2007:494 **γren-/Gr-in-*. Proto-Kartvelian **Gr-ut-* ‘to grunt’: Georgian *γrut-un-* ‘to grunt’; Mingrelian *γvint-* ‘to grunt’; Laz *γrut-, xrut-* ‘to grunt’; Svan *γurt-, žγurt-* ‘to grunt’. Klimov 1964:207 **γrut-* and 1998:234 **γru(n)t-* ‘to grunt’; Fähnrich—Sardshweladse 1995:399 **γrut-*; Fähnrich 2007:496 **γrut-*.
- C. Proto-Indo-European **gher-/ghor-/ghy-* ‘to growl, to wail, to weep, to cry (out)’: Latin *hirriō* ‘to growl’; Armenian *ger* ‘to wail’; Gothic *grētan* ‘to weep, to lament’, *grēts* ‘weeping’; Old Icelandic *gráta* ‘to weep, to bewail’, *grátr* ‘weeping’; Faroese *gráta* ‘to weep’, *grátur* ‘weeping’; Norwegian *graata* ‘to weep’, *graat* ‘weeping’; Swedish *gråta* ‘to weep’, *gråt* ‘weeping’; Danish *græde* ‘to weep’, *graad* ‘weeping’; Old English *grætan* ‘to weep’, *grædan* ‘to cry out, to call out’; Old Saxon *grātan* ‘to

weep'; Middle High German *grazen* 'to cry out, to rage, to storm'. Rix 1998a:180 (?) **ghreh₁d-* 'to weep'; Pokorny 1959:439 **gher-* onomatopoeic; Walde 1927—1932.I:605 **gher-*; Mann 1984—1987:319 **gher-*, **ghor-* 'to cry', 423 **ghrēdō* 'to roar, to din, to resound, to shout'; Watkins 1985:22 **gher-* and 2000:30 **gher-* 'to call out'; Walde—Hofmann 1965—1972.I:651—652 **ghers-*; Ernout—Meillet 1979:296 Latin *hirriō* 'expressive verb'; Orël 2003:142 Proto-Germanic **grētanan*; Kroonen 2013:187—188 Proto-Germanic **grētan-* 'to wail'; Lehmann 1986:160—161 Gothic *grētan* possibly from **gher-* with *-d-* extension; Feist 1939:221; De Vries 1977:185; Falk—Torp 1903—1906.I:243; Torp 1919:179; Onions 1966:413 Common Germanic **grāetan*; Klein 1971:322 **ghrēd-*.

- D. Chukchi-Kamchatkan: Proto-Chukotian **yəræp-* 'to sing': Chukchi *y(ə)rep-* 'to sing'; Alyutor *yrap-* 'to sing'. Fortescue 2005:90.
- E. Proto-Gilyak / Nivkh **garju-* (or **garju-*) 'to cry, to yelp': Amur *qarju-dʷ* 'to cry, to yelp (dog)'; East Sakhalin *qarju-d* 'to cry, to yelp'; South Sakhalin *qarju-* 'to make a noise'. Fortescue 2016:66.

Buck 1949:18.12 sing; 18.13 shout, cry out. Bomhard—Kerns 1994:502, no. 350.

573. Proto-Nostratic root **gar-* (~ **gər-*):

(vb.) **gar-* 'to crush, to grate, to grind; to melt, to dissolve';

(n.) **gar-a* 'the act of crushing, grating, grinding'; (adj.) 'crushed, grated, ground, dissolved, melted, softened'

- A. Proto-Afrasian **gar-* 'to crush, to grate, to grind': Proto-Semitic **gar-atṭ-* 'to crush, to grate, to grind' > Arabic *ğaraša* 'to crush, to grate, to grind', *ğarīš* 'crushed, bruised, coarsely ground; crushed grain, grits'; Hebrew *gereš* [גֶּרֶשׁ] 'groats, grits'; Amharic (*a*)*gʷärräsä* 'to make coarse-ground flour'. Murtonen 1989:142; D. Cohen 1970—:192—193; Klein 1987:110. Proto-Semitic **gurn-* 'threshing floor' > Hebrew *gōren* [גֹּרֵן] 'threshing floor'; Ugaritic *grn* 'threshing floor'; Arabic *ğurn* '(stone) basin, mortar; threshing floor, barn'; Sabaeen *grn* 'threshing floor'; Geez / Ethiopic *gʷərn* [ገርገ], *gorn* [ጎርጎ], *gurn* [ጉርጉ], *gʷərnā* [ገርገፍ] 'threshing floor'. Murtonen 1989:141—142; D. Cohen 1970—:188—189; Klein 1987:109. Hebrew *gāras* [גָּרַס] 'to crush, to pound, to ground, to mill; to make grits'; Aramaic *garas* 'to crush, to make groats'. Murtonen 1989:142; Klein 1987:109.
- B. Dravidian: Tamil *karai* (-*v-*, -*nt-*) 'to dissolve in water, to be reduced from solid to liquid form, to wear away (as soil by the action of water), to become emaciated, to become gradually attenuated', *karai* (-*pp-*, -*tt-*) 'to dissolve in water (tr.), to melt, to liquefy, to extirpate'; Malayalam *karakkuka* 'to melt, to dissolve'; Kota *karg-* (*kargy-*) 'to dissolve, to melt (intr.)', *kark-* (*karky-*) 'to dissolve, to melt (tr.)'; Kannaḍa *karagu*, *karaṅgu*, *kargu* 'to be dissolved, to melt away, to decrease in bulk, to

become softened to pity or love, to pine away’, *karagisu*, *karigisu*, *kargisu* ‘to cause to be dissolved, to melt’, *karaḍu* ‘to melt’; Koḍagu *kar-* (*kari-*) ‘to be digested’, *karak-* (*karaki-*) ‘to digest, to dissolve’; Tuḷu *karaguni* ‘to melt (intr.), to dissolve, to liquefy; to become thin, affected, softened; to melt with pity’, *karavuni* ‘to be dissolved, melted, digested’, *karapuni* ‘to digest’; Telugu *karāgu* ‘to melt (tr., intr.), to dissolve, to liquefy’, *karāgingu*, *karācu* ‘to melt (tr.), to dissolve, to liquefy’; Gadba *karṇ-ēr-* ‘to be melted’; Konda *kariṇ-* ‘to melt, to be dissolved’; Kuwi *karangali* ‘to be dissolved, to be melted’, *karṇg-* ‘to melt (tr.)’. Burrow—Emeneau 1984:120, no. 1292. For the semantics, cf. Old English *meltan* ‘to melt, to dissolve’ < Proto-Indo-European **mel-* ‘to crush, to grind’ (cf. Gothic *malan* ‘to grind’, *ga-malwjan* ‘to grind up, to crush’; Latin *molō* ‘to grind in a mill’; Hittite [3rd sg. pres.] *ma-al-la-i* ‘to crush, to grind’ [cf. Pokorny 1959:716—719]). Kuṛux *xarbnā* ‘to give an extra pounding to rice for cleaning it from grains unhusked or spoiled’; Malto *qarwe* ‘to clean rice by pounding’, *qarwre* ‘to be bruised or hurt by falling’. Burrow—Emeneau 1984:120, no. 1295. Tamil *kari* ‘(vb.) to chew, to eat by biting or nibbling; (n.) chewing, eating by biting’, *karumpu* (*karumpi-*) ‘to eat bit by bit’, *karuvu* (*karuvi-*) ‘to nibble (as a rat)’; Malayalam *karumpuka* ‘to eat (as cows with the lower teeth)’, *karampuka* ‘to nibble, to gnaw’; Telugu *karacu* ‘to bite, to gnaw’. Burrow—Emeneau 1984:129, no. 1390.

- C. Proto-Kartvelian **gerg-/gṛg-* ‘to grind (coarsely), to gnaw’: Georgian *γery-* ‘to grind (coarsely), to gnaw’; Mingrelian *γary-* ‘to grind (grain)’; Laz [*γary-*] ‘to grind (grain)’. Klimov 1964:202 **γery-* ‘to grind (grain)’ and 1998:223 **γery-* : **γry-* ‘to grind (coarsely), to gnaw’; Fähnrich—Sardshweladse 1995:388—389 **γery-*; Fähnrich 2007:482—483 **γery-*; Jahukyan 1967:61 **γery-*. Proto-Kartvelian **gerg-il-* ‘coarse-ground flour’: Georgian *γeryil-* ‘coarse-ground flour’ (Old Georgian *γeryil-* ‘ground grains’); Mingrelian *γaryil-* ‘coarse-ground flour’; Laz *γaryil-* ‘coarse-ground flour’. Klimov 1964:202 **γeryil-* and 1998:223—224 **γery-il-* ‘coarse-ground flour’. Proto-Kartvelian **gṛg-wṇ-* ‘to gnaw, to nibble’: Georgian *γryn-* ‘to gnaw, to nibble’; Mingrelian *γiryon-* ‘to gnaw, to nibble’; Laz *γiryol-* ‘to gnaw, to nibble’. Fähnrich—Sardshweladse 1995:399 **γry-*; Fähnrich 2007:497 **γry-*; Klimov 1964:207 **γry-wṇ-* and 1998:235 **γry-wn-* ‘to gnaw’.
- D. Proto-Indo-European **g^{hr}-en-t’-/g^{hr}-on-t’-* ‘to grind’: Greek χόνδρος (< **χρόνδ-πο-ς*) ‘grain’, (in pl.) ‘groats of wheat or spelt: gruel made therefrom’; Latin *frendō* ‘to crush, to bruise, to grind’. Rix 1998a:182 **g^hrend-* ‘to grind’; Pokorny 1959:459 **ghren-d-* ‘to rub over sharply’; Walde 1927—1932.I:656—657 **ghren-d-*; Frisk 1970—1973.II:1110—1111; Boisacq 1950:1066 **gher-*: **gher-en-d-*, **gher-en-dh-*; Hofmann 1966:421 **ghrend(h)-*; Chantraine 1968—1980.II:1268—1269; Beekes 2010.II:1643 (unexplained); De Vaan 2008:241 **g^{wh}r-end(h)-e/o-* (< **g^{wh}ren-* ?); Walde—Hofmann 1965—1972.I:545—546 **ghren-d(h)-*;

Ernout—Meillet 1979:253 Lithuanian *grėndu* < **g^{wh}rēndh-*; Sihler 1995:163—164, §163a. Proto-Indo-European **g^{hr}-en-d^h-*/**g^{hr}-on-d^h-* ‘to grind’: Old English *grindan* ‘to grind’; Lithuanian *grėndu*, *grėsti* ‘to rub’, *grándau*, *grándyti* ‘to scrape’. Walde 1927—1932.I:656—657 **ghrendh-*; Pokorny 1959:459 **ghren-dh-* ‘to rub over sharply’; Mann 1984—1987:384 **guhrendhō*, *-iō* ‘to crush, to grind, to tread down, to gnash (the teeth)’ (variant **ghrendh-*); Watkins 1985:23 **ghrendh-* and 2000:32 **ghrendh-* ‘to grind’; Mallory—Adams 1997:247 **ghrendh-* ‘to grind’; Orël 2003:141 Proto-Germanic **grendanan*; Kroonen 2013:190 Proto-Germanic **grindan-* ‘to grind’; Onions 1966:414 **ghrendh-*; Klein 1971:323 **ghren-d(h)-*; Derksen 2015:186 **g^{wh}rend-*; Fraenkel 1962—1965.I:167; Smoczyński 2007.1:197.

- E. Yukaghir (Southern / Kolyma) *keriləš-* (< **kerilə-*) ‘to bite, to chew’, *kerilə* ‘flour made of fish bones cooked with fish fat’, *keril’o-* ‘soft, tender’, (Northern / Tundra) *kerile-* ‘crushed’, *keriles-* ‘to make crumbs of, to break into pieces’, *kerile-* ‘to break (intr.)’. Nikolaeva 2006:208 — Nikolaeva notes: “The element *-lə* may be a derivational suffix.”

Buck 1949:5.56 grind; 8.34 thresh. Bomhard—Kerns 1994:502—504, no. 351.

574. Proto-Nostratic root **gar-* (~ **gər-*):

(vb.) **gar-* ‘to dig, to dig up, to dig out’;

(n.) **gar-a* ‘that which is used to dig: spade; that which is dug (out): furrow, ditch, gutter, canal’

- A. Afrasian: Semitic: Geez / Ethiopic *garha* [ገርህ] ‘to plow’, *garāht* [ገራህት], *garh* [ገርህ] ‘field, arable land, farm, estate’; Tigre *gārhat* ‘field’; Tigrinya *gərat* ‘field’. Leslau 1987:202; D. Cohen 1970— :184.
- B. Dravidian: Tamil *karuvi* ‘instrument, tool’; Malayalam *kari*, *karivi*, *karuvi*, *karu* ‘tool, plow, weapon’. Burrow—Emeneau 1984:119, no. 1290. Tamil *kāru* ‘plowshare’; Gondi *nāngel kareng* ‘plow’s point’, *kara* ‘plow’; Kuwi *karu* ‘plowshare’, *kārru* ‘plow’; Kannada *kāru* ‘plowshare’; Telugu *kārru*, *kāru* ‘plowshare’. Krishnamurti 2003:9 **kāt-* ‘plowshare’; Burrow—Emeneau 1984:139, no. 1505. Gondi *kār-* (also *kār-*, *kāt-*, *kāc-*) ‘to dig’; Konda *kār-* ‘to dig, to make a pit, to dig out (weeds, etc.)’; Pengo *kār-* ‘to dig’; Maṇḍa *kār-* ‘to dig’; Kui *kārpa* (*kārt-*) ‘(vb.) to dig up; (n.) the act of digging up’; Kuwi *kār-*, *kārhalī*, *karh’nai* ‘to dig’, *kārhnai* ‘to sculpt, to spade’. Burrow—Emeneau 1984:137, no. 1467. Konda *kārna* ‘canal’; Kuwi *karna* ‘irrigation channel’. Burrow—Emeneau 1984:130, no. 1398.
- C. Proto-Kartvelian **gare-* ‘gutter, furrow’: Georgian *γar-* ‘gutter, furrow’; Mingrelian *γore-* ‘gutter of mill; wooden dam’. Klimov 1998:221 **γare-* ‘gutter, furrow’; Fähnrich 2007:478 **γar-*; Fähnrich—Sardshweladse 1995:385 **γar-*. Fähnrich—Sardshweladse also include Svan *γār* ‘ravine,

valley; wooden open duct for mountain spring-water’, but Klimov rejects this comparison.

- D. Yukaghir (Southern / Kolyma) *qartəd’a*:- ‘to dig (intr.)’, *qartə*- ‘to shovel up, to sweep off’. Nikolaeva 2006:380.

Buck 1949:8.21 plow; 8.212 furrow; 8.22 dig.

575. Proto-Nostratic (n.) **gar^y-a* ‘stick, staff, rod, pole, stalk, stem’:

- A. Dravidian: Tamil *kaṛai* ‘pole used for propelling boats, elephant-goad, stem of sugarcane, shaft of a bamboo, bamboo bottle, spiny bamboo’, *kaṛi* ‘rod, staff, stick, handle of tool, peg to keep a yoke in place, lath’, *kaṛāy* ‘acrobat’s pole, spiny bamboo’, *kaṛāyar* ‘pole dancers, tumblers’, *kāṛ* ‘post, pillar, oar, iron rod, elephant goad, bolt, handle, rafter, firewood’; Malayalam *kaṛa* ‘bamboo, pole for carrying burdens’, *kaṛi* ‘staff of hoe, pin of yoke’; Kannaḍa *gaṛ*, *gaṛa*, *gaṛu*, *gaṛuvu*, *gaṛe*, *gaḍe*, *gaḍi* ‘bamboo rod or stake, bamboo, pole, staff, bamboo pole on which Kollatigas or Dombas tumble, churning stick’; Tuḷu *kari* ‘bar with which a door is fastened, pole fastened to a load by which it is carried on the shoulders’, *karè*, *garè* ‘the pole to which a bucket is attached in a country water-lift’, *garu*, *karu*, *gaḷu* ‘rafter’; Telugu *gaḍa* ‘pole, staff, rod, stick, stalk, mast’; Parji *kaṛcid* ‘wood for fuel’, *kaṛpa* ‘thin stick, twig, bean stick’; Gadba (Ollari) *kaṛsid* ‘wood for fuel’, *kaṛmeṭ* ‘stick’; Konḍa *gaṛa* ‘pole, long stick’. Burrow—Emeneau 1984:127, no. 1370.
- B. Proto-Kartvelian **ger-* ‘stem, stalk’: Georgian *γer-* ‘stem’; Svan *γēr* ‘stem’. Klimov 1998:223 **yer-* ‘stem, stalk’; Fähnrich—Sardshweladse 1995:388 *yer-*; Fähnrich 2007:482 **yer-*.
- C. Proto-Indo-European **ghrendh^o-s* ‘bar, pole, shaft’: Old Icelandic *grind* ‘a gate made of spars or bars, a fence; pen, fold; haven, dock; store houses’, *grind-hlið* ‘barred gate’; Swedish *grind* ‘lattice gate’; Old English *grindel* ‘bar, bolt; (pl.) grating, hurdle’; Old Saxon *grindil*, *grendil* ‘bolt, fence, hurdle’; Middle Dutch *grendel*, *grindel* ‘supporting post, bolt’; Old High German *grintil* ‘bolt, pole, post’; Lithuanian *grindis* ‘floorboard’; Old Church Slavic *gręda* ‘beam’; Russian *grjadá* [гряда] ‘layer, stratum (of sand); bed (of flowers), border, platband (of vegetables)’; Serbo-Croatian *gręda* ‘beam’; Polish *grzęda* ‘garden, (plant) bed; roost, perch’. Pokorny 1959:459—460 **ghrendh-* ‘beam’; Walde 1927—1932.I:657 **ghrendh-*; Mann 1984—1987:337 **ghrendhos*, *-is* ‘bar, pole, shaft’; Orël 2003:141 Proto-Germanic **grendiz*; Kroonen 2013:190 Proto-Germanic **grindi-* ‘fence’; De Vries 1977:189; Fraenkel 1962—1965.I:170—171; Derksen 2008:187—188 **ghrndh-* and 2015:189 **ghrndh-*.

576. Proto-Nostratic (n.) **gar*^y-*a* ‘wildfowl, wild goose’:

Reduplicated:

(n.) **gar*^y-*gar*^y-*a* ‘wildfowl, wild goose’

- A. (?) Afrasian: Egyptian (pl.) *gry* (**grgy*) ‘a kind of bird’, (New Egyptian) *grpt* (*gry*-*n-pt*) ‘pigeon, dove’; Coptic *čre* [ʃpɛ] ‘birds’. Hannig 1995:902 and 903; Erman—Grapow 1926—1963.5:181; Vycichl 1983:346; Černý 1976:335.
- B. Proto-Kartvelian **gargad*- ‘(wild) goose’: Georgian *γeryed*- ‘goose’ (Old Georgian *γeryed*-, *γryed*-, *γeryet*-); Mingrelian *γoryonž*- ‘goose’; Laz *γoryož*- ‘goose’; Svan *γaryād* ‘goose’ (Lower Bal *γaryad*). Schmidt 1962:139; Klimov 1964:201 **γaryad*- and 1998:221 **γaryad*- ‘goose’; Fähnrich—Sardshweladse 1995:400 **γryad*-; Fähnrich 2007:497—498 **γryad*-.
- C. Proto-Altaic **gār*^y*V* ‘wild goose’: Proto-Tungus **gār(u)a* ‘owl, swan’ > Evenki *gāre* ‘owl, swan’; Lamut / Even *gār* ‘a big mythical bird’; Negidal *gaja* ‘owl’; Manchu *garu* ‘swan’; Jurchen *gawr-un* ‘swan’; Ulch *goara(n)* ‘owl’; Udihe *gā* ‘owl’; Oroch *garua* ‘owl’. Proto-Turkic **Kar*^y- ‘goose’ > Old Turkic (Old Uighur) *qaz* ‘goose’; Karakhanide Turkic *qaz* ‘goose’; Turkish *kaz* ‘goose’; Gagauz *qāz* ‘goose’; Azerbaijani *gaz* ‘goose’; Turkmenian *gāz* ‘goose’; Uighur *γaz* ‘goose’; Tatar *qaz* ‘goose’; Bashkir *qad* ‘goose’; Kirghiz *qaz* ‘goose’; Kazakh *qaz* ‘goose’; Kumyk *qaz* ‘goose’; Noghay *qaz* ‘goose’; Oyrot (Mountain Altai) *qas* ‘goose’; Tuva *qas* ‘goose’; Chuvash *xor* ‘goose’; Yakut *xās* ‘goose’; Dolgan *kās* ‘goose’. Starostin—Dybo—Mudrak 2003:532 **gār*^y*V* ‘wild goose’.
- D. (?) Proto-Chukchi-Kamchatkan **yal̥ya* (if for **γarya*) ‘duck’: Chukchi *yatle* ‘duck, bird’, but *yal̥ya*- in *yal̥ya-mkən* ‘flock of ducks’; Kerek *halli* (stem *hal̥ya*-) ‘duck, bird’; Alyutor *yalli* (*yal̥ya*-), (Palana) *yal̥y* ‘duck’, *tənop-yalli* ‘polar owl’, (Karaga) *kukylli* ‘duck’; Koryak *yal̥le* ‘duck or other aquatic bird’, *yal̥ya-mkən* ‘flock of ducks’, *tənop-yalle* ‘polar owl’; Kamchadal / Itelmen (Western) *galgagalx* ‘duck. Fortescue 2005:82.

Buck 1949:3.56 goose; 3.57 duck.

577. Proto-Nostratic root **gat*^y- (~ **gət*^y-):(vb.) **gat*^y- ‘to bite’;(n.) **gat*^y-*a* ‘bite’; (adj.) ‘biting, sharp, bitter’

Derivative:

(n.) **gat*^y-*a* ‘jaw, chin’

- A. Proto-Afrasian **gat*^y- ‘to bite’: Semitic: Akkadian *gašāšu* ‘to gnash the teeth, to bare the teeth, to rage’. Though the phonetics are problematic, the following may ultimately belong here as well: Tigre *gāḥaṭa* ‘to nibble’; Tigrinya *gahaṣä* ‘to nibble’, *gāḥaṭä* ‘to eat a lot, to carry away’; Gurage

gaṭä ‘to nibble, to gnaw, *to pluck out grass’; Amharic *gaṭä* ‘to nibble’; Gafat *gaṣä* ‘to nibble’; Argobba *gähaṭä* ‘to nibble’; Harari *gēhaṭa* ‘to nibble the meat from the bone or the flesh of the fruit from the stone’. Leslau 1963:70 and 1979:301. We may reconstruct a Proto-Ethiopian Semitic **gaḥ-aṣ-* ‘to nibble’ (< ? Proto-Semitic **gat*’*y-ah-* through metathesis). Note also Aramaic *gūṣ* ‘to gnaw (of mice)’, with *w* infix.

- B. Dravidian: Tamil *kaccu* (*kacci-*) ‘to bite, to gnaw, to nibble (nursery)’; Toda *koc-* (*koč-*) ‘to bite’; Kannaḍa *kaccu*, *karcu* ‘to bite, to sting, to smart, to ache (as stomach)’, *kaccike* ‘biting’; Tuḷu *kaccuni* ‘to bite’; Kolami *kacc-* ‘to bite’; Parji *kacc-* ‘to bite, to sting’; Gadba (Ollari) *kas-* ‘to bite’, (Salur) *kacc-* ‘to sting’; Gondi *kask-* ‘to bite’, *kaccānā* ‘to gnash the teeth’, *kac-*, *kas-* ‘to bite’; Kui *kasa* (*kasi-*) ‘to bite, to sting’; Kuwi *kacc-* ‘to bite’; Malto *qaswe* ‘to eat greedily, to nip off with the teeth’. Burrow—Emeneau 1984:103, no. 1097. Tamil *kaya* ‘to be bitter; to abhor, to loathe, to detest’, *kai* ‘to be bitter, astringent, unpleasant; to dislike, to be angry with, to hate’, *kayappu*, *kacappu*, *kaccal* ‘bitterness’, *kaippu* ‘bitterness, dislike, aversion’, *kayar*, *kacar* ‘astringency, astringent matter’, *kaca* ‘to taste bitter; to be embittered, disgusted’, *kacaṭṭai* ‘astringency (as of an unripe fruit)’; Malayalam *kaikka*, *kaśakka* ‘to be bitter; to be disliked’, *kaippu* ‘bitterness, grudge, disrelish, disagreeable, sourish’, *kappu* ‘bitterness, grudge, disrelish, disagreeable, sourish; bile’, *kaśakaśa* imitative sound of sour astringent tastes’; Kota *kac-* (*kac-*) ‘to be bitter’, *kac va-y* ‘mouth when it has a bitter taste from beer, etc.’; Kannaḍa *kay*, *kaṃyi*, *kayi*, *kayyi*, *kaypu*, *kaype* ‘bitterness’, *kasar* ‘to scratch the throat, to be astringent’, *kasa*, *kasaku*, *kasaru*, *kasi*, *kasu*, *kasuru* ‘astringency, unripeness’, *kayku* ‘to be bitter’, *kaykaṭe*, *kayke* ‘bitter’; Toda *koy-* (*koc-*) ‘to be bitter’; Koḍagu *kay-* (*kayp-*, *kayc-*) ‘to be bitter’, *kaype* ‘gall-bladder’; Tuḷu *kaipē*, *kayipe*, *kaipelu* ‘(n.) bitterness; (adj.) bitter, envious’, *kasa* ‘brackish’, *kaskāyi* ‘half-ripe’; Koraga *kāy*, *kayye* ‘bitter’; Telugu *kasu* ‘raw, unripe’, *kasuru* ‘unripe fruit’; Naiki (of Chanda) *kayek* ‘unripe’; Parji *kēp-* (*kēt-*) ‘to be sour or bitter’, *kay-gaṭṭa* ‘bile’; Gondi *kay-*, *kaiyānā* ‘to be bitter’, *kaitāl* ‘bitter’, *kaiṭṭānā*, *kaittānā* ‘to taste bitter (as quinine)’, *keyke* ‘bitter’, *kayle* ‘bitter’, *kaymul* ‘bitter’, *kaitā*, *kahita*, *kelā* ‘bitter’, *kayār* ‘raw, unripe’; Gadba (Salur) *kēmbur*, *keymbur* ‘bitter’; Pengo *ke-* ‘to be bitter’; Maṇḍa *kembel* ‘bitter’; Kui *kappeli* ‘bitter’, *kasi* ‘a young, undeveloped pumpkin’; Kuwi *kassa* ‘sour’, *kombelli* ‘bitter’; Malto *qase* ‘to become bitterish, insipid, or vapid’. Burrow—Emeneau 1984:116, no. 1249; Krishnamurti 2003:119 and 154 **kac-* (> **kay-*) ‘(vb.) to be bitter; (n.) bitterness’.
- C. Proto-Kartvelian **geč’k-* ‘to chew’: Georgian *yeč’-* ‘to chew’; Mingrelian *yač’-* ‘to chew, to cut’; Laz *γvanč’-* ‘to chew’; (?) Svan *γarč’-* ‘to chew’. As noted by Klimov (1998:224), the cluster *-č’k-*, expected in Mingrelian and Laz, is simplified to *-č’-* after initial *γ-*. The Laz cognate underwent additional changes. The Svan cognate appears to be a Mingrelian loan. Klimov 1964:202—203 **yeč’-* and 1998:224 **yeč’-* ‘to chew’; Fähnrich—

Sardshweladse 1995:389 **yeč-*; Fähnrich 2007:483—484 **yeč-*. Proto-Kartvelian **geč'k'-wn-* 'to gnaw': Georgian *yeč'n-* 'to gnaw'; Mingrelian *xič'on-*, *xič'or-* (*x-* < **γ-*) 'to gnaw'. Klimov 1964:204 **γičwŋ-* and 1998:230 **γič-wn-* 'to gnaw'.

- D. Uralic: Proto-Finno-Permian **katʲk3* 'bitter, sour, rotten' > Cheremis / Mari (Birk) *kaske* 'foul, stale, rotten, sour and moldy (of drinks)', *kaška-* 'to be moldy, stale; to spoil; to become sour'; Votyak / Udmurt (Sarapul) *kužal* 'bitter'. Rédei 1986—1988:640—641 **kačk3*.
- E. Proto-Eskimo **qacali-* 'to sting, to smart': Alutiiq Alaskan Yupik *qatł-* 'to sting, to smart (of body part)'; Central Alaskan Yupik *qacəti-*, *qatli-* 'to sting, to whine'; Seward Peninsula Inuit *qazili-* 'to sting, to smart'; North Alaskan Inuit *qasilvi-* 'to beg, to entreat, to supplicate, to smart'; Western Canadian Inuit (Siglit) *qasilinaq-* 'to be bitter'; Eastern Canadian Inuit *qasili-* 'to have a prickling sensation in the limbs'; Greenlandic *qasilit-* 'to be bitter, to be sharp tasting, to sting (of wound)'. Fortescue—Jacobson—Kaplan 1994:273. Assuming semantic development as in Kannada *kaccu*, *karcu* 'to bite, to sting, to smart, to ache (as stomach)'.

Buck 1949:4.58 bite (vb.); 15.37 bitter. Bomhard 1996a:228, no. 644.

578. Proto-Nostratic (n.) **gat'y-a* 'jaw, chin':

Derivative of:

(vb.) **gat'y-* 'to bite';

(n.) **gat'y-a* 'bite'; (adj.) 'biting, sharp, bitter'

- A. Proto-Afrasian **gat'y-* 'jaw, chin': Berber **gac-* 'cheek' > Ahaggar *ayaž* 'cheek'. Proto-East Cushitic **gad₁-* 'chin, jaw' > Sidamo *gacc'o* 'chin, jaw'; Burji *gac-óo* 'molar, jaw'; Somali *gaḍ* 'chin'. Sasse 1982:75 **gad-* 'jaw'; Hudson 1989:85. Omotic **gat'-* 'chin' > Mocha *gat'-ano* 'chin'. Orël—Stolbova 1995:196, no. 866, **gač-* 'cheek, chin'.
- B. Proto-Kartvelian **gač'k'-* 'jaw': Georgian *γanč'-* 'jaw'; Svan *γč'k'-* '(n.) jaw; (vb.) to chatter', *mə-γč'k'-e* 'chatter-box'. Fähnrich—Sardshweladse 1995:386 **γαč-*; Fähnrich 2007:480 **γαč-*; Klimov 1998:222 **yač-* 'jaw'.

Buck 1949:4.207 jaw; 4.208 cheek; 4.209 chin.

579. Proto-Nostratic root **ger-*:

(vb.) **ger-* 'to stretch out the hand, to raise one's hand';

(n.) **ger-a* 'the act of stretching out or raising one's hand'

- A. Proto-Kartvelian **ger-/gir-* 'to stretch out; to raise one's hand': Georgian *γer-* : *γir-* 'to stretch out; to raise one's hand against somebody'; Laz *γir-* 'to stretch out; to raise one's hand'. Klimov 1998:223 **γer-* : **γir-* 'to

stretch; to raise one's hand'; Fähnrich—Sardshweladse 1995:388 **yer-*/**yir-*; Fähnrich 2007:482 **yer-*/**yir-*.

- B. Chukchi-Kamchatkan: Proto-Chukotian **yər-* 'to throw a lasso at reindeer' > Chukchi *yər-* 'to throw a lasso at, to catch (reindeer) with a lasso'; Alyutor *yər-* 'to catch with a lasso'. Fortescue 2005:90.

580. Proto-Nostratic root (Eurasianic only) **gil-* (~ **gel-*):

(vb.) **gil-* 'to shine, to glisten';

(n.) **gil-a* 'brilliance, shine'; (adj.) 'shining, glistening, gleaming, brilliant'

- A. Proto-Indo-European **ghel-/ghl-* (secondary *o*-grade form: **ghol-*) 'to shine, to glisten': Sanskrit *hári-h* 'tawny, yellow', *hiranya-h* 'gold'; Avestan *zaranya-* 'gold'; Greek *χλωρός* 'greenish-yellow'; Latin *helvus* 'light bay'; Old Irish *glé* 'clear', *glass* 'blue, green'; Gothic *gulþ* 'gold', *glitmunjan* 'to shine, to glitter'; Old Icelandic *glóa* 'to shine, to glitter', *glóð* 'red-hot embers', *gláðr* 'glad, cheerful', *gljá* 'to glisten, to shine', *glý* 'joy, glee', *gull* 'gold', *glit* 'glitter', *glotta* 'to grin', *glæa* 'to glow, to glisten', *gulr* 'yellow'; Old English *glōwan* 'to glow', *gold* 'gold', *glæd* 'bright, shining, brilliant, cheerful', *glæm* 'brilliant light', *geolo* 'yellow', *glīw* 'mirth, jest, glee', *glisian* 'to glitter', *glōm* 'twilight'; Old Frisian *gled* 'glow'; Old Saxon *glōian* 'to glow', *gelo*, *geln* 'yellow', *glad-* in *gladmōd* 'glad', *glīmo* 'brightness', *gold* 'gold'; Dutch *geel* 'yellow', *gloeien* 'to glow', *glad* 'slippery'; Old High German *gluoen* 'to glow' (New High German *glühen*), *glenzen* 'to shine' (New High German *glänzen*), *glanz* 'bright' (New High German *Glanz* 'brightness, brilliance, radiance, luster, gleam, shine, gloss'), *gelo* 'yellow' (New High German *gelb*), *glat*, *clat* 'shiny, smooth, slippery' (New High German *glatt* 'smooth, slippery'); Lithuanian *žālas* 'red', *žālias* 'green', *žilas* 'gray', *žlėjà* 'twilight'; Old Church Slavonic *zelenъ* 'green', *zlato* 'gold'. Rix 1998a:178—179 **ghlendh-* 'to look at, to gaze at; to shine'; Pokorny 1959:429—434 **ghel-* (and **ghel-* ?) 'to shine; yellow, green, gray, blue'; Walde 1927—1932.I:624—627 **ghel-*; Mann 1984—1987:317—318 **ghel-* 'yellow, green, fallow', 318 **gheleyos*, **ghelyos* 'yellowish green', 318 **gheltos* 'yellow', 322 **ghladh-* 'smooth, bright, glad', 322 **ghlādh-* (**ghlādhro-*) 'smooth, bright, luster; white-flowering tree', 322 **ghlagh-* 'smooth, bright; white-flowering tree', 322 **ghlastos*, -*om* 'brilliant, brilliance', 322 **ghlaiyos* 'bright', 322—323 **ghlauros* (**ghlāyur-*) 'bright', 323 **ghlayos*, **ghlauyos* 'bright; brilliance', 323 **ghleist-* 'bright; brilliance, shine', 323 **ghlējos* 'bright, shine', 324 **ghlidos*, -*ā*, -*om* 'bright; brilliance', 324 **ghlījō* 'to be warm', 324 **ghlōdhos*, -*jā*, -*ā*, -*us* 'smooth, bright; smoothness, brilliance', 324 **ghloyəros* (**ghlour-*, **ghloyo-*, **ghlōy-*) 'yellow, gold', 325 **ghlūrjō* 'to loom, to shine, to look', 325 **ghlūs-* 'bright; brilliance', 325 **ghlustis* 'brightness, shine, purity', 325—326 **ghlt-*, 326 **ghlyos*, -*ā*, -*us* 'yellow', 413 **ghel-* (**ghelos*, -*es-*; **ghelis*) 'green; greenery, vegetable; gold,

golden', 413 **ghelen-*, 413 **gheliō* 'to be green, to sprout', 413—414 **ghelk-* (**gholk-*), 414 **ghelmen-* (**ghelimen-*) 'yellowness; greenery', 414 **gheluos* (**gheleuos*, **ghelsuos*), 414 **gheltos* (**gholt-*, **ghlt-*) 'yellow, gold', 420 **ghlk-* (?) 'a colored substance', 420 **ghluos*, **ghlus*, 422 **ghol-* (**gholos*, -*es-*) 'green; greenery, green stuff', 422 **gholtos*, -*ios*, -*ja* (**ghlt-*) 'yellow, green'; Watkins 1985:21 **ghel-* and 2000:29 **ghel-* 'to shine'; Gamkrelidze—Ivanov 1984.II:714 **g[h]el-* and 1995.I:618 **ghel-* 'yellow'; Mallory—Adams 1997:529 **ghleh_xdh-* 'smooth' < 'shiny', **ghel-* 'to shine' and 654 **ghel-* ~ **ghel-* 'yellow'; Mayrhofer 1956—1980.III:581 and III:598—599; Beekes 2010.II:1638—1639 **ghelh₃-*; Boisacq 1950:1063—1064 **ghlō-*, **ghlē-*, **ghlā-*; **ghelē-*, **ghel(e)-*; Hofmann 1966:420 **ghel-*; Frisk 1970—1973.II:1104—1106 **ghel-*; Chantraine 1968—1980.II:1263—1264 **ghel-* and II:1264—1265 **ghel-*; Ernout—Meillet 1979:291 **ghelswo-*; De Vaan 2008:282; Walde—Hofmann 1965—1972.I:639 **gheluos*, **ghelsuos*; Orël 2003:131—132 Proto-Germanic **zelwaz*, 137 **glōanan*, 137 **glōdiz*, 137 **glōđjanan*, 137 **glōōjanan*, 137 **glōraz*, 137 **glōrōjanan*, 145—146 **gulpan*, 146 **gulpīnaz*, 146 **gulpanan*; Kroonen 2013:174 Proto-Germanic **gelwa-*, **gulu-* 'yellow', 182 **glōan-* 'to glow', and 182 **glōdi-* 'glow'; Feist 1939:216—217 **ghleid-* and 224—225 **ghel-*; Lehmann 1986:157 **ghley-* and 162—163 **ghel-*; De Vries 1977:173, 174, 175, 194, and 196; Onions 1966:399, 400, 402 **ghlō-*, **ghlē-*, 405 **ghel-*, and 1019 **ghelwo-*; Klein 1971:313, 314, 315 **ghlōu-*, 317 **ghel-*, **ghel-*, and 837 **ghel-*, **ghel-*, **ghlē-*, **ghlō-*; Boutkan—Siebinga 2005:140; Kluge—Mitzka 1967:244 **ghel-*, 259, 260, and 263 **ghlōu-*; Kluge—Seebold 1989:254 **ghel-*, 268, and 270—271; Derksen 2008:541, 547, and 2015:511—512 **ghelh₃-i-*; Smoczyński 2007.1:771, 1:772—773, 1:784—785, and 1:789; Fraenkel 1962—1965.II:1286, II:1287, II:1308, and II:1317. In Indo-European, some of the reflexes of this stem fell together with those of Proto-Nostratic **gal-* (~ **gəl-*) 'to be or become visible, clear, obvious, evident; to regard, to look at, to peer at'.

- B. Uralic: Finnish *kiiltää* 'to shine, to glisten, to glimmer, to gleam', *kiilto* 'luster, gloss, polish', *kiilua* 'glimmer, glow, glint', *kiiltävä* 'glossy, bright'; Estonian *kiilas* 'glossy, glazed'.
- C. Proto-Altaic **gile-* (~ -*i*, -*o*) 'to shine, to glitter': Proto-Tungus **gil-ta-* '(vb.) to shine; (adj.) white' > Manchu *gilmarža-* 'to shine, to glow, to flash' (< Mongolian *gilbalža-* 'to flash, to shine, to beam, to glitter'), *giltarila-* 'to shine, to glitter', *giltari* 'shining, glittering', *gilmahūn* 'shining, glittering', *giltahūn* 'glittering, shining, clean', *giltarša-* 'to shine brightly, to gleam'; Evenki *gilta-li* 'white'; Lamut / Even *giltāl-* 'to shine'; Ulch *gilte-* 'to shine'; Nanay / Gold *gilte-* 'to shine'; Solon *giltarī* 'white'. Proto-Mongolian **gil(b)a-* 'to glitter, to shine' > Mongolian *gilai-*, *gilui-* 'to shine, to be(come) shiny, to glitter', *gilayan*, *giluyan* 'bright, shiny', *gilayar* 'bright, shiny', *gilalža-* 'to twinkle, to sparkle; to scintillate, to

glitter, to gleam, to shine; to be glossy or shiny; to be dazzled; to be radiant, beaming', *gilaski-* 'to flash, to sparkle, to shine', *gilba-* 'to flash, to beam, to glitter', *gilbaday* 'dazzling, blinding', *gilbay-a* 'radiance, refulgence, sheen, reflection, glare; summer lightning', *gilbai-* 'to glitter, to glimmer, to dazzle', *gilbalža-* 'to flash, to shine, to beam, to glitter', *gilbegen* 'light, flash', *gilbel-* 'to shine, to emit light, to sparkle', *gilbelgen* 'brightness, glare, glow, flash of lightning', *gilbelže-* 'to shine, to glitter, to glare; to flash (in the distance)', *gilbigine-* 'to shine, to sparkle, to emit light; to dazzle', *gilgemel* 'clear, luminous, limpid, transparent', *giltayan-a* 'brilliance, shine', (adv.) *gilab* 'with a flash, glare, or sparkle', *giltayana-* 'to glitter, to shine, to beam', *giltagir* 'brilliant, shining', *gilte* 'splendor, luster, shine, glare, brilliance', *giluy* 'shiny, smooth; bald; barkless; dry (of trees)', *giliugelže-* 'to shine, to glare, to glisten', *giliugen* 'shimmering, bright'; Ordos *gilba-* 'to glitter'; Khalkha *gala-*, *galba-* 'to shine, to glitter', *gilbegne-* 'to shine, to glitter'; Buriat *yalay-* 'to shine, to glitter'; Kalmyk *gilēn*, *giləg*, *gilgr* 'light; glittering', *gil-*, *gilwə-* 'to glitter'; Dagur *gialbagalži-*, *gialbegelži-* 'to glitter, to shine'. Poppe 1955:149. Starostin—Dybo—Mudrak 2003:544—545 **gile* (~ *-i*, *-o*) 'to shine, to glitter'.

- D. (?) Chukchi-Kamchatkan: Proto-Chukotian **yili-* 'to look for' > Chukchi *yici-* 'to look for' (as a suffix *-yili-* 'to look for, to hunt for'); Koryak *yili-* 'to look for'; Alyutor (only in compounds) *-yili-* 'to look, to hunt for'. Fortescue 2005:84.

Buck 1949:11.31 seek; 15.52 look (vb.), look at; 15.56 shine; 15.68 green; 15.69 yellow. Koskinen 1980:28, no. 85; Illič-Svityč 1971—1984.I:229—230, no. 84, **gi/l/hu* 'smooth and shiny'; Hakola 2000:68—69, no. 272; Bomhard—Kerns 1994:390—392, no. 228; Dolgopolsky 2008, no. 624, **gil[h]o* 'to shine, to glitter, to sparkle'.

581. Proto-Nostratic root **git'* - (~ **get'* -):

(vb.) **git'* - 'to tickle';

(n.) **git'-a* 'armpit'

- A. Dravidian: Tuḷu *kidukilū*, *kid(y)kelū*, *kidkūlū* 'armpit, tickling', *k. āpini* 'to be tickled', *k. māḍuni* 'to tickle'; Maṇḍa *kiti ki-* 'to tickle'; Kui *kitki lomberi*, *kīti kola* 'armpit', *kīti* 'tickling', *kīti āva* 'to be tickled', *kīti giva* 'to tickle', *kitkorodī* 'armpit'; Kuwi *gidori kīali* 'to tickle', *gidori kīnai* 'to titillate'. Burrow—Emeneau 1984:143, no. 1551(a).
- B. Proto-Kartvelian **git'in-* 'to tickle': Georgian *γit'in-* 'to tickle'; Mingrelian *xicin-* 'to tickle'; Laz *xit'in-* 'to tickle'. Klimov 1964:204 **γiṭin-* and 1998:229—230 **γiṭin-* 'to tickle'.

Bomhard 1996a:228, no. 645.

582. Proto-Nostratic root **gub-* (~ **gob-*):(vb.) **gub-* ‘to bend, to twist’;(n.) **gub-a* ‘that which is twisted, bent, curved: hunch, wattle’

- A. Proto-Afrasian **gub-* ‘to bend, to twist’: Proto-Semitic **gab-ab-* ‘to bend, to twist; to be bent’ > Post-biblical Hebrew *gaḅ* [גַּב] ‘back, hunch’; Syriac *gəḅṭā* ‘hunch-backed’; Mandaic *gab* ‘to bend, to curve’; Geez / Ethiopic *gabbaba* [ገበበ] ‘to be bent’; Tigrinya (reduplicated) *g^wäg^wäbä* (< **g^wab-g^wab-*) ‘to be crooked, twisted’; Tigre *gäbb bela* ‘to incline’; Amharic *g^wäbbäbä*, *g^wäbäbb alä* ‘to be bent’. D. Cohen 1970— :94–95; Murtonen 1989:125; Klein 1987:88; Leslau 1987:177. Proto-Semitic **gab-as-* ‘crook-backed’ > Tigre *gäbs* ‘crook-backed’. D. Cohen 1979— :97. Proto-Semitic **gab-an-* ‘to be crooked, bent’ > Hebrew *gibbēn* [גִּבֵּן] ‘crook-backed, hump-backed’; Gurage (Muher) *g^wəbən*, (Chaha, Eža, Ennemor) *g^wəbər* ‘hunchbacked’. D. Cohen 1970— :96; Leslau 1979:257 and 258. Egyptian *gb* ‘to bend, to stoop’. Erman—Grapow 1926— 1963.5:162. Saho-Afar **gub-* ‘to be bent’ > Afar *guub-* ‘to be bent’. Central Chadic **gwab-* ‘to bend’ > Gisiga *gob-* ‘to bend’; Mofu *gəb-* ‘to bend’. East Chadic **gwab-* ‘to bend’ > Kera *gobe* ‘to bend’. Orël—Stolbova 1995:212, no. 938, **gob-* ‘to bend’.
- B. Proto-Kartvelian **gob-* ‘to braid, to plait’: Georgian *γob-* ‘to fence in, to enclose, to block, to obstruct’; Mingrelian *γob-* ‘to braid, to plait, to fence in, to enclose’; Laz *γob-* ‘to braid, to plait’. Klimov 1964:205 **γob-* and 1998:225 **γweb-* ‘to weave; wattle’; Fähnrich—Sardshweladse 1995:393 **γob-*; Fähnrich 2007:490 **γob-*. Proto-Kartvelian **gob-e-* ‘wattle-fence’: Georgian *γobe-* ‘wattle-fence’; Laz *γobe(r)-* ‘wattle-fence’; Mingrelian *γober-* ‘wattle-fence’; Svan *γweb* ‘bee-hive’. Klimov 1964:205 **γobe-* and 1998:231 **γob-e-* ‘wattle-fence’.
- C. Proto-Eskimo **quvə-* ‘to stoop (for example, in humiliation)’: Naukan Siberian Yupik *quvə-* ‘to be angry’; Central Siberian Yupik *quuvə-* ‘to decrease in size; to feel sad, insecure, or insignificant’; Sirenik *quv(ə)-* ‘to be sad, to loose heart’; North Alaskan Inuit *qufsuk-* ‘to kneel’. Fortescue—Jacobson—Kaplan 1994:321.

Buck 1949:9.14 bend (vb. tr.); 9.75 plait (vb.); 12.74 crooked. Bomhard—Kerns 1994:504, no. 352.

22.28. PROTO-NOSTRATIC *q^h

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
q ^h -	q- (?)	k-	q-	k ^h -	k-	k ^h -	k- q-
-q ^h -	-q- (?)	-k(k)-	-q-	-k ^h -	-k(k)-	-k ^h -	-k(k)- -q(q)-

583. Proto-Nostratic root *q^had- (~ *q^həd-):

(vb.) *q^had- ‘to move, to put in motion, to be in motion’;

(n.) *q^had-a ‘way, path, direction, passage; movement, motion; hard work, diligence’

- A. Afrasian: Proto-Semitic *kad-ad- ‘to urge, to drive; to work hard’ > Arabic *kadda* ‘to work hard, to exert oneself, to toil, to labor, to slave; to fatigue, to wear out, to overwork, to exhaust, to weary, to tire; to chase away, to drive away; to urge, to drive, to rush’, *kadd* ‘trouble, pains, labor, toil, hard work’, *kadūd* ‘industrious, hard-working, diligent’, *makdūd* ‘worn out, exhausted, overworked’; Mehri *kəd* ‘to carry something, to work hard’; Šheri / Jibbāli *kedd* ‘to struggle, to work hard, to carry’. Proto-Semitic *kad-aḥ- ‘to exert oneself, to toil, to labor, to work hard’ > Arabic *kadaḥa* ‘to exert oneself, to work hard, to toil, to labor, to slave (in or with something)’, *kadh* ‘exertion, toil, labor, drudgery’; Sabaean *mkdh* ‘depot, dockyard’. Zammit 2002:351—352.
- B. Dravidian: Tamil *kaṭa* ‘to pass through, to traverse, to cross, to exceed, to excel, to win, to overcome, to transgress; to go, to proceed, to pass (as time, water, clouds, etc.)’, *kaṭattu* (*kaṭatti*-) ‘(vb.) to cause to go, to drive, to transport, to pass (as time); (n.) boat’, *kaṭappu* ‘passing over, wicket or narrow passage in a wall or hedge’, *kaṭavāṇ* ‘channel cut through ridge of paddy-field to let surplus water run off’, *kaṭavu* (*kaṭavi*-) ‘(vb.) to cause to go, to drive, to ride, to dispatch, to discharge (as a missile); (n.) way, path, direction’, *kaṭavai* ‘leap, jump, passing over, way; fault, defect’, *kaṭāvu* (*kaṭāvi*-) ‘to discharge (as missiles), to ride, to drive, to drive in (as a nail, peg, wedge), to urge’, *kaṭācu* (*kaṭāci*-) ‘to drive (as a nail), to throw’, *kaṭai* ‘end, limit, boundary; lowness, lowest, worst; entrance, gate’, *kaṭaici* ‘end, extremity, the last’, *kaṭu*, *keṭu* ‘fixed time, period, term’; Malayalam *kaṭakka* ‘to pass over, to enter, to pass out, to transgress, to surpass’, *kaṭattuka* ‘to make to pass, to insert, to introduce’, *kaṭattu* ‘transporting, conveying’, *kaṭa* ‘what is ultimate; way’, *kaṭappu* ‘passage, transgression’, *kaṭāvuka* ‘to drive (as a carriage), to drive in (as a nail)’, *kaṭaṣi* ‘termination, end’, *kaṭampa*, *kaṭāyi* ‘stile, gate, bar’, *gaḍu*, *keṭu* ‘term, installment’; Kota *karv-* (*kaṛd-*) ‘to cross (river), to come out or leave (house), to pass (years), to rise (sun or moon)’, *kart-* (*kayt-/kaṛty-*) ‘to

make to cross, to send off', *karv* 'cattle-path through bushes, ford', *kar*, *karç* 'extreme end'; Toda *kað-* (*kaðθ-*) 'to leave, to pass, to cross', *kart-* (*karty-*) 'to send, to take across', *kað* 'a stride', *kaðč* 'end (of thing, event)'; Kannaḍa *kaḍe* '(vb.) to pass over, to transgress, to pass, to elapse, to get through; (n.) end, termination, limit; position of being last, low, or inferior; worse than; side, direction, last, at last', *kaṭa* 'end, corner', *kaḍa* 'ferry, ford', *kaḍakal* 'wicket or narrow passage in walls or hedges', *kaḍāyisu* 'to drive in (as a nail)', *kaḍame*, *kaḍime* 'deficiency, inferiority, remainder', *gaḍaba*, *gaḍavu*, *gaḍi*, *gaḍu*, *gaḍuba*, *gaḍuvu* 'limit, limited time, period, installment'; Koḍagu *kaḍa-* (*kaḍap-*, *kaḍand-*) 'to cross', *kaḍat-* (*kaḍati-*) 'to take across', *kaḍe* 'end (of row, event, etc.)', *kaḍeki* 'at last'; Tuḷu *kaḍapuni* 'to cross, to ford, to pass, to elapse, to surpass', *kaḍapāvuni* 'to cause to pass, to help one to ford a river', *kaḍapuḍuni* 'to dispatch, to forward, to send away', *kaḍapa* 'distance', *kaḍapu* 'a ferry', *kaḍapely* 'that which can be crossed over', *kaḍame* 'deficiency, defect, remnant; less, deficient, remaining', *kaḍe* 'verge, margin, end, extremity, place; last, final, low, mean', *gaḍu* 'a term, fixed time or place'; Telugu *kaḍacu*, *gaḍacu*, *gaḍucu* 'to pass, to elapse; to pass over, to cross, to transgress, to exceed', *kaḍapu*, *gaḍupu* 'to pass, to cause to pass or elapse, to put off, to defer, to drive, to push', *kaḍa* 'end, extremity, place, direction vicinity', *kaḍagoṭṭu* 'to die', *kaḍacanu* 'to die, to be destroyed or lost, to be completed; to cross, to cross over', *kaḍategu* 'to end, to come to a close', *kaṭṭakaḍa* '(n.) the very end, the very last place or point; (adj.) the very last, farthest, hindmost', *kaḍapa*, *gaḍapa* 'threshold', *kaḍapaṭa* 'at last', *kaḍapaṭi* 'last, final', *kaḍapala* 'the end', *kaḍama* 'remainder; remaining', *gaḍuvu* 'term, period, or limit of time, appointed time within which an action is to be performed'; Parji *kaḍa* 'end, side', *kaḍp-* (*kaḍt-*) 'to cross', *kaḍ-* (*kaṭt-*) 'to throw (normally used as an auxiliary verb)'; Gadba (Ollari) *karp-* (*kart-*) 'to cross'; Koṇḍa *garvi-* 'to go beyond the boundary of a village, to fail a promise, to disregard (elder's words)'; Maṇḍa *kṛā-* 'to cross'; Kui *grāsa* (*grāsi-*) 'to pass something over or through, to pass a thing through the outstretched legs', *grāpa* (*grāt-*) '(vb.) to cross, to cross over, to ford, to pass by; (n.) the act of crossing, fording, or passing by'; Kuwi *kaṭu* 'time (suitable period)'; Kuṛux *kaṭṭnā* 'to cross, to pass over or above, to overtake and go beyond, to out-distance, to surpass, to go to excess', *kaṛta'ānā*, *kaṭta'ānā* 'to take across, to pass over, to skip over'; Malto *kaṭe* 'to exceed, to pass, to cross', *kaṭtre* 'to pass, to spend time, to help across', *kaṭp* 'exceedingly, very much'; (?) Brahui *xarring* 'to proceed on foot, to make one's way'. Burrow—Emeneau 1984:104, no. 1109; Krishnamurti 2003:407 Proto-South Dravidian **kaṭ-ay* 'end, place'.

- C. Proto-Kartvelian **qad-/qed-/qd-* 'to move, to make a movement; to bring; to go': Georgian *xad-/xd-* 'to take, to take out; to happen, to occur'; Mingrelian *rt-* 'to go'; Laz *xt-*, *xṭ-* 'to go'; Svan *qad-* (*qed-*, *qid-*)/*qd-* 'to come; to bring; to take out, to draw out'. Fähnrich—Sardshweladse

1995:557—558 **qad-/qed-/qd-*; Fähnrich 2007:696—697 **qad-/qed-/qd-*; Klimov 1964:263 **qad-/qd-* and 1998:335 **qed- : qid- : qd-* ‘to move, to make a movement; to bring; to go’.

- D. (?) Proto-Chukchi-Kamchatkan *(*lə*)*qət-* ‘to go away’: Chukchi (*l*)*qət-* ‘to go off (to someone or something)’; Kerek *qət-* ‘to go off’, *il-ləqt-aat-* ‘to lose’; Koryak (*l*)*qət-* ‘to go away’; Alyutor (*l*)*qət-* ‘to go away’; Kamchadal / Itelmen *eł-kas*, *ił-kas* ‘to go (away)’, (Western) *elkaz* ‘to go’, (Western) *eletkaz* ‘to run away’, (Eastern) *tylkezil* ‘I am going (to)’. Fortescue 2005:247.

Buck 1949:10.11 move; 10.47 go; 10.65 drive (vb. tr.).

584. Proto-Nostratic root **q^hal-* (~ **q^həl-*):

(vb.) **q^hal-* ‘to strike, to split, to cut, to wound, to injure’;

(n.) **q^hal-a* ‘stroke, blow, wound, cut, slash, damage, injury’

- A. Afrasian: Proto-Semitic **kal-am-* ‘to strike, to wound, to injure’ > Hebrew *kālam* [כָּלַם] ‘to put to shame, to humiliate’; Aramaic *kālam* ‘to put to shame’; Akkadian *kalmakru* ‘battle-axe’; Arabic *kalama* ‘to wound’, *kalm* ‘wound, cut, slash’; Epigraphic South Arabian *klm* ‘to injure’. Murtonen 1989:233; Klein 1987:278.
- B. Proto-Kartvelian **qal-/ql-* ‘to beat, to drive in’: Georgian *xal-/xl-* ‘to beat; to push’; Svan *qal-/ql-* ‘to drive in; to fill with’. Klimov 1998:333 **qal- : ql-* ‘to drive in; to push’; Fähnrich—Sardshweladse 1995:558 **qal-*; Fähnrich 2007:697 **qal-*. Possibly also: Proto-Kartvelian **qlečk-/qličk-/qlčk-* ‘to tear off, to be torn off’: Mingrelian *xarck-* (*xorck-*)/*xirck-* ‘to tear off, to burst’; Laz *x(r)ock-*, *xroc’k’-*, *xrosk’-*, *xreck-* ‘to burst; to die (of animals)’; Georgian *xleč-/xlič-* ‘to tear off, to be torn off’, (Moxevian) *na-qleč-* ‘scrap, fragment’. Klimov 1964:266 **qleč-* and 1998:339 **qleč-/qlič-/qlč-* ‘to tear off, to be torn off’; Jahukyan 1967:70 Georgian-Zan **qleč-* ‘to tear off, to burst’; Fähnrich 2007:707 **qleč-*. Fähnrich—Sardshweladse (1995:553) reconstruct Proto-Kartvelian **xleč-/xlič-*, which seems improbable in view of Moxevian *na-qleč-* ‘scrap, fragment’.
- C. Proto-Indo-European **k^hel-/k^hol-*, **k^hal-* ‘to strike, to wound, to injure’: Greek *κᾶ-* in *ἀνα-κᾶω* ‘to bend back, to break off’; Latin *calamitās* ‘loss, misfortune, damage, calamity’, *clādēs* ‘disaster, injury’, *-cellō* in *percellō* ‘to beat down, to strike down, to overturn, to shatter; to overthrow, to ruin; to strike, to push’; Old Irish *coll* ‘loss, want’; Middle Irish *ceallach* ‘war’; Welsh *coll* ‘destruction, loss’; Old Icelandic *hildr* ‘battle’; Old English *hild* ‘war, battle’; Old Saxon *hild*, *hildi* ‘battle’; Old High German *hiltia*, *hilta* ‘battle’; Lithuanian *kalù*, *kálti* ‘to forge, to strike’; Old Church Slavic *kolō*, *klati* ‘to prick, to hew’. Rix 1998a:313 **kelh₂-* ‘to beat, to strike, to hit’; Pokorny 1959:545—547 **kel-*, **kelə-*, **klā-* ‘to hit, to hew’; Walde 1927—1932.I:436—440 **qel-*, **qelā-*; Mann 1984—1987:464 **kal-* ‘to

thrust', 464 **kal*- 'to strike', 526 **kol*-; Watkins 1985:28 **kel*- and 2000:38 **kel*- 'to strike, to cut'; Mallory—Adams 1997:549 **kelh*₁- 'to strike'; Beekes 2010.I:710—711; Boisacq 1950:464 and 465; Chantraine 1968—1980.I:538—539 **qolə*-; Hofmann 1966:146 **qelā*-; Frisk 1970—1973.I:864, I:864—865, and I:866—867; Walde—Hofmann 1965—1972.I:135—136 **qel(ā)*-, **qol(ā)*- and I:225—226; Ernout—Meillet 1979:85—86, 111, and 124; De Vaan 2008:82; Orël 2003:168 Proto-Germanic **xeldiz* ~ **xeldjō*; De Vries 1977:226—227; Derksen 2008:230 **kolH*- and 2015:222 **kolH*-; Smoczyński 2007.1:250; Fraenkel 1962—1965.I:211—212.

- D. (?) Proto-Gilyak / Nivkh **qalɣ* 'scabbard': Amur *q^hal* 'scabbard'; North Sakhalin *q^hal* 'scabbard'; East Sakhalin *q^halɣ* 'scabbard'; South Sakhalin *qal* 'scabbard'. Fortescue 2016:139. For the semantic development, cf. English *scabbard* 'sheath for a dagger or sword' < Proto-Indo-European *(*s*)*k^her*- 'to cut' (cf. Watkins 1985:59 and 2000:77—78; Klein 1971:658; Weekley 1921:1285; Barnhart [ed.] 1995:687).

Buck 1949:9.21 strike (hit, beat); 9.22 cut (vb.); 9.26 break (vb. tr.); 9.28 tear (vb. tr.); 10.67 push, shove (vb.); 11.28 harm, injure, damage (vb.). Bomhard—Kerns 1994:506—507, no. 354.

585. Proto-Nostratic root **q^ham*- (~ **q^həm*-):

(vb.) **q^ham*- 'to cover, to conceal';

(n.) **q^ham-a* 'covering'

- A. Proto-Afrasian **qam*- 'to cover, to hide, to conceal': Proto-Semitic **kam-am*- 'to cover, to hide, to conceal' > Arabic *kamma* 'to cover, to cover up, to conceal, to hide, to cloak'; Mehri *kmūm* 'to cover (a camel's teats) with cloth so that it's young cannot drink and milk is kept for human beings', *kīmēm* 'under shield, teat shield', *kəmmēt* 'small women's head-cloth under the top cloth'; Harsūsi *kəmmeh* 'skull cap'. Proto-Semitic **kam-an*- 'to cover, to hide' > Hebrew *miḫmān* [מִיחַמָּן] 'treasure, hidden store, cache, hoard'; New Hebrew (pi.) *kimmēn* [כִּמְנֵן] 'to hide', *kəməṇāh* [כִּמְנֵה] 'ambush, trap; hiding-place'; Aramaic *kəman* 'to lie in ambush'; Arabic *kamana* 'to hide, to conceal; to be hidden, concealed, latent; to ambush, to waylay', *makman* 'place where something is hidden; ambush, hiding place', *kamīn* 'hidden, lying in ambush; ambush, secret attack' (according to Klein [1987:279], this is a loan from Syriac), *kāmin* 'hidden, concealed, latent; secret'; Mehri *məkəmnēt* 'hidden beyond the rise of a slope'; Šheri / Jibbāli *kūn* (base *kmn*) 'to hide', *məkmūn* 'ambush', *ekmīn* 'to lay an ambush for'. Klein 1987:279. Proto-Semitic **kam-as*- 'to hide' > Amorite *kms* 'to hide'; Hebrew *kāmas* [כָּמַס] 'to hide, to conceal, to lay up, to store away'; Aramaic *kəməs* 'store-room, cellar'. Murtonen 1989:233; Klein 1987:279. Proto-Semitic **kam-ar*- 'to cover, to hide' > Akkadian *kamāru*,

kamaru ‘a trap with a snare’; Arabic *kamara* ‘to cover, to veil, to conceal’; Hebrew *kimrūr* [כִּמְרוֹר] ‘darkness, gloom’ (a hapax legomenon in the Bible); New Hebrew *kāmar* [כָּמַר] ‘to hide, to bury (for example, fruit in the ground)’; Aramaic *kamar* ‘to hide; to keep warm’. Murtonen 1989:233; Klein 1987:279. New Egyptian *kmmnt* ‘material (for a shawl, scarf)’. Hannig 1995:884; Erman—Grapow 1926—1963.5:131. Berber: Mزاب *taçmist* ‘a lightweight robe with sleeves’; Tuareg *təkamist* ‘a wide tunic with wide sleeves’; Wargla *takmist* ‘a lightweight robe, a long tunic’.

- B. Proto-Kartvelian **qamł-* ‘skin (of the legs) of sheep, goat’: Georgian *xaml-* ‘a kind of shoe’; Old Georgian *qaml-i* ‘footwear’, *u-qam-ur-i*, *u-qamł-o* ‘barefoot’, *ma-qamł-e* ‘shoemaker’; Svan *qamur*, *qemər* ‘skin (of the legs) of sheep, goat, calf’. Klimov (1998:333) notes that, until recently, sheepskin was used to make sandals in Svanetia. Klimov 1964:263 **qamł-* and 1998:333 **qamł-* ‘skin (of legs) of sheep, goat’; Jahukyan 1967:77; Fähnrich—Sardshweladse 1995:560 **qamł-*; Fähnrich 2007:699 **qamł-*.
- C. Proto-Indo-European **k^hem-/k^hom-* ‘to cover, to conceal’: Sanskrit *śāmulyà-h* (Vedic *śāmūla-h*) ‘thick woolen shirt’, *śāmī-* ‘pod, legume’; Latin *camisia* ‘linen shirt or night-gown’ (Gaulish loan ?); Gothic *-hamōn* in: *ana-hamōn*, *ga-hamōn* ‘to get dressed’, *af-hamōn* ‘to get undressed’, *ufar-hamōn* ‘to put on’; Old Icelandic *hamr* ‘skin, slough; shape, form’, *hams* ‘snake’s slough, husk’; Old English *ham* ‘undergarment’, *hemeþ* ‘shirt’, *hemming* ‘shoe of undressed leather’, *-hama* ‘covering’ (only in compounds); Old Frisian *hemethe* ‘shirt’; Dutch *hemd* ‘shirt’; Old High German *hemidi* ‘shirt’ (New High German *Hemd*), *-hamo* ‘covering’ (only in compounds). Pokorny 1959:556—557 **k^hem-* ‘to cover, to conceal’; Walde 1927—1932.I:386—387 **k^hem-*; Mallory—Adams 1997:134 **k^hem-* ‘to cover’; Walde—Hofmann 1965—1972.I:147—148 **k^hem-*, **k^ham-*; Ernout—Meillet 1979:90; Orël 2003:158 Proto-Germanic **xamaz*, 158 **xam(m)inǵaz*; Feist 1939:6; Lehmann 1986:4—5 **k^hem-* ‘to cover’; De Vries 1977:208 **k^hem-*; Vercoullie 1898:109; Kluge—Mitzka 1967:303 **k^hamitja-*, **k^hem-* ‘to cover’; Kluge—Seebold 1989:304; Mayrhofer 1956—1980.III:325.
- D. Proto-Uralic **kama* ‘peel, skin, rind, crust’ (< ‘covering’): Finnish *kamara* ‘surface, crust, the hard surface of something’, *sianlihan kamara* ‘the skin or rind of pork’, *pääkamara* ‘scalp’; Cheremis / Mari *kom* ‘rind, crust’; Votyak / Udmurt *kōm* ‘rind, crust’; Hungarian *hám* ‘peel, cuticle’, *hámlás* ‘peeling’, *hámlík* ‘peel, scale’, *hámoz* ‘peel, skin, pare (fruit)’, *hámréteg* ‘epidermis, cuticle’, *hámsejt* ‘epidermic cell’; Vogul / Mansi *kamtul* ‘rind, crust’; Selkup Samoyed *qǎām* ‘fish-scale’; Kamassian *kām* ‘fish-scale, money’. Proto-Finno-Permian **kamti* ‘lid, cover’ > Finnish *kansi* ~ *kante-* ‘lid, cap, cover’; Estonian *kaas* ‘lid, cover’; Lapp / Saami (Norwegian) *goaw’de*, *-wd-* ‘opening under something; projecting roof, roof on posts, without walls’, (Kola) *goam’dalás* ‘lid, cover’; Mordvin (Erza, Moksha) *kunda* ‘lid, cover’; Cheremis / Mari *komdāš* ‘cover’. Collinder 1955:22,

158, and 1977:42; Rédei 1986—1988:121—122 **kama* and 671 **komta* ‘lid’; Sammallahiti 1988:552 **komta* ‘lid’; Décsy 1990:100 **kama* ‘peel, skin’; Zhivlov 2023:160 **kamti* ‘lid’.

- E. Eskimo: Proto-Yupik-Siberian Eskimo **qəmtəq* ‘roof, ceiling’ (< ‘covering’) > (?) Alutiiq Alaskan Yupik *qəmtitə-* ‘to become filled to the brim, to become very high (tide)’; Naukan Siberian Yupik *qəmtəq* ‘roof, ceiling’; Central Siberian Yupik *qəmtəq* ‘attic, upper floor’; Sireniki *qəmtə* ‘ceiling, upper floor, attic’. Fortescue—Jacobson—Kaplan 1994:297. Siberian Eskimo loan in Chukchi *qəmtən* ‘ceiling’ (cf. Fortescue 2005: 245—246).

Buck 1949:1.62 darkness; 4.12 skin; hide; 6.44 shirt; 6.51 shoe; 7.28 roof; 12.26 cover (vb.); 12.27 hide, conceal; 15.63 dark (in color); 15.65 black. Bomhard—Kerns 1994:505—506, no. 353.

586. Proto-Nostratic root **q^har^{y-}* (~ **q^hər^{y-}*):

(vb.) **q^har^{y-}* ‘to make a rasping sound, to be hoarse; to creak, to croak’;

(n.) **q^har^{y-}-a* ‘neck, throat’

- A. Dravidian: Tamil *kaṟuttu* ‘neck, throat’; Malayalam *kaṟuttu* ‘neck (of man, animal, plant, vessel, etc.)’; Kota *kaṛtl* ‘neck’; Kannaḍa *kattu* ‘neck, throat’; Tuḷu *kaṇṭely* ‘neck, throat’; Gadba (Ollari) *gaḍli* ‘neck’. Burrow—Emeneau 1984:127, no. 1366.
- B. Proto-Kartvelian **qarqa-* ‘pharynx, throat’: Georgian *xaxa-* (dialectal variant *xarxa-*) ‘pharynx, throat’; Mingrelian *xorxot’a-* ‘throat, gullet’; Svan *qarq, qerq* ‘throat’. Klimov 1964:264 **qarqa-* and 1998:334 **qarqa-* ‘pharynx, mouth’; Fähnrich—Sardshweladse 1995:561 **qarq-*; Fähnrich 2007:700 **qarq-*.
- C. Proto-Indo-European **k^her-/k^hor-/k^hṛ-* ‘to make a rasping sound, to be hoarse; to creak, to croak’: Greek κρώζω ‘to cry like a crow, to caw; (of a wagon) to creak, to groan’; Latin *crōciō* ‘to caw like a crow’; Old English *hrace, hracu* ‘throat’, *hræcan* ‘to clear the throat, to spit’; Middle Low German *rake* ‘throat’; Dutch *raak* ‘back part of the palate’; Old High German *rahho* (**hrahho*) ‘jaws, mouth (of beast); throat, cavity of mouth’ (New High German *Rachen*), *rāhhisōn* ‘to clear one’s throat’; Lithuanian *krokiù, krōkti / kriokiù, kriōkti* ‘to grunt’, (dial.) *krokóti* ‘to groan, to wheeze’; Russian Church Slavonic *krakati* ‘to croak’. Pokorny 1959:567—571 **ker-*, **kor-*, **kr-* ‘to make a rasping sound, to be hoarse, to caw, to croak, etc.’; Walde 1927—1932.I:413—418 **ker-*, **kor-*, **kr-*; Mann 1984—1987:541 **krāgō, -jō* ‘to caw, to croak’ and 542 **krākō, -jō* ‘to caw, to croak’; Watkins 1985:29—30 **ker-* and 2000:40 **ker-* echoic root, base of various derivatives indicating loud noises of birds; Beekes 2010.I:788 **kroh₂k-*; Boisacq 1950:511—512; Frisk 1970—1973.II:31; Chantraine 1968—1980.I:589; Hofmann 1966:157; De Vaan 2008:145—

146; Ernout—Meillet 1979:151; Walde—Hofmann 1965—1972.I:293; Orël 2003:187 Proto-Germanic **xrēkjanan*, 187 **xrēkōn*; Onions 1966:743 Common Germanic **χraik-*; Klein 1971:633; Kluge—Mitzka 1967:576 **ker-*, **kor-*, **kr-*; Kluge—Seebold 1989:577; Fraenkel 1962—1965.I:299; Smoczyński 2007.1:316; Derksen 2008:245 and 2015:260.

- D. Eskimo: Proto-Yupik-Siberian Eskimo **qarya* ‘deep voice’ > Alutiiq Alaskan Yupik *qəXsatu-* ‘to have a deep voice’; Central Alaskan Yupik *qəXsiγ-* ‘to have a deep voice’; Central Siberian Yupik *qarya-* ‘to boast, to brag’, *qari* ‘deep voice’; Sirenik *qarya* ‘voice’. Fortescue—Jacobson—Kaplan 1994:289.
- E. (?) Chukchi-Kamchatkan: Proto-Chukotian **qəRæ(qəRæ)t-* ‘crunching sound’ > Chukchi *qʰeqat-*, *qeqʰet-*, *qeet-* ‘crunch, creak (for example, snow underfoot)’; Kerek *qaʰaqa(a)t-* ‘crunch’; Koryak *reqepəcyəcyet-* ‘crunch’. Fortescue 2005:246—247.

Buck 1949:4.29 throat. Bomhard—Kerns 1994:507, no. 355.

587. Proto-Nostratic root **qʰath-* (~ **qʰəth-*):

(vb.) **qʰath-* ‘to beat, to strike, to fight’;

(n.) **qʰath-a* ‘anger, fury, wrath, spite; fight, battle, quarrel; killing, slaughter’

- A. Proto-Afrasian **qat-* ‘to beat, to strike’: Proto-Semitic **kat-at-* ‘to beat, to strike’ > Arabic (Daḡina) *katt* ‘to demolish, to cut down’; Hebrew *kāθaθ* [כָּתַת] ‘to crush, to pound’; Aramaic *kəθaθ* ‘to crush, to pound’; Ugaritic *ktt* ‘beaten (copper)’; Akkadian *katātu* ‘to be low or short; to suffer physical collapse; (in astrology) to descend to the horizon’; Geez / Ethiopic *katta* [ክተ] ‘to cut in little pieces, to beat’; Tigre (reduplicated) *kātkāta* ‘to hurt, to beat’; Tigrinya (reduplicated) *kātkātā* ‘to cut’; Amharic (reduplicated) *kātākkātā* ‘to cut in little pieces, to chop up (wood)’; Gurage (reduplicated) *kātākkātā* ‘to break into pieces’, *kātta* ‘to break bread in half; to make an incision in the eye’. Klein 1987:290; Leslau 1979:356, 357 and 1987:298. Proto-Semitic **kat-asʷ-* ‘to beat, to strike’ > Hebrew *kāθaš* [כָּתַשׁ] ‘to crush, to pound’; Aramaic *kəθaš* ‘to beat, to crush, to pound’; Syriac *kəθaš* ‘to beat; to quarrel, to contend’. Murtonen 1989:242; Klein 1987:290. Egyptian (reduplicated) *ktkt* ‘to beat, to strike’; Coptic (reduplicated) *čotčēt* [Ⲫⲟⲧⲉⲧ] ‘to cut, to break, to destroy’. Hannig 1995:890; Erman—Grapow 1926—1963.5:146; Vycichl 1983:348.
- B. Dravidian: Tamil *katavu* (*katavi-*) ‘to be angry with, to be displeased with, to quarrel with’, *katam* ‘anger’, *katar* ‘to be angry with, to be displeased with, to be furious’, *katarvu* ‘fury, heat, vehemence’, *kati* ‘to be angry with’; Malayalam *katam* ‘wrath’, *kataykkuka* ‘to get angry’, *katarppu* ‘getting angry’; Kannaḍa *kati*, *khati*, *kāti*, *khāti* ‘anger, wrath’; Kolami *ka-ti* ‘anger, hate’. Burrow—Emeneau 1984:112, no. 1186. Tamil *kātu* (*kāti-*) ‘to kill, to murder, to cut, to divide’, *kātu* ‘murder’, *kātal* ‘killing,

fighting, cutting, breaking'; Kannaḍa *kādu* 'to wage war, to fight, to contend with', *kāduha* 'fighting'; Tuḷu *kāduni* 'to quarrel, to fight, to wrestle', *kādaḍuni* 'to fight', *kādāṭa* 'a fight, war, battle'. Burrow—Emeneau 1984:135, no. 1447.

- C. Proto-Indo-European **k^hat^h*- 'to fight': Sanskrit *śātru-ḥ* 'enemy, foe, rival'; Prakrit *sattu-* 'enemy, foe'; Old Irish *cath* 'battle'; Welsh *cad* 'war'; Old Icelandic (in compounds) *höð-* 'war, slaughter'; Old English (in compounds) *headu-* 'war, battle'; Old High German (in compounds) *hadu-* 'fight, battle'; Middle High German *hader* 'quarrel, strife' (New High German *Hader*); Old Church Slavic *kotora* 'battle'; Hittite *kattu-* 'enmity, strife'. Pokorny 1959:534 **kat-* 'to fight, to struggle', **katu-*, **kat(e)ro-* 'fight, struggle'; Walde 1927—1932.I:339 **kat-*; Mann 1984—1987:603 **kaṭjō* 'to strike, to beat', 603 **katros, -us* (?) 'striking, forceful', 603 **katus, -ū, -ā* 'battle, fight', 637 **kot-* (**kotejō*, **kotos*) 'spite, anger; to spite, to bother, to rage'; Watkins 1985:27 **kat-* and 2000:37 **kat-* 'to fight'; Mallory—Adams 1997:201 **katu-* 'fight'; Puhvel 1984—.4:138—140 **katu-* 'strife'; Kloekhorst 2008b:466 **k^het^h-(e)u-* (?); Orël 2003:165 Proto-Germanic **xapuz*; Kroonen 2013:214 Proto-Germanic **haparō-* 'fight' and 214—215 **hapu-* 'battle'; De Vries 1977:278—279; Kluge—Mitzka 1967:279—280; Kluge—Seebold 1989:285; Walshe 1951:89 **katu-*; Mayrhofer 1956—1980.III:294; Derksen 2008:240: "PIE origin doubtful. The North European evidence points to **kat-*." According to Boisacq (1950:502), Beekes (2010.I:761), Chantraine (1968—1980.I:572), and Hofmann (1966:156), Greek *κοτέω* 'to bear a grudge against, to be angry', *κότος* 'grudge, rancor, wrath' may belong here as well. However, Frisk (1970—1973.I:931—932) questions this comparison.
- D. Yukaghir *qatik-* 'to wrestle'. Nikolaeva 2006:381.
- E. Chukchi-Kamchatkan: Proto-Chukotian **qætvə-* 'to stab (to death)' > Chukchi *qetvə-* 'to stab (an animal) to death'; Koryak (Kamen) *qatvə-* 'to stab'; Alyutor *qatv(ə)-* 'to stab, to wound'. Fortescue 2005:233.

Buck 1949:16.42 anger; 20.11 fight (vb.); 20.12 battle (sb.); 20.13 war. Bomhard—Kerns 1994:429, no. 273; Dolgopolsky 2008, no. 1224, **k[a]tV* (or **kaʔitV*?) 'to kill, to wage a war'.

588. Proto-Nostratic root **q^hoc^h-*:

- (vb.) **q^hoc^h-* 'to take off, to take away, to remove' (> 'to remove by wiping, sweeping, rubbing, peeling, pulling or tearing off, etc.');
- (n.) **q^hoc^h-a* 'the act of removing; that which has been removed' (> 'rubbish, refuse, sweepings, etc.')

- A. Afroasiatic: Proto-Semitic **kac-ar-*, **kac-t-ar-* 'to sweep, to wipe off, to wipe away' > Geez / Ethiopic *k^wasara* [ḥ-ḥḏ], *k^wastara* [ḥ-ḥḏḏ] 'to sweep, to cleanse, to wipe away, to get rid of debris, to dust, to purify, to

prune (trees), to correct', *mək^wəstār* [፩፻፳፻፳፻] 'rubbish heap, sweepings, refuse; broom, twigs (serving as a broom); snuffers for a candle', *k^wəstār* [፩፻፳፻፳፻] 'sweepings'; Tigrinya *k^wästärä* 'to sweep, to wipe off, to filter'; Tigre *k^wästära* 'to sweep away'; Amharic *k^wäsättärä* 'to wipe off, to sweep away'; Gurage *kostarra* 'filtered'. Leslau 1979:354 and 1987:296.

- B. Dravidian: Kannada *kojaṇṭi* 'refuse (as of fruits)'; Tuḷu *kujanṭi*, *kojaṇṭi* 'the refuse of vegetables from which the juice has been pressed out'. Burrow—Emeneau 1984:184, no. 2039.
- C. Proto-Kartvelian **qoc-* 'to remove by wiping, sweeping, rubbing, peeling, etc.': Old Georgian *c'ar-qoca-* 'to clean', *ma-qoca-* 'to wipe up, to root out', *da-qoca-* 'to destroy'; Georgian *xoc-* 'to wipe up, to rub, to sweep'; Laz *xos-* 'to peel (fruit)'. Klimov 1998:340 **qoc-*; Fähnrich 2007:708 **qoc-*; Fähnrich—Sardshweladse 1995:567 **qoc-*.
- D. Chukchi-Kamchatkan: Proto-Chukotian **qocyə-* 'to tear' > Koryak *qocyə-*, *qocyi-* 'to tear, to tear to pieces'; Alyutor *qucyə-* 'to tear'. Fortescue 2005: 237.

Buck 1949:9.28 tear (vb. trans.); 9.31 rub; 9.37 sweep.

22.29. PROTO-NOSTRATIC *q'

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
q'-	q' (?)	k-	q'-	k'-	k-	k-	k- q-
-q'-	-q' (?)	-k(k)-	-q'-	-k'-	-k-	-k-	-k- -q-

589. Proto-Nostratic (n.) *q'ab-a 'jaw':

- A. Dravidian: Tamil *kavul* 'cheek, temple or jaw of elephant'; Malayalam *kaviḷ* 'cheek'; Tuḷu *kaḷu* 'the cheek', *kavunḍrasa*, *kavunḍrasa* 'cancer of the cheek'; Parji *gavla*, (metathesis in) *galva* 'jaw'; (?) Telugu *gauda* 'the cheek'; (?) Kui *kūlu* 'cheek'. Burrow—Emeneau 1984:124, no. 1337. Either here or with Proto-Nostratic *k'aph-a 'jaw, jawbone'.
- B. Proto-Kartvelian *q'ab- 'jaw': Georgian *q'b-a* 'jaw', *ni-q'b-er-i* 'chin, jaw'; Svan *q'ab*, *hā-q'b-a* 'cheek'. Palmaitis—Gudjedjani 1985:269 and 315; Klimov 1964:209 *q̇ba- and 1998:238 *q̇ba- 'jaw'; Fähnrich—Sardshweladse 1995:404 *q̇ab-; Fähnrich 2007:503 *q̇ab-.
- C. Proto-Indo-European *k'ebh-/*k'obh- '(vb.) to munch, to chew; (n.) jaw': Old Irish *gop* (Modern Irish *gob*) 'beak, mouth'; New High German *Kebe* 'fish-gill'; Lithuanian *žėbiù*, *žėbti* 'to munch'; Czech *žábra* 'fish-gill'. Pokorny 1959:382 *gēp(h)-, *gēbh- 'jaw, mouth; to eat'; Walde 1927—1932.I:570—571 *gēp(h)-, *gēbh-; Mann 1984—1987:389 *gēbh- (*gēbhl-, *gōbh-) 'jaw'; Watkins 1985:19 *gēp(h)-, *gēbh- and 2000:26 *gēp(h)-, *gēbh- 'jaw, mouth'; Mallory—Adams 1997:175 *gēP- 'to eat, to masticate'; Orël 2003:212 Proto-Germanic *kebran; Kroonen 2013:283 *gēbh-; Fraenkel 1962—1965.II:1294—1295; Smoczyński 2007.1:775 *gēbh-. Note: Not related to *k'em-bh-/*k'om-bh-/*k'm-bh- 'to chew (up), to bite, to cut to pieces, to crush', *k'om-bh-o-s 'tooth, spike, nail' (see below, no 578).

Buck 1949:4.207 jaw. Bomhard 1996a:219, no. 624; Dolgopolsky 2008, no. 1903, *q̇AbV 'jaw'.

590. Proto-Nostratic root *q'al- (~ *qəl-) or *q'el-:

- (vb.) *q'al- or *q'el- 'to glitter, to sparkle, to shine, to be or become bright; to make bright';
- (n.) *q'al-a or *q'el-a 'any bright, shining object: star'

- A. Afroasiatic: Southern Cushitic: Proto-Rift *k'al- 'to shine, to make bright' > Alagwa *qal-* 'to polish'; Asa *ʔalalaya* 'star'. Ehret 1980:368, no. 6.
- B. Proto-Indo-European *k'el- 'to shine, to be bright; to make bright' (extended form *k'leHy-): Greek ἀγλα[F]ός (< *āγα-γλαFός ?) 'splendid,

shining, beautiful, bright', ἀγλαΐα 'splendor, beauty, adornment', γλήνεα 'bright things, trinkets, stars', γλαυκός 'gleaming, silvery', γελάω 'to laugh (at)', γελᾶνὼ 'to brighten, to cheer', γελᾶνής 'cheerful', γέλως 'laughter'; Armenian *calr* 'laughter'; Old English *clæne* 'clear, open (field); pure, clean', *clænsian* 'to clean, to cleanse, to clear (land of weeds), to purge (stomach), to purify (heart), to chasten (with affliction)'; Old Frisian *klēne* 'small'; Old Saxon *klēni*, *cleini* 'dainty, graceful'; Middle Dutch *clēne* 'small, thin, clean' (Modern Dutch *klein*); Old High German *kleini*, *cleini*, *chleine* 'clear, delicate, small' (New High German *klein* 'small'). Perhaps Hittite (abl. sg.) *kal-ma-ra-az* 'ray (of the sun)', (acc. sg.) ^{GIŠ}*kal-mi-in* 'piece of firewood', (nom. sg.) ^{GIŠ}*kal-mi-ša-na-aš*, *kal-mi-eš-na-aš*, *kal-mi-iš-na-aš* 'brand, piece of firewood, (fire)bolt'. Pokorny 1959:366—367 **ǵel-*, **ǵelə-*, **ǵlē-* 'to shine, to be bright; to be happy, to smile, to laugh'; Walde 1927—1932.I:622—624 **ǵel-*, **ǵelē-*, (also **ǵelēi-* :) **ǵ(e)lai-*; Mann 1984—1987:390 **ǵel-* 'laugh; laughter'; Watkins 1985:18 **ǵel-* (extended form **ǵlei-* in Germanic **klai-ni-* 'bright, pure') and 2000:25 **ǵel-* (extended form **ǵlei-*) 'bright'; Mallory—Adams 1997:83 (?) **ǵlain-* 'bright'; Boisacq 1950:8, 143 **ǵlai-*, 150; Frisk 1970—1973.I:12, I:294—295, I:310—311, and I:311—312 **ǵlai-*; Chantraine 1968—1980.I:11—12, I:214, I:225—226; Hofmann 1966:2, 42—43 **ǵel-*, **ǵlai-*, 45 **ǵel-*; Beekes 2010.I:13, I:264—265 **ǵelh₂-*, I:274—275; Orël 2003:214—215 Proto-Germanic **klainiz*; Kroonen 2013:290 Proto-Germanic **klainja-* 'fine'; Onions 1966:180 West Germanic **klainaz*; Klein 1971:141; Barnhart 1995:130; Boutkan—Siebinga 2005:217—218; Walshe 1951:122; Kluge—Mitzka 1967:376 **ǵel-*, **ǵ(e)lai-*; Kluge—Seebold 1989:376; Puhvel 1984— .4:26—28; Kloekhorst 2008b:431; Martirosyan 2008:286—287 (nom. sg.) **ǵélh₂-ōs* (cf. Greek γέλως). Note: this etymology is disputed by some scholars, either in whole or in part.

- C. Chukchi-Kamchatkan: Proto-Chukotian **qelperat-* 'to glitter' > Chukchi *qelperat-*, *qelpera-* 'to glitter, to sparkle'; Kerek *qilpijat-* 'to glitter, to sparkle'; [Alyutor *itqil̥-γərr(at)-* 'to glitter, to sparkle']. Fortescue 2005:234.

Buck 1949:15.56 shine; 15.57 bright; 15.87 clean.

591. Proto-Nostratic (n.) **q'aly-a* 'sexual organs, genitals, private parts (male or female)':

- A. (?) Afrasian: Semitic: Akkadian *qallū*, *gallū* 'sexual organ' (this is usually considered to be a loan from Sumerian [cf. Von Soden 1965—1981:894]); Geez / Ethiopic *kʷəllh* [ቀላሕ] 'testicle'; Amharic *kʷəla* 'testicle'. Leslau 1987:428.
- B. Proto-Kartvelian **q'al-* 'penis': Georgian *q'l-e* (< **q'al-e* or **q'ol-e*) 'penis'; Mingrelian *ʔol-e* (< **q'ol-a-i*) 'penis'; Laz *q'ol-e*, *k'ol-e* 'penis';

- Svan [q'l-] in *q'law* 'child (male)'. Klimov 1964:212 **q̇le-* and 1998:243—244 **q̇le-* 'penis'; Fähnrich—Sardshweladse 1995:406 **q̇al-*; Fähnrich 2007:505 **q̇al-*; Schmidt 1962:141 **q̇al-*.
- C. Proto-Indo-European **k'el-th-/k'j-th-* 'vulva, womb': Sanskrit *jartú-h*, *jarta-h* 'vulva', *jathára-m* (< **jalthara-m*) 'belly, stomach, womb'; Gothic *kilpei* 'womb', *inkilþō* 'pregnant'; Old English *cild* 'child'. Possibly also Old Swedish *kulder*, *kolder* (Modern Swedish *kull*) 'child of the same marriage'; Old Danish *köll* (Modern Danish *kuld*) 'child of the same marriage'; Norwegian (dial.) *kold* 'child of the same marriage'. Mann 1984—1987:1623 **ġelt-*; Mayrhofer 1956—1980.I:414 and I:423; Orël 2003:212 Proto-Germanic **kelþaz*; Kroonen 2013:309—310 Proto-Germanic **kulda-* 'litter (of progeny)' (Gothic *kilpei* < **kelþin-* and Old English *cild* < **keldiz-*); Feist 1939:311 **gel-*; Lehmann 1986:218 **gel-* '(adj.) rounded; (vb.) to form a ball shape'; Onions 1966:169; Klein 1971:131; Falk—Torp 1903—1906.I:421—422.
- D. Uralic: Proto-Finno-Permian **kal'kk̄* 'egg, testicle' > Finnish *kalkku* 'testicle'; Zyrian / Komi (Sysola, Permyak) *kol'k*, (East Permyak) *kul'k* 'egg, testicle'. Rédei 1986—1988:644—645 **kal'kk̄*.
- E. Proto-Chukchi-Kamchatkan **q̄alq̄æ* 'penis': Chukchi *əlqe* 'penis'; Kerek *XalXa* 'penis'; Koryak *ɤəlq̄ə* 'penis'; Alyutor *ɤəlq̄a* 'penis'; Kamchadal / Itelmen *q̄əłX*, *k̄əłX* (Western, Southern *kalka*, Eastern *kallaka*) 'penis'. Fortescue 2005:245.

Sumerian *gal₄*, *gal₄la* 'vulva', *gal₄-la-tur* 'vagina', *gal₄la* 'sexual organs, genitals'.

Buck 1949:4.47 womb; 4.48 egg; 4.49 testicle; 4.492 (penis). Dolgopolsky 2008, no. 1918a, **q̇U||E* 'penis, (?) vulva'; Bomhard—Kerns 1994:509, no. 358.

592. Proto-Nostratic root **q'am-* (~ **q'əm-*):

- (vb.) **q'am-* 'to crush, to grind; to chew, to bite, to eat';
(n.) **q'am-a* 'bite; tooth'

- A. Proto-Afrasian **q'am-* '(vb.) to crush, to grind; to chew, to bite, to eat; (n.) flour': Proto-Semitic **k'am-aḥ-* '(vb.) to crush, to grind; to chew, to bite, to eat; (n.) flour' > Arabic (Daḡina) *ḳamah* 'to eat'; Arabic *ḳamḥ* 'wheat'; Hebrew *ḳemaḥ* [קמח] 'flour, meal'; Ugaritic *ḳmḥ* 'flour'; Akkadian *ḳemū*, *ḳamū* 'to grind, to crush', *ḳēmu* 'flour, meal' (Old Akkadian *ḳam'um*); Geez / Ethiopic *ḳamḥa* [ቀጥሐ] 'to eat grain or other fodder, to graze'; Gurage (Chaha) *ḳāmā* 'flour', (Wolane) *ḳāmā* 'to put flour into the mouth, *to take a mouthful, to chew the narcotic plant'; Harari *ḳāmaḥa* 'to take a mouthful'; Gafat *ḳumina* 'flour'; metathesis in: Tigrinya *ḳwāḥamā* 'to swallow, to devour'; Tigre *ḳāhma* 'to take a mouthful (of flour or

tobacco'); Argobba *kāhama* 'to eat, to devour'; Amharic *kamä* 'to swallow without chewing'. Murtonen 1989:378; Klein 1987:582; Leslau 1963:125, 1979:479, and 1987:431. Semitic loans in Egyptian *qmhw* 'bread made of fine flour', *qmhy-t* 'fine wheaten flour'. Hannig 1995:857; Faulkner 1962:279; Erman—Grapow 1921:190 and 1926—1963.5:40. Berber: Tuareg *tamyəst* 'molar tooth'; Siwa *taɣmast* 'molar'; Nefusa *tiyməst* 'molar'; Ghadames *tiymas* 'molar'; Mzab *tiyməst* 'tooth'; Wargla *tiyməst* 'tooth (other than molar)'; Tamazight *tuyməst* 'tooth (in general), toothache'; Riff *tiyməst* 'tooth (in general), molar'; Kabyle *tuyməst* 'tooth (in general)'; Chaouia *tiyməst* 'tooth'. Proto-East Cushitic **k'om-* 'to chew, to bite, to eat' (< former prefix verb **-k'(o)m-*) > Saho *-qom-*; Somali *qoom-* 'to wound', *qoon* 'wound'; Dasenech (imptv.) *kom* 'eat!'; Galla / Oromo *k'am-* 'to chew *č'at*'; Konso *qom-* 'to chew'; Gollango *qan-* 'to chew'. Sasse 1979:25 and 1982:121—122. Proto-Highland East Cushitic **k'ama* 'flour' > Burji *k'amay* 'flour of all kinds of cereals'; Hadiyya *k'ama* 'flour'; Kambata *k'ama* 'flour'. Hudson 1989:65; Sasse 1982:124. Diakonoff 1992:85 **qmḥ-* 'flour'; Orël—Stolbova 1995:336, no. 1545, **kamVḥ-* 'flour'.

- B. Proto-Indo-European **k'em-bh-/k'om-bh-/k'ṛ-bh-* 'to chew (up), to bite, to cut to pieces, to crush', **k'om-bh-o-s* 'tooth, spike, nail': Sanskrit *jāmbhate*, *jābhate* 'to chew up, to crush, to destroy', *jāmbha-h* 'tooth'; Greek γόμφος 'bolt, pin', γομφίος 'a grinder-tooth'; Albanian *dhëmb* 'tooth'; Old Icelandic *kambr* 'comb'; Swedish *kam* 'comb'; Old English *camb* 'comb', *cemban* 'to comb'; Old Saxon *kamb* 'comb'; Dutch *kam* 'comb'; Old High German *kamb*, *champ* 'comb' (New High German *Kamm*); Lithuanian *žambas* 'pointed object'; Latvian *zūobs* 'tooth'; Old Church Slavic *zobъ* 'tooth'; Polish *zab* 'tooth'; Russian *zub* [зуб] 'tooth'; Tocharian A *kam*, B *keme* 'tooth'. Rix 1998a:143—144 **ḡembh-* 'to show the teeth, to snap, to chew, to bite', **ḡombho-* 'tooth'; Pokorny 1959:369 **ḡembh-*, **ḡmbh-* 'to bite', **ḡombho-s* 'tooth'; Walde 1927—1932.I:575—576 **ḡembh-*, **ḡmbh-* 'to bite', **ḡombho-s* 'tooth'; Mann 1984—1987:404 **ḡombhō* 'to show the teeth, to chew, to bite, to stab, to snap', 404 **ḡombhos* 'spike, nail, tooth'; Watkins 1985:18 **ḡembh-* and 2000:26 **ḡembh-* 'tooth, nail'; Mallory—Adams 1997:594 **ḡómbhos* 'tooth'; Gamkrelidze—Ivanov 1984.II:879 **k'emb[h]-*, **k'ṛmb[h]-*, **k'omb[h]o-* and 1995.I:775 **k'ṛmbh-*, **k'ombho-* 'tooth', **k'embh-* 'to tear apart, to break to pieces, to bite'; Chantraine 1968—1980.I:232; Boisacq 1950:153 **ḡombho-s*; Frisk 1970—1973.I:319—320; Hofmann 1966:47 **ḡombhos*; Beekes 2010.I:282 **ḡembh-* 'to bite', **ḡombh-o-* 'cutting tooth'; Orël 1998:82 and 2003:209 Proto-Germanic **kam̥baz*, 209 **kam̥bjanan*; Kroonen 2013:279 Proto-Germanic **kamba-* 'comb' (< **ḡombh-o-*), 279 **kam̥bjan-* 'to comb', and 287 **kimbōn-* 'crest, ridge'; De Vries 1977:299 **ḡembh-* 'to bite', **ḡombhos* 'tooth'; Onions 1966:193 **ḡombhos*; Klein 1971:150 **ḡembh-* 'to bite, to cut to pieces'; Kluge—Mitzka 1967:344

**gombho-*; Kluge—Seebold 1989:350 **gombho-*; Adams 1999:194 **gombho-*; Van Windekens 1976—1982.I:186 **gombho-*; Huld 1984:58; Mayrhofer 1956—1980.I:419; Derksen 2008:549 **gombh-o-* and 2015:512 **gombh-o-*; Fraenkel 1962—1965.II:1288—1289; Smoczyński 2007.1:773 **gombh-o-*. Note: Not related to **k'ebh-/k'obh-* '(vb.) to munch, to chew; (n.) jaw' (see above, no 575).

- C. Chukchi-Kamchatkan: Proto-Chukotian **qametva-* (or **qamatva-*) 'to eat' > Chukchi *qametva-* 'to eat (intr.)', *qemet-* 'to feed (at time of offering to star or fire, etc.)', *qemi-plətku-* 'to finish eating'; Koryak *qametva-* 'to give food (to a guest), to treat'; Alyutor *qamitva-* 'to eat, to give food to'. Fortescue 2005:228.

Buck 1949:4.27 tooth; 4.58 bite; 6.91 comb. Bomhard—Kerns 1994:435—436, no. 280.

593. Proto-Nostratic (n.) **q'an-a* 'field, land, (open) country':

- A. (?) Afrasian: Egyptian *qn* used as a designation for plants in a field, *qnt* 'plant', *qnni* 'plant'. Erman—Grapow 1926—1963.5:47; Hannig 1995:858 and 861.
- B. Proto-Kartvelian **q'an-* 'cornfield, plowed field': Georgian *q'an-a* 'cornfield, plowed field', *q'anobir-* 'plowed field', *kue-q'ana-* 'land, country'; Mingrelian *ʔvan-a*, *ʔon-a* 'cornfield, plowed field'; Laz *q'on-a*, *ʔon-a*, *jon-a* 'cornfield, plowed field'. Klimov 1964:208 **qana-* and 1968:237 **qana-* 'cornfield, plowed field'; Fähnrich—Sardshweladse 1995:408 **qan-*; Fähnrich 2007:507 **qan-*.
- C. Uralic: Proto-Finno-Permian **kentä* 'field, meadow, pasture' > Finnish *kenttä* 'field'; Karelian *kenttä* 'meadow'; Lapp / Saami *gied'de* '(natural) meadow'; Votyak / Udmurt *gid*, *gid'* 'stall, barnyard'; Zyrian / Komi *gid* 'stall, stall for sheep, pigpen'. Rédei 1986—1988:658—659 **kentä*.

Sumerian *gán* 'field', *gán* 'planting, cultivation', *gána* 'field, land, country, area, region', *gán-zi*, *gán-zi-da* 'cultivation, tillage', *gán-zi^{sar}* 'a plant'.

Buck 1949:1.23 plain, field; 8.12 field (for cultivation). Bomhard 1996a:219, no. 625; Hakola 2003:43, no. 128.

594. Proto-Nostratic root **q'arʷ-* (~ **q'ərʷ-*):

(vb.) **q'arʷ-* 'to rot, to stink';

(n.) **q'arʷ-a* 'rotten, stinking, putrid thing'; (adj.) 'rotten, stinking, putrid'

- A. Dravidian: Gondi *kaṛītānā* 'to be rotten, to rot, to decay', *kaṛi-* 'to be rotten, to go rotten', *kaṛīsītānā* 'to rot, to ret (hemp)'; Konda *kaṛk-* 'to go

bad, to become rotten'; Pengo *kraŋ(g)-* (*kraŋt-*) 'to go bad, to become rotten (egg)'. Burrow—Emeneau 1984:126, no. 1360.

- B. Proto-Kartvelian **q'ar-/q'r-* 'to rot, to stink': Georgian *q'ar-/q'r-* 'to stink, to reek', *m-q'r-al-i* 'stinking'; Mingrelian [*ʔor-*] in *ʔor-ad-*, *ʔor-id-*, *ʔor-d-* 'to rot (tr., intr.), to stink', *ʔor-ad-il-i* 'rotten'. Klimov 1964:209 **qar-* and 1998:237 **qar-* : **qr-* 'to stink'; Fähnrich—Sardshweladse 1995:409 **qar-/qr-*; Fähnrich 2007:508 **qar-/qr-*.

Buck 1949:15.26 bad smelling, stinking.

595. Proto-Nostratic (n.) **q'aw-a* 'head, forehead, brow':

- A. Proto-Afrasian **q'aw-* 'forehead, brow': Proto-Southern Cushitic **k'awa* 'brow ridge' > Gorowa *qaway* 'eyelid'; Dahalo *k'awaŋi* 'middle of forehead'; Ma'a *ᵐkumbíti* 'eyebrow'. Ehret 1980:252.
- B. Proto-Kartvelian **q'ua-* 'forehead; handle (of an axe)': Georgian *q'ua* 'handle of an axe, crust (of bread)'; Mingrelian *ʔva* 'forehead'; Laz *k'va*, *q'va* 'forehead', (Xopa dialect) *q'ua-* 'handle of a hoe'; Svan *q'ua*, *q'uwa* 'handle of an axe' (this may be a loan from Georgian). Schmidt 1962:141; Fähnrich—Sardshweladse 1995:419 **qua-*; Fähnrich 2007:520 **qua-*; Klimov 1964:213 **qua-* and 1998:245 **qua-* 'handle of an axe'. According to Klimov, "[i]n general the meaning 'handle' is considered to be original".
- C. (?) Proto-Indo-European (**k'ew-lo-s/*) **k'u-lo-s* 'head, top, summit, peak': Proto-Germanic **kullaz* 'head, top, summit, peak' > Old Icelandic *kollr* 'top, summit; head, pate; a shaven crown'; Norwegian *koll* 'summit, peak'; Swedish (dial.) *koll* 'summit, peak'; Old Danish *kol*, *kuld* 'summit, peak'; Middle Low German *kol*, *kolle* 'head, uppermost part of a plant'. Pokorny 1959:397 [**geu-lo-s*]; Orël 2003:223 Proto-Germanic **kullaz*; De Vries 1977:325; Falk—Torp 1903—1906.I:399 **gḷno-*; Torp 1919:306.

Sumerian *gú* 'head, forehead'.

Buck 1949:3.205 forehead; 4.206 eyebrow. Bomhard—Kerns 1994:508—509, no. 357.

596. Proto-Nostratic root **q'el-*:

(vb.) **q'el-* 'to swallow';

(n.) **q'el-a* 'neck, throat'

- A. Proto-Kartvelian **q'el-* 'neck, throat': Georgian *q'el-* 'neck of a vessel, throat'; Mingrelian *ʔal-* 'neck, neck of a vessel', *o-ʔal-eš-* 'collar'; Laz *q'al-*, *ʔal-*, *al-* 'neck, neck of a vessel'; Svan [*q'l-*] in *mə-q'l-a*, *mə-q'l-i* 'neck, throat'. Klimov 1964:209 **qel-* and 1998:238 **qel-* 'neck'; Schmidt

1962:140; Fährnrich—Sardshweladse 1995:410 **qel*-; Fährnrich 2007:510 **qel*-.

- B. Proto-Indo-European **k'el*-/**k'l*- '(n.) neck, throat; (vb.) to swallow': Old Irish *gelim* 'to feed, to graze'; Latin *gula* 'throat, gullet', *gluttiō*, *glūtiō* 'to swallow, to gulp down'; Old English *ceole* 'throat, gorge'; Dutch *keel* 'throat'; Old High German *kela* 'throat, gullet' (New High German *Kehle*); Armenian *ekowl* 'devoured'; Old Church Slavonic *gl̋tati* 'to swallow'; Russian *glotát* [глотать] 'to swallow'; Czech *hltati* 'to swallow, to devour'; Polish (dial.) *glutać* 'to drink noisely'; Slovenian *goltáti* 'to swallow, to devour, to belch'; Serbo-Croatian *gūtati* 'to devour'. Rix 1998a:171 **guel*- 'to swallow, to devour, to gulp down'; Pokorny 1959:365 **gel*- 'to swallow'; Walde 1927—1932.I:621 **gel*-; Mann 1984—1987:287 **golos*, -*ā*, -*is*, -*iə* 'neck, throat, gullet'; Ernout—Meillet 1979:284—285 **gel*- (and **g^wel*-); De Vaan 2008:275 **gul*-; Walde—Hofmann 1965—1972.I:625—626 **gel*- and **g^uel*-; Orël 2003:212 Proto-Germanic **keluz* ~ **kelōn*; Kroonen 2013:284 Proto-Germanic **kelōn*- 'throat'; Kluge—Mitzka 1967:361 Proto-Germanic **kelōn*-, **kelu*-; Kluge—Seebold 1989:364 West Germanic **kelōn*-; Derksen 2008:168. Note: Sanskrit *gala-h* 'throat, neck' does not belong here (cf. Mayrhofer 1956—1980.I:330).

Buck 1949:4.28 neck; 4.29 throat; 5.11 eat; 5.12 drink (vb.). Bomhard—Kerns 1994:508, no. 356; Dolgopolsky 2008, no. 1910, **qalV* 'neck' (Dolgopolsky includes possible Afrasian [Cushitic] cognates but incorrectly compares Proto-Kartvelian **q'el*- 'neck, throat' with Proto-Indo-European **kol-so*- 'neck' [cf. Pokorny 1959:639 **k^uol-so*-; Mallory—Adams 1997:392 **kólsos*]).

597. Proto-Nostratic root **q'in*- (~ **q'en*-):

(vb.) **q'in*- 'to freeze, to be or become cold';

(n.) **q'in-a* 'cold, frost'

- A. Dravidian: Kolami *kinani*, *kinām* 'cold'; Gondi *kinan*, *kīnd* 'cold', *kinnān* 'wet, cool', *kinnīta* 'cold'. Burrow—Emeneau 1984:147, no. 1601.
- B. Proto-Kartvelian **q'in*- 'to freeze': Georgian *q'in*- 'to freeze', *q'in-el*- 'ice'; Mingrelian *ʔin*- 'to freeze'; Laz *q'in*- 'to freeze', *q'in*- 'cold, frost'. Klimov 1964:212 **qin*- and 1998:243 **qin*- 'to cool, to freeze'; Fährnrich—Sardshweladse 1995:416—417 **qin*-; Fährnrich 2007:517—518 **qin*-.

Buck 1949:15.86 cold. Bomhard 1996a:221, no. 629.

22.30. PROTO-NOSTRATIC *G^w

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
G ^w -	G ^w - (?)	k-	gw/u-	g ^{wh} -	k-	g-	k- q-
-G ^w -	-G ^w - (?)	-k-	-gw/u-	-g ^{wh} -	-x-	-g-	-ɣ-

598. Proto-Nostratic root *G^wal- (~ *G^wəl-):(vb.) *G^wal- ‘to curve, to bend, to roll; to be round’;(n.) *G^wal-a ‘round object: circle, globe, sphere, ball, etc.’

Derivative:

(n.) *G^wal-a ‘head, skull’

- A. Proto-Afrasian *G^wal- ‘to curve, to bend; to roll; to be round’: Proto-Semitic *gal-al- ‘to roll’ > Akkadian *galālu* ‘to roll’, *gallu* ‘rolling’; Hebrew *gālāl* [גָּלַל] ‘to roll, to roll away (especially large stones)’; Jewish Palestinian Aramaic *gallēl* ‘to roll, to turn over (and over)’; Aramaic *gālāl* ‘to roll, to roll away’; Arabic *ḡulla* ‘(cannon) ball; bomb’. D. Cohen 1970— :125—129; Murtonen 1989:134; Klein 1987:101. Proto-Semitic (reduplicated) *gal-gal- ‘round object: wheel, sphere, globe, circle’ > Hebrew *galgal* [גָּלְגָּל] ‘wheel, whirl, whirlwind’, *gilgāl* [גִּלְגָּל] ‘wheel’; Imperial Aramaic *glgl* ‘wheel’; Jewish Palestinian Aramaic *gilglā* ‘wheel’, *galgal* ‘belt’, *galgēl* ‘to roll, to turn’; Syriac *gīglā* ‘wheel’; Phoenician *glgl* ‘wrapper’; Geez / Ethiopic *ʔangallaga* [አንገላገላ] (‘to roll together’ >) ‘to assemble (intr.), to come together, to keep company, to band together, to gather in crowds’; Tigre *gālgāla* ‘to gather’. D. Cohen 1970— :118; Klein 1987:99; Tomback 1978:65; Leslau 1987:190. Proto-Semitic *gal-am- ‘to wrap up, to roll up’ > Hebrew **gālam* [גָּלַם] ‘to wrap up, to fold, to fold together’; Mandaic **glm* ‘to roll up, to wrap up’. D. Cohen 1970— :129; Klein 1987:101. Proto-Semitic *gal-a3- ‘to wrap up, to twist together, to tie round’ > Arabic *ḡalaza* ‘to fold and wrap up; to twist firmly together; to tie round with the sinew of a camel’s neck; to extend, to stretch’, *ḡalz* ‘sinew of a camel’s neck for tying’. D. Cohen 1970— :122. Proto-Semitic *gal-al- ‘heap, pile, or circle of stones’ > Akkadian *galālu* ‘pebble’; Hebrew *gal* [גָּל] ‘heap or pile of stones’, *gālilōθ* [גָּלִילֹת] ‘circles of stones’, *gilgāl* [גִּלְגָּל] ‘(sacred) circle (of stones)’; Jewish Palestinian Aramaic *gālālā* ‘stone’; Syriac *gālā* ‘mound’; Palmyrene *gllʔ* ‘stone pillar, stele’. D. Cohen 1970— :126; Murtonen 1989:134; Klein 1987:99. Egyptian *d3d3w* (‘round object’ >) ‘pot’; Coptic *ḡō* [xω] ‘cup’. Hannig 1995:997; Faulkner 1962:320; Erman—Grapow 1921:219 and 1926—1963.5:532; Gardiner 1957:603 Vycichl 1983:324; Černý 1976:311. Berber: Tuareg *gəlallət* ‘to be round’. Central Chadic: Logone *ngolō*

- ‘round’ (prefix **nV*-). Orël—Stolbova 1995:214, no. 948, **gol*- ‘to be round, to go round’, 221, no. 980, **gulul*- ‘ball’; Ehret 1995:191, no. 301, **g^wil*- ‘to bend, to turn (intr.)’; Militarëv 2012:91 Proto-Afrasian **g^wVIV*-.
- B. Dravidian: Tamil *kulukai* ‘circular earthen bin for storing grain’; Malayalam *kulukka* ‘receptacle of rice, made of bamboo mats or twigs’; Konda *kolki* ‘a big basket for storing grain, kept on a terrace below the roof’; Kuwi *kolki* ‘receptacle for storing paddy’. Burrow—Emeneau 1984:163, no. 1805.
- C. Proto-Kartvelian **gwel*-/**gw*_L- ‘to curve, to bend’: Georgian [*γul*-/*γvl*-] ‘to curve, to bend’; Mingrelian [*γul*-] ‘to curve, to bend’; Laz [*γul*-] ‘to curve, to bend’; Svan [*γul*-] ‘to curve, to bend’. Klimov 1998:226 **γwel*- : **γwl*- ‘to curve; to bend’ — according to Klimov, this “verb stem may be extracted from numerous derivatives”; Fähnrich—Sardschweladse 1995:403—404 **γun*-/**γul*-; Fähnrich 2007:500 **γul*-. Proto-Kartvelian **gw*_L- ‘bent, curved’: Georgian *γul*- (Old Georgian *mγul*-) ‘kind of sickle’; Mingrelian *γula*- ‘bent, crooked’; Laz *γul(a)*- ‘crooked, squint’, *tol**i*-*γula*- ‘squint-eyed’. Klimov notes that it is unclear whether Svan *γulaj* ‘knee’ belongs here. Klimov 1998:227 **γwl*- ‘bent, curved’. Proto-Kartvelian **gw*_L-*az*- ‘to twist, to twine, to bend’: Georgian *γvlaz*- ‘to twist, to twine, to bend’; Mingrelian *γuloz*- ‘to twist, to twine, to bend’. Klimov 1998:228 **γwl*-*az*- ‘to get crooked; to bend’. Proto-Kartvelian **gw*_L-*arž*- ‘to twist, to twine, to bend’: Georgian *gularč*-*n*- ‘to twist, to twine, to bend’ (Old Georgian past participle *γularč*-*n*-*il*- ~ *gularžn*-*il*- ‘crooked, bent’); Svan *γurža*-*n*- ‘to twist, to twine, to bend’. Klimov 1998:228 **γwl*-*arž*_L- ‘to get crooked; to bend’. Proto-Kartvelian **gw*_L-*arč*- ‘to twist, to roll’: Georgian *γvlarč*-*n*- ‘to twist, to roll’; Mingrelian *γuloc*-*k*- ‘to twist, to roll’. Klimov 1998:228 **γwl*-*arč*- ‘to twist, to roll’. Proto-Kartvelian **gw*_L-*ek*-/**gw*_L-*ik*- ‘to twist, to twine, to curve, to bend’: Georgian [*γvlek*-] ‘to twist, to twine, to curve, to bend’, *xvlik*- (< **γwlik*-) ‘lizard’; Mingrelian [*γlik*-] ‘to twist, to twine, to curve, to bend’; Laz [*γvelik*-, *γlik*-] ‘to twist, to twine, to curve, to bend’. Klimov 1998:228 **γwl*-*ek*-/**γwl*-*ik*- ‘to get crooked, to get curved’. Proto-Kartvelian **gw*_L-*erč*- ‘earthworm’: Georgian *γvle(r)č*- ‘spiral rod’ (dialectal also *γvlenč*-); Mingrelian *γve(r)č*-*k*-, *γve(n)č*-*k*- ‘earthworm’; Svan *γwäsq* ‘earthworm’. Klimov 1998:229 **γwl*-*erč*- ‘earthworm’ — according to Klimov, “[t]he Georgian lexeme underwent a semantic shift”.
- D. Proto-Indo-European **g^whal-k^h*- ‘(vb.) to curve, to bend, to twist, to turn; (n.) curved object: sickle’: Latin *falx* ‘a sickle, bill-hook, pruning-hook; a sickle-shaped implement of war, used for tearing down stockades’, *flectō* ‘to bend; to alter the shape of, to bow, to twist, to curve; to change, to alter, to influence; to turn round in a circle’; (?) Greek φάλκx ‘rib (of a ship)’. Mann 1984—1987:378 **gyhalk*- (?) ‘sickle; sickle-shaped claw’; Boisacq 1950:1012; Beekes 2010.II:1549; Chantraine 1968—1980.II:1174—1175; Frisk 1970—1973.II:986—987; De Vaan 2008:200 borrowing?; Ernout—

Meillet 1979:214 and 239—240; Walde—Hofmann 1965—1972.I:449—450 and I:514—515.

- E. Chukchi-Kamchatkan: Proto-Chukotian **yælmə-* ‘(to be) crooked or winding’ > Chukchi *yelmə-*, *welmə-* ‘to be crooked, to twist (road)’; Kerek *walmə-* ‘to bend’; Koryak *yalməŋ* ‘crooked’, *yelīmə-tku-* ‘to twist (road)’; Alyutor *yalmə-* ‘crooked’. Fortescue 2005:83.

Buck 1949:8.33 sickle; scythe; 10.76 wheel; 12.74 crooked; 12.81 round (adj.); 12.82 circle; 12.83 sphere.

599. Proto-Nostratic (n.) **G^wal-a* ‘head, skull’:

Derivative of:

(vb.) **G^wal-* ‘to curve, to bend, to roll; to be round’;

(n.) **G^wal-a* ‘round object: circle, globe, sphere, ball, etc.’

- A. Proto-Afrasian **G^wal-* ‘head, skull’, (reduplicated) **G^wal-G^wal-*: Proto-Semitic (reduplicated) **gul-gul-* ‘skull’ > Akkadian *gulgullu*, *gulgullatu* ‘skull; container shaped like a human skull’; Biblical Hebrew *gulgōlēθ* [גֻּלְגֻלֵּית] ‘skull, head, poll (person)’; Jewish Palestinian Aramaic *gōgaltā*, *gūlgūltā* ‘skull’. D. Cohen 1970— :118; Murtonen 1989:134; Klein 1987:99. Egyptian *ḡḡ* [**ḡḡ*] (< **gal-gal*) ‘head’; Coptic ḡḡ [xwx] ‘head’. Faulkner 1962:319; Erman—Grapow 1921:218 and 1926—1963.5:530—531; Gardiner 1957:603; Hannig 1995:997 and 2006:2824; Vycichl 1983:334 — according to Vycichl, Egyptian *ḡḡ* ‘head’ may ultimately be related to *ḡḡw* ‘pot’ (see above); Černý 1976:310—311. East Chadic: Kwang *gólò*, *góló* ‘head’. Central Chadic: Muktele *gəl* ‘head’. Jungraithmayr—Ibriszimow 1994.II:183. Takács 2011a:42.

Comment: Militarëv—Kogan (2000.I:74—75, no. 79) reconstruct Proto-Semitic (n.) **ga/ulga/ul-at-* ‘skull’. They do not list any non-Semitic cognates.

- B. Proto-Indo-European **g^whal-* ‘head’: Armenian *glux* ‘head’; Lithuanian *galvā* ‘head’ (gen. sg. *galvōs*); Latvian *galva* (gen. sg. *galvas*) ‘head’; Old Prussian *gallū* (gen. sg. *galwas*) ‘head’; Old Church Slavonic *glava* ‘head’; Serbo-Croatian *gláva* ‘head’; Russian *golová* [голова] ‘head’; Czech *hlava* ‘head’; Polish *głowa* ‘head’. Pokorny 1959:349—350 **gal-* ‘bald, naked’; Walde 1927—1932.I:537—538 **gal-*; Mann 1984—1987:1615 **galuā* ‘head’; Mallory—Adams 1997:45 **g(h)olh_{xu}-éh_a-* ‘bald-plate’; Fraenkel 1962—1965.I:131—132; Smoczyński 2007.1:154—155; Derksen 2008: 176 **golH-u-eh₂* and 2015:162—163 **golH-ueh₂-*; Preobrazhensky 1951:139—140 Indo-European root **ghōl-* (with suffix **-uā* [cf. Brugmann—Delbrück 1897—1916.II/1:208]). Note: Not related to words for ‘bald, bare, naked’ (Proto-Nostratic **k’alv-* [~ **k’əlv-*] ‘[adj.] bald, bare; [n.] bald spot’).

Buck 1949:4.20 head; 4.202 skull. Illič-Svityč 1971—1984.I:237—238, no. 94, **gUł* ‘round, sphere’; Dolgopolsky 2008, no. 613, **goLu* (or **goyVLu* ?) ‘skull’ (→ in descendant languages: ‘sphere, ball’).

22.31. PROTO-NOSTRATIC *q'w

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
q'w-	q'w- (?)	k-	q'w/u-	k'w-	k-	k-	k- q-
-q'w-	-q'w- (?)	-k(k)-	-q'w/u-	-k'w-	-k-	-k-	-k- -q-

600. Proto-Nostratic root *q'wad- (~ *q'wəd-):

(vb.) *q'wad- 'to abide, to dwell; to relax, to rest, to be or become calm';

(n.) *q'wad-a 'dwelling, abode, house'

- A. Dravidian: Tamil *kuṭi* 'house, abode, home, family, lineage, town, tenants', *kuṭikai* 'hut made of leaves, temple', *kuṭical* 'hut', *kuṭicai*, *kuṭiṇai* 'small hut, cottage', *kuṭimai* 'family, lineage, allegiance (as of subjects to their sovereign), servitude', *kuṭiy-āl* 'tenant', *kuṭiyilār* 'tenants', *kuṭil* 'hut, shed, abode', *kuṭaṅkar* 'hut, cottage'; Malayalam *kuṭi* 'house, hut, family, wife, tribe', *kuṭima* 'the body of landholders, tenantry', *kuṭiyan* 'slaves', *kuṭiyan* 'inhabitant, subject, tenant', *kuṭiṇṇil* 'hut, thatch', *kuṭil* 'hut, outhouse near palace for menials'; Kannada *guḍi* 'house, temple', *guḍil*, *guḍalu*, *guḍisalu*, *guḍasalu*, *guḍasala* 'hut with a thatched roof'; Koḍagu *kuḍi* 'family of servants living in one hut'; Tuḷu *guḍi* 'small pagoda or shrine', *guḍisalu*, *guḍisilyu*, *guḍsilyu*, *guḍicilyu* 'hut, shed'; Telugu *koṭika* 'hamlet', *guḍi* 'temple', *guḍise* 'hut, cottage, hovel'; Kolami *guḍi* 'temple'; Parji *guḍi* 'temple, village, resthouse'; Gadba (Ollari) *guḍi* 'temple'; Kui *guḍi* 'central room of house, living room'. Burrow—Emeneau 1984:151—152, no. 1655. (Note: According to Mayrhofer 1956—1980.I:222, Sanskrit *kuṭi-h* 'cottage, hut' and several similar forms are Dravidian loans.)
- B. Proto-Kartvelian *q'wed- 'house': Georgian [*q'ude-*] 'house' in: *q'ud-r-o* 'calm, quiet, tranquil', *sa-q'ud-el-* 'cloister, refuge', *kva-q'ude-* 'stone house', *da-q'ud-eb-a* 'to become calm, quiet, tranquil'; Mingrelian *q'ude-* 'house'; Svan *q'wed-i* 'calm, quiet, tranquil'. Fähnrich 2007:513 **q'wed-*; Fähnrich—Sardshweladse 1995:412 **q'wed-*; Klimov 1998:245—246 **q'ud-e* 'house'.
- C. (?) Uralic: Proto-Finno-Ugrian **kota* 'tent, hut, house' > Finnish *kota* 'Lapp hut', *koti*, *koto* 'home'; Estonian *koda* 'house', *kodu* 'home'; Lapp / Saami *goatte/goaḍe-* 'tent, hut'; Mordvin *kudo*, *kud* 'house'; Cheremis / Mari *kudo* 'house'; Votyak / Udmurt *kwa*, *kwala* 'summer hut'; Ostyak / Xanty *kat* 'house'; Hungarian *ház* 'house, residence, abode, home'. Collinder 1955:130—131 and 1977:142; Rédei 1986—1988:190 **kota*; Joki 1973:272—273 **kota*; Sammallahti 1988:543 **kotâ* 'house, hut'. These forms may be Indo-Iranian loans.

Sumerian *gùd* ‘home; family; nest’.

Buck 1949:7.12 house; 7.13 hut. Hakola 2000:78, no. 318, **kot* ‘teepee’;
Dolgopolsky 2008, no. 1907, **qūd[i]* ‘house, hut’.

601. Proto-Nostratic root **q^wal-* (~ **q^wəl-*):

(vb.) **q^wal-* ‘to call (out), to cry (out), to shout’;

(n.) **q^wal-a* ‘call, cry, outcry, sound, noise, hubbub, uproar’

- A. Proto-Afrasian **q^wal-* ‘to call (out), to cry (out), to shout’: Proto-Semitic **k^wa/wa/l-* ‘to speak, to call, to cry’ > Hebrew *kōl* [כֹּל] ‘sound, voice’; Aramaic *kāl* ‘voice, echo, news’; Syriac *kālā* ‘to call, to cry out, to shout’; Phoenician *kl* ‘voice’; Ugaritic *kl* ‘voice’; Mandaic *kala* ‘voice’; Akkadian *kālu* ‘to speak, to call, to cry’, *kūlu* ‘speech’; Amorite *kwl* ‘to speak’; Arabic *kāla* ‘to speak, to say, to tell’, *kawl* ‘word, speech’; Sabaean *kwl* ‘speaker’; Mehri *kawl* ‘speech’; Geez / Ethiopic *kāl* [ቃል] ‘voice, word, saying, speech, statement, discourse, command, order, sound, noise, expression, maxim, thing’; Tigrinya *kal* ‘word’; Tigre *kal* ‘word’; Amharic *kal* ‘word’; Gurage *kal* ‘voice, thing’. Murtonen 1989:372; Zammit 2002:348; Klein 1987:565; Leslau 1979:474 and 1987:426. Proto-Southern Cushitic **k^wwalaʔ-*, **k^wwalaaʔ-* ‘to shout’ > Iraqw *kwalaʔ-/qwalaʔ-* ‘to be joyful, to be glad’, *qwalaʔ* ‘joy’; Ma’a -*kalá/-xalá* ‘to bark’, -*kaláʔe* ‘to shout’; K’wadza *k’waʔaliko* ‘voice’. Ehret 1980:268. East Chadic **kawal-* ‘to cry, to shout; to speak, to call’ > Kabalay *ye-kuwəla* ‘to cry, to shout’; Dangla *kole* ‘to speak, to call’; Lele *ya-kolo* ‘to cry, to shout’; Jegu *kol* ‘to speak, to call’; Birgit *kole* ‘to speak, to call’; Bidiya *kol* ‘to speak, to call’. Diakonoff 1992:24 **k^wəl* (> **k^wul*) ‘call, voice’; Orël—Stolbova 1995:335, no. 1541, **kal-/kawal-* ‘speak’; Ehret 1995:245, no. 442, **k^wal-* ‘to call’.
- B. Elamo-Dravidian: Middle Elamite *ku-la-a* ‘prayer, plea’, *ku-ul-la-* ‘to call out’, *ku-ul* ‘prayer, invocation’; Neo-Elamite *ku-la* ‘cry, plea’. Dravidian: Tamil *kulai* ‘to bark (as a dog), to talk incoherently’, *kulaippu* ‘barking, snarling’, *kulavai* ‘chorus of shrill sounds’; Malayalam *kulākulā* imitative of barking. Burrow—Emeneau 1984:163, no. 1811. Kannada *gullu* ‘loud noise, hubbub’; Telugu *gollu* ‘noise, hubbub, uproar’, *kolakola* ‘noise, tumult’, *golagola* ‘a confused noise’, *gōla* ‘loud noise or outcry’, *gulgu* ‘to grumble’; Tulu *gullu* ‘a great noise, shout, uproar’. Burrow—Emeneau 1984:163, no. 1813.
- C. Indo-European: Greek βλήχῃ (Doric βλᾱχῃ) (< **k^wl-ā-* < **k^wl-eA-* [**k^wl-aA-*]) ‘a bleating, the wailing of children’; Old High German *klaga* ‘cries of pain; complaint, lament, lamentation, grievance’ (New High German *Klage*). Boisacq 1950:123 βλ- < **g^wl-*; Beekes 2010.I:221; Kluge—Mitzka 1967:373; Kluge—Seebold 1989:373; Brugmann 1904:176 βλ- < **g^wl-*.
- D. Yukaghir (Southern / Kolyma) *qolil* ‘sound, noise, tinkling’, *qoliñi-* ‘to make a noise’, *qoli-čö:n* ‘noiselessly’. Nikolaeva 2006:384.

- E. Proto-Chukchi-Kamchatkan **quli-* ‘to cry or shout’: Chukchi *quli-*, *qole-nto-* ‘to shout’, (reduplicated) *quliqul* ‘voice, cry’, *e-quli-ke* ‘silently’; Kerek *quli-lraat-* ‘to shout’, *quliiXul* ‘song’; Koryak *qolejav-* ‘to sing’, (reduplicated) *quliqul* ‘song’; Alyutor (reduplicated) *quliqul* ‘song’, *qulijava-* ‘to sing’; Kamchadal / Itelmen *quli(qul)* ‘song’, *qolento-* ‘to sing’ (these may be loans from Chukotian). Fortescue 2005:241; Mudrak 1989b:105 **quli-* ‘voice, cry’.

Buck 1949:18.13 (18.14) shout, cry out; 18.21 speak, talk; 18.41 call (vb. = summon). Bomhard—Kerns 1994:487, no. 333; Dolgopolsky 2008, no. 1913, **qU[ʔ]V* ‘to speak, to call’.

602. Proto-Nostratic root **qʷal-* (~ **qʷəl-*):
 (vb.) **qʷal-* ‘to strike, to hit, to cut, to hurt, to wound, to slay, to kill’;
 (n.) **qʷal-a* ‘killing, murder, manslaughter, destruction, death’
 Probably identical to:
 (vb.) **qʷal-* ‘to throw, to hurl’;
 (n.) **qʷal-a* ‘sling, club; throwing, hurling’
- A. Proto-Afrasian **qʷal-* ‘to strike, to hit, to cut, to kill, to slaughter’: (?)
 Proto-Semitic **kʷa/ta/l-* ‘to kill, to slay’ > Akkadian *kaṭālu* ‘to kill, to slaughter’; Arabic *kaṭala* ‘to kill, to slay, to murder, to assassinate’, *kaṭal* ‘killing, murder, manslaughter, homicide, assassination’; Hebrew *kaṭal* [כָּטַל] (< **kaṭ-al-*, with *t* < *t* through assimilation to the preceding emphatic) ‘to slay, to kill’, *keṭel* [כֶּטֶל] ‘murder, slaughter’; Syriac *kaṭal* ‘to kill’ (Ancient Aramaic *ktl*); Sabaean *ktl* ‘to kill’; Geez / Ethiopic *kaṭala* [ቀተለ] ‘to kill, to put to death, to slay, to murder, to execute, to slaughter, to attack, to engage in battle, to combat, to fight, to wage war’; Tigrinya *kaṭälä* ‘to kill’; Tigre *kaṭla* ‘to kill’; Gurage *kaṭälä* ‘to kill’. Murtonen 1989:374; Klein 1987:575; Militarev 2011:78 Proto-Semitic **ktl*; Leslau 1979:508 and 1987:451—452; Zammit 2002:333. Proto-Semitic **kʷal-aṣ-* ‘to strike, to hit, to hew off, to cut off’ > Arabic *kaṭala* ‘to hit, to beat’; Geez / Ethiopic *kaṭallaza* [ቀለለ] ‘to amputate, to hew off, to cut off, to prune’, *kaṭälz* [ቀለዘ] ‘pruning’, *maṭwäz* [መቀለዘ], *maṭlaz* [መቀለዘ] ‘axe’, *maṭlaza* [መቀለዘ] ‘to hew, to carve’; Amharic *kaṭälläzä* ‘to prune, to cut off thorns’. Leslau 1987:431. Proto-Semitic **kʷal-am-* ‘to cut, to divide’ > Arabic *kaṭama* ‘to cut, to clip, to pare (nails, etc.), to prune, to trim, to lop (trees, etc.)’, *kaṭāma* ‘clippings, cuttings, parings, shavings, nail cuttings’; Geez / Ethiopic *maṭala* [መቀለ] ‘to divide’, *maṭlamt* [መቀለምት] ‘knife’; Tigrinya *maṭälä* ‘to divide’; Amharic *maṭlämt* ‘knife’; Tigre *maṭälmät* ‘knife’; Gurage *maṭwänt* ‘a kind of knife’. Leslau 1979:415 and 1987:354. Egyptian (Demotic) *qlh* ‘to knock, to strike’; Coptic *kōlh* [ⲕⲟⲗⲏ], *kolh* [ⲕⲟⲗⲏ] ‘to knock, to strike’, *klhe* [ⲕⲗⲏⲉ] ‘knock’. Vycichl 1983:80; Černý 1976:57. Proto-East Cushitic **kʷal-* ‘to slaughter’ > Galla / Oromo *kʷal-* ‘to

slaughter'; Somali *qal-* 'to slaughter'; Hadiyya *alaleess-* 'to slaughter'. Sasse 1979:49.

- B. Proto-Dravidian **kol-* 'to strike, to hit, to cut, to hurt, to wound, to slay, to kill': Dravidian: Tamil *kol* (*kolv-*, *konr-*) 'to kill, to murder, to destroy, to ruin, to fell, to reap, to afflict, to tease', *kolai* 'killing, murder, vexation, teasing'; Malayalam *kolluka* 'to kill, to murder', *kollika* 'to make to kill', *kolli* 'killing', *kula* 'killing, murder'; Kota *kol* 'act of killing'; Toda *kwaly* 'murder'; Kannaḍa *kol*, *kollu*, *kolu* (*kond-*) 'to kill, to murder', *kole* 'killing, murder, slaughter', *kolluvike* 'killing'; Koḍagu *koll-* (*kolluv-*, *kond-*) 'to kill'; Tuḷu *kolè* 'murder'; Telugu *kollu* 'to kill', *kola* 'sin; murder, holocaust, enmity'; Brahui *xalling* 'to strike, to kill, to fire (a gun), to throw (stone)'. Burrow—Emeneau 1984:192, no. 2132; Krishnamurti 2003:118 **kol-* 'to kill'. Tamil *kol* (*kolv-*, *konr-*) 'to strike, to hurt', *kōl* 'killing, murder'; Malayalam *kolka* (*konr-*) 'to hit, to take effect, to come in contact', *kollikka* 'to hit', *kōl* 'hitting, wound, damage'; Kota *kol-/kon-* (*koḍ-*) 'to pain, to trouble'; Toda *kwiḷ-* (*kwiḍ-*) 'to quarrel'; Tuḷu *konpini* 'to hit', *kolpuni*, *kolpuni* 'to come into collision'; Telugu *konu* 'to be pierced (as by an arrow)'; Kolami *go-l-* (*godḍ-*) 'to beat, to shoot with a bow'. Burrow—Emeneau 1984:194, no. 2152.
- C. Proto-Kartvelian **q^wwal-* 'to slay, to kill': Georgian *k'al-/k'l-* (< **k^wwal-* < **q^wwal-*) 'to kill'; Mingrelian *ʔvil-* 'to kill'; Laz *q^wvil-*, *ʔvil-*, *ʔil-* 'to kill'. Schmidt 1962:70, 71, and 119.
- D. Proto-Indo-European **k^wel-/k^wol-/k^wl-* 'to strike, to hit, to cut, to hurt, to wound, to slay, to kill': Old Icelandic *kvelja* 'to torment, to torture', *kvöl* 'torment, torture'; Faroese *kvøl* 'torment, torture'; Norwegian *kvelja* 'to torment, to torture'; Swedish *kvälja* 'to torment, to torture', *kval* 'torment, torture'; Danish *kvæle* 'to torment, to torture', *kval* 'torment, torture'; Old English *cwelan* 'to die', *cwellan* 'to kill', *cwealm* 'killing, murder; death, mortality; pestilence, plague; pain, torment', *cwiæld* 'destruction, death', *cwielman* 'to kill, to torment, to oppress', *cwalu* 'killing, violent death, destruction'; Old Saxon *quāla* 'torture, torment, agony, pain', *quelan* 'to die', *quellian* 'to torture, to kill'; Middle Dutch *quelen* 'to be ill, to suffer'; Dutch *kwellen* 'to vex, to tease, to torment'; *kwaal* 'complaint, disease'; Old High German *quellan* 'to kill' (New High German *quälen* 'to torture, to torment'), *quelan* 'to die', *quāla* 'torture, torment, agony, pain' (New High German *Qual*); Welsh *ballu* 'to die'; Lithuanian *gelūi*, *gėlti* 'to sting, to ache', *gėlà* 'torture'; Old Prussian *gallan* 'death'; Armenian *kelem* 'to torture'. Rix 1998a:185 **g^welH-* 'to torment, to torture, to stab'; Pokorny 1959:470—471 **g^wel-* 'to stab'; Walde 1927—1932.I:689—690 **g^wel-*; Mann 1984—1987:354 **g^wel-* 'pain, sorrow', 355 **g^wēleḡō* 'to hurt, to harm', 363 **g^wulḡō* (**g^wul-*) 'to strike, to cast, to hurt, to beat down', 366 **g^wolḡō* 'to fell, to lay low'; Watkins 1985:24 **g^wel-* and 2000:34 **g^welā-* (also **g^wel-*) 'to pierce'; Mallory—Adams 1997:324—345 **g^wel-* 'to sting, to pierce' and 549 **g^wel-* 'to strike, to stab'; Orël 2003:227 Proto-

Germanic **kwaljanan*, 227 **kwelanan*; Kroonen 2013:315 Proto-Germanic **kwaljan-* ‘to make suffer; pain’, 315 **kwalō-* ‘torment’, 316 **kwelan-* ‘to suffer’, and 316 **kwelō-* ‘agony’; De Vries 1977:337 and 339; Falk—Torp 1903—1906.I:428 and I:434; Torp 1919:345; Onions 1966:505, 729, and 731; Klein 1971:402, 608, and 609; Kluge—Mitzka 1967:572 **g^uel-*; Kluge—Seebold 1989:573; Derksen 2015:167—168 and 170 **g^welH-*; Smoczyński 2007.1:168 **g^uelH-*; Fraenkel 1962—1965.I:145—146.

- E. Proto-Uralic **kola-* ‘to die’: Finnish *kuole-* ‘to die’; Estonian *koole-* ‘to die’; Mordvin *kulo-* ‘to die’; Cheremis / Mari *kole-* ‘to die’; Votyak / Udmurt *kul-* ‘to die’; Zyrian / Komi *kul-* ‘to die’; Vogul / Mansi *hool-* ‘to die’; Ostyak / Xanty *kāl-* ‘to die’; Hungarian *hal-/hol-* ‘to die’; Yurak Samoyed / Nenets *haa-* ‘to die’; Tavgi Samoyed / Nganasan *ku-* ‘to die’; Yenisei Samoyed / Enets *kaa-* ‘to die’; Selkup Samoyed *qu-* ‘to die’; Kamassian *kū-* ‘to die’. Collinder 1955:28, 1965:139—140, and 1977:48; Rédei 1986—1988:173 **kola-*; Décsy 1990:100 **kola* ‘to die’. Yukaghir (Northern / Tundra) *qoolew-*, *quolew-* ‘to kill’. Nikolaeva 2006:384.

Sumerian *gul* ‘to destroy’.

Buck 1949:4.75 die; dead; death; 4.76 kill. Bomhard—Kerns 1994:510—512, no. 359; Illič-Svityč 1965:370 **qo(H)la*; Caldwell 1913:618; Hakola 2000:82, no. 339, and 2003:52, no. 161; Dolgopolsky 2008, no. 1911, **qola* ‘to kill’.

603. Proto-Nostratic root **q^wal-* (~ **q^wəl-*):

(vb.) **q^wal-* ‘to throw, to hurl’;

(n.) **q^wal-a* ‘sling, club; throwing, hurling’

Probably identical to:

(vb.) **q^wal-* ‘to strike, to hit, to cut, to hurt, to wound, to slay, to kill’;

(n.) **q^wal-a* ‘killing, murder, manslaughter, destruction, death’

- A. Proto-Afrasian **q^wal-* ‘to throw, to hurl’: Proto-Semitic **k^ʾal-aṣ-* ‘to throw, to hurl’ > Hebrew *kāla^ʿ* [כָּלָא] ‘to sling, to hurl forth’, *kela^ʿ* [כֶּלָא] ‘sling’; Syriac *kāl^ʿā* ‘sling’; Ugaritic *kl^ʿ* ‘sling’; Arabic *miklā^ʿ* ‘slingshot, sling, catapult’; Geez / Ethiopic *kal^ʿa* [ቀለዓ] ‘to throw from a sling, to hit a ball’, *maklō^ʿ* [መቀለዕ] ‘sling, club’; Tigrinya *kāl^ʿe* ‘to hit a ball with a stick’; Amharic *källa* ‘to decapitate’. Murtonen 1989:377—378; Klein 1987:581; Leslau 1987:426; Zammit 2002:344.
- B. Proto-Kartvelian **q^wil-* ‘shoulder bone, shoulder blade; arm’: Georgian *q^ʷil-iv-i* ‘shoulder blade’; Mingrelian *ʷil-e* ‘bone, arm’; Laz *q^ʷil-i*, *ʷil-i* ‘bone’. Klimov 1964:211—212 **q^wil-iw-* and 1998:242 **q^wil-iw-*; Schmidt 1962:141; Fähnrich—Sardshweladse 1995:415 **q^wil-*; Fähnrich 2007:516 **q^wil-*.
- C. Proto-Indo-European **k^wel-/k^wol-/k^wl-* ‘to throw, to hurl’: Greek βάλλω (Arcadian -δέλλω) ‘to throw’, βλήμα ‘a throw, cast (of dice)’, βολή

‘a throw, the stroke or wound of a missile’, βόλος ‘a throw with a casting-net, a cast (of a net)’, βολίς ‘a javelin; a cast of the dice, a die’; Welsh *blif* ‘catapult’. Rix 1998a:185—186 **g^uelh₁*- ‘to throw, to hurl’; Pokorny 1959:471—472 **g^uel*-, **g^uelə*-, **g^ulē*- ‘to throw, to hurl’; Walde 1927—1932.I:690—692 **g^uel*-, **g^uelē(i)*-; Mann 1984—1987:355 **g^uelō*, -*iō* ‘to hurl, to fling’, 363 **g^uliō* (**g^uəl*-) ‘to strike, to cast, to hurl, to beat down’; Watkins 1985:25 **g^welə*- and 2000:34 **g^welə*- ‘to throw, to reach’; Mallory—Adams 1997:591—582 **g^welh₁*- ‘to throw’; Boisacq 1950:114 Greek βάλλω < **g^uliō* (root **g^uel*-, stem **g^uelē*-); Hofmann 1966:32 **g^uliō*; Frisk 1970—1973.I:215—217; Chantraine 1968—1980.I:161—163 **g^welə₂*-, **g^wleə₂*-, Beekes 2010.I:197—198 **g^welh₁*-.

Buck 1949:10.25 throw (vb.). Bomhard—Kerns 1994:512, no. 360.

604. Proto-Nostratic (n.) **q^war-a* ‘edge, point, tip, peak’:

- A. Proto-Afrasian **q^war*- ‘highest point, top, peak, summit, hill, mountain, horn’: Proto-Semitic **k’arn*- ‘horn, summit, peak’ > Akkadian *ḫarnu* ‘horn’; Ugaritic *ḫrn* ‘horn’; Hebrew *ḫeren* [ḫṛn] ‘horn; corner, point, peak’; Phoenician *ḫrn* ‘horn’; Aramaic *ḫarnā* ‘horn’; Palmyrene *ḫrn* ‘horn, corner’; Arabic *ḫarn* ‘horn, top, summit, peak (of a mountain)’, *ḫurna* ‘salient angle, nook, corner’; Harsūsi *ḫōn/ḫerōn* ‘horn, hill, top’, *ḫernēt* ‘corner’; Mehri *ḫōn/ḫarūn* ‘horn, peak, spur; tall narrow-based hill; hilt of a dagger; pod (of beans)’, *ḫarnēt* ‘corner’; Šheri / Jibbāli *ḫun/ḫérūn* ‘horn, hilt of a dagger, pod, peak’; Geez / Ethiopic *ḫarn* [ḫCṛ] ‘horn, trumpet, tip, point’; Tigre *ḫār*, *ḫärn* ‘horn’; Tigrinya *ḫärni* ‘horn’; Harari *ḫār* ‘horn’; Gurage *ḫār* ‘horn’; Amharic *känd* (< **k’arn*-) ‘horn’; Argobba *känd* ‘horn’. Murtonen 1989:387; Klein 1987:595; Diakonoff 1992:85 Proto-Semitic **q^rn*- ‘horn’; Militarëv 2008:200 and 2011:77 Proto-Semitic **kar-n*-; Leslau 1963:128, 1979:494, and 1987:442; Zammit 2002:338. Geez / Ethiopic *ḫardu* [ḫCṛ] ‘hill’. Leslau 1987:440. Egyptian *qṣ* (> **q^rr*) ‘hill, high ground, high place’, *qṣqṣ* ‘hill, high place’, *qṣy-t* ‘high ground, arable land’, *qṣ-t* ‘high land, height’, *qṣy-t* ‘high ground, arable land’, *qṣ*, *qṣy* ‘to be high, exalted’, *qṣi* ‘tall, high, exalted’, *qṣw* ‘height’; Coptic (Sahidic), *koie* [koie], *koeie* [koeie], (Bohairic) *koi* [koi] (< **qy* < **qṣy*) ‘field’, *kro* [kpo] (Demotic *qr* ‘shore’, *qrr* ‘embankment’) ‘shore (of sea, river), limit or margin (of land), hill, dale’. Hannig 1995:847, 847—848, 848 and 2006:2503—2505, 2505, 2505—2506, 2506; Faulkner 1962:275; Erman—Grapow 1921:188 and 1926—1963.5:1—3, 5:5, 5:6; Gardiner 1957:596; Černý 1976:51 and 61; Vycichl 1983:73 and 85. Proto-East Cushitic **k’ar*- ‘point, peak, top’ > Galla / Oromo *k’arree* ‘peak’; Somali *qar* ‘hill higher than *kur*’; Gedeo / Darasa *k’ar*- ‘to sharpen’, *k’ara* ‘sharp (of knife)’, (reduplicated) *k’ark’arā* ‘edge, blade’; Burji *c’ar-i* ‘point, top, peak, pointedness’ (loan, probably from Oromo); Hadiyya *k’ar-ess*- ‘to whet’,

k'areʔalla ‘edge, blade’, *k'ar-eeš-aanco* ‘whetstone, rasp, file’; Sidamo *k'ara* ‘point, edge, blade’. Sasse 1979:48 and 1982:46; Hudson 1989:55, 114, and 131—132. Omotic: Gonga **k'ar-* ‘horn’ (Mocha *qáro* ‘horn’); Aari *k'ari* ‘tusk’, *k'armi* ‘sharp’. [Orël—Stolbova 1995:337, no. 1549, **kar-* ‘horn’; Ehret 1995:238, no. 424, **k'ar-* ‘horn; point, peak’; Militarëv 2011:77 Proto-Afrasian **kar(-n)-*.]

Comment: Militarëv—Kogan (2000.I:151—152, no. 168) reconstruct Proto-Semitic (n.) **karn-* ‘horn’. They do not list any non-Semitic cognates. They note: “Possibly < **kar-n-*, cf. Tgr. *kār* with no traces of the lost **-n* and similar forms in S.-E., Eth., Gur. and especially in Arg.”

- B. Dravidian: Tamil *kuṛam* ‘Kurava tribe’, *kuṛiñci* ‘hilly tract’, *kuṛicci* ‘village in the hilly tract, village’, *kuṛavāṇar* ‘the Kurava tribe of the mountain’; Malayalam *kuṛavan* ‘wandering tribe of basket-makers, snake-catchers, and gypsies’, *kuṛumpan* ‘shepherd, caste of mountaineers in Wayanāḍu’, *kuṛicci* ‘hill country’, *kuṛicciyan* ‘a hill tribe’; Toda *kurb* ‘man of Kurumba tribe living in the Nilgiri jungles’, *kuṛumba* ‘a caste of mountaineers’; Telugu *korava* name of a tribe of mountaineers. Burrow—Emeneau 1984:166—167, no. 1844.
- C. Proto-Kartvelian **q'ur-* ‘edge’: Georgian *q'ur-e* ‘(dead-)end, edge’, *q'urimal-* ‘cheek’; Mingrelian *ʔur-e* ‘edge, border, side’. Schmidt 1962:141; Klimov 1964:213—214 **qur-* and 1998:246 **qur-* ‘ear’.
- D. Proto-Indo-European **k'wer-/k'wor-/k'w̥r-* ‘hill, mountain, peak’: Greek *δεῖπας* (Cretan *δηπάς*) (probably < **deṛpF-αδ-*) ‘the ridge of a chain of hills’; Sanskrit *giri-h* ‘mountain, hill, rock’; Avestan *gairi-* ‘mountain’; Albanian *gur* ‘rock’; Lithuanian *girė*, *girià* ‘forest’; Old Church Slavic *gora* ‘mountain’; Russian *gorá* [ropa] ‘mountain’; Serbo-Croatian *gòra* ‘mountain’; Hittite (acc. sg.) *gur-ta-an* ‘citadel’, *Kuriwanda* the name of a mountain in southwestern Anatolia. Pokorny 1959:477 **g^uer-*, **g^uor-* ‘mountain’; Walde 1927—1932.I:682 **g^uer-* (**g^uorā*, **g^uerī*); Watkins 1985:25 **g^werə-* and 2000:34 **g^werə-* ‘mountain’ (oldest form: **g^wer₂-*); Mann 1984—1987:374 **g^uris*, *-os*, *-us*, *-iə* ‘wooded hilltop, hill, wood’; Mallory—Adams 1997:270 **g^worh_x-*, **g^wrh_x-* ‘mountain; mountain forest’; Mayrhofer 1956—1980.I:335; Boisacq 1950:171 **g^uerjo-*; Beekes 2010.I:310—311; Frisk 1970—1973.I:358 *δεῖπας* < **deṛpás*, related to Sanskrit *dr̥śád-* ‘rock, large stone, mill-stone’ (but not according to Mayrhofer 1956—1980.II:61, who notes that the form *dhr̥śát*, with initial voiced aspirate, is found in the Rig Veda); Chantraine 1968—1980.I:258; Hofmann 1966:54 **g^uerjo-*; Kimball 1999:250 **g^wrtó-* : **g^wer-* : **g^wrh-* ‘mountain, height’; Kloekhorst 2008b:495; Puhvel 1984— .4:275—276 Hittite *gurta-* < **gher-dh-* ‘to enclose’; Bomhard 1976:220; Orël 1998:127; Derksen 2008:177—178 **g^wrH-* and 2015:178 **g^wrH-*; Fraenkel 1962—1965.I:153; Smoczyński 2007.1:182—183 **g^urh-i-*.

- E. (?) Altaic: Mongolian *qorya* ‘fort, fortress; shelter, enclosure’; Old Turkic *quryan* ‘castle, fortress’. Poppe 1960:88; Street 1974:88 **kurgan* ‘a fortification’.

(?) Sumerian *gur₅-ru*, *gur₅-uš* ‘forest’ (represented by the sign for a hair-covered head). For the semantics, note Lithuanian *gìrė*, *girià* ‘forest’, cited above. Note also Old Icelandic *skógr* ‘woods, forest’ from the same stem found in *skaga* ‘to jut out, to project’, *skagi* ‘a low cape or ness’, *skegg* ‘beard’ (cf. De Vries 1977:480, 487, and 497).

Buck 1949:1.22 mountain, hill; 1.41 woods, forest; 4.17 horn; 12.35 end; 12.353 edge; 12.36 side; 12.76 corner. Bomhard—Kerns 1994:514—516, no. 363. Note: Though similar in form and meaning, there is absolutely no justification whatsoever for the often-repeated comparison of the Afrasian forms cited above with Latin *cornū* ‘horn’, Gothic *haur̥n* ‘horn’, and related forms within Indo-European (as in, for example, Dolgopolsky 2008, no. 1130, Proto-Nostratic **kæRV* (or **kERV*) ‘horn’) — Proto-Afrasian **k* [= **k*'] does not correspond to Proto-Indo-European **k* [= **k^h*].

605. Proto-Nostratic root **q^war-* (~ **q^wər-*) or **q^wur-* (~ **q^wor-*):

(vb.) **q^war-* or **q^wur-* ‘to call out, to cry out’;

(n.) **q^war-a* or **q^wur-a* ‘call, cry, shout’

- A. Afrasian: Semitic: Arabic *ḵaraḵa* ‘to praise, to commend, to laud, to extol, to acclaim’.
- B. Dravidian: Tamil *kūru* (*kūri-*) ‘to speak, to assert, to cry out the price, to cry aloud, to proclaim’, *kūrram* ‘word’, *kūrru* ‘proclamation, utterance, word’; Malayalam *kūruka* ‘to speak, to proclaim’, *kūrru* ‘call, cry of men, noise’, *kūrram* ‘cry (as for help)’; Kannada *gūr̥nisu*, *gūrmisu* ‘to murmur or roar (as water of a river or the sea), to sound (as a trumpet), to roar or bellow, to cry aloud’; Telugu *ghūr̥ṇillu* ‘to sound, to resound’ (*gh-* is from Sanskrit *ghūr̥ṇ-* ‘to move to and fro’ [> Telugu *ghūr̥ṇillu* ‘to whirl, to turn around’]); Tuḷu *gūruni* ‘to hoot’. Burrow—Emeneau 1984:174, no. 1921.
- C. Proto-Kartvelian **q^wur-* ‘to howl (of wolves, dogs)’: Georgian *q^wur-* in *q^wurq^wul-* (< **q^wur-q^wur-*) ‘howling (of wolves, dogs)’; Mingrelian *ʔur-* ‘to howl (of wolves, dogs)’; Laz (*q^w)ur-*, *q^wu(r)-* ‘to cry, to be angry’. Schmidt 1962:141; Fähnrich—Sardshweladse 1995:420 **qur-*; Fähnrich 2007:521 **qur-*; Klimov 1964:211 **qwir-* ‘to cry (out), to shout’ (Georgian *q^wir-* ‘to cry out, to shout’) and 1998:246 **qur-* ‘to howl (of wolves, dogs)’.
- D. Proto-Indo-European **k^wer-/k^wor-/k^wṛ-* ‘to make a sound, to call, to call out, to praise’: Sanskrit *gr̥ṇāti* ‘to call, to call out, to invoke, to praise, to extol’, *gr̥* ‘words, speech, voice, language, invocation, praise, verse’, *gurāte* ‘to salute’, *gūr̥ti-h* ‘approval, praise’; Latin *grātus* ‘pleasing, welcome, agreeable’, *grātēs* ‘thanks, gratitude’; Old High German *queran*

‘to sigh’ (New High German *quarren*); Lithuanian *giriù*, *girti* ‘to praise, to commend’. Rix 1998a:188—189 **g^uerH-* ‘to extol, to praise, to honor’; Pokorny 1959:478 **g^uer(ə)-* ‘to raise one’s voice’; Walde 1927—1932.I:686—687 **g^uer(ā^x)-*; Mann 1984—1987:373 **g^ur-* ‘appellation, song, praise; to revere, to sacrifice, to worship’, 374—375 **g^urjō* ‘to sing, to praise’, 375 **g^urksjō* (**g^urkskō*, **g^urskō*) ‘to call, to cry, to appeal’, 376 **g^urtos* ‘revered, favored, important’, **g^urtis* ‘reverence, favor, importance’; Watkins 1985:25 **g^werə-* ‘to praise (aloud)’ and 2000:34 **g^werə-* (oldest form: **g^wer₂-*; suffixed zero-grade form: **g^wr₂-to-*) ‘to favor’; Gamkrelidze—Ivanov 1984.I:205 **k[’]erH-/k[’]q[’]rH-* > **k[’]q[’]-* and 1995.I:177 **k[’]erH-/k[’]q[’]rH-* > **k[’]q[’]-* ‘to raise the voice’; Mallory—Adams 1997:449 **g^werh_x-* ‘to praise’; Mayrhofer 1956—1980.I:336, I:340, I:342, and I:343; De Vaan 2008:271—272 **g^wrH-to-*; Walde—Hofmann 1965—1972.I:619—620 **g^uer(ā^x)-*; Ernout—Meillet 1979:281—282; Kluge—Mitzka 1967:573; Kluge—Seebold 1989:574; Fraenkel 1962—1965.I:154; Smoczyński 2007.1:183—184 **g^urH-é-*; Derksen 2015:178—179 **g^wrH-*. Proto-Indo-European **k[’]werdh-/k[’]wordh-/k[’]w₂dh-* ‘to call out, to cry out’: Avestan (adj.) *gərəδō* ‘howling’; Armenian *kardam* ‘to call, to read out’. Pokorny 1959:478 **g^uer(ə)-* ‘to raise one’s voice’; Walde 1927—1932.I:686—687 **g^uer(ā^x)-*; Mann 1984—1987:373 **g^urdh-*; Watkins 1985:25 **g^werə-* ‘to praise (aloud)’ and 2000:34 **g^werə-* (oldest form: **g^wer₂-*) ‘to favor’.

Buck 1949:15.44 sound (sb.); 16.79 praise (sb.); 18.13 shout, cry out. Bomhard—Kerns 1994:516—517, no. 364; Dolgopolsky 2008, no. 1938, **qur[h]V* ‘to bark, to howl (of canines)’, ‘to cry, to shout’.

606. Proto-Nostratic root **q[’]war^y-* (~ **q[’]wər^y-*) or **q[’]wur^y-* (~ **q[’]wor^y-*):
 (vb.) **q[’]war^y-* or **q[’]wur^y-* ‘to hear’;
 (n.) **q[’]war^y-a* or **q[’]wur^y-a* ‘ear’

- A. Dravidian: Tamil *kuṛai* ‘earring, ear’; Malayalam *kuṛa* ‘earring, ear’; Kannada *kḍaṅgē* ‘earring’, *kuḍka*, *kuḍki* ‘female’s ear ornament’; Kolami *kuḍka* ‘earring in the upper ear’; Gondi *kuṛka* ‘earring’. Burrow—Emeneau 1984:165, no. 1823.
- B. Proto-Kartvelian **q[’]ur-* ‘ear’, **q[’]ur-u-* ‘deaf, dumb’: Georgian *q[’]ur-* ‘ear’, *q[’]ru-* ‘deaf’, *q[’]ruoba-* ‘silence’; Mingrelian *ᵑuḗ-* ‘ear’, *ᵑuru-* ‘dumb’; Laz *q[’]uḗ-* (-ḗ- < -r- [cf. Schmidt 1962:77]), *ᵑuḗ-*, *juḗ-*, *uḗ-* ‘ear’, *ᵑuḗ-* ‘to hear’, *q[’]uḗ-a* ‘deaf’. Klimov 1964:213—214 **q[’]ur-* and 1998:246 **q[’]ur-* ‘ear’, 247 **q[’]ur-u-* ‘deaf, dumb’; Fähnrich—Sardshweladse 1995:420 **q[’]ur-*; Fähnrich 2007:522 **q[’]ur-*; Schmidt 1962:141; Gamkrelidze—Ivanov 1984.II:898 Georgian-Zan **q[’]ur-i* and 1995.I:793 Georgian-Zan **q[’]ur-i* ‘ear’. Proto-Kartvelian **q[’]ur-c-* ‘ear of the needle’: Georgian *q[’]unc-* ‘ear of the needle; cutting’ (attested in Old Georgian in the secondary form *k[’]urc-*,

showing the change $q' > k'$); Mingrelian $q'urc$ - 'ear of the needle'. Klimov 1998:247 * qur - 'ear of the needle'; derivative of * $q'ur$ - 'ear' extended by the unproductive diminutive suffix *- c -.

- C. (?) Indo-European: Lithuanian $girdžiù$, $girdėti$ 'to hear', $girdà$ 'hearing'; Latvian $dzirdu$, $dzirdēt$ 'to hear'. Pokorny 1959:476 * $g^{u}er(ə)$ - 'to raise one's voice'; Walde 1927—1932.I:686—687 * $g^{u}er(ā)$ -; Mann 1984—1987:373 * $gurdh$ -; Fraenkel 1962—1965.I:153; Smoczyński 2007.I:182.

Buck 1949:4.22 ear; 15.41 hear; 15.43 hearing (sb.). Bomhard—Kerns 1994:516—517, no. 364; Dolgopolsky 2008, no. 1939, * $qUR[w]V$ (= * $qUr[w]V$?) 'ear'.

607. Proto-Nostratic root (Eurasianic only) * $q^{w}at^{v}h$ - (~ * $q^{w}ə^{v}h$ -):

(vb.) * $q^{w}at^{v}h$ - 'to say, to speak, to call';

(n.) * $q^{w}at^{v}h$ - a 'call, invocation, invitation, summons'

- A. Proto-Indo-European * $k^{w}et^{h}$ -/* $k^{w}ot^{h}$ - 'to say, to speak, to call': Armenian $kočem$ (< * $k^{w}ot^{h}$ - ye -) 'to call, to name'; Gothic $qīpan$ 'to say, to tell, to name, to speak'; Old Icelandic $kveða$ 'to say, to utter', $kveðja$ 'to call on, to summon', $kviðr$ 'verdict; inquest; saying, word'; Faroese $kvøða$ 'to say, to speak'; Norwegian $kveda$ 'to say, to speak'; Swedish $kväda$ 'to say, to speak'; Danish $kvæda$ 'to say, to speak'; Old English $cweþan$ 'to say, to speak', $cwide$ 'speech, saying, utterance, word, sentence, phrase, proverb, argument, proposal, discourse, homily'; Old Frisian $quetha$ 'to speak'; Old Saxon $quedan$ 'to speak'; Old High German $quedan$ 'to speak'. Rix 1998a:190 * $g^{u}et$ - 'to say, to speak, to talk'; Pokorny 1959:480—481 * $g^{u}et$ - 'to talk'; Walde 1927—1932.I:672 * $g^{u}et$ -; Mann 1984—1987:357—358 * $g^{u}etō$, - $iō$ 'to proclaim, to pronounce, to ban', 367 * $g^{u}ot$ - 'call, ban'; Watkins 1985:25 * $g^{w}et$ - and 2000:34 * $g^{w}et$ - 'to say, to speak'; Mallory—Adams 1997:535 (?) * $g^{w}et$ - 'to say'; Orël 2003:226 Proto-Germanic * $kwaðjanan$, 227 * $kweðiz$, 229 * $kweþanan$; Kroonen 2013:314 Proto-Germanic * $kwaðjan$ - 'to greet', 315 * $kwedu$ - 'utterance', and 319 * $kweþan$ - 'to say'; Feist 1939:389—390 (Armenian $kočem$ < * $g^{u}ot$ - i -); Lehmann 1986:277—278 * $g^{w}et$ - 'to speak'; De Vries 1977:336; Falk—Torp 1903—1906.I:433; Torp 1919:343; Klein 1971:612; Onions 1966:734 Common Germanic * $kweþan$; Boutkan—Siebinga 2005:312.
- B. Uralic: Proto-Finno-Ugrian * $kut^{v}3$ - 'to call, to summon' > Finnish $kutsu$ - 'to call; to summon, to invite'; Lapp / Saami $goč'čo$ - 'to call, to order, to bid, to ask'; Ostyak / Xanty (Southern) hut -, (Nizyam) $hūs$ - 'to call, to entice, to seduce, to incite; to tease, to provoke'. Collinder 1955:93, 1960:412 * $kuć3$ -, and 1977:109; Rédei 1986—1988:192 * $kuć3$ -.
- C. (?) Chukchi-Kamchatkan: Proto-Chukotian * $qəððidə$ - 'to pester, to annoy, to bother, to bore' > Chukchi $qətcire$ -, $qətrire$ - 'to bore, to bother', $qətcera$ - $yəryən$ 'nuisance'; Kerek $qəccija$ - 'to bore, to annoy'. Fortescue 2005:242.

Assuming semantic development as in Ostyak / Xanty (Southern) *hut'*, (Nizyam) *hűś-* ‘to call, to entice, to seduce, to incite; to tease, to provoke’, cited above.

Buck 1949:18.22 say; 18.41 call (vb. = summon). Koskinen 1980:23, no. 67; Bomhard—Kerns 1994:496, no. 343; Hakola 2000:86, no. 356.

608. Proto-Nostratic root **q'wur-* (~ **q'wor-*):

(vb.) **q'wur-* ‘to swallow’;

(n.) **q'wur-a* ‘neck, throat’

- A. Afrasian: Semitic: Šheri / Jibbāli *ķerd* ‘throat’; Ḥarsūsi *ķard* ‘throat’; Mehri *ķard* ‘voice, throat’.
- B. Dravidian: Tamil *kural* ‘throat, windpipe’; Malayalam *kural* ‘throat’; Kannaḍa *korāl* ‘neck, throat’; Tuḷu *kurelu* ‘the nape of the neck’; Koḍagu *kora* ‘gullet, windpipe’. Burrow—Emeneau 1984:161, no. 1774. Malayalam *kōruka* ‘to eat greedily’; Kannaḍa *koḷḷu* ‘to drink’; Telugu *krōlu* ‘to drink, to eat’; Kuwi *gronj-* ‘to drink, to guzzle’. Burrow—Emeneau 1984:199, no. 2233.
- C. Proto-Kartvelian (**q'worq'-* >) **q'orq'-* ‘throat, gullet’: Georgian *q'orq'-* ‘throat, gullet’; Mingrelian *q'orq'-el-*, *q'urq'-el-* ‘throat, gullet’; (?) Svan *q'arq'inž* ‘larynx’. Schmidt 1962:140; Klimov 1964:213 **qorq-* and 1998:244 **qorq-* ‘throat, gullet’; Fähnrich—Sardshweladse 1995:418—419 **qorq-*; Fähnrich 2007:520 **qorq-*.
- D. Proto-Indo-European **k'wor-/k'w-* (secondary *e*-grade form: **k'wer-*) ‘(vb.) to swallow; (n.) neck, throat’: Sanskrit *girāti*, *grṇāti* ‘to swallow, to eat’, *grīvā* ‘neck, nape’, *garā-h* ‘drink, poison’, *gala-h* ‘throat, neck’; Prakrit *gīvā* ‘neck’, *girai* ‘to swallow, to eat’; Greek βιβρώσκω ‘to eat’, βopá ‘food, meat’, βopós ‘devouring, gluttonous’; Latin *vorō* ‘to eat greedily, to swallow up’; Old Irish *bráge*, *brágae* ‘throat, neck’; Modern Welsh *breuant* ‘windpipe’; Old Icelandic (pl.) *kverkr* ‘throat’, *kyrkja* ‘to strangle, to choke’; Dutch *kraag* ‘neck’; Middle High German *kraze* ‘neck’ (New High German *Kragen* ‘collar’); Lithuanian *geriù*, *gérti* ‘to drink’, *girtas* ‘drunk, tipsy’; Czech *žeru*, *žrāti* ‘to devour’; Russian Church Slavonic *gr̃lo* ‘throat’. Rix 1998a:189 **g^uerh₃-* ‘to swallow’; Pokorny 1959:474—476 **g^uer-*, **g^uerə-* ‘to swallow’; Walde 1927—1932.I:682—684 **g^uer-*; Mann 1984—1987:356—357 **g^uer-* (**g^uor-*) ‘food, drink, gulp, swallow, gullet, glutton’, 357 **g^uēros* ‘consuming; consumer’, 367 **g^uoros*, *-ā* ‘swallowing; throat; food, herb, poison; glutton’, 371 **g^uroghos*, *-ō(n)* (**g^uroġh-*) ‘neck, craw’, 371 **g^uros* ‘eater, eating’, 371—372 **g^urosmn-* ‘eaten; eating’, 372 **g^urūġos*, *-ā* ‘neck, throat; pitcher with narrow neck, pot’, 372—373 **g^ur-* ‘devouring; gulp; throat’, 373 **g^ur^hdhlom*; **g^ur^hdhlom*, *-ā*, *-ios*, *-iə* ‘crop, throat, gorging animal’, 374 **g^urġət-* (**g^urġət-*) ‘neck, throat, gullet’, 375 **g^urō* ‘to gulp down, to

devour', 375—376 **guṛquis* 'neck, throat', 376 **guṛqutos*, -ā (?) 'gulp, throat'; Mallory—Adams 1997:175 **g^wer(h₃)*- 'to swallow' and 391—392 **g^wrih_{xu}-eh_a*- 'neck'; Watkins 1985:25 **g^werə*- and 2000:34 **g^werə*- 'to swallow' (oldest form: **g^werə₃*-); Gamkrelidze—Ivanov 1984.I:231, II:702 **k^oer*- and 1995.I:201, I:607 **k^oer*- 'to swallow'; Mayrhofer 1956—1980.I:335; Chantraine 1968—1980.I:175 **g^wer*- and I:264 **g^wer*-; Frisk 1970—1973.I235—236, I:251, and I:367—368 **g^uer-ūā*; Hofmann 1966:37 **g^uorā* and 55 **g^uer-ūā*; Boisacq 1950:126—127 **g^uer*- and 177—178 **g^uer-ūā*; Beekes 2010.I:213—214 **g^werh₂*-; Ernout—Meillet 1979:753 **g^werə*-, **g^werē*/**g^werō*-; Walde—Hofmann 1965—1972.II:836; De Vaan 2008:690—691; Orël 2003:228 Proto-Germanic **kwerkjanan*, 228 **kwerkō*; Kroonen 2013:317 Proto-Germanic **kwerkō*- 'throat'; De Vries 1977:337 and 341; Kluge—Mitzka 1967:398—399 **g^uer*-; Kluge—Seebold 1989:408 **g^uerə*-; Fraenkel 1962—1965.I:148—149; Derksen 2008:198 **g^werh₃-tlóm*, 559 **g^werh₃*-, and 2015:172 **g^werh₃*-; Smoczyński 2007.1:172—173 **g^uerh₃-C*.

- E. Uralic: Proto-Finno-Ugrian **k[ü]rkə* 'neck, throat' > Finnish *kurkku* 'throat'; Mordvin (Erza) *kirga*, *ki'rga*, *korga* 'neck'. Collinder 1955:89 (according to Collinder, Finnish *kurkku* is either a Scandinavian loan-word or is influenced by Scandinavian), 1960:411 **kürkə*, and 1977:105, 109; Rédei 1986—1988:161.
- F. Proto-Gilyak / Nivkh **qor*- 'neck': Amur *q^hos* 'neck', *q^hozvərs* 'collar', *q^hostavs* 'scarf'; North Sakhalin *q^hos* 'neck'; East Sakhalin *q^hos* 'neck', *q^hostavř* 'scarf'; South Sakhalin *qor* 'neck', *qozvř* 'dog collar'. Fortescue 2016:142.

Buck 1949:4.28 neck; 4.29 throat; 5.11 eat; 5.13 drink (vb.). Bomhard—Kerns 1994:512—513, no. 361; Illič-Svityč 1971—1984.I:235—236, no. 91, **gura* 'to swallow'.

22.32. PROTO-NOSTRATIC *tʰh

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
tʰh-	tʰh-	c-	x-	kʰ-	sy-	š-	ʈ-
-tʰh-	-tʰh-	-k-	-x-	-kʰ-	-δ- (?)		-ʈ-

609. Proto-Nostratic (n.) *tʰhah-a ‘(young) sheep or goat’:

A. Proto-Afrasian *tʰah- ‘(young) sheep or goat’: Proto-Semitic *tʰa(h)- ‘(young) sheep’ > Arabic *šāh* (coll.; n. un. *šāh*; pl. *šiwāh*, *šiyāh*) ‘sheep, ewe’; Hebrew *śeh* [שֶׁה] ‘(young) sheep, lamb’; Phoenician *š* ‘sheep’; Ugaritic *š*, *śh* ‘sheep’; Akkadian *šuʔu* ‘ram’. Klein 1987:642; Murtonen 1989:412—413; Militarev—Kogan 2005.II:280—282, no. 217, Proto-Semitic *šaw-, *caw- ‘sheep’. Proto-Sam *lah- ‘ewe’ > Rendille *lah* ‘ewe’; Somali *lah* ‘ewe’. Heine 1978:67. Proto-Southern Cushitic *tʰah- ‘goat’ (?) > Ma’a *hlane* ‘he-goat’. Ehret 1980:328. [Orël—Stolbova 1995:121—122, no. 517, *cāʔ- ‘meat’ and 489, no. 2323, *šāʕ- ‘cow, bull’; Ehret 1995:428, no. 888, *tʰoʔ- ‘cattle’.]

Comment: Militarev—Nikolaev (2020:212) reconstruct Proto-Afrasian *šāʔ- and *šāʕ- ‘a kind of large bovid’. However, the data they cite to support their reconstruction differs somewhat from that given here. The cumulative evidence from the Afroasiatic daughter languages seems to point to similar stems at the Proto-Afrasian level but with different laryngeals: *tʰaʔ-, *tʰah-, *tʰaʕ- ‘(young) sheep or goat’ (Militarev—Nikolaev would write *šāʔ-, *šāh-, *šāʕ-, respectively).

B. Proto-Indo-European *kʰah₂h-kʰ- > *kʰākʰ- ‘(young) goat, kid’: Old English *hēcen* (< Proto-Germanic *χōkjan) ‘kid’; Middle Low German *hōken* ‘kid’; Middle Dutch *hoekijn* ‘kid’; Old Church Slavonic *koza* ‘goat’; Russian *kozá* [коза] ‘goat, she-goat, nanny-goat’; Albanian *kedh* ‘kid’. Pokorny 1959:517—518 *kaǵo-, *koǵo-, -ā- ‘goat’; Mann 1984—1987:459 *kǵǵ- ‘goat, kid, goatskin’; Walde 1927—1932.I:336—337 *qaǵo-, *qoǵo-, -ā-; Gamkrelidze—Ivanov 1984.II:585, II:589 *q[ʰ]okʰ- and 1995.I:500—501, I:504, I:765 *qʰokʰ- ‘goat’; Mallory—Adams 1997:511 (?) *(s)kegos ‘sheep, goat’; Orël 1998:174—175; Kroonen 2013:239 Proto-Germanic *hōkīna- ‘kid, young goat’; Derksen 2008:242.

Buck 1949:3.25 sheep; 3.26 ram; 3.29 lamb; 3.36 goat; 3.38 kid. Bomhard—Kerns 1994:379, no. 213.

610. Proto-Nostratic root *tʰakʰw- (~ *tʰakʰw-):

(vb.) *tʰakʰw- ‘to prick, to pierce, to stab’;

(n.) *tʰakʰw-a ‘stab, thrust, jab; thorn, spike, prong, barb’

- A. Proto-Afrasian *tʰakʰw- ‘to prick, to pierce, to stab’: Proto-Semitic *tʰak-ak- ‘to pierce, to prick, to stab’ > Arabic *šakka* ‘to pierce, to transfix; to prick, to stab’, *šakka* ‘stab, thrust, jab’; Šheri / Jibbāli *šekk* ‘to skewer meat’, *miškót* ‘spit, and the meat skewered on it’; Mehri *məškik* ‘wooden spit, skewer’; Harsūsi *meškēk* ‘bar, skewer, (wooden) spit’; Hebrew *šēḫ* [שֶׁח] (pl. *šikkīm* [שִׁכִּיִּם]) ‘thorn’, *šukkāh* [שֻׁכָּה] ‘barb, spear’ (a hapax legomenon in the Bible); Aramaic *sikkā* ‘thorn’. Murtonen 1989:421—422; Klein 1987:655 and 656; Leslau 1987:529. Proto-Semitic *tʰa/wa/k- ‘thorn’ > Arabic *šawk* ‘thorn(s)’, *šawkī* ‘thorny, spiky, prickly’; Aramaic *šawkā* ‘thorn’; Geez / Ethiopic *šok* [ሥክ] ‘thorn, thorn bush, spine (of hedgehog), sting’; Tigre *šokāt* ‘thorn’; Tigrinya *ʔəšok* ‘thorn’; Gafat *əsihʷä* ‘thorn’; Amharic *əšoh* ‘thorn’; Argobba *əšoh* ‘thorn’; Harari *usux* ‘thorn’; Gurage *sox* ‘thorn’. Leslau 1963:33, 1979:541, and 1987:529; Zammit 2002:246. Berber: Tuareg *əskər* ‘nail (person or animal), hoof’, *tāskərt* ‘blade, tip; stinger (of scorpion, wasp, bee); garlic’; Nefusa *accar* ‘nail’; Ghadames *acker* ‘nail’; Tamazight *iskər* ‘nail, claw, talon, tip’, *abaccər* ‘paw, hoof’; Wargla *accar* ‘nail, talon, hoof’; Mzab *accar* ‘nail’; Tashelhiyt / Shilha *iskər* ‘nail’, *baskar* ‘claw’, *tiskərt* ‘garlic’; Riff *iccər* ‘nail, claw’; Kabyle *iccər* ‘nail, claw, point’; Chaouia *iccər* ‘nail, talon’; Zenaga *askər* ‘nail, claw’, *təskərt* ‘anything with a sharp claw’. Proto-Southern Cushitic *tʰaakʰw- ‘to stab, to pierce’ > Iraqw *hlaqw-* ‘to shoot (arrow)’, *hlakat-* ‘to hunt’; Burunge *hlakw-* ‘to shoot (arrow)’, *hlagad-* ‘to hunt’; Alagwa *hlakat-* ‘to hunt’; Asa *hlakat-* ‘to hunt’; K’wadza *hlakataʔiko* ‘hunter’; Ma’a -*hla* ‘to stab, to pierce’, *mhlaʔé* ‘thorn’. Ehret 1980:209. Ehret 1995:422, no. 874, *tʰaakʰw- ‘to pierce’. [Orël—Stolbova 1995:132, no. 569, *čuk- ‘to cut, to pierce’ and 132, no. 570, *čuk- ‘sharp weapon’.]
- B. Dravidian: Kuṛux *cakkhnā* (*cakkhyas/cakkos*) ‘to pierce with a prick, to prick, to penetrate into, to puncture, to cause a prickly sensation’, (reflexive) *cakhrnā* ‘to get tattooed’, *cakkhtaʔānā* ‘to cause to be pierced, tattooed’; Malto *cage* ‘to sting, to pierce, to stab’ (also applied to the sowing of certain grains for which holes are made in the earth), *caqro* ‘worm-eaten roots’, *caqtre* ‘to have the ears pierced’, *caqu* ‘shooting pains in the stomach’; Brahui *jaxxing* ‘to run into, to pierce’. Burrow—Emeneau 1984:202, no. 2278. Perhaps also: Kuṛux *caknā* ‘to sharpen an edge instrument, to whet’; Malto *cake* ‘to sharpen, to whet’. Burrow—Emeneau 1984:202, no. 2277.
- C. Proto-Indo-European (?) *kʰakʰw- ‘spike, prong’: Sanskrit *śakulā-ḥ* ‘a kind of spur-like projection (behind the hoof of an ox or cow)’; Albanian *thekë* ‘fringe, tip’; Lithuanian *šākė* ‘fork, pitchfork’; Latvian *sakas* ‘pitchfork’.

Mann 1984—1987:599 **kakis*, -*iə* (**kakus*, -*os*, -*ā*; **kakinā*) ‘spike, prong’. Note too Mann 1984—1987:599 **kaktis*, -*os*, -*ā* ‘sharp; sharpness, point, spike’. Perhaps also Proto-Indo-European **k^hāk^{wh}H-* (better ? **k^hāk^{wh}H-*) ‘branch, bough’ > Sanskrit *śākhā* ‘branch’; Farsi *šāḡ* ‘branch’; Armenian *çaḡ* ‘twig’; Gothic *hōha* ‘plow’ (? assimilated from **hōhva*); Old High German *huohhili* ‘wooden hooked plow made from a curved branch’; Lithuanian *šakà* ‘branch, twig’; Latvian *saka* ‘ramification of a tree’; Old Church Slavic *soxa* ‘pole, (wooden) plow’; Russian *soxá* [coxa] ‘wooden plow’. Pokorny 1959:523 **kāḱ-* ‘branch, bough, twig, pole’, nasalized **kānk-*; **kākhā* ‘branch, plow’; Walde 1927—1932.I:335 **kāḱ-* (or **kōḱ-* ?), nasalized **kānk-* (or **konk-*) : **kṇk-*; Mann 1984—1987:599 **kāksā* ‘limb, bough, stump, stake’; Gamkrelidze—Ivanov 1984.I:97, II:690 **k^h[h]āk^h[h]-* and 1995.I:84, I:596 **k^hāk^h-* ‘branch, pole, stake, wooden plow’; Mallory—Adams 1997:80 **kóh₁kōh₂* ‘(forked) branch’; Orël 1998:473 and 2003:182 Proto-Germanic **xōxōn*; Kroonen 2013:239 Proto-Germanic **hōhan-* ‘plow’; Feist 1939:266—267; Lehmann 1986:189 **kāḱ-*, **kānk-* ‘branch, peg’; Derksen 2008:458; Fraenkel 1962—1965.II:957—958; Smoczyński 2007.1:621—622. Note: according to Carlton (1991:95), Old Church Slavic *soxa* ‘pole, (wooden) plow’ may be a borrowing from Iranian.

Buck 1949:8.21 plow; 8.55 branch.

611. Proto-Nostratic root **t^hhal-* (~ **t^hḥal-*):

(vb.) **t^hhal-* ‘to cut, split, or break open’;

(n.) **t^hhal-a* ‘slit, crack’

- A. Proto-Afrasian **t^hal-* ‘to cut, split, or break open’: Proto-Semitic **t^hal-ak’-* ‘to cut, split, or break open’ > Akkadian *šalāku* ‘to cut open, to split’; Arabic *šalaḡa* ‘to split lengthwise’. Proto-Semitic **t^hal-ax-* ‘to cut, split, or break open’ > Arabic *šalaḡa* ‘to cut to pieces with a sword’. Orël—Stolbova 1995:125, no. 536, **ċalah-* ‘to break’ and 126, no. 538, **ċalāk-* ‘to cut, to slaughter’.
- B. Dravidian: Tuḷu *selē* ‘chink, crack, flaw (as in a stone)’; Telugu *selagu*, *selayu*, *selāgu*, *celagu*, *celavu* ‘to cut’, *sela* ‘hole’; Kuṛux *calxnā* ‘to open, to uncover’, *calxrnā* ‘to open (intr.)’; Malto *calge* ‘to split or break open’, *calgro* ‘torn asunder’; Brahui *caling*, *calēnging* ‘to become cracked, split’. Burrow—Emeneau 1984:209, no. 2377.
- C. Uralic: Proto-Finno-Ugrian **s^vale-* ‘to cut, to split’ > Finnish *säle* ‘splint, lath’, *säli-* ‘to split, to slit’; (?) Lapp / Saami *čalle-* ‘to scratch; to cut; to write’; Vogul / Mansi *sil-* ‘to slit, to cut’; Ostyak / Xanty *sil-* ‘to slit, to rip, to slit’; Hungarian *szel-* ‘to slice, to cut, to carve; to cleave’, *szelet* ‘slice, piece, cut’. Collinder 1977:126; Rédei 1986—1988:459—460 **sale-*; Sammallahti 1988:459 **šälä-* ‘to cut’.

Buck 1949:9.26 break (vb. tr.); 9.27 split (vb. tr.).

612. Proto-Nostratic root *t^har- (~ *t^har-):

(vb.) *t^har- ‘to cause harm, to injure, to cause strife’;

(n.) *t^har-a ‘injury, harm, strife’

- A. Proto-Afrasian *t^har- ‘(vb.) to cause harm, to injure, to cause strife; (n.) injury, harm, strife’: Proto-Semitic *t^har-ar- ‘(vb.) to cause harm, to injure, to cause strife; (n.) evil, harm, injury, damage’ > Arabic *šarra* ‘to be vicious, bad, evil, wicked, malicious’, *šarr* ‘evil, harm, injury, damage’; Šheri / Jibbāli *éšrér* ‘to turn a sword in the air to make it flash; to choke (on food, drink)’, *šehr* ‘evil’; Harsūsi *ešterōr* ‘to choke (on something)’, *šer* ‘ill health’; Mehri *šūr* ‘to choke (on something)’, *šar* ‘ill health, evil’; Ugaritic *šrr* ‘evil’. Zammit 2002:237. Proto-Semitic *t^har-ay- ‘to cause harm, to cause strife’ > Hebrew *šārāh* [שָׂרָה] ‘to contend, to strive’; Arabic *šarā* ‘to do evil’, *šariya* ‘to grow angry’; Geez / Ethiopic *šeraya* [ሻረሃ] ‘to form a conspiracy, to plot’; Tigre *šira* ‘a plot’; Tigrinya *sera*, *šāra* ‘a plot’; Amharic *sēra* ‘a plot’; Gurage (Endegeñ) *sera* ‘a plot’, *(a)serä* ‘to conspire’, (Soddo) *sāra* ‘to do mischievous things’. Leslau 1979:558 and 1987:536; Murtonen 1989:437; Klein 1987:681.
- B. Dravidian: Kannaḍa *seragu* ‘calamity, evil, mischief, sin, crime’; Telugu *seragu* ‘calamity, misfortune’. Burrow—Emeneau 1984:241, no. 2777.
- C. Proto-Indo-European *k^hor-mo- ‘injury, harm, suffering’: Hittite (3rd sg. pres.) *kar-ma-la-aš-ša-i* ‘to suffer harm, to be incapacitated’; Old Icelandic *harmr* ‘sorrow, grief’, *harma* ‘to bewail’; Old English *hearm* ‘injury, affliction, evil, loss, grief, insult’, *hearmian* ‘to injure’; Old Frisian *herm* ‘grief, sorrow, harm’; Old Saxon *harm* ‘grief, sorrow, harm’; Old High German *har(a)m* ‘grief, sorrow, harm’ (New High German *Harm* ‘grief, sorrow, affliction; injury, wrong’), *harmēn*, *hermēn* ‘to harm or injure’ (New High German *härmen* ‘to grieve’); Old Church Slavonic *sramъ* ‘shame, injury’; Russian *sram* [срам] ‘shame’. Pokorny 1959:615 **kormo-* ‘torment, pain’; Walde 1927—1932.I:463 **kormo-*; Mann 1984—1987:636 **kormos* ‘harm, shame’; Watkins 1985:32 **kormo-* and 2000:43 **kormo-* ‘pain’; Mallory—Adams 1997:413—414 (?) *(p)*kórmos* ‘± grief, shame’; Puhvel 1984— .4:90—91; Kronasser 1966.I:555; De Vries 1977:212; Orël 2003:163 Proto-Germanic **xarmaz*, 163 **xarmipō*, 163 **xarmōjanan*; Kroonen 2013:212 Proto-Germanic **harma-* ‘harm, sorrow’; Onions 1966:428 Common Germanic **χarmaz*; Skeat 1898:255; Klein 1971:334; Kluge—Mitzka 1967:290 **kormo-*; Kluge—Seebold 1989:294 **pkor-mo-*; Walshe 1951:92.
- D. Yukaghir (Northern / Tundra) *čaraluu-* ‘to choke’. Nikolaeva 2006:126.

Buck 1949:11.28 harm, injure, damage (vb.); 16.19 misfortune; 16.31 pain, suffering; 16.32 grief, sorrow; 16.42 anger; 16.72 bad; 19.62 strife, quarrel. Bomhard—Kerns 1994:373—374, no. 206.

613. Proto-Nostratic root **tʰhar-* (~ **tʰħar-*):

(vb.) **tʰhar-* ‘to cut, to cut into’;

(n.) **tʰhar-a* ‘cut, slit, slice, slash; that which cuts: saw, knife, axe’

Extended form:

(vb.) **tʰhar-V-t-* ‘to make incisions, to cut into’;

(n.) **tʰhar-t'-a* ‘scratch, incision’

A. Proto-Afrasian **tʰar-* ‘to cut, to slice’: Proto-Semitic **tʰar-aħ-* ‘to slice, to cut up’ > Arabic *šaraḥa* ‘to cut in slices, to slice, to cut up’; Ḥarsūsi *šēreh* ‘to disjoint, to separate the parts of a carcass’; Šheri / Jibbāli *šeraḥ* ‘to cut up (meat, etc.)’; Mehri *šōrəḥ* ‘to dismember a carcass’. Proto-Semitic **tʰar-ay-* ‘to skin’ > Šheri / Jibbāli *šéré* ‘to skin (a cow, a camel) with a knife’; Mehri *šərū* ‘to skin (a cow, a camel)’. Arabic *šarama* ‘to split, to slit, to slash’, *šarmaṭa* ‘to shred, to tear to shreds’. Šheri / Jibbāli *šérōs* ‘to cut a slit in the ear, to tear skin off’. Proto-Semitic **wa-tʰar-* ‘to saw’ > Arabic *wašara* ‘to saw, to saw apart’; Hebrew *maššōr* [מַשְׁשׁוֹר] ‘saw’; Geez / Ethiopic *wašara*, *waššara* [ወሠረ] ‘to saw, to cut with a saw, to split with a saw’, *mošar* [ሞሠር], *mošart* [ሞሠርት] ‘saw’; Tigre *šāršāra* ‘to saw’, *māsar* ‘axe’; Tigrinya *šāršārä* ‘to saw’, *məssar* ‘axe’; Amharic *šāraššārä* ‘to saw’, *məssar* ‘axe’; Gurage *məsər* ‘horn-handle knife, knife for cutting and eating raw meat’. Leslau 1979:430 and 1987:621. West Chadic **tʰar-* ‘to cut (trees)’ > Hausa *saaraa* ‘to cut (trees)’. Orël—Stolbova 1995:126, no. 541, **ĉar-* ‘to cut, to saw’.

B. Proto-Kartvelian **xarx-* ‘saw’: Georgian *xerx-* ‘saw’; Mingrelian *xorx-* ‘saw’; Laz *xorx-* ‘to saw’. Klimov 1964:257 **xarx-* ‘to saw’, 258 **xarx-* ‘saw’ and 1998:326 **xarx-* ‘saw’; Fähnrich—Sardshweladse 1995:545—546 **xarx-*; Fähnrich 2007:678 **xarx-*; Schmidt 1962:158.

Buck 1949:8.22 dig; 9.48 saw. Bomhard—Kerns 1994:376—377, no. 209.

614. Proto-Nostratic root **tʰhar-* (~ **tʰħar-*):

Extended form:

(vb.) **tʰhar-V-t-* ‘to make incisions, to cut into’;

(n.) **tʰhar-t'-a* ‘scratch, incision’

Derivative of:

(vb.) **tʰhar-* ‘to cut, to cut into’;

(n.) **tʰhar-a* ‘cut, slit, slice, slash; that which cuts: saw, knife, axe’

A. Proto-Afrasian **tʰarat-* ‘to cut into, to make incisions’: Proto-Semitic **tʰarat-* ‘to cut into, to make incisions’ > Hebrew *šāraṭ* [שָׂרַט] ‘to incise,

to scratch', *šeret* [שֶׁרֶט] 'incision'; Akkadian *šarātu* 'to slit up, to slice'; Arabic *šaraṭa* 'to tear, to make incisions (in), to scratch, to slit open, to rip open', *šarṭ* 'incision (in the skin), cut, rip, slash, slit; provision, condition'; Gurage *särrätä* 'to make decorative incisions on a pot, to brand cattle'. Murtonen 1989:438; Klein 1987:682; Leslau 1979:562; Zammit 2002:237.

- B. Proto-Indo-European **k^hert*- '(vb.) to cut into, to make incisions, to carve; (n.) craft, trade; craftsman, artisan': Greek κέρδος 'profit, advantage, gain'; Old Irish *cerd* 'art, handicraft' (Modern Irish *ceárd*, *céird* 'trade, profession'); Welsh *cerdd* 'song' (Middle Welsh 'craft, song'); Latin *cerdō* 'workman, artisan' (Greek loan). Pokorny 1959:579 **kerd*- 'skilled manually'; Walde 1927—1932.I:423 **kerd*-; Mann 1984—1987:489 **kerdos*, -ā 'deed, activity, business, craft'; Watkins 1985:30 **kerd*- and 2000:41 **kerd*- 'craft'; Mallory—Adams 1997:143 **kerd*- 'to cut into, to carve' (enlargement of *(s)*ker*-); Boisacq 1950:440 **kērd*- or **qerd*-; Frisk 1970—1973.I:829; Chantraine 1968—1980.I:519; Hofmann 1966:140—141; Beekes 2010.I:678 **kērd*-; Walde—Hofmann 1965—1972.I:203 **kerd*-; Ernout—Meillet 1979:114. For the semantic development, cf. Old Church Slavic *remstvo* 'art, craft', Russian *remesló* [ремесло] 'trade, handicraft', Lithuanian *remšas* 'joiner', Latvian *remesis* 'craftsman, carpenter', Old Prussian *romestud* 'axe', all from the same stem found in Lithuanian *ramtyti* 'to cut, to carve', Latvian *ramstīt* 'to hew, to saw' (Preobrazhensky 1951.II:197).

Buck 1949:9.41 craft, trade; 9.42 artisan, craftsman. Bomhard—Kerns 1994: 377, no. 210.

615. Proto-Nostratic root **t^hay*- (~ **t^hay*-):

(vb.) **t^hay*- 'to grow old, to turn gray (hair)';

(n.) **t^hay-a* 'old age, gray hair'

- A. Proto-Afrasian **t^hay*- 'to grow old, to turn gray (hair)': Proto-Semitic **t^hay-ab*- 'to grow old, to turn gray (hair)' > Akkadian *šēbu* 'old man'; Hebrew *šēḇ* [שֵׁב] 'old age' (a hapax legomenon in the Bible), *šēḇāh* [שֵׁבָה] 'gray hair, old age'; Ugaritic *šbt* 'gray hair'; Mandaic *sab*, *sib* 'to be gray', *saba*, *siba* 'old man, gray beard'; Arabic *šāba* 'to turn white or gray (hair)', *šayb* 'gray hair, old age'; Harsūsi *šayb* 'white hair'; Šheri / Jibbāli *eššēb* 'to have white hair', *šub* 'white hair'; Mehri *šyīb* 'to go white (in the hair of the head)', *šayb* 'white hair'; Geez / Ethiopic *šeba* [ሄብ] 'to have gray hair'; Tigrinya *säyyäbä*, *šäyyäbä* 'to have gray hair'; Tigre *šäyyäbä* 'gray hair'; Gurage *šəbat* 'gray hair', *šäbbätä* 'to have gray hair'; Harari *šibät* 'gray hair'; Amharic *šäbbätä* 'to have gray hair'; Argobba *šəbäd* 'gray hair'. Murtonen 1989:419; Klein 1987:653—654; Leslau 1963:144, 1979:572, and 1987:539; Diakonoff 1992:85 **čjb*- 'gray hairs; old age, old man; elder'; Zammit 2002:247. Proto-Semitic **t^hay-ax*- 'to

grow old, to age' > Arabic *šāḥa* 'to age, to be or grow old', *šayḥ* 'an elderly, venerable gentleman; old man (above 50), elder; chief, chieftain, sheik, patriarch, head of a family or tribe', *šuyūḥiyya-t* 'old age', *šuyayḥ* 'little old man'; Mehri *šōx* 'big, old, oldest, senior'; Ḥarsūsi *šōx* 'big'. Zammit 2002:247.

Comment: Militarëv—Kogan (2000.I:321—322, no. 66) reconstruct Proto-Semitic (vg.) **šyb-* ~ **čyb* 'to have grey hair'. They do not list any non-Semitic cognates. They note: "Also **šayb(-at)-* / **šīb(-at)-* 'grey hair'; widely spread nominal forms may be regarded as primary ones and verbal forms as derived (cf. presumably denominal verbal forms in S.-E., Eth. and Gur. with *-t* incorporated into the consonant root)." "Note the derived meanings 'to be old', 'old', 'old age' attested throughout Sem."

- B. Proto-Indo-European **k^{hey}-*/**k^{ho}y-*/**k^{hi}-* 'gray-haired, old': Sanskrit *śi-ti-ḥ* 'white'; Old Icelandic *hárr* 'hoary, old'; Old Danish *hår* 'hoary, old, gray'; Old English *hār* 'gray, hoary, old'; Old Frisian *hēr* 'old, venerable'; Old Saxon *hēr* 'distinguished, noble, glorious, excellent'; Old High German *hēr* 'distinguished, noble, glorious, excellent' (New High German *hehr* 'noble, exalted, august, sublime', *Herr* 'lord, sir, Mr. '); Old Church Slavic *sěrb* 'gray'; Russian *séryj* [серый] 'gray'. Pokorny 1959:540—541 **kei-* 'gray, dark, brown'; Walde 1927—1932.I:360—361 **kei-*; Mann 1984—1987:598 **kaisros*, *-jos* 'gray, hoary'; Mallory—Adams 1997:69 **keir-* 'dull or brownish black'; Watkins 1985:28 **kei-* (suffixed *o*-grade form **koi-ro-* in Germanic **χairaz* 'gray-haired') and 2000:38 **kei-* referring to various adjectives of color; Kroonen 2013:201 Proto-Germanic **haira-* 'hoary, grey-haired'; Orël 2003:153 Proto-Germanic *xairaz*; De Vries 1977:212 **kei-*; Klein 1971:349 **koiro-*, **keiro-*; Onions 1966:442—443 Common Germanic **χairaz*; Skeat 1898:267; Kluge—Mitzka 1967:297; Kluge—Seebold 1989:299; Derksen 2008:447.

Buck 1949:14.15 old. Möller 1911:112—113; Bomhard—Kerns 1994:370—371, no. 201.

616. Proto-Nostratic root **t^hher-*:

(vb.) **t^hher-* 'to burn, to roast';

(n.) **t^hher-a* 'ash(es), charcoal, burnt wood; firewood'; (adj.) 'burned, heated, roasted, charred, parched'

- A. Proto-Afrasian **t^h[e]r-* 'to burn, to roast': Proto-Semitic **t^har-ap-* 'to burn' > Hebrew *šāraq* [שָׂרַק] 'to burn'; Ugaritic *šrp* 'to burn'; Akkadian *šarāpu* 'to burn'; Mehri *šarūf* 'to build up sticks for a fire'; Šheri / Jibbāli *šérōf* 'to build a fire to heat milk-heating stones'; Ḥarsūsi *šerōf* 'to roast meat with hot stones'. Murtonen 1989:438; Klein 1987:683. Proto-Semitic **t^har-ab-* 'to burn, to parch' > Hebrew *šārāḇ* [שָׂרַב] 'burning heat, parched'

- ground' (this may be a loan from Aramaic); Aramaic *šəraβ* 'to be parched', *šəraβ* 'heat, drought'. Murtonen 1989:437; Klein 1987:680; Militarëv 2010:56 Proto-Semitic *šrp. Egyptian *srf* (< *šrf) '(vb.) to warm; (n.) warmth'. Hannig 1995:729; Faulkner 1962:236; Erman—Grapow 1921:166 and 1926—1963.4:195—196; Gardiner 1957:591.
- B. (?) Dravidian: Telugu *ceraku* in *vaṇtaceraku* 'firewood for cooking' (*vaṇta* = 'cooking, anything cooked'; *vaṇḍu* 'to cook, to dress, to boil, to prepare'); Gondi *herk* 'a bundle of firewood'. Burrow—Emeneau 1984: 242, no. 2794.
- C. Proto-Kartvelian *xr-ak'- 'to char, to become charred': Georgian *xrak*'- 'to become charred, to overroast'; Mingrelian *xirok*'- 'to roast (by turning over an open flame)'. Fähnrich—Sardshweladse 1995:555 *xraḱ-; Klimov 1964:261 *xraḱ- and 1998:331 *xr-aḱ- 'to char, to become charred; to bend, to warp (in flames)'; Fähnrich 2007:691—692 *xraḱ-/xreḱ-/xriḱ-. Proto-Kartvelian *xr-ek'-/*xr-ik'- 'to roast, to fry, to char': Georgian *xrek*'-/xriḱ'- 'to roast, to fry, to char'; Mingrelian *xirak*'-/xirik'- 'to roast (by turning over an open fire)'; Laz *xrak*'- 'to roast, to fry'. Klimov 1964:261 *xreḱ-/xriḱ- and 1998:331 *xr-ek- : *xr-ik- 'to char, to become charred; to warp (in flames)'.
- D. Proto-Indo-European *k^her-/k^hṛ- (secondary *o*-grade form: *k^hor-) 'to burn, to roast': Latin *carbō* 'burning or burnt wood', *cremō* 'to burn, to consume by fire'; Welsh *crasu* 'to bake'; Gothic *hauri 'coal'; Old Icelandic *hyrr* 'fire'; Swedish (dial.) *hyr* 'glowing ashes'; Old English *heorð* 'hearth', *hierstan* 'to fry, to roast, to scorch'; Old Frisian *herth*, *hirth*, *hird* 'hearth'; Old Saxon *herth* 'hearth'; Dutch *haard* 'hearth'; Old High German *herd* 'hearth' (New High German *Herd*), *herstan* 'to roast'; Lithuanian *kārštas* 'hot'. Rix 1998a:329 (?) *kremH- 'to burn'; Pokorny 1959:571—572 *ker(ə)- 'to burn'; Walde 1927—1932.I:418—419 *ker-; Mann 1984—1987:478 *karst- (*krast-) 'hot, parched, roasted'; Watkins 1985:30 *ker- and 2000:41 *ker- 'heat, fire'; Mallory—Adams 1997:88 (?) *ker- ~ *kerh_x- 'to burn, to roast'; Ernout—Meillet 1979:99 *ker- and 148—149; Walde—Hofmann 1965—1972.I:165—166 *ker- and I:287 *ker-; De Vaan 2008:91—92 and 142; Fraenkel 1962—1965.I:223; Orël 2003:170 Proto-Germanic *xerþaz; Kroonen 2013:222 Proto-Germanic *herþa- 'hearth'; Feist 1939:250—251 *ker-; Lehmann 1986:*kerH- 'to burn, to glow'; De Vries 1977:275—276; Skeat 1898:259; Klein 1971:338 *ker-; Onions 1966:433 West Germanic *xerþa; Boutkan—Siebinga 2005:175 Proto-Germanic *herþa-; Vercoullie 1898:101; Kluge—Mitzka 1967:304—305; Kluge—Seebold 1989:305—306.
- E. (?) Uralic: Proto-Finno-Ugrian *s^var3- 'to dry up; to become dry, parched, or arid' > Hungarian *szárad*- 'to dry up, to become dry', *száraz* 'dry, arid'; Cheremis / Mari *səɾək* 'dry, parched'; Votyak / Udmurt *čyrs*, *čirs*, *čōrōš* 'sour, bitter'; Zyrian / Komi *čir*- 'to become sour, bitter, rancid', *čirōm* 'sun-dried (of flesh, fish), rancid (of fat)'; Vogul / Mansi *šurr*-, *sur*- 'to

become dry or parched'; Ostyak / Xanty *sar-* 'to become dry'. Collinder 1955:117 and 1960:414 **šar3-*; Rédei 1986—1988:466 **šar3-*; Sammallahhti 1988:549 **šorā-* 'to wither, to dry'.

- F. Proto-Altaic **šero-* 'to roast, to broil': Proto-Tungus **čere-* (~ *š-*) 'to bake (close to fire)' > Evenki *čere-* 'to bake (close to fire)'. Proto-Mongolian **sira-* 'to roast, to broil' > Written Mongolian *sira-* 'to roast, to broil, to fry; to scorch, to burn (the sun)'; Khalkha *šara-* 'to roast, to broil'; Buriat *šara-* 'to roast, to broil'; Kalmyk *šar-* 'to roast, to broil'; Ordos *šara-* 'to roast, to broil'; Monguor *širā-* 'to roast, to broil'. Starostin—Dybo—Mudrak 2003:1326—1327 **šero* 'to bake, to boil'.

Buck 1949:5.21 cook (vb.); 5.22 boil; 5.23 roast, fry; 5.24 bake; 7.31 fireplace (hearth); 15.84 dry. Bomhard—Kerns 1994:374—375, no. 207. Slightly different etymology in Dolgopolsky 2008, no. 2215, */*š*/ERV 'to roast'.

617. Proto-Nostratic root **tʰhiʃ-* (~ **tʰheʃ-*):

Extended form:

(vb.) **tʰhiʃ-V-r-* 'to comb';

(n) **tʰhiʃ-r-a* 'hair':

Note: The original meaning of the stem **tʰhiʃ-* (~ **tʰheʃ-*) may have been 'to scratch, to scrape' (> 'to comb' > 'hair'); this stem may be preserved in Cushitic: Proto-Cushitic **taʃf-/tiʃf-* or **laʃf-/liʃf-* 'to claw, to scratch' (cf. Ehret 1995:429, no. 891). For derivation of the word for 'hair' from a stem with the meaning 'to scratch, to scrape', cf. Old Church Slavic *kosa* 'hair', Serbo-Croatian *kōsa* 'hair, wool', etc., *o*-grade of the root found in Common Slavic **česati* 'to scratch, to comb' > Russian *česát'* [чесать] 'to scratch, to comb' (cf. Derksen 2008:86 and 238).

- A. Proto-Afrasian **tʰiʃ(a)r-* 'hair': Proto-Semitic **tʰaʃr-/tʰiʃr-* 'hair; hairy' > Hebrew *šē'ār* [שַׁעַר] 'hair'; Syriac *sa'ra* 'hair'; Mandaic *sara* 'hair'; Arabic *ša'r* 'hair; bristles; fur, pelt', *ša'rānī* 'hairy'; Akkadian *šārtu* 'hairy skin'; Ugaritic *š'rt* 'hair'; Ḥarsūsi *šōr* 'hair, wool'; Mehri *šēr* 'straw'; Šheri / Jibbāli *šá'ar* 'dry grass, straw'; Soqotri *šá'ar* 'straw'; Geez / Ethiopic *šə'ərt* [ሥዕርት] 'hair of body or head', *maš'ərt* [መሥዕርት] 'comb, wooden headrest'. Murtonen 1989:433; Militarëv 2008a:199 and 2011:73 Proto-Semitic **šaʃar(-t)-*; Diakonoff 1992:18 **čaʃar-* 'hair'; Klein 1987:673; Leslau 1987:525; Zammit 2002:239—240. Note: Egyptian (Demotic) *s'rt* 'wool', Coptic *sort* [copt] 'wool' are Semitic loans (cf. Černý 1976:162; Vycichl 1983:197). West Chadic (**tʰiʃar-* >) **tʰaHar-* 'hair' > Hausa *šaari* 'hair on the chest of a ram'; Bokkos *syah-* 'hair'. Omotic (**tʰiʃar-* >) **šaHar-* 'hair' > Maji *saaru* 'hair'. Assimilation of vowels in West Chadic and Omotic. Militarëv 2008a:199 Proto-Semitic **šaʃr(-at)-* 2011:73 Proto-Afrasian **čVʃar-*; Orël—Stolbova 1995:123—124, no.

538, **čaʃar-* ‘hair’. [Ehret 1995:429, no. 889, **ɬ-r-* or **ɬ-rʔ-* ‘hair’: Proto-Semitic **ʃr-*.]

Comment: Militarëv—Kogan (2000.I:231—232, no. 260) reconstruct Proto-Semitic (n.) **šaʃr(-at)-* ~ **čaʃr(-at)-* ‘hair (of body and head)’. They do not list any non-Semitic cognates.

- B. (?) Dravidian: Tamil *īr*, *īrppi* ‘nit’; Malayalam *īr* ‘nit’, *īruka* ‘to comb hair’; Kota *ci-r* ‘nit’; Toda *ti-r* ‘nit’; Kannaḍa *īr*, *īpi*, *sīr* ‘nit’, *īr* ‘to comb out nits’, *īr-aṇige*, *sīr-aṇige* ‘to comb for nits or lice’; Koḍagu *ci-rī* ‘nit’; Tuḷu *tīry*, *cīry*, *sīry* ‘nit’, *tiruvaṇa* ‘to nit-pick’; Telugu *īru*, *īpi* ‘nit’, *īr(u)cu* ‘to comb out nits’, *īr(u) pena* ‘comb for removing nits’; Kolami *si-r* ‘nit’; Naikri *śīr* ‘nit’; Naiki (of Chanda) *sīrku* (pl.) ‘nits’; Gadba *īrs-* (*īris-*) ‘to comb’; Gondi *sīr*, *hīr*, *hīr*, *īr* ‘nit’, *sīr* ‘louse’, *cirnī* ‘comb for removing nits’, *īrs-* ‘to comb out nits’; Pengo *hīr* ‘nit’; Maṇḍa *hīr* ‘nit’; Kui *sīreni*, *sīreṇi* ‘comb’; Kuwi *hīru* ‘nit’; Kuṛux *cīr* ‘nit’. Burrow—Emeneau 1984: 228, no. 2625. For the semantics, cf. Old English *hnitu* ‘nit’; Dutch *neet* ‘nit’; Old High German (*h*)*niz* ‘nit’ (New High German *Niß*, *Nisse*) < Proto-Indo-European **khnit-* ‘louse, nit’, ultimately from **khen-* ‘to scratch’. Greek κović ‘eggs of lice, nits’ is from the same root (cf. κνίζω ‘to scratch, to scrape; to chop, to grate’). Note also Old Icelandic *gnit* ‘nit’ from the same stem found in *gniða* ‘to rub, to scrape’.
- C. Proto-Indo-European **k^hiʃhr-* [**k^heʃhr-*] (> **k^hēr-*) ‘hair’: Old Icelandic *hár* ‘hair’; Faroese *hár* ‘hair’; Norwegian *haar* ‘hair’; Swedish *hår* ‘hair’; Danish *haar* ‘hair’; Old English *hær*, *hēr* ‘hair’; Old Frisian *hēr* ‘hair’; Old Saxon *hār* ‘hair’; Dutch *haar* ‘hair’; Old High German *hār* ‘hair’ (New High German *Haar*). Perhaps also Old Irish *cír* ‘comb, rake’. Pokorny 1959:583 **ker(s)-* ‘to bristle’; Walde 1927—1932.I:427 **ker(s)-*; Mallory—Adams 1997:252 **ker(es)-* ‘(rough) hair, bristle’ (Germanic forms < **kēro-*); Orël 2003:172 Proto-Germanic **xēran*, 172 **xērjōn*; Kroonen 2013:220 Proto-Germanic **hēra-* ‘hair’; De Vries 1977:210; Torp 1919:204; Falk—Torp 1903—1906.I:264—265; Klein 1971:331; Onions 1966:423 Common Germanic **χēram*; Boutkan—Siebinga 2005:165; Kluge—Mitzka 1967:278; Kluge—Seebold 1989:284 **ker-*, **k̑r-*.

Buck 1949:4.14 hair. Möller 1911:120 (Proto-Indo-European **kēr-*); Bomhard—Kerns 1994:372, no. 204. Different (improbable) etymology in Dolgopolsky 2008, no. 2220, **šäyoy[i]RV* ‘hair’.

618. Proto-Nostratic root **t^hhil-* (~ **t^hhel-*) or (?) **t^hhid^h-* (~ **t^hhed^h-*):
 (vb.) **t^hhil-* or (?) **t^hhid^h-* ‘to see’;
 (n.) **t^hhil-a* or (?) **t^hhid^h-a* ‘eye’

- A. Afrasian: Proto-Highland East Cushitic **lell-* ‘to appear, to be seen’ > Gedeo / Darasa *lell-* ‘to appear, to be seen’, *lell-iš-* ‘to show, to uncover, to

reveal'; Kambata *lall-* 'to appear, to be seen'; Sidamo *leell-* 'to appear, to be seen', *leell-iš-* 'to show'. Hudson 1989:21.

- B. Proto-Kartvelian **xel-/xil-* 'to open the eyes, to see': Georgian *xil-* 'to see' (also *xed-* 'to see'), *xel-/xil-* 'to open the eyes'; Mingrelian *xil-* 'to open the eyes'. Schmidt 1962:36, 79, and 158. According to Schmidt (1962:79), the *l ~ d* alternation in Georgian may point to an earlier lateral. If this suggestion is indeed correct, the Kartvelian data may provide evidence for a third (voiced) lateralized affricate in Proto-Nostratic, which means that the Proto-Nostratic form may have been **tʰhɪdʒ-* (~ **tʰhɛdʒ-*) instead.
- C. Proto-Uralic **silmä* 'eye': Finnish *silmä* 'eye'; Estonian *silm* 'eye'; Lapp / Saami *čäl'bme/čälme-* 'eye'; Mordvin *sel'me* 'eye'; Cheremis / Mari (Western) *sinzä*, (Eastern) *šinža* (derivative) 'eye'; Votyak / Udmurt *šin/sinm-*, *šim-* 'eye'; Zyrian / Komi *šin* 'eye'; Vogul / Mansi *šām*, *sām* 'eye'; Ostyak / Xanty *sem* 'eye'; Hungarian *szēm* 'eye'; Yurak Samoyed / Nenets *sōw*, *saew*, *haem* 'eye'; Tavgi Samoyed / Nganasan *šajme*, *šejme* 'eye'; Yenisei Samoyed / Enets *sej* 'eye'; Selkup Samoyed *sajī* 'eye'; Kamassian *sajma*, *sima* 'eye'. Collinder 1955:57, 1960:408 **šil'mä*, and 1977:74; Rédei 1986—1988:479 **šilmä*; Décsy 1990:108 **sjilmä* 'eye'; Sammallahti 1988:540 **šilmä* 'eye'; Janhunen 1977b:132 **sâjmä*; Zhivlov 2023:169 Proto-Uralic **ćilmä* 'eye', Proto-Finnic **silmä*.

Buck 1949:4.21 eye; 15.51 see. Bomhard—Kerns 1994:377—378, no. 211; Dolgopolsky 2008, no. 2200, **silV(-ma)* 'eye; to look, to examine'.

619. Proto-Nostratic root **tʰhir-* (~ **tʰher-*):

(vb.) **tʰhir-* 'to be highly esteemed, eminent, illustrious, glorious';

(n.) **tʰhir-a* 'high rank, chief, chieftain, ruler'

- A. Proto-Afrasian **tʰ[i]r-* '(vb.) to be highly esteemed, eminent, illustrious; (n.) high rank, chief, chieftain, ruler': Proto-Semitic **tʰarr-* 'chieftain, ruler' > Hebrew *šar* [שָׂר] 'chieftain, chief, ruler, official, captain, prince'; Akkadian *šarru* 'king'; Ugaritic *šr* 'prince, ruler'; Phoenician *šr* 'prince'. Murtonen 1989:437; Klein 1987:680; Diakonoff 1992:86 **čarr-* 'chief'. Proto-Semitic **tʰar-ap-* 'to be highborn, noble' > Arabic *šarufa* 'to be highborn, noble', *šaraf* 'high rank, nobility'; Šheri / Jibbāli *eššórf* 'to honor (guests), to give generous hospitality'; Mehri *sōrəf* 'to honor, to respect'.
- B. Dravidian: Tamil *cira* 'to be eminent, illustrious; to surpass; to be abundant; to be auspicious; to be graceful; to rejoice', *cirantōr* 'the great, the illustrious, gods, relatives, ascetics', *cirappu* 'pre-eminence, pomp, abundance, wealth, happiness, esteem', *ciravu* 'meritorious deed'; Malayalam *cirakka* (*cirannu*) 'to be glorious'; Kannaḍa *serapu* 'hospitality, honor, festival'. Burrow—Emeneau 1984:225, no. 2589.

- C. Proto-Indo-European **k^hreyH-*/**k^hriH-* (> **k^hrī-*) ‘(adj.) better, superior, glorious, illustrious; (n.) high rank’: Sanskrit *śréyas-* ‘more splendid or beautiful, more excellent or distinguished, superior, preferable, better’, *śrī-* ‘high rank, power, might, majesty, royal dignity; light, luster, radiance, splendor, glory, beauty, grace, loveliness’; Avestan *srayah-* ‘fairer, more beautiful’, *srī-* ‘beauty, fairness’, *srīra-* ‘fair, beautiful’; Greek κρείων, κρέων ‘ruler, lord, master’. Pokorny 1959:618 **k^hrei-* ‘to shine forth’; Walde 1927—1932.I:478 **k^hrei-*; Mann 1984—1987:637 **k^hreijo-* (**k^hrējo-*) ‘superior’; Boisacq 1950:513; Chantraine 1968—1980.I:580; Frisk 1970—1973.II:12; Hofmann 1966:159 **k^hrei-*; Beekes 2010.I:774 **k^hreiH-*.
- D. (?) Proto-Eskimo postbase **t^həR* ‘one that is more or most’: Alutiiq Alaskan Yupik *təq* (possessed *təxə*, etc.) ‘one that is more — (than possessor)’, *təqə* (tr.) ‘have — be more than (subject)’; Central Alaskan Yupik *təq* (possessed *təxə*, etc.) ‘one that is more or most —’; Central Siberian Yupik *təXpiyaq* ‘most’; North Alaskan Inuit *təXaaq* ‘one that is more, most —’; Western Canadian Inuit (Siglit) *təruq* ‘the most —’ (on adjectival verb bases); Eastern Canadian Inuit *laaq* ‘one that is the most —’. Fortescue—Jacobson—Kaplan 1994:409.

Buck 1949:19.32 king. Bomhard—Kerns 1994:369—370, no. 200.

620. Proto-Nostratic root **t^hhuŋ-* (~ **t^hhoŋ-*):

Extended form:

(vb.) **t^hhuŋ-V-k^h-* ‘to hook up, to hang up, to suspend (tr.); to dangle, to hang (intr.)’;

(n.) **t^hhuŋ-k^h-a* ‘peg, hook’

- A. Afrasian: Semitic: Arabic *šankala* (< **t^hank-al-*) ‘to hook up’, *šankal* ‘peg, hook’.
- B. Dravidian: Tamil *cuñku* ‘end of cloth left hanging out in dressing, pleat or fold of garment’; Kannada *cuñgu*, *juñgu* ‘end of a turban sticking out, a small part torn and hanging to the thing, a dangling tatter’; Telugu *cuñgulu* ‘the end(s) of a garment’, *cuñgu* ‘a skirt, the end of a cloth’; Kolami *june* ‘cloth’. Burrow—Emeneau 1984:229, no. 2648.
- C. Proto-Indo-European **k^honk^h-* ‘(vb.) to hook up, to hang up; (n.) peg, hook’: Hittite (3rd sg. pres. act.) *ga-an-ki* ‘to hang’; Sanskrit *śāṅkú-h* ‘peg, nail, spike’, *śāṅkate* ‘to waiver, to hesitate’; Latin *cūnctor* ‘to delay, to linger, to hesitate’; Gothic *hāhan* ‘to hang, to keep in suspense’; Old Icelandic *hanga* ‘to hang, to be suspended’, *hengja* ‘to hang up, to suspend’; Faroese *hanga* ‘to hang’; Norwegian *hanga* ‘to hang’, *hengja* ‘to hang up’; Swedish *hānga* ‘to hang’; Danish *hænge* ‘to hang’; Old English *hangian* ‘to hang’, *hengan(n)* ‘death or punishment by hanging, hanging, torture; gallows, cross, rack; prison, confinement’; Old Frisian *hangia* ‘to hang’; Old Saxon *hangōn* ‘to hang’; Dutch *hangen* ‘to hang’; Old High

German *hangēn* ‘to hang’ (New High German *hangen*, *hängen*). Rix 1998a:290 **kenk-* ‘to hang, to suspend’; Pokorny 1959:537—538 **kenk-* ‘to dangle’, 566 **kenk-*, **konk-* ‘to dangle’; Walde 1927—1932.I:382—383 **kenk-*; Mann 1984—1987:469 **kank-* (**kankjō*) ‘to raise, to hang’, 470 **kankəl-* ‘hook, hanger’, 601 **kankos*, -*is* ‘spike, limb, branch, peg’; Watkins 1985:32 **konk-* and 2000:43 **konk-* ‘to hang’; Gamkrelidze—Ivanov 1984.II:927 **k[h]ank[h]*- and 1995.I:821 **k^hank^h-* ‘stake, peg’; Mallory—Adams 1997:255 **konk-* ‘to hang’; Ernout—Meillet 1979:157; Walde—Hofmann 1965—1972.I:307 **kenq-*, **konq-*; De Vaan 2008:153; Puhvel 1984—4:48—51 **kenke(y)-*, **k_ŋk-*; Kloekhorst 2008b:437—438; Orël 2003:160 Proto-Germanic **xanġjanan*, 160 **xanxanan* ~ **xanġanan*, 160 **xanxēnan* ~ **xanġēnan*; Kroonen 2013:208 Proto-Germanic **hangjan-* ~ **hankjan-* ‘to (make) hang’ and 208 **hanhan-* ‘to hand’; Feist 1939:230—231 **kank-*; Lehmann 1986:168 **kenk-*; De Vries 1977:208 and 222; Falk—Torp 1903—1906.I:319 **ke(n)k-*; Torp 1919:198; Onions 1966:426 Common Germanic **chanġan*; Klein 1971:333 **kenq-*, **konq-*; Kluge—Mitzka 1967:288; Kluge—Seebold 1989:292 **konk-*.

- D. Yukaghir (Northern / Tundra) *čuy^hnel'e-* ‘to fall down a little (of trousers)’. Nikolaeva 2006:145.

Buck 1949:12.75 hook. Bomhard—Kerns 1994:371—372, no. 203.

621. Proto-Nostratic root **t^hhut-* (~ **t^hhot-*):

(vb.) **t^hhut-* ‘to cut, to split’;

(n.) **t^hhut-a* ‘cut, split’

- A. Proto-Afrasian **t^h[u]t-* ‘to cut, to split’: Proto-Semitic **t^hat'-ar-* ‘to cut, to split’ > Arabic *šaṭara* ‘to halve, to divide into equal parts, to bisect, to cut through, to cut off, to sever’, *šaṭr* ‘partition, division, separation, halving, bisecting’; Mehri *šaṭráyr* ‘rag, strip of cloth’; Soqotri *šeṭar* ‘to tear’; Ḥarsūsi *šeṭeráyr* ‘bundle of rags or cloth’; Šheri / Jibbāli *šaṭrér* ‘rag, strip of cloth’; Gurage (Chaha) *šāṭārä* ‘to split wood into half or into big pieces, to plow a field for the first time’, (Endegeñ) (*a*)*šāṭāṭārä* ‘to split wood into small pieces’, (Muher) *šāṭārä* ‘to cut, to split’; Tigre *sāṭra* ‘to split, to crack’; Harari *sēṭära* ‘to split along the grain into splinters’, *sāṭra* ‘crack, split’, *sāčīr* ‘splinter’. Leslau 1963:137, 144 and 1979:588; Zammit 2002:238—239. Proto-Semitic **t^hat'-ak-* ‘to cut, to split’ > Akkadian *šatāku* ‘to cut, to separate’; Geez / Ethiopic *šaṭaḳa* [ሠጠፈ] ‘to cut, to split, to tear asunder, to break through, to open a way’; Tigre *šāṭṭāka* ‘to split’; Gurage *sāṭṭākä* ‘to split wood in half, to plow a field for the first time’. Leslau 1979:567 and 1987:537—538. Proto-Semitic **t^hat'-at-* ‘to cut, to split, to tear’ > Arabic (Daḡina) *šaṭṭa* ‘to cut, to split, to tear’; Geez / Ethiopic *šaṭaṭa* [ሠጠጠ] ‘to tear (apart), to rend, to rip up’; Tigre *sāṭṭa* ‘to rend’, *šāṭṭa* ‘to tear’; Tigrinya *šātātä*, *sātātä* ‘to break’; Amharic *sāṭṭātä* ‘to

tear noisily or quickly’. Leslau 1987:538. Arabic *šaṭaba* ‘to cut in slices or strips; to make an incision, a longitudinal cut, a slit, a slash’, *šaṭb* ‘cut, slash, incision, scratch’. Geez / Ethiopic *šaṭaya* [ሠጠየ] ‘to tear, to lacerate, to rend, to be terror-stricken, to be dismayed’. Leslau 1987:538. Berber: Tuareg *tasəṭṭa* ‘branch cut from a thorny tree’; Tamazight *asəṭṭa* ‘branch, limb’; Tashelhiyt / Shilha *tasəṭṭat* ‘branch’; Riff *tasəṭṭa* ‘branch’; Kabyle *tasəṭṭa* ‘branch, limb’; Chaouia *ciḍuw* ‘branch, limb’; Zenaga *cəd* ‘to split (wood)’, *əccad* ‘stick’, *tacodda* ‘branch, cut tree’.

- B. (?) Dravidian: Tamil *cutti*, *cuttiyal* ‘small hammer’; Malayalam *cutti*, *cuttika*, *tutti* ‘hammer’; Kannaḍa *suttige* ‘hammer’; Tuḷu *sutti*, *suttigè*, *suttiyè*, *suttè*, *suttiyè* ‘hammer’; Telugu *sutte* ‘hammer’; Gondi *sutte* ‘hammer’; Kuwi *suthi* ‘hammer’. Burrow—Emeneau 1984:231, no. 2668. Cf. Marathi *sutkī* ‘an instrument of stone-splitters’.
- C. Proto-Kartvelian **xot’r-* ‘to cut, to clip’: Georgian *xot’r-* ‘to cut (close to the skin)’; Mingrelian *xot’or-*, *xut’or-*, *xuč’or-* ‘to cut, to clip’; Laz *xot’or-*, *xut’or-*, *xoč’or-* ‘to cut, to clip’. Klimov 1964:261 **xoṭr-* and 1998:330 **xoṭr-* ‘to clip, to shear’; Fähnrich—Sardshweladse 1995:554 **xoṭr-*; Fähnrich 2007:690—691 **xoṭr-*.

Buck 1949:9.22 cut (vb.); 9.27 split (vb. tr.); 9.28 tear (vb. tr.). Bomhard—Kerns 1994:378, no. 212.

22.33. PROTO-NOSTRATIC *tʃ'

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
tʃ'-	tʃ'-	t-	k'-	k'-	ɖy-		
-tʃ'-	-tʃ'-	-t(t)-	-k'-	-k'-	-ɖy-		

622. Proto-Nostratic root *tʃ'ar- (~ *tʃ'ər-):

(vb.) *tʃ'ar- 'to bite, to gnaw';

(n.) *tʃ'ar-a 'bite'

Extended form (in Semitic and Indo-European):

(vb.) *tʃ'ar-V-s- 'to bite, to gnaw';

(n.) *tʃ'ar-s-a 'tooth; morsel bitten, food, nourishment'

- A. Afrasian: Proto-Semitic *tʃ'aras- 'to bite', *tʃ'irs- 'molar tooth' > Arabic *qarasa* 'to bite firmly or fiercely', *qirs* 'molar tooth'; Sabaeen *qrs* 'molar tooth'; Šheri / Jibbālī *māzrēs* 'molar tooth'; Geez / Ethiopic *qars* [፩ርሰ] 'molar tooth', *ṭars* [፩ርሰ] 'molar tooth'; Tigrinya *ṭarsi* 'tooth'; Amharic *ṭars* 'tooth', *ṭārräsä* 'to break the teeth'; Harari *ṭirsi* 'molar tooth'; Gurage (Wolane) *ṭäräsä* 'to break off a piece, *to chip the rim of a utensil'. Leslau 1963:156, 1979: 633, and 1987:153.

Comment: Militarëv—Kogan (2000.I:246—247, no. 275) reconstruct Proto-Semitic (n.) *širs- ~ *čirs- 'molar tooth'. They do not list any non-Semitic cognates. According to Militarëv—Kogan, the Ethiopic forms with initial *t- listed above may be from a root variant *ṭirs-.

- B. Proto-Kartvelian *k'rč'- 'to gnash or grind one's teeth': Georgian *k'rč'* in *k'rč'-en-a* 'to gnash or grind one's teeth'; Laz *k'irč'* in *o-k'irč'-ol-u* 'to crunch with the teeth, to munch'. Fähnrich—Sardshweladse 1995:211 *krč-; Fähnrich 2007:256 *krč-.
- C. Proto-Indo-European *k'ras- 'to bite, to gnaw, to eat': Sanskrit *grāsate*, *grāsati* 'to swallow, to consume, to eat, to devour', *grāsa-h* 'food, nourishment, morsel bitten'; Greek γράω 'to gnaw, to eat'; (?) Latin *grāmen* (if not from *g^hra-s-men) 'grass'. Rix 1998a:170—171 *gres- 'to eat, to devour'; Pokorny 1959:404 *gras- : *grōs- 'to eat'; Walde 1927—1932.I:657—658 *grēs- : *grōs- : *grās-; Mann 1984—1987:291—292 *grasō 'to devour, to consume'; Watkins 1985:24 *gras- and 2000:33 *gras- 'to devour'; Mallory—Adams 1997:175 *gras- 'to eat, to graze'; Mayrhofer 1956—1980.I:352 *gréseti, (older paradigm) *gr-és-mi : *gr-s-més; Boisacq 1950:155 *ger-; Frisk 1970—1973.I:326 *grs-ō; Chantraine 1968—1980.I:237 *grs- or *gres- (?); Hofmann 1966:47—48 *grasō;

Beekes 2010.I:286 *gres-; Ernout—Meillet 1979:280; Walde—Hofmann 1965—1972.I:616—617; De Vaan 2008:269—270.

Buck 1949:4.27 tooth; 4.58 bite; 5.11 eat. Bomhard—Kerns 1994:381, no. 216.

623. Proto-Nostratic root *tʃ'il- (~ *tʃ'el-):

(vb.) *tʃ'il- 'to be bent, curved, round';

(n.) *tʃ'il-a 'bent, curved, round thing or object'; (adj.) 'bent, curved, round'

- A. Proto-Afrasian *tʃ'il-aʃ- 'to be bent, curved, round', *tʃ'il-(a)ʃ- 'rib': Proto-Semitic *tʃ'alaʃ- 'to be bent, curved, round', *tʃ'ilʃ- 'rib' > Akkadian *šēlu* 'rib, side'; Hebrew *šēlāʿ* [שֵׁלָא] 'rib'; Ugaritic *šlʿt* 'ribs'; Arabic *ḍaliʿa* 'to be crooked, bent, curved; to curve; to bend', *ḍilʿ* 'rib'; Šheri / Jibbāli *ḏalʿ* 'rib'; Mehri *ḏālaʿ* 'rib'; Soqotri *ḏalʿ* 'rib'. Murtonen 1989:361; Klein 1987:549. Proto-East Cushitic *dʃin(a)ʃ- (< *dʃil(a)ʃ-) 'rib' > Burji *dīn-āa* 'rib, ribs, side of body'; Somali *ḍinaʿ* 'side'; Gidole *dīnaʿ-itt* 'rib'; Galla / Oromo *c'ina-a* 'rib, side of body'; Gedeo / Darasa *c'inaacca* 'ribs, side'. Sasse 1982:64; Hudson 1989:123.
- B. Proto-Indo-European *k'el-/ *kl- 'bent, curved, round': Sanskrit *gūlī* 'globe, pill', *glāu-h* 'round lump'; Greek γίγλυμος 'a hinge joint', γλουτός 'rump, buttocks'; Latin *globus* 'a round ball, globe, sphere', *glomus* 'ball of yarn', *glēba* 'a lump or clod of earth', *glomerō* 'to form into a sphere'; Old English *clīwen* 'ball of thread, clew; anything in the shape of a ball', *clympre* 'lump of metal, metal'; Low German *klump* 'clump, lump'; Dutch *klomp* 'lump, mass', *kluwen* 'clew, ball'; Old High German *klumpe* 'lump, mass' (New High German *Klumpen*), *kliuwa*, *chliwa* 'clew, ball' (initial cluster dissimilated from *kl-* to *kn-* in New High German *Knäuel*); Slovenian *glūta* 'boil, tumor, lump, swelling'. Pokorny 1959:357—364 *gel- 'to form into a ball'; Walde 1927—1932.I:612—621 *gel-; Mann 1984—1987:275 *glayos 'ball, lump', 276 *glembō, -iō 'to compress', 279 *glīu- (*glāu-) 'ball, clump', 279 *globos, -ā 'lump, mass', 280 *glombos, -ios 'mass, lump, clump', 281 *glomos, *glom- 'compact; mass', 281 *gloud- 'compact; ball, lump, huddle', 282—283 *glūd- 'bundle, bunch, clot; to ball up, to huddle, to bunch', 283 *glund- (*glundh-) 'lump'; Watkins 1985:18 *gel- 'to form into a ball'; Mayrhofer 1956—1980.I:341 and I:354—355; Boisacq 1950:147 and 151 *gleu-, based upon *gel- 'to form into a ball'; Frisk 1970—1973.I:306 and I:313—314; Beekes 2010.I:272 and I:277 (pre-Greek); Hofmann 1966:44 and 46 *gl-eu-; Chantraine 1968—1980.I:221 Greek γίγλυμος, without etymology, and I:228 *glout-; Ernout—Meillet 1979:276 and 277; Walde—Hofmann 1965—1972.I:606—607 *gelebh- (lengthened-grade *glēbh-), I:608—609 *g(e)leb(h)-, and I:609 *gel- 'to form into a ball'; De Vaan 2008:264 and 265; Orël 2003:216 Proto-Germanic *klewōn (related to *klawjanan); Kroonen 2013:292 Proto-Germanic *klewan- 'lump, ball'

(< *gleuh₂-on-); Onions 1966:181 and 184; Klein 1971:142 *gleu- and 144; Kluge—Mitzka 1967:380 and 381; Kluge—Seebold 1989:380 and 382; Walshe 1951:123 *gle(m)b-/ *glo(m)b-.

- C. Yukaghir (Southern / Kolyma) *čilgə* ‘bough’, (Northern / Tundra) *čilge* ‘bough, willow branches used as bedding’, *čilge-raal* ‘dried branch used as fuel’. Nikolaeva 2006:131.

Buck 1949:12.81 round; 12.82 circle; 12.83 sphere. Bomhard—Kerns 1994: 381—382, no. 217.

624. Proto-Nostratic root *tʃ'im- (~ *tʃ'em-):

- (vb.) *tʃ'im- ‘to join, bind, press, or unite together’;
 (n.) *tʃ'im-a ‘bond, tie, union, connection’; (adj.) ‘joined, bound, pressed, or united together; tied, harnessed, glued, etc.’

- A. Proto-Afrasian *tʃ'[i]m- ‘to join, bind, or unite together’: Proto-Semitic *tʃ'am-ad- ‘to join together, to yoke, to harness’ > Akkadian *šamādu* ‘to yoke, to harness’; Hebrew *šāmaḏ* [שָׁמַד] ‘to press together; to join, to couple’, *šemeḏ* [שֵׁמֶד] ‘couple, pair’; Aramaic *šamaḏ* ‘to bind together, to yoke’; Mandaic *šmd* ‘to bind, to join, to couple’; Ugaritic *šmd* ‘to harness’; Arabic *ḍamada* ‘to dress a wound, to twist a bandage around the head’; Sabaeen *ḍmd* ‘to yoke, to unite’; Geez / Ethiopic *ḍamada* [ፈመደ], *šamada* [ሰመደ] ‘to yoke, to harness, to bind together, to join, to link, to subjugate’; Tigre *šāmda* ‘to yoke’; Tigrinya *šāmādä* ‘to yoke’; Gurage *ṭāmādä* ‘to join, to unite, to put together, to bring together’; Amharic *ṭāmmādä* ‘to yoke oxen’; Argobba *ṭāmmāda* ‘to yoke oxen’. Murtonen 1989:361—362; Klein 1987:550; Leslau 1979:621 and 1987:149—150. Proto-Semitic *tʃ'am-am- ‘to join together’ > Arabic *ḍamma* ‘to bring together, to join, to draw together, to contract; to gather, to collect, to reap, to harvest; to unite; to embrace; to combine, to close, to compress; to grasp, to grip, to grab, to seize’; Hebrew *šāmam* [שָׁמַם] ‘to be pressed together, restrained; (hif.) to restrain, to tie up’, *šammāh* [שָׁמַח] ‘woman’s veil’; Šheri / Jibbāli *šimm* ‘to enlist; to be reunited’; Mehri *šam* ‘to join up, to enlist’; Geez / Ethiopic *ḍamama* [ፈመመ] ‘to bind, to tie around, to patch up, to restrain (appetite)’; Amharic *čāmāččāmä* ‘to bind’, *ṭāmāttāmä* ‘to wrap (a scarf around the head or neck), to wind (a bandage, turban, etc.), to tie a package with a string, to coil up (tr.)’; Tigre *šamma* ‘to squeeze together’. Murtonen 1989:361; Klein 1987:550; Leslau 1987:150; Zammit 2002:265. Egyptian *dmm* ‘to unite with’, *dmj* ‘to bind together’, *dmi* ‘to join, to bring together’, *dmd* ‘to assemble, to bring together, to unite’; Coptic *tōōme* [ⲧⲟⲟⲙⲉ] ‘to join’. Gardiner 1957:602; Hannig 1995:978, 979, and 979—980; Faulkner 1962:312 and 313; Erman—Grapow 1921:214 and 1926—1963.5:451, 5:453—455, 5:457—459; Vycichl 1983:215; Černý 1976:187. Berber: Tuareg *azmi* ‘to sew, to be sewn’, *ažamay* ‘the act of sewing, being

sewn, sewing'; Siwa *əzmi* 'to sew', *əzamma* 'rattan'; Ghadames *əzmək* 'to sew'; Tamazight *azmu* 'rattan'; Tashelhiyt / Shilha *tasmi* 'small needle', *azzmay* 'rattan'; Zenaga *azməy* 'to sew', *azməy* 'sewing'.

- B. Proto-Indo-European **k'em-/k'ḡm-* (secondary *o*-grade form: **k'om-*) '(vb.) to join together, to unite (in marriage); to wed, to marry; (n.) the one who is married, son-in-law': Sanskrit *jāmi-h* 'related (brother or sister)', *jāmātar-* 'son-in-law (daughter's husband)'; Avestan *zāmātar-* 'son-in-law'; Farsi *dāmād* 'son-in-law'; Greek γαμέω 'to marry', γάμος 'wedding', γαμβρός 'son-in-law'; Latin *gener* (for **gemer*) 'son-in-law'; Lithuanian *žentas* 'son-in-law'; Old Church Slavic *zētb* 'son-in-law'; Albanian *dhëndhër*, *dhëndhri*, *dhëndhurë* 'son-in-law, bridegroom'. Pokorny 1959:369—370 **gem(e)-* 'to marry'; Walde 1927—1932.I:574—575 **gem(e)-*; Mann 1984—1987:396 **gəmros*; Mallory—Adams 1997:369 **gemh_x-* 'to marry (from the male point of view)' and 533 **gomh_x-ter-* 'son-in-law', **gḡm_x-ro-s*, **gḡm-ro-s* 'son-in-law', **gemh_x- to-s* 'son-in-law'; Watkins 1985:19 **gemə-* and 2000:26 **gemə-* 'to marry' (oldest form: **gemə₁-*); Mayrhofer 1956—1980.I:430; Boisacq 1950:140 and 140—141; Chantraine 1968—1980.I:208—209 and I:209; Frisk 1970—1973.I:287 and I:287—288; Beekes 2010.I:259 **g(e)m-*; Hofmann 1966:54; Huld 1984:58—59 **gamH-* 'to marry'; Walde—Hofmann 1965—1972.I:590—591 **gem(e)-* 'to marry'; De Vaan 2008:258 **g(e)m-ro-* 'son-in-law'; Ernout—Meillet 1979:270; Wodkto—Irslinger—Schneider 2008:136—139 **gemH-*; Orël 1998:82; Smoczyński 2007.1:779 **ggh₃-C*; Fraenkel 1962—1965.II:1301; Derksen 2008:543—544 **genh₃-ti-* and 2015:516—517 **gnh₃-ti-* (?).
- C. Proto-Uralic **δ'ümä* 'glue': Finnish *tymä* 'glue'; Lapp / Saami *dâbmē* / *dâme-* 'glue'; Cheremis / Mari *lümö* 'glue'; Votyak / Udmurt *l'em* 'glue'; Zyrian / Komi *l'em* 'glue'; Yurak Samoyed / Nenets *jiibe*, *jiimeä* 'glue'; Tavgi Samoyed / Nganasan *jimi* 'glue'; Yenisei Samoyed / Enets *jii* 'glue'; Selkup Samoyed *t'üme*, *t'eu* 'glue'; Kamassian *nəme* 'glue'. Sammallahti 1988:537 **d'ümä* 'glue'; Rédei 1986—1988:66 **δ'imä* (**δ'ümä*); Collinder 1955:64, 1960:409 **δ'ümä*, and 1977:81; Décsy 1990:98 **dhjimä* 'lime'; Zhivlov 2023:170 Proto-Uralic **δ'ümä* 'glue', Proto-Finnic **tümä*.

Sumerian *dim* 'band, binding; rope, cord; knot', *dim-ma* 'to tie together, to fasten, to bind', *dim-má* 'band, rope, cord'.

Buck 1949:2.33 marry; 2.63 son-in-law; 10.78 yoke. Möller 1911:73—74; Bomhard—Kerns 1994:380—381, no. 215.

625. Proto-Nostratic root **tʰ'ukh-* (~ **tʰ'okh-*):
 (vb.) **tʰ'ukh-* 'to push, to shove, to thrust (in), to press (in)';
 (n.) **tʰ'ukh-a* 'push, shove, thrust'

- A. Afrasian: Semitic: Arabic *ḍakka* ‘to press, to press upon’, *ḍakaza* ‘to press violently with the hand’, (reduplicated) *ḍakḍaka* ‘to press; to walk apace’.
- B. Dravidian: Kannaḍa *dūku* ‘to push’; Kuṛux *tukknā* ‘to give a push to, to shove’; Malto *tuke* ‘to push, to remove’. Burrow—Emeneau 1984:287, no. 3286.
- C. Uralic: Proto-Finno-Ugrian **δʷukk3-* (**δʷokk3-*) ‘to put (in), to stick (in), to thrust (in)’ > (?) Finnish *tokkaa-* ‘to put in, to stick’; Cheremis / Mari *loye-* ‘to butt, to ram’; Votyak / Udmurt *l’ekal-* ‘to but, to ram, to stick’; Zyrian / Komi *l’ukal-*, *l’ukaav-*, *lukaal-* ‘to butt, to ram’. Rédei 1986—1988:66 **δʷkk3-*.

Buck 1949:9.342 press (vb.); 10.67 push, shove (vb.); 12.12 put (place, set, lay). Bomhard—Kerns 1994:382, no. 218.

22.34. PROTO-NOSTRATIC *ʔ

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
ʔ-	ʔ-	Ø-	Ø-	ʔ-	Ø-	Ø-	Ø-
-ʔ-	-ʔ-	-Ø-	-Ø-	-ʔ-	-Ø-	-Ø-	-Ø-

626. Proto-Nostratic 1st singular personal pronoun stem *ʔa- (~ *ʔa-), *ʔi- (~ *ʔe-)
‘I, me’:

No doubt originally the same as the deictic particles *ʔa-, *ʔi- listed below.

- A. Proto-Afrasian *ʔa- 1st singular personal pronoun prefix: Proto-Semitic *ʔa- 1st singular personal pronoun prefix > Classical Arabic ʔa-; Šheri / Jibbāli e-, a-, Ø-; Mehri a-; Akkadian a-; Hebrew ʔe-/ʔā- [-ʔ/-ʔ]; Aramaic ʔi-; Ugaritic ā-/ī-; Geez / Ethiopic ʔa- [ʔ-]; Amharic a-. O’Leary 1923:244; Lipiński 1997:376—377. Proto-Berber *ʔa-nak- > *ʔnak- > Tuareg nək ‘I, me’; Ghadames nəc, nəcən ‘me’; Mzab nəc, nəcči, nəcčin ‘me’; Kabyle nək, nəkki, nəkkin ‘me’; Tamazight nək, nəc ‘me’. Proto-Cushitic *ʔ(a)- 1st singular personal pronoun prefix > Beja / Beḏawye ʔa-; Proto-Sam *Ø-. Heine 1978:34—36. Diakonoff 1988:80—82. According to Militarev (2011:77), this prefix is also found in Proto-Afrasian *ʔa-na(-k/tV) ‘I’.
- B. Proto-Indo-European *ʔe- in: *ʔe+kʷ-, *ʔe+gʰ-, *ʔe+kʰ- 1st singular personal pronoun stem: ‘I’: Greek ἐγώ, ἐγών ‘I’ (Laconian ἐγώνη ‘I’; Boeotian ἰώ(v) ‘I’); Latin egō ‘I’; Faliscan eko, ego ‘I’; Venetic .ego ‘I’; Gothic ik ‘I’; Runic eka [ᚱᚾ] ‘I’; Old Icelandic ek ‘I’; Faroese eg ‘I’; Swedish jag ‘I’; Danish jeg ‘I’; Old English ic ‘I’; Old Frisian ik ‘I’; Old Saxon ik ‘I’; Dutch ik ‘I’; Old High German ih, ihha ‘I’ (New High German ich); Armenian es ‘I’; Old Prussian es, as ‘I’; Lithuanian aš ‘I’ (Old Lithuanian eš); Latvian es ‘I’; Old Church Slav ic azъ, (rare) jazъ ‘I’; Czech ja ‘I’; Polish ja ‘I’; Serbo-Croatian ja ‘I’; Russian ja [ja] ‘I’; Sanskrit ahám ‘I’; Avestan azəm ‘I’; Old Persian adam ‘I’. Pokorny 1959:291 *eġ-, *eġ(h)om, *eġō ‘I’; Walde 1927—1932.I:115—116 *eġ(h)om; Mann 1984—1987:233 *eġō, *eġōne ‘I’, 236 *ek ‘I’, 238 *ekhō ‘I’; Watkins 1985:16 *eg- and 2000:22 *eg- nominative form of the first person singular personal pronoun; Mallory—Adams 1997:454 *h₁eġ ‘I’ (emphatic *h₁eġóm); Fortson 2004:127 *eġoh₂, *eġh₂-om; Brugmann 1904:407 *eġh-, *eġ-; Szemerényi 1996:213 *eġō, *eg(h)om; Meillet 1964:333; Mayrhofer 1956—1980.I:68 *eġhom, *eġom, *eġō(m), *eġ, *eġo(m) (?); Boisacq 1950:214—215 *eġ-, *eġh-, *eġ(h)óm; Hofmann 1966:68 *eġ(h)om; Frisk 1970—1973.I:441 *eġō, *eġom; Chantraine 1968—1980.I:311; Beekes 2010.I:373 *h₁eġ-+e/oH, -h₁-om; Ernout—Meillet 1979:192—193 *eġō; Walde—Hofmann 1965—1972.I 395—396 *eġ(h)om, *eġom, *eġ, *eġ(h), *eġō; De Vaan 2008:287; Orël 2003:83 Proto-Germanic *eka (< *eġō), (acc. sg.) *meke; Kroonen 2013:116 Proto-Germanic *ek(a) ‘I’; Feist

1939:291—292 **eġ(h)om*, **eġō*, **eġ*; Lehmann 1986:204—205 **eġ-ō*, **eġom*, **eġh-(om)*; De Vries 1977:98—99 **eġ*, **eġh*; Falk—Torp 1903—1906.I:336; Onions 1966:457; Klein 1971:363; Walshe 1951:107; Kluge—Mitzka 1967:323—324 **eġom*, **eġhom*; Kluge—Seebold 1989:324 **eġ*, **eġom*; Boutkan—Siebinga 2005:191; Fraenkel 1962—1965.I:18; Derksen 2008:31 **h₁eġ-H-om* and 2015:63 **h₁eġ-H-om*.

- C. (?) Chukchi-Kamchatkan: Chukchi *i-* ~ *e-* in (predicative forms): *-iyəm* ~ *-eyəm* ‘I’ (the shorter form *yəm* is used as an independent personal pronoun ‘I’), *-iyət* ~ *-eyət* ‘you’ (the shorter form *yət* is used as an independent personal pronoun ‘you’). Greenberg 2000:78—80. Fortescue (2005:146—147) reconstructs Proto-Chukchi-Kamchatkan **kəm* ‘I’ and (2005:142—143) **kəð* ‘you’.

Sumerian *a-a_A* ‘I’.

Note: The Chukchi forms indicate that we are dealing with what was originally a deictic particle here inasmuch as the same patterning is found in both the first and second person predicative pronoun stems. Moreover, it is the proximate deictic form **ʔi-* (~ **ʔe-*) that is represented in Chukchi-Kamchatkan as opposed to the distant form **ʔa-* (~ **ʔə-*) found in Afrasian (the Indo-European forms are phonologically ambiguous). This seems to indicate that independent developments were involved in each branch, using the same basic elements.

Möller 1911:64; Dolgopolsky 1984:89—90 and 94; Bomhard—Kerns 1994: 567, no. 433; Greenberg 2000:77—81.

627. Proto-Nostratic demonstrative stems (originally deictic particles):

Proximate: **ʔi-* (~ **ʔe-*) ‘this’;
Intermediate: **ʔu-* (~ **ʔo-*) ‘that’;
Distant: **ʔa-* (~ **ʔə-*) ‘that yonder, that over there’

Note: These stems regularly combined with other deictic particles: **ʔa/i/u+na-*, **ʔa/i/u+ša-*, **ʔa/i/u+ma-*, **ʔa/i/u+t^ha-*, **ʔa/i/u+k^ha-*, **ʔa/i/u+ya-*, etc.

- A. Afrasian: For Proto-Southern Cushitic, Ehret (1980:50) reconstructs the following suffixes: (a) **-i* nearness marker, (b) **-a* farness marker, (c) **-o* marker of reference (indefinite distance):

- a) Proto-Southern Cushitic **-i* nearness marker > Iraqw *-i* in *wi/ri/ti* ‘this’ (m./f.); Burunge *-i* in *ki/ti* ‘this’ (m./f.), *-i-* in *tiʔi* ‘here’; Alagwa *-i* in *wi/ti* ‘this’ (m./f.); Ma’a *i-* in *ilaʔi* ‘this direction’, *iʔi* ‘here’.
b) Proto-Southern Cushitic **-a* farness marker > Iraqw *-a* in *qa* ‘that’, *da* ‘that aforementioned’; Burunge *-a* in *kaʔa/taʔa* ‘that’ (m./f.), *taʔi* ‘there’; Ma’a *-a* in *twaʔi* ‘there’.

- c) Proto-Southern Cushitic *-*o* marker of reference (indefinite distance)
 > Iraqw -*o* in *wo/ro/to* ‘this being talked about’ (m./f./n.); Alagwa -*o*
 in *qo* ‘that’; K’wadza -*o* in -*uko* masculine gender marker, -*eto*, -*ito*
 feminine gender marker.

North Cushitic: Beja / Beḍawye *ʔün* ‘this’. Reinisch 1895:20—21.

Proto-Agaw base **ʔə+n-* ‘this’ > Bilin *ʔəna* ‘this’; Xamir *ən/ənin/ənyän*,
 (f.) *ənčän* ‘this’; Kemant *ən/əndän* ‘this’; Awngi / Awiya *ən* ‘this’.
 Appleyard 2006:136; Reinisch 1887:32—33 (*en, in*).

- B. Proto-Dravidian (a) **ǎ* distant demonstrative stem (Burrow—Emeneau 1984:1—3, no. 1; Krishnamurti 2003:253—258 and 390 **aH* ‘that’), (b) **ĩ* proximate demonstrative stem (Burrow—Emeneau 1984:38—40, no. 410; Krishnamurti 2003:253—258 and 390 **iH* ‘this’), and (c) **ũ* intermediate demonstrative stem (Burrow—Emeneau 1984:54—55, no. 557; Krishnamurti 2003:253—258 and 391 **uH* ‘yonder, not too distant’). Krishnamurti derives these stems from deictic bases and notes that they carry gender and number and are inflected for case. Finally, he notes that time (‘now, then, when’) and place (‘here, there, where’) adverbs are also derived from these deictic bases. Similar usage is found in other Nostratic languages. Examples (this is but a small sampling):
- a) Proto-Dravidian **ǎ* distant demonstrative stem: Tamil *a* demonstrative base expressing the remoter person or thing; prefixed to nouns to express remoteness; Malayalam *a*, *ā* ‘that, yonder’; Kota *a-* distant from the speaker in space or time; Toda *a-* distant from speaker in space or time; Kannaḍa *a-* remote demonstrative base; Kui *a-* ‘that over there’; Kuwi (adj.) *ā* ‘that most remote’; Kuṛux *a-* ‘that most remote’.
- b) Proto-Dravidian **ĩ* proximate demonstrative stem: Tamil *i* demonstrative base expressing the nearer or proximate person or thing; prefixed to nouns to express nearness; Malayalam *i*, *ī* ‘this’; Kota *i-* demonstrative base expressing nearness to the speaker; Maṇḍa *ī* ‘this’; Toda *i-* demonstrative base expressing nearness to the speaker; Kannaḍa *i-* proximate demonstrative base.
- c) Proto-Dravidian **ũ* intermediate demonstrative stem: Tamil *u* demonstrative base expressing a person, place, or thing occupying an intermediate position, neither far nor near, and meaning yonder or occupying a position near the person or persons spoken to; demonstrative particle before nouns expressing intermediate position or position near the person or persons spoken to; Kannaḍa *u-* base indicating intermediate place, quantity, or time; Kuwi *ũ* (adj.) ‘that’ (intermediate).

- C. a) Proto-Kartvelian **a-* proximate demonstrative stem: Georgian *a-*; Mingrelian *a-*; Laz *(h)a-*; Svan *a-*. Klimov 1964:41 **a-* and 1998:1 **a-* pronominal stem, proximal. Proto-Kartvelian **a-ma-* ‘that, this’: Georgian *a-ma-*, *a-m-* ‘that, this’; Mingrelian *a-mu-* ‘that, this’; Laz *(h)a-mu-* ‘that, this’; Svan *a-m(a)-* ‘this’, *a-me* ‘here’. Klimov 1964:44 **a-ma-* 1998:2 **a-ma-* ‘that, this’. Proto-Kartvelian **a-ša-* deictic stem: Georgian *a-se* ‘so’; Mingrelian *[a-š-]*; Laz *[a-š-]*; Svan *a-š* ‘so’. Klimov 1964:46 **a-s_I-* and 1998:4 **a-s_I-* deictic stem. Proto-Kartvelian **a-k-* ‘here’: Georgian *a-k* ‘here’; Mingrelian *ak*, *tak*, *atak-* ‘here’; Laz *a-k*, *a-ko* ‘here’. Klimov 1964:46 **a-k-* and 1998:4 **a-k-* ‘here’.
- b) Proto-Kartvelian **e-* demonstrative stem: Georgian *e-*; Mingrelian *e-*; Laz *(h)e-*; Svan *e-*. At the present time, it usually occurs as a bound demonstrative element (cf. Georgian *e-s* ‘so’, *-e-g* ‘this; he, she, it’; [dial.] *e-ma-*; etc.; Mingrelian *e-na-*; *e-ši* ‘so’; Laz *he-a-*; *he-s*; *e-še* ‘so, there’; Svan *[e-ž-]* in *e-ži*, *e-žē*, *e-žä* ‘he, she, it; that’; *e-š* ‘so’); however, note Laz *he* in *he bigate...* ‘with that stick...’. Klimov 1964:77 **e-*, 78 **e-g-*, 80 **e-s_I-*, and 80 **e-k-* ‘there’; 1998:45 **e-* pronominal element, 45 **e-g-* pronominal stem, and 47 **e-s_I-* pronominal stem.
- c) Proto-Kartvelian **i-* distant demonstrative stem: Georgian *i-*; Mingrelian *i-*; Laz *(h)i-*; Svan *i-*. Klimov 1964:99 **i-* and 1998:80 **i-* deictic stem (denoting remote objects in contrast to **a-*). Proto-Kartvelian **i-ma-* distant demonstrative stem: Georgian *i-ma-*; Mingrelian *i-mu-*; Laz *(h)i-mu-*; Svan *[i-m-]*. Klimov 1964:101—102 **i-ma-* and 1998:81 **i-ma-* a pronominal stem of demonstrative semantics (in contrast to **a-ma-*, it denotes remote objects). Proto-Kartvelian **i-š-* deictic element: Georgian *i-s-* ‘that; he’; Mingrelian *[i-š-]* in *iš-o*, *viš-o* ‘there’; Laz *[(h)i-š-]* in *(h)iš-o* ‘this way, over there’. Klimov 1964:102—103 **i-s_I-* and 1998:82 **i-s_I-* deictic element. Proto-Kartvelian **i-k-* ‘there, over there’: Georgian *i-k(a)* ‘there, over there’; Mingrelian *i-k* ‘there, over there’; Laz *(h)i-k* ‘there, over there’. Klimov 1964:104 **i-k-* and 1998:83 **i-k-* ‘there, over there’.

Note: The Nostratic pattern **ʔa-* (distant) ~ **ʔi-* (proximate) was changed to **a-* (proximate) ~ **i-* (distant) in Kartvelian.

- D. Proto-Indo-European demonstrative stem **ʔe-/ʔo-*, **ʔey-/ʔoy-/ʔi-* (< **ʔe-/ʔo-+y/i-*): Sanskrit *ayám* ‘this’ (gen. sg. m./n. *a-syá*, *á-sya*; f. *a-syáḥ* [cf. Burrow 1973:276—278]), *idám* ‘this’, (f.) *iyám* ‘she, this’, *á-taḥ* ‘from this, hence’ (< **e-to-s* [cf. Mayrhofer 1956—1980.I:26]), (n.) *e-tát* ‘this, this here’, *ihá* ‘here’ (Pāṇi *idha* ‘here, in this place, in this connection, now’), *e-śá* (f. *e-śā*) ‘this’; Old Persian *a-* ‘this’, *aita-* ‘this’, *ima-* ‘this’, *iyam* ‘this’, *idā* ‘here’; Avestan *a-* ‘this’, *aētaṭ* ‘this’, *ima-* ‘this’, *iḍa* ‘here’;

Hittite enclitic demonstrative particle (nom. sg.) *-aš*, (acc. sg.) *-an*, (n. sg.) *-at* ‘he, she, it’; (dat. sg.) *e-di*, *i-di*, *e-da-ni* ‘to or for him, her, it’; Latin *is*, *ea*, *id* ‘he, she, it; this or that person or thing’; Oscan *eiso-* ‘this’; Umbrian (dat. sg.) *esmei* ‘to this, to it’; Old Irish *é* ‘he, they’, *ed* ‘it’; Gothic anaphoric pronoun *is* ‘he’, *ita* ‘it’; Old Icelandic relative particle *es* (later *er*) ‘who, which, what’; Old Saxon *et*, *it* ‘it’; Old High German *er*, *ir* ‘he’, *ez*, *iz* ‘it’ (New High German *er* ‘he’, *es* ‘it’); Lithuanian *jis* (< **is*) ‘he’. Pokorny 1959:281—286 **e-*, **ei-*, **i-*, (f.) **i-* demonstrative particle; Walde 1927—1932.I:96—102 **e-*, **i-*, (f.) **i-*, **ā-*; Mann 1984—1987:235—236 **eīā* (**iā*) ‘she, it’, 236 **eīo*, **eījo* (**eījos*) ‘his, her(s)’, 427 **id* ‘it, that’, 433 **is* (**iā*, **iō* f.) ‘this, he (she)’, 437 **iā* ‘she, it’; De Vaan 2008:309—310; Watkins 1985:26 **i-* and 2000:35—36 **i-* pronominal stem; Gamkrelidze—Ivanov 1984.I:291 **is*, **it*, I:385—387 and 1995.I:253 (m./f.) **is*, (n.) **it* ‘this’; Mallory—Adams 1997:458; Tischler 1977— .1:1—2 and 1:118—119; Kloekhorst 2008b:162—164 and 220—221; Puhvel 1984— .1/2:3—6 and 1/2:6—7; Orël 2003:203 Proto-Germanic **iz*, (neuter) **it*; Kroonen 2013:268 Proto-Germanic **i-* ‘he/she, that one’; Feist 1939:296; Lehmann 1986:207—208; De Vries 1977:105; Kluge—Mitzka 1967:169—170; Kluge—Seebold 1989:183; Smoczyński 2007.1:234 **Hīó-*; Szemerényi 1996:206—207; Brugmann 1904:401—402; Meillet 1964:326—327. Proto-Indo-European **i* deictic particle meaning ‘here and now’ added to verbs to form so-called “primary” endings (cf. Burrow 1973:314; Fortson 2004:85; Kerns—Schwartz 1972:4). Proto-Indo-European adverbial particle **ǵē-/ǵō-* ‘near, by, together with’: Sanskrit *ā* ‘hither, near to, towards’; Greek prefixes *ἐ-* and *ὀ-*; Old High German prefix *ā-*; Old Church Slavic prefix *ja-*.

- E. Proto-Uralic **e-* demonstrative particle: Finnish *e-* in *että* ‘that’; Estonian *et* ‘that’, *iga* ‘every’; Mordvin *e-* in *esē* (inessive) ‘these’, *estē* (relative) ‘from there’, *est’a* ‘so’, *est’amo* ‘such’, *ete* (*e+te*) ‘this’, *ese* (*e+se*) ‘that, that one’, *embe* ‘if, when, after’; Zyrian / Komi *e-* in *esy* ‘this, that’; Hungarian *ez* ‘this’, *itt* ‘here’, *innen* ‘from here’, *ide* ‘hither’, *így* ‘so’, *ilyen* ‘such’; Yenisei Samoyed / Enets *eke*, *eko* ‘this, this here’, *eo?* ‘hither’, *inoo* ‘that there’; Kamassian *iidā* ‘that there’. Greenberg 2000:89; Collinder 1955:9 and 1977:31; Rédei 1986—1988:67—68 **e*; Décsy 1990:98 **e* ‘this’. Yukaghir (Northern / Tundra) *a-n* ‘that’, contrasting with *ten* ‘this’; (Southern / Kolyma) *a-da*, *a-da:* ‘there’, *a:n* ‘here it is’, *e-dij* (< **en+tiŋ*) ‘this’, *ej-tiŋ* ‘this’. Nikolaeva 2006:104, 152, and 159.
- F. a) Proto-Altaic **a-* deictic stem: Proto-Mongolian **a-nu-* 3rd person plural possessive pronoun > Written Mongolian *anu* originally the genitive form of the obsolete pronoun **a-*; in Modern Mongolian, it has almost completely lost its pronominal meaning and is used postpositionally to indicate that what precedes it is the syntactical subject of a sentence — it is now used interchangeably with *inu*. Note

Poppe (1955:219): “The pronoun of the third person plural was **a* in Common Mongolian. The stem of the oblique cases was **an*. Only the genitive is preserved in Written Mongolian, but in Middle Mongolian (in the *Secret History* and *Hua-i i-yü*) the genitive *anu*, the dative-locative *andur*, and the accusative *ani* occur. None of these forms occur in spoken Mongolian.”

- b) Proto-Altaic **e-* deictic stem: ‘this, that’: Proto-Tungus **e-* ‘this’ > Evenki *er, eri* ‘this’; Lamut / Even *er* ‘this’; Negidal *ey* ‘this’; Manchu *ere* ‘this’; Spoken Manchu (Sibo) *erə* ‘this’; Jurchen *e(r)se* ‘this’; Ulch *ey* ‘this’; Orok *eri* ‘this’; Nanay / Gold *ei* ‘this’; Oroch *ei* ‘this’; Udihe *eyi* ‘this’; Solon *er* ‘this’. Proto-Mongolian **e-ne-* ‘this’ > Written Mongolian *ene* ‘this’; Khalkha *ene* ‘this’; Buriat *ene* ‘this’; Kalmyk *enə* ‘this’; Ordos *ene* ‘this’; Moghol *enä* ‘this’; Dagur *ene* ‘this’; Dongxiang *ene* ‘this’; Shira-Yughur *ene* ‘this’; Monguor *ne* ‘this’. Proto-Turkic **an-* ‘that (oblique cases); here’ > Old Turkic (Orkhon, Old Uighur) (loc.) *aŋ-ta*, (dat.) *aŋ-ar* ‘that’; Karakhanide Turkic (loc.) *an-da*, (dat.) *aŋ-a* ‘that’; Turkmenian *ana* ‘here’; Karaim (loc.) *an-da*, (dat.) *an-ar* ‘that’; Tatar (loc.) *an-da*, (dat.) *aŋ-a*, *an-ar* ‘that’; Bashkir (loc.) *an-da*, *an-ta*, (dat.) *aŋ-a* ‘that’; Kirghiz (loc.) *an-ta*, (dat.) *a-(γ)a* ‘that’; Sary-Uighur (nom.) *a* ‘that’; Oyrot (Mountain Altai) (loc.) *an-da*, (dat.) *o-(γ)o* ‘that’; Tuva (loc.) *in-da*, (dat.) *a(ŋ)-a* ‘that’; Chuvash (loc.) *on-da*, (dat.) *ɨʷn-a* ‘that’; Yakut *ana-rā* ‘that’. Starostin—Dybo—Mudrak 2003:487 **e* ‘that’ (deictic root).
- c) Proto-Altaic **i-* deictic stem: Proto-Tungus **i-* 3rd person deictic stem > Manchu *i* ‘he, she’, *ineku* ‘the same; this (day, month, year)’; Spoken Manchu (Sibo) *ī* ‘he, she’; Jurchen *in* 3rd person deictic stem; Solon *ini* ‘his’. Proto-Mongolian **i-nu-* 3rd person singular possessive pronoun > Written Mongolian *inu* originally the genitive form of the extinct pronoun **i* ‘he, she, it’; in Modern Mongolian, it has almost completely lost its pronominal meanings and is used postpositionally to indicate that what precedes it is the syntactic subject of a sentence — it is now used interchangeably with *anu*. Note Poppe (1955:214): “The pronoun of the third person of the singular was **i* in Common Mongolian. The stem of the genitive was **in-* and in all the remaining oblique cases the stem was **ima-*. This pronoun has disappeared.”; Khalkha *ń* possessive pronoun; Buriat *ń* possessive pronoun; Kalmyk *ń* possessive pronoun; Moghol *ini ~ ni ~ ne ~ i* possessive pronoun; Dagur *īn* ‘he; this, that’. Proto-Turkic **i-na-* ‘that’ > Turkmenian *ina-ru* ‘that’; Tuva *inda* ‘there’, *indīγ* ‘such’. Starostin—Dybo—Mudrak 2003:577 **i* a deictic root.
- d) Proto-Altaic **o-* deictic stem: ‘this, that’: Proto-Tungus **u-* ‘this; that’ > Manchu *u-ba* ‘this; here, this place’; Spoken Manchu (Sibo) *evā* ‘this’; Udihe *u-ti* ‘that’. Proto-Mongolian **o-n-* ‘other, different’ > Written Mongolian *ondu* ‘another, other; different(ly); apart, separate’, *ončuyui* ‘peculiar, unusual; specific; separate; special; particular,

different; remote, isolated; strange'; Khalkha *ondō* 'other, different'; Buriat *ondō* 'other, different'; Ordos *ondōn* 'other, different'; Dagur *enčū* 'other'; Shira-Yughur *ondōn* 'other, different'. Proto-Turkic **o(-l)-* 'that' > Old Turkic (Orkhon, Old Uighur) *o-l* 'that'; Turkish *o* 'that'; Gagauz *o* 'that'; Azerbaijani *o* 'that'; Karakhanide Turkic *o-l* 'that'; Turkmenian *ol* 'that'; Uzbek *u* 'that'; Uighur *u* 'that'; Karaim *o* 'that'; Tatar *u-l* 'that'; Bashkir *u*, *o-šo* 'that'; Kirghiz *o-šo* 'that'; Kazakh *o-l* 'that'; Noghay *o-l* 'that'; Sary-Uighur *o-l*, *o* 'that'; Oyrot (Mountain Altai) *o-l* 'that'; Tuva *ol* 'that'; Chuvash *vṣʷ-l* 'that'; Dolgan *ol* 'that'. Starostin—Dybo—Mudrak 2003:1040 **o* 'this, that' (deictic particle).

- G. Proto-Gilyak / Nivkh **a-* distant demonstrative: 'that yonder, that over there': East Sakhalin *ahu-d* / *ehu-d* 'that distant from the speaker but visible'; Amur *a-d* 'that over there', *a-in* 'there'; South Sakhalin *a-x* / *ahus* 'over there'. Gruzdeva 1998:26; Greenberg 2000:91; Fortescue 2016:7. Proto-Gilyak / Nivkh **i-* in **ivŋ* 'he' or 'she': Amur *if* 'he, she'; North Sakhalin *i* 'he, she'; East Sakhalin *jaŋ* 'he, she'; South Sakhalin *jaŋ* 'he, she'. Fortescue 2016:81. Proto-Gilyak / Nivkh (deictic) **e-* in **ey-* distant demonstrative: 'that over there': Amur *aēhə-d* distant demonstrative: 'that over there'; East Sakhalin *ey-* intermediate demonstrative: 'that over there', *aiy-* distant demonstrative: 'that over there', *aix-nt* distant demonstrative: 'that far away'; South Sakhalin (*a*)*eyn* distant demonstrative: 'that (far away)'. Fortescue 2016:55 and 175 (table of affixes).
- H. Etruscan *i-* in: *i-ca* 'this', *i-n*, *i-nc* 'it', *i-ta* 'this'.

Sumerian *e* 'hither, here'.

Bomhard—Kerns 1994:576—577, no. 444; Illič-Svityč 1971—1984.I:257—258, no. 121, *ʔa demonstrative pronoun indicating distant object: 'that' and I:270—272, no. 134, *ʔi/(?)ʔe demonstrative pronoun indicating near object: 'this'; Greenberg 2000:81—87, §8. Third Person I ~ E, and 87—91, §9. Demonstrative A ~ E; Dolgopolsky 2008, no. 751, **ha* deictic pronominal particle ('ille', distal deixis), no. 753, **h[e]* 'this', no. 754, **[h]i* 'iste' (or 'hic'), and no. 755, **[h]u* 'iste', demonstrative particle (intermediate deixis ?).

628. Proto-Nostratic (n.) *ʔab-a 'strength, power'; (adj.) 'strong, mighty':

- A. Afrasian: Proto-Semitic *ʔab-ar- 'strong, mighty' > Akkadian *abāru* 'strength'; Hebrew *ʔāḇīr* [אֲבִיר] 'the strong one', *ʔabbīr* [אֲבִיר] 'strong, mighty, valiant'; Ugaritic *ibr* 'bull'; Yaʿudic *ʔbrw* 'force, power'; Gurage (Chaha) *abər* 'young person or animal in his prime'. D. Cohen 1970— :5; Murtonen 1989:81; Klein 1987:3; Leslau 1979:9.
- B. Proto-Indo-European *ʔabh-ro- 'strong, powerful, mighty': Gothic *abrs* 'strong, violent, great, mighty'; Old Icelandic *afar-* 'very, exceedingly', *afir*

‘strong’; Old Irish *abar-* ‘very’ (Middle Irish *abor-*); Welsh *afr-* ‘very’. Pokorny 1959:2 **abhro-* ‘strong’; Walde 1927—1932.I:177—178 **ōbh-*; Mann 1984—1987:1 **abhros* ‘powerful, gigantic’; Orël 2003:1—2 Proto-Germanic **abraz*; Kroonen 2013:1—2 **h₃ep-ró-*; Lehmann 1986:1—2; Feist 1939:1—2; De Vries 1977:2 and 2—3; Vendryès 1959— :A6—7.

- C. Proto-Altaic **abga* ‘strength, power’: (Manchu-)Tungus: Manchu *abgari* ‘idle, without occupation; retired official’; Lamut / Even *abgar*, *abgor* ‘healthy’; Evenki *awgara* (< **abga-ra*) ‘healthy’. Mongolian: Written Mongolian *auγ-a* ‘strength, power; mighty, powerful’, *auγatai* ‘strong, powerful’; Khalkha *ūgā* ‘strength, power’; Kalmyk *ūgv* ‘strength, power’. Poppe 1960:44, 89, and 95; Street 1974:7 **abga* ‘strength, power’. Not in Starostin—Dybo—Mudrak 2003.

Buck 1949:4.81 strong, mighty, powerful. Bomhard—Kerns 1994:573—574, no. 441; Brunner 1969:27, no. 72.

629. Proto-Nostratic (n.) **ʔab(b)a* ~ **ʔaph(p^h)a* ‘father, forefather’ (nursery word):

- A. Proto-Afrasian **ʔab-* ‘father, forefather, ancestor’: Proto-Semitic **ʔab-* ‘father, forefather, ancestor’ > Akkadian *abu* ‘father; (in pl.) forefathers, ancestors’; Amorite **ʔabum* ‘father’; Eblaite *a-bù* ‘father’, *a-bu* ‘elder’; Hebrew **ʔāb* [אב] ‘father’; Phoenician **ʔb* ‘father’; Punic **ʔb* ‘father’; Nabatean **ʔb* ‘father’; Ugaritic **ʔb* ‘father’; Aramaic **ʔabbā* ‘my father’; Liḥyānite **ʔb* ‘father’; Arabic **ʔab* ‘father, ancestor, forefather’; Sabaeen **ʔb* ‘father, forefather’; Mehri *ḥāyb* ‘father’; Šheri / Jibbāli **ʔiy* ‘father’; Geez / Ethiopic **ʔab* [አብ] ‘father, forefather, ancestor’; Tigrinya **ʔab* ‘father’; Tigre **ʔab* ‘father’; Amharic *abbat* ‘father’, *ab* ‘elder, forefather’; Argobba *aw* ‘father’; Harari *āw* ‘father’; Gurage *ab* ‘father’; Gafat *ab^wā* ‘father’. D. Cohen 1970— :1; Diakonoff 1992:85 **ʔab(b-)* (?) ‘father’; Murtonen 1989:80; Klein 1987:1; Leslau 1963:37, 1979:4—5, and 1987:2; Zammit 2002:67—68. Egyptian **ʔbt* ‘family; relatives (on the father’s side of the family)’. Hannig 1995:6; Faulkner 1962:2; Erman—Grapow 1921:1 and 1926—1963.1:7; Gardiner 1957:549. Berber: Tuareg *aba* ‘father’; Siwa *aba* ‘father’; Tamazight *ibba* ‘father’; Mzab *aba* ‘papa’; Tashelhiyt / Shilha *ibba* ‘father’; Chaouia *ibba* ‘father’. Proto-East Cushitic **ʔa(a)bb-* ‘father’ > Saho-Afar *abb-a* ‘father’; Somali *aabb-e* ‘father’; Rendille *ab-a* ‘father’; Bayso *abb-o* ‘father’; Galla / Oromo *abb-aa* ‘father’; Hadiyya *aabb-a* ‘father’; Burji *aabb-óo* ‘father, father’s brother, mother’s sister’s husband’, *abi* ‘maternal uncle’; Konso *aapp-a* ‘father’; Sidamo *aabb-o* ‘father’, *abbo* ‘maternal uncle’; Gedeo / Darasa *aabbo* ‘maternal uncle’. Hudson 1989:62; Sasse 1979:15 and 1982:21. Central Cushitic: Bilin (voc.) **ʔabbā* ‘O father!’; Kemant *aba* ‘father’. Appleyard 2006:64—65; Reinisch 1887:5. Proto-Southern Cushitic **ʔaba* or **aba* ‘father’ (term of address) > Asa *aba* ‘father’; Ma’a *aba* ‘father’. Central Chadic: Buduma *aba* ‘father’. Ehret 1980:281. Orël—Stolbova 1995:1, no. 2, **ʔab-* ‘father’.

- B. Dravidian: Tamil *appan*, *appu* ‘father’; Malayalam *appan* ‘father’; Kannada *appa* ‘father’, *apa* ‘father’; Koḍagu *appē* ‘father’; Tuḷu *appa*, *appē* affix of respect added to proper names of men; Telugu *appa* ‘father’; Gondi *āpōṛāl* ‘father’; Konḍa *aposi* ‘father’. Burrow—Emeneau 1984: 15—16, no. 156; Krishnamurti 2003:10 **app-a-* ‘father’.
- C. Proto-Indo-European **ʔabh-* ‘father, forefather, man’: Gothic *aba* ‘man, husband’; Old Icelandic *aʃi* ‘grandfather, man’; Old English personal names *Aba*, *Abba*, *Afa*; Old High German personal name *Abo*. Orël 2003:1 Proto-Germanic **abōn*; Kroonen 2013:1 Proto-Germanic **aban-* ‘man, husband’; Lehmann 1986:1; Feist 1939:1; De Vries 1962:2. Note: Greek ἄββᾱ ‘father’ is borrowed from Aramaic ʔabbā ‘my father’. Proto-Indo-European **ʔaph^hpa* ‘father’: Greek ἄππα, ἄπφα ‘father’; Tocharian A *āp*, B *āppo* ‘father’; Prakrit *appa-* ‘father’; Gujarati *āp* ‘father’ (used by shepherds); Marathi *āpā* term of respect for an elder or of endearment for a son or junior; Assamese *āp* term of address by lower classes for a father, grandfather, or old man, *āpaṭi* ‘father’. Note: The Indo-Aryan forms cited above may be loans from Dravidian. Pokorny 1959:52 **appa* ‘father’ (nursery word); Walde 1927—1932.I:47 **apa*; Turner 1966—1969.I:23; Boisacq 1950:72; Frisk 1970—1973.I:126 and I:127; Beekes 2010.I:119 (onomatopoeic); Hofmann 1966:21; Chantraine 1968—1980.I:99 and I:100; Adams 1999:44; Van Windekens 1976—1982.I:166.
- D. Proto-Uralic **eppi* ‘father-in-law’: Finnish *appi* ‘father-in-law’; Lapp / Saami *vuop’pā* ‘father-in-law’; Cheremis / Mari *owō* ‘father-in-law’; Hungarian *ip(a)-* ‘father-in-law’; Vogul / Mansi *up* ‘father-in-law’; Ostyak / Xanty *op* ‘father-in-law’. Collinder 1955:72, 1960:410 **appō*, and 1977:89; Rédei 1986—1988:14 **appe*; Aikio 2020:55—56 **eppi* ‘father-in-law’; Sammallahti 1988:536 **ippi* ‘father-in-law’; Zhivlov 2023:161 **eppi* ‘father-in-law’.
- E. Proto-Altaic **aba* ~ **ap^ha* ‘father’: Common Mongolian **ab(u)* ‘father’ > Written Mongolian *abu* ‘father’; Monguor *āba*, *āwa* ‘father’; Khalkha *av* ‘father’; Buriat *aba* ‘father’; Kalmyk *āwə* ‘father’. Poppe 1955:74. Derivative: **aba-ka* ‘paternal uncle’ (< **aba* ‘father’) > Written Mongolian *abay-a* ‘paternal uncle’; Khalkha *avga* ‘paternal uncle’; Buriat *abgay* ‘paternal uncle’; Kalmyk *awγə* ‘paternal uncle’; Ordos *awaga*, *agā* ‘paternal uncle’; Monguor *āga* ‘paternal uncle’. Mongolian loans in: Chagatay *abaqa* ‘paternal uncle’; Yakut *abaya* ‘paternal uncle’; Evenki *awaga* ‘paternal uncle’. Poppe 1960:56; Street 1974:7 **aba-ka* ‘paternal uncle’. Starostin—Dybo—Mudrak (2003:310) reconstruct Proto-Altaic **ap’a* ‘father’. However, such a reconstruction cannot account for the *-b-* found in the Mongolian forms cited above, which point, instead, to Proto-Altaic **aba* ‘father’. It is better to assume two separate forms at the Proto-Altaic level: **aba* ~ **ap^ha* ‘father’, the first of which was the ancestor of the Mongolian words for ‘father’, the second of which was the ancestor of the (Manchu-)Tungus and Turkic words. Starostin—Dybo—Mudrak cite the following forms from (Manchu-)Tungus and Turkic: Proto-Tungus

- **apa* ‘grandfather, uncle (elder brother of father, mother)’ > Negidal *apa* ‘grandfather, uncle (elder brother of father, mother)’; Nanay / Gold (reduplicated) (Naikhinsk) *papa*, (Bikin) *fafa* ‘grandfather, uncle (elder brother of father, mother)’. Proto-Turkic **apa* (**appa*) ‘father’ > Old Turkic (Orkhon, Old Uighur) *apa* ‘ancestors’; Karakhanide Turkic *apa* ‘father, bear; ancestor’; Turkish *aba* ‘father’; Azerbaijani (dial.) *aba* ‘father’; Turkmenian (dial.) *aba* ‘father’; Tatar (dial.) *aba* ‘father’; Bashkir (dial.) *apa* ‘father’; Kirghiz *aba* ‘father’; Sary-Uighur *awa* ‘father’; Oyrot (Mountain Altai) *aba* ‘father, bear’; Tuva *ava* ‘father’; Chuvash *oba* ‘bear’.
- F. Proto-Chukchi-Kamchatkan **æpæ* ‘grandfather’ (?) or ‘any older male relative’ (?): Chukchi *apajjən*, (Southern) *epe*, *epapə* ‘grandpa’ (children’s word); Kerek *apappij* ‘grandfather’, *appa* ‘daddy’, *appakku* ‘parents’; Koryak *apappo* ‘uncle’, *appa* ‘daddy’ (children’s word); Alyutor *apapa* ‘daddy’; Kamchadal / Itelmen (Southern) *apac* ‘father’. Fortescue 2005: 36—37.
- G. Proto-Gilyak / Nivkh **apak* ‘uncle’: Amur *apak* ‘uncle’; North Sakhalin *apák* ‘relative’. Fortescue 2016:14—15.
- H. Proto-Eskimo **ap(p)a* ‘grandfather’: Central Alaskan Yupik *apa(q)*, *appa* ‘grandfather’; Alutiiq Alaskan Yupik *apa*, *apaaq* ‘grandfather’; Naukan Siberian Yupik *apa*, *apaya* ‘grandfather’; Central Siberian Yupik *apa* ‘grandfather’; Sirenik *apa* ‘grandfather’; Seward Peninsula Inuit *ava* ‘grandfather’; Western Canadian Inuit *aappak* ‘father’; North Alaskan Inuit *aapa* ‘father’. Fortescue—Jacobson—Kaplan 1994:36.
- I. Etruscan *apa* ‘father, husband’, *apana* ‘related to the father, paternal’.

Sumerian *a-ba*, *ab*, *ab-ba* ‘father’.

Buck 1949:2.31ff. words for family relationship. Bomhard—Kerns 1994:572—573, no. 440; Dolgopolsky 1998:93—94, no. 118, **ʔaba* ~ **ʔapa* ‘daddy, father’ (nursery word) and 2008, no. 5, **ʔaba* ~ **ʔapa* ‘daddy, father’; Caldwell 1913:606 and 613; Hakola 2000:22—23, no. 38; Fortescue 1998:152.

630. Proto-Nostratic root **ʔad-* (~ **ʔəd-*):
 (vb.) **ʔad-* ‘to be strong, mighty, powerful, exalted’;
 (n.) **ʔad-a* ‘lord, master’; (adj.) ‘strong, mighty, powerful, exalted’
- A. Proto-Afrasian **ʔad-* ‘(vb.) to be strong, mighty, powerful, exalted; (n.) lord, master’: Proto-Semitic **ʔad-ān-* ‘lord, master’ > Hebrew *ʔādōn* [ʔādōn] ‘lord, master’; Phoenician *ʔdn* ‘lord, master’; Ugaritic *ādūn* ‘lord, father’. D. Cohen 1970— :9; Klein 1987:8; Tomback 1978:5—6. Proto-Semitic **ʔad-īr-* ‘strong, mighty, powerful, exalted’ > Phoenician *ʔdr* ‘to be powerful’; Hebrew *ʔaddīr* [ʔaddīr] ‘great, mighty, powerful, majestic’, *ʔēder* [ʔēder] ‘splendor, magnificence’, **ʔāḏar* [ʔāḏar] ‘to be glorious, mighty, exalted’; Ugaritic *ādr* ‘mighty’. Klein 1987:8; Murtonen 1989:83; D. Cohen 1970— :10; Tomback 1978:6. Berber: Tamazight *addur* ‘good

reputation, honor, glory, fame'; Zenaga *təydart* 'fatness, wealth'. Central Cushitic: Bilin *ʔadārā* 'master, lord'; Xamir *adāra*, *iederā* 'god'; Kemant *adāra* 'master, lord; god'; Quara *adarte* 'master, lord'. Appleyard 2006: 97—98. Lowland East Cushitic **ʔader-* 'uncle' > Galla / Oromo *adeeraa* 'uncle'; Somali *adeer* 'uncle'. Appleyard 2006:97—98. Southern Cushitic: Rift **daʔar-* (< **ʔadar-* through metathesis) 'chief' > Gorowa *daari* 'chief'. Highland East Cushitic: Hadiyya *adila* 'chief, (clan) leader, king'. Hudson 1989:268. Orël—Stolbova 1995:6, no. 19, **ʔader-* 'master, lord'.

- B. Proto-Altaic **ēdV* (with **ē-* for expected **ǣ-*) 'lord, master, husband': Proto-Tungus **edi-* 'husband' > Evenki *edī* 'husband'; Lamut / Even *edi* 'husband'; Negidal *edī* 'husband'; Ulch *edi(n)* 'husband'; Oroch *edi* 'husband'; Nanay / Gold *eži* 'husband'; Oroch *edi* 'husband'. Proto-Mongolian **ežen* 'lord, master' > Written Mongolian *ežen* 'lord, master, ruler, owner'; Khalkha *ezen* 'lord, master, ruler, owner, proprietor'; Buriat *ezen* 'lord, master'; Kalmyk *ezn* 'lord, master'; Ordos *ežin* 'lord, master'; Moghol *ežän* 'lord, master'; Dongxiang *ežen* 'lord, master'; Dagur *ežin* 'master, ruler'. Poppe 1955:47, 57, 115, and 169. Proto-Turkic **Edi* 'lord, host' > Old Turkic (Old Uighur) *edi* 'master, proprietor'; Karakhanide Turkic *iđi* 'lord, host'; Turkish *iye*, *is*, *is* 'lord, host'; Azerbaijani *iyä* 'lord, host'; Turkmenian *eye* 'lord, host'; Uzbek (dial.) *äyä* 'lord, host'; Karaim *iye*, *ye* 'lord, host'; Tatar *iyä* 'lord, host'; Bashkir *iyä* 'lord, host'; Kirghiz *ē* 'lord, host'; Kazakh *īye* 'lord, host'; Noghay *iye* 'lord, host'; Sary-Uighur *ise* 'lord, host'; Oyrot (Mountain Altai) *ē* 'lord, host'; Tuva *ē* 'lord, host'; Yakut *ičči* 'lord, host'. Starostin—Dybo—Mudrak 2003: 493—494 **ēdV* 'host, husband'.

Sumerian *ad* 'father'.

Buck 1949:19.36 noble (sb.), nobleman; 19.41 master. Dolgopolsky 1998:91, no. 115, **ʔediNV* 'pater familias' (or 'owner') and 2008, no. 14, **ʔediNV* 'pater familias'.

631. Proto-Nostratic (n.) **ʔady-a* 'thorn'; (adj.) 'pointed, sharp, prickly':

- A. Dravidian: Kuṛux *acc* 'thorn'; Malto *acu* 'thorn', *ac-acro* 'prickly'. Burrow—Emeneau 1984:6, no. 45.
- B. Proto-Indo-European **ʔedh-/ʔodh-* 'pointed, sharp, prickly': Old Prussian *addle* 'fir(-tree), spruce'; Lithuanian *ēglė* (< **edlē*) 'fir(-tree), spruce', *adýti* 'to darn', *ādata* 'needle'; Old Church Slavic *jela* (< **edlā*) 'fir(-tree), spruce'; Polish *jodla* 'spruce'; Old Czech *jedla* 'spruce'; Russian *jel'* [ель] (< **edli-*) 'fir(-tree) spruce'; Latin *ebulus* (< **edh-los*) 'the dwarf elder'. Pokorny 1959:289—290 **edh-* 'tip, point'; Mann 1984—1987:232 **edhlā*, *-jə* (?) 'firtree'; Gamkrelidze—Ivanov 1984.II:633 **ed[h]-*, **ed[h]lo-* and 1995.I:545 **edh-* 'to darn, to use a needle', **edhlo-* 'spruce; sharp, prickly'; Walde—Hofmann 1965—1972.I:388—389 **edh-* 'tip, point'; Ernout—

Meillet 1979:190; De Vaan 2008:185; Smoczyński 2007.1:3 and 1:141—142 **h₁ed^h-lo-*; Fraenkel 1962—1965.I:118; Derksen 2008:139 **h₁ed^h-l-i*.

Sumerian ^Ĝ*ġ**ad* ‘thorny bushes or undergrowth’, *ad* ‘a briar, bramble’.

Buck 1949:12.351 point. Bomhard—Kerns 1994:569—570, no. 436.

632. Proto-Nostratic (n.) **ʔaḥ-a* ‘cow’:

- A. Proto-Afrasian **ʔaḥ-* ‘cow’: Semitic: Ethiopic / Geez *ʔaḥā* [አሐ], *ʔaḥā* [አሕ] ‘cattle, cows’; Tigre *ʔaḥa* ‘cattle’; Tigrinya *ʔaḥa* ‘cattle’. D. Cohen 1970— :15; Leslau 1987:12. Egyptian *iḥ* ‘bull’, (f.) *iḥt* ‘cow’; Coptic *ehe* [ⲉⲭⲉ] ‘ox, cow’. Hannig 1995:96; Erman—Grapow 1921:17 and 1926—1963.1:119—120; Faulkner 1962:28; Gardiner 1957:554; Černý 1976:41; Vycichl 1983:50. M. Cohen 1947:78, no. 11.
- B. Dravidian: Tamil *ā*, *āṇ* ‘female of ox, sambur, and buffalo’, *āyaṇ* ‘herdsman’, (f.) *āytti*, *āyam* ‘a herd of cows’, *ā-ppi* ‘cow dung’; Malayalam *ā*, *ān* ‘cow’, *āyan* ‘cowherd’; Kota *a-v* ‘cow’; Kannada *ā*, *āvu* ‘cow’; Kodagu (pl.) *atta* ‘cattle’; Telugu *āvu* ‘cow’; Kuṛux *ōy* ‘cow’; Malto *ōyu* ‘cow, ox’. Burrow—Emeneau 1984:31—32, no. 334; Krishnamurti 2003:12, 92, and 278 **ā(m/n)-* ‘cow’.

Buck 1949:3.20 cattle; 3.21 bull; 3.22 ox; 3.23 cow. Bomhard 1996a:222, no. 632.

633. Proto-Nostratic root **ʔax-* (~ **ʔəx-*):

- (vb.) **ʔax-* ‘to be young, youthful, tender, fresh’;
- (n.) **ʔax-a* ‘a youth, young man, younger brother’; (adj.) ‘young, tender’

- A. Proto-Afrasian **ʔax-* ‘(adj.) young, tender; (n.) youth, young man, younger brother’: Proto-Semitic **ʔax-* ‘brother, companion, friend’ > Ugaritic *āḥ* ‘brother’; Eblaite *a-ḥu-um* ‘brother’; Akkadian *aḥu* ‘brother, colleague, associate’; Phoenician *ʔḥ* ‘brother’; Hebrew *ʔāḥ* [אָח] ‘brother, kinsman’; Syriac *ʔaḥā* ‘brother, friend, companion, associate’; Arabic *ʔaḥ*, *ʔaḥū* ‘brother, companion, friend’; Sabaeen *ʔḥ*, *ʔḥw* ‘brother’; Mehri *ḡā* ‘brother’; Soqotri *ʔāḥi* ‘brother’; Šheri / Jibbāli *ʔagā* ‘brother’; Ḥarsūsi *ḡā(h)* ‘brother’; Ethiopic / Geez *ʔəḥəw* [አካው], *ʔəḥ^w* [አካ], *ʔəḥ* [አካ] ‘brother, blood relation, kinsman’; Tigre *ḥu* ‘brother’; Tigrinya *ḥaw* ‘brother’; Argobba *āḥ* ‘brother’; Harari *əḥ* ‘younger brother’. D. Cohen 1970— :15; Klein 1987:16; Murtonen 1989:86—87; Zammit 2002:70. West Chadic **ʔaḥ(ya)-* ‘uncle, brother’ > Kulere *aḥy-* ‘uncle’; Warji *yahə-* ‘brother’ (according to Orël—Stolbova [1995:7], Warji initial *ya-* is due to the influence of the second syllable); Hausa *wāà/yàà/yáá* ‘elder brother’. Central Chadic **ʔaḡ-* ‘son’ > Musgu *aḥi* ‘son’. Orël—Stolbova 1995:7, no. 23, **ʔaḥ-* ‘brother’.

- B. Kartvelian: Georgian *ax-al-i* ‘young, new, fresh’; Svan *m-ax-e* ‘new’, *m-ax-änd* ‘anew, again’, *m-ax-eɣwäž* ‘a brave man, a youth’. Palmaitis—Gudjedjiani 1985:215; Schmidt 1962:94. Not related to Proto-Kartvelian **xal-/xl-* ‘to be near’ as hesitatingly suggested by Schmidt (1962:94), Klimov (1964:260 and 1998:328), Fähnrich—Sardshweladse (1995:544—545), and Fähnrich (2007:676—677).

Buck 1949:2.44 brother; 14.13 new; 14.14 young. Bomhard 1996a:223—224, no. 634.

634. Proto-Nostratic root **ʔak^h*- (~ **ʔək^h*-):

(vb.) **ʔak^h*- ‘to eat’;

(n.) **ʔak^h-a* ‘food, meal; fodder, feed, morsel’

- A. Proto-Afrasian **ʔak-* ‘to eat’: Proto-Semitic **ʔak-al-* ‘to eat’ > Akkadian *akālu* ‘to eat’; Hebrew *ʔāḫal* [אָחַל] ‘to eat’; Aramaic *ʔāḫal* ‘to eat’; Arabic *ʔakala* ‘to eat, to consume’, *ʔakl* ‘food; meal, repast; fodder, feed’; Eblaite *a-kà-lum* ‘(vb.) to eat; (n.) food’; Ugaritic *ʔkl* ‘to eat, to consume’; Sabaeen *ʔkl* ‘meal or grain, cereal crops’; Geez / Ethiopic *ʔakl* [አክል] ‘food, bread, corn, grain, fodder, bait, produce of the field’; Tigre *ʔakəl* ‘corn’; Tigrinya *ʔekli* ‘cereals’; Amharic *əhəl* ‘grain, cereal, crops, food’; Argobba *əhəl* ‘grain, cereal, crops, food’; Harari *əxi* ‘cereal, sorghum’; Gurage (Soddo) *ākəl* ‘cereal, barley’. D. Cohen 1970— :18; Murtonen 1989:90; Klein 1971:27; Leslau 1963:23, 1979:33, and 1987:15; Militarev 2010:23 Proto-Semitic **ʔkl*; Zammit 2002:75—76. [Orël—Stolbova 1995:37, no. 148, **ʔVkul-* ‘to eat’.]
- B. Proto-Indo-European **ʔak^h*- ‘to eat’: Sanskrit *aśnāti* ‘to eat’, *aśúṣa-h*, *ásna-h* ‘voracious’; Old Icelandic *agn* ‘bait’, *æja* ‘to rest and bait’; (?) Greek ἄκολος ‘a bit, morsel’ (this may be a Phrygian term — cf. βεκος ακκαλος τι in a Phrygian inscription). Pokorny 1959:18 **ak̑-* ‘to eat’; Walde 1927—1932.I:112—113 **ak̑-*; Mann 1984—1987:236 **ekno-*, **ekən-* ‘to eat, to swallow, to drink’; Mayrhofer 1956—1980.I:60 Proto-Indo-European **ek(u- ?)* or **ak̑-* if Sanskrit *aśnāti* is related to Greek ἄκολος; Boisacq 1950:36; Frisk 1970—1973.I:55; Chantraine 1968—1980.I:48; Hofmann 1966:10; Beekes 2010.I:53; De Vries 1977:3 **ek̑-* ‘to eat’ and 681; Orël 2003:4 Proto-Germanic **agnan*, 5 **axjanan*; Kroonen 2013:3 Proto-Germanic **agana-* ‘bait’.

Buck 1949:5.11 eat. Brunner 1969:36, no. 139; Bomhard—Kerns 1994:559, no. 420.

635. Proto-Nostratic root **ʔak^h*- (~ **ʔək^h*-):

(vb.) **ʔak^h*- ‘to be evil, wicked, bad; to hurt, to harm’;

(n.) **ʔak^h-a* ‘evil, wickedness, harm’

- A. Afrasian: Proto-Semitic **ʔak-ay-* ‘(vb.) to be evil, wicked, bad; to hurt, to harm; (n.) evil, wickedness, harm’ > Geez / Ethiopic *ʔakaya* [አካየ], *ʔakya* [አካየ] ‘to be bad, evil, wicked’, *ʔaʔkaya* [አአካየ] ‘to make bad, to make evil, to do harm, to treat badly, to afflict, to deprave, to pervert, to corrupt’, *taʔakaya* [ተአካየ] ‘to be bad, to be hurtful’, *ʔakkuy* [አካይ] (f. *ʔakkīt* [አካት]) ‘bad, wicked, villainous, evil, noxious, vile’; Tigre *ʔaka* ‘to be bad, evil; to deteriorate’; Tigrinya *ʔakäyä* ‘to be bad, evil’. Semitic loans in: Bilin *ʔekáy* ‘evil’; Beja / Beḍawye *ʔaka* ‘harm, mischief’. Reinisch 1895:12. D. Cohen 1970— :18; Leslau 1987:17.
- B. Dravidian: Tamil *akaṭu* ‘wickedness’; Kannaḍa *agaḍu* ‘viciousness, savageness, meanness’; Telugu *agaḍu* ‘blame, exposure, fault’. Burrow—Emeneau 1984:3, no. 4.
- C. Proto-Indo-European **ʔak^h-* ‘evil, pain, trouble, misfortune’: Sanskrit *ākam* ‘unhappiness, pain, trouble’; Avestan *akō* ‘bad’; Farsi *āk-* ‘insult, misfortune’. Mayrhofer 1956—1980.I:14. Pokorny (1959:23) reconstructs Proto-Indo-European **ak^u-* ‘to harm, to hurt, to injure, to damage, to wrong’ (?) on the basis of a comparison of the Indo-Iranian forms cited above plus several alleged Greek cognates (such as, for example, ἀπάτη ‘trick, fraud, deceit’). However, according to Frisk (1970—1973.I:118) and Chantraine (1968—1980.I:95), the Greek forms cited by Pokorny have no known cognates in other Indo-European daughter languages and should, therefore, be removed from the comparison.
- D. Proto-Gilyak / Nivkh **əki-* ‘bad’: Amur *əki-dv* ‘bad’; North Sakhalin *əki-s* ‘bad’; East Sakhalin *əki-d* ‘bad’; South Sakhalin *əki-nd* ‘bad’. Fortescue 2016:166.

Buck 1949:11.28 harm, injure, damage (vb.); 16.31 pain, suffering; 16.72 bad.
Bomhard—Kerns 1994:578—579, no. 447.

636. Proto-Nostratic root **ʔak^h-* (~ **ʔəkh-*):
(vb.) **ʔak^h-* ‘to dig’;
(n.) **ʔak^h-a* ‘that which is dug: digging, ditch, trench, hole; that which is used to dig: carving tool, chisel, cutter, gouge’
- A. Proto-Afrasian **ʔak-* ‘to dig’ (> ‘to plow, to till’): Proto-Semitic **ʔak-ar-* ‘to till’, **ʔikkar-* ‘farmer’ > Arabic *ʔakara* ‘to plow, to till, to cultivate the land’, *ʔakkār* ‘plowman’; Akkadian *ikkaru* ‘plowman, farm worker, farmer’; Hebrew *ʔikkār* [אִכָּר] ‘plowman, farm worker’; Aramaic *ʔikkārā* ‘plowman, farm worker’; Mandaic *ʔkr* ‘to plow, to till, to cultivate’. D. Cohen 1970— :19; Klein 1987:27 (Klein considers Hebrew *ʔikkār* [אִכָּר] to be a loan from Akkadian). Egyptian *ʔkr* name of the earth-god. Hannig 1995:16; Faulkner 1962:6; Erman—Grapow 1921:4 and 1926—1963.1:22; Gardiner 1957:550. Orël—Stolbova 1995:8, no. 26, **ʔakür-* ‘to till’ and 20, no. 70, **ʔekar-* ‘farmer’.

- B. Dravidian: Tamil *akar* ‘(vb.) to excavate, to dig out, to pluck out (as eye), to uproot; (n.) moat, tank, reservoir’, *akari* ‘moat’; Malayalam *akaruka*, *akiruka* ‘to dig out, to excavate’, *akir*, *akari* ‘moat, ditch, trench’, *akil*, *akil* ‘moat, earth wall’; Kannada *agar* (*agard-*), *agur* (*agurd-*) ‘to dig’, *agar* ‘what has been dug’, *agarte* ‘digging, pit, ditch’, *agarata*, *agarate* ‘digging, ditch, moat’, *agalte* ‘ditch, moat’, *agi*, *age* ‘to dig, to burrow, to make a hole in the ground’; Tulu *agary*, *agalū* ‘ditch, trench, moat’, *agate* ‘overturning the soil by spade’; Telugu *agaḍṭa* ‘ditch, moat, trench’; Kolami *agul-* (*agult-*) ‘to dig’; Naiki (of Chanda) *agul-/agl-* ‘to dig’, *agulmur* ‘digging’; Gadba *adg-*, *arg-* ‘to dig’. Burrow—Emeneau 1984:4, no. 11.
- C. Proto-Indo-European *ʔokh- ‘(vb.) to dig; (n.) furrow’: Hittite (acc. sg.) *ak-ka-a-la-an*, *ag-ga-la-an* ‘furrow’. Perhaps also Greek ὄγμος ‘furrow’, if from *ὄκ-μο-ς. Benveniste 1962:107—108; Puhvel 1984—.1/2:23; Chantraine 1968—1980.II:773; Frisk 1970—1973.II:347—348; Mallory—Adams 1997:434—435 **h_{1/4}okéteh_a* ‘rake, harrow’, **h_{1/4}ek-* ‘to rake, to harrow’. Older etymologies in Boisacq 1950:684, Hofmann 1966:224, and Beekes 2010.II:1045.
- D. Proto-Altaic *ʔakh- ‘to dig, to delve’: Proto-Tungus **aχiri-* ‘to sweep, to rake up snow’ > Ulch *aχiri-* ‘to sweep, to rake up snow’; Oroch *aχiri-* ‘to sweep, to rake up snow’; Nanay / Gold *aχiri-* ‘to sweep, to rake up snow’. Proto-Mongolian **uku-* ‘(vb.) to dig, to delve; (n.) adze, notch (on animal’s ear), axe’ > Mongolian *uqu-* ‘to dig, to excavate’, *uqumi* ‘carving tool, chisel, cutter, gouge’, *uqumal* ‘dug out, excavated, hollowed out, scooped out’, *uqudasu(n)* ‘an excavated hole’, *uqumida-* ‘to cut with a chisel’; Khalkha *uxu-* ‘to dig, to delve’, *uxmi* ‘adze, notch (on animal’s ear)’; Buriat *uxami* ‘adze’; Kalmyk *uxə-* ‘to dig, to delve’; Ordos *uxa-* ‘to dig, to delve’. Starostin—Dybo—Mudrak 2003:282—283 *ʔak’u ‘to dig, to delve’.

Buck 1949:8.15 cultivate, till; 8.21 plow (vb.; sb.); 8.22 dig.

637. Proto-Nostratic (n.) *ʔak^{hk}ha ‘older female relative’ (nursery word):

Note also:

(n.) *ʔak^{hk}ha ‘older male relative’

- A. Proto-Afrasian *ʔakk- ‘grandmother’: Proto-East Cushitic *ʔaakk- ‘mother’s mother, grandmother’ > Galla / Oromo *akk-oo* ‘grandmother’; Hadiyya *aakk-o* ‘mother’s mother’; Burji *aakk-óo* ‘grandmother’; Bayso *akk-o* ‘grandmother’; Konso *aakk-a* ‘grandmother’. Sasse 1982:21. Proto-Highland East Cushitic **akako* ‘grandfather, grandmother’ > Gedeo / Darasa *akkaʔo* ‘grandfather, grandmother’; Sidamo *ahaahe* ‘grandmother’, *ahaahe* ‘grandfather’. Hudson 1989:72.
- B. Dravidian: Tamil *akkā*, *akkai*, *akkan*, *akkātai*, *akkacci*, *akkaicci*, *akkāl* ‘elder sister’; Malayalam *akka* ‘elder sister, wife of an elder brother, elderly maternal or paternal cousin’; Kota *akn* ‘elder sister or female

parallel cousin'; Kannada *akka* 'elder sister'; Koḍagu *akkē* 'elder sister or female parallel cousin'; Tuḷu *akka*, *akkē* 'elder sister'; Telugu *akka* 'elder sister'; Kolami *akkābāi* 'elder sister'; Gondi *akkā*, *akkal(i)* 'elder sister'. Krishnamurti 2003:10 **akka*- 'elder sister'; Burrow—Emeneau 1984:4, no. 23.

- C. Proto-Indo-European (f.) (**ǵakʰkʰeA* [**ǵakʰkʰaA*] >) **ǵakʰkʰā* 'female relative, mother': Sanskrit *akkā* 'a mother (used contemptuously)'; Prakrit *akkā* 'sister, baud'; Marathi *akā* 'respectful term for elder sister or any elderly woman'; Greek Ἀκκό 'the (wet-)nurse of Demeter (*mater Cereris*)'; Latin *Acca* in *Acca Lārentia* 'the wife of the shepherd Faustulus, who nursed and brought up the twins Romulus and Remus; mother of the twelve *Arvales Fratres*'. Pokorny 1959:23 **akkā* 'mother'; Walde 1927—1932.I:34 **akkā*; Mallory—Adams 1997:386 **h_aekkeh_a*- 'mother'; Mayrhofer 1956—1980.I:15; Turner 1966—1969.I:1; Chantraine 1968—1980.I:48; Frisk 1970—1973.I:53; Hofmann 1966:10; Boisacq 1950:35—36; Beekes 2010.I:52 (nursery word); Walde—Hofmann 1965—1972.I:5; Ernout—Meillet 1979:4. Note: The Indo-Aryan terms cited above are sometimes taken to be loans from Dravidian.
- D. Uralic: Finnish *akka* 'old woman'; Lapp / Saami *akku* 'grandmother'; Cheremis / Mari *aka* 'older sister'.
- E. Proto-Altaic **ěkʰa* (~ -o) (with **ě*- for expected **ǵ*-) 'elder sister': Proto-Tungus **eKe*, **keKe* 'woman, wife; elder sister' > Evenki *ekīn* 'woman, wife'; Lamut / Even *ekən* 'elder sister'; Negidal *eχe* 'woman, wife', *eχīn* 'elder sister'; Manchu *χeχe* 'woman, female'; Spoken Manchu (Sibo) *χeχə* 'woman, female'; Jurchen *χeχe-e* 'woman, wife'; Ulch *ēqte* 'woman, wife'; Oroch *ekte* 'woman, wife'; Nanay / Gold *ekte* 'woman, wife'; Oroch *eki* 'elder sister'; Udihe *eχi(n)* 'woman, wife; elder sister'; Solon *χeχe* 'woman, wife'. Proto-Mongolian **eke* 'mother', **egeče* 'elder sister' > Written Mongolian *eke* 'mother', *egeče* 'elder sister'; Khalkha *eχ* 'mother', *egč* 'elder sister'; Buriat *eχe* 'mother', *egeše* 'elder sister'; Kalmyk *ekə* 'mother', *egəčə*, *ekčə* 'elder sister'; Ordos *eke* 'mother', *egeči* 'elder sister'; Dagur *eg* 'mother', *egči*, *ekē* 'elder sister'; Dongxiang *egečə* 'elder sister'; Shira-Yughur *he* 'mother', *əyeči* 'elder sister'; Monguor *kaži*, *āžī* 'elder sister'. Poppe 1955:146. Proto-Turkic **eke* 'elder sister' > Old Turkic (Old Uighur) *eke* 'elder sister'; Karakhanide Turkic *eke* 'elder sister', *ege-t* 'female servant of bride'; Turkmenian *ekeži* 'elder sister'; Chuvash *akka* 'elder sister'. Poppe 1960:55, 103, and 128; Street 1974:12 **eke* 'some older female relative'; Starostin—Dybo—Mudrak 2003:499—500 **ěk'a* (~ -o) 'elder sister'. As noted by Starostin—Dybo—Mudrak (2003:500), some of these forms may be borrowings.
- F. Proto-Eskimo **a(a)kar* 'older female relative' (expressive gemination of initial vowel): Alutiiq Alaskan Yupik *aakaaq* 'older sister'; Central Alaskan Yupik *aakaaq* 'mother'; Naukan Siberian Yupik *aakaaq* 'older sister'; Central Siberian Yupik *aakaaq* 'older sister or female'; Sirenik *aakaX* 'older sister'; Seward Peninsula Inuit *aaka* 'mother'; North Alaskan

Inuit *aaka* ‘mother’, *aaxxaa* ‘eldest sister’; Western Canadian Inuit (Siglit) *aakaq*, *aakaaraaluk* ‘older sister’. Fortescue—Jacobson—Kaplan 1994:10.

Buck 1949:2.22 woman; 2.24 female; 2.31ff. words for family relationship; 2.36 mother. Bomhard—Kerns 1994:557—558, no. 417; Hakola 2000:18, no. 19; Caldwell 1913:567 and 611—612.

638. Proto-Nostratic (n.) *ʔak^hka ‘older male relative’ (nursery word):

Note also:

(n.) *ʔak^hka ‘older female relative’

- A. Proto-Afrasian *ʔak- ‘older male relative’: Proto-Highland East Cushitic **akako* ‘grandfather, grandmother’ > Gedeo / Darasa *akkaʔo* ‘grandfather, grandmother’; Sidamo *ahahe* ‘grandmother’, *ahaaho* ‘grandfather’. Hudson 1989:72. Southern Cushitic: Proto-Rift *ʔako ‘old man’ > Iraqw *ako* ‘old man’; Asa *ʔagok* ‘mother’s brother’. Ehret 1980:377. Omotic: Bench / Gimira *akas* ‘grandfather’. Takács 2011a:146.
- B. Dravidian: Parji *akka* ‘mother’s father’; Gondi *akkō* ‘mother’s father (said by granddaughter)’, *akko* ‘great grandfather’, *akko* ‘daughter’s son or daughter, grandson’s wife’, *ukko* (that is, *akko*) ‘maternal grandfather’; Pengo *ako* ‘maternal grandfather’; Kui *ake* ‘grandfather, ancestor’, *akenja* ‘grandfather’; Kuwi *akku* ‘grandfather’. Burrow—Emeneau 1984:4, no. 24.
- C. Yukaghir (Northern / Tundra) *akaa* ‘elder brother’, *akaadie* ‘the eldest among brothers’. Nikolaeva 2006:99.
- D. Proto-Altaic *āk^ha ‘older male relative’: Proto-Tungus **akā*, **kakā* ‘man; elder brother’ > Evenki *akā* ‘akin; elder brother’; Lamut / Even *aqā*, *aqḥn* ‘elder brother’; Negidal *aga*, *aḡa* ‘elder brother’; Manchu *ḡaḡa* ‘male, man’, *aḡun* ‘elder brother’; Spoken Manchu (Sibo) *hahə* ‘man’; Ulch *aga* ‘elder brother’; Jurchen *ḡaḡa-ay* ‘man’, *aḡun* (*aḡun-un*) ‘elder brother’; Orok *aga*, *aqā* ‘elder brother’; Nanay / Gold *ā* ‘elder brother’; Oroch *aka*, *akin* ‘elder brother’; Udihe *aga* ‘elder brother’; Solon *aḡā*, *aḡin* ‘elder brother’. Proto-Mongolian **aka* ‘elder brother’ > Written Mongolian *aqā* ‘older brother; senior, older, elder’; Khalkha *aḡ*, *aḡay* term of respectful address: ‘aunt’; Buriat *aḡa* ‘elder brother’; Kalmyk *aḡə* ‘elder brother’; Ordos *aḡa* ‘elder brother’; Dagur *akā*, *aga* ‘elder brother’; Dongxiang *aḡa* ‘elder brother’; Shira-Yughur *aba* (or *aga*) ‘elder brother’; Monguor *aga* ‘elder brother’. Poppe 1955:88. Proto-Turkic *(i)āk^ha ‘elder male relative: elder brother; elder uncle; father; grandfather’ > Old Turkic (Old Uighur) *aqā* ‘elder male relative: elder brother; elder uncle; father; grandfather’; Turkish *aḡa* term of respectful address: ‘lord, master, gentleman’; Azerbaijani *aḡa* ‘elder male relative: elder brother; elder uncle; father; grandfather’, also used as a term of respectful address; Turkmenian *agā* ‘elder male relative: elder brother; elder uncle; father; grandfather’; Uzbek *ḡa* ‘elder male relative: elder brother; elder uncle; father; grandfather’; Uighur *aḡa* ‘elder male relative: elder brother; elder uncle; father;

grandfather'; Karaim *aqā* term of respectful address, *aya* 'elder', also used as a term of respectful address; Tatar *aya* 'elder male relative: elder brother; elder uncle; father; grandfather', also used as a term of respectful address; Bashkir *ayay* 'elder male relative: elder brother; elder uncle; father; grandfather', also used as a term of respectful address; Kirghiz *aya* 'elder male relative: elder brother; elder uncle; father; grandfather'; Kazakh *aya* 'elder male relative: elder brother; elder uncle; father; grandfather; elder'; Noghay *aya* 'elder male relative: elder brother; elder uncle; father; grandfather', also used as a term of respectful address; Sary-Uighur *aqā* 'elder male relative: elder brother; elder uncle; father; grandfather', also used as a term of respectful address; Oyrot (Mountain Altai) *aqā* 'elder male relative: elder brother; elder uncle; father; grandfather', also used as a term of respectful address; Tuva *aqi* 'elder male relative: elder brother; elder uncle; father; grandfather'; Yakut *aya* 'father'; Dolgan *aga* 'father'. Poppe 1960:55, 94, 124, and 146; Street 1974:7 **aka* 'some older male relative'; Starostin—Dybo—Mudrak 2003:281—282 **āk'a* 'elder brother'.

- E. Proto-Gilyak / Nivkh **akan* or **aki* 'older brother': Amur *əkən* / *əkəd* 'older brother'; East Sakhalin *aki* / *aka(n)d* 'older brother'; North Sakhalin *əkəkən* / *əkən* 'older brother'; South Sakhalin *akan* 'older brother'. Fortescue 2016:10 — Fortescue notes: "any older male or female blood relative acc[ording to] Sht[ernberg], who indicates Tungusic equivalents."

Buck 1949:2.35 father; 2.46 grandfather; 2.51 uncle. Dolgopolsky 2008, no. 21, **ṛaḲa* 'elder relative, grandfather'; Fortescue 1998:152.

639. Proto-Nostratic root **ṛak^{wh}*- (~ **ṛək^{wh}*-):

- (vb.) **ṛak^{wh}*- 'to be hot, to burn; to warm oneself';
(n.) **ṛak^{wh}-a* 'heat, fire'

- A. Proto-Afrasian **ṛak^w*- '(vb.) to be hot, to burn; (n.) fire': Semitic: Arabic *ṛakka* 'to be very hot; to push back; to press; to be oppressed, contracted with anxiety', *ṛakka-t* 'suffocating heat; plight; tumult; hatred, envy; death'; Syriac *ṛakkəṯā* 'wrath, anger'. D. Cohen 1970— :18. East Cushitic: Arbore *ṛoog-* 'to burn'. Proto-Southern Cushitic **ṛak^w*- or **ṛaak^w*- 'to be bright, to be brightly colored' > K'wadza *kamisayo* 'chameleon'; Ma'a *ṛá-* 'to be white', *ṛáku* 'white', *ṛakúye* 'clean'. Ehret 1980:287, no. 43. West Chadic: Tsagu *áàkwé* 'fire'; Kariya *àkú* 'fire'; Miya *ákú* 'fire'; Jimbin *akwá* 'fire'; Diri *áukòwà*, *akúwá* 'fire'; Ngizim *áká* 'fire'; Bade *ákà* 'fire'. East Chadic: Sokoro *óko*, *òkó* 'fire'; Dangla *ako* 'fire'; Migama *ókkò* 'fire'; Jegu *ṛóók* 'fire'; Birgit *ṛàkù* 'fire'. Jungraithmayr—Ibriszimow 1994.II:138—139; Newman 1977:26, no. 48, **akul*/**ak^wa* 'fire'. Ehret 1995:361, no. 717, **ṛaak^w*- '(vb.) to burn (of fire); (n.) fire' and 520, no. 717.

- B. Dravidian: Kuṛux *axrnā* ‘to warm oneself (by the fire, in the sun)’; Malto *awge* ‘to expose to the heat of the sun or fire’, *awgre* ‘to bask in the sun, to warm oneself at a fire’. Burrow—Emeneau 1984:4, no. 18.
- C. Proto-Eskimo **əkə-* ‘to burn’: Central Alaskan Yupik *əkə-* ‘to burn’, *əka* ‘fire, conflagration’; Seward Peninsula Inuit *iyi-* ‘to burn’; North Alaskan Inuit *iki* ‘to burn’; Western Canadian Inuit (Siglit) *iki-* ‘to be burnt’; Greenlandic *iki-* ‘to be lit, to smoke (lamp)’. Aleut *hiy-* ‘to burn’ (with secondary *h-*), *ikla-X* ‘firewood’. Fortescue—Jacobson—Kaplan 1994:101. Proto-Inuit **əkət-* ‘to ignite’ > Seward Peninsula Inuit *iyit-* ‘to ignite’; North Alaskan Inuit *ikit-* ‘to ignite, to be ignited’; Western Canadian Inuit *ikit-* ‘to ignite’; Greenlandic *ikit-* ‘to ignite’. Fortescue—Jacobson—Kaplan 1994:101. Proto-Eskimo **əknəbəy-* ‘to catch or strike fire’: Alutiiq Alaskan Yupik *kənəḡə-* ‘to build a fire’; Central Alaskan Yupik *kənḡə-* ‘to start to burn’; Western Canadian Inuit *ijnak-* ‘to catch fire’, *ijnait* ‘flintstones’; Eastern Canadian Inuit *inna(k)-* ‘to strike fire’, *innaq* ‘flintstone’; Greenlandic *innay-* ‘to strike fire, to catch fire’. Fortescue—Jacobson—Kaplan 1994:101. Proto-Eskimo **ək(ə)nəṛ* ‘fire’: Alutiiq Alaskan Yupik *kənəq* ‘fire’; Central Alaskan Yupik *kənəq** ‘fire’; Naukan Siberian Yupik *əkḡəq* ‘fire, star’; Central Siberian Yupik *kənəq** ‘fire’; Sireniki *əkḡəX* ‘fire’; Seward Peninsula Inuit *ikniq* ‘fire’; North Alaskan Inuit *inyiq** ‘fire’; Western Canadian Inuit *inyiq* ‘fire’; Eastern Canadian Inuit *inniq* ‘fire struck with stone, spark from lighter’; Greenlandic *inniq** ‘fire’. Fortescue—Jacobson—Kaplan 1994:101. Proto-Inuit **əkuala-* ‘to burn brightly’ > Seward Peninsula Inuit *iyuaṭak-* ‘to burst into flames’; North Alaskan Inuit *ikuala-* ‘to blaze, to burn brightly’, *ikuallak-* ‘to burst into flames’; Western Canadian Inuit *ikuallak-* ‘to burst into flames’; Eastern Canadian Inuit *ikuala-* ‘to be smoking (lamp that has burnt too much)’; Greenlandic *ikuala-* ‘to burn’, *ikuatṭay-* ‘to flare up’. Fortescue—Jacobson—Kaplan 1994:101. Proto-Eskimo **əkuma-* ‘to be burning’: Alutiiq Alaskan Yupik *kumaq* ‘light (for example, lamp)’; Central Alaskan Yupik *kuma-* ‘to be lit’, *kumaXtə-* ‘to ignite’; Naukan Siberian Yupik *əkuma-* ‘to burn’, *əkumaXtə-* ‘to ignite’; Central Siberian Yupik *kumar-* ‘to burn, to ignite’, (Chaplinski) *kumaq* ‘fire, conflagration’; Sireniki *kuməḡə-* ‘to burn’, *kuməṛ-* ‘to blaze up’, *kuməX-* ‘flame, glow’; Seward Peninsula Inuit *iyuma-* ‘to be burning’; North Alaskan Inuit *ikuma-* ‘to be burning’; Western Canadian Inuit *ikuma-* ‘to be burning’; Eastern Canadian Inuit *ikuma-* ‘to be burning’; Greenlandic *ikuma-* ‘to be burning’. Fortescue—Jacobson—Kaplan 1994:101. Proto-Yupik **kənir-* ‘to cook’ > Alutiiq Alaskan Yupik *kənir-* ‘to cook’; Central Alaskan Yupik *kənir-* ‘to cook’. Fortescue—Jacobson—Kaplan 1994:101.
- D. Proto-Chukchi-Kamchatkan (?) **əkəka* ‘hot’: Alyutor *n-əkəka-qin* ‘hot’, *əkəka-sʔən* ‘hottest’; Kamchadal / Itelmen *xka-laX* ‘hot’, *xkakkəm* ‘heat (in summer)’, *akika* ‘(it is) hot!’, (Eastern) *kekalu* ‘hot’, *kekak* ‘heat’, (Southern) *kika* ‘not’. Fortescue 2005:339.

Buck 1949:1.81 fire; 1.85 burn (vb.); 15.85 hot, warm.

640. Proto-Nostratic root **ʔal-* (~ **ʔəl-*):

(vb.) **ʔal-* ‘to purify, to cleanse’ (> ‘to sift, to clean grain’ in the daughter languages);

(n.) **ʔal-a* ‘the act of washing, cleaning; that which is washed, cleaned’

Semantics as in Sanskrit *punāti* ‘to make clean, clear, pure, or bright; to cleanse, to purify, to purge, to clarify; (with *sáktum*) to cleanse from chaff, to winnow; to sift, to discriminate, to discern’, (passive) *pūyáte* ‘to be cleaned, washed, or purified’; related to Old High German *fowen* ‘to sift, to clean grain’ and Latin *pūrus* ‘clean, pure’ (cf. Pokorny 1959:827; Mayrhofer 1956—1980.II:237—238; Ernout—Meillet 1979:546—547).

- A. Proto-Afrasian **ʔaal-* ‘to purify, to cleanse; to sift, to clean grain’: Highland East Cushitic: Kambata *aa’l-* ‘to wash oneself’. Hudson 1989:306. Proto-Southern Cushitic **ʔaal-* ‘to sift (grain from chaff), to clean; (figuratively) to separate out useless from useful’, **ʔaala* ‘clean, pure’ > Alagwa *ila* ‘grain of corn’; Iraqw *al-* ‘to reject’, *ilmo* ‘individual grain (of maize)’; K’wadza *ana* (< **alVmV*) ‘maize’, *ela* ‘good’; Asa *ʔila* ‘good, ripe’, *ʔelala* ‘suitable’; Dahalo *ʔeel-* ‘to sift (grain from chaff)’, *ʔeelaawuð-* ‘to rinse’. Ehret 1980:284—285.
- B. Dravidian: Tamil *alampu* (*alampi-*) ‘to wash, to rinse’, *alacu* (*alaci-*) ‘to rinse’, *alaicu* (*alaici-*) ‘to wash, to rinse’, *alaittal* ‘to wash clothes by moving them about in water’; Malayalam *alakkuka* ‘to wash clothes by beating’, *alakku* ‘washing’, *alampuka* ‘to shake clothes in water’; Toda *asp-* (*aspy-*) ‘to clean’; Kannada *alambu*, *alumbu*, *alabu*, *alubu* ‘to rinse, to wash’, *ale* ‘to wash’, *alasu* ‘to shake or agitate water (as a cloth, vegetables, etc., for cleansing)’; Telugu *alamu* ‘to wash’; Tulu *alambuni* ‘to wash’, *alumbuni*, *lumbuni* ‘to plunge, to wash, to rinse’. Burrow—Emeneau 1984:24, no. 246.
- C. Proto-Altaic **ālgī* ‘net, sieve’: Proto-Tungus **alga* ‘net’ > Evenki *alga* ‘net’; Manchu *algan* ‘a net for catching quail’; Ulch *arga* ‘net’; Nanay / Gold *alga* ‘net’; Oroch *agga* ‘net’; Solon *alga* ‘net’. Proto-Turkic **ēlge-* (vb.) to sift; (n.) sieve’ > Old Turkic (Old Uighur) *elge-* ‘to sift’; Karakhanide Turkic *elge-* ‘to sift’, *ele-* ‘to sift’, *elek* ‘sieve’; Turkish *ele-* ‘to sift’, *elek* ‘sieve’, *eleme* ‘sifted’; Gagauz *iele-* ‘to sift’, *ielek* ‘sieve’; Azerbaijani *älä-* ‘to sift’, *äläk* ‘sieve’; Turkmenian *ele-* ‘to sift’, *elek* ‘sieve’; Uzbek *ela-* ‘to sift’, *elak* ‘sieve’; Uighur *ägli-* ‘to sift’, *älgäk* ‘sieve’; Karaim *ele-*, *öle-* ‘to sift’, *elek*, *ölek* ‘sieve’; Tatar *ile-* ‘to sift’, *ilek* ‘sieve’; Bashkir *ile-* ‘to sift’, *ilek* ‘sieve’; Kirghiz *ele-*, *elge-* ‘to sift’, *elek*, *elgek* ‘sieve’; Noghay *ele-* ‘to sift’, *elek* ‘sieve’; Oyrot (Mountain Altai) *elge-* ‘to sift’, *elgek* ‘sieve’; Tuva *egle-/elge-* ‘to sift’; Chuvash *alla-* ‘to sift’, *alla* ‘sieve’. Turkic loans in Mongolian *elkeg* ‘sieve, sifter, strainer,

bolter', *elkegde-* 'to sift, to bolt, etc.'. Starostin—Dybo—Mudrak 2003: 287—288 **ālgi* 'net, sieve'.

Buck 1949:9.36 wash; 15.87 clean. Bomhard—Kerns 1994:583—584, no. 453.

641. Proto-Nostratic root **ʔal-* (~ **ʔəl-*) (perhaps also **ʔel-*, **ʔul-*):
 (vb.) **ʔal-* 'to be not so-and-so or such-and-such';
 (n.) **ʔal-a* 'nothing'

Originally a negative verb stem meaning 'to be not so-and-so or such-and-such' — later used in some branches as a negative particle.

- A. Afrasian: Proto-Semitic **ʔal-/ʔul-* (< **ʔəl-*) element of negation > Akkadian *ūl* 'not'; Ugaritic *āl* 'not'; Hebrew *ʔal* [ʔal] (negative particle) 'certainly not', (as prefix) 'not, non-, un-', (n.) 'nothing' (Job 24:25); Phoenician *ʔl* element of negation; Arabic *lā* (negative particle) 'not', (with apoc. expressing negative impv.) 'no!'; Sabaeen *ʔl* (negative particle) 'not, no one'; Ḥarsūsi *ʔel* 'not'; Šḥeri / Jibbāli *ʔəl* 'not'; Mehri *ʔal* 'not'; Geez / Ethiopic *ʔal-* [ḥal-] element of negation in *ʔalbə-* [ḥal-], *ʔalbo* [ḥal]; Tigre *ʔälä-* in *ʔälä-bu* 'there is not'; Amharic *al-* used to express a negative verb in the perfect. D. Cohen 1970— :19, no. 3, prohibitive particle; Klein 1987:28; Leslau 1987:17 and 18; Zammit 2002:363. Berber: Kabyle *ala* 'no'. Central Cushitic: negative element *-lā* in: Bilin *ʔillā* 'no'; Awngi / Awiya *əlla* 'no'. Appleyard 2006:105; Reinisch 1887:26, 32, and 250. Militarëv 2012:80 Proto-Afrasian **ʔa/ul-*.
- B. Proto-Dravidian **al-* 'to be not so-and-so': Tamil *al-* 'to be not so-and-so'; Malayalam *alla* 'is not that, is not thus'; Kolami *ala-* 'to be not so-and-so'; Kannada *alla* 'to be not so-and-so, to be not fit or proper'; Kodagu *alla* 'to be not so-and-so'; Malto *-l-* negative morpheme; Brahui *all-* base of past negative tenses of *anning* 'to be', *ala*, *alavā* 'certainly not, not a bit of it'. Burrow—Emeneau 1984:22, no. 234; Krishnamurti 2003:354—356 Proto-South Dravidian **al-* 'to be not'.
- C. Indo-European: Hittite *li-e* element used with the present indicative to express a negative command. The Hittite form is isolated within Indo-European. Many scholars take it to be from Proto-Indo-European **ne* (cf. Puhvel 1984— :5:74—77), but see Kloekhorst 2008b:523.
- D. Proto-Uralic **elä* imperative of the negative auxiliary verb (cf. Collinder 1977:26). Marcantonio (2002:239) describes the patterning in Finnish as follows: "A negative verbal form is used in Finnish also in the Imperative, as shown by the pair *lue* 'read' vs *älä lue* 'do=not read' (2nd Person Singular). The negative form *älä* is often compared with the equivalent Yukaghir *el* ~ *ele*. Equivalent negative verbs and related isomorphic constructions are found in the majority of the Tungusic languages (*e-* ~ *ä-*), in Mongolian (*e-se*) (UEW 68; SSA 100) and in Dravidian." Rédei (1986—1988:68—70) treats the negative verb **e-* and the imperative **elä*

together, as do many others, including Collinder and TAILLEUR. As noted by Greenberg (2000:214), these two forms are so closely intertwined, often through suppletion, that it is difficult to distinguish one from the other. In the closely-related Yukaghir, all verbs except *le-* ‘to be; to live, to become’ form the negative by means of a prefix *el-* (cf. Greenberg 2000:214–215). Clearly, we are dealing with two separate forms here. The first is the Proto-Nostratic negative particle **ʔe* ‘no, not’, and the second is the negative verb *ʔal-* (~ **ʔəl-*) ‘to be not so-and-so’. The latter is to be distinguished from the Uralic verb **elä-* ‘to live, to be’ (cf. Rédei 1986–1988:73; Collinder 1955:10 and 1977:31). Greenberg’s (2000:215) analysis of the situation is as follows: “As we have just seen, the Yukaghir verb ‘to be’ is *l’e*, a form that has cognates in other Eurasiatic languages. The theory tentatively suggested to account for this and other intricate facts is that there was a Eurasiatic negative verb **e(i)* that, when combined with the positive verb ‘to be’ *le*, formed a negative existential verb **e-le* that in some instances lost either its initial or final vowel.” Contrary to Greenberg, the Proto-Nostratic verb under discussion here must be reconstructed as **ʔil-* (~ **ʔel-*) ‘to live, to be alive; to be, to exist’ (cf. Illič-Svityč 1965:341 *жить*¹ ‘to live’: **elʌ*), not **le*. To complicate matters further, there may have also been a separate Proto-Nostratic negative particle **li* (~ **le*) ‘no, not’ as well as a separate verb stem **liʔ-* (~ **leʔ-*) ‘to become’. The relationship among these forms is extremely complex and not yet fully understood.

- E. Proto-Altaic **ule* (~ *-i*) negative particle: Proto-Mongolian **ülü-* negative element preceding verbs > Written Mongolian *ülü*; Khalkha *ül*; Buriat *üle*; Kalmyk *üle*; Ordos *üle*, *ülü*; Moghol *la*, *lū*, *le*; Dagur *ul*, *ule*; Dongxiang *ulie*; Shira-Yughur *lə*; Monguor *li*, *lī*. Poppe 1955:287, 288, 289, 290, and 291; Starostin—Dybo—Mudrak 2003:1493 **ule* (~ *-i*) negative particle.
- F. Chukchi-Kamchatkan: According to Greenberg (2000:216): “In the Koryak group reflexes of **ele* form sentence negations or are equivalent to English ‘no!’, a natural use for a negative existential. Examples are Palana Koryak *elle* and Kerek *ala* ‘not.’ Kerek has lost its vowel harmony system through merger so that *a* is the expected reflex of **e*. Aliutor has gone through similar phonetic changes and has *al*, *alla* ‘no, not’. In addition, for prohibitives, Kerek uses the imperative of a negative auxiliary verb *illa*, which follows the negative infinitive...” Fortescue (2005:31) reconstructs Proto-Chukchi-Kamchatkan **æl(læ)* ‘not’: Chukchi *etlə* ‘not’; Kerek *ala* ‘not’; Koryak [*elvelkin* ‘not’]; Alyutor *alla* ‘not’ (Palana *el(le)* ‘not’); Kamchadal / Itelmen *il-* in: *il-puvakax* ‘don’t threaten!’, *il-masys* ‘don’t hinder!’.
- G. Gilyak / Nivkh: Greenberg (2000:215) compares the Gilyak / Nivkh verb stem *ali-* ‘to be unable’, “which may be considered to represent the full form of the negative existential **ele*.” Proto-Gilyak / Nivkh **ali-* ‘to not manage’: Amur *jali-dʷ* ‘to not manage to complete’; East Sakhalin *jali-d* ‘to not manage, to miss (goal)’; South Sakhalin *jari-nd* ‘unable’. Fortescue 2016:11.

Sumerian: *li* negative particle: ‘not, un-’.

Caldwell 1913:607 and 614; Illič-Svityč 1971—1984.I:263—264, no. 128, *ʔāla particle of categorical negation; Bomhard—Kerns 1994:580—581, no. 449; Greenberg 2000:214—217, §58. Negative E/ELE; Dolgopolsky 2008, no. 22, *ʔāla particle of negation and categorical prohibition.

642. Proto-Nostratic root *ʔam- (~ *ʔam-):

(vb.) *ʔam- ‘to seize, to grasp, to take, to touch, to hold (closely or tightly)’;
(n.) *ʔam-a ‘grasp, hold, hand(ful)’; (adj.) ‘seized, grasped, touched, held, obtained’

- A. Proto-Afrasian *ʔam- ‘to seize, to touch, to hold’: Egyptian *ʕm*, *ʕmm* ‘to seize, to grasp’. Hannig 1995:9; Faulkner 1962:3; Erman—Grapow 1921:2 and 1926—1963.1:10; Gardiner 1957:550. Berber: Ghadames *uməz* ‘to take a handful’, *tamməst* ‘a handful of ...’; Tamazight *aməz* ‘to take, to seize, to grasp’, *tummiḥt* ‘fist; punch’; Mzab *tummiḥt* ‘handful’; Tashelhiyt / Shilha *aməz* ‘to take, to seize, to grasp’; Riff *aməz* ‘to take, to seize’; Kabyle *tummaḥ* ‘fist; punch; handful’; Chaoia *tummiḥt* ‘handful’. Cushitic: Beja / Beḍawye *ʔamit*-, *ʔamid*- ‘to seize’. Reinisch 1895:19. Highland East Cushitic: Hadiyya *amad*- ‘to hold, to seize, to start, to begin, to touch’; Sidamo *amad*- ‘to hold, to seize, to touch’. Hudson 1989:80. Central Chadic *ʔam-/ʔim- ‘to catch, to seize’ > Tera *ōom*- (< *Hwa-ʔam-) ‘to catch, to seize’; Musgu *ima*-, *ime*- ‘to catch, to seize’. East Chadic *ʔam- ‘to catch’ > Lele *ōm*- ‘to catch’; Kabalay *am*- ‘to catch’. Orël—Stolbova 1995:10, no. 35, *ʔam- ‘to catch, to seize’.
- B. Dravidian: Tamil *amar* ‘to get close to, to resemble, to be suitable, to wish, to desire, to do, to perform’, *amai* (-v-, -nt-) ‘to crowd together, to be close; to be attached, connected, joined; to suffice, to prepare (oneself); to be suitable, appropriate; to be complete, to prepare; (-pp-, -tt-) to effect, to accomplish, to create, to appoint, to institute, to bring together, to prepare, to get ready’, *amai* ‘fitness, beauty’, *amaiti* ‘being attached, joined; nature of a thing, abundance, occasion, opportunity, deed, action’, *amaippu* ‘structure, constitution, destiny, fate’, *amaivu* ‘being acceptable, suitable, fitting’; Kannaḍa *amar* (*amard*-) ‘to be closely united, to gather in a mass, to be connected with, to be produced, to arise, to appear, to be fit or agreeable, to be nice or becoming, to be known or famous, to fit, to agree with, to seize firmly, to embrace’, *amarike*, *amarke* ‘fitness, agreeing with (as a ring with the size of the finger), state of being closely joined’, *amarisu*, *amarcu* ‘to cause a person to join or stick by, to prepare, to do in a fit manner, to make ready’; Tuḷu *amarige* ‘heap’, *amariyuni*, *amaryuni* ‘to cleave to’, *amaruni* ‘to seize, to touch, to hold’, *amāruni* ‘to suit, to fit, to embrace, to hold, to twine (a plant)’; Telugu *amayū* ‘to be useful or serviceable’, *amaraṅgā*, *amara(n)* ‘properly, fitly, duly, agreeably’, *amaru* ‘to suit; to be fit, suitable, or agreeable; to be prepared or ready’, *amarincu*,

amar(u)cu ‘to prepare, to make ready, to adjust, to arrange, to provide’; Kuwi *ambrinai* ‘to suit’. Burrow—Emeneau 1984:16, no. 162.

- C. Proto-Indo-European **ǵem-/ǵm-* ‘to take, to obtain’: Latin *emō* ‘to purchase, to buy’; Umbrian (past. ptc.) *emps* ‘taken’; Old Irish *-em-* in *ar-fō-em-at* ‘they take’; Lithuanian *imù, im̃ti* ‘to take, to accept, to receive, to get’; Old Church Slavic *imō, jęti* ‘to take’. Pokorny 1959:310—311 **em-*, **em-* ‘to take’; Walde 1927—1932.I:124—125 **em-*; Rix 1998a:209—210 **h₁em-* ‘to take’; Mann 1984—1987:240 **emō* (**imō, *mō*) ‘to take, to get’; Watkins 1985:17 **em-* and 2000:23 **em-* ‘to take, to distribute’; Mallory—Adams 1997:564 **h₁em-* ‘to take, to distribute’; Gamkrelidze—Ivanov 1984.II:754 **em-* and 1995.I:187, I:194, I:657 **em-* ‘to take, to have’; De Vaan 2008:188—189; Walde—Hofmann 1965—1972.I:400—402 **em-* ‘to take’; Ernout—Meillet 1979:195—196; Derksen 2008:158 **h₁m-* and 2015:200—201 **h₁m-*; Smoczyński 2007.1:220—221 **h₁em-/h₁m-*; Fraenkel 1962—1965.I:184—185.

Buck 1949:11.13 take; 11.14 seize, grasp, take hold of; 11.81 buy. Bomhard—Kerns 1994:563, no. 426; Dolgopolsky 2008, no. 38, **ǵemV* ‘to seize, to hold’; Illič-Svityč 1971—1984.I:270, no. 133, **ǵemA* ‘to seize, to take’.

643. Proto-Nostratic (n.) **ǵam-a* ‘time, moment, point of time’; (particle) ‘now’:

- A. Proto-Afrasian **ǵam-* ‘time, moment, point of time; now’: Semitic: Geez / Ethiopic *ǵama* [ḫam] ‘at the time of, when’, *ǵamehā* [ḫamē] ‘at that time, then, next’; Amharic *ama* ‘when’ (Geez loan); Gurage *-ām(m)^{wä}* suffix expressing time, as in (Chaha) *yärbat-ām^{wä}* ‘time of the evening meal’ (from *yärbat* ‘evening meal, dinner’), (Chaha) *zäft-ām^{wä}*, (Eža, Muher) *zäft-āmm^{wä}* ‘time around midnight’ (from *zäft* ‘calm’). Leslau 1979:41 and 1987:21. Proto-East Cushitic **ǵamm(-an)-* ‘time, now’ > Galla / Oromo *amm-a* ‘now’; Somali *amm-in-ka, imm-in-ka, imm-i-ka* ‘now’; Hadiyya *amm-an-i* ‘time, when’; Gidole *amm-an-n-e* ‘now’; Konso *amm-a* ‘now’. Sasse 1979:25. Proto-Southern Cushitic **ǵami* ‘when?’ > Iraqw *-ami* in *hami* ‘now’; K’wadza *-ami-* in *hamiso* ‘then’; Ma’a *ámi* ‘when?’. Ehret 1980:281.
- B. Elamo-Dravidian: Middle Elamite *a-am, am* ‘now’. Paper 1955:107.
- C. Indo-European: Proto-Celtic **am-o-*; **amstero-*, *-ā* ‘time, moment’ > Old Irish *amm* (also written *ám*) ‘time, moment, point of time’, (acc.) *i n-am*, (dat.) *i n-aim* ‘when’, *i n-ám sin* ‘at this moment’, *aimser* ‘time, moment, epoch’; Welsh *amser* ‘timely’, *amserach* ‘more timely’; Cornish *amser* (Middle Cornish *anser*) ‘timely’; Breton (Middle Breton *amser*) *amzer* ‘timely’. Mann 1984—1987:19 **ambhmn-* (**əmbhmn-*, **mbhmn-*) ‘circuit, period’; Vendryès 1959—:A35 and A67; Lewis—Pedersen 1937:21; Matasović 2009:33 Proto-Celtic **amo-* ‘time’.
- D. Yukaghir (Southern / Kolyma) *amunde* (< **am-un-* ?) ‘here; soon after’. Nikolaeva 2006:103.

- E. Proto-Altaic **āmV* ‘on time, timely, now’: Proto-Tungus **am-* ‘quick, quickly; to be on time, to catch up; to reach’ > Evenki *ama*, *ama-kān* ‘quick, quickly’, *amin-*, *ami-ltān-* ‘to be on time, to catch up’; Lamut / Even *āmṛṭq* ‘quick, quickly’, *āmṛltṭn-* ‘to be on time, to catch up’; Manchu *am-bu-* ‘to overtake and catch’, *am-ča-* ‘to pursue, to chase, to catch up to; to hurry, to rush’, *am-čana-* ‘to go to pursue, to rush (over)’, *am-čata-* ‘to strive to overtake’, *am-čanga* ‘pertaining to pursuit’; Spoken Manchu (Sibo) *aməčə-* ‘to pursue, to chase, to catch up to’; Nanay / Gold *am-qa-čī-* ‘to reach, to touch’; Solon *amarī* ‘quick, quickly’. Proto-Mongolian *(h)*am-* ‘sudden, quick; to be on time’ > Written Mongolian *am-ži-* ‘to do something in the required time, to be on time; to be successful, to make progress’, *ama-γai* ‘sudden, quick’; Khalkha *am-ži-* ‘to be on time’; Buriat *am-ža-* ‘to be on time’; Kalmyk *am-γā* ‘sudden, quick’; Ordos *am-ži-* ‘to be on time’. Proto-Turkic *(i)*am-* ‘now; recent’ > Old Turkic (Orkhon, Old Uighur) *am-dī* ‘now’; Sary-Uighur *am-γo*, *am-dö-ko* ‘recent’; Khakas *am* ‘now’, *am-dī-γī*, *am-γī* ‘recent’; Tuva *am* ‘now’, *am-γī*, *am-dī* (< *am-dī-γī*) ‘the same’; Yakut *anī* (< **am-dī*) ‘now’; Dolgan *anī* ‘now’. Starostin—Dybo—Mudrak 2003:298 **āmV* ‘quick, timely’.

Buck 1949:14.11 time. Bomhard—Kerns 1994:578, no. 446.

644. Proto-Nostratic (n.) **ʔam(m)a* ‘mother’ (nursery word):

Note also:

(n.) **ʔema* ‘older female relative; mother; (older) woman’

- A. Proto-Afrasian **ʔam(m)a* ‘mother’: Proto-Semitic **ʔumm-* (< **ʔamm-*) ‘mother’ > Akkadian *ummu* ‘mother’; Amorite *ʔummu*, (very rare) *ʔimmu* ‘mother’; Ugaritic *ūm* ‘mother’; Eblaite *ū-mu-mu* ‘mother’; Phoenician *ʔm* ‘mother’; Hebrew *ʔēm* [עֵם] ‘mother’; Aramaic *ʔēm*, *ʔimmā* ‘mother’; Syriac *ʔemmā* ‘mother’; Arabic *ʔumm* ‘mother’; Sabaeen *ʔmm* ‘mother’; Mehri (indef.) *ḥām*, (constr.) *ʔēm* ‘mother’; Ḥarsūsi *ḥām* ‘mother’; Šheri / Jibbālī *ʔēm(é)* ‘mother’; Geez / Ethiopic *ʔamm* [አም] ‘mother’; Tigre *ʔam* ‘mother’; Argobba *əm* ‘mother’; Gafat *əm^{wit}* ‘mother’; Gurage *əmm* ‘female, mother’; Amharic *əmmo*, *əmmamma*, *əmmayye* ‘mother!’. D. Cohen 1970— :22—23; Klein 1987:33; Murtonen 1989:92—93; Leslau 1979:42 and 1987:22; Diakonoff 1992:86 **ʔamm-* ‘mother’; Zammit 2002:79. Berber: Tuareg *ma* ‘mother’; Nefusa *əmmi* ‘mother’; Wargla *mamma* ‘mother, mommy’; Mzab *mamma* ‘mother, mommy’; Ghadames *ma* ‘mother’, *imma* ‘mommy’; Tamazight *imma*, *mma*, *ma* ‘mother, mommy’; Kabyle *yamma* ‘mother, mommy’, *tayammaṭ* ‘mother’; Chaouia *imma*, *yamma* ‘mother, mommy’. Proto-Highland East Cushitic **ama* ‘mother’ > Gedeo / Darasa *ama* ‘mother’; Burji *am-á* ~ *aam-á* ‘adult woman, wife, mother’; Hadiyya *ama* ‘mother’; Kambata *ama-ta* ‘mother’; Sidamo *ama* ‘mother’. Sasse 1982:25—26; Hudson 1989:102. Proto-Southern Cushitic **ʔaama-* ‘female, female relative’ (term

- of address ?) > Burunge *ama* ‘sister, female cousin’; Iraqw *ameni* ‘woman’, *ama* ‘grandmother’; K’wadza *ama* ‘mother’; Asa *ʔamama* ‘grandmother’, *ʔamaʔeto* ‘older girl’. Ehret 1980:282. West Chadic **ʔam-* ‘woman’ > Ngizim *ámâ* ‘woman, wife’; Warji *ámá, á máí, ʔám-áy* ‘woman’; Tsagu *óóméy* ‘woman’; Kariya *âm* ‘woman’; Miya *ám* ‘woman’; Jimbin *ámá* ‘woman’. Jungraithmayr—Ibrizimow 1994.II:346—347. Orël—Stolbova 1995:10, no. 34, **ʔam-* ‘woman’.
- B. Proto-Elamo-Dravidian **amma* ‘mother’: Middle Elamite *am-ma* ‘mother’. McAlpin 1981:141. Dravidian: Tamil *ammā* ‘mother’; Malayalam *amma* ‘mother’; Kannaḍa *amma, ama* ‘mother’; Telugu *amma, ama* ‘mother, matron’; Tuḷu *amma* ‘mother, lady’; Kolami *amma* ‘mother’; Konda *ama* ‘grandmother’; Brahui *ammā* ‘mother, grandmother’. Krishnamurti 2003:10 **amm-a* ‘mother’; Burrow—Emeneau 1984:18, no. 183.
- C. Proto-Indo-European **ʔam(m)a* ‘mother’: Greek ἀμμός, ἀμμία, ἀμμή ‘mother’; Late Latin *amma* ‘mom’, *amita* ‘father’s sister’; Oscan (gen. sg.) *Ammái* the name of a Samnite goddess; Old Icelandic *amma* ‘grandmother’; Old Swedish *amma* ‘mother, nurse’; Old High German *amma* ‘mother, nurse’ (New High German *Amme*); Albanian *amë* ‘mother, aunt’; Tocharian B *ammakki* ‘mother’. Pokorny 1959:36 **am(m)a*, **amī* ‘mommy’; Walde 1927—1932.I:53 **am(m)a*; Mann 1984—1987:18 **amā* ‘mother, nurse’; Watkins 1985:2 **amma* various nursery words and 2000:3 **am-* various nursery words; Mallory—Adams 1997:386 **h₄em-* (or **am-*) ‘mother’; Beekes 2010.I:88 (nursery word); Chantraine 1968—1980.I:76; De Vaan 2008:38—39; Walde—Hofmann 1965—1972.I:39; Ernout—Meillet 1979:28; Orël 1998:4 and 2003:17 Proto-Germanic **ammōn*; De Vries 1977:8; Kluge—Mitzka 1967:18; Kluge—Seebold 1989:25; Van Windekens 1976—1982.I:621; Adams 1999:20.
- D. Proto-Gilyak / Nivkh **əmək* ‘mother’: Amur *əmək* ‘mother’; North Sakhalin *əmk* ‘mother’; East Sakhalin *əmk* ‘mother’; South Sakhalin *əmk* ‘mother’. Fortescue 2016:166.
- E. (?) Proto-Eskimo **ama(C)ur* ‘great grandparent’: Alutiiq Alaskan Yupik *amuuq* ‘great grandparent’; Central Alaskan Yupik *amauq*, (Nunivaq) *amauXtuyax* ‘great grandparent’; Seward Peninsula Inuit *amau* ‘great grandparent, great grandchild’; North Alaskan Inuit *amau, amauṭuk* ‘great grandparent’; Western Canadian Inuit (Siglit) *amaukṭuk* ‘great grandparent’, (Netsilik) *amauq* ‘great grandmother’; Eastern Canadian Inuit *amauraq* ‘great grandmother’; Greenlandic Inuit *amauq* ‘great grandparent’. Fortescue—Jacobson—Kaplan 1994:22. Note also Western Canadian Inuit (Netsilik, Copper) *amaama* ‘mother’.

Sumerian *ama* ‘mother’.

Buck 1949:2.22 woman; 2.24 female; 2.31ff. words for family relationship; 2.36 mother. Dolgopolsky 1998:91—92, no. 116, **ʔemA* ‘mother’ and 2008,

no. 37, *ʔemA ‘mother’; Bomhard—Kerns 1994:571—572, no. 439; Caldwell 1913:606 and 613—614.

645. Proto-Nostratic root *ʔan- (~ *ʔən-):

(vb.) *ʔan- ‘to load up and go, to send off’;

(n.) *ʔan-a ‘load, burden’

- A. Afrasian: Egyptian (obsolete) (f.) *inwt* ‘freight, cargo’. Erman—Grapow 1926—1963.1:92; Hannig 1995:75.
- B. Dravidian: Tamil *anuppu* (*anuppi*) ‘to send, to accompany one a little way out of respect’; Malayalam *anuppuka* ‘to send’; Kannaḍa *ampaka* ‘sending, dispatching, entertainment given to friends at their departure’; Telugu *anucu*, *ancu*, *anupu*, *ampu* ‘to send’; Gadba *anisp-* (*anist-*) ‘to load on a cart’; Kuṛux *ambnā* ‘to let go, to set free, to send away, to give up, to pardon, to leave a place’; Malto *ambe* ‘to leave off, to forsake’; Brahui *hamping* ‘to load up, to load up and go, to start, to depart, to be wiped out’, *hampifing* ‘to make to load, to make to start off, to help to load’, *hamp* ‘start, starting’. Burrow—Emeneau 1984:31, no. 329.
- C. Proto-Indo-European *ʔen-os-/ʔon-os- ‘load, burden’: Sanskrit *ānas-* ‘cart, wagon’; Latin *onus* ‘load, burden, freight’. Pokorny 1959:321—322 *enos- or *onos- ‘burden’; Walde 1927—1932.I:132—133 *enos- or *onos-; Mann 1984—1987:879 *onos, -es- ‘burden, load; impost, duty; obligation; bearer, carrier, carriage’; Watkins 1985:17 *en-es- and 2000:23 *en-es- ‘burden’; Mayrhofer 1956—1980.I:33; Mallory—Adams 1997:87 *h₁ónh_xes- ‘burden’; Ernout—Meillet 1979:462 *enos > *onos; Walde—Hofmann 1965—1972.II:210 *onos; De Vaan 2008:428.

Buck 1949:10.63 send; 10.75 carriage, wagon, cart. Bomhard—Kerns 1994: 561, no. 423.

646. Proto-Nostratic root *ʔanʷ- (~ *ʔənʷ-):

(vb.) *ʔanʷ- ‘to be quiet, still, at peace, at rest’;

(n.) *ʔanʷ-a ‘tranquility, peace, rest’; (adj.) ‘quiet, still, peaceful, restful’

- A. Proto-Afrasian *ʔan- ‘to be quiet, still, peaceful, at rest’: (?) Proto-Semitic *ʔa/wa/n-, *ʔa/ya/n- ‘to be at rest’ > Arabic *ʔāna* ‘to be at rest’, *ʔawn* ‘calmness, serenity, gentleness’; Tāmūdīc *ʔn* ‘calmness, serenity’; Geez / Ethiopic *taʔayyana* [ተአየነ] ‘to live well and comfortably, to be pampered’. D. Cohen 1970— :12—13; Leslau 1987:50. Proto-Southern Cushitic *ʔand- ‘to be quiet, to be still’ > Asa *ʔand-* ‘to tame’; Ma’a -ʔandú ‘to be quiet, to be still’. Ehret (1980:284) reconstructs *ʔand- (or *ʕand-) ‘to tame’ and notes the following concerning the Ma’a form: “Stem plus extension, probably -Vw- consecutive, added before C# → Ø.”

- B. Dravidian: Tamil *aṇantar* ‘sleep, drowsiness, stupor, loss of consciousness, inebriety, confusion of mind’, *aṇantal* ‘sleep, drowsiness, stupor’; Malayalam *anantal* ‘light sleep’. Burrow—Emeneau 1984:30, no. 326.
- C. Proto-Altaic **ān^{ve}(-č^hV)* ‘to be quiet, peaceful, at rest’: Proto-Tungus **ān^{vi}-* ‘(vb.) to enjoy; (n.) feast’ > Evenki *āñi-* ‘to enjoy’; Nanay / Gold *añā* ‘feast’. Proto-Mongolian **eye*, **eŋ-ke* (< **ān^{ve}-kV*) ‘peace, quiet’ > Written Mongolian *eye* ‘peace, accord; harmony, concord; amity, friendship’; Khalkha *eye*, *eŋ* ‘peace, quiet’; Buriat *eye*, *eŋxe* ‘peace, quiet’; Kalmyk *eyə*, *eŋkə* ‘peace, quiet’; Ordos *eye*, *eŋxe* ‘peace, quiet’. Proto-Turkic **Enč-* ‘tranquil, at peace’ > Old Turkic (Old Uighur) *enč* ‘tranquil, at peace’, *enčsire-* ‘to be uneasy’; Karakhanide Turkic *enč* ‘tranquil, at peace’, *enčrü-n-* ‘to live in peace’; Oyrot (Mountain Altai) *enčü* ‘tranquil, at peace’, *enčik-* ‘to be accustomed’, *enčik* ‘habit’, *enči-le-* ‘to soothe’; Tatar (dial.) *inčü* ‘peace’; Sary-Uighur *inžek-tiγ* ‘quiet’. Starostin—Dybo—Mudrak 2003:302—303 **āñe(-č^hV)* ‘to be quiet, to sit’.

Buck 1949:4.61 sleep (vb.; sb.); 12.19 quiet (adj.).

647. Proto-Nostratic root **ʔan^v-* (~ **ʔən^v-*):

(vb.) **ʔan^v-* ‘to draw near to, to approach, to come (close to)’;

(n.) **ʔan^v-a* ‘nearness, proximity’

Derivative:

(particle) **ʔan^v-* ‘to, towards, over, for, against, upon, on’

- A. Proto-Afrasian **ʔan-* ‘to draw near to, to approach, to come (close to), to reach, to arrive’: Proto-Semitic **ʔan-aw/y-* ‘to draw near to, to approach, to come (at the right time)’ > Arabic *ʔanā* ‘to come to maturity, to be nearly ripe; to draw near, to come (esp. time), to approach’, *ʔanan* ‘(span of) time’; Hebrew *ʔānāh* [אָנָה] ‘to be opportune, to meet, to encounter opportunity; to bring about, to cause’, *tōʔānāh* [תּוֹאֲנָה] ‘opportunity’, *taʔānāh* [תּאֲנָה] ‘occasion; time of copulation, mating time (of animals)’ (a hapax legomenon in the Bible). Perhaps also Akkadian *īnu*, *ēnu*, *inum*, *ēnum* ‘when’, *īnu* ‘at the time of’ (Von Soden 1965—1981.I:382—383 lists *inu*, *enu*). D. Cohen 1970— :25; Murtonen 1989:95; Klein 1987:38 and 688; Zammit 2002:71—82. Egyptian *ini*, *iny* ‘to bring, to fetch; to carry off, to bring away; to bring about (an event); to remove (something bad), to overcome (trouble); to reach, to attain (a place)’; Coptic *ine* [εἰνε] ‘to bring, to bear’. Hannig 1995:74; Faulkner 1962:22; Gardiner 1957:554; Erman—Grapow 1921:14 and 1926—1963.1:90—91; Vycichl 1983:64; Černý 1976:47. Highland East Cushitic: Sidamo *aan-* ‘to follow’. Hudson 1989:348.
- B. Dravidian: Tamil *aṇai* ‘to approach, to come near, to touch, to come into contact with, to copulate with’, *aṇmai*, *aṇumai*, *aṇimai* ‘nearness, proximity’, *aṇāvu* (*aṇāvi-*) ‘to approach’, *aṇi* ‘(vb.) to join with (tr.); (adv.) near’, *aṇuku* (*aṇuki-*) ‘to approach’, *aṇṇimai* ‘nearness’, *aṇṇaṇi* ‘in close

proximity'; Malayalam *aṇayuka* 'to approach, to arrive', *aṇavu* 'arrival, closeness', *aṇekka* 'to bring into contact, to embrace, to hug', *aṇukuka* 'to approach', *aṇaccal* 'embracing, drawing near', *aṇṭa* 'nearness, proximity', *aṇṭuka*, *aṇṇuka*, *aṇṇuka* 'to approach'; Kota *and-* (*andy-*) 'to be in the same place with, to approach, to be in or move into place, to seize prey'; Kannada *aṇe*, *aṇi* 'to come near, to come into contact, to touch, to embrace', *aṇe* 'approach', *aṇi* 'joining, fitness, order', *aṇḍisu* 'to go near, to approach, to resort to, to come or go to for protection', *aṇḍe* 'nearness, approach, side of anything'; Tulu *aṇepuni* 'to come into contact, to press'; Telugu *aṇṭu* '(vb.) to touch; (n.) touch, uncleanness, defilement by touch, impurity, pollution'; Kurux *āṛsnā* 'to reach, to arrive at, to come, to overtake, to hear about', *āṛsta'ānā* 'to make reach, to deliver, to touch (with the help of some instrument), to overtake', *āṛstārnā* 'to be brought up in a certain place'; Malto *aṇrse* 'to arrive', *aṇrstre* 'to cause to arrive, to convey'; Brahui *haninging* 'to copulate (of human beings)'. Burrow—Emeneau 1984:13, no. 120.

- C. Proto-Indo-European **ʔen-o-s* ('span of time' >) 'year': Greek **ἔνός* 'year' in: *ἐνι-αὐτός* 'one year old; yearly, annual, year by year; for a year, lasting a year', *ἔνις* (acc. pl. *ἔνις*) (lengthened-grade) 'a year old, yearling', *δί-ενος* 'two years old', *τρί-ενος* 'three years old', etc. Perhaps also *-n-* (zero-grade) in: Lithuanian *pér-n-ai* 'last year'; Latvian *pēr-n-s* 'in previous years'; Gothic **fair-n-s* 'in the previous year'; Middle High German (adv.) *ver-n-e* 'in the previous year'; Old Icelandic *for-n* 'old, ancient'; Old English *fyr-n* '(adj.) former, ancient; (adv.) formerly, of old, long ago, once upon a time'. Semantic development as in Arabic *ʔanan* '(span of) time', cited above. Pokorny 1959:314 **en-* 'year'; Watkins 1985:17 **en-* 'year'; Mann 1984—1987:925 **pernoi* (**pern-*) 'last year, of yore', **pernos* 'last year's, ancient'; Mallory—Adams 1997:654 **h₁en-* 'year'; Hofmann 1966:83 and 108; Chantraine 1968—1980.I:348—349 **eno-* and I:414; Beekes 2010.I:426; Frisk 1970—1973.I:518 and I:638; Orël 2003:100—101 Proto-Germanic **fernaz* (< **per-* 'previous' plus zero-grade of **eno-* 'year'), 101 **fernjaz*; Feist 1939:140—141 **eno-*; Lehmann 1986:106—107 **eno-*; De Vries 1977:138; Fraenkel 1962—1965.II:576; Smoczyński 2007.1:451—452; Derksen 2015:352.
- D. Proto-Altaic **ānʷu* ('span of time' >) 'moon; (moon cycle), year': Proto-Tungus **anʷḡa* 'year' > Evenki *anḡanī* 'year'; Lamut / Even *anḡḡn* 'year'; Negidal *aḡḡanī* 'year'; Manchu *aniya* 'year', *aniyadari* 'every year', *aniyaḡga* 'pertaining to a certain year in the twelve year cycle', *aniyalame* 'for an entire year, a whole year'; Spoken Manchu (Sibo) *ani* 'year'; Jurchen *ania* 'year'; Ulch *aḡa(n)* 'year'; Oroch *anaḡi* 'year'; Nanay / Gold *ayḡaḡa*, *ayḡanī* 'year'; Oroch *anḡaḡi* 'year'; Udihe *aḡa(n)* 'year'; Solon *aḡē*, *aḡa* 'year'. (?) Proto-Mongolian **oy(n)* 'anniversary, year' > Middle Mongolian *oin* 'time'; Written Mongolian *oi* 'full year, anniversary, birthday'; Khalkha *oy* 'anniversary'; Buriat *oy* 'anniversary'; Kalmyk *ō* 'year'; Ordos *oḡn* 'anniversary, year'. Proto-Turkic **ānʷ(k)* 'moon, month'

> Old Turkic (Orkhon, Old Uighur) *ay* ‘moon, month’; Karakhanide Turkic *ay* ‘moon, month’; Turkish *ay* ‘moon, month; crescent’; Gagauz *ay* ‘moon, month’; Azerbaijani *ay* ‘moon, month’; Turkmenian *āy* ‘moon, month’; Uzbek *oy* ‘moon, month’; Uighur *ay* ‘moon, month’; Karaim *ay* ‘moon, month’; Tatar *ay* ‘moon, month’; Bashkir *ay* ‘moon, month’; Kirghiz *ay* ‘moon, month’; Kazakh *ay* ‘moon, month’; Noghay *ay* ‘moon, month’; Oyrot (Mountain Altai) *ay* ‘moon, month’; Tuva *ay* ‘moon, month’; Chuvash *oyăç* ‘moon, month’; Yakut *iy* ‘moon, month’. Starostin—Dybo—Mudrak 2003:303 **ānu* ‘moon; (moon cycle), year’. Semantic development as in Arabic *ʿanan* ‘(span of) time’, cited above.

- E. Proto-Gilyak / Nivkh **an^v(i)* ‘year’: Amur *an^v* ‘year’; North Sakhalin *an^v* ‘year’; East Sakhalin *an^v* ‘year’, *naci an^v* ‘last year’; South Sakhalin *an^v(i)* ‘year’, *nattə* ‘last year’. Fortescue 2016:14.

Buck 1949:10.61 carry (bear); 10.62 bring; 14.73 year. Bomhard—Kerns 1994:561—562, no. 424.

648. Proto-Nostratic (particle) **ʔan^v-* ‘to, towards, over, for, against, upon, on’:

Derivative of:

(vb.) **ʔan^v-* ‘to draw near to, to approach, to come (close to)’;

(n.) **ʔan^v-a* ‘nearness, proximity’

- A. Proto-Afrasian **ʔan-* ‘to, towards, over, for, against, upon, on’: Semitic: Akkadian *ana* ‘to, towards, over, for, against, upon, on’. Von Soden 1965—1981.I:47—48; D. Cohen 1970— :24. Highland East Cushitic: Sidamo *aaná* ‘on (top of)’, *aana* ‘over, above’. Hudson 1989:348.
- B. Proto-Indo-European **ʔan-* ‘to, towards, over, for, against, upon, on’: Sanskrit *ānu* ‘with, after, along, alongside, lengthwise, near to, under, subordinate to’; Avestan *ana* ‘along, on’, *anu* ‘toward, along’; Old Persian *anuv* (that is, *anu*) ‘along, according to’; Greek *ἄνα*, *ἀνά* (with dative) ‘on, upon’, (with accusative) ‘up, from bottom to top, up along’, (in compositions) ‘up to, upwards, up’; Latin *an-* ‘on, to’ as in (inf.) *an-hēlāre* ‘to draw a heavy breath, to puff, to pant’; Gothic *ana* ‘in, on, upon, at, over, to, into, against’; Old Icelandic *á* ‘on, upon, in’; Old English *an*, *an-*, *on*, *on-* ‘in, on, into, on to, among’; Old Frisian *an*, *ana* ‘at, on, over’; Old Saxon *an*, *ana* ‘at, on, over’; Old High German *an*, *ana* ‘at, on, over’ (New High German *an*); Lithuanian (prep. with gen.) *nuõ* ‘from, away from; since’. Pokorny 1959:39—40 **an*, **anu*, **anō*, **nō* ‘over there, along’; Walde 1927—1932.I:58—59 **an*, **anō*, **nō*; Mann 1984—1987:21 **ana* (**anə*) ‘on, upon’, 27 **anō* (**anō*) ‘upon, above’, 257 **an-*, **anə*, 258 **anō*, **anōi* ‘upon; above, downward’; Watkins 1985:2 **an* and 2000:3 **an* ‘on’ (extended form **ana*); Mallory—Adams 1997:612 **h_aen-h_ae* ‘up (onto), upwards, along’, **h_aen-u* ‘up (onto), upwards, along’; Mayrhofer 1956—1980.I:34; Boisacq 1950:59 **anō*; Frisk 1970—1973.I:100—101; Chantraine 1968—1980.I:82; Beekes 2010.I:97 **h₂en-*; Hofmann 1966:17;

Walde—Hofmann 1965—1972.I:43—44 **ana*, **anō*, **anē*; Ernout—Meillet 1979:30; Orël 2003:17 Proto-Germanic **ana(i)*; Kroonen 2013:26 Proto-Germanic **ana* ‘on(to), to, by’; Feist 1939:41; Lehmann 1986:30 **an*, **anu*; De Vries 1977:1; Onions 1966:627; Klein 1971:513 **anō*; Kluge—Mitzka 1967:20 **ana*; Kluge—Seebold 1989:27 **ana*; Boutkan—Siebinga 2005:21 Proto-Frisian **ana*; Smoczyński 2007.1:430; Fraenkel 1962—1965.I:511; Derksen 2015:338.

Sumerian *en* ‘as far as, (up) to, with, together with, in addition to, besides, including’, *en(-na)*, *en-ša* ‘as far as, (up) to’, *en-na* ‘to, towards, near, in addition to, besides, moreover’.

Bomhard—Kerns 1994:562—563, no. 425.

649. Proto-Nostratic (n.) *ʔ*an*^v*a* ‘mother, aunt’ (nursery word):

Note also:

(n.) *ʔ*en*^v*a* ‘mother, elder sister’

- A. Dravidian: Tamil *aññai* ‘mother’, *annai*, *tannai* ‘mother, elder sister’, *emm-anai* ‘our mother’, *tamm-anai* ‘mother’; Malayalam *anna* ‘mother’; Parji *añña* ‘father’s sister’. Burrow—Emeneau 1984:7, no. 58. Dravidian loans in Indo-Aryan: cf. Prakrit *aññī-* ‘father’s sister’.
- B. [Proto-Indo-European *ʔ*an(n)o-s*, *ʔ*an(n)i-s*, *ʔ*an(n)a* ‘mother’: Hittite (nom. sg.) *an-na-aš* ‘mother’; Palaic (nom. sg.) *an-na-aš* ‘mother’; Luwian (nom. sg.) *an-ni-iš*, *a-an-ni-iš* ‘mother’; Lycian (nom. sg.) *ēni* ‘mother’; Lydian (nom. sg.) *ēnaš* ‘mother’; Latin *anna* ‘foster-mother’; (?) Greek (Hesychius) *ἀννίς* ‘grandmother’. Pokorny 1959:36—37 (nursery word) **an-* ‘old woman, ancestor’; Walde 1927—1932.I:55—56 **an-*; Tischler 1977— .1:24—25; Puhvel 1984— .1/2:55—57; Kloekhorst 2008b:174; Sturtevant 1933:87, §73; 132, §129; 178—179, §293; Mallory—Adams 1997:385—386 **h₄en-* (or **an-*) ‘(old) woman, mother’; Hoffmann 1966:19; Chantraine 1968—1980.I:91; Frisk 1970—1973.I:112; Beekes 2010.I:107 **h₂en-*; Walde—Hofmann 1965—1972.I:50.] Note: The Indo-European forms belong either here or with Proto-Nostratic *ʔ*an(η)a* ‘woman, female, female relative’.
- C. Proto-Uralic **an*^v*i* ‘sister-in-law’: Hungarian *ángy* ‘the wife of an elder brother or another older relative’, (?) *anya* ‘mother’; Lapp / Saami (Kola) *vyōnnje/vyōnje-* ‘the wife of an elder brother’; (?) Zyrian / Komi *ōña* ‘sister-in-law’; Vogul / Mansi *āāñyʔ/āāñgə-* ‘the wife of an older relative’; Ostyak / Xanty *āñəgə* ‘the wife of an elder brother or uncle; stepmother; aunt’; Yurak Samoyed / Nenets *nejea* ‘the mother’s sister’; Selkup Samoyed *ooña* ‘aunt’. Collinder 1955:3, 1960:405 **aña*, and 1977:25; Rédei 1986—1988:10—11 **aña*; Décsy 1990:98 **anja* ‘mother, aunt’; Aikio 2020:18—19 **āni* ‘sister-in-law’; Sammallahti 1988:542 Proto-Finno-Ugrian **āñā* ‘sister-in-law’; Janhunen 1977b:100 **ne*.

- D. Proto-Gilyak / Nivkh **an^var* ‘female’: Amur *an^vχ* ‘female’; North Sakhalin *an^vrej* ‘wife’; East Sakhalin *an^vaχ* ‘female’; South Sakhalin *an^vχ₂* ‘female’. Fortescue 2016:14.
- E. Proto-Eskimo **a(a)na* ‘grandmother, mother’ (expressive gemination of the initial vowel): Alutiiq Alaskan Yupik *aana* ‘mother’; Central Alaskan Yupik *aana* ‘mother’; Naukan Siberian Yupik *aana* ‘mother’; Central Siberian Yupik *naa* ‘mother’; Sirenik *nana* ‘mother’; Seward Peninsula Inuit *aana* ‘grandmother’; North Alaskan Inuit *aana* ‘grandmother’; Western Canadian Inuit (Siglit) *aana* ‘grandmother’; Eastern Canadian Inuit *aana* ‘paternal grandmother, paternal great aunt’; Greenlandic Inuit *aanak*, *aanag* ‘grandmother’. Fortescue—Jacobson—Kaplan 1994:25. Aleut *ana-X* ‘mother’. Proto-Eskimo **ana(a)na* (probably a reduplication of **a(a)na*) ‘older female relative’ > Alutiiq Alaskan Yupik *anaana(k)*, *anaanaq* ‘maternal aunt’; Central Alaskan Yupik *anaana* ‘maternal aunt, stepmother’; Naukan Siberian Yupik *anaana* ‘maternal aunt’; Central Siberian Yupik *anaana* ‘maternal aunt’; Sirenik *anána* ‘maternal aunt’; Western Canadian Inuit (Siglit) *anaanak* ‘grandmother’; Eastern Canadian Inuit *anaana* ‘mother’; Greenlandic Inuit *anaana* ‘mother’. Fortescue—Jacobson—Kaplan 1994:26.

Caldwell 1913:613; Bomhard—Kerns 1994:584, no. 454; Hakola 2000:21, no. 30; Fortescue 1998:152.

650. Proto-Nostratic root **ʔaŋ-* (~ **ʔəŋ-*):

(vb.) **ʔaŋ-* ‘to divide, to separate’;

(n.) **ʔaŋ-a* ‘separation, difference’; (adj.) ‘separate, different’

- A. Afrasian: Highland East Cushitic: Hadiyya *annann ih-* ‘to be different’, *annanna* ‘different’, *annann-is-* ‘to differentiate, to separate (grain)’; Kambata *annann-* ‘to be different’, *annanna ass-* ‘to differentiate, to separate (grain)’, *annannooma-ta* ‘different’. Hudson 1989:49, 269, and 307. Cushitic (Kambata) loans in Gurage (Endegeñ) *äññä*, *ʔäññä*, *äññäʔar*, (Ennemor) *eña*, *eñaʔar* ‘other, another, different, various’. Leslau 1979:79.
- B. Proto-Indo-European **ʔan-* ‘separate, different’ in: **ʔan-yo-s* ‘other, different’, **ʔan-thero-s* ‘different’: Sanskrit *anyá-h* ‘other, different’, *ántara-h* ‘different’; Avestan *anyō* ‘another, else’; Old Persian *aniya-* ‘the one or the other (of two), other (of any number), the rest of’; Gothic *anþar* ‘other, second’, (adv.) *anþar-leikō* ‘otherwise’, **anþar-leiks* (only *anþar-leikei* is attested) ‘diversity’; Old Icelandic *annarr* ‘one of the two, the one (of two); second; the next following; some other; other, different’; Faroese *annar* ‘other’; Swedish *annan* ‘other’; Danish *anden* ‘other’; Old English *ōþer* ‘one of two; second; other’, *ōþer-līce* ‘otherwise’; Old Frisian *ōther* ‘other; second’; Old Saxon *ōðar* ‘other; second’, *ōðar-līk* ‘otherwise’; Dutch *ander* ‘other’; Old High German *andar* ‘other; second’ (New High German *ander* ‘other; next, following, second’); Lithuanian *añtras* ‘other,

second'; Latvian *ùotrs* 'other, second'; Old Prussian *anters*, *antars* 'other, second'. Pokorny 1959:37—38 **an-* demonstrative particle: 'other(side), there', **anjos* 'other', **anteros* 'other'; Walde 1927—1932.I:56 **an* and I:67; Mann 1984—1987:25 **anjos* 'yon, that; other', 27 **anteros* 'second, other'; Watkins 1985:2 **an* demonstrative particle; Mayrhofer 1956—1980.I:35 and I:37; Mallory—Adams 1997:411 **h₁ónteros* 'other'; Fraenkel 1962—1965.I:12; Smoczyński 2007.1:18 **h₂én-tero-*; Kroonen 2013:30 Proto-Germanic **anþara-* 'the other (of two), the second'; Orël 2003:21 Proto-Germanic **anþeraz*; Feist 1939:53; Lehmann 1986:39—40 **anter-o-*, **an-yo-*; De Vries 1977:10; Falk—Torp 1903—1906.I:20 **ántero-*; Onions 1966:635 Common Germanic **anþeraz*; Klein 1971:522; Boutkan—Siebinga 2005:300; Kluge—Mitzka 1967:21 **antero-*; Kluge—Seebold 1989:29 **antero-*.

- C. Proto-Altaic **aŋV* 'separate, different': Proto-Tungus **aŋa-* 'foreigner, orphan' > Evenki *aŋnakī* 'foreigner', *aŋažakān* 'orphan'; Lamut / Even *aŋəža* 'orphan'; Negidal *aŋnaχī* 'foreigner', *aŋažaxān* 'orphan'; Manchu *anaqu* (žuy) 'orphan'; Ulch *aŋaža*, *aŋaŋi* 'orphan'; Orok *aŋada* 'orphan'; Nanay / Gold *aŋžini* 'foreigner', *aŋgažā* 'orphan'; Oroch *aŋnaihi* 'foreigner', *aŋaža* 'orphan'; Udihe *aŋnaχi* 'foreigner', *aŋaža* 'orphan'; Solon *aŋaži* 'orphan'. Proto-Mongolian **aŋgi-* 'apart, separately; class, group' > Written Mongolian *aŋgida* (adv. and adj.) 'separately; especially; apart from; except; different, another', *aŋgi* 'class, group; part, section', *aŋgila-* 'to divide, to separate, to segregate, to discriminate; to classify, to subdivide'; Khalkha *aŋgid* 'apart, separately', *aŋgi* 'class, group'; Buriat *aŋgil-* 'to be separated', *aŋgi-* 'class, group'; Kalmyk *āŋgi-* 'class, group'; Ordos *aŋgi* 'piece, part'; Dagur *aŋg(i)* 'class, group'. Starostin—Dybo—Mudrak 2003:307 **aŋV* 'separate, different'.

Buck 1949:2.85 orphan. Dolgopolsky 2008, no. 807, **HaŋV* 'other'.

651. Proto-Nostratic (n.) *ʔ*aŋ(ŋ)a* '(older) female relative' (nursery word):

- A. Afrasian: Proto-Southern Cushitic *ʔ*aŋ-* 'father's sister' > Ma'a *engá* 'father's sister'; Dahalo ʔ*anno* 'father's sister'. Ehret 1980:288.
- B. Dravidian: Kannaḍa *aŋṇu* 'a woman'; Telugu *annu* 'a woman'. Burrow—Emeneau 1984:14, no. 132.
- C. [Proto-Indo-European *ʔ*an(n)o-s*, *ʔ*an(n)i-s*, *ʔ*an(n)a* 'mother': Hittite (nom. sg.) *an-na-aš* 'mother'; Palaic (nom. sg.) *an-na-aš* 'mother'; Luwian (nom. sg.) *an-ni-iš*, *a-an-ni-iš* 'mother'; Lycian (nom. sg.) *ēni* 'mother'; Lydian (nom. sg.) *ēnaš* 'mother'; Latin *anna* 'foster-mother'; (?) Greek (Hesychius) ἄννις 'grandmother'. Pokorny 1959:36—37 (nursery word) **an-* 'old woman, ancestor'; Walde 1927—1932.I:55—56 **an-*; Tischler 1977—.1:24—25; Puhvel 1984—.1/2:55—57; Kloekhorst 2008b:174; Sturtevant 1933:87, §73; 132, §129; 178—179, §293; Mallory—Adams 1997:385—386 **h₄en-* (or **an-*) '(old) woman, mother'; Chantraine

1968—1980.I:91; Frisk 1970—1973.I:112; Hoffmann 1966:19; Beekes 2010.I:107 **h₂en-*; Walde—Hofmann 1965—1972.I:50.] Note: The Indo-European forms belong either here or with Proto-Nostratic **ʔanʷa* ‘mother, aunt’.

Buck 1949:2.52 aunt.

652. Proto-Nostratic (n.) **ʔaŋ(ŋ)a* ‘(older) male relative’ (nursery word):

- A. Afrasian: Proto-Highland East Cushitic **anna* ‘father’ > Burji *an(n)-áa* ‘father, husband, owner’, *annaa* (pl. *annaani*) ‘father, husband, owner (of)’; Gedeo / Darasa *anna* ‘father, uncle, paternal owner (of)’; Hadiyya *anna* (pl. *annoʷo*) ‘father’; Kambata *anna* ‘father’; Sidamo *anna* ‘father, owner (of)’. Sasse 1982:26; Hudson 1989:62. Central Cushitic: Kemant *an* ‘grandfather’; Quara *an* ‘grandfather’; Bilin *ʔan* (pl. *ʔánen*) ‘grandfather’. Appleyard 2006:77; Reinisch 1887:32.
- B. Dravidian: Tamil *aŋŋaŋ*, *aŋŋācci* ‘elder brother’, *aŋŋār* ‘elder brother’, *aŋŋāttai* ‘elder brother (sometimes in contempt)’, *aŋŋārvī* ‘elder brother or cousin’, *aŋŋā* ‘elder brother, father’, *aŋŋi* ‘elder brother’s wife’; Toda *oŋ*, *oŋoŋ* ‘elder brother or male parallel cousin’; Malayalam *aŋŋan*, *aŋŋācci* ‘elder brother’; Kota *aŋ* ‘elder brother or male parallel cousin’; Kannaḍa *aŋŋa*, *aŋa* ‘elder brother; respectful mode of addressing boys’, *aŋŋi* ‘affectionate mode of addressing females’; Koḍagu *aŋŋē* ‘elder brother or male parallel cousin’; Tuḷu *aŋŋe* ‘elder brother, maternal uncle, an elderly man’; Telugu *anna* ‘elder brother; termination of names of men’; Kolami *annāk* ‘elder brother’; Gondi *tannāl* ‘elder brother’; Konda *ana* ‘father’s father’, *annasi* ‘elder brother (with reference to 3rd person)’. Krishnamurti 2003:10 **aŋŋa-* ‘elder brother’; Burrow—Emeneau 1984:14, no. 131.
- C. Proto-Eskimo **aŋayuy* ‘elder sibling of the same sex’: Alutiiq Alaskan Yupik *aŋa<y>uk* ‘partner, buddy’; Central Alaskan Yupik (Bristol Bay) *aŋayuk* ‘partner’; Seward Peninsula Inuit *aŋayuk* ‘older brother; (Qawiaaraq) elder sibling of the same sex’; North Alaskan Inuit (Nunamiut) *aŋayuk* ‘elder sibling of the same sex’; Western Canadian Inuit *aŋayuk* ‘(Copper) elder sibling of the same sex; (Siglit) older brother of boy’; Eastern Canadian Inuit *aŋayuk* ‘elder sibling of the same sex’; Greenlandic Inuit *aŋayu(q)*, (East Greenlandic) *aŋiiq* ‘elder sibling of the same sex’. Fortescue—Jacobson—Kaplan 1994:32.

Buck 1949:2.31ff. words for family relationship.

653. Proto-Nostratic root **ʔap^h-* (~ **ʔap^h-*):

- (vb.) **ʔap^h-* ‘to be more, over, above, extra, superior; to surpass’;
- (n.) **ʔap^h-a* ‘that which is more, over, above, extra, superior’; (adj.) ‘many, more, extra, additional, numerous, teeming, superior’
- (particle) **ʔap^h-* ‘also, moreover, besides’

Note: The *CVC*-patterning shows that this stem could not originally have been a particle, though this is how it is preserved in Semitic and the other Nostratic daughter languages. Though the original meaning is uncertain, we may speculate that it may have been something like '(vb.) to be more, over, above, extra, superior; to surpass; (n.) that which is more, over, above, extra, superior; (adj.) many, more, extra, additional, numerous, teeming, superior'.

- A. Afrasian: Proto-Semitic *ʔapa 'also, and also' > Ugaritic *āp* 'also'; Hebrew *ʔaḵ* [אח] 'also, and also, and even'; Syriac *ʔāḫ* 'also'; Phoenician *ʔp* 'also, even'; Palmyrene *ʔp* 'also, even'; Arabic *fā* 'then, and then, and so thus, thence'; Sabaean *f* 'and, so'. Klein 1987:45; Tombback 1978:27; Zammit 2002:314. The original meaning may be preserved in Akkadian (adj. f. pl.) *apātu* (*abātu*, *epātu*) (Old Babylonian *a/epiātum*) 'numerous, teeming (as epithet of human beings)'. Berber: Tuareg *uf* 'to be better, to be superior', *suf* 'to prefer', *tūfūt* 'superiority in goodness'; Ghadames *sif* 'to prefer, to choose'; Mzab *if* 'to surpass, to exceed, to be better'; Wargla *if* 'to surpass, to be better than', *tifət* 'superiority, preeminence'; Tamazight *af*, *if* 'to surpass, to be better than'; Tashelhiyt / Shilha *af* 'to surpass, to be better'; Riff *af* 'to surpass, to be better'; Kabyle *if* 'to surpass, to be better than'; Chaouia *af* 'to be better (than)'; Zenaga *uft* 'to be better'.
- B. Proto-Indo-European *ʔep^{hi}/*ʔop^{hi} (zero-grade form: *p^{hi}) 'and, also, and also, besides, moreover': Sanskrit *āpi* 'and, also, moreover, besides, upon'; Avestan *aipi* 'also, too'; Old Persian *apiy* 'thereto, very'; Armenian *ew* 'and, also'; Greek *ἐπ*, *ἐπί* 'upon, besides'. Pokorny 1959:323—324 *epi, *opi, *pi 'near to'; Walde 1927—1932.I:122—123 *epi, *opi, *pi; Mann 1984—1987:246—247 *epi (*pi) 'on, by, at, near', 880 *op-, *opi 'back, off, out, round, at'; Watkins 1985:17 *epi (also *opi) and 2000:23 *epi (also *opi) 'near, at, against' (zero-grade form *pi); Mallory—Adams 1997:391 *h₁epi ~ *h₁opi 'near, on'; Boisacq 1950:264—265 *epi, *opi; Hofmann 1966:87 *epi, *opi; Chantraine 1968—1980.I:358; Frisk 1970—1973.I:535 *épi; Beekes 2010.I:440 *h₁epi; Mayrhofer 1956—1980.I:39.
- C. Altaic: Proto-Turkic *Ap ~ *Ep emphatic strengthening particle > Turkish *ap* emphatic strengthening particle, *apaçık* 'wide open; very evident or clear'; Azerbaijani *apžig* 'however'; Karakhanide Turkic *ap*, *ep* emphatic strengthening particle; Kirghiz *apey* an emphatic interjection. [Starostin—Dybo—Mudrak 2003:514.]
- D. (?) Etruscan *epl*, *pi*, *pul* 'in, to, up to, until'.

Bomhard—Kerns 1994:568—569, no. 435.

654. Proto-Nostratic root *ʔar- (~ *ʔər-):
 (vb.) *ʔar- 'to cut (off, apart), to sever, to separate, to part asunder';
 (n.) *ʔar-a 'half, side, part'; (adj.) 'severed, separated, parted, disjoined'

- A. Dravidian: Tamil *ari* ‘to cut off, to nip off’, *arakka* (*arakki-*) ‘to clip off, to prune, to cut, to sever’; Malayalam *ariyuka* ‘to reap corn, to cut grass, to cut very small, to hack to pieces’, *arakkuka* ‘to cut, to chip off, to sever’, *araññuka* ‘to cut or chop off (the branches of trees or plants)’; Toda *ark-* (*arky-*) ‘to chip, to cut square (end of plank or post)’; Kannaḍa *ari* (*arid-*) ‘to cut or lop off’. Burrow—Emeneau 1984:20, no. 212. Tamil *arai* ‘half’; Malayalam *ara* ‘half’; Kota *ar* ‘half’; Toda *ar* ‘half’; Kannaḍa *ara* ‘half, a little’, *arebar* ‘a few’; Telugu *ara* ‘half, a moiety, incomplete, not full’, *ara* ‘half, a moiety’; Tulu *are* ‘half’; Naiki (of Chanda) *ar* ‘half’ in *ar sōla* ‘a measure’. Burrow—Emeneau 1984:21—22, no. 229. Tamil *aru* (*aruv-*, *arr-*/[mod.] *arunt-*) ‘to be severed, to break (as a rope), to cease, to become extinct, to perish, to be decided, to be settled’, *aru* (*-pp-*, *-tt-*) ‘to break off, to cut, to part asunder, to sever, to cleave, to exterminate, to determine, to resolve’; Malayalam *aruka* ‘to be severed, to be cut off, to cease’, *arukka* ‘to sever, to cut off, to decide’; Kota *arv-* (*art-*) ‘to cut (meat) into small pieces for broth’; Toda *arf-* (*art-*) ‘to cut, to reap’; Kannaḍa *aru* ‘to be severed or disjoined, to be cut asunder, to cease’, *arake* ‘fragment, piece’; Koḍagu *ara-* (*arap-*, *arat-*) ‘to cut’; Telugu *aru* ‘to be destroyed, to decrease’; Kolami *ark-* (*arakt-*) ‘to harvest grain by cutting’. Burrow—Emeneau 1984:29—30, no. 315.
- B. Proto-Indo-European **ǵer-dh-/ǵor-dh-/ǵr-dh-* ‘to split, to divide, to separate’: Avestan *arəδō* ‘side’; Sanskrit *īdhak* (also *ṛdhák*) ‘separately, aside, apart’, *ārdha-h* ‘side, part’, *ardhá-h* ‘half’; Lithuanian *ardaũ*, *ardýti* ‘to rip up, to rip open, to pull down, to dismantle, to disassemble, to take to pieces, to disjoint; to destroy, to demolish, to break’, *iriũ*, *irti* ‘to rip apart; to disintegrate’. Pokorny 1959:333 **er-dh-*; Walde 1927—1932.I:143 **er-dh-*; Mann 1984—1987:887 **ordhos* ‘side, part, half’; Mayrhofer 1956—1980.I:51 and I:124; Smoczyński 2007.1:22 and 1:223—224.

Buck 1949:9.22 cut (vb.); 12.23 separate (vb.); 13.24 half. Bomhard—Kerns 1994:581—582, no. 451; Dolgopolsky 2008, no. 67, **ǵerV* ‘to divide; one share, one, single’.

655. Proto-Nostratic (n.) **ǵar-a* ‘male, man, husband’:

- A. Proto-Afrasian **ǵar-* ‘husband’: Proto-Highland East Cushitic **aroǵo* ‘husband’ > Sidamo *aroo*, *aró* ‘husband’; Gedeo / Darasa *aroʔo* ‘husband’; Hadiyya *aroʔo* ‘husband’. Hudson 1989:82. Central Cushitic: Awngi / Awiya (with prefix *η-*) *η-árá* ‘husband’. Appleyard 2006:86. Omotic: Anfilla *aroo* ‘husband’ (according to Orël—Stolbova, this may be a loan from Sidamo). Orël—Stolbova 1995:14, no. 49, **ǵar-* ‘husband’.
- B. Elamo-Dravidian: Royal Achaemenid Elamite *ir-šá-na*, *ir-šá-an-na* ‘big, large, great’, *ir-šá-ra* ‘leader, chief’; Middle Elamite *ri-ša-ar*, *ri-ša-ar-ra*, *ri-šá-ri* ‘the big one, great person’, Neo-Elamite *ri-šá-ra* ‘the big one, great person’. The *ir-* ~ *ri-* variation may indicate a syllabic *r* [r].

- C. Proto-Indo-European *ʔer-s-/*ʔr-s- ‘male, man’: Greek (Homeric) ἄρσῃν, (Attic) ἄρρῃν, (Ionic, Aeolian, Lesbian, Cretan, etc.) ἔρρῃν, Laconian ἄρρῃς ‘male; masculine, strong’; Sanskrit *r̥ṣa-bhá-h* ‘bull’; Avestan *aršan-* ‘man; manly’; Old Persian *aršan-*, *arša-* ‘male, hero, bull’; Armenian *ar̥n* ‘male sheep’. Pokorny 1959:336 *ers-, *rs-; *rsen ‘manly, virile’; Walde 1927—1932.I:149—150; Mann 1984—1987:36 *arsjēn (*arsjēn, *rsjēn, *rsjēn) ‘male, manly’; Mallory—Adams 1997:363 *rsēn ‘male (as opposed to female)’; Benveniste 1969.I:21—25 and 1973:19—22; Mayrhofer 1956—1980.I:125; Buck 1955:45; Kent 1953:171; Boisacq 1950:83; Frisk 1970—1973.I:152—153; Chantraine 1968—1980.I:116; Hofmann 1966:25; Beekes 2010.I:141 *uers-n-; Godel 1975:98, §5.144.
- D. (?) Uralic: Proto-Ugric *ar3 (*arwa) ‘relative on the mother’s side; mother’s younger brother’ > Old Hungarian *ara* ‘brother’ (Modern Hungarian ‘fiancée’); Ostyak / Xanty (Kazym) *wōrti* ‘mother’s younger brother; younger brother’s sons’, (Obdorsk) *orti* ‘mother’s brother’; Vogul / Mansi (Middle Lozva) *oār*, (Northern) *ār* ‘relative on the mother’s side’. Rédei 1986—1988:832—833 *ar3 (*arwa).
- E. Proto-Altaic *āri (~ *ēra) ‘male, man, husband’: Proto-Mongolian *ere ‘man, male’ > Written Mongolian *ere* ‘man, male, husband; manly, daring, bold, brave’; Khalkha *er* ‘man’; Buriat *ere* ‘man’; Kalmyk *erə* ‘man’; Ordos *ere* ‘man’; Moghol *errä* ‘man’; Dagur *er*, *ergun*, *ere* ‘man’; Monguor *rē* ‘non-castrated male of certain animals; masculine’. Proto-Turkic *ēr ‘man’ > Old Turkic (Orkhon, Old Uighur) *er* ‘man’; Turkish *er* ‘man, male, husband’; Karakhanide Turkic *er* ‘man’; Azerbaijani *ār* ‘husband’; Turkmenian *ār* ‘man’; Uighur *ār* ‘man’; Karaïm *er* ‘man’; Tatar *ir* ‘man’; Bashkir *ir* ‘man’; Sary-Uighur *jer* ‘man’; Oyrot (Mountain Altai) *er* ‘man’; Tuva *er* ‘man’; Chuvash *ar* ‘man’; Yakut *er* ‘man’; Dolgan *er* ‘man’. Starostin—Dybo—Mudrak 2003:312 *āri (~ *ēra) ‘man’.
- F. Proto-Gilyak / Nivkh *ar ‘male’: Amur *ar* ‘male’; North Sakhalin *ār̥a* ‘male’; East Sakhalin *ar̥a* ‘male’; South Sakhalin *aṛ̥2* ‘male’. Fortescue 2016:15. Proto-Gilyak / Nivkh *arməč ‘man’: East Sakhalin *azmuc* ‘man’; South Sakhalin *azmc* ‘man’. Fortescue 2016:16.

Buck 1949:2.23 male; 2.31 husband.

656. Proto-Nostratic (n.) *ʔar-a ‘associated or related person or thing; associate, companion, friend; kinsman, relative’; (adj.) ‘associated, related’:
- A. Proto-Afrasian *ʔar- ‘(n.) associated or related person or thing; associate, companion, friend; kinsman; (adj.) associated, related’: Semitic: Ugaritic *āry* ‘kinsman’. D. Cohen 1970— :33. Egyptian *iry*, *iri* ‘one who belongs to someone or something, one who is in charge, keeper; friend, associate, companion’; Coptic (Bohairic) *ēr* [hp] ‘friend’. Hannig 1995:82; Faulkner 1962:25; Erman—Grapow 1921:15 and 1926—1963.1:105; Gardiner 1957:61, §79, *iry* ‘related to, connected with’, from the preposition *r* (*ir*)

‘to’, and 554; Vycichl 1983:53—54; Černý 1976:42. Proto-Southern Cushitic **ʔar-* ‘kind, associated or related thing’ > Iraqw *ado* ‘way, manner’; Asa *ʔarato* ‘twins’; Ma’a *mʔáro* ‘neighbor; kind, associated or related thing’. Ehret 1980:286.

- B. Proto-Indo-European **ʔer-/ʔor-/ʔr-* ‘associated, related’: Sanskrit *arí-h* ‘devoted, trustworthy, loyal’, *aryamā* ‘companion, host; the god of hospitality’; Avestan *airyaman-* ‘friend, guest’; Hittite (nom. sg.) *araš* ‘member of one’s own social group, peer, comrade, partner, fellow, friend’. Puhvel 1984— .1/2:116—121 **áro-*; Mallory—Adams 1997:213 **h₄erós* ~ **h₄erios* ‘member of one’s own (ethnic) group, peer, freeman’; Kloekhorst 2008b:198—199.

Buck 1949:19.51 friend; 19.53 companion. Dolgopolsky 1998:95, no. 120, **ʔarV-* ‘member of the clan’ and 2008, no. 66, **ʔaRV* ‘member of one’s clan/family’; Bomhard—Kerns 1994:565, no. 429.

657. Proto-Nostratic root **ʔar-* (~ **ʔar-*) (used as the base for the designation of various horned animals):

(n.) **ʔar-a* ‘ram, goat, mountain-goat, chamois, ibex, gazelle, etc.’

- A. Proto-Afrasian **ʔar-* used as the base for the designation of various horned animals: Proto-Semitic **ʔar-w/y-* originally used as the designation of various horned animals: ‘chamois, gazelle, mountain goat’; later used as the designation for any wild animal > Akkadian *arwū* (also *armū*) ‘gazelle’, *erū*, *arū* ‘eagle’; Amorite *ʔarwiyum* ‘gazelle’; Hebrew *ʔārī* [אַרְיִי], *ʔaryēh* [אַרְיֵה] ‘lion’; Syriac *ʔaryā* ‘lion’; Arabic *ʔarwā* ‘chamois’, *ʔurwiyya* ‘mountain goat’; Sabaeen *ʔry* ‘mountain goats’; Geez / Ethiopic *ʔarwe* [አርዌ] ‘animal, wild animal, beast, wild beast, reptile’; Tigrinya *ʔarawit*, *ʔarā* ‘wild animal’; Tigre *ʔarwē* ‘serpent, snake’, *ʔarwāt* ‘female elephant’; Harari *ūri* ‘wild animal, beast’. D. Cohen 1970— :32; Murtonen 1989:100—101; Klein 1987:55; Leslau 1963:31 and 1987:40. Berber: Guanche *ara* ‘she-goat’. Lowland East Cushitic **ʔar-* ‘sheep’ > Boni *eriya* ‘sheep’; Rendille *ari* ‘sheep’. Highland East Cushitic (pl.) **ʔaray-* ‘sheep’ > Bambala *araay* ‘sheep’. Proto-Rift **ʔar-* ‘goat’ > Iraqw *ari* ‘goat’; Alagwa (pl.) *ara* ‘goats’; Burunge (pl.) *ara* ‘goats’; K’wadza *ali-to* ‘goat’. Ehret 1980:297 **aari* ‘goat’. Orël—Stolbova 1995:15, no. 50, **ʔar-* ‘ram, goat’; Militarëv 2009:101; Militarëv—Kogan 2005.II:26—28, no. 18, Proto-Afrasian **ʔarwVj-* ‘(wild) goat, ram; kind of antelope’.

Comments: Militarëv—Nikolaev (2020:200—201) reconstruct Proto-Afrasian **ʔar(a)w/y-* ‘a kind of larger bovid’ on the basis of the following evidence: Semitic **ʔi/arw-/ʔawr-* ‘calf, bull’ > Akkadian (Old Akkadian on) *arwū*, *armū*, etc. ‘gazelle’ [*Gazella* sp.]; Syriac *ʔarw-ān-ā* ‘vitulus, vitula’ (‘bull-calf, she-calf’); Gurage **ʔar-* ‘cows’ > Eza, Gyeto *āray*; etc. (?) Egyptian *ir.t* ‘calf’; Demotic *iry.t* ‘milking-cow’ (if < **ʔVr-* not **ʔVL-*).

Chadic *ʔarw- ‘a kind of bovid’ [*Tragelaphus*?]: Central Chadic *ʔarw- > Balɓi *érèw-è* ‘antelope sp.’ East Chadic *ʔar- > Migama *ʔār-ó* ‘duiker’ [*Tragelaphus* sp.]. Cushitic *ʔaraw- ‘male of large ungulates’: North Cushitic *-rayVw- (*ʔ > Ø in Beja) > Beja *o-reo* ‘bull, steer’ (*o-* is a masc. article). East Cushitic *ʔawar- (met.): Saho-Afar: Saho *awr*; Afar *awur* ‘bull’. Lowland East Cushitic: Somali *awr* ‘he-camel’; Rendille *or* ‘he-camel, bull’; Boni *oor* ‘male, elephant [*L. africana*]’; Oromo *oor-oo* ‘burden camel; Bayso *aar*; Arbore *ʔaar*; Dasenech *ar* ‘bull’. Highland East Cushitic *ʔaray- > Burji *array*, *aʔráy* ‘bull’, *aʔre* ‘calf’; Yaaku *erer* ‘antelope sp.’ Southern Cushitic *ʔarw- > Ma’a *áro* ‘large herbivore’; Dahalo *ʔáároole* (with *-l* root extension?) ‘eland’ [*Taurotragus* sp.].

Militarëv—Nikolaev (2020:201) also reconstruct Proto-Afrasian *ʔar(a)w/y- ‘a kind of lesser bovid’ on the basis of the following evidence: Semitic *ʔarwi- ‘ibex’ [*Capra ibex*] > Sabaeen *ʔrwy-n* (pl.) ‘(female) mountain goat, ibex (?)’ [*Capra ibex*]; Arabic *ʔurw-iy-at-* ‘chèvre de montagne’ ‘(mountain goat)’ [*Capra ibex*]; Modern South Arabian: Mehri *ʔar-īt* ‘goat’, *hā-raw-n*; Jibbāli *ʔarū* ‘she-goat’, *ʔerū-n* ‘goats’; Harsūsi *he-werū-n* (met.); Soqotri *ʔére-hon* ‘moutons, chèvres’ (‘sheep, goats’). Berber-Canary: Tenerife *ara* ‘goat’. Chadic *ʔawr- (met.) ‘small cattle’: West Chadic *(ʔa)war- > Hausa *ara-ara* (*-w-* lost in a reduplicated form?) ‘type of long-legged ram, goat, sheep’; Montol, Ankwe, Gerka *ur*; Kerkere *wār* ‘he-goat’. East Chadic *ʔawr- > Lele *ōr-ē* ‘goats’. Cushitic *ʔaray- ‘a kind of lesser bovid’: East Cushitic *ʔaray-: Saho-Afar *ʔVray- > Afar *eráy-taa* ‘goat’. Lowland East Cushitic *ʔar- > Somali *ari*, *eri* ‘pecore e capre’ (‘sheep and goats’); Bayso *arer* ‘antelope sp.’. Highland East Cushitic *ʔaray- > Burji *aráy* ‘sheep’; Yaaku *erer* ‘antelope sp.’ Southern Cushitic *ʔary- > Iraqw *ari* ‘goat’ (pl. *ar-a*); Alagwa, Burunge (pl.) *ar-a* ‘goats’; K’wadza *ali-to* (*-l* < **-r-*) ‘goat’.

Even though Militarëv—Nikolaev reconstruct two separate Proto-Afrasian stems here, I prefer to reconstruct only a single stem.

- B. Proto-Kartvelian *arčkw- ‘chamois’: Mingrelian *erckem-*, *erskem-* ‘ibex’; Georgian *arčv-* ‘chamois’. Note: Svan *jersk’än* ‘chamois’ is a loan from Mingrelian. Schmidt 1962:93 *arckw-; Klimov 1964:45 *arčw- and 1998:3—4 *arčw- ‘chamois’; Fähnrich—Sardshweladse 1995:36 *arčw-; Fähnrich 2007:38—39 *arčw-.
- C. Proto-Indo-European *ʔer-/*ʔor-/*ʔr- used as the base for the designation of various horned animals: ‘ram, goat’: Greek *ἔριφος* ‘young goat, kid’; Armenian *or-oj* ‘lamb’; Latin *ariēs* ‘ram’; Umbrian *erietu* ‘ram’; Old Irish *heirp* ‘she-goat’; Old Prussian *eristian* ‘lamb’; Lithuanian *ėras* ‘lamb’. Pokorny 1959:326 *er-, *eri- ‘he-goat’; Walde 1927—1932.I:135—136 *er-; Watkins 1985:17 *er- base of designation of various domestic horned animals; Gamkrelidze—Ivanov 1984.II:584 *er(i)- and 1995.I:500 *er(i)- ‘lamb, ram’; Mallory—Adams 1997:511 *h₁er- ‘lamb, kid’; Chantraine

1968—1980.I:372; Boisacq 1950:281; Frisk 1970—1973.I:560; Hofmann 1966:93 **eri-bhos*, **er-bhos*, **_eri-*; Beekes 2010.I:460; De Vaan 2008:54; Ernout—Meillet 1979:46; Walde—Hofmann 1965—1972.I:67 **eri-bho-*, **er-bh-*, **ero-*; Fraenkel 1962—1965.I:121; Smoczyński 2007.1:233—234 *jéras*; Derksen 2015:154 **Hieh₁-r-*; Wodtko—Irslinger—Schneider 2008: 233—235 **h₁er-*, **h₁er-i-*.

Buck 1949:3.25 sheep; 3.26 ram; 3.36 goat; 3.37 he-goat; 3.38 kid. Bomhard—Kerns 1994:570—571, no. 437; Dolgopolsky 2008, no. 75, **₂erq[i]* ‘ruminant’.

658. Proto-Nostratic root **₂as-* (~ **₂as-*):

(vb.) **₂as-* ‘to gather, to collect’;

(n.) **₂as-a* ‘the act of gathering, collecting’

- A. Proto-Afrasian **₂as-* ‘to gather, to collect’: Proto-Semitic **₂as-ap-* ‘to gather, to collect’ > Hebrew *ʾāsaq* [אָסַק] ‘to gather, to collect, to remove; to harvest’, *ʾāsīq* [אָסִי] ‘harvest’; Aramaic *ʾasaq* ‘to gather, to harvest’; Phoenician *ʾsp* ‘to be gathered in’; Ugaritic *āsp* ‘to gather’; Akkadian *esēpu* ‘to gather up, to collect’ (Assyrian *esāpu*); Eblaite *á-si-pū* ‘harvest’. D. Cohen 1970—:27; Murtonen 1989:97; Klein 1971:44. East Chadic **₂Vsup-* ‘to harvest’ > Tumak *sub-* ‘to harvest’. Orël—Stolbova 2000:37, no. 146, **₂Vcup-* ‘to gather, to harvest’.
- B. Proto-Indo-European **₂es-/ *₂os-* ‘harvest-time’: Gothic *asans* ‘summer (time of harvest)’; Old Icelandic *önn* ‘working season, especially the hay-making season’; Old High German *aran* ‘harvest’ (New High German *Ernte* ‘harvest, crops’); Old Prussian *assanis* ‘autumn’; Old Church Slavic *jesenʹ* ‘autumn’; Russian *ósenʹ* [осень] ‘autumn’; Ukrainian *ósinʹ* ‘autumn’; Belorussian *vósenʹ* ‘autumn’; Slovak *jeseň* ‘autumn’; Bulgarian *ésen* ‘autumn’. Pokorny 1959:343 **es-en-*, **os-en-* ‘summer, harvest’; Walde 1927—1932.I:161—162 **es-en-*, **os-en-*; Mann 1984—1987:38 **asjō(n)* (**asin-*, **asən-*) ‘harvest-time, autumn’; Gamkrelidze—Ivanov 1984.II:691 **(e)s-en-* and 1995.I:596—597 **(e)s-en-* ‘harvest time, summer’; Watkins 1985:17 **esen-* and 2000:24 **es-en-* ‘harvest, fall’ (Germanic **aznō* ‘harvest, work’); Mallory—Adams 1997:504 **h₁es-en-* ~ **h₁os-en-* ~ *h₁os-₁* ‘autumn’; Orël 2003:31 Proto-Germanic **az(a)niz* ~ **asaniz*; Kroonen 2013:46 Proto-Germanic **azani-* ‘harvest’; Lehmann 1986:44 **e/os-+-en/r* ‘harvest time, summer’; Feist 1939:58—59; De Vries 1977:687—688 **es-en-*, **os-en-*; Kluge—Mitzka 1967:173; Kluge—Seebold 1989:186 **osōr/-n-*; Derksen 2008:144 Balto-Slavic **es-eni-* and 2015:555—556 **h₁es-en-i-*.

Buck 1949:8.41 crop, harvest. Bomhard—Kerns 1994:559—560, no. 421.

659. Proto-Nostratic root *ʔasʷ- (~ *ʔasʷ-):

(vb.) *ʔasʷ- ‘to put, to place, to set; to sit, to be seated’;

(n.) *ʔasʷ-a ‘place, seat’; (adj.) ‘put, placed, set, established’

- A. Proto-Afrasian *ʔasʷ- ‘to put, to place, to set; to sit, to be seated’: Proto-Semitic *ʔasʷ-asʷ- ‘to set up, to establish’ > Old Akkadian *uššum* ‘foundation’; Hebrew *ʔāšāš [ʔʕšš] ‘to strengthen, to fortify, to found, to establish’; Post-Biblical Hebrew *məʔuššāš* [ʔʕššā] ‘strong’; Biblical Aramaic (pl. det.) *ʔuššayyā* ‘foundations’; Arabic *ʔassa* ‘to found, to establish, to set up, to lay the foundation’, *ʔuss* ‘foundation, basis’; Sabaeen *ʔss* ‘base (of a statue or stele)’; Tigre *ʔassārā* ‘to set in order’. D. Cohen 1970—:35—36; Klein 1987:59—60. Egyptian *is-t*, *s-t* ‘seat, throne, place’, *t-is* ‘to sit, to seat oneself’, *t-isʔ* ‘to set, to insert, to inlay’, *isb-t* ‘throne, seat’, (obsolete in Middle Egyptian) *isd* ‘to sit’. Hannig 1995:102, 105, and 918; Faulkner 1962:30 and 206; Rössler 1981:715; Erman—Grapow 1921:19, 150 and 1926—1963.1:132, 4:1—6 *š-t*, 5:242. East Cushitic: Burji *iss-* ‘to do, to act, to make’; Sidamo *ass-* ‘to do, to make’; Kambata *ass-*, *es-* ‘to so, to make’; Hadiyya *iss-* ‘to do, to make’; Gedeo / Darasa (*h*)*ass-* ‘to do’; Saho *is-* ~ *iš-* ‘to do, to make’; Boni *as-* ‘to prepare, to make’. Sasse 1982:107; Hudson 1989:51 and 405 Proto-Highland East Cushitic **ass-* ‘to do’.
- B. Proto-Indo-European *ʔēs-/ʔōs- ‘to put, to place, to set; to sit, to be seated’: Hittite (3rd sg. pres.) *e-eš-zi*, *a-aš-zi* ‘to set, to sit, to beset, to do’; Hieroglyphic Luwian *i-sà-nu-wa/i-* ‘to seat, to cause to sit’, *i-sà-tara/i-tá-* ‘throne’; Greek ἵσται ‘to sit, to be seated’; Sanskrit *āste* ‘to sit, to sit down’; Avestan *āste* ‘to sit’. Rix 1998a:206 **h₁eh₁s-* ‘to sit’; Pokorny 1959:342—343 **ēs-* ‘to sit’; Walde 1927—1932.II:486 **ēs-*; Mann 1984—1987:249 **ēs-* (variant of root: **es-*); Watkins 2000:24 **ēs-* ‘to sit’ (oldest form **ʔ₁ēs-*); Gamkrelidze—Ivanov 1984.II:928 **es-* and 1995.I:821 **es-* ‘to sit, to be seated’; Mallory—Adams 1997:522 **h₁ēs-* ‘to sit’; Laroche 1960:13, no. 19/II, 153, no. 298, and 153—154, no. 299; Hawkins—Morpurgo-Davies—Neumann 1974:187—188; Werner 1991:35 and 88; Winter 1965b:202 **Ees-*; Mayrhofer 1956—1980.I:84; Boisacq 1950:322 **ēs-*; Beekes 2010.I:518 **h₁eh₁s-*; Chantraine 1968—1980.I:411—412; Hofmann 1966:107; Frisk 1970—1973.I:633—634; Kloekhorst 2008b:252—255 (reduplicated) **h₁e-h₁s-*; Tischler 1977—:1:110—111; Puhvel 1984—:1/2:291—300.
- C. Proto-Uralic **asʷe-* ‘to place, to put, to set’: Finnish *asu-* ‘to reside, to live, to dwell’, *asetta-* ‘to place, to put, to set’, *ase-* ‘to place oneself’, *asema* ‘position, place, station’; Estonian *asu-* ‘to be, to be found, to lie, to dwell’, *asu* ‘place (for rest)’, *asukoht* ‘dwelling-place, residence, abode, habitation, haunt; location, whereabouts; site, seat’, *asula* ‘settlement, populated area, village’, *asukas* ‘inhabitant, denizen’, *asuta-* ‘to set up, to found, to institute, to establish, to constitute’, *asunda-* ‘to settle, to colonize’, *asumaa* ‘colony’, *ase* ‘place, spot, site’, *asetä-* ‘to place, to put, to set, to

lay; to arrange'; Mordvin *ezem* 'place, position; bench fastened to the wall in a Mordvin room'; Yurak Samoyed / Nenets *ηōōso-*, *ηāeso-* 'to stop and put up one's tent', *ηyysy* 'tent, settlement'. Collinder 1955:4 and 1977:26; Décsy 1990:97 **asja* '(to) place'; Rédei 1986—1988:18—19 **aše-*; Aikio 2020:48—49 **ēci-* 'to set', **ēci-w-* 'camp'; Zhivlov 2023:161 Proto-Uralic **ēci-* 'to settle down', Proto-Finnic **aše-* 'to set up'; Joki 1973:252—253.

Sumerian *aš-te* 'seat, stool, throne', *aš-ti* 'seat, throne', *eš-de*, *eš-ki* 'throne'.

Buck 1949:9.11 do, make; 12.11 place (sb.); 12.12 put (place, set, lay); 12.13 sit. Illič-Svityč 1971—1984.I:268—270, no. 132, **ʔesA* 'to settle a place, to be at a place'; Hakola 2000:25, no. 47; Bomhard—Kerns 1994:567—568, no. 434; Dolgopolsky 2008, no. 84, **ʔ[ä]ś[o]* 'to stay, to be' (Illič-Svityč ← 'to settle') and no. 85, **ʔisV* (or **ʔiʔsV* ?) 'to sit', 'seat (the part of the body that bears the weight in sitting)' (→ 'foundation, basis').

660. Proto-Nostratic (n.) **ʔath^hha* 'older male relative, father' (nursery word):

- A. Afrasian: Egyptian *it* 'father', (f.) *it-t* 'nurse'; Coptic *yōt* [ϣⲓⲟⲩⲧ] 'father'. Hannig 1995:110; Faulkner 1962:32; Gardiner 1957:555; Erman—Grapow 1921:20 and 1926—1963.1:141; Vycichl 1983:67—68; Černý 1976:49.
- B. Proto-Elamo-Dravidian **atta* 'father': Middle Elamite *at-ta* 'father'; Royal Achaemenid Elamite *at-ta* 'father'. McAlpin 1981:141. Dravidian: Tamil *attan* 'father, elder, person of rank or eminence', (f.) *attai*, *attaicār* 'father's sister, mother-in-law', *attān* 'elder sister's husband; father's sister's son, maternal uncle's son when elder, wife's brother when elder'; Malayalam *attan* 'father', *atta* (f.) 'mother, mother's sister'; Kannaḍa (f.) *atte*, *atti* 'mother-in-law, aunt'; Tuḷu (f.) *attē* 'mother-in-law'; Gadba (Ollari) (f.) *āta*, (Salur) (f.) *atta* 'father's sister'; Gondī (f.) *ātī* 'father's sister'; Telugu (f.) *atta* 'mother-in-law'; Naikṛī (f.) *atiak* 'father's sister'; Kuwī (f.) *atta* 'aunt', (f.) *atu* 'grandmother'; Kui (f.) *ata*, *atali* 'grandmother'. Krishnamurti 2003:10 **atta-* 'maternal/paternal aunt'; Burrow—Emeneau 1984:15, no. 142.
- C. Proto-Indo-European **ʔath^hha* 'father, daddy': Hittite (nom. sg.) *at-ta-aš* 'father'; Greek *ἄττα* 'daddy'; Latin *atta* 'father'; Gothic *atta* 'father'; Old Frisian *aththa* 'father'; Old High German *atto* 'father' (Middle High German *atte*, *ätte* 'father'); Albanian *atë* 'father'; Old Church Slavonic *отѣць* 'father'; Russian *otéc* [отѣц] 'father'; Sanskrit (f.) *attā* 'mother' (**atta-* 'father' is unattested, but note the following: Assamese *ātā* form of address to a respectable older man; Gujarati *ātāji* 'grandfather'; Sinhalese *ātā* 'grandfather'; Sindhi *ado* 'brother'; Lahndi *addā* 'father'). Pokorny 1959:71 **ātos*, **atta* 'daddy'; Walde 1927—1932.I:44 **atta*; Mann 1984—1987:39 **atā* (**attā*, -os, -jos) 'daddy'; Watkins 1985:4 **atto-* and 2000:6 **atto-* 'father' (nursery word); Mallory—Adams 1997:195 **at-* (or **h_aet-* ~ **h₁at-*) 'father'; Mayrhofer 1956—1980.I:27—28; Chantraine

- 1968—1980.I:135; Boisacq 1950:98; Frisk 1970—1973.I:182; Hofmann 1966:27; Beekes 2010.I:165 *atta; Ernout—Meillet 1979:54; Walde—Hofmann 1965—1972.I:77; De Vaan 2008:60; Huld 1984:39; Orël 1998:11 and 2003:27 Proto-Germanic *attōn; Kroonen 2013:39 Proto-Germanic *attan- ‘father’; Feist 1939:62; Lehmann 1986:46; Derksen 2008:383; Kloekhorst 2008b:225—226; Puhvel 1984— .1/2:224—226.
- D. Proto-Altaic *ēthe (with *ē- for expected *ǎ-) ‘elder male relative’: Proto-Tungus *(χ)eti- ‘old man; father-in-law’ > Evenki *eti-rkēn* ‘old man’, *etkī* ‘father-in-law’; Lamut / Even *eti-kēn* ‘old man’, *etki* ‘father-in-law’; Negidal *eti-χen* ‘old man’, *etkī* ‘father-in-law’; Solon *etikkē* ‘old man’. Proto-Mongolian *ečige (< *etike) ‘father’ > Written Mongolian *ečige* ‘father’; Khalkha *eceg* ‘father’; Buriat *esege* ‘father’; Kalmyk *ecəgə* ‘father’; Ordos *ečige* ‘father’; Dagur *ečig*, *ecihe* ‘father’. Poppe 1955:57. Proto-Turkic *Ata/*Ete ‘father, uncle, ancestor’ > Old Turkic (Old Uighur) *ata* ‘father’; Karakhanide Turkic *ata*, *ataqī* ‘father’; Turkish *ata* ‘father, ancestor’; Azerbaijani *ata* ‘father’; Turkmenian *ata* ‘father’s father’; Uzbek *ota* ‘father’; Uighur *ata* ‘father, ancestor’; Karaim *ata* ‘ancestor’; Tatar *ata*, *eti* ‘father’, *etkey* ‘uncle’; Bashkir *ata* ‘father, male’; Kirghiz *ata* ‘father, ancestor’; Kazakh *ata* ‘father’; Noghay *ata* ‘father, male’; Sary-Uighur *ata* ‘father’; Oyrot (Mountain Altai) *ada* ‘father, ancestor’. Poppe 1960:51, 56, and 103; Street 1974:12 *etiké(y) ‘some older male relative’; Starostin—Dybo—Mudrak 2003:523—524 *ēt’e ‘elder relative’.
- E. Chukchi-Kamchatkan: Proto-Chukotian *atləy(ən) ‘father’ > Chukchi *atləyən* ‘father’, *atləyə-lqəl* ‘stepfather’; Alyutor *əlləyən* ‘father’, *əlləyuwwi* ‘parents’; Kerek *itna* ‘father’, *itnuu-lXəl* ‘stepfather’. Fortescue 2005:148.
- F. Proto-Gilyak / Nivkh *ətək ‘father’; Amur *ətək* ‘father, paternal uncle’; North Sakhalin *ətək* ‘father’; East Sakhalin *ətk* ‘father’; South Sakhalin *ətk* ‘father’. Fortescue 2016:167. Proto-Gilyak / Nivkh *atak or *atək ‘grandfather’ or ‘father-in-law’: Amur *atak* ‘grandfather’, *atk* ‘father-in-law’; North Sakhalin *atak* ‘grandfather’; East Sakhalin *atk* / *ackičx* ‘grandfather’; South Sakhalin *at(ə)k* ‘grandfather’. Fortescue 2016:17.
- G. Etruscan *ateri* ‘parents, ancestors’, (f.) *ati* ‘mother’, (f.) *ati nacna* ‘grandmother’.

Buck 1949:2.35 father. Bomhard—Kerns 1994:565—566, no. 430; Caldwell 1913:612—613.

661. Proto-Nostratic (n.) *ʔatʔa ‘older relative (male or female)’ (nursery word):

- A. Dravidian: Tamil *accan* ‘father’; Malayalam *accan* ‘father, lord’, *acca*, *acci* ‘mother’; Kota *aj ayn* ‘very old man’, *aj av* ‘very old woman’; Kannada *acci* ‘mother’, *ajja* ‘grandfather’, *ajji* ‘grandmother’; Kodagu *ajjē* ‘grandfather’, *mutt-ajjē* ‘great-grandfather’; Tulu *ajje* ‘grandfather’, *ajji* ‘grandmother’; Naikri *ājak-jaran* ‘grandfather’; Manda *aji* ‘father’s

- mother'; Kuṛux *ajjos* (voc. *ajjō*) 'paternal grandfather', *ajjī* 'grandmother'. Burrow—Emeneau 1984:6, no. 50.
- B. Proto-Uralic **älvvā* 'father': Lapp / Saami *ač'če* 'father'; Vogul / Mansi *äüči* 'grandfather'; Ostyak / Xanty (Tremyugan) *at'i*, (Literary) *asī* 'father'; Yurak Samoyed / Nenets *ḡaaceʔ* 'father', (Forest) *aaće* 'father'. Collinder 1955:2 and 1977:24; Rédei 1986—1988:22 **äčä*; Décsy 1990:98 **ätjä* 'father'; Aikio 2020:30—33 (?) **äččä* / **eč(č)ä* / **ič(č)ä* / **ajčä* 'father'. Yukaghir (Southern / Kolyma) *eče*: 'father'. Nikolaeva 2006:150.
- C. Proto-Altaic **äčV* 'older relative (male or female)': Proto-Tungus **asī* 'elder brother's wife; woman; wife' > Evenki *asī* 'woman'; Lamut / Even *asī* 'woman'; Negidal *asī* 'woman'; Manchu *aša* 'elder brother's wife'; Spoken Manchu (Sibo) *ašə, asə* 'wife'; Ulch *asī* 'wife'; Orok *asī* 'woman'; Nanay / Gold *aša* 'woman'; Oroch *asa* 'woman'; Udihe *ahanta* 'woman'; Solon *ašē, ašī* 'woman'. Mongolian: Dagur *ačā* 'father'. Proto-Turkic **äčay/*ēčey* 'older relative (male or female)' > Old Turkic (Orkhon) *eči* 'elder brother, uncle', (Orkhon, Old Uighur) *ečü* 'ancestor'; Karakhanide Turkic *eči* 'old man or woman', *ečü* 'Father! (to the god)'; Turkish (dial.) [*ažu, eže*] 'old man, elder man'; Uzbek *oča, ača* 'mother, grandmother'; Uighur *ača* 'aunt, sister of father'; Tatar (dial.) *aža, aži, eži* 'mother', (dial.) *ažiy, ezi* 'old man, elder man, father'; Bashkir *äsä* 'mother'; Kirghiz *ačay* 'mother', *aža* 'old man, elder man'; Sary-Uighur *ači* 'sister (of woman)', *ača* 'husband, father'; Tuva *ača* 'father'; Chuvash *aža* 'father'; Yakut *ehe* 'grandfather'. Starostin—Dybo—Mudrak 2003:271—272 **äčV* 'elder relative, ancestor'.
- D. Proto-Gilyak / Nivkh **ačik* 'grandmother' or 'mother-in-law': Amur *əčik* 'grandmother', *ačk* 'mother-in-law', *ačx* 'aunt (father's sister)'; North Sakhalin *əčik* 'grandmother'; East Sakhalin *əčim* 'grandmother', *əčik* 'mother-in-law'; South Sakhalin *ačik* 'mam'. Fortescue 2016:7.
- E. Proto-Eskimo **accay* 'paternal aunt': Alutiiq Alaskan Yupik *aca(k)*, *acaaq* 'paternal aunt'; Central Alaskan Yupik *acak* 'paternal aunt'; Naukan Siberian Yupik *asak, asik* 'paternal aunt'; Central Siberian Yupik *asak* 'paternal aunt'; Sirenik *asəx* 'paternal aunt'; North Alaskan Inuit *atcak* 'paternal aunt'; Western Canadian Inuit (Netsilik) *atsak*, (Copper) *attak* 'paternal aunt'; Eastern Canadian Inuit *atsa, atsak* 'paternal aunt'; Seward Peninsula Inuit *assak* 'paternal aunt'; Greenlandic Inuit *atsak* 'paternal aunt'. Fortescue—Jacobson—Kaplan 1994:2. Proto-Eskimo **acurar* 'aunt by marriage': Alutiiq Alaskan Yupik (Kodiak) *acu<R>aq* 'aunt by marriage'; North Alaskan Inuit *asuraq* 'paternal aunt-in-law'; Seward Peninsula Inuit *azuraq* 'aunt by marriage'. Fortescue—Jacobson—Kaplan 1994:4.

Buck 1949:2.46 grandfather; 2.47 grandmother; 2.51 uncle; 2.52 aunt.

662. Proto-Nostratic coordinating conjunction **ʔaw-*, **ʔwa-* (~ **ʔwə-*) 'or':

- A. Afrasian: Proto-Semitic *ʔaw- ‘or’ > Arabic ʔaw ‘or’; Hebrew ʔō [ʔō] ‘or’; Syriac ʔaw ‘or’; Ugaritic ʔ ‘or’; Akkadian ū ‘or’; Sabaeen ʔw ‘or’; Ḥarsūsi ʔaw ‘or’; Mehri ʔaw ‘or’; Geez / Ethiopic ʔaw [ḥaw] ‘or’; Tigre ʔaw ‘or’; Tigrinya wāy ‘or’; Harari aw ‘or’; Gurage we ‘or’; Amharic wāy ‘or’; Gafat wāy ‘or’. D. Cohen 1970— :11; Murtonen 1989:84—85; Klein 1987:9; Leslau 1963:37, 1979:639, and 1987:47; Zammit 2002:83. East Cushitic: Saho oo ‘or’.
- B. Proto-Indo-European *ʔwe ‘or’ > Greek ἦ-(F)έ ‘or’; Sanskrit -vā ‘or’; Latin -ve ‘or’. Pokorny 1959:75 *μῑ-, *μo- ‘or’; Walde 1927—1932.I:188—189; Mann 1984—1987:1496 *μe (*μῑ, *μo, *u) enclitic: ‘and, but, or, also, so’; Mallory—Adams 1997:410 *μῑ- ‘or’; De Vaan 2008:656; Ernout—Meillet 1979:716; Boisacq 1950:313; Frisk 1970—1973.I:619; Chantraine 1968—1980.I:404; Hofmann 1966:104; Beekes 2010.I:507 *h₁ῑ-ue; Mayrhofer 1956—1980.III:180.
- C. Uralic: Finnish vai ‘or’; Estonian vōi ‘or’.

Möller 1911:258; Brunner 1969:152, no. 862; Bomhard—Kerns 1994:602—603, no. 476.

663. Proto-Nostratic root *ʔay- (~ *ʔay-) (interrogative verb stem):

(vb.) *ʔay- ‘to do what?, to act in what manner?’

Derivative:

Interrogative-relative pronoun stem *ʔay-, *ʔya- ‘(relative) who, which, what; (interrogative) who?, which?, what?’

- A. Proto-Dravidian *iya- originally an interrogative verb stem meaning ‘to do what?, to act in what manner?’, later ‘to do, to effect, to cause, to induce, to cause to act; to be possible, to be proper’: Tamil *iyal* ‘to be possible, to befall, to be associated with; to accept, to agree to, to approach, to resemble’, *iyalpu* ‘nature, proper behavior, goodness, propriety’, *iyalvu* ‘nature, means of attaining’, *iyarru* ‘to do, to effect, to cause to act; to control the movements of, to create, to compose’, *iyarri*, *iyarral* ‘effort’, *iyarkai* ‘nature, custom’, *iyai* ‘to join, to connect, to adapt’, *iyaipu* ‘union, harmony, appropriateness’, *iyaivu* ‘union, joining together’; Malayalam *iyaluka* ‘to agree, to go fairly, to be proper’, *iyal* ‘what is proper; nature, condition; strength, power’, *iyarruka* ‘to cause, to induce’, *iyappu* ‘joint, joining together’, *iyaykkuka* ‘to join’, *iyayuka* ‘to be agreeable, to harmonize’; Tulu *iyaruni*, *iyavuni* ‘to be sufficient’; Telugu *īya-konu*, *īyya-konu* ‘to consent’. Burrow—Emeneau 1984:45, no. 471.
- B. Proto-Indo-European *ʔ(e)yo- (originally an interrogative verb stem meaning ‘to do what?, to act in what manner?’, later simply ‘to make, to do, to perform’): Proto-Anatolian *iya- ~ *aya- ~ *ya-/*yē- (< *HyeH-) ‘to do, to make, to perform, etc.’ > Hittite (3rd sg. pres. active) *i-ya-(az-)zi*, *i-e-iz-zi* ‘to do, to make, to treat, to beget, to perform (duty, ritual), to celebrate (deity, feast)’; Luwian (3rd sg. pres. passive) *a-a-ya-ri* ‘to make’;

Hieroglyphic Luwian *a(i)a-* ‘to make’; Lycian (3rd sg. pres.) *ati* (< **ayati*) ‘to make’; Lydian *i-* ‘to make’. The stem is also found in Tocharian A/B *yām-* ‘to do, to make, to commit, to effect’. Mallory—Adams 1997:362 **ieh₁-* ‘to do, to make; to act vigorously’; Puhvel 1984— .1/2:335—347 **eye-*, **eyo-*; Tischler 1977— .2:338—343; Kloekhorst 2008b:381—382; Van Windekens 1976—1982.I:586; Adams 1999:490—492 **yeh₁-*.

- C. Altaic: Common Mongolian **yaya-*, **yeyi-* (< **yayi-*), **yeki-* interrogative verb stem (derived form — the root is **yā-*): ‘to do what?, to act in what manner?’ > Mongolian *yaki-*, *yeki-*, *yeyi-*, *yayaki-* ‘how to act?, what to do?, how to proceed?’; Dagur *yā-* ‘to do what?’; Ordos *yā-*, *yā^kxi-* ‘to do what?’; Khalkha *yā-* ‘to do what?’; *ī-* (< **yī-* < **yeyi-*) ‘to act in what manner?’; Monguor *yā-* ‘to do what?’; Buriat *yā-* ‘to do what?’; Kalmyk *yā-* ~ **yayv-* ‘to do what?’. Poppe 1955:230—231; Street 1974:29 **yā-* ‘to do what?; who, what’.
- D. Gilyak / Nivkh: Amur *ja-dv* ‘to do what?’. Fortescue 2016:81. Proto-Gilyak / Nivkh **aj-* ‘to do’ (originally an interrogative verb stem meaning ‘to do what?, to act in what manner?’, later simply ‘to do, to make, to build’): Amur *ai-dv* / *jai-dv* ‘to do’; East Sakhalin *aj-d* / *jaj-d* ‘to build, to make, to do’; South Sakhalin *jai-nt* ‘to do’. Fortescue 2016:9.

Bomhard—Kerns 1994:595—596, no. 468.

664. Proto-Nostratic interrogative-relative pronoun stem **ʔay-*, **ʔya-* ‘(relative) who, which, what; (interrogative) who?, which?, what?’:

Derivative of:

(vb.) **ʔay-* ‘to do what?, to act in what manner?’

- A. Proto-Afrasian **ʔay(y)-* interrogative-relative pronoun stem: ‘who, which, what; here; who?, which?, what?; where?’: Proto-Semitic **ʔay(y)-* interrogative stem: ‘who?, which?, what?; where?’ > Hebrew *ʔē* [ʔē] ‘where?’; Aramaic *ʔē* ‘what?, where?, how?’; *ʔēḫā* ‘where now?’; Syriac *ʔaynā* ‘what?’, *ʔaykā* ‘where?’; Ugaritic *īy* ‘where?’; Akkadian *ayyu* ‘who?, what?’; Arabic *ʔayy* ‘which?, what?’; Epigraphic South Arabian *ʔy* ‘whatsoever’; Geez / Ethiopic *ʔayy* [ḥḥ] ‘which?, what?, what kind?, what sort of?’; Tigre *ʔayi* ‘which?’; Tigrinya *ʔayyān*, *ʔayyā-nay* ‘which?’, also in: *nabāy* ‘whither?’ (from *nab ʔay*) and *kāmāy* ‘how!’ (from *kāmā ʔay*); Harari *āy* ‘which?’, *āyde* ‘where?’, *āyku(t)* ‘how?’; Gurage (Chaha) *e* ‘where?’. D. Cohen 1970— :16—17; Moscati 1964:114—115; Zammit 2002:86; Klein 1987:20; Leslau 1963:38, 1979:1, and 1987:49. Proto-East Cushitic **ʔay(y)-* > Saho *ay* ‘who?’; Boni *ay* ‘who?’; Somali *ayy-o* ‘who?’; Burji *áyye* ‘who?’; Hadiyya *ay*, *ayy-e* ‘who?’. Sasse 1979:46 and 1982:30; Hudson 1989:167. This stem also occurs in Proto-Southern Cushitic **ʔayi* ‘here’, (combining form) **yi* ‘here’ > K’wadza *ayīye* ‘here’; Ma’a *iʔi* ‘here’; Dahalo **ji-* in *jiko* ‘who?’. Ehret 1980:288. Bender (2000:209)

reconstructs an interrogative stem **ay* ‘who?, what?, why?’ for Proto-Omotc. Diakonoff 1988:83, §4.4.4.

- B. Proto-Dravidian **yā-* interrogative stem: ‘who?, which?, what?’: Kannada *yā-*, *ā-*, *ē-*, *e-* interrogative base; Malayalam *yāvan/ēvan*, *yāvaḷ/ēvaḷ*, *yāvar/ēvar/yār/ār* ‘who?’, *yā/yātu/ētu/ēn* ‘what?’; Tamil *yā*, *yāvai* ‘what or which things?’, *ēvan* ‘who?’, *ēṇ* ‘why?, what?, how?’. Krishnamurti 2003:256—258 **yaH-/yāH-* interrogative stem; Burrow—Emeneau 1984:465—467, no. 5151.
- C. Kartvelian: Svan (Upper Bal) (interrogative) *jār* ‘who?’, (relative) *jerwāj* ‘who’, (indefinite) *jer* ‘somebody, something’, *jerē* ‘someone, somebody’, *jerwāle* ‘anybody’.
- D. Proto-Indo-European **ʔyo-* relative pronoun stem: Greek ὅς, ἧ, ὅ ‘which’; Phrygian ιος ‘which; this’; Sanskrit *yá-h* ‘which’. Greenberg 2000:225—227; Pokorny 1959:283 **io-* ‘who, which’; Walde 1927—1932.I:98 **io-*; Mann 1984—1987:452 **ios*, **iā* relative pronoun; Gamkrelidze—Ivanov 1984.I:387 **ios/*io-t[h]* and 1995.I:235, I:339 **yos/*yo-th* relative pronoun; Mallory—Adams 1997:457 **íos/*iéha/*iód* ‘who, what, that’; Boisacq 1950:721 **io-s*, **iā*, **io-d*; Frisk 1970—1973.II:434 **ios*, **iā*, **iód*; Hofmann 1966:241 **ios*, **iā*, **iód*; Chantraine 1968—1980.II:831 **yo-*; Beekes 2010.II:1117 **h₁i-o-*. According to Szemerényi (1996:210), among others, **yo-* is to be derived from the anaphoric stem **i-*. However, Greenberg has successfully refuted this view.
- E. Uralic: Proto-Finno-Ugrian relative and indefinite pronoun **yo-* ‘who, which’: Finnish *jo-* in *joka* ‘who, which’, *joku* ‘someone, anyone’, *jos* ‘when’; Lapp / Saami *juokkē* ‘each, every’; Mordvin *ju-* in *juza toza* ‘to and fro, back and forth’; Cheremis / Mari (Western) *juž*, (Eastern) *južō* ‘someone, anyone’. Greenberg 2000:227; Joki 1973:264; Rédei 1986—1988:637 **jo*.
- F. Proto-Altaic **yā-* interrogative stem: ‘who?, which?, what?’: Manchu-Tungus: Manchu *ya* ‘which?, what?’, *yaba* ‘where?’, *yade* ‘where?, whither?, to whom?’; Evenki *ēma* (< **yāma*) ‘what kind?’, *ēdu* (< **yādu*) ‘why?, for what?’. Mongolian: Written Mongolian *yaγun* ‘what?’, *yambar* ‘which?, what kind?’, Dagur *yō* ‘what?’; Moghol *yan* ‘what?, which?’, *yem* ~ *yema* ‘what?’; Ordos *yū* ‘what?’; Buriat *yūṇ* ‘which?’. Greenberg 2000:227; Poppe 1955:126, 226, 229, 230 and 1960:32, 33; Street 1974:29 **yā-* ‘to do what?; who, what’. Starostin—Dybo—Mudrak (2003:754) derive the Manchu-Tungus forms cited above from Proto-Altaic **k’a(j)* ‘who?’ (interrogative pronoun), while they (2003:2034) derive the Mongolian forms from Proto-Altaic **ŋ[iV]* ‘what?, who?’ (interrogative pronoun). In view of the data from other Nostratic languages, it seems more likely that a Proto-Altaic interrogative stem **yā-* needs to be reconstructed here to account for the Tungus and Mongolian forms. Proto-Altaic **k^{ha}(y)*, then, was the source of Proto-Tungus **χai* but not Proto-Tungus **yā-*. This agrees with the traditional etymology as opposed to what Starostin—Dybo—Mudrak propose.

- D. Proto-Gilyak / Nivkh **ja(nəŋ)* ‘how’: Amur *janut* / *janur* ‘how’ (West Sakhalin Amur *janġur* ‘how’, *janko* ‘where’); North Sakhalin *janagut* ‘how’; East Sakhalin *jan’r* / *jan’* ‘how’, *janəg* ‘why’. Fortescue 2016:81.

Greenberg 2000:225—229, §61. Interrogative J; Illič-Svityč 1971—1984.I: 277—278, no. 142, **ja* interrogative and relative stem: ‘which, who’; Bomhard—Kerns 1994:594—595, no. 467; Dolgopolsky 2008, no. 101, **ǵyV* (= **ǵāya* ?) ‘which’ and, no. 2616, **ya* ‘which?’.

665. Proto-Nostratic root **ǵay-* (~ **ǵay-*):

(vb.) **ǵay-* ‘to go, to proceed’;

(n.) **ǵay-a* ‘journey’

Note also:

(vb.) **ǵiy-* ‘to come, to go’;

(n.) **ǵiy-a* ‘approach, arrival; path, way’

- A. Proto-Afrasian **ǵay-* ‘to come, to run’: (?) Semitic: Arabic *taʿayya* ‘to remain a long time’. D. Cohen 1970— :17 (Arabic *ʿayyaya*). Berber: Tuareg *ayu-* ‘to come’; Kabyle (interjection) *ayya* ‘come!’. East Chadic **ǵaw-/ǵay-* ‘to go; to gallop’ > Ndam *ao* ‘to go’; Sibine *ʿaya* ‘to gallop’. Highland East Cushitic: Sidamo *eʔ-* ‘to enter; to set (of sun)’. Hudson 1989:361. Omotic: Ometo *ai-* ‘to come’; Bench / Gimira (inf.) *yo* ‘to come’. Orël—Stolbova 1995:18—19, no. 65, **ǵay-* ‘to come, to run’.
- B. [Proto-Indo-European **ǵey-/ǵoy-/ǵi-* ‘to go’: Greek (1st sg. pres.) εἶμι ‘I go’, (1st pl. pres.) ἴμεν ‘we go’; Sanskrit (1st sg. pres.) *émi* ‘I go’, (3rd sg. pres.) *éti* ‘goes’, (1st pl. pres.) *imáh* ‘we go’, (3rd pl. pres.) *yánti* ‘they go’; Avestan (3rd sg. pres.) *aēiti* ‘goes’; Old Persian (3rd sg. pres.) *aitiy* ‘goes’; Paelignian (imptv.) *eite* ‘go!’; Latin (1st sg. pres.) *eō* ‘I go’; Old Lithuanian (1st sg. pres.) *eīmi* ‘I go’, (3rd sg. pres.) *eīti* ‘goes’; Old Prussian (3rd sg. pres.) *ēit* ‘goes’, *per-ēit* ‘comes’; Old Church Slavic *idq*, *iti* ‘to go’; Luwian (3rd sg. pres.) *i-ti* ‘goes’; Hittite (imptv.) *i-it* ‘go!’; Tocharian A (1st pl.) *ymäs* ‘we go’, B (1st sg.) *yam*, *yam* ‘I go’. Rix 1998a:207—208 **h₁ei-* ‘to go’; Pokorny 1959:293—297 **ei-* ‘to go’; Walde 1927—1932.I:102—105 **ei-*; Mann 1984—1987:234 **eimi* (**eīō*) ‘to go’; Gamkrelidze—Ivanov 1984.I:180 **eī/i-* and 1995.I:155, I:194 **ei-/i-* ‘to go’, I:296 **ei-mi* ‘I go’, **ei-si* ‘you go’, **ei-ti* ‘he, she goes’; Watkins 1985:16 **ei-* and 2000:22 **ei-* ‘to go’ (oldest form **ǵ₂ei-*); Mallory—Adams 1997:227—228 **h₁ei-* ‘to go’; Boisacq 1950:225—226 **ei-*; Frisk 1970—1973.I:462—463; Chantraine 1968—1980.I:321—322; Hofmann 1966:73 **ei-*; Beekes 2010.I:388 **h₁ei-*; De Vaan 2008:191—192; Walde—Hofmann 1965—1972.I:406—409 **ei-*; Ernout—Meillet 1979:197—199 **ei-*, **i-*; Mayrhofer 1956—1980.I:128; Derksen 2008:216 **h₁ei-* and 2015:151—152 **h₁ei-*; Smoczyński 2007.1:144—145; Fraenkel 1962—1965.I:119. Proto-Indo-European **ǵy-eh-* [**ǵy-ah-*] (> **ǵyā-*) ‘to go, to proceed’: Sanskrit (3rd sg. pres.) *yāti* ‘goes, proceeds, moves, walks,

sets out, marches, advances, travels, journeys'; Avestan (3rd sg. pres.) *yāiti* 'goes, rides'; Hittite (3rd sg. pres.) *i-ya-at-ta(-ri)* 'goes' (so Sturtevant 1951:34, §61, Indo-Hittite **yehty*; Puhvel 1984—.1/2:330—335, however, derives the Hittite form from **iya-* < **eyo-* and compares it with Vedic *áyate* 'to go'); Lithuanian *jóju, jótī* 'to ride on horseback'; Tocharian A *yā-* 'to go, to move'. Rix 1998a:275 **ieh₂-* 'to proceed, to move along, to go, to travel, to ride'; Pokorny 1959:294 **iā-* 'to go'; Walde 1927—1932.I:104 **iā-*; Mann 1984—1987:439 **iāiō*, **iāmi* 'to go, to ride'; Gamkrelidze—Ivanov 1984.II:724 **iāH-* and 1995.I:627 **yāH-* 'to ride (in a vehicle)'; Derksen 2015:212—213 **ieh₂-*; Mallory—Adams 1997:228 **ieha-* 'to go, to travel'; Kloekhorst 2008b:380; Wodtko—Irslinger—Schneider 2008:220—230 **h₁ei-*.] Note: Two separate Proto-Nostratic stems have fallen together in Proto-Indo-European: (A) **ṛay-* (~ **ṛay-*) 'to go, to proceed' and (B) **ṛiy-* (~ **ṛey-*) 'to come, to go'.

- C. Proto-Uralic **aya-* 'to drive, to ride; to go, to travel; to chase away, to chase off, to drive away; to pursue': Finnish *aja-* 'to drive, to ride; to go, to travel; to run; to transport, to carry; to chase away, to chase off, to drive away', *ajaja* 'driver, rider'; Estonian *aja-* 'to drive, to impel'; Lapp / Saami *vuoggje-/vuoje-* 'to drive (tr. and intr.)'; Votyak / Udmurt *ujy-, uj-, üj-* 'to drive, to pursue'; Zyrian / Komi *voj-* 'to bolt, to run away; to move away, to carry away swiftly', *vojl-* 'to run away', *vojledly-* 'to drive, to chase'; Vogul / Mansi *oj-* 'to flee, to run away', *ojt-* 'to let run', *wujt-* 'to chase, to pursue'. Rédei 1986—1988:4—5 **aja-*; Collinder 1955:129 and 1977:140; Sammallahti 1988:542 **ājā-* 'to drive'; Aikio 2020:7—8 **aja-* 'to drive / to chase'. The above forms are usually taken to be loans from Indo-Iranian (cf. Joki 1973:247—248). Yukaghir (Northern / Tundra) *ejuu-* 'to attack', (Southern / Kolyma) *je:j-* 'to get somewhere, to fall; to attack', *ejtə-* 'to take away, to take off'. Nikolaeva 2006:152.
- D. Proto-Altaic **āya-* 'to go, to walk': Proto-Tungus **āy-* '(vb.) to run quickly, to step (on sand, snow); (adj.) swift' > Lamut / Even *ayij* 'swift'; Manchu *aya-* 'to run quickly'; Oroch *aya-munžī* 'swift'; Nanay / Gold *āi-* 'to step (on sand, snow)'. Proto-Mongolian **aya-* 'journey, travel' > Written Mongolian *ayan*, *ayan* 'travel, journey, expedition'; Khalkha *ayan* 'journey, travel'; Buriat *ayan* 'journey, travel'; Kalmyk *ayan* 'journey, travel'; Ordos *ayan* 'journey, travel'; Dagur *ayan* 'journey, travel'. Proto-Turkic **Ay-* 'to go, to go round, to walk in circles' > Turkish *ayla(-n)-* 'to revolve, to rotate, to go round'; Gagauz *ayla-, aylan-* 'to revolve, to rotate, to go round', (*h*)*ayda-* 'to drive'; Azerbaijani (dial.) *aylan-* 'to revolve, to rotate, to go round'; Turkmenian *ayla-* 'to lead, to lead round'; Uzbek *aylan-* 'to revolve, to rotate, to go round; to tarry'; Uighur *aylan-* 'to revolve, to rotate, to go round; to tarry'; Karaim *aylan-* 'to revolve, to rotate, to go round'; Tatar *aylan-* 'to revolve, to rotate, to go round'; Kirghiz *aylan-* 'to revolve, to rotate, to go round', *ayda-* 'to drive'; Kazakh *ayda-* 'to drive', *aynal-* 'to revolve, to rotate, to go round'; Noghay *aylan-* 'to revolve, to rotate, to go round; to tarry'; Oyrot (Mountain Altai) *ayla-*

‘to revolve, to rotate, to go round’, *ayda-* ‘to drive’; Yakut *aygi-s-in-* ‘to tarry; to go, to visit frequently’. Starostin—Dybo—Mudrak 2003:277—278 **āja* ‘to go, to walk’.

- E. Chukchi-Kamchatkan: Proto-Chukotian **ajtat-* ‘to drive (herd)’ > Chukchi *aytat-* ‘to drive animals from place to place’, *ayta-* ‘to drive into a compound, to screen, to surround’, *aytatwan* ‘compound’; Kerek *ajtaat-* ‘to chase, to drive’; Koryak *ajtat-* ‘to drive a herd of animals’; Alyutor (Palana) *ajtat-* ‘to drive a herd of animals’. Fortescue 2005:18.
- F. Proto-Eskimo **ayu-* ‘to go ahead or further’: Alutiiq Alaskan Yupik (Alaskan Peninsula, Kenai Peninsula) *ayu-* ‘to progress, to get bigger, to spread’; Central Alaskan Yupik *ayu-* ‘to progress, to go further, to spread’; Central Siberian Yupik *ayu-* ‘to progress, to keep going’; Naukan Siberian Yupik *ayur-* ‘to hold out, to hold on’; Sirenik *ayə-* ‘to go far off’; Seward Peninsula Inuit *ayu-* ‘to get a head’s start, to progress, to die’; North Alaskan Yupik *ayu-* ‘to go ahead, to have a head’s start, to die’, *ayuuq-* ‘to go far, to progress’; Western Canadian Inuit (Siglit) *ayuuḷy-* ‘to go far (rock, bullet)’; Eastern Canadian Inuit *ayu-* ‘to run away, to break loose, to run off inland (angry person)’; Greenlandic Inuit *ayuuṭ(i)* ‘to kick towards a goal (football)’. Fortescue—Jacobson—Kaplan 1994:59—60.

Buck 1949:10.45 walk (vb.); 10.47 go; 10.48 come; 10.53 pursue; 10.65 drive (vb. tr.); 10.66 ride (vb.). Hakola 2000:17—18, no. 16; Dolgopolsky 2008, no. 102, **ʔ[e]yV* ‘to come, to arrive’; Fortescue 1998:152.

666. Proto-Nostratic (n.) **ʔay-a* ‘brain’:

- A. Afrasian: Egyptian *ʔis* ‘brain (of men and animals)’ (medical term). Hannig 1995:2; Faulkner 1962:1; Erman—Grapow 1926—1963.1:2. Berber: Mzab *ayətti*, *tayətti* ‘attention given to an act or deed’; Tuareg *tayttə* (pl. *tiyttəwīn*) ‘intelligence, mind’; Riff (Iznasen) *taytti* ‘evil eye’.
- B. Proto-Uralic **ay̯ji* ‘brain’: [Finnish *aivo(t)* ‘brain(s); cerebrum’; Estonian *aju* ‘brain’; Lapp / Saami (Norwegian) *vuoiṅāš-* ~ *vuoiṅāšak* (pl.) ‘brain(s)’, (Lule) *vuoiṅam* ~ *vuoiṅam* ‘brain’;] (?) Mordvin (Moksha) *uj* ‘marrow, brain’; (?) Hungarian *agy* ‘brain; cerebrum’. Collinder 1955:71 and 1977:87; Rédei 1986—1988:5 **aj̯je* ‘brain’; Sammallahti 1988:542 **ā̯ji* ‘brain’; Aikio 2020:9—10 **aj̯ji* ‘brain’.
- C. Proto-Chukchi-Kamchatkan (?) **ajwa* ‘brain’: Chukchi *ajo* ‘brain’; Kerek *aju* ‘brain’; Koryak *awi* ‘brain’ (adj. *awja-kin*); Alyutor *ēwa* ‘brain’; Kamchadal / Itelmen [*ajuvaj*, *aʔjva* ‘brain’] (this may be a loan from Chukotian). Fortescue 2005:19.

Buck 1949:4.203 brain. Greenberg 2002:30, no. 48, **ayu* ‘brain’. Different (false) etymology in Dolgopolsky 2008, no. 2600a, **Xay̯no* (= **h|χay̯no*) (a variant reconstruction instead of **ʔay̯no*) ‘marrow, brain, soft fat of animals’ (→ ‘to smear, to anoint’).

667. Proto-Nostratic (n.) *ʔay(y)a ‘mother, female relative’ (nursery word):

- A. Proto-Afrasian *ʔay(y)- ‘mother’: Berber: Kabyle *ya* ‘woman, female’ (in composition: *ya-n-əgma* in *tiyanəgmatin* ‘sister-in-law, brother’s wife’), *yaya* ‘(my) grandmother, older member of the family’. Proto-East Cushitic *ʔaayy- ‘mother’ > Boni *aay-oʔ* ‘mother’; Somali *aay-o* ‘stepmother’; Rendille *ay-o* ‘mother’; Bayso *ay-o* ‘mother’; Galla / Oromo *aayy-oo* ‘mother’; Konso *aayy-o* ‘mother’; Burji *aayy-ée* ‘mother, mother’s sister’; Hadiyya *a(a)y-y-a* ‘sister’. Sasse 1979:44 and 1982:22; Hudson 1989:102, 176, and 269.
- B. Dravidian: Malayalam *ācci* ‘mother, grandmother’, *tāyi* ‘mother’; Tamil *āy*, *āyi*, *yāy*, *ñāy* ‘mother’, *āycci*, *ācci* ‘mother, grandmother’; Kannada *āyi*, *tāy*, *tāyi*, *tāye* ‘mother’; Kolami *ay* ‘mother’; Naikri *ayma* ‘woman’, *ayka* ‘husband’s elder sister’; Konda *aya* ‘mother’; Pengo *aya*, *iya* ‘mother’. Burrow—Emeneau 1984:34, no. 364; Krishnamurti 2003:10 **āy* ‘mother’.
- C. Proto-Indo-European *ʔay-tʰ- ‘mother’: Gothic *aipei* ‘mother’; Old Icelandic *eiða* ‘mother’; Middle High German *eide* ‘mother’. Kroonen 2013:15 Proto-Germanic **aipin-* ~ **aipōn-* ‘mother’; Orël 2003:10 Proto-Germanic **aipīn* (cf. also **aipōn*); Feist 1939:28; Lehmann 1986:20; De Vries 1977:95. Germanic loans in Balto-Finnic: Finnish *äiti* ‘mother’; Estonian *eit* ‘(peasant) woman, old woman’.
- D. Eskimo: Proto-Inuit **ayak* ‘maternal aunt’ > Seward Peninsula Inuit *ayak* ‘maternal aunt’; North Alaskan Inuit (Point Hope) *ayak*, *ayauluk* ‘paternal aunt’, *ayaayak* ‘older sister’; Western Canadian Inuit (Siglit) *aya* ‘maternal aunt’; Eastern Canadian Inuit (North Baffin-Iglulik) *aya(k)*, (Tarramiut) *ayakuluk* ‘maternal aunt’; Greenlandic Inuit *aya(k)*, (North Greenlandic / Polar Eskimo) *ayaaXXuk* ‘maternal aunt’. Fortescue—Jacobson—Kaplan 1994:59.

Buck 1949:2.36 mother. Dolgopolsky 1998:92—93, no. 117, *ʔ[ä]yV (or *h[ä]yV ?) ‘mother’ and 2008, no. 100, *ʔ[a]yV ‘mother’; Bomhard—Kerns 1994:577—578, no. 445.

668. Proto-Nostratic (n.) *ʔay(y)a ‘father, male relative’ (nursery word):

- A. Afroasiatic: Proto-Southern Cushitic *ʔaayi ‘elder brother’ > Iraqw *aykos* ‘his father’s wife’ (-*kos* ‘his’); K’wadza *ayi-* in *ayibalaʔo* ‘cross-cousin’; Dahalo *ʔááji* ‘elder brother’. Ehret 1980:288.
- B. Dravidian: Tamil *ayyan*, *aiyan* ‘father, sage, priest, teacher, Brahman, superior person, master, king’, *ayyā* ‘father, respectable man’, *aiyar* ‘men worthy of respect, sages, Brahmans, etc.’, *tam-aiyan* ‘elder brother or parallel male cousin’, *num-aiyan* ‘your elder brother’, *ai* ‘lord, master, husband, king, guru, priest, teacher, father’; Malayalam *ayyan* ‘father, lord’, *tam-ayan* ‘elder brother’; Kota *ayn* ‘father, father’s brother or parallel male cousin, mother’s sister’s husband’; Kannada *ayya*, *aya*

‘father, grandfather, master, lord, teacher’; Koḍagu *ayyē* ‘father’s brother or parallel male cousin, mother’s sister’s husband’, *tamm-ayya-n* ‘younger brother’ (voc.); Tuḷu *ayye* ‘priest, minister, teacher, master’, *tamm-aiya* an affectionate form of addressing a younger brother; Telugu *ayya*, *aya* ‘father’; Kolami *ayyā* ‘mother’s father’, *ayyāk* ‘god’; Gondī *ēyāl* ‘father’. Burrow—Emeneau 1984:19, no. 196; Krishnamurti 2003:10 **ayy-a* ‘father’.

- C. Proto-Uralic (?) **äyyä* ‘father, old man’: Finnish *äijä* ‘father, old man’; Estonian *äi* ‘father-in-law’; Lapp / Saami (Norwegian) *ag’gja/aggja* ‘grandfather, old man, fellow’; Votyak / Udmurt (Sarapul) *ajj*, (Kazan) *ajḡ*, (Glazov) *aj*, *ajj* ‘father, male’; Zyrian / Komī (Permyak) *aj* ‘father’. Rédei 1986—1988:609 **äje*; Aikio 2020:33 (?) **äjjä* ‘old man’

Buck 1949:2.35 father. Hakola 2000:16, no. 7.

669. Proto-Nostratic negative particle **ʔe* ‘no, not’:

Note the discussion above under **ʔal-* (~ **ʔəl-*) (perhaps also **ʔel-*, **ʔul-*) (originally a negative verb stem — later used in some branches as a negative particle) ‘to be not so-and-so or such-and-such’.

- A. Proto-Uralic **e-* negative particle: ‘no, not’. For details, see the discussion above (no. 622) under Proto-Uralic **elä* imperative of the negative auxiliary verb (cf. Rédei 1986—1988:68—70 **e* ~ **ä* ~ **a* negative particle; Collinder 1955:10 and 1977:26).
- B. Proto-Altaic **e* negative particle: Proto-Tungus **e-* ‘not’ > Evenki *e-* ‘not’; Lamut / Even *e-* ‘not’; Negidal *e-* ‘not’; Jurchen *ey-χe*, *esi(n)-in* ‘not’; Ulch *e-* ‘not’; Oroch *e-* ‘not’; Nanay / Gold *e-* ‘not’; Oroch *e-* ‘not’; Udihe *e-* ‘not’; Solon *e-* ‘not’. Proto-Mongolian *e-se* ‘not’ > Written Mongolian *ese* ‘not’; Khalkha *es* ‘not’; Buriat *ehe* ‘not’; Kalmyk *es* ‘not’; Ordos *ese* ‘not’; Moghol *sa*, *se* ‘not’; Dagur *es* ‘not’; Monguor *sə*, *sī* ‘not’. Poppe 1955:287, 290, and 291 — Poppe points out that “[t]he negative *ese* is the stem of the verb *ese-* ‘not to be’ = Tungus *esi-*.” Starostin—Dybo—Mudrak 2003:488 **e* ‘not’.
- C. Chukchi-Kamchatkan: Chukchi negative prefix *e-* ~ *a-*; Koryak negative prefix *e-* (or its expected phonetic outcomes). Greenberg 2000:216.
- D. Etruscan *ei* ‘not’.

Sumerian *e* ‘no’.

Illič-Svityč 1971—1984.I:264—265, no. 129, **ʔe* negative particle; Dolgopolsky 2008, no. 3, **ʔe* (~ ? **ʔä*) ‘not’.

670. Proto-Nostratic root *ʔeb-:

(vb.) *ʔeb- ‘to become weak, exhausted, wasted, debilitated, wiped out; to yield, to succumb; to go mad, to become insane, to lose one’s mind; to lose one’s way’;

(n.) *ʔeb-a ‘weakness, exhaustion; madness, silliness, foolishness’; (adj.) ‘weakened, exhausted, debilitated, wiped out; mad, foolish, silly, half-witted’

- A. Proto-Afrasian *ʔeb- ‘to become weak, exhausted, wasted, debilitated, wiped out; to yield, to succumb; to go mad, to become insane, to lose one’s mind; to lose one’s way’: Proto-Semitic *ʔab-ad- ‘to become weak, exhausted, wasted, debilitated, wiped out; to yield, to succumb; to go mad, to become insane, to lose one’s mind; to lose one’s way’ > Arabic *ʔabada* ‘to roam in a state of wildness, to run wild, to be shy’, *ʔābid* ‘wild, untamed’; Hebrew *ʔāḇaḏ* [אָבַד] ‘to perish, to vanish, to be lost, to go astray’; Aramaic *ʔāḇaḏ* ‘to be lost’; Moabite *ʔbd* ‘to perish’; Ugaritic *ʔbd* ‘perished’; Akkadian *abātu* ‘to destroy, to lay waste, to ruin’; Geez / Ethiopic *ʔabda* [አብደ], *ʔabda* [ዐብደ] ‘to be insane, to become enraged, to rage, to be mad, to be out of one’s mind, to become a fool, to be foolish’, *ʔabud* [አቡድ] ‘foolish, stupid, mad, insane, enraged, furious’; Tigre *ʔabbāda* ‘to deceive’, *ʔabd* ‘fool-hardy’; Tigrinya *ʔabbādä* ‘to entice with promises’, *ʔabādä* ‘to go mad, to become insane’; Amharic *abbādä* ‘to go insane, to go mad’. D. Cohen 1970—:2; Murtonen 1989:79; Klein 1971:1; Leslau 1987:2—3. Berber: Tuareg *əbdəh* ‘to be exhausted (after running or marching)’. Proto-Highland East Cushitic **ebelo* ‘so-and-so’ > Burji *ebelo* ‘so-and-so’; Gedeo / Darasa *ebelo* ‘so-and-so’; Hadiyya (m.) *ebaro*, (f.) *ebare* ‘so-and-so’; Kambata (m.) *ebalo*, (f.) *ebale* ‘so-and-so’; Sidamo *ebelo*, *eweló* ‘so-and-so’. Hudson 1989:138. Semantic development as in Burji *dóof-aa* ~ *dóof-a* ‘so-and-so’ vs. Galla / Oromo *doofaa* ‘fool’. [Orël—Stolbova 1995:23—24, no. 87, *ʔibad- ‘to lose, to be lost’.]
- B. Dravidian: Tamil *ēppiṛāci*, *ēppiyan* ‘simpleton, fool’; Kannaḍa *ēbrāsi*, *ebaḍa* ‘a foolish, silly man’ (f. *ebaḍi*); Tuḷu *ebuḷante* ‘half-witted, silly’; Telugu *ebberāsi*, *ebrāsi* ‘a slovenly person’. Burrow—Emeneau 1984:79, no. 803. Semantic development as in Geez / Ethiopic *ʔabda* [አብደ], *ʔabda* [ዐብደ] ‘to be insane, to become enraged, to rage, to be mad, to be out of one’s mind, to become a fool, to be foolish’, cited above. Perhaps also: Kuṛux *ebsnā* ‘to lose, to forfeit, to wander from and not be able to find, to cease to perceive (as from distance or darkness)’, *ebsrnā* ‘to be lost, estranged, strayed; to disappear from sight’; Malto *ewje* ‘to be lost, to go astray’, *ewtre* ‘to lose’. Burrow—Emeneau 1984:82, no. 847.
- C. Uralic: Finnish *epatto*, *epatti*, *epero* ‘silly, stupid, feeble-minded’.
- D. Proto-Altaic **ebi*- ‘to become weak, exhausted, wasted, debilitated, wiped out; to yield, to succumb’: Proto-Tungus **ebe*- ‘(vb.) to yield, to succumb; (adj.) weak; foolish, obstinate; lax, tarrying’ > Manchu *ebe-ri* ‘weak, deficient, inadequate, inferior’, *ebi-lun* ‘a delicate, sickly child’, *eberḡuken*

‘rather weak’, *eberχun* ‘weak’, *eberiken* ‘somewhat deficient’, *eberinge* ‘not up to par, inferior’, *ebere-* ‘to diminish, to decline, to decrease, to subside’; Evenki *ewe-žeken* ‘hardly, scarcely, barely’; Ulch *ebe-le* ‘foolish, obstinate’; Orok *ebe-le* ‘lax, tarrying’; Nanay / Gold *ebe-ri-* ‘to yield, to succumb’; Oroch *ebe-le* ‘weak’. Starostin—Dybo—Mudrak 2003:490 **ebi* ‘to be weak, to wither’.

Buck 1949:17.22 foolish, stupid; 17.23 insane, mad, crazy. Hakola 2000:28, no. 61; Bomhard 1996a:215, no. 617.

671. Proto-Nostratic root **ʔekʰ-*:

(vb.) **ʔekʰ-* ‘to move quickly, to rage; to be furious, raging, violent, spirited, fiery, wild’;

(n.) **ʔekʰ-a* ‘rapid or violent movement, fury, rage’

- A. (?) Afrasian: Semitic: Akkadian *akkannu* (*akkānu* [*akk-ān-*]) ‘wild donkey; a breed of horses’ (Nuzi only).
- B. (?) Dravidian: Kannada *ekkala* ‘wild hog’; Telugu *ēkalamu*, *ēkalīḍu* ‘wild hog’; Gondi *akrā*, *akrāl* ‘wild pig’, *ikundāl* ‘boar’. Burrow—Emeneau 1984:76, no. 771. Note: Assuming specialization from a generic ‘raging, wild’ applied to any animal to one applied specifically to pigs, hogs, boars.
- C. Proto-Indo-European **ʔekʰu-*, **ʔekʰw-o-s* ‘horse’ (literally, ‘the spirited, violent, fiery, or wild one’): Hieroglyphic Luwian *á-sù-wa-* ‘horse’; Hittite **ekku-* ‘horse’; Lycian *esbe-* ‘horse’; Sanskrit *ásva-ḥ* ‘horse’; Avestan *aspa-* ‘horse’; Old Persian *asa-*, (Median) *aspa-* ‘horse’; Mycenaean *i-ʔo* (*hiqqʷo-*) ‘horse’; Greek ἵππος ‘horse’; Latin *equus* ‘horse’; Venetic (acc. sg.) *ekvon* ‘horse’; Old Irish *ech* ‘horse’; Gothic **aiḥva-* ‘horse’ in **aiḥvatundi* ‘bramble, prickly bush’ (literally, ‘horse-thorn’); Old Icelandic *jór* (< **eχwar* < **eχwaz*) ‘stallion, steed’; Old English *eoh* ‘horse’; Old Saxon *ehu-* ‘horse’ in *ehu-skalk* ‘horse-servant’; Lithuanian *ašvā* (Old Lithuanian *ešva*) ‘mare’; Tocharian A *yuk*, B *yakwe* ‘horse’, B *yākwaške* ‘little horse’. Pokorny 1959:301—302 **ekʷo-s* ‘horse’; Walde 1927—1932.I:113 **ekʷo-s*; Mann 1984—1987:237—238 **ekʷos*, *-ā* ‘horse; mare’; Gamkrelidze—Ivanov 1984.I:183, I:271, I:272, II:544—545, II:554 (fn. 2), II:561 (fn. 1), II:564 (and fn. 1) **ekʰ/hʷo-s* and 1995.I:87, I:88, I:214 (fn. 13), I:478—479, I:482 (and fn. 26), I:765, I:767, I:809 **ekʰwo-* ‘horse’; Watkins 1985:16 **ekwo-* and 2000:23 **ekwo-* ‘horse’; Mallory—Adams 1997:273—274 **h₁ekʷos* ‘horse’ and 2006:50, 69, 89, 135, 139, 154, 449 **h₁ékʷos* ‘horse’; Mayrhofer 1956—1980.I:62; Kloekhorst 2008b:237—239 **h₁ekʷu-*, **h₁ekʷos*; Boisacq 1950:380—381 **ekʷo-s*; Hofmann 1966:125—126 **ekʷos*; Frisk 1970—1973.I:733—735 **ekʷos*; Chantraine 1968—1980.I:467—468 **ekwo-*; Beekes 2010.I:597—598 **h₁ekʷo-*; Walde—Hofmann 1965—1972.I:412—413 **ekʷos*; Ernout—Meillet 1979:199—200; De Vaan 2008:192—193; Orël 2003:83 Proto-Germanic **exwaz*; Kroonen 2013:115—116 Proto-Germanic **ehwa-*

‘horse’; Feist 1939:21 **ékʷos*; Lehmann 1986:15 **ékʷos*; De Vries 1977:293; Adams 1999:482; Van Windekens 1976—1982.I:611 **ékʷo-s*; Fraenkel 1962—1965.I:20; Smoczyński 2007.1:28; Derksen 2015:65 **h₁ekʷos*; Anthony 2007:196—197; Wodtko—Irslinger—Schneider 2008: 230—233 **h₁ékʷo-*; Niskanen 2023. Note: Ultimately, not related to Proto-Indo-European **HoHkʰu-* (> **ōkʰu-*) ‘swift, quick, fast’ (cf. Pokorny 1959: 775 **ōkʷu-s* ‘swift, quick, fast’).

- D. Proto-Altaic **ekʰa-* ‘to move quickly, to rage’: Proto-Tungus **ekte-* ‘to make rapid movements’ > Manchu *ekte-* ‘to stamp the front hoof on the ground, to paw the ground’; Udihe *ektine-* ‘to faint’. Proto-Mongolian *(*h*)*agsa-* ‘to move quickly, to rage; to be furious, raging, violent, spirited, fiery, wild’ > Written Mongolian *aγsur-* ‘to storm, to fly into a rage, to be violent or furious; to be fiery’, *aγsum* ‘(n.) fury, rage, madness; (adj.) furious, fiery, violent, tempestuous, spirited’, *aγsum mori* ‘fiery or spirited horse’, *aγsumna-* ‘to rage, to storm, to behave violently; to bluster, to be boisterous; to debauch’; Khalkha *agsam* ‘(n.) fury, rage; (adj.) furious, raging; fiery, spirited’, *agsamnaχ-* ‘to rage (of a drunken person); to be furious; to dash ahead (of a horse)’, *agsan* ‘furious, raging (of a drunken person)’, *agsan mori* ‘fiery, mettlesome horse’, *agsčix* ‘to be fiery all the time (of a horse); to continually rage’; Buriat *agšan* ‘frolicsome, prankish’, *agsam* ‘furious, raging’; Kalmyk *agsra-* ‘to chafe, to behave nervously (of a horse); to rough-house’, *agsag* ‘wild’; Ordos *agsur-* ‘to fling fiercely’, *agsum* ‘wild, raging’. Proto-Turkic **agsa-* ‘(vb.) to hobble, to limp; (adj.) lame’ > Karakhanide Turkic *axsa-* ‘to hobble, to limp’, *aqsaq*, *aγsaγ* ‘lame’, *aγsunj*, *axsum* ‘rampage, rage, raging’; Turkish *aksa-* ‘to hobble, to limp’, *aksak* ‘lame, limping’; Azerbaijani *axsa-* ‘to hobble, to limp’, *aqsın* ‘rampage, rage, raging’; Turkmenian *agsa-* ‘to hobble, to limp’; Uzbek *oqsa-* ‘to hobble, to limp’; Tatar *aqsa-* ‘to hobble, to limp’; Bashkir *aqha-* ‘to hobble, to limp’; Kirghiz *aqsa-* ‘to hobble, to limp’, *aqsım* ‘rampage, rage, raging’; Kazakh *aqsa-* ‘to hobble, to limp’; Karachay-Balkar *aqsa-* ‘to hobble, to limp’; Kara-Kalpak *aqsa-* ‘to hobble, to limp’; Kumyk *aqsa-* ‘to hobble, to limp’; Noghay *aqsa-* ‘to hobble, to limp’; Sary-Uighur *axsa-* ‘to hobble, to limp’; Khakas *axsa-* ‘to hobble, to limp’; Tuva *asqa-* ‘to hobble, to limp’; Yakut *axsım* ‘lame’. Starostin—Dybo—Mudrak 2003: 499 **ek’a* ‘to paw, to hit with hooves’ — according to Starostin—Dybo—Mudrak, the Turkic forms cited here may be loans from Mongolian.

Buck 1949:3.32 boar; 3.41 horse; 16.43 rage, fury. Bomhard 2009.

672. Proto-Nostratic root *ʔek’-:

- (vb.) *ʔek’- ‘to diminish, to decrease, to reduce; to be insufficient, lacking, wanting; to be small, weak, lowly, ignoble, common, ordinary, plain, simple’;
 (n.) *ʔek’-a ‘diminishment, reduction, decrease, loss; deficiency, want, need, lack’

- A. Afrasian: Egyptian *ṣq* ‘to perish, to come to grief’, *ṣqw* ‘ruin, misfortune, loss’, *ṣqyt* ‘loss’; Coptic *akō* [ⲁⲕⲱ] ‘thing destroyed, destruction’. Hannig 1995:3; Faulkner 1962:6; Erman—Grapow 1921:4 and 1926—1963.1:21; Gardiner 1957:550; Černý 1976:3; Vycichl 1983:6. Berber: Ghadames *əqqu* ‘to be finished, used up, lost’; Kabyle *aqu* ‘to be rare, to miss, to dissappear’, *tuqqit* ‘misfortune, disappearance, annihilation’.
- B. Dravidian: Kannada *eggu*, *heggū* ‘shame, feeling of disgrace, blame, harm’, *egguli* ‘a bashful person, a rustic or low person’, *egga* ‘a rude, rustic, stupid, or low man’, *eggulitana* ‘shame, bashfulness’; Telugu *eggu* ‘harm, evil, mischief, shame, disgrace, blame’, *eggincu* ‘to disregard, to slight, to wrong, to injure’, *eggādu* ‘to find fault with, to blame, to reproach, to revile, to abuse’. Burrow—Emeneau 1984:76—77, no. 776.
- C. Proto-Indo-European **pek-* ‘to lack, to need, to want’: Latin *egeō* ‘to want, to be in need, to be destitute’, *egēnus* ‘needy, destitute’; Old Icelandic *ekla* ‘lack, want, need’; Old High German *ekorōdo* ‘merely’, *ekrōdi*, *eccherōde* ‘small, weak’. Pokorny 1959:290 **eg-* ‘lack, want, need’; Walde 1927—1932.I:114—115 **eg-*; Mann 1984—1987:1613 **eg-*, **ēg-* ‘shortcoming’; Ernout—Meillet 1979:192; Walde—Hofmann 1965—1972.I:394—395; De Vaan 2008:186—187; De Vries 1977:99.
- D. Proto-Altaic **ēka* (~ -o) ‘bad, weak’: Proto-Tungus **eke-* ‘(vb.) to decrease; (adj.) bad, low; weak; evil’ > Manchu *ekiye-* ‘to diminish, to be deficient, to be too little, to be lacking; to be vacant, unoccupied’, *ekiyexun* ‘to be little, lacking; empty, unoccupied’, *ekiyen* ‘lacking, decrease, vacancy’, *eḵe* ‘inauspicious, bad, evil’; Sibo *eki-* ‘to diminish, to decrease’, *eḵa* ‘bad, evil’; Jurchen *eḵebe* ‘bad, low’; Ulch *ekeči(n)* ‘weak’; Orok *eke* ‘weak’; Nanay / Gold *ekeči* ‘weak’, *eḵele* ‘bad, low’. Proto-Mongolian **egel* ‘lowly, ignoble, common, ordinary’ > Written Mongolian *egel* ‘lowly, ignoble, common; ordinary, plain; simple’; Khalkha *egil* ‘simple, common, ordinary, plain’; Buriat *egēley* ‘lowly, uneducated, simple’; Kalmyk *egl* ‘lowly, uneducated, simple’; Ordos *egel*, *egn* ‘lowly, uneducated, simple’. Proto-Turkic **ek-* ‘(vb.) to decrease, to diminish; to be insufficient; (adj.) common, ordinary, low-class, uneducated’ > Old Turkic (Old Uighur) *egsü-* ‘to decrease, to diminish; to be insufficient’, *egil* ‘common, ordinary, low-class, uneducated’; Karakhanide Turkic *egsü-* ‘to decrease, to diminish; to be insufficient’; Turkish *eksik* ‘deficient; lacking, absent; defective, incomplete’, *eksil-* ‘to grow less, to decrease; to be absent’, *eksilt-* ‘to diminish, to reduce’; Azerbaijani *āskik* ‘common, ordinary, low-class, uneducated’; Gagauz *yisil-* ‘to decrease, to diminish; to be insufficient’; Turkmenian *egis-*, *egsil-* ‘to decrease, to diminish; to be insufficient’, *egsik* ‘common, ordinary, low-class, uneducated’; Uighur (dial.) *ögsü-* ‘to decrease, to diminish; to be insufficient’; Karaim *eksil-* ‘to decrease, to diminish; to be insufficient’, *eksik* ‘common, ordinary, low-class, uneducated’; Kirghiz *öksü-* ‘to decrease, to diminish; to be insufficient’, *öksük* ‘common, ordinary, low class, uneducated’; Chuvash *iksäl-* ‘to decrease, to diminish; to be insufficient’, *jəksek* ‘common,

ordinary, low-class, uneducated’. Starostin—Dybo—Mudrak 2003:498
 **ěka* (~-o) ‘bad, weak’.

Buck 1949:9.93 need, necessity; 11.33 lose; 11.74 loss; 16.19 misfortune;
 16.45 shame (sb.); 16.72 bad. Dolgopolsky 2008, no. 760, **h|X[ä]kă* ‘to need,
 to lack’.

673. Proto-Nostratic root *ʔel-:

- (vb.) *ʔel- ‘to shine, to radiate, to glitter, to glisten’;
 (n.) *ʔel-a ‘luster, splendor, light’

- A. Proto-Afrasian *ʔel- ‘to shine, to radiate, to glitter, to glisten’: Semitic:
 Arabic *ʔalla* ‘to shine, to glitter’, *ʔalaka* ‘to shine, to radiate, to flash, to
 glitter, to glisten’. D. Cohen 1970— :21 and 21—22. Highland East
 Cushitic: Hadiyya *ellin-co* ‘sun’. Hudson 1989:277.
 B. Dravidian: Tamil *el* ‘luster, splendor, light, sun, daytime’, *elli*, *ellai* ‘sun,
 daytime’, *ilaku* (*ilaki*-), *ilaṅku* (*ilaṅki*-) ‘to shine, to glisten, to glitter’;
 Malayalam *ilakuka* ‘to shine, to twinkle’, *ilaṅkuka* ‘to shine’, *el* ‘luster,
 splendor, light’, *ella* ‘light’; Telugu *elamu* ‘to be shiny, splendid’.
 Burrow—Emeneau 1984:81, no. 829.

Buck 1949:1.56 light (sb.); 15.56 shine. Bomhard—Kerns 1994:581, no. 450.

674. Proto-Nostratic (Eurasianic only) (n.) *ʔema ‘older female relative; mother;
 (older) woman’ (nursery word):

Note also:

- (n.) *ʔam(m)a ‘mother’

- A. Proto-Uralic **emä* / **ämä* ‘mother’: Finnish *emä* ‘mother’; Estonian *ema*
 ‘mother’; Hungarian *eme* ‘female of an animal’; Selkup Samoyed *əmy*
 ‘mother’; Motor *imam* ‘mother’; Taigi *emme*, *imam* ‘mother’; Yurak
 Samoyed / Nenets *emej* (in vocative also *emee*) ‘mother’. Collinder
 1955:10 and 1977:31—32; Sammallahti 1988:536 **emä* ‘mother’; Décsy
 1990:98 **emä* ‘mother’; Rédei 1986—1988:74 **emä*; Janhunen 1977b:23
 **emä*; Aikio 2020:44—45 **emä* / **ämä* ‘mother’. Yukaghir (Southern /
 Kolyma) *emej* ‘mother’. Nikolaeva 2006:158.
 B. Proto-Altaic **ěme* ‘woman, female’: Proto-Tungus **emV* ‘mother-in-law;
 female; female deer, elk’ > Evenki *emugde*, *umigde* ‘female deer, elk’;
 Lamut / Even *ömiri* ‘female deer, elk’; Negidal *umigde* ‘female deer, elk’;
 Manchu *eme* ‘mother’, *emile* ‘the female of birds’, *emeke* ‘husband’s
 mother, mother-in-law’, *emxe* ‘wife’s mother, mother-in-law’ (in some
 early texts, *emxe* may also refer to a husband’s mother); Spoken Manchu
 (Sibo) *eməxə* ‘mother-in-law’; Nanay / Gold *emxe* ‘mother-in-law’. Proto-
 Mongolian **eme* ‘woman, wife’ > Written Mongolian *eme* ‘woman, wife,
 female’, *emegen* ‘old woman, grandmother’; Khalkha *em* ‘woman’, *emgen*

‘wife’; Buriat *eme* ‘woman’; Kalmyk *emə* ‘woman’; Ordos *eme* ‘woman’, *emegen* ‘old woman’; Dagur *eme* ‘woman, wife’, *emgun*, *emeg* ‘woman, wife’; Dongxiang *eme* ‘woman’; Monguor *mugen* ‘old woman’. Poppe 1955:153. Proto-Turkic **eme* ‘female; old woman’ > Turkish (dial.) *eme* ‘old woman’; Azerbaijani (dial.) *ämä* ‘old woman’; Kirghiz *eme* ‘old woman’; Chuvash *ama* ‘female’. Starostin—Dybo—Mudrak 2003:504 **ěme* ‘woman, female’.

- C. Proto-Chukchi-Kamchatkan (?) **ammæ* ‘mother’ (hypocoristic): Chukchi *amme*, *ammemə* ‘mother, mommy’; Kerek [*amməŋ* ‘mother’]; Koryak *amme* ‘mother’; Alyutor *amama* ‘mother’. Fortescue 2005:342.
- D. Eskimo: Proto-Yupik **ama* ‘grandmother’ > Alutiiq Alaskan Yupik *ama*, *amaaq* ‘grandmother’; Central Alaskan Yupik *maurluq*, *mauXłuyaq*, (Upper Kuskokwim) *amacuŋaq* ‘grandmother’; Naukan Siberian Yupik *amaXpak* ‘great grandmother’, *ama* ‘grandmother’. Fortescue—Jacobson—Kaplan 1994:109.

Buck 1949:2.22 woman; 2.24 female; 2.31ff. words for family relationship; 2.36 mother. Bomhard—Kerns 1994:571—572, no. 439; Fortescue 1998:152; Hakola 2000:27, no. 57; Dolgopolsky 1998:91—92, no. 116, **ʔemA* ‘mother’ and 2008, no. 37, **ʔemA* ‘mother’.

675. Proto-Nostratic (n.) **ʔenʷa* ‘mother, elder sister’ (nursery word):

Note also:

(n.) **ʔanʷa* ‘mother, aunt’

- A. Uralic: Proto-Finno-Permian **enä* ‘mother’: (?) Vote *enne* ‘mother’; Lapp / Saami (Norwegian) *æd’ne/-dn-*, (Lule) *iednē ~ ädnē* ‘mother’; (?) Votyak / Udmurt *in*, *iñ* in: (Sarapul) *kılč’in*, (Kazan) *kälč’in* ‘customary epithet of Inmar; angel (in Christian literature)’; Zyrian / Komi (Upper Sysola) *eñ* ‘female’. Rédei 1986—1988:624—625 **enä*; Aikio 2020:53—54 **əna-* / **ana-*. Yukaghir (Southern / Kolyma) *eñie* ‘mother’, (Northern / Tundra) *eñie*, *eñe* ‘mother’. Nikolaeva 2006:161.
- B. Proto-Altaic **ʔenʷa* ‘mother, elder sister’: Proto-Tungus **enʷi-* ‘mother, female’ > Evenki *eñin* ‘mother, female’; Lamut / Even *eñin* ‘mother, female’; Negidal *eñin* ‘mother, female’; Manchu *eñen* ‘mother, female’ (Norman 1978:76 writes *eniye* ‘mother’); Jurchen *enin* ‘mother’; Ulch *eñ-* ‘mother, female’; Oroch *enin* ‘mother, female’; Nanay / Gold *eñin* ‘mother, female’; Oroch *ene*, *eñi* ‘mother, female’; Udihe *eñi(n)* ‘mother, female’; Solon *enē*, *eñĩ* ‘mother, female’. Proto-Turkic **ana* ~ **eñe* ‘mother’ > Old Turkic (Old Uighur) *ana* ~ *ene* ‘mother’; Karakhanide Turkic *ana* ~ *ene* ‘mother’; Turkish *ana* ‘mother’; Gagauz *ana* ‘mother’; Azerbaijani *ana* ‘mother’; Turkmenian *ene* ‘mother’; Uighur *ana* ‘mother’; Karaim *ana* ‘mother’; Tatar *ana* ‘mother’; Bashkir *inä* ‘mother’; Kirghiz *ene* ‘mother’; Kazakh *ene*, *ana* ‘mother’; Sary-Uighur *ana* ‘mother’; Oyrot (Mountain Altai) *ene* ‘mother’; Tuva *iñe* ‘mother’; Chuvash *añne* ‘mother’; Yakut *iñe*

‘mother’; Dolgan *iñe* ‘mother’. Starostin—Dybo—Mudrak 2003:510 **ěña* ‘mother, elder sister’.

Sumerian *en* ‘lady, mistress’.

Buck 1949:2.22 woman; 2.24 female; 2.31ff. words for family relationship; 2.36 mother.

676. Proto-Nostratic root *ʔeŋ-:

(vb.) *ʔeŋ- ‘to burn, to heat up’;

(n.) *ʔeŋ-a ‘fire, heat; (heat of the) sun, sunshine, sunlight’

Extended form (in Indo-European and Uralic [Finno-Ugrian]):

(vb.) *ʔeŋ-V-k- ‘to burn, to heat up’;

(n.) *ʔeŋ-k-a ‘fire, heat; (heat of the) sun, sunshine, sunlight’

A. Proto-Dravidian **en-r-* ‘sun’: Tamil *enru* ‘sun’, *enr ūr* ‘sunshine, sun, summer’; Telegu *eṇḍa* ‘sunshine, sun, heat of sun’, *eṇḍu* ‘to be heated by exposure to the sun, to dry up, to evaporate’; Naiki (of Chanda) *edde* ‘sunshine’; Parji *nendi* ‘heat of the sun’; Gonda *eddi*, *ed*, *yaddi* ‘hot, sunlight’. Burrow—Emeneau 1984:84, no. 869; Krishnamurti 2003:278 and 524 **en-t-* ‘sun’.

B. Proto-Indo-European *ʔ*h*k’-ni-s ‘fire’: Sanskrit *agnī-h* ‘fire, sacrificial fire’; Latin *ignis* ‘fire, flame; brightness, splendor, brilliancy, luster, gleam, radiance, glow; the fire of the sun or other heavenly bodies; the fire of lightning or thunderbolts, lightning, a lightning flash; etc.’, *igniō* ‘to ignite, to set on fire’; Old Church Slavic *ognь* ‘fire’; Russian *ogón’* [огонь] ‘fire, light; flame, blaze, bonfire’; Czech *oheň* ‘fire’; Polish *ogień* ‘fire’; Bulgarian *ógǎn* ‘fire’; Serbo-Croatian *òganj* ‘fire’; Lithuanian *ugnis* (< **ungnis*) ‘fire’; Latvian *uguns* ‘fire’. Pokorny 1959:293 **egnis* : **ognis* ‘fire’; Walde 1927—1932.I:323 **h*gni-s (better **egni-s* ?); Mann 1984—1987:427—428 **ighni-* ‘fire’ (*ī-* = an indeterminate vowel, possibly a “schwa secundum”); Watkins 1985:16 **egni-* (also **ogni-*) ‘and 2000:22 **egni-* (also **ogni-*) ‘fire’; Gamkrelidze—Ivanov 1995.1:605, fn. 16, **h*k’ni-; Mallory—Adams 1997:202 **h*_x*ng^wnis* ‘fire’; Mayrhofer 1956—1980.I:18 **h*g-ni-s; Ernout—Meillet 2001:307—308 **egnis* or **h*gnis; De Vaan 2008:297 **h*₁*ng^w-ni-*; Walde—Hofmann 1965—1972.I:676 **egnis* (or **h*gnis); Lindsay 1894:229 **h*gni-; Derksen 2008:364 **h*₁*ng^w-ni-* and 2015:478 **h*₁*ng^w-ni-*; Smoczyński. 2007:701 **h*₁*ng^(u)-ni-*, Balto-Slavic proto-form **ung-ni-*; Machek 1997:410.

C. Uralic: Proto-Finno-Ugrian **eŋ-*, **eŋk-* ‘fire; (intr.) to burn’: (?) Cheremis / Mari (Kozmodemjansk) *əŋgä-* ‘(intr.) to singe, to be charred’, (Uržum; Birk) *eŋa-* ‘(intr.) to singe, to be charred’, *eŋ* ‘fire’; Zyrian / Komi *jñ* ‘flame’, *jñal-* ‘to flame, to flare up, to become inflamed’, *jñed-* ‘to kindle, to set on fire, to ignite’; Ostyak / Xanty *jäŋläl-* ‘to roast’; Hungarian *ég-* ‘(intr.) to burn’. Collinder 1960:410 Proto-Finno-Ugrian **eŋa-* (or **iŋa-*)

and 1977:93; Rédei 1986—1988.I:26 **äŋ*3- ‘fire; to burn’; Aikio 2020:39 (citing Pystynen) **eŋ*- ~ **iŋ*- ‘to smolder, to burn, to get scorched’. Note: I have followed Aikio, Collinder, and Illič-Svityč in the reconstruction of the Proto-Finno-Ugrian initial vowel.

Buck 1949:1.52 sun; 1.81 fire. Illič-Svityč 1971—1984.I:245—246, no. 106, **Henka* ‘to burn’; Dolgopolsky 2008:779, no. 814, **HäŋkU* ‘fire’.

677. Proto-Nostratic root **ʔep^h*-:

- (vb.) **ʔep^h*- ‘to burn, to be hot; to cook, to boil, to bake’;
 (n.) **ʔep^h-a* ‘the act of cooking, baking; oven’

- A. Proto-Afrasian **ʔ[e]f*- ‘to burn, to be hot; to bake’: Proto-Semitic *ʔap-ay*- ‘to bake’ > Hebrew *ʔāpāh* [אָפָה] ‘to bake’; Aramaic *ʔāpā* ‘to bake’; Ugaritic *āp(y)* ‘to bake’; Mandaic *apa* ‘to bake’; Akkadian *epū* ‘to bake’; Arabic (Daḡina) *hafā* (*hfy*) ‘to bake’, *mīfan* ‘oven’; Sabaeen *ʔfy* ‘baked goods’; Soqotri *mofe* ‘furnace’; Geez / Ethiopic *ʔafaya* [አፋየ] ‘to bake’. Murtonen 1989:98; Klein 1987:45; D. Cohen 1970—:28; Leslau 1987:10. Egyptian *ʔfy* ‘flames, fire’, *ʔfr* ‘to burn, to be hot’, *ʔfry* ‘to boil’. Hannig 1995:8; Faulkner 1962:3; Erman—Grapow 1926—1963.1:9.
- B. Proto-Indo-European **ʔep^h*- ‘to cook’: Greek *ἔψω* ‘to cook by boiling’, *ἐφθός* (< **epstos*) ‘boiled, cooked’; Armenian *ep^hem* ‘to cook by boiling’. Pokorny 1959:325 **eph*- ‘to cook’; Walde 1927—1932.I:124 **eps*- or **eph*-; Mann 1984—1987:1614 **epsō* (**iebhso*); Boisacq 1950:304; Frisk 1970—1973.I:604—605; Chantraine 1968—1980.I:394; Hofmann 1966:101; Beekes 2010.I:492 (pre-Greek).
- C. Proto-Altaic **ep^ho* ‘bread, food’: Proto-Tungus **epe* ‘baked bread, cake’ > Evenki *ewedi* ‘baked bread, cake’; Manchu *efen* ‘bread, pastry, cake, any sort of breadlike product made from flour’; Spoken Manchu (Sibo) *efən* ‘Manchu bread’; Ulch *epe(n)* ‘baked bread, cake’; Nanay / Gold *epě* ‘baked bread, cake’; Solon *ouo* ~ *uŋon* ~ *ewen* ‘baked bread, cake’. Proto-Mongolian **ayag*/**hayag* ‘bran’ > Written Mongolian *ayay* ‘bran’; Khalkha *āga* ‘bran’; Buriat *āgaha(n)*, *āha(n)* ‘oatmeal’; Ordos *āg* ‘bran’; Dagur *āhe* ‘bran’. Proto-Turkic **Epey* ‘baked bread’ > Tatar *ipi* ‘baked bread’; Bashkir *äpäy* ‘baked bread’. Starostin—Dybo—Mudrak 2003:514 **ep’o* ‘bread, food’. Starostin—Dybo—Mudrak note that the following Turkic forms may belong here as well, but they have been contaminated with reflexes of **et-mek* ‘bread’: Azerbaijani *äppäk* ‘bread’ (< **äpmäk* < **epmek*); Turkmenian (dial.) *epmek* ‘bread’; Khakas *ipek* ‘bread’; etc.
- D. Chukchi-Kamchatkan: Proto-Chukotian **apat*- ‘to boil or cook’ > Chukchi *apat*- ‘to boil or cook (tr.)’, *apaŋe* ‘soup’, *apa-w*- ‘to drink tea or soup’, *t-apa-ŋ*- ‘to boil soup’; Kerek *ənnə-paat*- ‘to cook fish’; Koryak *apat*- ‘to boil, to cook’, *apaŋa* ‘soup’, *apa-v*- ‘to drink soup’; Alyutor *apat*- ‘to boil, to cook’, (Palana) *apa’ap* ‘soup’. Fortescue 2005:347; Mudrak 1989b:92 **ʔapaŋ*- ‘to cook’.

Buck 1949:5.21 cook (vb.); 5.22 boil; 5.23 roast; 5.24 bake. Bomhard—Kerns 1994:571, no. 438; Dolgopolsky 1998:56, no. 64, *ʔäPHi ‘to bake, to prepare food on hot stones’ and 2008, no. 62, *ʔäP[h]i ‘to bake, to cook food on hot stones’.

678. Proto-Nostratic (n.) *ʔer-a ‘earth, ground’:

- A. Proto-Afrasian *ʔ[e]r-tʃ- ‘earth, ground’: Proto-Semitic *ʔar-tʃ- ‘earth, land’ > Hebrew ʔereš [ʔ.ʔ.ʔ.ʔ] ‘earth, land, country, ground’; Aramaic ʔarʿā ‘land, earth, ground, field’; Phoenician ʔrš ‘earth’; Ugaritic ʔrš ‘earth’; Akkadian eršetu ‘earth, soil, ground, dry land; land, territory, district; the earth; the nether world’; Arabic ʔarḍ ‘earth, ground, land’; Sabaeen ʔrḍ ‘earth’; Šheri / Jibbāli ʔerz ‘land, earth’. D. Cohen 1970—:33—34; Klein 1987:57; Murtonen 1989:102; Zammit 2002:72; Takács 2011a:32 Proto-Semitic *ʔarš- (*ʔarḍ-); Militarev 2010:64 Proto-Semitic *ʔarš-. West Chadic *HVritʃ- ‘earth’ > Pa’a (ə)ṛṭa / riṭṭā (Orël—Stolbova write riṣa) ‘earth’; Tsagu hiiʔtlē (Orël—Stolbova write hīṣe) ‘earth’; Siri rəʔtlū / iṛṭli (Orël—Stolbova write rəṣu) ‘earth’; Mburku riʔtlū (Orël—Stolbova write riṣi) ‘earth’. Junggraithmayr—Ibrizimow 1994.II:116—117. (?) East Chadic *ʔiratʃ- ‘valley’ > Bidiya ʔiraadya ‘valley’. Diakonoff 1992:21 *ʔrč ‘earth’; Orël—Stolbova 1995:15—16, no. 54, *ʔarič- ‘earth’; Militarev 2010:64 Proto-Afrasian *ʔarič-; Takács 2011a:32 *rVč- ‘earth’.
- B. Dravidian: Kannaḍa ere ‘black soil’; Telugu rē-gaḍa, rē-gaḍi ‘clay’ (gaḍḍa ‘clod’). Burrow—Emeneau 1984:80, no. 820.
- C. Proto-Indo-European *ʔer- ‘earth, ground’: Greek ἔρα ‘earth’ (Homeric ἔραζε ‘to the earth, to the ground’); Gothic airpa ‘earth’; Old Icelandic jörð ‘earth, ground’; Faroese jørð ‘earth’; Swedish jord ‘earth’; Norwegian jord ‘earth’; Danish jord ‘earth’; Old English eorþ ‘earth, ground; the world’; Old Frisian irthe, erthe ‘earth’; Old Saxon erða ‘earth’; Middle Dutch erde, aerde ‘earth’ (Dutch aarde); Old High German erda ‘earth, ground, soil; the world’ (New High German Erde), ero ‘earth’; Welsh erw ‘field’; Old Breton ero ‘furrow’; Old Cornish erw, ereu ‘furrow’. Pokorny 1959:332 *er- ‘earth’; Walde 1927—1932.I:142 *er-; Mann 1984—1987:1614 *ertos, -ā, -is, 1614 *eryos, -ə ‘land, earth, field’; Watkins 1985:17 *er- and 2000:23—24 *er- ‘earth, ground’ (extended form *ert-); Mallory—Adams 1997:174 *h₁er- ‘earth’; Boisacq 1950:270; Hofmann 1966:90; Beekes 2010.I:449 *h₁er-; Chantraine 1968—1980.I:363; Frisk 1970—1973.I:546—547; Orël 2003:86 Proto-Germanic *erþō; Kroonen 2013:118 Proto-Germanic *erþō- ‘earth’; Feist 1939:25—26; Lehmann 1986:18 Proto-Germanic *erþō, *erō; De Vries 1977:295 Proto-Germanic *erþō, *erō; Falk—Torp 1903—1906.I:338—339 Proto-Germanic *erþō from the root *er-; Torp 1919:251; Onions 1966:298 Common Germanic *erþō < *er-; Klein 1971:235 *er-; Weekley 1921:491; Skeat 1898:184; Kluge—Lutz 1898:67; Vercoullie 1898:4; Boutkan—Siebinga 2005:194—

195; Kluge—Mitzka 1967:171 **er-*, **ert-*, **ery-*; Kluge—Seebold 1989: 184 Proto-Germanic **erþō*; Walshe 1951:48.

Buck 1949:1.21 earth, land. Brunner 1969:19, no. 2; Möller 1911:68—69 and 72; Bomhard—Kerns 1994:558—559, no. 419; Dolgopolsky 2008, no. 65, **ʔarV* ‘earth, land, place’.

679. Proto-Nostratic root **ʔeth-*:

(vb.) **ʔeth-* ‘to oppose’;

(n.) **ʔeth-a* ‘that which is opposite’

- A. Afrasian: Egyptian *itn* ‘to be in opposition; to oppose, to be against’, *itnw* ‘opponent, enemy’, *itnw* ‘difficulties’. Faulkner 1962:33; Erman—Grapow 1921:20 and 1926—1963.1:145; Hannig 1995:112; Gardiner 1957:555.
- B. Dravidian: Tamil *etir* ‘that which is opposite, over against, in front, before; obstacle, that which is contrary, adverse, hostile’, *etir* (-*v-*, -*nt-*) ‘to happen, to befall, to come to pass in the future, to precede; to be opposed, to be at variance; to oppose, to confront, to meet’, *etir* (-*pp-*, -*tt-*) ‘to meet face to face, to encounter; to oppose, to withstand; to prevent, to hinder’, *etir* (adv.) ‘in front’, *etiri* ‘enemy’, *etirtōr* ‘adversaries, combatants’, *etirvu* ‘meeting, confronting, happening’, *etirmai* ‘happening in the future’; Malayalam *etir* ‘opposite, adverse’, *etirkka* ‘to attack, to face, to resist’, *etirppu* ‘opposition, what crosses one’s way, bad omen’; Kota *edyr* ‘enemy’; Toda *ōthir* ‘openly, (to lie) on one’s back’; Kannada *idir*, *idaru*, *iduru*, *edaru*, *edir*, *edur* ‘that which is opposite, the front; in front; that which is hostile, opposition’, *idircu*, *idirisu*, *edarisu*, *edirisu*, *edurisu* ‘to face (generally in a hostile manner), to oppose, to withstand, to come into hostile contact’, *edarāyisu*, *edirāyisu*, *edurāyisu* ‘to oppose, to contradict’; Kodagu *edike* ‘in front’; Tulu *edyru*, *eduru* ‘the front, that which is opposite; presence’; Telugu *eduru* ‘the front, the point directly opposite; opposite, front’, *eduru* ‘to oppose, to resist, to act against’, *eduṭa* (adv.) ‘in front’, *ediri* ‘opponent, foe’, *edirincu*, *edurucu* ‘to oppose, to resist, to act against, to face, to encounter’; Konḍa *edru* ‘opposite, in front’. Burrow—Emeneau 1984:78, no. 795.
- C. Proto-Indo-European adverb **ʔethi* (‘from the opposite side’ >) ‘over, beyond, further’: Sanskrit *āti* ‘over, beyond’; Avestan *aiti* ‘over, beyond’; Old Persian *atīy* ‘beyond, across, past’; Greek *ἔτι* ‘yet, as yet, still; further, moreover, besides; hereafter’; Phrygian *ετι-* ‘again’; Latin *et* ‘and’; Gaulish *eti* ‘also, further’; Middle Breton *eta* ‘so’; Gothic *ip* ‘but’; Old Icelandic *eða*, *eðr* ‘still, yet’; Old English *eðða* ‘and, or’; Old High German *ith-* prefix indicating repetition, addition; Old Prussian *et-* ‘besides’. Pokorny 1959:344 **eti* ‘over, beyond, further’; Walde 1927—1932.I:43—44 **eti*; Mann 1984—1987:354 **eti*, **eta*, **et* ‘and, but, yet’; Watkins 1985:17 **eti* ‘above, beyond’ and 2000:24 **eti* ‘above, beyond’; Mallory—Adams 1997:156 **h₁eti* ‘beyond’, 215 **h₁eti* ‘and, in addition’, and 2006:422

**h₁eti* ‘and, in addition’; Mayrhofer 1956—1980.I:27; Boisacq 1950:292 **e-ti*; Hofmann 1966:97 **e-ti*; Beekes 2010.I:476 **h₁eti*; Frisk 1970—1973.I:582 **éti*; Matasović 2009:119; Feist 1939:297; Lehmann 1986:208 **eti* ‘in addition, and’; De Vries 1977:98. Note: Proto-Indo-European **ʔet^hi* may also be the source of the thematic ablative singular case ending *-*ō/ē-th-* < *-*o/e-+ʔ(e)th(i)* ‘from (the opposite side)’ (the *-*i* is preserved in Luwian and Lycian): Sanskrit -*āt* [-*ād*]; Oscan -*ud*, -*úd*; Old Latin -*ē/ōd*; Cuneiform and Hieroglyphic Luwian -*ati*; Lycian -*adi*, -*edi*; Lydian -*ad*. Cf. Brugmann 1904:382 *-*ēd*, *-*ōd*; Burrow 1973:233; Fortson 2010:127—128 *-*o-(h₂)ad/t*; Lundquist—Yates 2018:2087 *-*oh₁ad*; Meillet 1964:322; Sihler 1995:250—251; Szemerényi 1996:183—184; Weiss 2009:202 *-*o-h₂Vd* > *-*ōd*, *-*e-h₂Vd* > *-*ād*.

Buck 1949:19.52 enemy.

680. Proto-Nostratic root *ʔib- (~ *ʔeb-):

(vb.) *ʔib- ‘to well up, to overflow, to spill over; to pour out or over’;

(n.) *ʔib-*a* ‘spill, overflow, flood, deluge’

- A. Proto-Afrasian *ʔ[i]b- ‘to well up, to overflow, to spill over; to pour out or over’: Proto-Semitic **ʔab-ab- ‘flood, deluge, inundation’ > Akkadian *abūbu* ‘the Deluge as a cosmic event; the Deluge personified as a monster with definite features; devastating flood’, (adv.) *abūbāniš* (*abūbiš*) ‘like the flood’; Arabic *ʔubāb* ‘great mass of water, billow, wave’; Geez / Ethiopic *ʔababi* [አበበ] ‘flow, wave’; Mandaic *tababia* ‘storm, hurricane’. D. Cohen 1970—:1—2; Leslau 1987:2. Egyptian *ibḥ* ‘stream’, *ibḥ* ‘to sprinkle water’, *ibḥ* ‘a priest who pours libations’. Hannig 1995:42; Faulkner 1962:16; Gardiner 1957:553; Erman—Grapow 1926—1963.1:64.
- B. Proto-Uralic *ipt₃ ‘(n.) higher water-level; (vb.) to rise, to swell (water)’: Zyrian / Komi *it*: (Sysola, Vyčegda) *it-va* (*va* = ‘water’) ‘higher water-level, high water’; Ostyak / Xanty (Tremyugan) *āpāt-* ‘to bubble, to boil (kettle, soup)’, (Demyanka, Obdorsk) *epāt-* ‘to rise, to swell (water), to overflow the banks (river), to boil over (boiling kettle)’. Rédei 1986—1988:83 Proto-Finno-Ugrian *ipt₃ (*ūpt₃) ‘(n.) higher water-level; (vb.) to rise, to swell (water)’; Aikio 2020:62 (?) *ipt₃V ‘flood’.

Sumerian (*i*)*br(a)* ‘to overflow, to flood, to inundate’.

Buck 1949:1.36 river, stream, brook; 5.22 boil (vb. intr.); 9.35 pour; 10.31 boil (vb. tr.). Different etymology in Dolgopolsky 2008, no. 7, *ʔ[a]bHV ‘water, watercourse’.

681. Proto-Nostratic root *ʔil- (~ *ʔel-):

(vb.) *ʔil- ‘to live, to be alive; to be, to exist’;

(n.) *ʔil-*a* ‘dwelling, habitation, house’; (adj.) ‘living, alive, existing’

- A. Afrasian: Berber: Tuareg *əll* ‘to be, to exist’; Siwa *ili* ‘to be’; Nefusa *ili* ‘to be’; Ghadames *ili* ‘to be’; Wargla *ili* ‘to be’; Mzab *ili* ‘to be’; Tamazight *ili* ‘to be, to exist’; Tashelhiyt / Shilha *ili* ‘to be’; Riff *ili*, *iri* ‘to be’; Kabyle *ili* ‘to be, to exist’; Chaouia *ili* ‘to be, to exist’; Zenaga *ille* ‘to be’, *al* ‘place’. Central Chadic **ʔal-* ‘to be’ > Mofu *ala-* ‘to be’; Logone *āli-*, *li-* ‘to be’. Orël—Stolbova 1995:8 **ʔal-*/**ʔil-* ‘to be’.
- B. Dravidian: Tamil *il* ‘house, home, place; wife’, *illam* ‘house, home’, *illavaḷ*, *illāl* ‘wife, mistress of the house’, *illāḷaṇ*, *illāḷi* ‘householder’; Malayalam *il* ‘house, place’, *illam* ‘house of Nambudiri’; Koḍagu *illavēn* ‘man who is a relative’; Tuḷu *illu* ‘house, dwelling, family’; Telugu *illu* ‘house, dwelling, habitation’, *illaṭamu*, *illaṇṭramu* ‘living in the house of one’s wife’s father’; Kolami *ella* ‘house’, *iltāmā* ‘younger sister’s husband’, *iltam* ‘boy who serves for a wife in her father’s house’; Naikri *ella* ‘house’; Gondi *il* ‘house’; Konḍa *ilu* ‘house’; Pengo *il* ‘house’; Maṇḍa *il* ‘house’; Kui *iḍu* ‘house, dwelling, shed, hut’; Kuwi *illū*, *illu*, *il* ‘house’. Burrow—Emeneau 1984:48, no. 494; Krishnamurti 2003:8 and 180 **il* ‘house’.
- C. Proto-Uralic **elä-* ‘to live’: Finnish *elä-* ‘to live; to be alive’, *elämä* ‘life, lifetime’, *elo* ‘life’; Estonian *ela-* ‘to be alive; to live, to dwell, to reside’, *elamu* ‘dwelling, habitation, house’; Lapp / Saami *ælle-/æle-* ‘to live’; Cheremis / Mari *əle-*, *ile-* ‘to live’; Votyak / Udmurt *uly-* ‘to live’; Zyrian / Komi *ol-* ‘to live’; Hungarian *él-* ‘to live’; Yurak Samoyed / Nenets *jiile-* ‘to live’; Tavgi Samoyed / Nganasan *nile-* ‘to live’; Yenisei Samoyed / Enets (Hantai) *iḍi-*, (Baiha) *jire-* ‘to live’; Selkup Samoyed *ela-*, *ila-* ‘to live’; Kamassian *d’ili* ‘alive’. Rédei 1986—1988:73 **elä-*; Décsy 1990:98; Collinder 1955:10 and 1977:31; Janhunen 1977b:27 **ilä-*; Sammallahhti 1988:536 **elä-* ‘to live’; Aikio 2020:43—44 **elä-* ‘to live / to go, to visit’.

Buck 1949:4.74 live (= be alive); living; alive; life; 7.11 dwell; 7.12 house; 7.122 home; 7.13 hut; 9.91 be. Illič-Svityč 1965:341 **el* ‘to live’ (‘жить’)) and 1971—1984.I:267—268, no. 131, **ʔelA* ‘to live’; Hakola 2000:26—27, no. 56; Dolgopolsky 2008, no. 23, **ʔelV* ‘clan, tribe’ (→ ‘all’, pronoun of plurality), no. 26, **ʔil[A]* ‘to stand, to stay; place to stay’, and, no. 2579, **χelV* ‘to live, to dwell’; Fortescue 1998:152.

682. Proto-Nostratic (n.) **ʔil-a* (~ **ʔel-a*) ‘deer’:

- A. Dravidian: Tamil *iralai* (< **ilar-* through metathesis) ‘stag, a kind of deer’; Kannaḍa *eraḷe*, *erale* ‘antelope, deer’; Tuḷu *eraḷe* ‘antelope, deer’; Telugu (inscr.) *iri* ‘stag’, *irri* (< **ilri*) ‘antelope’, *lēṭi*, *lēḍi* (< **ilati*) ‘antelope’; Malto *ilaru* ‘the mouse deer’. Burrow—Emeneau 1984:46, no. 476.
- B. Proto-Indo-European **ʔel-* (secondary *o*-grade form: **ʔol-*) ‘deer (and similar animals)’: Greek *ἔλαφος* (< **el-ḡ-*) ‘deer’, *ἐλλός* (< **ēlnós*) ‘a young deer, fawn’; Armenian *eln* ‘hind, doe’; Old Irish *elit* ‘doe’; Welsh *elain* ‘fawn’; Old Icelandic *elgr* ‘elk’; Dutch *eland* ‘elk’; Old English *eolh*

‘elk’; Old High German *elaho* ‘elk’ (New High German *Elch*); Lithuanian *ėlnis* ‘deer’; Old Church Slavic *jelenь* ‘deer’; Russian *olén’* [олень] ‘deer’, *los’* [лось] (< **olsь*) ‘elk’; Ukrainian *ólen’* ‘deer’; Macedonian *elen* ‘deer’; Czech *jelen* ‘deer’, *los* ‘elk’; Tocharian A *yäl*, B *yal* ‘gazelle’. Pokorny 1959:303—304 **el-en-*, **el-ŋ-* (**elənī*) ‘deer’; Walde 1927—1932.I:154—155 **el-* ‘deer and similar animals’; Mann 1984—1987:16 **alkis*, **alākis* ‘a horned animal’, 238 **elānis* (**elnis*, -os; **ālānis*) ‘deer’; Watkins 1985:16—17 **el-* 2000:23 **el-* ‘red, brown’ (forming animal and tree names); Gamkrelidze—Ivanov 1984.I:517—518 **el-*, **ol-*: *(*e*)l-*k̂[h]*-, **el-en-*, **el-ŋ-* and 1995.I:437 **el-*, **ol-*: *(*e*)l-*k̂h-*, **el-en-*, **el-ŋ-* ‘deer’; Mallory—Adams 1997:154—155 **h₁elh₁ēn* (British English) red deer’; Boisacq 1950:238 **elŋ-bho-s* and 245 **el-en-*; Frisk 1970—1973.I:483—484 **elen-* (?); Chantraine 1968—1980.I:333 **elŋ-bho-s*; Hofmann 1966:77 **el-ŋ-bhos*; Beekes 2010.I:402—403 **h₁ekuo-*; Van Windekens 1976—1982.I:591 **el-en-*; Adams 1999:485—486 **h₁el-en-*; Derksen 2008:140 **h₁el-h₁en-i* and 2015:153 **h₁ol-Hn-iH-*; Fraenkel 1962—1965.I:120; Orël 2003:14 Proto-Germanic **algiz* ~ **elxaz* ~ **elxōn* (continuing Proto-Indo-European **olkis* ~ **el̥kis*); Kroonen 2013:116 Proto-Germanic **elha(n)-* ‘elk’; De Vries 1977:100 **el-*; Onions 1966:304 **oln-*, **eln-* and 306 **elk-*; Klein 1971:240 **eln-* and 242 **elk-*; Kluge—Mitzka 1967:162 **elk-*, **olk-*; Kluge—Seebold 1989:173—174 **el-*; Vercoullie 1898:70.

- C. Yukaghir (Southern / Kolyma) *ile*, *ilbe* (< **ilwə*) ‘domestic reindeer’, (Northern / Tundra) *ilwiiče* ‘pastor’, *ilwii-* ‘to graze’, *iled-ičibe* ‘milk’, *iled’e* ‘having reindeer’, *ilen-nouriče* ‘herdsman’. Nikolaeva 2006:171 and 173.
- D. Proto-Altaic **ēlV(-k̂hV)* ‘deer’: Proto-Tungus *(*χ*)*elkēn* ‘deer’ > Evenki *elkēn* ‘wild deer’; Lamut / Even *iēlken*, *elken* ‘domesticated deer’. Proto-Mongolian **ili* ‘a young deer, fawn’ > Written Mongolian *ili*, *eli* ‘a young deer, fawn’; Khalkha *il* ‘a young deer, fawn’; Kalmyk *ilə* ‘a young deer, fawn’. Proto-Turkic **elik* ‘roebuck; wild goat’ > Old Turkic (Old Uighur) *elik* ‘roebuck; wild goat’; Karakhanide Turkic *elik* ‘roebuck; wild goat’; Turkish (dial.) *elik* ‘roebuck; wild goat’; Bashkir *ilek* ‘roebuck; wild goat’; Kirghiz *elik* ‘roebuck; wild goat’; Kazakh *elik* ‘roebuck; wild goat’; Oyrat (Mountain Altai) *elik* ‘roebuck; wild goat’; Tuva *elik* ‘roebuck; wild goat’. Starostin—Dybo—Mudrak 2003:501 **ēlV(-k̂V)* ‘deer’.

Buck 1949:3.75 deer. Illič-Svityč 1971—1984.I:272—273, no. 135, **ʔili* ‘deer’; Bomhard—Kerns 1994:582—583, no. 452; Dolgopolsky 1998:41—42, no. 37, **ʔEl/ʔi* ‘deer’ and 2008, no. 25, **ʔēlV* ‘deer’.

683. Proto-Nostratic root **ʔil-* (~ **ʔel-*):
 (vb.) **ʔil-* ‘to see, to know’;
 (n.) **ʔil-a* ‘eye’

- A. Proto-Afrasian **ʔil-* ‘(vb.) to see, to know; (n.) eye’: Proto-Southern Cushitic **ʔila-* ‘eye’ > Iraqw *ila* ‘eye’; Burunge *ila* ‘eye’; Alagwa *ila* ‘eye’; K’wadza *ilito* ‘eye’; Asa *ʔilat* ‘eye’; Ma’a *iʔilá* ‘eye’; Dahalo *ʔila* ‘eye’. Ehret 1980:291. Proto-Southern Cushitic **ʔiley-* ‘to know’ > Ma’a *-ile* ‘to know’, *-ʔiliye* ‘to acquaint’; Dahalo *ʔelej-* ‘to know’. According to Ehret (1980:292), this stem is a derivative of **ʔila-* ‘eye’, converted to a verb by the addition of the consecutive extension **-Vɣ-*. Proto-Southern Cushitic **ʔilima-* ‘tears’ > Asa *ʔelelema* ‘tears’; Ma’a *iʔilima* ‘tears’; Dahalo *ʔilima* ‘tears’. Ehret 1980:291—292. Proto-East Cushitic **ʔil-* ‘eye’: Burji *il-a*, *ill-áa* ‘eye’; Gedso / Darasa *ille* ‘eye’; Hadiyya *ille* ‘eye’, *il-šura* ‘eyelash’; Kambata *illi* (pl. *illi-ta*) ‘eye’, *ille šura* ‘eyelash’; Sidamo *ille* (pl. *ill-ubba*) ‘eye’; Somali *il* ‘eye’; Rendille *il* ‘eye’; Bayso *il-i* ‘eye’; Boni *il* ‘eye’; Dasenech *ʔil* ‘eye’; Elmolo *il* ‘eye’; Galla / Oromo (Wollega) *ijj-a* (< **il-i-ta*) ‘eye’; Borana *il-a* ‘eye’; Konso *il-ta* ‘eye’; Yaaku *il* ‘eye’; Gidole *il-t* ‘eye’. Sasse 1979:22 and 1982:104; Heine 1978:65; Hudson 1989:60. Proto-East Cushitic **ʔilaal-* ‘to see, to look at’ (derivative of **ʔil-* ‘eye’) > Burji *ilaal-* ‘to see, to look at’; Saho *ilaal-* ‘to wait for’; Somali *ilaal-* ‘to guard’; Galla / Oromo *ilaal-* ‘to watch’; Konso *ilaal-* ‘to follow with the eyes’. Sasse 1979:5, 22 and 1982:105. Proto-Agaw **ʔal* ‘eye’ > Bilin *ʕil* (pl. *ʕilil*) ‘eye’; Xamir *əl* ‘eye’; Kemant *yəl* ‘eye’; Awngi / Awiya *əll* ‘eye’. Reinisch 1887:63; Appleyard 2006:62. North Cushitic: Beja / Beḏawyi *lili*, *lile* ‘eye’. Reinisch 1895:158. Ehret 1995:360, no. 720, **ʔil-* / **ʔal-* ‘to see’, **ʔil-* ‘eye’; Takács 2011a:146 **ʔil* ‘eye’.
- B. Elamo-Dravidian: Middle Elamite *el*, *el-ti* ‘eye(s)’; Royal Achaemenid Elamite *el-te* ‘his eye’; Neo-Elamite *el-ti-pi* ‘eyes’. Proto-Dravidian **ēl-* ‘mind, reason, knowledge’: Kui *ēlu*, *elki* ‘mind, reason, thought, wisdom, understanding, remembrance’, *ēlu giva* ‘to think, to remember’; Kuwi *ēḍu* ‘wisdom’; Brahui *hēl* ‘knowledge, wisdom’, *hēl kanning* ‘to learn’, *hēl tining* ‘to teach’. Burrow—Emeneau 1984:87, no. 912; Krishnamurti 2003: 14 **ēl-* ‘mind, reason, knowledge’.
- C. Proto-Altaic **ila* ‘evident, visible’: Proto-Tungus **ile* ‘figure, shape; body; example; exterior’ > Evenki *ille* ‘body’; Lamut / Even *ilrɤ* ‘body’, *ilrɤn* ‘figure, shape’, *ilun* ‘example’; Ulch *il̥ta(n)* ‘exterior’; Nanay / Gold *il̥ta* ‘exterior’. Proto-Mongolian **ile* ‘known, evident, obvious’ > Written Mongolian *ile* ‘clear, manifest, obvious; perceptible, visible, distinct’, *iled-* ‘to be evident, clear, open’; Khalkha *il* ‘known, evident, obvious’; Buriat *eli* ‘known, evident, obvious’; Kalmyk *ilə* ‘known, evident, obvious’; Ordos *ile*, *ele* ‘known, evident, obvious’; Moghol *ilä* ‘known, evident, obvious’; Dagur *il*, *ilēt*, *ile* ‘known, evident, obvious’; Shira-Yughur *hele* ‘known, evident, obvious’. Proto-Turkic **iler-* ‘to be dimly visible’ > Karakhanide Turkic *iler-* ‘to be dimly visible’; Oyrot (Mountain Altai) *eles* ‘silhouette, ghost’, *eleste-* ‘to be dimly visible’. Starostin—Dybo—Mudrak 2003:581—582 **ila* ‘evident, visible’.
- D. (?) Proto-Chukchi-Kamchatkan **lə-* in: Proto-Chukchi-Kamchatkan **lələ-* ‘eye’: Chukchi *lələlyən* (pl. *ləlet*) ‘eye’; Koryak *lələlyən* (pl. *ləlat*) ‘eye’;

Kerek *laŋa* ‘eye’; Alyutor *ləlalyən* ‘eye’; Kamchadal / Itelmen *lōŋ* ‘eye’. Fortescue 2005:163. Proto-Chukchi-Kamchatkan **ləlaðyən* ‘eyelashes’: Chukchi *ləlaryən* ‘eyelash’; Koryak *ləliacyo* ‘eyelash’; Kerek [*lajəyəjə-Xal* ‘eyelash’]; Alyutor *ləlatyən*, (Palana) *liacyo* ‘eyelashes’; Kamchadal / Itelmen *latceʔn* ‘eyelashes’. Fortescue 2005:163. Proto-Chukotian **lələp-* ‘to look’: Chukchi *ləlep-* ‘to look, to open eyes’; Kerek *liappa-ttu-* ‘to look’; Koryak *ləliap-* ‘to look’; Alyutor *liəliap-*, (Palana) *lilep-* ‘to look’. Fortescue 2005:163—164. Proto-Chukchi-Kamchatkan (?) **ləru-* ‘to see’: Chukchi *lʔu-* ‘to see, to find’; Kerek *lʔuu-* ‘to see, to find’; Koryak *ləru-* ‘to see, to find’; Alyutor *lʔu-*, *laʔu-*, (Palana) *laʔu-* ‘to see, to find’; (?) Kamchadal / Itelmen *laXɬ-kas* ‘to look’. Fortescue 2005:167—168. Proto-Chukotian **lərulqəl* ‘face’: Chukchi *lʔulqəl* ‘face’; Kerek *lʔulkrəl* ‘face’; Koryak *lərulqəl* ‘face’; Alyutor *ləʔulqəl* ‘face’. Fortescue 2005:168.

Sumerian *il* ‘to look at’.

Buck 1949:4.21 eye; 15.51 see; 17.17 know; 17.34 clear, plain (to the mind). Dolgopolsky 2008, no. 27, **ʔilV* ‘eye’.

684. Proto-Nostratic (n.) **ʔin-a* (~ **ʔen-a*) ‘place, location’ (> ‘in, within, into’ in the daughter languages):

- A. Proto-Afrasian **ʔin-* ‘in, within, into’: Proto-Semitic **ʔin-* ‘in, on, from, by’ > Akkadian *ina* (*in*) ‘in, on, from, through’; Geez / Ethiopic *ʔən-ta* [**አገተ**] ‘through, by way of, by, at, into, to, in the direction of, because’; Tigre *ʔət* ‘on, in, by, with, because of’, *ʔətta* ‘there’. Leslau 1987:32—33; D. Cohen 1970— :24. Egyptian *in* ‘in, to, for, because, by’. Gardiner 1957:553; Hannig 1995:73; Faulkner 1962:22; Erman—Grapow 1921:13 and 1926—1963.1:89. Proto-Highland East Cushitic **-ni* ‘with’ > Burji *-na* ‘with’; Gedeo / Darasa *-nni* ‘with’, *-ni* ‘on (top of)’, *-ni* ‘from, in’; Hadiyya *-n* ‘in’, *-nni* ‘in’, *-ns* ‘from’; Kambata *-n* ‘with’; Sidamo *-nni* ‘with’. Hudson 1989:83 and 169.
- B. Proto-Indo-European **ʔen-* ‘in, into, among, on’: Greek *ἐν*, *ἐνι*, *ἐνί* ‘in, on, among, into, and besides’; Latin *in* (Old Latin *en*) ‘in, on, among, into, on to, towards, against’; Oscan *en* ‘in’; Umbrian *-en* (*-e*, *-em*) ‘in’; Old Irish *ini-*, *en-*, *in-* ‘in, into’; Gothic *in* ‘in, into, among, by’, *inn* ‘into’; Old Icelandic *í* ‘in, within, among’, *inn* ‘in, into’; Old English *in* ‘in, on, among, into, during’, *inn* ‘in’; Old Frisian *in* ‘in’; Old Saxon *in* ‘in’; Old High German *in* ‘in’ (New High German *in*); Old Prussian *en* ‘inside, within’. Pokorny 1959:311—314 **en*, **eni* ‘inside, within’; Walde 1927—1932.I:125—127 **en-*; Mann 1984—1987:241 **en*, **eni* ‘in’; Watkins 1985:17 **en* and 2000:23 **en* ‘in’; Mallory—Adams 1997:290 **h₁en(i)* ‘in, into’; Boisacq 1950:249 **en* (**eni*); Frisk 1970—1973.I:508—509 **en*, **eni*; Hofmann 1966:81 **en*, **eni*, **en_i*, **η*; Chantraine 1968—1980.I:344—345 **en-*; Beekes 2010.I:419 **h₁en(i)*; Ernout—Meillet

1979:312—314 **en*, **ŋ*; Walde—Hofmann 1965—1972.I:687—688 **en*, **ŋ*; **eni*; De Vaan 2008:300; Buck 1928:209, §301.2; Orël 2003:84 Proto-Germanic **end*(ē), 84 **eni*; Kroonen 2013:269 Proto-Germanic **in(i)* ‘in’; Feist 1939:292; Lehmann 1986:205 **en*, *(*e*)*ni*, **entós* and 206; De Vries 1977:282 and 286; Onions 1966:466 **en*, **ŋ*; Klein 1971:371 **en*, **ŋ*, **eni*; Boutkan—Siebinga 2005:192—193; Kluge—Mitzka 1967:326; Kluge—Seebold 1989:328—329 **eni*.

- C. Uralic: Proto-Finno-Ugrian *[*i*]*n*3 ‘place’ > Votyak / Udmurt *in*, *iñ* ‘place, spot’; Zyrian / Komi (Sysola) *-in* in: *kos-in* ‘dry place, dry land’, (Letka) *in* ‘place, spot’; (?) Hungarian (dialectal) *eny*, *enyh* ‘shelter; covered or sheltered place where men and animals take cover from wind, rain, snow, or heat’. Rédei 1986—1988:592—593 **ŋ*n3.
- D. Proto-Eskimo **ənə* ‘place’: Alutiiq Alaskan Yupik *əna* ‘(Chugach) house; (Koniag) room space’ [base *ənə*]; Central Alaskan Yupik <*ə*>*na*, (Hooper Bay-Chevak) *əna*, (Nunivak) *əna* ‘house, place’ [base *ənə*]; Naukan Siberian Yupik *ənə* ‘place’; Central Siberian Yupik *na* ‘home, place’ [base *nə*]; Sirenik *ənə* ‘place, dwelling’; Seward Peninsula Inuit *ini*, (Little Diomed) *ənə* ‘house’; North Alaskan Inuit *ini* ‘place, room’, *inī* ‘village’; Western Canadian Inuit *ini* ‘place, sledge track’; Eastern Canadian Inuit *ini* ‘place, sledge track’; Greenlandic *ini* ‘place, nest, lair, sledge track’. Fortescue—Jacobson—Kaplan 1994:111.

Bomhard—Kerns 1994:566—567, no. 432; Dolgopolsky 2002:48—49 **ʔin/ṇa/ä* ‘place’ (> ‘in’ in daughter languages) and 2008, no. 45, **ʔin̄[A]* ‘place’ ([in descendant languages] → ‘in’); Fortescue 1998:144.

685. Proto-Nostratic (n.) **ʔina* or **ʔiŋa* ‘younger relative (male or female)’ (nursery word):

- A. Proto-Afrasian **ʔin(a)* or **ʔiŋ(a)* ‘younger relative (male or female)’: Proto-East Cushitic **ʔinam-/ʔinm-* (m.) ‘son, boy’, (f.) ‘daughter, girl’ > Somali *inan* (pl. *inamm-o*) ‘boy, son’, *inán* (pl. *inam-o*) ‘girl, daughter’; Rendille *inam* ‘boy’, *inám* ‘girl, daughter’; Konso *inn-a* ‘son, boy’, *inan-ta* ‘girl, daughter’; Gidole *imm(-a)* ‘boy, son’, *inan-t(a)* ‘girl, daughter’; Harso *inan-ko* ‘son-in-law’. Sasse 1979:24. Proto-Southern Cushitic **ʔiŋan-* or **ʔiŋaan-* ‘child’ > Burunge *nana* ‘sibling, cousin’; Iraqw *nina* ‘small, little’; Alagwa *nina* ‘small, little’; K’wadza *-nanana* ‘little’; Ma’a *ijínta* ‘sister’, *iŋa* ‘brother’. Ehret 1980:292. (?) Egyptian *inpw* ‘royal child: crown-prince, princess’. Gardiner 1957:554; Faulkner 1962:23; Hannig 1995:77; Erman—Grapow 1921:14 and 1926—1963.1:96.
- B. Proto-Altaic **īna* ‘younger relative (male or female)’: Proto-Tungus **īnan* ‘younger relative (male or female)’ > Evenki *īnan* ‘husband’s younger brother’; Lamut / Even *in̄n* ‘(younger) brother-in-law or sister-in-law’; Negidal *ina* ‘sister’s children’; Manchu *ina* ‘sister’s son, nephew’; Spoken Manchu (Sibo) *inā* ‘sister’s son, nephew; son of father’s or mother’s sister,

cousin'; Orok *ina* 'son-in-law'; Nanay / Gold *inā* 'husband's younger sister'. Proto-Turkic **ini* 'younger brother' > Old Turkic (Orkhon, Old Uighur) *ini* 'younger brother'; Karakhanide Turkic *ini* 'younger brother'; Turkish *ini* 'younger brother'; Azerbaijani (dial.) *ini* 'younger brother'; Turkmenian *ini* 'younger brother'; Tatar *inī* 'younger brother'; Bashkir *inī* 'younger brother'; Uzbek *ini* 'younger brother'; Uighur *ini* 'younger brother'; Kirghiz *ini* 'younger brother'; Kazakh *inī* 'younger brother'; Noghay *ini* 'younger brother'; Sary-Uighur *ini*, *inī* 'younger brother'; Oyrot (Mountain Altai) *ini*, *in* 'younger brother'; Yakut *ini*, *inī* 'younger brother'; Dolgan *ini-bī* 'younger brother'. Starostin—Dybo—Mudrak 2003:587—588 **ina* 'younger sibling'.

- C. (?) Eskimo: Proto-Inuit **inrutaq* 'grandchild' > North Alaskan Inuit *inrutaq* 'grandchild'; Western Canadian Inuit (Copper) *inrutaq*, (Siglit) *inrutaaluk*, (Netsilik) *injutaq* 'grandchild'; Eastern Canadian Inuit *irjutaq* 'grandchild'; Greenlandic Inuit *irnutaq*, *irjutaq* 'grandchild'. Fortescue—Jacobson—Kaplan 1994:134.

Buck 1949:2.25 boy; 2.26 girl; 2.27 child; 2.41 son; 2.42 daughter; 2.44 brother; 2.45 sister.

686. Proto-Nostratic root **ʔirʷ-* (~ **ʔerʷ-*):

(vb.) **ʔirʷ-* 'to draw, to drag, to pull';

(n.) **ʔirʷ-a* '(the act of) drawing, dragging, pulling; trace, furrow'

- A. Dravidian: Tamil *iru* (-*pp-*, -*tt-*) 'to draw, to pull, to drag along the ground, to attract (as a magnet), to wheedle, to draw out, to stretch out, to draw into (as a whirlpool), to engulf, to absorb; to have convulsions', *iruppu*, *iruval*, *iruvai* 'drawing, pulling'; Malayalam *irukka* 'to draw, to take off clothes', *irekka* 'to drag, to pull', *irappu* 'propelling force of a current'; Kannaḍa *ir*, *īr*, *ere* (vb.) to pull, to drag, to attract, to take away by force; (n.) pulling, dragging, attracting, taking away by force'; Koṇḍa *iris-* (-*t-*) 'to pull, to drag'; Gondi *irk-* 'to drag'. Burrow—Emeneau 1984:49, no. 504(a).

- B. Proto-Altaic **irʷu* 'trace, furrow': Proto-Tungus **iru-n* 'furrow' > Manchu *irun* 'rows between furrows in a field'; Nanay / Gold *irū* 'furrow'. Proto-Tungus **ir-* 'to draw, to drag, to haul, to pull, to tow, etc.' (< 'to leave a trace') > Evenki *ir-* 'to draw, to drag'. Tsintsius 1975—1977.I:323—324 ИР- II волочить. Proto-Turkic **irʷ* / **irʷ* 'trace, furrow' > Old Turkic (Old Uighur) *iz* 'trace'; Karakhanide Turkic *iz* 'trace'; Turkish *iz* 'track, trace; footprint'; Gagauz *jiz* 'trace'; Azerbaijani *iz* 'trace'; Turkmenian *iz* 'trace'; Uzbek *iz* 'trace'; Uighur *iz* 'trace'; Karaim *iz*, *iz* 'trace'; Tatar *iz* 'trace', *izan* 'furrow'; Bashkir *id* 'trace', *idan* 'furrow'; Kirghiz *iz* 'trace'; Kazakh *iz* 'trace'; Noghay *iz* 'trace', *izan* 'furrow'; Oyrot *is* 'trace'; Tuva *is* 'trace'; Chuvash *jər* 'trace', *jəran* 'furrow'. Starostin—Dybo—Mudrak 2003: 592—593 **irū*.

Buck 1949:9.212 furrow. Illič-Svityč 1971—1984.I:245—246, no. 112, **Hir'a* ‘to drag, to pull’; Dolgopolsky 2008:156—157, no. 72a, **ʔi[ʔy]r[a]* ‘to drag, to pull, to push’.

687. Proto-Nostratic root **ʔit*’- (~ **ʔet*’-):

(vb.) **ʔit*’- ‘to chew, to bite, to eat, to consume’;

(n.) **ʔit*’-*a* ‘the act of eating; that which is eaten: food, nourishment’

- A. Proto-Afrasian **ʔit*’-, **ʔet*’- ‘to eat, to bite into’: Proto-Semitic **ʔat*’-*am*- ‘to bite into’ > Arabic *ʔatama* ‘to bite into’; Ugaritic *ʔtm* ‘bite, mouthful, morsel’. D. Cohen 1970— :16. (?) Egyptian *idbw* ‘of the mouth’ (medical term). Erman—Grapow 1926—1963.1:153. Berber: Tawlemmet *əttəd* ‘to suck’, *sudəd* ‘to suckle, to nurse, to breast-feed’; Nefusa *taḍḍa* ‘leech’; Mzab *əttəd* ‘to suck’, *ssəttəd* ‘to suckle, to nurse, to breast-feed’; Wargla *əttəd* ‘to suck’; Tamazight *əttəd* ‘to suck’, *ssuttəd* ‘to suckle, to nurse, to breast-feed’, *tiḍiṭt* ‘leech’; Tashelhiyt / Shilha *əttəd* ‘to suck’; Riff *əttəd* ‘to suck’, *uḍud* ‘nursing, breast-feeding’; Kabyle *əttəd* ‘to suck’, *tuttḍa* ‘sucking’; Chaouia *əttəd* ‘to suck, to be sucked’, *timsudḍəṭ* ‘wet-nurse’; Zenaga *ḍud* ‘to suck’, *suddud* ‘to suckle, to nurse, to breast-feed’, *əḍəd* ‘to bite’. (?) Chadic: Fyer *et*- ‘to eat’; Tangale *edi*- ‘to eat’. Jungraithmayr—Ibrisimow 1994.II:120—121. (?) East Cushitic: Burji *it*- ‘to eat’; Gedeo / Darasa *it*- ‘to eat’; Hadiyya *it*- ‘to eat’; Kambata *it*- ‘to eat’; Sidamo *it*- ‘to eat’; Galla / Oromo *it-o* ‘food’. Sasse 1982:108; Hudson 1989:55 Proto-Highland East Cushitic **it*-. Orël—Stolbova 1995:23, no. 83, **ʔet*- ‘to eat’.
- B. Proto-Indo-European **ʔet*’- (secondary *o*-grade form: **ʔot*’-) ‘to eat’ (original meaning ‘to bite’): Sanskrit *ádmi* ‘to eat, to consume, to devour’; Greek *ἔδω, ἔδομαι* ‘to eat, to devour; (of worms) to gnaw’; Armenian *utem* ‘to eat’; Latin *edō* ‘to eat’; Gothic *itan* ‘to eat’; Old Icelandic *eta* ‘to eat’; Norwegian *eta* ‘to eat’; Swedish *äta* ‘to eat’; Old English *etan* ‘to eat’; Old Frisian *eta, ĩta* ‘to eat’; Old Saxon *etan* ‘to eat’; Dutch *eten* ‘to eat’; Old High German *ezzan* ‘to eat’ (New High German *essen*); Lithuanian *ėdu, ėsti* ‘to eat’, *ėda* ‘food’; Latvian *ēst* ‘to eat’; Old Prussian *īst* ‘to eat’; Old Church Slavic *jasti* ‘to eat’; Russian *jest’* [естъ] ‘to eat’; Polish *jeść* ‘to eat’; Czech *jísti* ‘to eat’; Hittite (1st sg. pres.) *e-it-mi* ‘I eat’; Palaic (3rd pl. pres.) *a-ta-a-an-ti* ‘they eat’; Luwian (inf.) *a-du-na* ‘to eat’; Hieroglyphic Luwian *at*- ‘to eat’. Rix 1998a:205—206 **h₁ed*- (‘to bite’ →) ‘to eat’; Pokorny 1959:287—289 **ed*- ‘to eat’; Walde 1927—1932.I:118—121 **ed*-; Mann 1984—1987:230 **ēd*- (**ēdā*, -*om*, -*īd*, -*īom*, -*is*) ‘food, bait’, 230 **ēdālis*, -*os*, -*om* ‘edible; food’, 230—231 **ēdmi* (**ēdō*) ‘to eat’, 231 **ēdmn*-, **ēdn*- ‘food; tooth, set of teeth’, 231 **edō(n)* ‘devourer, consumer’, 231 **ednt*-, **edont*- (**odont*-) ‘eating-; tooth’, 231 **edonts* (**edont*, **edon*) (act. ptc.) ‘eating’, 231 **ēdō(n)* (**ēdon*-, **ēdīos*) ‘eater’, 231 **ēdrā*, -*is* ‘food’, 231 **ēds*-, **ēdsmn*- ‘eating, food’, 231—232 **edsk*- (**odsk*-) ‘foodstuff, food-crop’, 232 **ēdsō*, -*īō*, 232 **ēdtis* (**ēstis*) ‘eating, food’, 862 **ōd*- ‘to eat’; Watkins 1985:16 **ed*- and 2000:22 **ed*- ‘to eat’

(original meaning 'to bite'); Gamkrelidze—Ivanov 1984.I:41 **et*’-/**ot*’- and 1995.I:37 **et*’-/**ot*’- 'to eat', I:218 **et*’-*mi* 'I eat', **et*’-*men* 'food'; Mallory—Adams 1997:175 **h₁édmi* 'to eat'; Mayrhofer 1956—1980.I:28; Boisacq 1950:216 **éd*-; Chantraine 1968—1980.I:312—313 **éd*-*mi*, **ed*-; Frisk 1970—1973.I:444—445 **éd*-*mi*; Hofmann 1966:69 **ed*-; Beekes 2010.I:375 **h₁ed*-; Walde—Hofmann 1965—1972.I:392—393 **éd*-*mi*; Ernout—Meillet 1979:191—192 **ed*-; De Vaan 2008:185—186; Orël 2003:27 Proto-Germanic **atjanan*, 86 **etanan*, 86 **etulaz*; Kroonen 2013:39 Proto-Germanic **atjan*- 'to make eat' and 119 **etan*- 'to eat'; Lehmann 1986:208 **ed*- ← *ʔ*ed*-; Feist 1939:296—297; De Vries 1977:106 **ed*-*mi*; Torp 1919:91; Onions 1966:298 **ed*-; Klein 1971:235 **ed*-; Kluge—Mitzka 1967:175—176 **ed*-; Kluge—Seebold 1989:190 **ed*-; Smoczyński 2007.1:148—149; Fraenkel 1962—1965.I:124—125; Derksen 2008:154 **h₁ed*-*mi* and 2015:157—158 **h₁ed*-*mi*; Wodtko—Irslinger—Schneider 2008:208—220 **h₁ed*-; Puhvel 1984— .1/2:315—320; Klockhorst 2008b:261—263.

- C. Proto-Altaic **ite* (~ **eti*) 'to eat': Proto-Mongolian **ide*- 'to eat' > Mongolian *ide*- 'to eat, to feed on, to gnaw, to eat up, to devour, to consume', *idegde*- 'to be eaten', *idegen* 'food, nourishment, provisions', *idegöl*- 'to give food to, to feed (tr.)', *idelče*- 'to eat (something) together with others', *ideši* 'food, meals'; Khalkha *ide*- 'to eat'; Buriat *ede*- 'to eat'; Kalmyk *idə*- 'to eat'; Ordos *ide*- 'to eat'; Moghol *idä*- 'to eat'; Dagur *ide*- 'to eat'; Dongxiang *ežie*- 'to eat'; Monguor *ide*- 'to eat'; Shira-Yughur *ede*- 'to eat'. Poppe 1955:107. Proto-Turkic **et-mek* 'bread' > Old Turkic (Old Uighur) *ötmek* 'bread'; Karakhanide Turkic *etmek* 'bread'; Turkish *etmek*, *ekmek* 'bread, food', *ekmekçi* 'baker'; Karaim *ekmek*, *etmek*, *ötmek* 'bread'; Gagauz *iekmek* 'bread'; Azerbaijani *äppäk* 'bread' (< **äpmäk* < **epmek*); Turkmenian (dial.) *ekmek*, *epmek* 'bread'; Tatar *ikmāk* 'bread'; Bashkir *ikmāk* 'bread'; Noghay *öipek* 'bread'; Khakas *ipek* 'bread'; Oyrot (Mountain Altai) *ötpök* 'bread'. Starostin—Dybo—Mudrak 2003:594 **ite* (~ **eti*) 'to eat'. Starostin—Dybo—Mudrak (2003:514) note that some of the above Turkic forms may be from Proto-Turkic **ep-mek* 'bread' instead.

Buck 1949:4.58 bite (vb.); 5.11 eat. Illič-Svityč 1971—1984.I:273—274, no. 136, **ʔitā* 'to eat'; Bomhard—Kerns 1994:558, no. 418; Dolgopolsky 2008, no. 91, **ʔitē* 'to eat'.

688. Proto-Nostratic root *ʔ*iy*- (~ *ʔ*ey*-):
 (vb.) *ʔ*iy*- 'to come, to go';
 (n.) *ʔ*iy*-*a* 'approach, arrival; path, way'
 Note also:
 (vb.) *ʔ*ay*- 'to go, to proceed';
 (n.) *ʔ*ay*-*a* 'journey'

- A. Proto-Afrasian **ʔiy-* ‘to come, to go’: Egyptian *ii*, *iy* ‘to come’ (also *iw* ‘to come’); Coptic *i* [ⲉⲓ] ‘to come, to go’. Hannig 1995:27—28; Faulkner 1962:10 and 11; Erman—Grapow 1921:6 and 1926—1963.1:37; Gardiner 1957:551; Vycichl 1983:59—60; Černý 1976:44. North Cushitic: Beja / Beḍawye *yiʔ-*, *ʔiʔ-* ‘to arrive at, to come’. Reinisch 1895:241. Lowland East Cushitic: Arbore *ʔiʔit-* ‘to go’. Proto-Chadic (imptv.) **ya* ‘come!’ > Hausa *yaa-ka* ‘come!’; Ngizim *yé-n* ‘come!’; Sukur *yo* ‘come!’. Ngizim *yi* ‘go, went’ (form of ‘go’ used in the subjunctive aspect). Newman 1977:24; Jungraithmayr—Ibrizimow 1994.II:82—83 and II:162—163; Schuh 1981:177. Orël—Stolbova 1995:31, no. 118, **ʔiw-/ʔiy-* ‘to come’.
- B. Dravidian: Tamil *iyanku* (*iyanki-*) ‘(vb.) to move, to stir, to go, to proceed, to walk about; (n.) movement, act of going’, *iyakku* (*iyakki-*) ‘(vb.) to cause to go, to train or break in (as a bull or horse); (n.) motion, going, marching’, *iyakkam* ‘motion, moving about, way’, *iyal* (*iyalv-*, *iyān-*, *iyali-*) ‘(vb.) to go on foot, to dance; (n.) pace, gait’, *iyavu* ‘way, leading, proceeding’, *iyavai* ‘way, path’; Malayalam *iyannuka* ‘to move steadily’, *iyakkuka* ‘to cause to move’, *iyakkam* ‘motion, movement’; Kota *i-y-* (*i-c-*), *i-c-* (*i-c-*) ‘to drive (cattle)’; Kannaḍa *esagu* ‘to drive’. Burrow—Emeneau 1984:45, no. 469. Tamil *eytu* (*eyti-*) ‘to approach, to reach, to obtain, to be suitable’; Malayalam *eytuka* ‘to get, to obtain’, *ettuka* ‘to stretch as far as, to reach, to arrive’; Toda *ič-* (*ič-*) ‘to reach, to be sufficient’; Kannaḍa *aydu*, *eydu* ‘to approach, to reach, to go to, to join, to obtain, to be suitable’; Koḍagu *ett-* (*etti-*) ‘to arrive’; Tuḷu *ettāvuni*, *ettāḍuni* ‘to reach, to deliver’, *ettū*, *ekkū* ‘to reach’; Telugu *ey(i)du*, *ēdu* ‘to attain, to go to, to join, to obtain; to suit, to be proper’; Parji *ēd-*, *ēy-* ‘to arrive’; Kōṇḍa *ī-* ‘to arrive’; Kuwi *ejali* ‘to arrive, to reach, to overtake’; Brahui *hining* ‘to go, to depart, to disappear, to be past, to pass beyond, to be no longer fit for, to flow, (stomach) to have diarrhea’. Burrow—Emeneau 1984:79, no. 809.
- C. [Proto-Indo-European **ʔey-/ʔoy-/ʔi-* ‘to go’: Greek (1st sg. pres.) εἶμι ‘I go’, (1st pl. pres.) ἴμεν ‘we go’; Sanskrit (1st sg. pres.) émi ‘I go’, (3rd sg. pres.) éti ‘goes’, (1st pl. pres.) imāḥ ‘we go’, (3rd pl. pres.) yānti ‘they go’; Avestan (3rd sg. pres.) aēiti ‘goes’; Old Persian (3rd sg. pres.) aitiy ‘goes’; Paelignian (imptv.) eite ‘go!’; Latin (1st sg. pres.) eō ‘I go’; Old Lithuanian (1st sg. pres.) eīmi ‘I go’, (3rd sg. pres.) eīti ‘goes’; Old Prussian (3rd sg. pres.) ēit ‘goes’, *per-ēit* ‘comes’; Old Church Slavic *idō*, *iti* ‘to go’; Luwian (3rd sg. pres.) *i-ti* ‘goes’; Hittite (imptv.) *i-it* ‘go!’; Tocharian A (1st pl.) *ymäs* ‘we go’, B (1st sg.) *yam*, *yam* ‘I go’. Rix 1998a:207—208 **h₁ej-* ‘to go’; Pokorny 1959:293—297 **ei-* ‘to go’; Walde 1927—1932.I:102—105 **ei-*; Mann 1984—1987:234 **eimi* (**eīō*) ‘to go’; Gamkrelidze—Ivanov 1984.I:180 **eī/i-* and 1995.I:155, I:194 **ei-/i-* ‘to go’, I:296 **ei-mi* ‘I go’, **ei-si* ‘you go’, **ei-ti* ‘he, she goes’; Watkins 1985:16 **ei-* and 2000:22 **ei-* ‘to go’ (oldest form **₂ei-*); Mallory—Adams 1997:227—228 **h₁ej-* ‘to go’; Boisacq 1950:225—226 **ei-*; Frisk 1970—1973.I:462—463; Chantraine 1968—1980.I:321—322; Hofmann 1966:73 **ei-*; Beekes 2010.I:388 **h₁ej-*; De Vaan 2008:191—

192; Walde—Hofmann 1965—1972.I:406—409 **ei-*; Ernout—Meillet 1979:197—199 **ei-*, **i-*; Mayrhofer 1956—1980.I:128; Derksen 2008:216 **h₁ei-* and 2015:151—152 **h₁ei-*; Smoczyński 2007.1:144—145; Fraenkel 1962—1965.I:119. Proto-Indo-European *ʔ_y-*eh-* [*ʔ_y-*ah-*] (> *ʔ_y-*ā-*) ‘to go, to proceed’: Sanskrit (3rd sg. pres.) *yāti* ‘goes, proceeds, moves, walks, sets out, marches, advances, travels, journeys’; Avestan (3rd sg. pres.) *yāiti* ‘goes, rides’; Hittite (3rd sg. pres.) *i-ya-at-ta(-ri)* ‘goes’ (so Sturtevant 1951:34, §61, Indo-Hittite *ʔ_y*eh₂*; Puhvel 1984— .1/2:330—335, however, derives the Hittite form from **iya-* < **eyo-* and compares it with Vedic *áyate* ‘to go’); Lithuanian *jóju*, *jóti* ‘to ride on horseback’; Tocharian A *yā-* ‘to go, to move’. Rix 1998a:275 **ieh₂-* ‘to proceed, to move along, to go, to travel, to ride’; Pokorny 1959:294 **iā-* ‘to go’; Walde 1927—1932.I:104 **iā-*; Mann 1984—1987:439 **iāiō*, **iāmi* ‘to go, to ride’; Gamkrelidze—Ivanov 1984.II:724 **iāH-* and 1995.I:627 **yāH-* ‘to ride (in a vehicle)’; Derksen 2015:212—213 **ieh₂-*; Mallory—Adams 1997:228 **ieh_a-* ‘to go, to travel’; Kloekhorst 2008b:380; Wodtko—Irslinger—Schneider 2008:220—230 **h₁ei-*.] Note: Two separate Proto-Nostratic stems have fallen together in Proto-Indo-European: (A) *ʔ_y*ay-* (~ *ʔ_y*ay-*) ‘to go, to proceed’ and (B) *ʔ_y*iy-* (~ *ʔ_y*ey-*) ‘to come, to go’.

- D. Chukchi-Kamchatkan: Proto-Chukotian **jæt-* ‘to come’ > Chukchi *jet-* ‘to come, to arrive (by boat or sledge)’; Kerek *jat-*, *jattə-* ‘to come, to arrive’; Koryak *jet-* ‘to come, 2008’; Alyutor *jat-* (Palana *jet-*, *tet-*) ‘to come, to arrive’. Fortescue 2005:112.

Sumerian *è* ‘to go out, to come out, to leave; to bring out’, *è* ‘to get away from, to escape, to flee, to run away’, *e₁₁* ‘to ride, to travel’.

Buck 1949:10.47 go; 10.48 come. Illič-Svityč 1971—1984.I:265—267, no. 130, *ʔ_e*j₁ā* ‘to arrive, to come’; Bomhard—Kerns 1994:574—575, no. 442; Dolgopolsky 2008, no. 102, *ʔ_e*[e]yV* ‘to come, to arrive’; Möller 1911:65.

689. Proto-Nostratic 1st person personal pronoun stem *ʔ_i*ya*: (a) ‘by me’; (b) agent marker of the 1st singular of verbs; (c) postnominal possessive pronoun: ‘my’:

- A. Proto-Afrasian *ʔ_i*ya* first person suffixed personal pronoun stem: Proto-Semitic *-(*i*)*ya* first person singular suffixed personal pronoun > Old Babylonian *-ī*, *-ya*; Ugaritic *-y*; Hebrew *-ī*; Aramaic *-ī*; Classical Arabic *-ī*, *-ya*; Mehri *-i*, *-yā*; Geez / Ethiopic *-ya* [-ʔ]; Tigre *-ye*; Tigrinya *-äy*. Moscati 1964:106, §13.14; O’Leary 1921:149—150; Lipiński 1997:306—307, 308; Gray 1934:63—64; W. Wright 1890:95—98. Egyptian *-i* 1st singular suffix: ‘I, me, my’. Hannig 1995:21; Faulkner 1962:7; Erman—Grapow 1926—1963.1:25; Gardiner 1957:39 and 550. Berber: Kabyle *-i*, *-iyi*, *-yi* ‘me, to me’, *-i* ‘me’ as in: *fəll-i* ‘for me’, *yid-i* ‘with me’, *əʔr-i* ‘towards me’, *gar-i d-rəbbi* ‘between me and God’, *wəḥd-i* ‘me alone’, *zdat-i* ‘in front of me’, etc.; Tuareg *-i*, *-iyi* ‘me, to me’; Tamazight (1st sg. direct

object pronoun, placed either before or after verbs according to the syntactic conditions) *i*, *yi* ‘me’. Proto-East Cushitic **ya/*yi* ‘me, my’ > Saho *yi* ‘me’; Afar (poss.) *yi* ‘my’; Burji (1st sg. abs. [obj.]) *ee* ‘me’, *li-ya* ‘my’; Arbore *ye-* ‘me’; Dasenech *ye-* ‘me’; Elmolo *ye-* ‘me’; Kambata *e(e)s* ‘me’; Hadiyya *e(e)s* ‘me’; Sidamo *-e* ‘me’; Dullay *ye* ‘me’; Yaaku *i(i)* ‘me’. Sasse 1982:67 and 104; Hudson 1989:97; Heine 1978:53. Proto-Agaw (oblique) **yə-* ‘me, my’ > Bilin *yi-* ‘me, my’; Xamir *yə-* ‘me, my’; Kemant *yə-* ‘me, my’; Awngi / Awiya *áy-/yí-* ‘me, my’. Appleyard 2006:87; Reinisch 1887:365. Proto-Southern Cushitic **ʔe/*ʔi* ‘my’ > Iraqw *e* ‘my’; Burunge *ayi* ‘my’; Alagwa *i* ‘my’; K’wadza *-ʔe* ‘my’; Dahalo *ʔi* ‘my’. Ehret 1980:289. Ehret 1995:478, no. 1011, **i* or **yi* ‘me, my’ (bound 1st sg. pronoun); Diakonoff 1988:76—77.

- B. Elamo-Dravidian: McAlpin (1981:112—114, §531.0) reconstructs a Proto-Elamo-Dravidian **i* ‘I’. In Elamite, this became *u* ‘I’. McAlpin assumes that the following developments took place in Dravidian: **i-ən* > **iən* [**yən*] > (with vowel lengthening in accordance with Zvelebil’s Law) **yān* ‘I’ > Tamil *yān* ‘I’; Kota *a-n* ‘I’; Toda *o-n* ‘I’; Kannaḍa *ān* ‘I’; Tuḷu *yānu*, *yēnu* ‘I’; Telugu *ēnu* ‘I’; Kolami *a-n* ‘I’; Naikri *ān* ‘I’; Parji *ān* ‘I’; Gadba *ān* ‘I’; Gondī *anā*, (emph.) *annā* ‘I’; Pengo *ān/āney* ‘I’; Manda *ān* ‘I’; Kui *ānu* ‘I’; Kuṛux *ēn* ‘I’; Malto *én* ‘I’; Brahui *ī* ‘I’. Burrow—Emeneau 1984:468, no. 5160; Caldwell 1913:359—373; Zvelebil 1990:24—26 (1st sg. nom.) **yān* ‘I’, (obl.) **yan-*, (1st pl. excl. nom.) **yām* ‘we’, (obl.) **yam-*; Bloch 1954:30—31; Steever 1998a:21 (1st sg. nom.) **yān*, (obl.) **yan-/*(y)en-*; Krishnamurti 2003:245 **yān/*yan-* ‘I’.

Dolgopolsky 1984:85—87 **HoyV* (a) ‘by me’, (b) agent marker of the 1st sg. of verbs, (c) postnominal possessive pronoun (‘my’) and 2008, no. 822, **H₂oyV* (= **hoyV* ?) ‘by me, my’; Bomhard—Kerns 1994:597—598, no. 470.

690. Proto-Nostratic (n.) **ʔom-a* ‘rounded prominence at the end of a bone forming a ball and socket joint with the hollow part of another bone, condyle (of the lower jaw, the shoulder, the elbow, the hip, etc.)’:

Note: Semantic shifts took place in Semitic, Indo-European, and, in part, Altaic; the original meaning was preserved in Egyptian and Turkic.

- A. Proto-Afrasian **ʔ[o]m-* ‘rounded prominence at the end of a bone forming a ball and socket joint with the hollow part of another bone, condyle (of the lower jaw, the shoulder, the elbow, the hip, etc.)’: Proto-Semitic **ʔamm-at-* ‘forearm, cubit’ > Akkadian *ammātu* ‘forearm, cubit’; Ugaritic *ām̄t* ‘elbow’; Hebrew *ʔammāh* [אַמָּה] ‘ell, cubit’; Ancient Aramaic *ʔmh* ‘cubit’; Aramaic *ʔammā* ‘cubit’; Syriac *ʔamməṯā* ‘cubit’; Mandaic *ama* ‘ell, forearm’; Sabaeen *ʔmt* ‘cubit’; Geez / Ethiopic *ʔamat* [አመት] ‘cubit, forearm’; Tigre *ʔammāt* ‘cubit, forearm’; Tigrinya *ʔammāt* ‘cubit, forearm’; Amharic *amāt* ‘cubit, forearm’ (Geez loan). Murtonen 1989:93;

D. Cohen 1970— :22; Klein 1987:34; Leslau 1987:26. Egyptian *ʒmʿt* ‘rounded prominence at the end of a bone forming a ball and socket joint with the hollow part of another bone, condyle (of the lower jaw, the shoulder, the elbow)’ (medical term). Hannig 1995:9; Faulkner 1962:3 *ʒmʿt* ‘ramus of jaw; fork of bone’; Erman—Grapow 1926—1963.1:10.

Comment: Militarëv—Kogan (2000.I:8, no. 6) reconstruct Proto-Semitic (n.) *ʔamm-at- ‘elbow, forearm’. They do not list any non-Semitic cognates.

- B. Proto-Indo-European *ʔom-es-, *ʔom-so- ‘shoulder’: (?) Hittite *anašša-* (< *ams-) name of a body-part, perhaps ‘rear of shoulders, upper back’ or ‘hip’; Sanskrit *āmsa-h* ‘shoulder’; Greek ὤμος (< *omsos) ‘shoulder’; Latin *umerus* ‘shoulder’ (< *omesos); Umbrian *onse* ‘shoulder’; Gothic *ams* ‘shoulder’; Old Icelandic *áss* ‘mountain ridge’ (< Proto-Germanic *amsaz ‘shoulder’); Tocharian B *āntse* ‘shoulder’. Pokorny 1959:778 *om(e)so-s ‘shoulder’; Walde 1927—1932.I:178 *om(e)so-s; Mann 1984—1987:875—876 *omsos (*omes-) ‘shoulder’; Mallory—Adams 1997:515—516 *h_{1/4}ómsos ‘shoulder’; Watkins 1985:45 *omeso- (also *omso-) ‘shoulder’ and 2000:60 *om(e)so- ‘shoulder’; Mayrhofer 1956—1980.I:14 *omsos; Boisacq 1950:1081—1082 *omso-; Hofmann 1966:430 *ōmsos; Beekes 2010.II:1679—1680 *h₃ems-o-; Frisk 1970—1973.II:1148 *ōmsos, *ōmsos; Chantraine 1968—1980.II:1301 *ōmso-, *oměso-, *ōmso-; Walde—Hofmann 1965—1972.II:815 *omesos, *ōmsos; De Vaan 2008:640; Ernout—Meillet 1979:746; Orël 2003:17 Proto-Germanic *amsaz; Kroonen 2013:25 Proto-Germanic *amsa- ‘shoulder’; Lehmann 1986:30 *omsos; Feist 1939:40—41; De Vries 1977:16; Adams 1999:43—44 *h_{1/4}om(e)so- or *h_{1/4}ōm(e)so-; Melchert 1994a:186 *ómsos-; Puhvel 1984— .1/2:63—64 *omso- (this is rejected by Kloekhorst 2008b:178).
- C. Proto-Altaic *om-urʷV ‘shoulder, collar bone’: Proto-Mongolian *omur- ‘collar bone, clavicle’ > Written Mongolian *omuruγ(n)*, *omuruu* ‘sternum, clavicle, breast’; Khalkha *omrū* ‘collar bone, clavicle’; Buriat *omorū(n)* ‘breast bone, sternum’; Kalmyk *omrūn* ‘collar bone, clavicle’; Ordos *omorū*, *umurū* ‘collar bone, clavicle’; Monguor *muršdag* ‘Adam’s apple’. Proto-Turkic *om-urʷ ‘shoulder’ > Turkish *omuz* ‘shoulder’; Turkmenian *omuz* ‘shoulder’; Uzbek *omiz* ‘shoulder’; Karaim *omuz* ‘shoulder’; Kumyk *omuz* ‘shoulder’; Chuvash *ʷmʷr* ‘shoulder’. Poppe 1960:68 and 129; Street 1974 *omur² ‘shoulder, clavicle’; Starostin—Dybo—Mudrak 2003:1052 *omu^rV ‘shoulder, collar bone’. Proto-Altaic *ōmu ‘bone head, head of hip bone’ (original meaning preserved in Turkic) > ‘upper part of hip, backside, behind’: Proto-Tungus (*ōmu-kV >) *omga ‘upper part of hip, behind’ > Ulch *ombo/onbo* ‘upper part of the hip, behind’; Oroch *omgo* ‘upper part of the hip, behind’; Nanay / Gold *onbo* ‘upper part of the hip, behind’; Oroch *ombo* ‘upper part of the hip, behind’. Proto-Mongolian *omu- ‘buttocks’ > ‘large intestines; North, backside’ > Written Mongolian *umus* ‘large intestines’, *umara* ‘North, backside’; Khalkha *ums* ‘large

intestines', *umar* 'North, backside'; Buriat *omho(n)* 'large intestines', *umara* 'North, backside'; Kalmyk *umsn*, *omsn* 'large intestines'. Proto-Turkic **omV* 'bone head, head of hip bone; hip bone, thigh bone; clavicle' > Turkish *omurga* 'backbone, keel', *omaca*, *umaça*, *uma* 'bone head'; Azerbaijani *omba* 'head of hip bone'; Turkmenian *omača* 'hip bone, thigh bone'; Khakas (dial.) *omiχ* 'knee-cap'. Starostin—Dybo—Mudrak 2003: 1052 **ōmu* 'hip; back part, buttocks'. Starostin—Dybo—Mudrak note: "The meaning 'buttocks' in Mong[olian] gave rise to two widely separated semantic reflexes: a) > 'large intestine'; b) > 'back' > 'North'."

Buck 1949:4.30 shoulder.

691. Proto-Nostratic root **ʔor-*:

(vb.) **ʔor-* 'to move rapidly, quickly, hastily; to set in motion';

(n.) **ʔor-a* 'any rapid motion: running, flowing, pouring, etc.'; (adj.) 'rapid, quick, hasty'

- A. Proto-Afrasian **ʔor-* '(vb.) to hasten, to hurry; (n.) road, way': Proto-Semitic **ʔar-ax-* 'to go, to journey, to hurry', **ʔurx-* 'road, way' > Hebrew *ʔārah* [אָרַח] 'to go, to wander, to journey', *ʔōrah* [אֹרַח] 'way, path, route'; Palmyrene *ʔrh* 'road'; Aramaic *ʔōrhā* 'road, path, way'; Akkadian *arāhu* 'to hasten, to hurry', *urhu* 'road, path'; Sabaean *ʔrh* 'road'. D. Cohen 1970—:32—33; Murtonen 1989:101; Klein 1987:54. Highland East Cushitic **ʔor-* '(vb.) to go; (n.) road' > Kambata *orokk-* 'to go'; Gedeo / Darasa *ora* 'road'. Hudson 1989:124, 258, and 335. Southern Cushitic: Rift **ʔuruw-* 'path, way' > Gorowa *uruwa* 'path, way'. East Chadic **ʔwar-* 'road' > Bidiya *ʔoora* 'road'. West Chadic **ʔwara-* (< **ʔwaraH-*) 'road' > Sura *ar* 'road'; Kulere *ʔaraw* 'road'; Angas *ar* 'road'; Ankwe *war* 'road'. Orël—Stolbova 1995:31—32, no. 122, **ʔorah-* 'road, way'.
- B. (?) Dravidian: Tamil *oruku* (*oruki-*) 'to flow, to leak, to trickle down', *orukal* 'leaking, dripping; leak', *orukku* (*orukki-*) (vb.) to cause to drop, drip; (n.) leaking, dripping, flowing', *orukkal* 'pouring (as into the mouth)'; Malayalam *urukkuka* 'to pour, to inundate, to set afloat', *orukku* 'current, stream', *orukkam* 'running, flowing', *oriyuka* 'to run off (as water)', *orivu* 'watercourse', *orikka* 'to pour', *orippu* 'discharge', *ōruka* 'to flow'; Kota *ok-* (*oky-*) 'to ooze, to pour out (liquid, e.g., blood)'; (?) Toda *warf-* (*wart-*) 'to flow'; Kannada *or̥ku* '(vb.) to flow; (n.) torrent or strong current of a stream'; Kodagu *okk-* (*okki-*) 'to flow, to float away, to be carried away (by stream)'. Burrow—Emeneau 1984:97, no. 1010. Tamil *or̥unkai* 'lane, alley'; Kannada *or̥ṇku* 'narrow path between two walls in a garden' (Tuḷu loan); Tuḷu *or̥ṇku*, *or̥ṇky* 'lane, footpath'. Burrow—Emeneau 1984:97, no. 1014. Note: Contamination of Proto-Nostratic **ʔor-* 'to move rapidly, quickly, hastily; to set in motion' by **ʔor^y-* 'to rise (up)' in Dravidian (?).

- C. [Proto-Indo-European *ʔor-/ʔr- ‘to move, to set in motion; to arise, to rise; to raise’: Hittite (3rd sg. pres.) *a-ri* ‘to arrive, to come’, (3rd sg. pres.) *a-ra-(a-)i* ‘to (a)rise, to lift, to raise; to (a)rouse’, (3rd sg. pres.) *a-ar-aš-ki-iz-zi* ‘to be arriving’, (3rd sg. pres.) *ar-nu-(uz-)zi* ‘to move along, to make go; to stir, to raise; to transport, to deport, to remove; to bring, to transmit, to deliver, to produce; to further, to promote’, (3rd sg. pres.) *(a-)ar-aš-zi* ‘to flow’; Sanskrit *árṣati* ‘to flow’, *árṇa-h* ‘undulating, surging; wave’, *rcchāti* ‘to go, to move, to send’, *ṛṇóti* ‘to go, to move, to arise’; Avestan *ar-* ‘to go, to move, to come’, *aurva-*, *aurvant-* ‘rapid, quick’, *ərənaoiti* ‘to set in motion’; Old Persian *ar-* ‘to move, to go or come toward’, *aruvā* ‘action’, *aruva-* ‘rapid, quick’; Greek ὀρνύμι ‘to urge on, to incite, to move, to stir oneself, to make to arise’; Latin *orior* ‘to rise, to arise’. Rix 1998a:266—267 **h₃er-* ‘to set in (rapid) motion’; Pokorny 1959:326—332 **er-*, **or-*, **r-* ‘to set in motion; to incite, to stir up, to arouse; to arise’; Walde 1927—1932.I:136—142 **er-*; Mann 1984—1987:249 **ersō* ‘to go, to glide, to wander, to creep, to dawdle’, 884 **or-* ‘to start, to start up, to rise’, 889 **orneu-*, **or-nū-mi* ‘to move, to rouse; to dash, to fly’, 891 **orsō*, **-iō* ‘to go, to proceed, to flow, to slide, to glide, to creep’; Watkins 1985:17 **er-* and 2000:23 **er-* ‘to move, to set in motion’ (oldest form **ǵ₁er-*); Gamkrelidze—Ivanov 1984.I:218 **ṛneu-*, **ornu-*, I:295 **or-* and 1995.I:187, I:194 **er-/ṛ-*, **or-* ‘to rise, to get up; to come into motion; to attain’, I:172 **ṛneu-*, **ornu-* ‘to move’; Mallory—Adams 1977:506 **h₃er-* ‘to set in motion’; Mayrhofer 1956—1980.I:51, I:53, I:119 **er-*, and I:122; Boisacq 1950:714—716 **er-*, **ere-*; **erei-*, **ereu-*; Chantraine 1968—1980.II:823—824 **er-*, **ṛ-*; Hofmann 1966:238—239 **er-*; **ereu-*, **erei-*; Frisk 1970—1973.II:422—424 **er-*; Beekes 2010.II:1107 **h₃er-*; Walde—Hofmann 1965—1972.II:222—223 **er-* (**ere-*, **erē-*); Ernout—Meillet 1979:468; De Vaan 2008:434—435; Kloekhorst 2008b:196—197; Puhvel 1984—1988.1/2:108—111 **er-*, 1/2:123—127, 1/2:162—167, and 1/2:170—172 **H₂ér-s-*, **H₂r-és-*.] Note: Two separate Proto-Nostratic stems have fallen together in Proto-Indo-European: (A) *ʔor- ‘to move rapidly, quickly, hastily; to set in motion’ and (B) *ʔorʷ- ‘to rise (up)’.
- D. Proto-Uralic **orko* originally ‘riverbed, ravine, gully’, then, by extension, ‘any low-lying place or spot’: Finnish *orko* ‘a low-lying brook in a meadow; a humid valley; any low-lying place or spot’; Estonian *org* ‘valley; a ravine or gully in a forest’; Lapp / Saami *årgo* ‘a sandy stretch of land where trees have been planted’; (?) Cheremis / Mari *or* [оръ] ‘ditch’; (?) Votyak / Udmurt (Sarapul) *er*, (Kazan) *ör* ‘riverbed, ditch’. Rédei 1986—1988:721 **ork₃*; Aikio 2020:79 **orko* ‘valley / riverbed’.
- E. Proto-Altaic **oru-si-* ‘(vb.) to flow; (n.) river’: Proto-Mongolian **urus-* ‘to flow’ > Mongolian *urus-* ‘to flow, to run, to stream’, *urusqa-* ‘to cause to flow; to shed, to pour’, *urusqal* ‘stream, flow; current of water or air; running, flowing’; Khalkha *ursa-* ‘to flow’; Buriat *urda-* ‘to flow’; Kalmyk *ursə-* ‘to flow’; Ordos *urus-* ‘to flow’; Dagur *orsu-*, *orese-*, *orso-* ‘to flow’; Dongxiang *usuru-*, *urusu-* ‘to flow’; Shira-Yughur *urus-*, *urusu-*, *usuru-* ‘to

flow'; Monguor *urosə-* 'to flow'. Proto-Turkic **ōrs*, **ōrsen* '(vb.) to flow; (n.) river, riverbed' > Karakhanide Turkic *ōzen* 'river, riverbed'; Azerbaijani *öz-* 'to flow'; Turkmenian *ōzen* 'river, riverbed'; Chuvash *vazan* 'river, riverbed'; Yakut *örüs* 'river, riverbed'. Note also: Yakut *üreḡ* 'river'; Dolgan *ürek* 'river', which suggest that **-si* may originally have been a suffix. Starostin—Dybo—Mudrak 2003:1063 **orusi* '(n.) river; (vb.) to flow'. Poppe (1960:102) compares Mongolian *urus-* 'to flow, to run, to stream' with Lamut / Even *ūru-* 'to flow out', Evenki *ūrḡdān* 'current, stream, flow' (Starostin—Dybo—Mudrak write *urigden* 'back-water'), and Koibal *ur-* 'to flow'.

Buck 1949:1.36 river; stream; brook; 10.11 move (vb.); 10.21 rise (vb.); 10.32 flow (vb.); 10.47 go; 10.48 come. Möller 1911:69—70; Bomhard—Kerns 1994:707—708, no. 593.

692. Proto-Nostratic root **ʔorʷ-*:

(vb.) **ʔorʷ-* 'to rise (up)';

(n.) **ʔorʷ-a* 'rising movement or motion'

Extended form:

(vb.) **ʔorʷ-V-g-* 'to climb on, to mount, to copulate (with)';

(n.) **ʔorʷ-g-a* 'mounting, copulation'

- A. [Proto-Indo-European **ʔor-/ʔr-* 'to move, to set in motion; to arise, to rise; to raise': Hittite (3rd sg. pres.) *a-ri* 'to arrive, to come', (3rd sg. pres.) *a-ra-(a-)i* 'to (a)rise, to lift, to raise; to (a)rouse', (3rd sg. pres.) *a-ar-aš-ki-iz-zi* 'to be arriving', (3rd sg. pres.) *ar-nu-(uz-)zi* 'to move along, to make go; to stir, to raise; to transport, to deport, to remove; to bring, to transmit, to deliver, to produce; to further, to promote', (3rd sg. pres.) *(a-)ar-aš-zi* 'to flow'; Sanskrit *ārṣati* 'to flow', *ārṇa-ḥ* 'undulating, surging; wave', *ṛcchāti* 'to go, to move, to send', *ṛṇóti* 'to go, to move, to arise'; Avestan *ar-* 'to go, to move, to come', *aurva-*, *aurvant-* 'rapid, quick', *ərənaoiti* 'to set in motion'; Old Persian *ar-* 'to move, to go or come toward', *aruvā* 'action', *aruva-* 'rapid, quick'; Greek *ὀρνύμι* 'to urge on, to incite, to move, to stir oneself, to make to arise'; Latin *orior* 'to rise, to arise'. Rix 1998a:266—267 **h₃er-* 'to set in (rapid) motion'; Pokorny 1959:326—332 **er-*, **or-*, **r-* 'to set in motion; to incite, to stir up, to arouse; to arise'; Walde 1927—1932.I:136—142 **er-*; Mann 1984—1987:249 **ersō* 'to go, to glide, to wander, to creep, to dawdle', 884 **or-* 'to start, to start up, to rise', 889 **orneu-*, **or-nū-mi* 'to move, to rouse; to dash, to fly', 891 **orsō*, *-iō* 'to go, to proceed, to flow, to slide, to glide, to creep'; Watkins 1985:17 **er-* and 2000:23 **er-* 'to move, to set in motion' (oldest form **₂er-*); Gamkrelidze—Ivanov 1984.I:218 **rney-*, **ornu-*, I:295 **or-* and 1995.I:187, I:194 **er-/r-*, **or-* 'to rise, to get up; to come into motion; to attain', I:172 **rney-*, **ornu-* 'to move'; Mallory—Adams 1977:506 **h₁er-* 'to set in motion'; Mayrhofer 1956—1980.I:51, I:53, I:119 **er-*, and I:122;

Boisacq 1950:714—716 *er-, *ere-; *erei-, *ereu-; Chantraine 1968—1980.II:823—824 *er-, *r-; Hofmann 1966:238—239 *er-; *ereu-, *erei-; Frisk 1970—1973.II:422—424 *er-; Beekes 2010.II:1107 *h₃er-; Walde—Hofmann 1965—1972.II:222—223 *er- (*ere-, *erē-); Ernout—Meillet 1979:468; De Vaan 2008:434—435; Kloekhorst 2008b:196—197; Puhvel 1984—1/2:108—111 *er-, 1/2:123—127, 1/2:162—167, and 1/2:170—172 *H₂ér-s-, *H₂r-és-.] Note: Two separate Proto-Nostratic stems have fallen together in Proto-Indo-European: (A) *ʔor- ‘to move rapidly, quickly, hastily; to set in motion’ and (B) *ʔorʷ- ‘to rise (up)’.

- B. Yukaghir (Southern / Kolyma) *orpo-* ‘hung up’, *arpušaj-*, *orpušaj-* ‘to rise, to get up, to drive upwards’, *arpaj-* ‘to go up’. Nikolaeva 2006:337—338.
- C. Proto-Altaic *ōrʷi- ‘to rise up’: Proto-Mongolian *ergü- (*ōrgü-) ‘to lift, to raise’ > Written Mongolian *ergü-*, *ōrgü-* ‘to raise, to lift up’; Khalkha *ōrgö-* ‘to lift, to raise’; Buriat *ūrge-* ‘to lift, to raise’; Kalmyk *ōrgə-* ‘to lift, to raise’; Ordos *ūrgü-* ‘to lift, to raise’; Dagur *erewē-*, *ergue-* ‘to lift, to raise’; Dongxiang *ugu-* ‘to lift, to raise’; Monguor *urgu-* ‘to lift, to raise’. Poppe 1955:48. Proto-Turkic *ūrʷ- (*ōrʷ-) ‘on top, high above’ > Old Turkic (Orkhon, Old Uighur) *ūze/ōze* ‘on top, high above’; Turkish *üzere*, *üzre* ‘on, upon’, *üzeri* ‘upper or outer surface of a thing; space above a thing; on, over, about’; Azerbaijani *üzəri* ‘on top, high above’; Sary-Uighur *ūze*, *ūzi* ‘on top, high above’; Oyrot (Mountain Altai) *üzeri* ‘on top, high above’; Chuvash *vir* (< *ōrʷ-) ‘on top, high above’; Yakut *ūhe*, *üöhe* ‘on top, high above’; Dolgan *ūhe*, *üöhe* ‘on top, high above’. A common Turkic derivative is *ūrʷ-t (with secondary vowel shortening) ‘upper part’ > Old Turkic *üst* ‘upper part’; Turkmenian *üst* ‘upper part’; Tatar *ös* ‘upper part’; Khalay *ist* ‘upper part’. Starostin—Dybo—Mudrak 2003:1065 *ōri ‘to rise up’.

Buck 1941:10.21 rise (vb.).

693. Proto-Nostratic root *ʔorʷ-:

Extended form:

(vb.) *ʔorʷ-V-g- ‘to climb on, to mount, to copulate (with)’;

(n.) *ʔorʷ-g-a ‘mounting, copulation’

Derivative of:

(vb.) *ʔorʷ- ‘to rise (up)’;

(n.) *ʔorʷ-a ‘rising movement or motion’

- A. Afrasian: Proto-East-Cushitic *ʔorg- (‘mounter’ >) ‘male animal’ > Somali *orgi* ‘billy-goat’; Rendille *ogor* ‘gazelle’; Galla / Oromo *org-ee* ‘baby she-camel’; Harso *ork-akko* ‘billy-goat’; Gidole *ork-eta* ‘billy-goat’, *ork-eet* ‘non-castrated male goat’; Yaaku *org-ei* ‘male giraffe’. Sasse 1979:23.
- B. Proto-Indo-European *ʔorgʰ-/ʔrgʰ- ‘to climb on, to mount, to copulate (with)’, *ʔorgʰi-s ‘testicle’: Avestan *ərəzi* ‘scrotum’; Greek ὀρχις ‘testicle’;

Armenian *orjik^h* ‘testicles’, *orj* ‘male’; Hittite (3rd sg. pres. act.) *a-ar-ki* ‘to mount, to copulate (with)’, (nom. pl.) *ar-ki-i-e-eš* ‘testicles’; Old Irish *uirge* ‘testicle’; Old Icelandic *argr* ‘unmanly, effeminate, cowardly; passive homosexual’, *ergi* ‘lust, lewdness’; Old English *earg* ‘cowardly; bad, depraved’; Old Frisian *erch* (also *erg*, *arch*) ‘angry, evil; wrong, bad, disgraceful; severe (wounds)’, *erg* ‘mean, cowardly’; Old Saxon *arug* ‘mean, cowardly’; Old High German *arg*, *arag* ‘mean, cowardly’; Lithuanian *aržūs* ‘lusty’, *ežilas* (dial. *ažilas*) ‘stallion’; Albanian *herdhë* ‘testicle’. Pokorny 1959:782 **orghi-*, **rghi-* ‘testicle’; Walde 1927—1932.I:182—183 **orghi-*, **rghi-* (**erghi-*); Mann 1984—1987:888 **orghis* ‘testicle’; Gamkrelidze—Ivanov 1984.II:817 **orġ[h]-i-* and 1995.I:716 **orġh-i-* ‘testicle’; Watkins 1985:17 **ergh-* and 2000:24 **ergh-* ‘to mount’ (oldest form **₂erġh-*); Mallory—Adams 1997:507 **h₄órghis* ‘testicle’ and 508 **h₄órġhei-* ~ **h₄rġhór* ‘to mount, to cover’; Arbeitman 1980a:71—88; Puhvel 1984— .1/2:142—143 **erġh-*, **orġh-*; Kloekhorst 2008b:203—204; Smoczyński 2007.1:24—25 **h₁orġhi-*; Fraenkel 1962—1965.I:123—124; Derksen 2015:62 **h₁orġh-* and 157; Frisk 1970—1973.II:433—434; Chantraine 1968—1980.II:830—831; Hofmann 1966:241 **orghi-* (**rghi-*); Beekes 2010.II:1116 **h₃(e/o)rġh-i-*; Boisacq 1950:721; Hamp 1965a:129; Huld 1984:73—74; Orël 1998:145 and 2003:23 Proto-Germanic **arġaz*, 23 **arġīn*, 23 **arġjanan*; Kroonen 2013:34 Proto-Germanic **arga-* ‘unmanly’; De Vries 1977:13 and 104; Boutkan—Siebinga 2005:90—91.

Buck 1949:4.49 testicle. Bomhard—Kerns 1994:564—565, no. 428.

694. Proto-Nostratic root **ʔot-*:

(vb.) **ʔot-* ‘to move to or toward; to move away from; to move out of the way, to step aside’;

(n.) **ʔot-a* ‘movement to or toward; movement away from; step, track’

A. Afrasian: Proto-Southern Cushitic **ʔoot-* ‘to come in, to enter’ > K’wadza *tsaw-* ‘to come from’ (stem plus *-aw-* consecutive, with normal deletion of #*ʔV-*); Dahalo *ʔoot-* ‘to come in, to enter’. Ehret 1980:293.

B. Dravidian: Tamil *ottu* (*otti-*), *orru* (*orri-*) ‘to make room for’, *orri-ppō-* ‘to go away from’, *orri-vai-* ‘to place out of the way, to adjourn’; Malayalam *orruka* ‘to step aside, to retire, to cringe’; Kota *ot-* (*oty-*) ‘to precede on the way, to go fast’; Kannaḍa *ottu* ‘to give way, to leave space, to step aside’; Telugu *ottu*, *ottilu*, *ottigillu* ‘to step aside, to make way, to move out of the way’. Burrow—Emeneau 1984:93, no. 973(a). Tamil *otuṅku* (*otuṅki-*) ‘to get out of the way, to step aside (as a mark of respect, before a superior), to retreat, to be defeated, to seek refuge; to be finished, settled, adjusted, completed’, *otukku* (*otukki-*) (vb.) ‘to put on one side (as the hair), to cause to get out of the way (as cattle in the road), to push into a corner, to separate (as persons in a quarrel), to gather on one side or tuck up (as one’s clothes while crossing a river), to place out of reach, to expel (as from a

caste), to dispatch (as a business), to settle; (n.) that which is apart, refuge, screen', *otukkam* 'privacy, retiring, hiding-place'; Malayalam *otuññuka* 'to give way, to step aside, to yield; to be adjusted', *otukkuka* 'to subdue, to settle', *otukkam* 'subjection, being settled and compressed', *otukku* 'shelter'; Toda *wiθx-* (*wiθxy-*) '(horns of fighting buffaloes) 'to slip apart'; Telugu *odūgu* 'to move or step aside, to make room, to sidle, to shrink from, to sneak, to slink'. Burrow—Emeneau 1984:93, no. 973(b).

- C. Proto-Altaic **ōti-* (~ *-tʰ-*) 'to move to or toward; to move away from; to move out of the way, to step aside': Proto-Tungus *(*χ*)*utur-* 'to reel, to turn around' > Evenki *utur-* 'to reel, to turn around'. Proto-Mongolian **oči-* 'to walk, to move, to go' > Written Mongolian *oči-* 'to go to a place'; Khalkha *oči-* 'to walk, to move, to go'; Buriat *ošo-* 'to walk, to move, to go'; Dagur *važire-* 'to come in', *vāžī* 'track'; Dongxiang *eči-* 'to walk, to move, to go'; Monguor *śži-* 'to walk, to move, to go'. Poppe 1955:113. Note also the following (without palatalization): Middle Mongolian *ot-*, *udu-* 'to be on one's way'; Written Mongolian *od(u)-* 'to go to, to proceed to'; Kalmyk *od-* 'to be on one's way'. Poppe 1955:110. Proto-Turkic **ōt-* 'to pass by, to pass through' > Old Turkic (Orkhon, Old Uighur) *ōt-* 'to pass by, to pass through'; Karakhanide Turkic *ōt-* 'to pass by, to pass through'; Azerbaijani *ōt-* 'to pass by, to pass through'; Turkmenian *ōt-* 'to pass by, to pass through'; Uzbek *ot-* 'to pass by, to pass through'; Uighur *ōt-* 'to pass by, to pass through'; Karaim *ōt-* 'to pass by, to pass through'; Tatar *ūt-* 'to pass by, to pass through'; Bashkir *ūt-* 'to pass by, to pass through'; Kirghiz *ōt-* 'to pass by, to pass through'; Kazakh *ōt-* 'to pass by, to pass through'; Noghay *ōt-* 'to pass by, to pass through'; Sary-Uighur *yūt-* 'to pass by, to pass through'; Oyrot (Mountain Altai) *ōt-* 'to pass by, to pass through'; Tuva *ōt-* 'to pass by, to pass through'; Chuvash *vit-* 'to pass by, to pass through'; Yakut *ōt-* 'to pass by, to pass through'. Starostin—Dybo—Mudrak 2003:1066—1067 **ōti* (~ *-tʰ-*) 'to move, to change place'.

Buck 1949:10.11 move; 10.45 walk (vb.); 10.47 go; 10.57 enter.

695. Proto-Nostratic root **ʔow-*:

Extended form:

(vb.) **ʔow-V-ħ-* 'to hatch eggs';

(n.) **ʔow-ħ-a* 'egg'

- A. Afrasian: Semitic: Arabic *ʔāḥ* [ح] (root *ʔwḥ*) 'eggwhite, albumen'. D. Cohen 1970—:12 'WH'; Wehr 1966:34.
- B. Proto-Indo-European **ʔowḥh-yo-m* 'egg': Latin *ōvum* 'egg' (> Spanish *huevo* 'egg'; Catalan *ou* 'egg'; Portuguese *ovo* 'egg'; Italian *uovo* 'egg'; French *oeuf* 'egg'; Romanian *ou* 'egg'); Young Avestan *aēm* 'egg'; Greek (Attic) *ᾠόν*, (Aeolian) *ᾠιον*, (Doric) *ᾠεων* 'egg'; Middle Cornish *uy* 'egg'; Old Welsh *ui* 'egg' (Modern Welsh *wy*); Crimean Gothic *ada* (Gothic [nom. pl.] **addja* [unattested]) 'egg'; Old Icelandic *egg* 'egg'; Faroese *egg*

- ‘egg’; Norwegian *egg* ‘egg’; Swedish *ägg* ‘egg’; Danish *eg* ‘egg’; Old English *æg* ‘egg’ (Middle English *ēi*, *ēy* ‘egg’; Modern English *egg* is a Scandinavian loan); Old Saxon *ei* ‘egg’; Dutch *ei* ‘egg’; Old High German *ei* ‘egg’ (pl. *eigir*) (New High German *Ei*); Old Church Slavonic *ajъce* ‘egg’; Russian *jajcо* [яйцо] ‘egg’. Pokorny 1959:783—784 **ō(u)i-om* ‘egg’; Walde 1927—1932.I:21—22 **ōu(e)i-om* (derived from **auēi-* ‘bird’); Watkins 1985:4 **ōwyo-*, **əyo-* ‘egg’ (possibly derived from **awi-* ‘bird’) (Germanic **ajja(m)* in Old English *æg* ‘egg’) and 2000:6 **ōwyo-*, **ōyyo-* (suffix lengthened *o*-grade form **₂ōw-yo-*) ‘egg’ (possibly derived from **awi-* ‘bird’); Mallory—Adams 1997:176 **hₐō(u)iom* ‘egg’ (quite possibly a *vrddhied* derivative of the word for ‘bird’, **hₐeuei-*) and 2003:143 **hₐō(u)i-om* ‘egg’; Mann 1984—1987:897—898 **ōu(i)om* (**ōuom*, **ō’uio-*) ‘egg’; Frisk 1970—1973.II:1150; Boisacq 1950:1082—1083 **ōu(i)om*; Hofmann 1966:430 **ōu(i)om*; Beekes 2010.II:1681 **h₂ōui-o-*; Chantraine 1968—1980.II:1303; De Vaan 2008:438 **h₂ōu(i)om*; Walde—Hofmann 1965—1972.II:230 **ōu(i)om*; Ernout—Meillet 1979:472; Orël 2003:11 Proto-Germanic **ajjaz*; Kroonen 2013:17 Proto-Germanic **ajja-* ‘egg’ (< **h₂ōu-ió-*); Feist 1939:2 Proto-Germanic **aijam*, **aijaz*; Lehmann 1982:2 **ō(w)i-om* < **oH(w)i-om*; Krause 1968:110 Proto-Germanic **ajjan*; Torp 1919:84; Falk—Torp 1903—1906.I:131; De Vries 1977:94—95 Proto-Germanic **aijam*; Klein 1971:239; Onions 1966:303 Common Germanic **ajjaz*; Barnhart 1995:233; Kluge—Mitzka 1967:153—154 Common Germanic **ajjaz*; Kluge—Seebold 1989:167; Derksen 2008:27 **h₂ōui-om*.
- C. Proto-Eskimo **ava-* ‘to sit on eggs’: Alutiiq Alaskan Yupik *wa-* ‘to sit on eggs (bird)’; Seward Peninsula Inuit *iwa-*, (Qawwaraq) *ua-*, *waa-* ‘to sit on eggs, to care for young or baby’; North Alaskan Inuit *iva-* ‘to bear a litter, to whelp, to sit on eggs, to feed or care for young’, *ivaaq* ‘young of animal’; Western Canadian Inuit *iva-* ‘to hatch’; Eastern Canadian Inuit *iva-* ‘to hatch’; Greenlandic Inuit *iva-* ‘to hatch eggs (bird), to lie up close to, to lie with litter of puppies (bitch)’, *ivaaq* ‘egg bird sits on’. Fortescue—Jacobson—Kaplan 1994:119.

(?) Sumerian *us* ‘to break or burst open’.

Buck 1949:4.48 *egg*. Dolgopolsky 1998:60, no. 72, **₂[a|o|h]χi* or **₂u[h]χi* ‘egg’ (or ‘white of egg’) and 2008, no. 98, **₂ūXi* ‘egg’; Bomhard 1999a:60 **₂aw-ḥ-* ‘egg’ (or ‘white of egg’). Dolgopolsky has proposed a very attractive etymology. However, it must be noted that Arabic *ʔāḥ* ‘eggwhite, albumen’ is isolated within Semitic. Moreover, even though the Proto-Indo-European form is traditionally reconstructed as **ōu(i)om* ‘egg’ (cf. Pokorny 1959:783—784; Mann 1984—1987:897—898), no single reconstruction can account for all of the forms found in the Indo-European daughter languages (cf. Walde 1927—1932.I:21—22 for discussion; see also Buck 1949:4.48; Kilday 2017; Schindler 1969; Zair 2011). Accordingly, there are difficulties with this etymology. If this is a valid etymology, it would imply that the Proto-Indo-European form is to be

reconstructed as **ʔ₂ouʔ₂iom* ‘egg’, with short vowel in the first syllable and a laryngeal (**ʔ₂* [= **h₂h*]) between **u* and **i* (the long vowel found in the first syllable of the forms attested in several of the Indo-European daughter languages would then be due to compensatory lengthening following the loss of this laryngeal). There may have been a non-apophonic **o* (original, or inherited, **o*) in the first syllable, in which case the Proto-Nostratic form would have been **ʔow-h-*. Reconstructing a medial laryngeal (**ʔ₂* [= **h₂h*]) would also account for the Germanic developments (cf. Jasanoff 1978a:85; Lehmann 1952:44, §4.44d; Lindeman 1964:112—114, §10.2). **ʔowh₂yo-m* (traditional **ʔ₂ouʔ₂iom*) ‘egg’ cannot, as is often assumed, be a derivative of the common Proto-Indo-European word for ‘bird’, which requires an initial *a*-coloring laryngeal (preserved in Armenian [cf. Winter 1965a:102 and 107]): **h₂h₂ew-i-s* [**h₂h₂aw-i-s*], **h₂hw-éy-s* (cf. Pokorny 1959:86 **au₂ei-*; Mallory—Adams 1997:66 **h₂au₂ei-* [nom. **h₂éu₂is*, gen. **h₂u₂é₂is*] > Armenian *hav* ‘bird, hen, chicken’ (cf. Hübschmann 1897:465); Latin *avis* ‘a bird’ (De Vaan 2008:65—66 **h₂eu₂-i-*); Umbrian (acc.) *avif* ‘bird’; Sanskrit (nom. sg.) *vī-h*, (Rigveda) *vé-h* ‘a bird’ (Mayrhofer 1956—1980.III:265—266 **ʔ₂éu₂-s*, **ʔ₂u₂é₂-s*); etc.

696. Proto-Nostratic root **ʔoy-*:

- (vb.) **ʔoy-* ‘to be by oneself, to be alone’;
 (n.) **ʔoy-a* ‘solitude, aloneness’; (adj.) ‘single, alone; one’

- A. Proto-Afrasian **ʔVj-* ‘single, alone; one’: Proto-Semitic **ʔay-am-* ‘(to be) single, alone’ > Arabic *ʔāma* (root /ʔym/) ‘to be without a husband or a wife (single, divorced, widowed); to lose one’s wife, to become a widower; to lose one’s husband, to become a widow’, *ʔayma* ‘widowhood’, *ʔayyim* (pl. *ʔayāmā*) ‘unmarried man or woman; widow, widower’. D. Cohen 1970—:17 *ʔym; Steingass 1884:99—100; Wehr 1976:37; Zammit 2002:85; Biberstein-Kazimirski 1875.1:95—96. The following Berber forms may belong here as well, assuming development from Pre-Proto-Berber **ʔ-y-w* > **y-y-w* > Proto-Berber (m.) **yīw-ān*, (f.) **yīw-āt* (Prasse 1974:404) or (m.) **iyyaw-an*, (f.) **iyyaw-at* (Militarëv 1988:101—107), participle meaning ‘being alone, sole, unique’ (> ‘one’): Tuareg *yən* (f. *yət*) ‘one; a certain one, someone’; Siwa *əḡən*, *iḡən* (f. *əḡət*, *iḡət*) ‘one’; Nefusa *uḡun* (f. *uḡət*) ‘one’; Ghadames *yun* (f. *yut*) ‘one’; Wargla *iggən* (f. *iggət*) ‘one’; Mzab *iggən* (f. *iggət*) ‘one’; Tamazight *yiwən*, *yun* (f. *yīwt*, *yut*) ‘one’; Tashelhiyt / Shilha *yan* (f. *yat*) ‘one’; Riff *iḡ*, *iḡən* (f. *ict*), *iwən* (f. *iwət*) ‘one’; Kabyle *yiwən* (f. *yīwet*) ‘one’; Chaoia *iji* (f. *ijt*) ‘one’; Zenaga *yun* ‘one’. Haddadou 2006—2007:224.
- B. Proto-Indo-European **ʔoy-* ‘single, alone; one’ (with non-apophonic *-o-*) (extended forms: **ʔoy-no-*, **ʔoy-wo-*, **ʔoy-k^ho-*): (A) **ʔoy-no-*: Latin *ūnus* ‘one’ [Old Latin *oinos*]; Umbrian *unu* ‘one’; Old Irish *óen*, *óin* ‘one’; Welsh *un* ‘one’; Gothic *ains* ‘one’; Old Icelandic *einn* ‘one’; Faroese *ein* ‘one’; Danish *en* ‘one’; Norwegian *ein* ‘one’; Old Swedish *en* ‘one’; Old English *ān* ‘one; alone, sole, lonely; singular, unique’; Old Frisian *ān*, *ēn*

‘one’; Old Saxon *ēn* ‘one’; Dutch *een* ‘one’; Old High German *ein* ‘one’ (New High German *ein*); Albanian *një* ‘one’; Lithuanian *vienas* (with unexplained initial *v-*) ‘one; alone’; Latvian *viēns* ‘one’; Old Prussian *ains* ‘one’; Old Church Slavonic *inъ* ‘some(one), other’; Russian Church Slavonic *inokъj* ‘only, sole, solitary’; Russian *inój* [иной] ‘different, other’ — it is also found in Greek οἷνη, οἷνός ‘roll of one (in dice)’. (B) **ṛoy-wo-*: Avestan *aēva-* ‘one’; Old Persian *aiva-* ‘one’ — it is also found in Greek οἷος ‘alone, lone, lonely’ (Cyprian οἷφος). (C) **ṛoy-kʰo-*: Sanskrit *éka-h* ‘one’; Mitanni (“Proto-Indic”) *aika-* ‘one’. Pokorny 1959:286 **oi-nos* ‘one’; Walde 1927—1932.I:101 **oi-nos*; Mann 1984—1987:866 **oinos*, *-ā* ‘one; unit’; Gamkrelidze—Ivanov 1995:741 **oi-* ‘one’ (extended forms: **oi-no-*, **oi-kʰo-*, **oi-wo-*); Watkins 1985:45 **oi-no-* and 2000:59 **oi-no-* ‘one, unique’; Mallory—Adams (eds.) 1997:398—399 **oi-no-s* ~ **oi-uo-s* ~ **oi-ko-s* (or **h₁oi-no-s* ~ **h₁oi-uo-s* ~ **h₁oi-ko-s*) and 2006:61 **h₁oi-no-s* ‘one’; Boisacq 1950:691 and 692; Frisk 1970—1973.II:364 **oino-s* and II:367 **oiuo-s*; Chantraine 1968—1980.II:784 and II:786; Hofmann 1966:228; Beekes 2010.II:1058 **Hoi-no-*; De Vaan 2008:642 **Hoi-no-*; Walde—Hofmann 1965—1972.II:821—823; Ernout—Meillet 1979:748—749; Lindsay 1894:409; Sihler 1995:405 **oy-*: **oy-no-*, **oy-wo-*, and possibly **oy-ko-*; Matasović 2009:304—305; Kroonen 2013:11 Proto-Germanic **aina-* < Proto-Indo-European **Hoi-Hn-o-*; Orël 1998:304—305 and 2003:9 Proto-Germanic **ainaz*; Feist 1939:24 **oi-no-*; Lehmann 1986:17 **oy-no-* ‘sole, alone; one’; De Vries 1977:97; Falk—Torp 1903—1906.I:137, 1909:3, and 1910—1911.I:190—192; Torp 1919:86; Onions 1966:627 Common Germanic **ainaz*; Klein 1971:513 **oi-nos*; Kluge—Seebold 1989:169 Proto-Germanic **aina-*; Kluge—Mitzka 1967:157—158; Fraenkel 1962—1965.II:1239—1240; Smoczyński 2007.1:747—748 Proto-Baltic **ai-na-* < Proto-Indo-European **H₁oi-no-*; Derksen 2008:212 and 212—213 **HiH-no-*; Burrow 1973:248; Mayrhofer 1956—1980.I:126 **oi-(ko-)*; Szemerényi 1996:222. Notes: (1) According to Kloekhorst (2008:181—182) and Puhvel (1984— .1/2:73), Hittite *a-an-ki* ‘once’ is related to the above forms. Kloekhorst derives it from Proto-Indo-European **Hojonki*. (2) Latin *aequus* ‘level, equal’, on the other hand, does not belong here (cf. De Vaan 2008:27).

- C. Uralic: Proto-Samoyed **oj-* ~ **āj-* ‘one’ > Tavgi Samoyed / Nganasan *ño’ai* ‘one’ (gen. *ñoadan*), *ño’alâ* ‘single, alone’, *ño’alei*, *ño’adu* ‘once’; Motor *öjläk* (?) ‘one’ (only in independent use). Castrén 1854:193 and 1855:45; Helimski 1997:145, 326 (no. 798) (Motor) and 1998a:500, table 16.9, (Nganasan) (*ɲu?*)*ai?* ~ (*ɲu?*)*aj* ‘one’, numerical adverb (*ɲu?*)*ədu?* ‘once’. Note: Not related to Proto-Samoyed **op* ‘one’ (cf. Blažek 1999b: 90).

- D. Altaic: Tungus: Oroch *ojoke* ‘some, one’.

Buck 1949:13.33 alone, only (adj., adv.); Blažek 1999b.

697. Proto-Nostratic (n.) *ʔul-a ‘the bottom or lowest part of anything; the sole of the foot; soil, earth, ground, land’:

Semantics as in Latin *solum* ‘the bottom or lowest part of anything; the sole of the foot; soil, earth, ground, land’ (cf. Buck 1949:1.212).

- A. Afrasian: Proto-Highland East Cushitic *ulla ‘earth, land’ > Hadiyya *uulla*, *u(u)lla* ‘country, land’; Kambata *ulla(-ta)* ‘earth’, *ulla-ta* ‘land’; Sidamo *ulla* ‘earth, land’. Hudson 1989:44, 55, and 88.
- B. Proto-Altaic *ūla ‘sole of foot or footwear; basis, foundation’: Proto-Tungus *olā-či ‘short boots’ > Evenki *olōt*, *olōčik* ‘short boots’; Lamut / Even *olāčiq* ‘short boots’; Negidal *olot* ‘short boots’; Ulch *olžuma* ‘short boots’; Orok *ollōčī* ‘short boots’; Oroch *olōčī* ‘short boots’; Solon *alóci*, *olóci* ‘short boots’. Proto-Mongolian *ula ‘sole of foot or footwear; basis, foundation’ > Written Mongolian *ula* ‘sole of foot or footwear; basis, foundation’; Khalkha *ul* ‘sole of foot or footwear; basis, foundation’; Buriat *ula* ‘sole of foot or footwear; foundation, basis’; Kalmyk *ul* ‘sole of foot or footwear; basis, foundation’; Moghol *ulō* ‘sole of foot or footwear; basis, foundation’; Dagur *uale* ‘sole of foot or footwear; basis, foundation’; Bonan / Baoan *la* ‘sole of foot or footwear; basis, foundation’. Proto-Turkic *ul ‘foundation; sole (of foot)’ > Old Turkic (Old Uighur) *ultañ* ‘sole (of foot)’; Karakhanide Turkic *ul* ‘foundation’, *uldañ* ‘sole (of foot)’; Turkish *oltan*, (dial.) *oltan* ‘sole (of foot)’; Turkmenian *oltan* ‘sole (of foot)’; Uzbek *ultan* ‘sole (of foot)’; Uighur *ultañ* ‘sole (of foot)’, (dial.) *ūl*, *ul* ‘basis, foundation’; Tatar *ūltan* ‘sole (of foot)’; Bashkir *ūltan* ‘sole (of foot)’; Kazakh *ūltan* ‘sole (of foot)’; Noghay *ultan* ‘sole (of foot)’; Oyrot (Mountain Altai) *ultañ*, *ultan*, *iltam* ‘sole (of foot)’; Tuva *ulduj* ‘sole (of foot)’; Yakut *ulluñ* ‘sole (of foot)’. Starostin—Dybo—Mudrak 2003: 1492—1493 *ūla ‘sole, footwear’.

Sumerian *ūl* ‘field(s), cultivated land’, *ūlul* ‘field; steppe, open land’, *ulul* ‘field’.

Buck 1949:1.212 earth = ground, soil; 1.23 plain, field; 12.34 bottom. Dolgopolsky 2008, no. 30, *ʔulV ‘soil, foundation, earth’.

698. Proto-Nostratic deictic stem indicating distance farthest away from the speaker *ʔul- (~ *ʔol-) ‘that over there, that yonder’:

- A. Afrasian: Proto-Semitic *ʔilla, *ʔillay, *ʔul(l)a demonstrative pronoun stem > Hebrew *ʔēl* [ʔēl], *ʔēlleh* [ʔēlleh] ‘these’; Imperial Aramaic *ʔlh*, *ʔln*, *ʔlw* ‘these’; Phoenician *ʔl* ‘these’; Akkadian *ullū* ‘those’; Arabic *ʔulā* ‘these’; Sabaeen *ʔl* ‘these’; Soqotri *elhe* ‘those’; Geez / Ethiopic (m.) *ʔallu* [ʔallu], (f.) *ʔallā* [ʔallā] ‘these’; Tigre (m.) *ʔall-om* ‘these’; Amharic *allih*

‘these’. D. Cohen 1970— :18—20; Klein 1987:28; Leslau 1987:17—18; Lipiński 1997:315—323.

- B. Proto-Indo-European **ǵol-* demonstrative pronoun stem: Latin (later variants of *ollus*, etc.) *ille, illa, illud* ‘that’, *ōlim* ‘at that time’, *ole, olle, ollus, olus, olla* ‘that’, *ultrā* (< **oltrād*) ‘beyond, on the far side, farther’; Umbrian *ulo, ulu* ‘there, at that place’; Old Church Slavic *lani* (< **ol-nei*) ‘last year’. Pokorny 1959:24—26 **al-*, **ol-* demonstrative stem; Walde 1927—1932.I:84—86 **al-*, **ol-*; Mann 1984—1987:872—873 **olnī* ‘then, formerly’; Ernout—Meillet 1979:309, 460, and 461; Walde—Hofmann 1965—1972.I:679—680 and II:206—207; Sihler 1995:393—394, §377.4 **ol-* ‘that, yonder’; De Vaan 2008:298; Lindsay 1894:430 and 436—437; Buck 1933:225—226. Note: The initial *i-* found in the later Latin forms *ille, illa, illud* is usually explained as due to the influence of *is* ‘that’.

Dolgopolsky 2008, no. 28, **[ǵ]olV̄* ‘that (visible)’; Bomhard—Kerns 1994:566, no. 431.

699. Proto-Nostratic root **ǵum-* (~ **ǵom-*):

(vb.) **ǵum-* ‘to bear, to give birth’;

(n.) **ǵum-a* ‘offspring, descendant’

- A. Proto-Afrasian **ǵum-* ‘(vb.) to bear, to give birth; (n.) clan, kinsmen’: Proto-Semitic **ǵumm-* ‘people, clan’ > Hebrew *ǵummāh* [גִּמְמָה] ‘clan, tribe, nation, people’; Aramaic *ǵummā* ‘people, nation’; Ugaritic *ūmt* ‘sibling, kinsman’; Arabic *ǵumma* ‘nation, people, generation’; Akkadian *ummātu* ‘people, army’; Tigre *ǵammāt* ‘nation, tribe, people’. Klein 1987:34; D. Cohen 1970— :23. (?) Berber: Tuareg *iman* ‘soul, person’; Nefusa *iman* ‘person’; Wargla *iman* ‘soul, person’; Mzab *iman* ‘soul, life-force, self’; Riff *iman* ‘soul, life, person’; Chaouia *iman* ‘person, being’. Also used in the formation of reflexive pronouns: Nefusa *iman-ənnəs* ‘himself’; Mzab *imən-əs* ‘himself’; Tuareg *iman-in* ‘myself’; Riff *iman-əs* ‘himself’; Kabyle *iman-iw* ‘myself’, *iman-ik* ‘yourself’; Chaouia *iman-əs* ‘oneself, himself, herself’. Southern Cushitic: Proto-Rift **ǵim-i-* (assimilated from **ǵum-i-*) ‘people’ > Iraqw *imi* ‘people’; Burunge *im-et* ‘people’; Alagwa *imi* ‘crowd’. Proto-Southern Cushitic **ǵumuṭ-* ‘to give birth’ > Burunge *murungu* ‘navel’; Alagwa *mugungu* ‘navel’; Dahalo *ǵumuš-* ‘to give birth’, *ǵumušikuḍ-* ‘to be born’. Ehret 1980:295. Orël—Stolbova 1995:34, no. 131, **ǵum-* ‘people’.
- B. Dravidian: Tamil *umpal* ‘descendant’; Toda *ub-* in song-units: *en mox uba*, *en mary uba* ‘Oh my child!’. Burrow—Emeneau 1984:61, no. 639.
- C. Proto-Altaic **umu-* ‘to bear, to give birth’: Proto-Tungus **omu-/umu-* ‘(vb.) to lay eggs; (n.) offspring, descendant, grandchild’ > Evenki *umū-* ‘to lay eggs’, *omolgī* ‘offspring, descendant, grandchild’; Lamut / Even *omolgo* ‘offspring, descendant, grandchild’; Negidal *omolgī* ‘offspring, descendant, grandchild’; Manchu *omolo* ‘grandson’; Spoken Manchu

(Sibo) *oməla* ‘offspring, descendant, grandchild’; Jurchen *omo-lo* ‘offspring, descendant, grandchild’; Oroch *omolā* ‘daughter-in-law’; Udihe *omolo* ‘offspring, descendant, grandchild’; Solon *omolī* ‘offspring, descendant, grandchild’. Proto-Mongolian **(h)umay* ‘womb’ > Written Mongolian *umay* ‘womb’; Khalkha *umay* ‘womb’; Buriat *umay* ‘womb’; Kalmyk *omā* ‘female ancestor’; Ordos *omā* ‘womb’. Poppe 1955:32. Note: the Mongolian forms cited above may be loans from Turkic. Proto-Turkic **umay* ‘placenta, afterbirth; goddess of birth’ > Old Turkish (Old Uighur) *umay* ‘placenta, afterbirth’; Karakhanide Turkic *umay* ‘placenta, afterbirth; goddess of birth’; Turkish *umacı* ‘ogre, bogy man’; Kirghiz *umay* ‘goddess of birth’. Starostin—Dybo—Mudrak 2003:1498 **umu* ‘to bear, to give birth’. The following probably belong here as well: Proto-Altaic **umu-tki* ‘egg’: Proto-Tungus **umū-hta* ‘egg’ > Evenki *umūkta* ‘egg’; Lamut / Even *umtə* ‘egg’; Negidal *omūkta* ‘egg’; Manchu *umḡan, umgan* ‘egg’; Spoken Manchu (Sibo) *uməhan* ‘egg’; Ulch *omūkta* ‘egg’; Nanay / Gold *omaqta* ‘egg’; Oroch *umukta* ‘egg’; Udihe *umukta* ‘egg’; Solon *umatta* ‘egg’. Proto-Mongolian **ömdege, *emdüge* ‘egg’ > Middle Mongolian *öndege(n), ömdege(n), öndüge, ömdüge* ‘egg’; Khalkha *öndög* ‘egg’; Buriat *ündege(n)* ‘egg’; Kalmyk *öndəgə* ‘egg’; Ordos *öndögö* ‘egg’; Moghol *ündäγön* ‘egg’; Dagur *enduge* ‘egg’; Dongxiang *endegi* ‘egg’; Monguor *ndige* ‘egg’. Poppe 1955:75. Proto-Turkic **yumurtka* ‘egg’ > Old Turkic (Old Uighur) *yumurṭya, yumurṭa* ‘egg’; Karakhanide Turkic *yumurṭya* ‘egg’; Turkish *yumurta* ‘egg’; Gagauz *yimirta* ‘egg’; Azerbaijani *yumurta* ‘egg’; Turkmenian *yumurtga* ‘egg’; Uzbek (dial.) *yumurtqa* ‘egg’; Karaim *yimirta, imirtxa* ‘egg’; Tatar *yomirqa* ‘egg’; Bashkir *yomortqa* ‘egg’; Kirghiz *žumurtqa* ‘egg’; Kazakh *žumirtqa* ‘egg’; Noghay *yumirtqa* ‘egg’; Sary-Uighur *yomut* ‘egg’; Oyrot (Mountain Altai) *d’imirtqa* ‘egg’; Tuva *čuurya* ‘egg’; Chuvash *śḃʷmarda* ‘egg’; Yakut *simīt* ‘egg’. Initial **y-* is most likely due to the influence of Proto-Altaic **nāmo* ‘testicle’ (and/or **žiōmu* ‘round’). Starostin—Dybo—Mudrak 2003:1499 **umu-tki* ‘egg’.

Buck 1949:4.47 womb; 4.48 egg; 4.72 bear (of mother).

700. Proto-Nostratic root **ʔup^h-* (onomatopoeic):

(vb.) **ʔup^h-* ‘to blow’;

(n.) **ʔup^h-a* ‘puff of air, breath’

- A. Proto-Afrasian **ʔuf-* ‘to blow’: Proto-East Cushitic **ʔuf(u)f-* ‘to blow’ > Burji *ufu(u)f-* ‘to blow (on fire)’; Gedeo / Darasa *ufuuf-eem-* ‘to blow (on fire)’; Hadiyya *ufaʔ-* ‘to blow (on fire)’; Sidamo *uffu ass-* ‘to blow (on fire)’, *ufuuf-* ‘to blow (on fire)’; Saho *ufu-* ‘to breathe’; Afar *uff-uy* ‘breath’; Bayso *ufuuf-* ‘to blow’; Dasenech *ʔuf-* ‘to blow’; Elmolo *uuf-* ‘to blow’; Galla / Oromo *uff-i jed-* ‘to blow’; Konso *uff-* ‘to inflate’; Gidole *uff-* ‘to blow’; Gawwada *uʔuf-* ‘to blow’; Gollango *uff-* ‘to blow’; Dobase *uff-* ‘to blow’; Dullay *uff-* ‘to blow, to inflate’. Sasse 1979:19 and

1982:183—184; Hudson 1989:29 Proto-Highland East Cushitic **ufuuf*- ‘to blow (on fire)’. Central Cushitic: Bilin *ʔuf y-* ‘to blow’; Xamir *əf y-* ‘to blow’; Kemant *əf y-* ‘to blow’. Appleyard 2006:34—35. Note: Reinisch 1887:117 lists Bilin *fūf y-* ‘to blow’. North Cushitic: Beja / Beḍawye *fūf-* ‘to blow’. Reinisch 1895:77. Proto-Southern Cushitic **ʔuuf-* ‘to blow’ > Iraqw *ufuf-* ‘to blow’; Asa *ʔuf-* ‘to blow’; Ma’a -*ʔúfu* ‘to blow (with the mouth)’, -*ʔúfuka* ‘to give off smoke’; Dahalo *ʔuuf-/juuf-* ‘to blow’, *júúfume* ‘wind’. Ehret 1980:294.

- B. Dravidian: Toda *ūf in-* (*īd-*) ‘to blow, to blow away (e.g., ashes)’; Kannaḍa *uph, uphi* ‘sound emitted when strongly blowing with the mouth to remove impurities’; Brahui *huf* ‘puff of wind, blast, windy talk’, *huf kanning* ‘to blow upon’. Burrow—Emeneau 1984:61, no. 633.

Buck 1949:10.38 blow (vb. intr.).

701. Proto-Nostratic root **ʔut-* (~ **ʔot-*):

(vb.) **ʔut-* ‘to stretch, to lengthen’;

(n.) **ʔut-a* ‘wide-open space, outdoor area, exterior; length, distance’; (adj.) ‘wide, broad, long’

- A. Proto-Afrasian **ʔut-* ‘wide, broad, long’: Semitic: Arabic *ʔaṭaṭ-* ‘long, tall’. D. Cohen 1970— :16. Proto-Southern Cushitic **ʔuḍ-* (or **uḍ-* or **ʔuuḍ-* or **uuḍ-*) ‘wide, broad’ > Iraqw *ur* ‘big, large’, *uraw-* ‘to grow up’, *ures-* ‘to rear’; K’wadza *ulungayo* ‘wide, broad’; Ma’a *uda* ‘far’. Ehret 1980:295.
- B. Dravidian: Iruḷa *uddya* ‘long’; Kota *udm* ‘length’; Kannaḍa *udda, uddi, uddu* ‘height, length, depth’; Koḍagu *udda* ‘length, height’, *uddatē* ‘long’; Tuḷu *udda* ‘length, distance’. Burrow—Emeneau 1984:60, no. 621. Malayalam *utakuka* ‘to prosper, to thrive’; Kannaḍa *odagu, odugu, odavu* ‘to become endowed with power, to prosper, to thrive, to increase’; Tuḷu *odaguni* ‘to prosper’; Telugu *odavu* ‘to flourish’, *odalu* ‘to increase, to flourish’, *odugu, oduvu* (vb.) to increase, to thrive; (n.) abundance’. Burrow—Emeneau 1984:59, no. 605.
- C. Proto-Indo-European **ʔūt-* ‘out, out of, outside, away from’: Sanskrit (prefix) *ud-* ‘up, upwards; upon, on; over, above; out, out of, away from, apart’, *úttara-h* ‘upper, higher, superior’, *uttamā-h* ‘uppermost, highest’; Old Persian *ud* ‘up’; Gothic (adv.) *ūt* ‘out’, (adv.) *ūta* ‘outside’, (adv.) *ūtana* ‘from outside, up to’; Old Icelandic *út* ‘out, towards the outer side’, *úti* ‘out, out of doors’; Swedish *ut* ‘out’; Danish *ud* ‘out’; Old English *ūt* ‘out’, *ūte* ‘outside, in the open air’, *ūterra* ‘outer, exterior’, *ūtan* ‘outside, from outside’, *ȳtan* ‘to drive out, to banish’; Old Frisian *ūt* ‘out’; Old Saxon *ūt* ‘out’; Dutch *uit* ‘out’; Old High German *ūz* ‘out’ (New High German *aus*), *ūzan(a)* (adv.) ‘outside’; Latin *ūs-* in *ūsque* ‘at every point, through and through, from...to, all the way, continuously’. Pokorny 1959:1103—1104 **ūd-* ‘up, out’; Walde 1927—1932.I:189—190 **ūd*;

Mann 1984—1987:1473—1474 **ūd*, **ūd-* ‘out, off, away, up’, 1475 **ūds̥kos* ‘high’, and 1475 **ūd-ter-* (**ūter-*) ‘extreme, outer, upper, further’; Watkins 1985:72 **ud-* (also **ūd-*) and 2000:94 **ud-* (also **ūd-*) ‘up, out’; Gamkrelidze—Ivanov 1984.I:243 **ut^h]-*, **ut’-* and 1995.I:212 **ut^h-*, **ut’-* ‘up, out’; Mallory—Adams 1997:612 **ūd* ‘upward, out (from under)’; Mayrhofer 1956—1980.I:101 and I:102; Lindsay 1894:595 **ud* ‘out, up out’; De Vaan 2008:646; Walde—Hofmann 1965—1972.II:844; Ernout—Meillet 1979:756; Orël 2003:437 Proto-Germanic **ūt*, 437 **ūtai*, 437 **ūtanē*, 437 **ūtaraz*, 437 **ūtjanan*; Kroonen 2013:562 **ūt* ‘out’ and 563 **uz* ‘out (of)’; Feist 1939:537; Lehmann 1986:384 **ūd-* ‘upward’; De Vries 1977:636 **ud-*; Falk—Torp 1903—1906.II:406—408 **ūd*; Onions 1966:636; Klein 1971:523 **ud* ‘up, out, away’; Kluge—Mitzka 1967:39 **ūd*; Kluge—Seebold 1989:49 **ud-*; Boutkan—Siebinga 2005:425. Note: The original meaning was ‘wide-open space, outdoor area, exterior’.

Buck 1949:12.57 long; 12.61 wide, broad.

22.35. PROTO-NOSTRATIC *h

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
h-	h-	Ø-	Ø-	h-	Ø-	Ø-	Ø-
-h-	-h-	-Ø-	-Ø-	-h-	-Ø-	-Ø-	-Ø-

702. Proto-Nostratic root **hag-* (~ **həg-*):

(vb.) **hag-* ‘to burn, to be on fire, to be aflame, to be ablaze, to shine brightly’;

(n.) **hag-a* ‘midday heat, heat of sun, sunlight’

- A. Proto-Afrasian **hag-* ‘to burn, to be on fire, to be aflame, to be ablaze, to shine brightly’: Proto-Semitic **hag-ag-* ‘to burn, to be on fire, to be aflame, to be ablaze’ > Arabic *hağğa* ‘to burn, to be on fire, to be aflame; to flame, to blaze, to be ablaze; to set ablaze, to stir up, to stroke (the fire)’; Akkadian *agāgu* ‘to be angry, to flare up with anger’; Hebrew **hāyīy* [חַיִּי] ‘heat, fervor of mind’; Šheri / Jibbāli *ehgég* ‘to make a big blaze, to flash’; Tigrinya *hagägä* ‘to give off a strong odor, to smell strong, to smoke (fire)’. D. Cohen 1970— :6 and 364; Von Soden 1965—1981.I:14; Murtonen 1989:155. Proto-Semitic **hag(ī)r-* ‘hottest time of day, midday, noon’ > Arabic *hağara* (inf. *tahğīr*) ‘to travel in the heat of midday’, *hağr* ‘hottest time of day’, *hağīra* ‘midday heat, midday, noon’, *hağīr* ‘midday heat’, *hāğīra* ‘midday heat, midday, noon’, *hāğīrī* ‘midday’; Šheri / Jibbāli *hógər* ‘midday’; Mehri (*hēgər*), *həgərūt* ‘to be hot at midday’, *hgōr* ‘to go out in the midday heat’. D. Cohen 1970— :369—370. (?) Geez / Ethiopic *hagwaza* [ሀገወዘ] ‘to produce light, to make produce light’ (if not a misprint for *hanwaza* [ሀንወዘ]). Leslau 1987:216. Proto-Highland East Cushitic **agana* ‘month, moon’ > Hadiyya *agana* ‘moon’; Kambata *agana* ‘moon’; Sidamo *agana*, *aganá* ‘month, moon’. Proto-Highland East Cushitic **agan-co* ‘month, moon’ > Burji *agun-co*, *agun-cóo* ‘month, moon’; Gedeo / Darasa *agen-jo* ‘month, moon’; Hadiyya *agan-co* ‘month’; Kambata *agan-cu* ‘moon’; Sidamo (pl.) *aganna* ‘months’. Hudson 1989:101, 177, 230, 269, 306, and 349; Sasse 1982:24 — according to Sasse, the Highland East Cushitic forms are of Omotic origin: North Omotic *agen-* ‘moon’ (cf. Fleming 1974a:90). Proto-Southern Cushitic **hag-* ‘full moon’ (that is, ‘that which is shining or bright’) > Iraqw *homo* ‘full moon’; Dahalo *háge* ‘moon’. Ehret 1980:306.
- B. Dravidian: Kuṛux *axrnā* ‘to warm oneself (by the fire, in the sun)’; Malto *awge* ‘to expose to the heat of the sun or fire’, *awgre* ‘to bask in the sun, to warm oneself at a fire’. Burrow—Emeneau 1984:4, no. 18.

- C. Proto-Indo-European **hegh-* [**hag^h-*] ‘day’: Sanskrit *ahi-h* ‘the sun’, *áhar*, *áhas-* (gen. sg. *áhnah*) ‘a day’, (Vedic) (nom. pl.) *áhā* ‘a day’; Avestan (gen. pl.) *asnəm* (base *azan-*) ‘a day’. Semantic development from ‘heat of sun, sunlight’ to ‘daylight, daytime, day’. Pokorny 1959:7 **ǵgher-*, **ǵghen-*, **ǵghes-* (or **ǵgher-*, etc.) ‘day’; Walde 1927—1932.I:849—850 **ǵghr-*, **ǵghn-*, **ǵghes-* (or **ǵghr-*, etc.); Mann 1984—1987:863 **ogh-* (?) (variant **ogh-*) ‘day, spirit’; Mallory—Adams 1997:149 **h_aégh_r* ‘day’; Watkins 1985:1 **agh-* and 2000:1 **agh-* ‘a day’ (considered as a span of time); Mayrhofer 1956—1980.I:68.
- D. Proto-Chukchi-Kamchatkan **əkəka* ‘hot’: Alyutor *n-əkakə-qin* ‘hot’, *əkəka-sʔən* ‘hottest’; Kamchadal / Itelmen *xka-laX* ‘hot’, *xkakkəm* ‘heat (in summer)’. Fortescue 2005:339.

Buck 1949:1.53 moon; 14.41 day. Bomhard—Kerns 1994:588—589, no. 461.

703. Proto-Nostratic root **hak^h-* (~ **hək^h-*):

- (vb.) **hak^h-* ‘to be sluggish, slow; to do or approach something gradually, slowly, step by step’; (adv.) ‘slowly, gradually’;
(n.) **hak^h-a* ‘slowness, gradualness, sluggishness’

- A. Afrasian: Proto-Semitic **hak-ay-* ‘to be lazy, idle, inactive’ > Geez / Ethiopic *hakaya* [ሐየ] *hakaya* [ሐሐየ] ‘to be lazy, sluggish; to be slack, inactive; to be weary; to languish; to be indolent’, *hakkāy* ‘sluggard, indolent, inert, idle, languishing, lazy, slothful, negligent’, *haket* ‘weariness, idleness, slothfulness, laziness, apathy, inertia, negligence’; Tigre *hakka* ‘to be weary, indolent’; Tigrinya *hakäyā* ‘to be weary, indolent’; Amharic *haket* ‘indolence’ (Geez loan). Metathesis in: Arabic *kahiya* ‘to be weak, cowardly’; Hebrew *kāhāh* [כָּהָה] ‘to be or grow dim, faint’; Aramaic *kəhā* ‘to grow dim, to be sad’. Murtonen 1989:228; Klein 1987:271; Leslau 1987:216—217.
- B. Proto-Altaic **āk^{he}* ‘to advance gradually, slowly’: Proto-Mongolian **aki-*, **akuy-* (vb.) to advance gradually; (n.) work, earnings, mode of life’ > Written Mongolian *aki-* ‘to advance, to progress, to move forward, to increase’, *akiča* ‘advancement, progress, success’; Khalkha *axi-* ‘to advance, to approach step by step; to advance in years; to promote’, *axui* ‘being, existence, life’; Buriat *axi-* ‘to advance slowly’; Kalmyk *axū* ‘work, earnings, mode of life’; Ordos *ax^{wi}* ‘work, earnings, mode of life’. Proto-Turkic *(i)*akuru-* (< **āk^{he}-ru-*) ‘slowly, quietly, gradually’ > Old Turkic (Old Uighur) *aquru* ‘slowly, quietly, gradually’; Karakhanide Turkic *aqru*, *aqrun* ‘slowly, quietly, gradually’; Tatar *ekren*, *ekerten*, (dial.) *ekert* ‘slowly, quietly, gradually’; Bashkir *aqrın* ‘slowly, quietly, gradually’; Kirghiz *aqırin* ‘slowly, quietly, gradually’; Kazakh *aqırin* ‘slowly, quietly, gradually’; Oyrot (Mountain Altai) *aqqırin*, *aqqır-aqqır* ‘slowly, quietly,

gradually'. Starostin—Dybo—Mudrak 2003:282 **āk'e* 'to advance gradually, slowly'.

- C. Proto-Gilyak / Nivkh **əkəkə* 'at last': Amur *əkəkə* 'barely': East Sakhalin *əkəkə* 'at last'; South Sakhalin *əkəkəko* 'at last'. Fortescue 2016:166.

Buck 1949:14.22 slow (adj.). Dolgopolsky 2008, no. 759, **hakV* 'slow, inactive'.

704. Proto-Nostratic root **hak'*- (~ **hək'*-):

- (vb.) **hak'*- 'to press, squeeze, pack, or cram together; to confine, to oppress';
(n.) **hak'-a* 'oppression, affliction, pain'

- A. Proto-Afrasian **hak'*- 'to press, to squeeze hard, to cause pain': Semitic: Arabic *haḵaḡa* 'to be weak, to be weakened by an illness or by hunger'. D. Cohen 1970— :446. Egyptian *hq* 'to oppress, to inflict pain, to diminish' (medical term), *hq* 'head ailment', *hqs* 'to defraud, to steal'. Hannig 1995:498; Faulkner 1962:160; Erman—Grapow 1926—1963.2:503.
- B. [Dravidian: Kannāḍa *agacu*, *agucu*, *agusu* 'to press firmly, to confine, to hold firmly', *agacāṭ(a)lu*, *agacāṭ(a)le*, *agacāṭu* 'affliction, trouble'; Telugu *agacāṭlu* 'troubles, difficulties, affliction'. Burrow—Emeneau 1984:3, no. 2.] Either here or with Proto-Nostratic **hag-* (~ **həg-*) '(to be) pressed or weighed down; (to be) oppressed; (to be) disheartened, vexed, distressed, afflicted, troubled'.
- C. Proto-Indo-European **hek'-os-* [**hak'-os-*] 'pain, affliction, injury': Sanskrit *āgas-* 'transgression, sin, offense, injury, fault'; Greek *ἄγος* 'curse, guilt, pollution'; Old English *acan* 'to ache', *ece* 'ache, pain'. Pokorny 1959:8 **agos-* 'fault, blemish'; Walde 1927—1932.I:38 **agos-*; Mann 1984—1987:2 **āgos-*, *-es-* 'evil; bitterness, harshness, turmoil'; Watkins 1985:1 **ag-es-* and 2000:2 **ag-es-* 'fault, guilt' (perhaps < 'to cause mental pain'); Uhlenbeck 1898—1899.1:30; Mayrhofer 1956—1980.I:70; Boisacq 1950:9; Frisk 1970—1973.I:14; Chantraine 1968—1980.I:13 (Chantraine rejects the comparison of Greek *ἄγος* with Sanskrit *āgas-*); Beekes 2010.I:14—15 *(*H*)*ieh₂ǵ-*; Hofmann 1966:2; Prellwitz 1905:5; Orël 2003:11 Proto-Germanic **akanan*; Kroonen 2013:18 Proto-Germanic **akan-* 'to ache'; Onions 1966:8—9 Old English *ece* < **akis*; Klein 1971:7 — English *ache* is "of uncertain origin"; Skeat 1898:6.
- D. Uralic: Proto-Finno-Ugrian **akta-* 'to press, cram, or pack together; to confine, to trap' > Finnish *ahta-* 'to stuff, to cram, to pack; to set or put (traps, snares)', *ahta- riitää* 'to fill the kiln, to put corn into the kiln for drying', *ahtauma* 'constriction, contraction', *ahtautu-* 'to pack, to cram, to crowd', *ahtojää* 'pack-ice'; Estonian *ahta-*, *ahti-* 'to stuff, to cram, to pack', *ahta- reht* 'to put corn into the kiln', *ahtake(ne)* 'narrow, straight, slender, slim'; Lapp / Saami *vuoktinje* 'frame for drying nets'; Mordvin (Moksha) *afto-* 'to set (nets or traps)', *aftuma* 'fishing-net, trap, snare',

(Erza) *avtuma* ‘fishing-net’; (?) Cheremis / Mari *opte-* ‘to put, to load (e.g., flour in a bin, hay or wood on a load); to build (a nest, of a bird); to pour out (water); to set (nets, traps)’; *optōš*, *oktōš* ‘snare (for catching birds or hares), net (for catching wild animals, e.g., foxes)’; Zyrian / Komi *okty-* ‘to set a trap’, *oktym*, *oktyn* ‘ledger-tackle’; Ostyak / Xanty *ygət-* ‘to hang (up); to spread (the seine or the nets, on poles to dry)’. Collinder 1955:71 and 1977:88; Rédei 1986—1988:5—6 **akta-*.

- E. Proto-Eskimo **aka(a)* and **akəka* ‘ouch!’ (exclamation of pain): Central Alaskan Yupik *akəka(taki)*, *akkatak*, (Nelson Island, Hooper Bay-Chevak) *akaa* ‘ouch!’; Sirenik *aka-kaa* expression of surprise; Eastern Canadian Inuit *aʔaa* cry of pain; Greenlandic Inuit *ayaa* ‘ouch!’. Fortescue—Jacobson—Kaplan 1994:10.

Buck 1949:11.28 harm, injure, damage (vb.); 16.31 pain, suffering. Bomhard—Kerns 1994:587, no. 459.

705. Proto-Nostratic root **hal-* (~ **həl-*):

- (vb.) **hal-* ‘to light up, to beam forth, to shine, to brighten up, to radiate’;
(n.) **hal-a* ‘clearness, brightness, radiance, purity’; (adj.) ‘clear, pure, bright, shining, radiant’

- A. Proto-Afrasian **hal-* ‘to light up, to beam forth, to shine, to brighten up, to radiate’: Proto-Semitic **hal-al-* ‘to light up, to shine, to brighten up, to radiate’ > Akkadian *elēlu* ‘to purify, to make clean’, *ellu* ‘clean, pure, bright, shining’, *elliš* ‘in a pure fashion, brilliantly’, *ellūtu* ‘purity’; Eblaite *ul-lum* ‘festival’; Ugaritic *hll* ‘new moon’ (?); Hebrew *hālāl* [הלל] ‘to shine’, *hēlēl* [הליל] (appellative) ‘shining one’ (epithet of the king of Babylon); Arabic *halla* ‘to appear, to come up, to show (new moon); to shout with joy, to rejoice, to exult, to jubilate; to shine, to gleam, to glow, to be radiant; to beam with joy’, *tahallala* ‘it shone, gleamed’, *hilāl* ‘new moon’; Geez / Ethiopic *hālāl* [ሀለለ] ‘new moon’ (Arabic loan), (denominative) *halala* [ሀለለ] ‘to shine, to be bright’; Amharic *həlāl* ‘full moon’. D. Cohen 1970— :414—417; Leslau 1987:217; Klein 1987:152; Murtonen 1989:157; Zammit 2002:420. Berber: Tuareg *tallit* ‘(lunar) month, new moon’; Ghadames *lal* ‘to be born’; Nefusa *lal* ‘to be born’; Wargla *llal* ‘to come to light, to be born’, *tlallit* ‘birth, coming to light’; Mzab *llal* ‘to be born’, *tlallit* ‘birth’; Tamazight *lal* ‘to be born, to appear’, *talalit* ‘birth’; Tashelhiyt / Shilha *lal* ‘to be born’, *talalit* ‘birth’; Riff *lal*, *rar* ‘to be born’, *talalit*, *tararit* ‘birth’; Kabyle *lal* ‘to be born, to lay (eggs), to break (dawn)’, *talalit* ‘birth’; Chaouia *lal* ‘to be born, to break (day)’, *talalit* ‘birth’. Orël—Stolbova 1995:262, no. 1176, **hilāl-* ‘new moon’.
- B. Dravidian: Tamil *alari* ‘beauty’; Kannaḍa *alampu*, *lampu* ‘beauty, ornament, pleasure, magnificence’; Telugu *alarāru* ‘to shine, to glitter; to

suit well, to be proper, to be fit; to rejoice, to be pleased', *alarincu* 'to please, to gratify'. Burrow—Emeneau 1984:24, no. 248.

- C. Proto-Indo-European **hel-b^{ho}-s* [**hal-b^{ho}-s*] 'white; cloud, whiteness': Hittite (nom. sg.) *al-pa-aš* '(rain-)cloud'; Greek ἄλφος 'whiteness, white leprosy'; Latin *albus* 'white'; Umbrian *alfu* 'white'; Old Icelandic *elptr* 'swan' (named for its white color); Old English *iefetu* 'swan'; Old High German *albiz* 'swan'; Old Church Slavic *lebedь* (< Proto-Slavic **olb-edь*) 'swan'; Czech *labud* 'swan'; Polish *labędź* 'swan'; Russian *lébed'* [лебедь] 'swan'. Pokorny 1959:30—31 **albho-* 'white'; Walde 1927—1932.I:92—94 **albho-*; Mann 1984—1987:14 **albhos* 'white'; Watkins 1985:2 **albho-* and 2000:3 **albho-* 'white'; Gamkrelidze—Ivanov 1984.II:783 **alb[h]o-* and 1995.I:685 **alb^{ho}-* 'white, white-colored'; Mallory—Adams 1997:641 **h₄elbhós* 'white'; Puhvel 1984— .1/2:37—38; Kloekhorst 2008b:169; Boisacq 1950:48; Frisk 1970—1973.I:81—82; Chantraine 1968—1980.I:67; Beekes 2010.I:77—78 **h₂elb^{ho}-*; Hofmann 1966:14 **albhos*; De Vaan 2008:32; Walde—Hofmann 1965—1972.I:26—27; Ernout—Meillet 1979:20; Orël 2003:13 Proto-Germanic **albatiz* ~ **albetiz*; Kroonen 2013:20 Proto-Germanic **albut-* 'swan'; De Vries 1977:101 **albh-*; R. Woodhouse 2012:226—227; Derksen 2008:365—366 **h₂elb^h-ond-i-*.

Sumerian *al-è* 'to light up, to shine, to brighten up, to radiate, to beam forth'.

Buck 1949:1.53 moon; 15.64 white; 16.22 joy; 16.81 beautiful. Bomhard—Kerns 1994:586, no. 457.

706. Proto-Nostratic root **hal-* (~ **həl-*):

(adv.) **hal-* 'else, otherwise';

(n.) **hal-a* 'other side'; (adj.) 'other'

- A. Proto-Afrasian **hal-* 'else, otherwise': Proto-Southern Cushitic **hal-* 'else, otherwise' > Iraqw *halahali* 'sixth finger'; Ma'a *háli* 'other'; Dahalo *halló* 'and, with'. Ehret 1980:306. (?) Egyptian *hnw* 'associates, family'. Hannig 1995:494; Faulkner 1962:159; Eрман—Grapow 1926—1963.2:494; Gardiner 1957:579. Ehret 1995:381, no. 776, **hal-/hil-* 'other'.
- B. Proto-Indo-European **hel-yo-* [**hal-yo-*] 'else, otherwise; other': Greek ἄλλος 'another, one besides', ἄλλά 'otherwise, but'; Armenian *ayl* 'other'; Latin *alius* 'other, another'; Oscan *allo* 'other, another; the other' (= Latin *alia, cetera*); Old Irish *aile* 'other'; Welsh *ail* 'second' (Middle Welsh *eil*); Cornish *yll, eyll* 'the one'; Breton *eil* 'the one'; Gothic *aljīs* 'other', *alja* 'but'; Old Icelandic *ella, ellar, elligar* 'else, otherwise'; Faroese *ella* 'else, otherwise'; Swedish *eller* 'else, otherwise'; Old Danish *ællær, ællæ, ællæs* 'else, otherwise'; Norwegian *elles(t)* 'else, otherwise'; Old English *elles* 'otherwise, in another manner; if it were otherwise, else'; Old Frisian *elles*,

ellis ‘otherwise’; Middle Dutch *els* ‘otherwise’; Old High German *alles*, *elles* ‘otherwise’ (New High German *als* ‘as, than’); Tocharian A *ālak*, B *alyek*, *allek* ‘other’, A *yn-ālek* ‘elsewhere, somewhere else’. Pokorny 1959:25—26 **aljos* ‘another’; Walde 1927—1932.I:85—86 **aljos*; Mann 1984—1987:15 **alið* ‘but, yet’, 15 **aliðo-aliðo-* ‘each other, one another’, 15—16 **aljos* ‘other’, 16 **aljote* (**aljotə*, **aljot*) ‘elsewhere’, 17 **alter-* ‘other’; Watkins 1985:2 **alyo-* and 2000:3 **alyo-* ‘other of more than two’; Mallory—Adams 1997:411 **h_aéljos* ‘other’; Hofmann 1966:13; Boisacq 1950:46 **al-jos*; Frisk 1970—1973.I:76—77 **aliðo-*; Chantraine 1968—1980.I:63—64; Beekes 2010.I:72—73 **h₂el-io-*; Walde—Hofmann 1965—1972.I:30—31 **aljos*; Ernout—Meillet 1979:21—22; De Vaan 2008:34; Orël 2003:15 Proto-Germanic **aljaz*; Kroonen 2013:23 Proto-Germanic **alja-* ‘someone else’; Feist 1939:37 and 39 **aljos*; Lehmann 1986:27 and 28—29 **alyos*; Falk—Torp 1903—1906.I:135 Germanic **alja-*; De Vries 1977:100; Torp 1919:88; Klein 1971:242—243 **ali-os*; Onions 1966:307 Common Germanic **aljaz*; Kluge—Mitzka 1967:16; Kluge—Seebold 1989:22; Adams 1999:28—29 **h_aelno-*, **h_aelyo-* ‘other’; Van Windekens 1976—1982.I:160—161 **ali-* : **aliðo-*.

- C. Uralic: Proto-Ugrian **älz* (**äl(3)-m3*) ‘other (side)’ > Ostyak / Xanty (Yugan) *äləm* ‘other’; Vogul / Mansi (Lower Konda) *ööləmpööl*, (Sosva) *aaləmpaalt* ‘behind, on the other side (of the water)’; Hungarian (dial.) *el*, *eli*, *elv* ‘region or district on the other side’, (dial.) *elvé*, *elvētt* ‘on the other side, beyond, yonder’, (dial.) *elvöl* ‘from the other side’. Rédei 1986—1988:836 **älz* (**äl(3)-m3*).
- D. Altaic: Written Mongolian *alus* ‘on the other side; far away’; Khalkha *als* ‘far, remote, distant’; Buriat *alas* ‘on the other side; far away’; Kalmyk *als* ‘on the other side; far away’; Ordos *alus* ‘on the other side; far away’.
- E. Proto-Chukchi-Kamchatkan **ælvæ-* ‘other, different’: Chukchi *alwa-ŋ*, *alwaytə* ‘otherwise, in another way’; Kerek *alwa-ŋ* ‘otherwise’, *alwalkan*, *alwaki*, *am-alwa-ŋ* ‘other, different’; Koryak *alva-ŋ* ‘otherwise, not right’; Alyutor *alva-ŋ* ‘otherwise, not right’; Kamchadal / Itelmen *ɬva-ɬʔan* ‘other, different’. Fortescue 2005:32—33.
- F. Proto-Eskimo **aləŋ* ‘other (of a pair)’: Alutiiq Alaskan Yupik *aɬəq* ‘(its) other, companion, placenta’; Central Alaskan Yupik *alləXpak* ‘placenta’; Naukan Siberian Yupik *alraXpak* ‘placenta’; Central Siberian Yupik *aləq* ‘other of a pair, companion, afterbirth’, *aalraq* ‘other of a cooperating pair of boats, hunting partner, another family in the same clan’; Sirenik *aləX* ‘companion’, *alrəX* ‘partner, other of a pair’, *alrəra* ‘second’; Seward Peninsula Inuit *arlaaq* ‘placenta, afterbirth’; North Alaskan Inuit *alra(i)* ‘other one of a pair’, *alraaq* ‘afterbirth’; Western Canadian Inuit *alraq* ‘reticulum of caribou used as bag for carrying blood’; Eastern Canadian Inuit (Labrador) *axxaak* ‘placenta’; Greenlandic Inuit *arɬa(ŋ)* ‘one of them’, *arɬaaq* ‘afterbirth’. Fortescue—Jacobson—Kaplan 1994:17.

Bomhard—Kerns 1994:590, no. 464. Dolgopolsky 2008, no. 770a, *[h]al[V?]E ‘on the other side’.

707. Proto-Nostratic root **hal-* (~ **həl-*) (?):

(vb.) **hal-* ‘to begin, to start’;

(n.) **hal-a* ‘beginning, start; the front of anything’

- A. Afrasian: Proto-Highland East Cushitic (n.) **al-b-a* ‘the front of anything: front, face, forehead’: Gedeo / Darasa *alba* ‘face’; Sidamo *alba* ‘forehead, front, face’, *alba(a)* ‘face, front’, *albaa-ni* ‘(in) front (of)’. Hudson 1989: 230 and 349. Note: The alleged Akkadian cognate proposed by Dolgopolsky (2008:2393—2395, no. 2577) (prep.) *ellāmu-* (*illāmu-*) ‘in front of, before’ does not belong here. It is from *ina* + *lāmu-* (cf. Black—George—Postgate 2000:70 and 176 *lāma* [also *lām*], *lāmi/u-* ‘before [in time], in front of’).
- B. (?) Proto-Indo-European **Hl-ey-kh-o-* / **Hl-oy-kh-o-* / **Hl-i-kh-o-* ‘front part’ > ‘face, cheek’ (**H* = **h* [?]): Old Irish *lecco* ‘jaw, cheek’ (Modern Irish *leaca* ‘cheek’); Old Church Slavonic *lice* ‘face, person’; Russian *licó* [лицо] ‘face, figure, countenance; character, person; face, front (of a building, coin, etc.); right side’; Czech *lice* ‘face’; Polish *lice* ‘cheek; (pl.) face’; Serbo-Croatian *lice* ‘face, appearance’; Bulgarian *licé* ‘face, person, appearance’; Old Prussian *laygnan* (= *laik-nan*) ‘cheek’. Derksen 2008:278 Balto-Slavic **lik-/*loik-* (?), Proto-Indo-European **l(o)ik-o-* — Derksen notes: “Since the third palatalization is generally considered not to have operated after **ei*, one may advance the hypothesis that the root originally had zero grade ...”; Machek 1997:331; Trubačev 1974— .15 (1988):75—78; Mann 1984—1987:672 **leikos, -om, -jom* ‘turn, feature, face’.
- C. Uralic: Proto-Finno-Ugrian **alka-* (n.) ‘(front or back) end; beginning’; (vb.) ‘to begin, to start’ > Finnish *alka-* ‘to start, to begin, to commence, to open’, *alkaen* ‘from, starting from’, *alku* ‘commencement, beginning, start’; Estonian *alga-* ‘to commence, to start, to begin’, *algatus* ‘initiation’, *algus* ‘beginning, commencement, outset’; Lapp / Saami (Norwegian) *al’ge- lg-* ‘to begin to, to set to work on’, *al’go- lg-* ‘beginning, origin’; (Lule) *al’kē-* ‘to begin’, *al’kō* ‘beginning’; Ostyak / Xanty *aləŋ* ‘beginning; end’; Vogul / Mansi (Tavda) *awə-l* ‘beginning; end’. Collinder 1977:88; Rédei 1986—1988.I:6—7 Proto-Finno-Ugrian **alka-* ‘(n.) (front or back) end; beginning; (vb.) to begin, to start’.
- D. Proto-Altaic **āla* (~ *-ē-*) ‘front side’: Proto-Turkic **āl* ‘front, forehead; in front of’ > Old Turkic (Old Uighur) *alin* ‘forehead’; Karakhanide Turkic *alin* ‘forehead’; Turkish *alin* ‘forehead, brow, face, front’; Gagauz *anni* ‘forehead’; Azerbaijani *alin* ‘forehead’; Turkmenian *ālin* ‘front, forehead’; Uzbek *al-d-i* ‘front’; Uighur *ajl, aldi* ‘front’, *al-din* ‘in front of’, *al-ya* ‘towards the front of’; Karaim *al-d-i, alin* ‘front’; Tatar *al, al-d-i, alin* ‘front’; Bashkir *al, aldi* ‘front’; Kirghiz *al, al-d-i* ‘front’; Kazakh *al-da* ‘in

front of', *al-d-i* 'front'; Noghay *al-d-i* 'front'; Khakas *alni* 'front'; Oyrot *al-di*, *alin* 'front'; Tuva *alin* 'face'. Starostin—Dybo—Mudrak 2003:284 **āla* (~ -*ē*-) 'front side'.

Buck 1949:4.204 face; 4.205 forehead; 14.25 to begin; beginning. Illič-Svityč 1971—1984.I:244, no. 104, **Hal* 'forward edge'; Dolgopolsky 2008:2393—2395, no. 2577, *[*χ*]*alV* (or **h*-, **ǵ*-) ('forehead' →) 'front, edge'.

708. Proto-Nostratic (n.) **ham-a* 'blackness; black object'; (adj.) 'black':

- A. Afrasian: Proto-Southern Cushitic **ham-* 'black' > Iraqw *hanta* 'shadow, spirit'; Burunge *hante* 'darkness'; Asa *huma* 'red'; Ma'a *-háme* 'to be black'; Dahalo *hímmate* 'black'. Ehret 1980:304.
- B. Proto-Indo-European **hem-s-* [**ham-s-*], **hm-es-* 'blackbird' (named due to its color): Latin *merula* 'blackbird'; Welsh *mwyalch* 'blackbird'; Breton *moualch* 'blackbird'; Old English *ōsle* 'blackbird' (Modern English *ousel*, *ouzel*); Old High German *amusla*, *amsala* 'blackbird' (New High German *Amsel*). Pokorny 1959:35—36 **ames-* or **omes-* (: **mes-* : **ams-* : **oms-*) 'blackbird'; Walde 1927—1932.I:53—54 **ames-* or **omes-*; Mann 1984—1987:20 **ameslā* (**aməslā*) 'blackbird, ouzel'; Watkins 1985:2 **ames-* and 2000:3 **ams-* 'black; blackbird'; Mallory—Adams 1997:70 **h_aemes-l-* 'blackbird'; Walde—Hofmann 1965—1972.II:77—78 **ames-* or **omes-*: **mes-*; Ernout—Meillet 1979:400; De Vaan 2008:375—376 possible "loanword from a non-IE substratum language"; Onions 1966:571 and 636; Klein 1971:458 and 523; Kluge—Mitzka 1967:19—20 **ames-*; Kluge—Seebold 1989:26 **mes-*, **ames-*. Perhaps also: Sanskrit *ásita-h* (f. *ásiknī* < **ásit-nī*) 'black, dark' and Greek ἄσις 'slime, mud' (if from Proto-Indo-European **hms-* 'black'). Mayrhofer 1956—1980.I:64; Hofmann 1966:25; Boisacq 1950:87; Frisk 1970—1973.I:162; Chantraine 1968—1980.I:123; Beekes 2010.I:148—149 (etymology uncertain); Kroonen 2013:25—26 Proto-Germanic **amslōn-* 'blackbird'; Orël 2003:17 Proto-Germanic **amslōn*.

Bomhard—Kerns 1994:589, no. 462.

709. Proto-Nostratic (n.) **ham-a* 'water':

- A. Proto-Afrasian **ham-* 'water': Proto-Semitic **ham-aw/y-* 'to flow, to pour forth, to overflow' > Arabic *hamā* 'to flow, to pour forth, to overflow, to run, to shed tears', *hamūm* 'abounding in water'. D. Cohen 1970— :422—423. Proto-Semitic **ham-aʕ-* 'to shed tears, to cry, to flow' > Arabic *hamaʕa* 'to shed tears, to cry, to flow, to drop', *hamūʕ* 'flowing'. D. Cohen 1970— :425. Proto-Semitic **ham-ar-* 'to pour out' > Arabic *hamara* 'to pour out, to shed (water, tears); to be poured out, to be shed; to pour down

- (rain), to flow (tears)', *hamra* 'shower of rain', *munhamir* 'poured out'; Sabaeen *hmr* 'ejaculation of semen'; Hebrew *mahāmōrāh* [מַהְמֹרָה] 'watery pit' (a hapax legomenon in the Bible); (?) Ugaritic *mhmrt* 'gullet'. D. Cohen 1970—:426; Klein 1987:322; Zammit 2002:421. Proto-Chadic **ham-* 'water' > Sura *àm* 'water'; Tal *hām* 'water'; Yiwom *γām* 'water'; Fyer *ham* 'water'; Dafo-Butura *ham* 'water'; Bokkos *ham* 'water'; Kulere ?*àam*, *àmṃ* 'water'; Tangale *am* 'water'; Karekare ?*am*, *amu* 'water'; Geruma *amma* 'water'; Kirfi *amma*, *àmmá* 'water'; Bole *amāi*, *àmmá* 'water'; Pa'a *ambi*, *ámbi* 'water'; Yedina *āmái*, *àámái* 'water'; Bade *amun* 'water'; Kotoko-Logone *am*, *àm*, ?*àm* 'water'; Migama *àmmi* 'water'; Birgit ?*àmì* 'water'; Mubi *àámé*, ?*ám*, ?*àm* 'water'. Newman 1977:34, no. 142, **am* 'water'; Jungraithmayr—Ibriszimow 1994.II:340—341. Orël—Stolbova 1995:258, no. 1156, **ham-* 'water'.
- B. Dravidian: Tamil *am*, *ām* 'water', *amm-enal* onomatopoeic expression of filling or overflowing (as of water); Kuṛux *emṇā* 'to take a bath (all over the body), to be covered all over (with sweat, blood)', *emta?ānā* 'to help one to bathe, to bathe (a child, corpse)', *amm* 'water, urine, dropsy'; Malto *amu* 'water', *am-amre* 'to water (as the mouth)', *amsro* 'waterish', *amye* 'to bathe (oneself)', *amte* 'to bathe (another)'. Burrow—Emeneau 1984:18, no. 187.
- C. Proto-Indo-European **hem-bh-* [**ham-bh-*]/[**hom-bh-*]/[**hṃ-bh-*], possibly also **hem-p-* [**ham-p-*]/[**hom-p-*]/[**hṃ-p-*] 'water, rain, rain-cloud': Sanskrit *ámbu* 'water', *ámbhas-* 'water', *abhrám* 'rain-cloud'; Pāli *ambu* 'water', *abbha-* 'dark cloud'; Avestan *awrəm* 'cloud'; Greek ὄμβρος 'a rain-storm, a thunder-storm; heavy rain; water; a shower'; Armenian *amb*, *amp* 'cloud, rain-cloud'; Latin *imber* 'a shower, a rain-storm; a rain-cloud; water'. I assume here that **hem-bh-* [**ham-bh-*]/[**hom-bh-*]/[**hṃ-bh-*] 'water, rain, rain-cloud' was distinct from **neb-* 'sky, cloud' and that **nembh-* was a contamination of what were originally two separate stems. Pokorny 1959:315—316 (**enebh-*): **nebh-*, **embh-*, **ṃbh-* (contaminated form **nembh-*); **emb-*, **omb-* (from **embh-*, **ombh-*) 'wet, water'; Walde 1927—1932.I:131—132 (**enebh-*): **nebh-*, **embh-*, **ṃbh-* (contaminated form **nembh-*); **emb-*, (**omb-*) from **embh-*; Mann 1984—1987:824 **ṃbhros*, *-is* 'cloud, vapor, drizzle', 874 **ombos*, *-us* (**ombāros*, **ombro-*) 'water, rain, rain-cloud'; Mallory—Adams 1997:477 **ṃbh(ro/ri)-* 'rain'; Watkins 1985:46 **ombh-ro-* (zero-grade form **ṃbh-ro-*) and 2000:60 **ombh-ro-* 'rain' (zero-grade form **ṃbh-ro-*); Mayrhofer 1956—1980.I:43 and I:45; Boisacq 1950:106 **ṃbh-*, **embh-*, **ombh-* and 700; Hofmann 1966:231 **omb(h)-*; Chantraine 1968—1980.II:796—797 **enbh->* **embh-*; Frisk 1970—1973.II:384—385 **ómbhro-s*, **ṃbhró-*, **embhro-*; Beekes 2010.II:1075; De Vaan 2008:299; Walde—Hofmann 1965—1972.I:680—681 **ṃbh-*, **emb(h)-*, **omb(h)-*; **ṃbhrós*; Ernout—Meillet 1979:310: "The *b* of *imber* can be derived from either **bh* or **b*."

- D. Proto-Altaic **āmu* ‘lake, river’: Proto-Tungus **āmu*- ‘lake, river’ > Evenki *āmūt* ‘lake’; Lamut / Even *amar*, *āmār* ‘river’; Negidal *amūt* ‘lake’; Manchu *omo* ‘lake, pond’; Spoken Manchu (Sibo) *omə* ‘lake’; Jurchen *omo* ‘lake’; Nanay / Gold *amoā* ‘lake’; Oroch *amu* ‘lake’; Udihe *amuli* the name of a river; Solon *amūži* ‘lake’, *amur* ‘river’. Proto-Mongolian **ama-n* ‘valley’ > Middle Mongolian *ama-sar* ‘mountain fold’; Written Mongolian *ama(n)* ‘narrow mountain valley’; Khalkha *am(an)* ‘narrow mountain valley’; Kalmyk *amṇ* ‘valley’; Ordos *ama(n)* ‘valley’. Note: **ama-n* ‘valley’ should be distinguished from **ama-n* ‘mouth’ (on which see below). Starostin—Dybo—Mudrak 2003:297 **āmu* ‘river, valley’.

Buck 1949:1.24 valley; 1.31 water; 1.32 sea; 1.33 lake; 1.36 river; stream; brook; 1.73 cloud; 1.75 rain.

710. Proto-Nostratic root **ham-* (~ **həm-*):

(vb.) **ham-* ‘to take into the mouth, to eat’;

(n.) **ham-a* ‘mouth’

- A. Proto-Afrasian **ham-* ‘to take into the mouth, to eat’: Semitic: Arabic *nahima* (< **na-ham-*) ‘to have a ravenous appetite, to be insatiable; to be greedy, covetous’, *naham* ‘ravenous hunger, insatiable greed, gluttony’, *nahim* ‘voracious, insatiable, glutton’. Berber: Tuareg *əmi* ‘mouth, orifice, entrance, opening’; Nefusa *imi* ‘mouth, entrance, opening’; Ghadames *ami* ‘mouth, entrance, opening’; Wargla *imi* ‘mouth, orifice, opening’; Mzab *imi* ‘mouth, orifice, opening’; Tamazight *imi* ‘mouth, opening, entrance, threshold’, *timmitt* ‘small mouth’; Tashelhiyt / Shilha *imi* ‘mouth, entrance, threshold’; Riff *imi* ‘mouth, orifice’; Kabyle *imi* ‘mouth, orifice, entrance, threshold’; Chaouia *imi* ‘mouth, orifice’. Southern Cushitic: Dahalo *ham-* ‘to toss a piece of food in the mouth’. West Chadic **ham-* ‘to eat’ > Pa’a *ʔm̄ma*, *ma*, *ṁmā* ‘to eat’. East Chadic **ham-* ‘to eat’ > Kera *hàmè* ‘to eat’; Somray *ʔəm-* ‘to eat’. Central Chadic **ham-* ‘to eat, to chew’ > Buduma *ham* ‘to eat’; Daba *həmu* ‘to eat’; Musgoy *ham* ‘to chew’. Jungraithmayr—Ibriszimow 1994.II:120—121. Ehret 1995:383, no. 781, **hom-* ‘to take into the mouth’; Orël—Stolbova 1995:258, no. 1157, **ham-* ‘to eat’.
- B. Yukaghir (Southern / Kolyma) *aml̄i-* ‘to swallow’, *aml̄ədaɟ-*, *eml̄ədeɟ-* ‘to swallow; to embrace’, *aml̄ibe* ‘digestive tract’. Nikolaeva 2006:103.
- C. Proto-Altaic **āmo-* ‘(vb.) to taste; (n.) mouth, taste’ (**amo-tʰa*, **amo-sa*): Proto-Tungus **am̄ja* ‘mouth’, **am̄ta-* ‘to taste’ > Evenki *am̄ja* ‘mouth’, *am̄ta-* ‘to taste’; Lamut / Even *am̄jə* ‘mouth’, *am̄tə-* ‘to taste’; Negidal *am̄ja* ‘mouth’, *am̄ta-* ‘to taste’; Manchu *aŋga* ‘mouth; opening, hole’; Spoken Manchu (Sibo) *aŋə* ‘mouth’; Jurchen *am-ŋa* ‘mouth’; Ulch *aŋma* ‘mouth’; Orok *am̄ja* ~ *aŋma* ‘mouth’; Nanay / Gold *amga* ‘mouth’; Oroch *amma* ‘mouth’; Udihe *aŋma* ‘mouth’; Solon *amma*, *angai* ‘mouth’. Proto-Mongolian **ama-* ‘mouth’, **amsa-* ‘to taste’, **am̄ta* ‘taste’ > Written

Mongolian *ama(n)* ‘mouth’, *amsa-* ‘to taste’, *amta(n)* ‘taste, flavor’; Khalkha *am* ‘mouth’, *amsa-* ‘to taste’, *amt(an)* ‘taste’; Buriat *aman* ‘mouth’, *amha-* ‘to taste’, *amta(n)* ‘taste’; Kalmyk *amṇ* ‘mouth’, *amsa-* ‘to taste’, *amtṇ* ‘taste’; Ordos *ama* ‘mouth’, *amsa-* ‘to taste’, *amta* ‘taste’; Moghol *aman*, *amun* ‘mouth’, *amsa-* ‘to taste’, *amta* ‘taste’; Dagur *ama* ‘mouth’, *anta-* ‘to taste’, *anta* ‘taste’; Dongxiang *amaṇ* ‘mouth’, *amusa-* ‘to taste’, *anda-tu* ‘tasty’; Monguor *ama* ‘mouth’, *amusa-* ‘to taste’, *amata*, *amta* ‘taste’. Poppe 1955:53. Proto-Turkic **um-*, **um-sa-* (‘to taste, to have taste for’ >) (vb.) ‘to hope for, to envy; (n.) an object of hope, desire; hope’ > Old Turkic (Old Uighur) *umuy* ‘an object of hope, desire; hope’; Karakhanide Turkic *um-* ‘to hope for’, *umdu* ‘an object of hope, desire; hope’, *umdu-čī* ‘beggar’; Turkish *um-* ‘to hope, to expect’, *umsan-* ‘to hope for’, *umma* ‘hope, expectation’; Gagauz *um-* ‘to hope for’; Azerbaijani *um-* ‘to hope for’, *umsun-* ‘to be disappointed’, *umažag* ‘an object of hope, desire; hope’; Turkmenian *imtil-* ‘to wait for food’; Uzbek *um-* (dial.) ‘to hope for’, *umsun-* ‘to experience a flow of milk in one’s breast and a desire to feed a baby’; Karaim *um-*, *umsun-* ‘to hope for’; Tatar *omti-l-* ‘to hope for’; Kirghiz *umu-*, *umsun-* ‘to hope for’, *umtul-* ‘to strive’; Kazakh *umti-* ‘to dart, to lunge’; Noghay *imti-* ‘to dart, to lunge’; Oyrot (Mountain Altai) *umzan-* ‘to go in a direction’, *umza-* ‘to make somebody to go in a direction’; Chuvash *ʋ^wmza-* ‘to envy’; Yakut *umsu-gu-y-* ‘to be keen on, to be addicted’, *umnahit* ‘beggar’. Poppe 1960:40, 68, 94, 121, and 140; Street 1974:7 **ama* ‘mouth, opening’, **ama-gay*; Starostin—Dybo—Mudrak 2003:296—297 **āmo* ‘mouth; taste’ (**amo-t’a*, **amo-sa*).

- D. Proto-Gilyak / Nivkh **amy* ‘mouth’: Amur *əŋg* ‘mouth, beak’; North Sakhalin *əmx* ‘mouth’; East Sakhalin *amx* ‘mouth’; South Sakhalin *amək* ‘mouth’. Fortescue 2016:12.

Buck 1949:4.24 mouth; 5.11 eat; 15.31—15.34 taste (vb.; sb.); 16.62 desire (vb.).

711. Proto-Nostratic root **haŋ-* (~ **həŋ-*):

- (vb.) **haŋ-* ‘to split apart, to open (tr.); to gape, to open the mouth, to yawn’;
(n.) **haŋ-a* ‘opening: yawn, gape, mouth; hole; crack, crevice’

- A. Afrasian: Highland East Cushitic: Hadiyya *an-* ‘to split (wood)’. Hudson 1989:269.
B. Dravidian: Tamil *aṅkā* ‘(vb.) to open the mouth; (n.) opening the mouth’, *aṅkāppu* ‘opening the mouth, thirsting’; Tuḷu *aṅgāvuni* ‘to yawn, to gape, to open the mouth’, *aṅguni* ‘to open the mouth, to be seized with a fit of yawning’; Kolami *aṅgasi* ‘a yawn’; Naikṛi *aṅgāsi* ‘a yawn’; Parji *aṅalp-* (*aṅalt-*) ‘to gape, to open the mouth wide’; Gondi *aṅil-/aṅl-* ‘to open the mouth’, *aṅgal-* ‘gaping, yawning’, *aṅglānā* ‘to yawn’; Maṇḍa *aṅlā-* ‘to open the mouth’; *aṅgalanga* ‘with mouth agape, with foolish appearance’;

foolishly, crazily'; Kuwi *angalacali* 'to gape'; Kuṛux *aṅḡlānā*, *aṅḡlaʔānā* 'to gape, to open the mouth wide, to be open'; Malto *aṅḡle* 'to gape', *aṅḡlo* 'open-mouthed'. Burrow—Emeneau 1984:5, no. 34. Tamil *aṅal* 'neck, side of the upper jaw, chin, throat, windpipe, beard, dewlap', *aṅar*, *aṅari* 'side of the upper jaw', *aṅār* 'neck'; Malayalam *aṅa* 'jaw, hinder part of the jaw', *aṅal* 'jaw, hinder part of the mouth', *aṅṇāti* 'cheekbone', *aṅṇi* 'inside of the cheek, joint of jaws'; Kota *aṅḡ* 'lower cheek'; Kannaḍa *aṅal* 'under part of the mouth, mouth'. Burrow—Emeneau 1984:12, no. 114.

- C. Proto-Indo-European **hen-tʰro-* [**han-tʰro-*] ('hole, opening' >) 'cave, cavern': Greek ἄντρον 'cave, cavern, grotto'; Latin *antrum* 'cave' (loan from Greek); Armenian *ayr* 'hollow, cave'. Pokorny 1959:50 **antro-m* 'hollow, cave'; Mann 1984—1987:28 **antro-* 'interior, hollow'; Boisacq 1950:64—65; Frisk 1970—1973.I:115; Chantraine 1968—1980.I:93; Hofmann 1966:19; Beekes 2010.I:110 (substrate word); Walde—Hofmann 1965—1972.I:49—50; Ernout—Meillet 1979:37.
- D. Proto-Uralic **aṅa-* 'to open' > Finnish *avaa-* 'to open, to unwrap, to unlock, to unfasten, to untie, to undo, to unbutton, to unstrap, to uncork', *avo-* 'open, bare', *avara* 'wide, vast, extensive, broad, spacious', *avoin/avoime-* 'open, vacant', *avanto* 'ice-hole'; Estonian *ava-* 'to open'; Mordvin (Erza) *aṅksima*, *avsimā*, (Moksha) *ańćəma* 'ice-hole' (regular deverbative noun from **aṅksi-*, etc., which may be a frequentative of **aṅ-* 'to open'); Vogul / Mansi *ōḍḡq̄w-* 'to take off (a garment)'; Ostyak / Xanty (Kazym) *ōṅk-* 'to untie (a knot, etc.)', *ōṅkəs-*, (Southern) *oṅḡəs-*, *āṅkəs-* 'to take off (a garment, shoes, etc.)'; Hungarian *old-* 'to loosen, to open'. Collinder 1955:72—73 and 1977:89; Rédei 1986—1988:11 **aṅa-*; Aikio 2020:20—22 **aṅa-* 'to open, to take off'; Zhivlov 2023:122 Proto-Uralic **aṅa-* 'to open'. Proto-Uralic **aṅi* 'mouth, opening': Lapp / Saami *vuogḡsá-/vuogḡsá-* 'halter or band on the muzzle of a dog, to prevent it from biting a reindeer; the muzzle of a calf, to prevent it from sucking the cow' (derivative of **vuogḡá*, possibly 'mouth'); Mordvin *ovks* (pl. *oṅkšt'*, *ojkst*) 'bit on a bridle' (derivative of **ov*, **oṅ*, **oj*, possibly 'mouth'); (?) Cheremis / Mari *āṅ*, *aṅ* 'mouth, opening, gap (in a doorway, in a sack); rent in a garment'; Votyak / Udmurt *ym* 'mouth; opening, outlet, estuary'; Zyrian / Komi *vōm*, *vom* 'mouth; opening, outlet; mouth (of a river)', *kōrt-vōm* 'bit on a bridle' (*kōrt* 'iron'); Ostyak / Xanty *oṅ* 'opening, mouth (of a bottle, vessel, etc.); entrance, bay; mouth, entry of a river'; Yurak Samoyed / Nenets *næxʔ*, (Forest) *næxḡ* 'mouth'; Yurak Samoyed / Nganasan *ḡaṅḡ* 'mouth'; Yenisei Samoyed / Enets (Hatanga) *eeʔ*, (Baiha) *naʔ/nan-* 'mouth'; Selkup Samoyed *āṅ*, *aṅḡ*, *aak* 'mouth', *aṅḡaj*, *aakal'* 'bridle'; Kamassian *aṅ* 'mouth'; Koibal *an* 'mouth'. Collinder 1955:68—69 and 1977:85; Rédei 1986—1988:11—12 **aṅe-*; Décsy 1990:97 **aṅa* 'opening'; Janhunen 1977b:20 **āṅ*; Sammallahti 1988:542 Proto-Finno-Ugrian **āṅi* 'mouth'; Aikio 2020:22—23 **aṅi* / **aṅa* 'opening, mouth'; Zhivlov 2023:122 Proto-Uralic **aṅi* 'opening, mouth'. Yukaghir (Northern

/ Tundra) *aŋa* ‘mouth’, (Southern / Kolyma) *aŋa* ‘mouth’, *aŋil* ‘opening, mouth (of a river)’. Nikolaeva 2006:106.

- E. Proto-Altaic **aŋa* ‘hole, crack, gape’: Proto-Tungus **aŋa-* ‘(vb.) to dig; to open; (n.) crack, hole’ > Evenki *aŋa-* ‘to dig’, *aŋa-/āŋā-* ‘to open’, *aŋa* ‘crack, hole’; Lamut / Even *aŋ-* ‘to dig’, *āŋa-* ‘to open’; Negidal *aŋa-* ‘to dig; to open’, *aŋa* ‘crack, hole’; Ulch *aŋgala* ‘crack, hole’; Oroch *āŋga-* ‘to dig’. Proto-Mongolian **aŋ-*, **aŋga-* ‘(vb.) to open one’s mouth, to gape; (n.) crack, hole, gape’ > Written Mongolian *aŋγ-a* ‘bifurcation, branch’, *aŋ* ‘crack, chink, cleft, fissure, crevice; ravine’, *aŋγai-* ‘to open up, to be wide open’, *aŋγailγ-a* ‘opening, gap; hiatus’, *aŋγalža-* ‘to gape, to open and shut the mouth repeatedly’, *aŋγarqai* ‘crevice, cranny, fissure, gaping’, *aŋγar* ‘crevice, cranny, fissure, cleft’, *aŋta-* ‘to split, to crack, to cleave’; Khalkha *aŋ* ‘crack, hole, gape’, *aŋgai-* ‘to open one’s mouth, to gape’; Buriat *aŋg(an)* ‘crack, hole, gape’; Kalmyk *aŋ*, *aŋgə* ‘crack, hole, gape’; Ordos *aŋ* ‘crack, hole, gape’; Dagur *xangai-* ‘to open one’s mouth, to gape’; Dongxiang *aŋgəi-* ‘to open one’s mouth, to gape’; Shira-Yughur *aŋγi-* ‘to open one’s mouth, to gape’; Monguor *ŋgai-* ‘to open one’s mouth, to gape’. Proto-Turkic **aŋ-* ‘(vb.) to be wide open, to have one’s mouth opened, to gape; to be perplexed, astonished; to look at with surprise; to be faint, drowsy; (adj.) wide open, obtuse, stupid, astonished; (n.) fool, simpleton’ > Karakhanide Turkic *aŋil*, *ačuq* ‘wide open’; Turkish (dial.) *anuk*, *aniz* ‘fool, simpleton’; Turkmenian *aŋal-* ‘to be perplexed, astonished’, *aŋqar-* ‘to be perplexed, astonished; to have one’s mouth opened’; Uzbek *aŋray-* ‘to be perplexed, astonished; to have one’s mouth opened’; Tatar *aŋγi-miŋge bul-* ‘wide open’, (dial.) *aŋγil* ‘obtuse, stupid’; Kirghiz *aŋqay-*, *aŋγar-* ‘to be wide open; to look at with surprise’, *aŋqō* ‘fool, simpleton’, *aŋjir-* ‘to be perplexed, astonished’, *aŋjiray-* ‘to gape’; Kazakh *aŋtar-*, *aŋjir-* ‘to be perplexed, astonished’, *aŋqaw* ‘fool, simpleton’; Noghay *aŋqī-tiŋke* ‘daffy’, *aŋra* ‘fool, simpleton’, *aŋšay-* ‘to have one’s mouth opened’; Tuva *aŋγada-* ‘to be perplexed, astonished’; Yakut *aŋar-* ‘to be drowsy, faint’. Poppe 1960:72; Street 1974:8 **aŋ* ‘crack, cleft’, **aŋ-a-* ‘to open’; Starostin—Dybo—Mudrak 2003:304 **aŋa* ‘hole, crack, gape’.
- F. Proto-Eskimo **aŋva-* ‘to be open’: Central Siberian Yupik *aŋvanəq* ‘hollow beneath shoulder blade’; Sirenik *aŋvanəX* ‘hollow beneath shoulder blade’; Seward Peninsula Inuit *aŋma-* ‘to be open, to be free of ice (lake)’, *aŋmaq* ‘hole’; North Alaskan Inuit *aŋma-*, (Malimiut) *aŋma-* ‘to be open’; Western Canadian Inuit *aŋma-* ‘to be open’; Greenlandic Inuit *amma-* ‘to be open’. Fortescue—Jacobson—Kaplan 1994:36. Proto-Eskimo **aŋvar-* ‘to open’: Alutiiq Alaskan Yupik *ampar-* ‘to open’; Central Alaskan Yupik *aŋpar-*, (Nunivak) *aŋvar-* ‘to open’; Seward Peninsula Inuit *aŋmaq-* ‘to open’; North Alaskan Inuit *aŋmaq-*, (Malimiut) *aŋmaq-* ‘to (become or make) open’; Western Canadian Inuit *aŋmaq-* ‘to open’; Eastern Canadian Inuit *amma(q)-* ‘to open, to be open’; Greenlandic

Inuit *ammar-* ‘to (become or make) open’. Fortescue—Jacobson—Kaplan 1994:36.

Buck 1949:4.207 jaw; 4.24 mouth; 4.52 yawn, gape; 12.24 open (vb.). Illič-Svityč 1971—1984.I:244—245, no. 105, **Hanga* ‘to gape’; Bomhard—Kerns 1994:590—592, no. 465; Hakola 2000:26, no. 52.

712. Proto-Nostratic root **hap^h-* (~ **həp^h-*):

(vb.) **hap^h-* ‘to turn, to turn away, to turn back’;

(n.) **hap^h-a* ‘the act of turning away, turning back, overturning’; (adj.) ‘turned away from, turned back, overturned’

A. Afroasiatic: Proto-Semitic **hap-ak-* ‘to turn, to turn away, to turn back, to overturn’ > Hebrew *hāḫaḫ* [חָחָח] ‘to turn, to turn away, to turn back, to overturn’; Aramaic *həḫaḫ* ‘to turn, to change, to move, to return’; Ugaritic *hpk* ‘to overturn’; Phoenician *hpk* ‘to overturn’; Palmyrene *hpk* ‘to overturn’; Akkadian *abāku* ‘to turn upside down, to upset, to overturn’. D. Cohen 1970—:28 and 440; Murtonen 1989:158; Klein 1987:161.

B. Proto-Indo-European **hep^ho* [**hap^ho*] ‘(turned) away, back’: Sanskrit *āpa* ‘away, forth, back’; Old Persian (prefix) *apa-* ‘away’; Greek *ἄπο, ἀπό* ‘off, away, back’; Latin *ab* ‘away from’; Gothic *af* ‘of, from, by, away from’; Old Icelandic *af* ‘off, from’; Old English *of* ‘from, away from’; Old Frisian *af, of* ‘off, from, away from’; Old Saxon *af* ‘off, from, away from’; Dutch *af* ‘off, down’; Old High German *ab, aba* ‘off, from, away from’ (New High German *ab*); Hittite *a-ap-pa* ‘afterwards, back, again’; Luwian *a-ap-pa* ‘back, again, after’; Lycian *epñ* ‘back, after, further’. Pokorny 1959:53—55 **apo* ‘off, away’; Walde 1927—1932.I:47—50 **apo*; Mann 1984—1987:30 **apo* (**apō*, **apə*, **po*) ‘away; from, after’; Watkins 1985:3 **apo* (also **ap-*) and 2000:5 **apo* (also **ap-*) ‘off, away’; Mallory—Adams 1997:42 **h₄épo* ‘back, behind’, **h₄ep-ér-* ‘back, behind’; Mayrhofer 1956—1980.I:37; Hofmann 1966:20—21; Boisacq 1950:69; Beekes 2010.I:117 **h₂epo*; Frisk 1970—1973.I:122; Chantraine 1968—1980.I:97—98; Ernout—Meillet 1979:1—2; Walde—Hofmann 1965—1972.I:1—2 **ap*, **apo*; De Vaan 2008:19—20 **h₂ep-*; Orël 2003:1 Proto-Germanic **aba*; Kroonen 2013:1 Proto-Germanic **aba* ‘(away) from, off’; Feist 1939:3 **apo*; Lehmann 1986:2 **apo-*; De Vries 1977:2; Klein 1971:510; Onions 1966:624 **ap*, **apo* (Common Germanic adv. and prep. **ab(a)*); Kluge—Mitzka 1967:1 **apo*; Kluge—Seebold 1989:2 **apo*; Boutkan—Siebinga 2005:292—293; Sturtevant 1942:45, §42b, Indo-Hittite *:*āpo* and 1951:53, §76, **hép-*; Puhvel 1984—.1/2:91—94; Kloekhorst 2008b:192—195.

Bomhard—Kerns 1994:585—586, no. 456.

713. Proto-Nostratic root **haw-* (~ **həw-*):(vb.) **haw-* ‘to long for, to desire’;(n.) **haw-a* ‘desire’

- A. Proto-Afrasian **haw-* ‘(vb.) to long for, to desire; (n.) desire’: Proto-Semitic **haw-ay-* ‘(vb.) to long for, to desire; (n.) desire’ > Hebrew *hawwāh* [חַוְוָה] ‘desire’; Arabic *hawīya* ‘to love, to desire’, *hawan* ‘love, affection, desire, longing’; Mehri *šəhwū* ‘to like’; Šheri / Jibbāli *šhəbé* ‘to appreciate something (beautiful), to think something is fine; to like something overmuch’. D. Cohen 1970— :386; Klein 1987:142. Cushitic: Somali *hawo* ‘desire, passion’; Galla / Oromo *haw-* ‘to covet’, (adj.) *hawa* ‘covetous, envious’. Orël—Stolbova 1995:259, no. 1162, **haw-* ‘to want’.
- B. Dravidian: Tamil *āvu* (*āvi-*) ‘to desire’, *avāvu* (*avāvi-*) ‘to desire, to crave for, to covet’, *avā* ‘desire for a thing, covetousness’; Malayalam *āvikka* ‘to desire’, *āval* ‘desire’. Burrow—Emeneau 1984:36, no. 394.
- C. Proto-Indo-European **hew-* [**haw-*] ‘to long for, to desire’: Sanskrit *āvati* ‘to be pleased, to strive for’, *āva-h* ‘favor, protection, gratification’; Avestan *avaiti* ‘to protect, to help’, *avah-* ‘protection’; Latin *aveō* ‘to long for, to desire’, *avidus* ‘passionately desiring, longing for’; Welsh *ewyllys* ‘will’, *awydd* ‘desire’ (Latin loan). Rix 1998a:244 **h₂eu-* ‘to enjoy’; Pokorny 1959:77—78 **au-*, **auē-*, **auēi-* ‘to like’; Walde 1927—1932.I:19 **au-*, **auē-*, **auēi-*; Mann 1984—1987:45—46 **auē-iō* ‘to like, to favor, to want’, 47 **auis* ‘desire’; Mallory—Adams 1997:197 **h_aeu-* ‘to favor’ and 317 **h₄eu-* ‘to enjoy’; Mayrhofer 1956—1980.I:57 and I:58; Walde—Hofmann 1965—1972.I:81—82; Ernout—Meillet 1979:56; De Vaan 2008:65.

Buck 1949:16.62 desire (vb.). Illič-Svityč 1971—1984.I:241—242, no. 100, **hawA* ‘to desire passionately’; Caldwell 1913:588 and 607; Bomhard—Kerns 1994:587, no. 458; Dolgopolsky 2008, no. 790, **hawV* ‘to desire, to love’.

714. Proto-Nostratic (n.) **hay-a* ‘a kind of cereal or grain’:

- A. Proto-Afrasian **hay-* ‘a kind of cereal or grain’: Egyptian *ihy* ‘cereal’. Hannig 1995:95; Erman—Grapow 1926—1963.I:118. West Chadic **hay-* ‘grain’ > Angas *he* ‘corn’; Fyer *hay* ‘a kind of millet’; Bökkos *hay* ‘a kind of millet’. Orël—Stolbova 1995:260—261, no. 1167, **hay-* ‘cereal’.
- B. Dravidian: Parji *ayk* ‘a kind of grain called in Halbi *kaṅg*’; Gadba (Salur) *aykil* ‘a kind of grain called in Telugu *korralu*’. Burrow—Emeneau 1984:19, no. 195.
- C. Indo-European: Proto-West Germanic **ayt-* ‘a type of cereal or grain’ > Old English *āte*, *āte* ‘(wild) oats’ (Middle English *āte* ‘[cultivated] oats’); West Frisian *oat* ‘oats’; Flemish *ate*, *ote* ‘oats’; Zeelandic *ôôte* ‘oats’. Note also: Old Saxon *er(iw)it* ‘pea’; Old High German *araweiz*, *arawiz* ‘pea’,

literally, ‘pea grain’ (New High German *Erbse*) (< **arw(a)-(a)itō*). Orël 2003:10 Proto-Germanic **aitōn*; Onions 1966:619 (“peculiar to English and of uncertain origin”); Hoad 1986:318; Klein 1971:505 (“of uncertain origin”); Liberman 2008:170—174; Weekley 1921:998—999; E. Müller 1879.II:156; Vercoulie 1898:211; Kluge—Mitzka 1967:170; Kluge—Seebold 1989:184. Skeat (1898:398) compares Old English *āte*, *æte* ‘oats’ with Old Icelandic *eitill* ‘a nodule in stone’; Norwegian *eitel* ‘a gland, knot, nodule in stone’; Russian *jadró* [ядро] ‘a kernel in fruit, bullet, ball, shot’; Greek οἶδος ‘a swelling’. Kroonen (2013:37) reconstructs Proto-Germanic **arwīt-* ‘pea’ and considers it to be of non-Indo-European origin.

Buck 1949:8.42 grain; 8.46 oats.

715. Proto-Nostratic exclamation of surprise, astonishment, grief, or misfortune
**hay*:

- A. Proto-Afrasian **hay* exclamation of surprise, astonishment, grief, or misfortune: Proto-Semitic **haw/y* exclamation of surprise, astonishment, grief, or misfortune > Hebrew *hōy* [חַי] exclamation of dissatisfaction and pain (used in lamentations): ‘ah!, alas!, ha!’, *hī* exclamation of grief: ‘woe!’, Syriac *hāwāy* ‘ah!’, Akkadian *aya* in *uʾa aya* ‘alas!’, Arabic (interjection) *hayyā* ‘up!, come on!, let’s go!, now then!’, *yā hayya* ‘oh!’. D. Cohen 1970—:386; Klein 1971:142. Egyptian (interjection) *hy* ‘oh!, hail!’, Coptic *hayo* [ⲭⲁ(ⲉ)ⲓⲟ], *ayo* [ⲕⲁ(ⲉ)ⲓⲟ] ‘hey!, hail!’. Hannig 1995:489; Faulkner 1962:157; Erman—Grapow 1921:200 and 1926—1932.2:482; Gardiner 1957:579; Vycichl 1983:290; Černý 1976:270. Berber: Kabyle *uy!* exclamation of pain. Highland East Cushitic: Gedeo / Darasa *aai* ‘alas!’. Hudson 1989:230.
- B. Dravidian: Tamil *aiya* exclamation of wonder, pity, concern; Malayalam *ayyō*, *ayyayyō* interjection of pain, grief; Kota *aya* exclamation of surprise or grief; Kannada *ayyō*, *ayyayyō*, *ayyayyē* interjection of grief, annoyance; Tulu *ayyō*, *ayyayyō* interjection of grief, annoyance, pain; Telugu *ayyo*, *ayyō*, *ayyayō*, *ayyayyō*, *ayayō* interjection denoting sorrow, lamentation, pity, pain. Burrow—Emeneau 1984:19, no. 196(b).
- C. Proto-Indo-European **hay-* exclamation of surprise, astonishment, grief, or misfortune: Hittite *a(y)i-* ‘pain’; Sanskrit *ai* particle of addressing, summoning, remembering; Avestan *āi* particle of summoning; Greek *āi*, *āi* exclamation of astonishment, *aiāi* exclamation of grief; Lithuanian *ai*, *ai* ‘oh!’. Pokorny 1959:10 **ai* interjection; Walde 1927—1932.I:1 **ai*; Mann 1984—1987:5 **ai* ‘oh!’, Puhvel 1984—:1/2:13—14; Mayrhofer 1956—1980.I:130; Beekes 2010.I:30: “Elementary formation, found in many languages”; Chantraine 1968—1980.I:28—29.
- D. Uralic: Finnish *ai* ‘oh!, oh dear!’, Hungarian *ajaj* ‘oh dear!’.

- E. Altaic: Classical Mongolian *ai*, *aia* (*aya*) interjection expressing pity, sympathy, worry, or fear: ‘oh!, ah!’; Manchu *ai* ‘hey!’, *aya* interjection of praise or surprise.

Bomhard—Kerns 1994:589—590, no. 463; Hakola 2000:15—16, no. 6.

716. Proto-Nostratic (n.) **hay-a* ‘metal, ore’:

- A. Dravidian: Tamil *ayil* ‘iron’; Malayalam *ayir*, *ayiram* ‘any ore’; Kannada *aduru* ‘native metal’; Tuḷu *ajirda karba* ‘very hard iron’. Burrow—Emeneau 1984:18, no. 192.
- B. Proto-Indo-European **hey-os-/ *hey-es-* [**hay-os-/ *hay-es-*] ‘metal, ore’ (> ‘copper, bronze’): Sanskrit *áyas-* ‘iron, metal’; Avestan *ayah-* ‘iron, metal’; Latin *aes* ‘copper, bronze, brass; copper or bronze as a metal of currency, copper or bronze money, a copper or bronze coin’, *aēneus*, *aēnus* ‘made of bronze (or any alloy of copper); derived from or connected with bronze, of bronze; bronze-colored’; Gothic *aiz* ‘money, metal coin’; Old Icelandic *eir* ‘brass’; Old Swedish *ēr* ‘copper’ (Modern Swedish *erg* ‘verdigris, copper rust’); Old Danish *eer* ‘copper’; Norwegian *eir*, *irr* ‘copper rust’; Old English *ār*, *æ̆r* ‘ore; brass, copper’, *æ̆ren* ‘made of brass’; Old Saxon *ēr* ‘ore’; Dutch *oer* ‘bog-ore’, *erts* ‘ore’; Old High German *ēr* ‘ore, copper’, *ērīn* ‘of brass, of bronze’ (New High German *Erz* ‘ore; [poet.] brass, bronze’, *ehern* ‘of brass, of bronze’). Pokorny 1959:15—16 **ajos-* ‘metal’; Walde 1927—1932.I:4 **ajos-*; Mann 1984—1987:8 **ajos*, *-es* ‘metal, bronze, ore’; Gamkrelize—Ivanov 1995.I:380 **Haye/os-* ‘copper’ and I:614 **Haye/os-*; Watkins 1985:4 **ayes-* ‘a metal, copper or bronze’ and 2000:6 **ayes-* ‘a metal, copper or bronze’; Mallory—Adams 1997:379 **h_aeĵ-es-* ‘metal’ > ‘copper’ > ‘bronze’; Mayrhofer 1956—1980.I:46 and 1986—2001.I:104 **ajēs-* (~ **h₂eĵes-*); Ernout—Meillet 1979:12—13 **ay(o)s*; De Vaan 2008:27—28 **h₂ei-os*, **h₂ei-es-* ‘bronze’ **h₂eies-no-* (adj.) ‘of metal’; Walde—Hofmann 1965—1972.I:19—20 **ajos*; Orël 2003:11 Proto-Germanic **aizan*; Kroonen 2013:16—17 Proto-Germanic **aiza-*, **aizīna-*; Feist 1939:31; Lehmann 1980:22 **ayos-*; Falk—Torp 1910—1911.I:467; Torp 1919:87; De Vries 1977:97; Onions 1960:632; Klein 1971:1093 **ayos-*; Vercoulie 1898:73 and 205; Walshe 1951:43 and 49; Kluge—Mitzka 1967:152—153 **ajos* and 174; Kluge—Seebold 1989:166 **ajos* and 188 (New High German *Erz* ‘ore’ = loanword from Sumerian *urud*).

Note: Similar forms are found in Northwest Caucasian: Common Abkhaz **ajǰá*: South Abkhaz *ajǰá* ‘iron; axe; bit (of a horse)’; Abaza/Tapanta *ajǰá* ‘iron; metal’; Ashkharywa *ájǰa* ‘iron’. Note also: South Abkhaz *ajg^oǰš^o* ‘small axe’; Abaza/Tapanta *g^oaš^o* ‘small axe’, *k^oayā* ‘small axe’;

Bzyp *ajk* 'áγ(a) 'small axe'; Abzhywa *ajk* 'áγa 'small axe'. These may have been borrowed from Indo-European.

Buck 1949:9.66 copper, bronze; 9.67 iron.

717. Proto-Nostratic root *her- and/or *hor-:

(vb.) *her- and/or *hor- 'to escape, to flee, to run away';

(n.) *her-a and/or *hor-a 'escape, flight'; (adj.) 'escaped, liberated, freed'

- A. Proto-Afrasian *her-, *hor- 'to escape, to flee, to run away': Proto-Semitic *har-ab- 'to escape, to flee, to run away' > Akkadian *arbu* 'fugitive, runaway'; Arabic *haraba* 'to flee, to escape, to desert, to run away, to elope; to help to escape, to force to flee, to put to flight; to liberate, to free (a prisoner); to smuggle', *harab* 'flight, escape, getaway; desertion; elopement', *hurūb* 'flight', *harbān* 'fugitive, runaway, on the run; a runaway, a fugitive, a refugee', *hārib* 'fugitive, runaway, on the run; a runaway, a fugitive, a refugee; deserter'; Sabaeen *hrb* 'to flee'; Ḥarsūsi *herōb* 'to put to flight, to smuggle'; Šheri / Jibbāli *ohūrb* 'to smuggle, to run away (from prison)'; Mehri *hōrəb* 'to smuggle, to put to flight'; Tigre *harbä* 'to flee'. D. Cohen 1970— :447; Zammit 2002:417. Ehret 1995: 385, no. 789, *her-/ *hor- 'to go rapidly on foot'; Ehret also posits Proto-Cushitic *horr-/ *herr- 'to go on foot' (Proto-East Cushitic 'to run away'), but he does not give examples.
- B. Proto-Indo-European *her- [*har-]/ *hor-/ *h₂- (vb.) to liberate, to set free; (adj.) free': Hittite *a-ra-a-u-(wa-)aš* 'free', (1st sg. pres.) *a-ra-wa-aḥ-ḥi* 'to set free'; Lycian *arawa* 'free', *arawā* 'exempt from tax', Ἐρεῦας / *erewa- / 'free(city)'. Tischler 1977— :53—55; Puhvel 1984— .1/2:119—121. Puhvel's rejection notwithstanding, the most convincing Indo-European cognate remains Lithuanian *árvas* 'free' (cf. Gamkrelidze—Ivanov 1995.I: 397—398 *arw- and I:781 *arwo- 'free agriculturalist'). Fraenkel 1962— 1965.I:16.
- C. Proto-Eskimo *arullar- 'to leave': Alutiiq Alaskan Yupik *arulaXtə*- 'to run away'; Naukan Siberian Yupik *arulaXquq* 'gathered greens'; Central Siberian Yupik *arulaqə*- 'to leave', *arulaXqur*- 'to go and gather greens'; Sirenik *arəlar*- 'to leave', *arəlarə(ə)*- 'to take away'; Seward Peninsula Inuit *aulari*- 'to leave'; North Alaskan Inuit *aullaq*- 'to leave'; Western Canadian Inuit *aullaq*- 'to leave'; Eastern Canadian Inuit *aulla(q)*- 'to leave'; Greenlandic Inuit *aattar*- 'to leave'. Fortescue—Jacobson—Kaplan 1994:45.

Buck 1949:10.51 flee; 11.34 release; 19.44 free (adj.). Bomhard—Kerns 1994:585, no. 455.

22.36. PROTO-NOSTRATIC *ħ

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
ħ-	ħ-	Ø-	x-	<u>h</u> h-	Ø-	Ø-	Ø-
-ħ-	-ħ-	-Ø-	-x-	- <u>h</u> h-	-Ø-	-Ø-	-Ø-

718. Proto-Nostratic root *ħac'- (~ *ħac'-):

(vb.) *ħac'- 'to pick, to pluck';

(n.) *ħac'-a 'the act of picking, plucking'; (adj.) 'picked, plucked'

- A. Proto-Afrasian *ħac'- 'to pick, to pluck': Proto-Semitic *ħac'-ad- 'to harvest, to reap' > Akkadian *ešēdu* 'to harvest'; Imperial Aramaic *ħšd* 'to harvest'; Biblical Aramaic *ħšāḏ* 'to cut, to mow', *ħšāḏā* 'crop, harvest-time'; Arabic *ħašada* 'to harvest, to reap, to mow', *ħašīd* 'crop, harvest, yield', *ħašad* 'mown grain'. Murtonen 1989:193; Klein 1987:228. (?) Egyptian *ħd-t* 'a kind of plant'. Hannig 1995:575; Erman—Grapow 1926—1923.3:211. Proto-East Cushitic *ħad₁- 'to reap' > Burji *hat*'- 'to reap'; Galla / Oromo *hatt*'-aw- 'to sweep'; Dobase *hat*'- 'to hoe, to clean'; Kambata *hat*'iid- 'to reap, to cut crops', *hat*'iidi-je(ccut 'harvest-time'. Sasse 1982:93; Hudson 1989:46.
- B. Dravidian: Kota *ec*- (*ec*-) 'to pick (berries, fruit)'; Konḁa *es*- 'to play on *toyla* or any stringed instrument'; Pengo *ec*- 'to pluck'; Maṇḁa *eh*- 'to pluck'; Kui *espa*- (*est*-) 'to pluck'; Kuwi *eh*- (*est*-) 'to pluck (fruit)'. Burrow—Emeneau 1984:77, no. 779.
- C. Proto-Indo-European *hhet'- [*hhat'-] 'crop, grain': Latin *ador* 'a species of grain, spelt'; Gothic *atisk* 'grain, grain-field'; Old English *edisc* 'enclosure, park; pasture'; Dutch *esch* 'cultivated fields of a village'; Old High German *ezzisc* 'seed' (New High German *Esch*); Armenian *hat* 'grain'; (?) Tocharian A *āti*, B *atiyo* 'grass'. Semantic development from 'to pick, to pluck' > 'to gather the crop, to harvest' > 'crop, grain' as in Arabic *ħašīd* 'crop, harvest, yield' and *ħašad* 'mown grain', cited above. Pokorny 1959:3 **ades*-, **ados*- 'type of grain'; Walde 1927—1932.I:45 **ados*-; Mann 1984—1987:2 **adhōr*-, **adhər*- 'a course grain' (?); Gamkrelidze—Ivanov 1984.II:655 **Hat*'- and 1995.I:564 **Hat*'- 'grain'; Mallory—Adams 1997:237 **h₂ed*- 'grain, barley'; Orël 2003:26—27 Proto-Germanic **atiskaz*; Kroonen 2013:39 Proto-Germanic **atiska*- 'grainfield'; Feist 1939:61; Lehmann 1986:46; Ernout—Meillet 1979:9; Walde—Hofmann 1965—1972.I:14; De Vaan 2008:25; Kluge—Mitzka 1967:174 **ados*-; Kluge—Seebold 1989:188; Van Windekens 1976—1982.I:624 considers the Tocharian forms to be loans from Turkic; Adams

1999:9, on the other hand, favors derivation from **āt-u-* and compares Old Irish *áiith* (< **āt-i-*) ‘sharp, energetic’.

(?) Sumerian *ha-za* ‘to seize, to grasp’.

Buck 1949:8.32 mow, reap; 8.41 crop, harvest; 8.42 grain. Bomhard—Kerns 1994:355—356, no. 181.

719. Proto-Nostratic root **hag-* (~ **həg-*):

- (vb.) **hag-* ‘to be pressed or weighed down; to be oppressed; to be vexed, distressed, disheartened, afflicted, troubled’;
- (n.) **hag-a* ‘trouble, affliction, oppression, distress, grief, sadness’

- A. Proto-Afrasian **hag-* ‘to be pressed or weighed down; to be oppressed; to be disheartened, vexed, distressed, afflicted, troubled’: Proto-Semitic (**hag-an-* > **hag^y-an-* > **had^y-an-* >) **haz-an-* ‘to grieve, to be sad’ > Arabic *ḥazana* ‘to make sad, to sadden, to grieve’; Ḥarsūsi *hezōn* ‘to be sad’; Šheri / Jibbāli *hazīn* ‘sad’; Mehri *hzūn* ‘to be very sad’; Geez / Ethiopic *ḥazana* [ሐዘን], *ḥazna* [ሐዘነ] (also *ḥazana* [ሐዘነ]) ‘to be sad, to be sorrowful, to be grieved, to be in mourning, to have compassion, to be sorry for, to sympathize’, *ḥazan* [ሐዘን] ‘sadness, grief, sorrow, mourning, affliction, melancholy, care’; Tigrinya *ḥazānā* ‘to be sad’; Tigre *ḥazna* ‘to be sad’; Harari *ḥuzni* ‘sadness’; Argobba *hazzāna* ‘to be sad’; Amharic *azzānā* ‘to be sad’; Gurage *azānā* ‘to be sad, sorrowful’, *azān* ‘grief, sorrow’. Leslau 1963:89, 1979:121, and 1987:253—254; Zammit 2002: 139—140. Egyptian (**hag-an-* > **hag^y-an-* > **had^y-an-* >) *ḥḏn*, *ḥḏnw* ‘to be oppressed, disheartened, vexed, angry’, *shḏn* (causative) ‘to vex’. Hannig 1995:575 and 740; Faulkner 1962:239; Erman—Grapow 1921:120 and 1926—1923.3:214; Gardiner 1957:583.
- B. [Dravidian: Kannaḍa *agacu*, *agucu* ‘to press firmly, to confine, to hold firmly’, *agacāṭ(a)lu*, *agacāṭ(a)le*, *agacāṭu* ‘affliction, trouble’; Telugu *agacāṭlu* ‘troubles, difficulties, affliction’. Burrow—Emeneau 1984:3, no. 2.] Either here or with Proto-Nostratic **hak’-* (~ **hək’-*) ‘(vb.) to press, squeeze, pack, or cram together; to confine, to oppress; (n.) oppression, affliction, pain’. Kannaḍa *agi* ‘to tremble, to fear’, *agurvū*, *agurbu* ‘amazement, terror; a terrible form’, *agurvisu* ‘to be terrifying or formidable, to terrify’; Tuḷu *aguruni* ‘to totter, to stagger’; Telugu *agurvū* ‘fear, terror’. Burrow—Emeneau 1984:4, no. 12.
- C. Proto-Indo-European **h₂heg^h-* [**h₂hag^h-*] ‘(vb.) to be weighed down, oppressed, fearful; (n.) pain, sorrow, grief, fear’: Greek ἄχος ‘pain, sorrow, grief, distress’, ἄχομαι ‘to be vexed, annoyed, distressed’, ἀκαχεῖν ‘to grieve, to vex, to annoy, to distress’, ἄχνομαι ‘to trouble oneself, to grieve for, to lament’; Old Irish *ad-ágor* ‘fear’; Gothic *agis* ‘fright, fear, terror’; Old English *ege* ‘fear’, *egesa* ‘fear, terror’, *egesian* ‘to terrify’; Old High

German *egis-līh* ‘terrible’. Pokorny 1959:7—8 **agh-* ‘to be depressed’; Walde 1927—1932.I:40 **agh-*; Mann 1984—1987:2 **agh-* ‘dread, terror’, 2 **aghālos*, **aghulos* ‘evil, sorrow’, 3 **aghō*, -*īō* ‘to groan, to fear, to sorrow’, 3 **aghos*, -*es-* ‘evil, harm, grief, gain, horror’; Watkins 1985:1 **agh-* and 2000:1 **agh-* ‘to be afraid, to be depressed’; Mallory—Adams 1997:413 **h_aéghleh_a* ‘affliction’; Frisk 1970—1973.I:200—201 and I:202—203; Boisacq 1950:108; Chantraine 1968—1980.I:150 and I:151; Hofmann 1966:30; Beekes 2010.I:184—185 **h₂eg^h-*; Orël 2003:3 Proto-Germanic **ağez*; Kroonen 2013:4 Proto-Germanic **agiz-* ‘fear’; Lehmann 1986:10 **agh-* ‘to suffer in spirit’; Feist 1939:14 **agh-*.

Buck 1949:16.31 pain, suffering; 16.32 grief, sorrow; 16.36 sad; 16.53 fear, fright. Bomhard—Kerns 1994:457, no. 302. Different etymology in Dolgopolsky 2008, no. 1856, **qag[?]a* ‘to fear’.

720. Proto-Nostratic root **hag-* (~ **hæg-*):

- (vb.) **hag-* ‘to cover over, to hide, to conceal, to obscure, to overshadow’;
(n.) **hag-a* ‘mist, darkness, cloudy weather’; (adj.) ‘misty, dark, cloudy’

A. Proto-Afrasian **hag-* (vb.) to cover over, to hide, to conceal, to obscure, to overshadow; (adj.) misty, dark, cloudy; (n.) mist, darkness, cloudy weather’: Proto-Semitic **hag-ab-* ‘to cover, to hide, to obscure’ > Arabic *hağaba* ‘to veil, to cover, to shelter, to seclude, to hide, to conceal, to obscure, to overshadow’; Hebrew *hāyāḇ* [חַיָּב] ‘locust’ (originally ‘locusts covering the sky’); Šheri / Jibbāli *hógób* ‘to outline the shape of a projected structure’, *hótgəb* ‘to wrap and tie cloth around one’s knees and sit cross-legged’; Mehri *həgūb* ‘to outline the shape of a structure (house, pen, etc.) in stones and branches’. Murtonen 1989:174; Klein 1987:207; Zammit 2002:133. Proto-East Cushitic **hagay-* ‘rainy season’ > Kambata *haguu(ha)* ‘dry season’; Burji *hagáy-ee* ‘rainy season’; Saho *hagay* ‘rainy season’; Afar *haagay-* ‘summer’; Galla / Oromo *hag-ay-y-a* ‘wet season’; Somali *hagaa* ‘dry season’; Gidole *haakay-t* ‘rainy season’; Hadiyya *hageyye* ‘rainy season’; Gollango *hakay-te* ‘rainy season’. (Cushitic loans in Ethiopian Semitic: Geez / Ethiopic *hagāy* [ሐጋይ], *hagāy* [ሐጋይ] ‘summer, dry season [January—March]’, [denominative] *hagaya* [ሐገሃ] ‘to spend the summer, to become summer’, *hagayāwi* [ሐገሃዊ] ‘pertaining to summer’; Tigre *hagay* ‘dry season’; Amharic *hagay*, *agay* ‘dry season’ [cf. Leslau 1987:228].) Sasse 1982:89; Hudson 1989:120. (?) Proto-East Cushitic **hagoog-* ‘to cover over’ > Galla / Oromo *hagoog-ad/t-* ‘to cover’; Saho *agoog-* ‘to be covered with cloths, to be draped in garments’; Somali *hagog* ‘cloth draped over the head’; Rendille *ogog-* ‘to cover’. Sasse (1979:39) reconstructs Proto-East Cushitic **hagoog-*; however, considering the more specialized meaning of the Saho and Somali forms, they may be loans, perhaps from Galla / Oromo.

- B. Proto-Indo-European **h₂heg^h-lu-* [**h₂hag^h-lu-*] ‘mist, darkness, cloudy weather’: Greek ἀγλῶς ‘mist, gloom, darkness’; Armenian *aljalj*, *aljamuljk^h* ‘darkness, obscurity’; Old Prussian *aglo* (*u*-stem) ‘rain’. Pokorny 1959:8 **aghl(u)-* ‘dark cloud’; Walde 1927—1932.I:41 **aġhl(u)-*; Mallory—Adams 1997:477 **h_aeghlu-* (*-ġh-* ?) ‘rain’; Boisacq 1950:108; Frisk 1970—1973.I:201—202; Chantraine 1968—1980.I:151; Hofmann 1966:30; Beekes 2010.I:184 **h₂eg^hlu-*; Derksen 2015:555 **h₂eg^hlu-*.
- C. Proto-Altaic **aga* ‘rain, cloudy sky’: Proto-Tungus **aga* ‘rain’ > Manchu *aga* ‘rain’; Spoken Manchu (Sibo) *ahā* ‘rain’; Jurchen *ah-ga* ‘rain’. Proto-Mongolian **agayar* (< **aya-yar*) ‘cloudy sky’ > ‘air, atmosphere’ > Written Mongolian *ayar* ‘air, atmosphere, weather’; Khalkha *ayr*, *ayār* ‘air, atmosphere’; Ordos *agāri* ‘celestial space, the appearance of the sky’; Moghol *jur* ‘cloud’. Starostin—Dybo—Mudrak 2003:273—274 **aga* ‘rain; air’.

Buck 1949:1.62 darkness. Bomhard—Kerns 1994:534—535, no. 388.

721. Proto-Nostratic root **hak^h-* (~ **hək^h-*):

(vb.) **hak^h-* ‘to be mentally sharp, keen’;

(n.) **hak^h-a* ‘wisdom, sound judgment, understanding’

- A. Afrasian: Proto-Semitic **hak-am-* ‘to be mentally sharp, keen; to judge’ > Arabic *hakama* ‘to pass judgment, to express an opinion, to judge; to decide, to give a decision, to pass a verdict, to pass sentence; to sentence, to impose, to inflict (a penalty) on someone; to pronounce a verdict or judgment, to deliver judgment, to rule (in someone’s favor); to adjudicate, to adjudge, to award; to have judicial power, to have jurisdiction, to have authority, to govern, to rule, to dominate, to command, to order; to bridle, to check, to curb’, *hakīm* ‘wise, judicious; wise man, sage; philosopher; physician, doctor’; Hebrew *hāḫam* [חָכַם] ‘to be wise’, *hāḫām* [חָכָם] ‘wise, skillful, shrewd, crafty, cunning’, *hāḫmāh* [חָכְמָה] ‘wisdom, prudence’; Aramaic *hakkīm* ‘wise man’; Ugaritic *hkm* ‘wise’; Akkadian *hakāmu* ‘to know, to understand’ (initial *h-* may be due to West Semitic [Aramaic] influence); Harsūsi *hekōm* ‘to rule, to conquer’; Soqotri *hkem* ‘to judge’; Mehri *həkūm* ‘to aim (a gun) at; to condemn, to rule; to be old’; Geez / Ethiopic *hakama* [ሐክሙ] ‘to treat medically, to be wise’, *hakim* [ሐክም] ‘physician, philosopher, wise man’; Tigre *hakim* ‘physician’; Amharic *hakim* ‘physician’; Harari *hakāma* ‘to judge, to rule; to recite the daily lesson of the Koran to the teacher or the father’, *hukmi* ‘judgment, law’, *hakīm* ‘physician’. The Ethiopian Semitic terms are loans from Arabic. Murtonen 1989:181; Klein 1971:216; Leslau 1963:81 and 1987:228—229; Militarev 2011:70 Proto-Semitic **hkm*; Zammit 2002:146.
- B. Dravidian: Kuṛux *axnā* (*axcas*, *akkhas*) ‘to know, to realize, to experience, to mistake for’, *axkā*, *akkhā* ‘knowledge, experience’; Malto *āge* (*aqqa*) ‘to

know, to understand', *ágre* 'to get accustomed to'. Burrow—Emeneau 1984:4, no. 17.

- C. Proto-Indo-European **h₂ekh-* [**h₂hak^h-*] 'to be mentally sharp, keen': Hittite (nom. sg.) *ha-at-ta-an-za* (< **h₂akt-ant-*) 'intelligent, clever, wise', *hattah^h-* 'to make clever, to instruct', (nom. sg.) *ha-at-ta-a-tar* 'intelligence, (wise) counsel, wisdom'; Gothic *aha* 'mind, understanding', *ahjan* 'to think', *ahma* 'spirit', **ahmateins* 'inspiration', **ahmeins* 'spiritual'; Old Icelandic *ætla* (< Proto-Germanic **axtilōn*) 'to think, to mean, to suppose', *ætlan* 'thought, meaning, opinion'; Old English *eaht* 'council, deliberation, consideration', *eahtian* 'to watch over, to hold council, to deliberate, to consider'; Old Frisian *achte* 'consideration', *achtia* 'to consider'; Old High German *ah^h* 'consideration' (New High German *Acht*), *ahtōn* 'to consider' (New High German *achten*). Puhvel 1984— .3:260—263 **H₁ek-(t)-*; Kloekhorst 2008b:333; Feist 1939:15; Lehmann 1986:11; De Vries 1977:682; Kluge—Mitzka 1967:6 **ok-* 'to think about, to consider'; Kluge—Seebold 1989:8—9 perhaps from **ak-* 'pointed, sharp'. Note: Some of the Indo-European forms cited under Proto-Nostratic **hok^h-* 'sharp point' may belong here instead.

Buck 1949:21.16 judge (vb.).

722. Proto-Nostratic root **hak'-* (~ **hək'-*):

(vb.) **hak'-* 'to spread, to widen, to extend';

(n.) **hak'-a* 'expanse, wide-open space, earth, field'

- A. Proto-Afrasian **hak'-* 'field': Proto-Semitic **hak'-l-* 'field' > Arabic *ḥakl* 'field'; Aramaic *ḥəkal* 'field'; Syriac *ḥaklā* 'field'; Akkadian *eklu* 'field'; Sabaean *ḥkl* 'cultivated land, country, field'; Geez / Ethiopic *ḥakl* [ሐቅል] 'field, plain, desert, wilderness, countryside, district'; Amharic *ḥakl* 'field' (loan from Geez). Leslau 1987:239—240. [Orël—Stolbova 1995:271, no. 1222, **hak^hVL-* 'earth, field'.]
- B. Dravidian: Tamil *akal* (*akalv-*, *akar^hr-*) 'to spread, to widen, to extend; to depart, to go away', *akalam* 'width, extent, expanse, greatness, earth, sky', *akali* 'to broaden out, to enlarge (intr.)', *akaluḷ* 'width, expanse, greatness, earth, town, village, country', *akalvu* 'extent, expanse', *akar^hci* 'breadth, separation, ascetic life', *akar^hru* (*akar^hri-*) 'to widen (tr.), to broaden, to extend; to remove, to expel, to banish', *akar^hal* 'extension', *akavu* (*akavi-*) 'to become long, to lengthen out'; Malayalam *akaluka* 'to become extended, distant; to part, to retire', *akalca* 'separation, distance', *akar^hruka* 'to extend (tr.), to open; to remove; to put away', *akattuka* 'to distend', *akalam* 'breadth, distance', *akala*, *akalē* 'far off, aside'; Kota *agalm* 'width'; Kannaḍa *agal-* (*agald-*) 'to be spacious, extensive; to separate from, to go away', *agala* 'space, width, extension', *agali^hke* 'separation from', *agal^hcu* 'to spread out; to remove', *agundale* 'extensiveness,

greatness', *agunti* 'greatness, vastness'; Tuḷu *agapuni* 'to depart; to separate (tr.), to extend', *agapāvuni* 'to send away, to cause to depart', *agela* 'breadth', *agely* 'to go apart, to widen'; Telugu *agalu* 'to leave, to depart, to be gone (of strength in war, liveliness, etc.)'; (?) Malto *agare* 'to spread, to increase, to become public', *agatre* 'to spread, to distribute'. Burrow—Emeneau 1984:3, no. 8.

- C. Proto-Indo-European **h₁hek'-ro-* [**h₁hak'-ro-*] 'field, plain': Sanskrit *ájra-h* 'field, plain'; Greek *ἀγρός* 'field'; Armenian *art* 'field'; Latin *ager* 'field'; Umbrian *agre* 'field, country'; Gothic *akrs* 'field'; Old Icelandic *akr* 'field, corn-field'; Faroese *akur* 'field'; Norwegian *aaker* 'field'; Swedish *åker* 'field'; Danish *ager* 'field'; Old English *æcer* '(cultivated) field, acre'; Old Frisian *ekker* 'field'; Old Saxon *akkar* 'field'; Dutch *akker* 'field'; Old High German *ackar*, *achar* 'field' (New High German *Acker*). Pokorny 1959:6 **aġ-ro-s* 'field'; Walde 1927—1932.I:37 **aġ-ro-s*; Mann 1984—1987:4 **aġros* 'plain, field', 4 **aġrijos* 'wild, field-', 4 **aġrīnos* 'field-, fruit, crop'; Watkins 1985:1 **agro-* and 2000:1 **agro-* 'field' (oldest form **₂aġro-*); Gamkrelidze—Ivanov 1984.II:694 **Hak'-ro-* and 1995.I:600 **Hak'-ro-* 'unworked field for grazing'; Mallory—Adams 1997:200 **h_aeġros* 'field, pasture'; Mayrhofer 1956—1980.I:23; Boisacq 1950:10 **aġro-s*; Frisk 1970—1973.I:16 **aġros*; Chantraine 1968—1980.I:15; Hofmann 1966:3 **aġ-ro-s*; Beekes 2010.I:16 **h₂eġ-ro-*; De Vaan 2008:29 **h₂eġ-ro-* 'uncultivated field, pasture'; Ernout—Meillet 1979:14—15 **agro-*; Walde—Hofmann 1965—1972.I:22 **aġ-ro-s*; Orël 2003:12 Proto-Germanic **akraz*; Kroonen 2013:18 Proto-Germanic **akra-* 'field'; Feist 1939:33 **aġros*; Lehmann 1986:24 **aġros* 'pasture'; De Vries 1977:4; Falk—Torp 1903—1906.I:11—12; Torp 1919:11; Klein 1971:8 **aġ-ro-s*; Onions 1966:9—10 **agros*; Vercoullie 1898:8; Boutkan—Siebinga 2005:85; Kluge—Mitzka 1967:6—7 **aġro-*; Kluge—Seebold 1989:9 **aġros*; Wodtko—Irslinger—Schneider 2008:267—277 **h₂eġ-*: **h₂aġ-ro-*.

Buck 1949:1.23 plain, field; 8.12 field (for cultivation). Bomhard—Kerns 1994:539—540, no. 396.

723. Proto-Nostratic root **hak'-* (~ **hək'-*):

(vb.) **hak'-* 'to direct, to guide, to command';

(n.) **hak'-a* 'direction, guidance, command, decree; leader, chief, chieftain, ruler, headman'

- A. Proto-Afrasian **hak'-* 'to direct, to guide, to command': Proto-Semitic **hak'-ak'-* 'to direct, to guide, to command, to decree; to establish what is correct, proper, true, legitimate' > Arabic *hakka* 'to be true, to turn out to be true, to be confirmed; to be right, correct; to be necessary, obligatory, requisite, imperative; to be adequate, suitable, fitting, appropriate; to be due; to make something come true, to realize (something, e.g., hope), to

carry out, to carry into effect, to fulfill, to put into action, to consummate, to effect, to actualize, to implement; to produce, to bring on, to yield; to determine, to ascertain, to find out, to pinpoint, to identify; to prove something to be true, to verify, to establish, to substantiate; to confirm, to assert, to aver, to avouch, to affirm (something); to be exact, painstaking, meticulous, careful', *ḥakḥ* 'truth, correctness, rightness', *ḥakḥānī* 'correct, right, proper, sound, valid, legitimate, legal'; Hebrew *ḥāḥak* [חָחַק] 'to decree, to ordain laws; to cut into, to engrave, to inscribe'; Aramaic *ḥāḥak* 'to inscribe; to decree'; Syriac *ḥukḥā* 'rule'; Phoenician *ḥḥk* 'to engrave; to prescribe, to order'; Nabatean *ḥḥk* 'to engrave; to prescribe, to order'; Sabaeen *ḥḥk* 'contract'; Harsūsi *ḥek* 'right, truth'; Sheri / Jibbālī *ḥak* 'right'; Mehri *ḥak* 'right', *ḥək* 'to adjust, to level, to file smooth'; Soqotri *ḥak* 'judgment'; Geez / Ethiopic *ḥakaka* [ሐቀቀ] 'to level off, to fasten, to fix, to make exact by increasing what is little or by diminishing what is much'; Tigre *ḥakḥ* 'right'; Tigrinya *ḥakḥi* 'truth'. Murtonen 1989:194; Klein 1987:230; Leslau 1987:240. Egyptian *ḥq*, *ḥqʿ* 'to rule, to govern, to guide, to direct, to reign', *ḥqʿ* 'ruler, chieftain' (f. *ḥqʿt*), *ḥqʿ-ḥwt* 'village headman'. Hannig 1995:563—564; Faulkner 1962:178; Erman—Grapow 1921:117 and 1926—1963.3:170—173; Gardiner 1957:583.

- B. Proto-Indo-European **h₂hek-* [**h₂hak-*] 'to direct, to guide, to command' (> 'to drive'): Greek *ἄγω* 'to lead, to conduct, to guide, to direct, to command, to rule, to instruct', *ἄγος* 'leader, chief'; Sanskrit *ājati* 'to drive, to propel, to throw, to cast', *ajā-h* 'driver, mover, instigator, leader'; Avestan *azaiti* 'to drive'; Latin *agō* 'to drive'; Old Irish *agid* 'to drive, to lead' (cf. Lewis—Pedersen 1937:334—337, §491; Thurneysen 1946:461); Old Welsh *agit* 'to go'; Old Icelandic *aka* 'to drive (a vehicle or an animal drawing a vehicle); to carry or convey (in a vehicle), to cart'; Armenian *acem* 'to bring, to lead'; Tocharian A *āk-* 'to lead, to drive, to guide'. Rix 1998a:227—228 **h₂eg-* 'to drive'; Pokorny 1959:4—6 **ag-* 'to drive'; Walde 1927—1932.I:35—37 **ag-*; Mann 1984—1987:4 **agō* 'to drive, to lead, to go, to do, to act', 4 **agos* 'drive, lead; driver, leader'; Watkins 1985:1 **ag-* and 2000:1 **ag-* 'to drive, to draw, to move' (oldest form **₂ag-*); Mallory—Adams 1997:170 **h₂eg-* 'to drive'; Mayrhofer 1956—1980.I:23; Boisacq 1950:11 **agō*; Frisk 1970—1973.I:18; Chantraine 1968—1980.I:17—18 **₂eg-*; Hofmann 1966:3 **agō*; Beekes 2010.I:18—19 **h₂eg-*; Ernout—Meillet 1979:15—18 **ag-*; Walde—Hofmann 1965—1972.I:23—24 **ag-*; De Vaan 2008:30—31; Orël 2003:11 Proto-Germanic **akanan*, 11 **akaz*; Kroonen 2013:18 Proto-Germanic **akan-* 'to drive'; De Vries 1977:3 **ag-*; Van Windekens 1976—1982.I:158; Adams 1999:36—37 **h₂eg-*; Wodtko—Irslinger—Schneider 2008:267—277 **h₂eg-*.

Buck 1949:10.64 lead (vb.). Bomhard—Kerns 1994:540, no. 397.

724. Proto-Nostratic root **hal-* (~ **həl-*):
 (vb.) **hal-* ‘to lay waste, to destroy, to kill, to slaughter’;
 (n.) **hal-a* ‘destruction, violence, killing, slaughter’
 Note also:
 (vb.) **xal-* ‘to wear down, to wear out, to weaken; to be worn out, worn down, weakened’;
 (n.) **xal-a* ‘weakness, exhaustion, fatigue, weariness’; (adj.) ‘weak, worn out, tired, exhausted, weary’
- A. Afrasian: Proto-Southern Cushitic **hal-* ‘to cut off’ > Dahalo *haliite* ‘knife’. Ehret 1980:334. East Cushitic: Somali *halaalee-* ‘to circumcise’.
- B. Elamo-Dravidian: Middle Elamite *hal-pu* ‘to kill, to strike down’; Royal Achaemenid Elamite *hal-pi* ‘to die, to slay’, *hal-be-ra* ‘butcher (of cattle)’, *hal-ba* ‘dead’. Dravidian: Naikṛi *aḷaṇ-* ‘to kill’; Kolami *alṇg-* (*alaṇkt-*) ‘to kill’. Burrow—Emeneau 1984:1291, no. 309.
- C. Indo-European: Hittite (3rd sg. pres. mid.) *hal-la-an-ni-ya-at-ta-ri* ‘to lay waste, to ruin, to savage, to ravage’, (nom. sg.) *hal-lu-wa-iš* ‘violence, brawl, altercation, quarrel’, (3rd pl. pres. act.) *hal-lu-u-wa-an-zi* ‘to resort to violence, to brawl, to quarrel; (tr.) to savage, to fight’; Luwian (dat.-loc. sg.) *hal-wa-ti-ya* ‘quarrel’ (?). Puhvel 1984— .3:13—14 **A₂^wel-A₁^w-* and 3:49—51 3rd sg. pres. act. **A₂^wl-n-é-A₁^w-ti*; Kloekhorst 2008b:271—272.
- D. Proto-Altaic **ālV-* ‘to destroy, to kill’: Proto-Tungus **āli-* ‘to crumble (of earth, snow); to kill an animal (after a long hunt)’ > Negidal *āli-w-* ‘to crumble (of earth, snow)’; Udihe *ali-* ‘to kill an animal (after a long hunt)’, *alip-* ‘to become spoiled (of meat)’. Proto-Mongolian **ala-* ‘to kill’ > Written Mongolian *ala-* ‘to kill, to murder, to butcher’, *alayači* ‘killer, executioner, butcher’, *alaldu-* ‘to kill each other, to fight each other’, *alalduyan* ‘slaughter, bloody battle’, *alasi* ‘slaughter (of animals)’, *alaxuvar* (adv.) ‘fatally, mortally’; Khalkha *ala-* ‘to kill’; Buriat *ala-* ‘to kill’; Kalmyk *al-* ‘to kill’; Ordos *ala-* ‘to kill’; Moghol *olā-*, *āla-* ‘to kill’; Dagur *ala-* ‘to kill’; Dongxiang *ala-* ‘to kill’; Shira-Yughur *ala-* ‘to kill’; Monguor *ala-* ‘to kill’. Proto-Turkic **Alk-* ‘to finish; to destroy; (refl.) to perish, to come to an end, to be exhausted’ > Old Turkic (Orkhon, Old Uighur) *alq-* ‘to finish, to destroy’, (refl.) *alq-in-* ‘to perish, to be exhausted, to come to an end’; Karakhanide Turkic *alq-* ‘to finish, to destroy’, (refl.) *alq-in-* ‘to perish, to be exhausted, to come to an end’, *alq-iš-* ‘to destroy each other’; Turkish (dial.) *alk-* ‘to finish; to destroy; (refl.) to perish, to come to an end, to be exhausted’, (Old Osmanli) *alk-iš-* ‘to destroy (many)’; Kirghiz *alq-in-* ‘to weaken; to rage’; Kazakh *alq-in-* ‘to get short of breath, to chafe’. Starostin—Dybo—Mudrak 2003:290—291 **ālV* ‘to destroy, to kill’.
- E. Proto-Chukchi-Kamchatkan **əlvə-* ‘to flense’: Alyutor *alv(ə)-* ‘to flense’; Chukchi *əlvə-* ‘to flense (carcass)’; Kamchadal / Itelmen *əlv(ə)-s* ‘to flense’ (with *-ətv-* ?). Fortescue 2005:33.

Sumerian *ha-lam* ‘ruin, destruction’, *ha-lam* ‘to destroy, to ruin, to devastate’.

Buck 1949:4.76 kill; 11.27 destroy.

725. Proto-Nostratic root **hal-* (~ **həl-*):

(vb.) **hal-* ‘to wash, to rinse, to clean’;

(n.) **hal-a* ‘the act of washing, cleaning’; (adj.) ‘washed, clean(ed)’

A. Proto-Afrasian **hal-* ‘to wash, to rinse, to clean’: Proto-Semitic **hal-al-* ‘to wash, to rinse, to clean’ > Akkadian *ellu* ‘clean, pure; holy, sacred’; Imperial Aramaic *hll* ‘to wash, to rinse’; Syriac *həlal* ‘to wash away, to cleanse, to purify’. East Cushitic: Somali *hal-* ‘to wash’. Orël—Stolbova 1995:272, no. 1226, **hal-* ‘to wash’. (?) Proto-Southern Cushitic **hel-* ‘to clean’ > Asa *hilus-* ‘to strain, to filter’. Ehret 1980:335. Semitic loans in: Hittite (abl. sg.) *ha-la-la-za* ‘clean’; Luwian (nom. sg.) *ha-la-li-iš* ‘clean’ (cf. Puhvel 1984— .3:13; Laroche 1959:38).

B. Dravidian: Tamil *alampu* (*alampi-*) ‘to wash, to rinse’, *alacu* (*alaci-*) ‘to rinse’, *alaicu* (*alaici-*) ‘to wash, to rinse’, *alaittal* ‘to wash clothes by moving them about in water’; Malayalam *alakkuka* ‘to wash clothes by beating’, *alakku* ‘washing’, *alampuka* ‘to shake clothes in water’; Kannada *alambu*, *alumbu*, *alabu*, *alubu* ‘to rinse, to wash’, *ale* ‘to wash’, *alasu* ‘to shake or agitate in water (as a cloth, vegetables, etc., for cleansing)’; Tulu *alambuni* ‘to wash’, *alumbuni*, *lumbuni* ‘to plunge, to wash, to rinse’; Telugu *alamu* ‘to smear, to wash’. Burrow—Emeneau 1984:24, no. 246.

Sumerian ^{HA-AL}*hal* ‘purity, pureness; cleanness, cleanliness’.

Buck 1949:9.36 wash. Dolgopolsky 2008, no. 2578, **χalV* ‘(to be/become) clean’.

726. Proto-Nostratic root **hal-* (~ **həl-*):

(vb.) **hal-* ‘to lower’;

(n.) **hal-a* ‘that which is beneath or under; lower part, underpart’; (adj.) ‘lower’

A. Afrasian: Highland East Cushitic: Burji *hal-* ‘to fall (down), to set (of sun)’; Sidamo *halalla*, *halaalla* ‘lowland’, *halaalla* ‘lowland, desert’, *halalla* ‘plain’, *halliyyá* ‘deep’, *halaʔl-* ‘to be wide’, *halaʔl-iš-* ‘to widen’, *halaʔlado* ‘wide’. Hudson 1989:196 and 369; Sasse 1982:90.

B. Proto-Uralic **ēla* ‘lower, under; below, underneath; that which is beneath or under, lower space, underpart’: Finnish *ala* ‘area, territory, space’, *alla* (< **alna*) ‘being under’, *ala-*, *ali-* ‘sub-, lower’, *alta* ‘from beneath (an object)’, *alas*, *ales* ‘down’; Lapp / Saami *-vuolle* ‘that which lies beneath’, *vuollē-* ‘lower, under-, sub-’, *vuollen* ‘underneath’, *vuol’dē* ‘under; from

beneath'; Mordvin *alo* 'under, underneath', *aldo* 'up from underneath, under'; Cheremis / Mari *ül-*, *ülə* 'that which is beneath, sub-', *ülhə* 'underneath, (being) under'; Votyak / Udmurt *ul* 'underpart, lower space, that which is beneath', *ulyñ* 'under, underneath', *ullañ* '(going) underneath'; Zyrian / Komi *-ul* 'space under something', *ulyñ* '(being) under', *ul-* 'sub-, lower', *ulyś* 'from a low place', *ullañ* 'down, downwards', *ulö* '(going) under'; Vogul / Mansi *jol-* 'sub-, lower part', *jolan* '(being) under', *joləl* 'from the underside'; Ostyak / Xanty *yl*, (Southern) *it* 'lower, sub-, lower part'; Hungarian *al*, *alj* 'that which is beneath, underpart', *al-* 'sub-', *alatt* '(being) under', *alól*, *alúl*, *alul* 'from beneath, beneath'; Yurak Samoyed / Nenets *ɲyl* 'floor, ground, base', *ɲylna* 'below, underneath', *ɲyld* 'from below'; Tavgi Samoyed / Nganasan *ɲilea-* 'that which is below', *ɲileanu* '(being) under', *ɲileada* 'from below', *ɲilinu* 'below, underneath', *ɲilida* 'from below'; Yenisei Samoyed / Enets (Hantai) *iðo*, (Baiha) *iro* 'ground', *iðone* '(being) under', *iðoro* 'from below'; Selkup Samoyed *yl* 'ground, base', *ylgan*, *ylogan* 'from below', *yllä* 'downwards'; Kamassian *ilgän* 'below', *ilde* 'downwards'. Collinder 1955:2—3, 1960:405 **ala*, 1965:136, and 1977:24—25; Rédei 1986—1988:6 **ala*; Décsy 1990:97 **ala* 'below, beneath'; Sammallahti 1988:536 **ilä* 'under'; Aikio 2020:52—53 **ēla-* 'place under or below'; Janhunen 1977b:24 **ilš*; Zhivlov 2023:160 **ēla* 'under, below' (spatial noun). Yukaghir (Southern / Kolyma) *a:l-*, *a:n-*, *a:-* 'below, under', *alyudo:-* 'lowest, youngest', *alyu-* 'below, down', *albo:ži-* 'steep', *albə-* 'foot of a mountain'; (Northern / Tundra) *al-* 'below, under', *-albe*, *-alba* 'bottom', *alunban-* 'low', *alyuučii-* 'to go down, to abate'. Nikolaeva 2006:99—100.

- C. Proto-Altaic **ale* 'below, lower': Proto-Turkic **āl-* 'lower side, below; being below, lower' > Old Turkic (Old Uighur) *altin* 'being below, lower'; Karakhanide Turkic *altin* 'being below, lower', *alt* 'lower side, below'; Turkish *alt* 'lower or underpart (of a thing); underside, bottom'; Gagauz *alt* 'lower side, below'; Azerbaijani *alt* 'lower side, below'; Karaim *alt* 'lower side, below'; Tatar (dial.) *alt* 'lower side, below'; Kirghiz *ald(i)* 'lower side, below'; Sary-Uighur *altı* 'lower side, below'; Khakas *altı* 'lower side, below'; Oyrot (Mountain Altai) *ald*, *altı* 'lower side, below', *altıyı* 'being below, lower'; Tuva *a'ldi* 'lower side, below'; Chuvash *old(ě)* 'gusset'; Yakut *alın* 'lower side, below'. Starostin—Dybo—Mudrak 2003:285—286 **ale* 'below, lower'.

(?) Sumerian *halib* 'underworld'.

Buck 1949:10.23 fall (vb.); 12.32 low. Greenberg 2002:175—176, no. 406, **ala* 'under'; Hakola 2000:19, no. 21.

727. Proto-Nostratic root **halʷ-* (~ **həʷ-*):(vb.) **halʷ-* ‘to grow, to be strong’;(n.) **halʷ-a* ‘health, strength, power’; (adj.) ‘healthy, strong, powerful; grown, great, large’

- A. Proto-Afrasian **hal-* ‘to grow, to be strong’: Proto-Semitic **hal-am-* ‘to grow, to be strong’ > Arabic *ḥalama* ‘to attain puberty’; Hebrew *ḥālam* [חָלַם] ‘to be healthy, strong’; Syriac *ḥəlīm* ‘healthy, firm’. Klein 1987:219; Murtonen 1989:183. Proto-Semitic **hal-ak-* ‘to grow (up)’ > Geez / Ethiopic *ḥalka* [ሐልቀ] ‘to grow, to grow up, to increase’. Leslau 1987:230.
- B. Dravidian: Tamil *aḷ* ‘strength, firmness’; Kannaḍa *aḷa*, *aḷavi*, *aḷavu*, *alavu* ‘power, strength, force, ability, possibility, practicability’; Telugu *alavi* ‘power, ability, possibility, practicability’, *alavu* ‘power, ability, strength, exertion’, *lāvu* ‘(n.) strength, power, ability, bigness, fatness, corpulence, robustness; (adj.) big, large, stout, corpulent, robust’; Kolami *la-v* ‘fat’; Parji *lāv* ‘strength’; Gondi *lāv* ‘strength, force’; Koṇḍa *alvi* ‘energy, stamina’, *āl* ‘energy, stamina, endurance’, *lāvu* ‘much’. Burrow—Emeneau 1984:27—28, no. 291.
- C. Proto-Indo-European **h₂hel-* [**h₂hal-*] ‘to grow, to be strong’: Latin *alō* ‘to nourish, to support’, *altus* ‘grown, great, high’, *alēscō* ‘to grow up’; Old Irish *alim* ‘to rear’; Gothic *alan* ‘to grow’, *alds* ‘age, life’, *alpeis* ‘old’, **aldōmō* ‘old age’; Old Icelandic *ala* ‘to bear, to give birth to, to beget, to bring up, to rear’, *aldr* ‘age, lifetime’, *öld* ‘time, age’; Old English *alan* ‘to nourish, to produce’, *eald* ‘old’, *ealdor* ‘life, vitals; eternity’, *eal(d)dōm* ‘old age’, *ield(o)* ‘period, age (of the world); time of life, age; old age’; Old Frisian *ald* ‘old’; Old Saxon *ald* ‘old’, *eldī* ‘age’; Dutch *oud* ‘old’; Old High German *alt* ‘old’ (New High German *alt*), *altī*, *eltī* ‘age’ (New High German *das Alte* ‘the old [state of affairs]’); Greek ἄλθομαι ‘to become whole and sound’, ἄν-αλ-τος ‘insatiable’, ἀλθαίνω ‘to heal’, ἀλδαίνω ‘to make to grow’. Rix 1998a:233—234 **h₂el-* ‘to nourish, to rear’; Pokorny 1959:26—27 **al-* ‘to grow’; Walde 1927—1932.I:86—87 **al-*; Mann 1984—1987:14 **aldh-* (?), 16 **alō*, **aljō* ‘to rear, to breed, to grow’, 17 **altos*, *-jos* ‘high; height, fortress, sacred grove’; Watkins 1985:2 **al-* and 2000:3 **al-* ‘to grow, to nourish’ (suffixed [participial] form **al-to-* ‘grown’); Mallory—Adams 1997:258 **hael-* ‘to grow’; Boisacq 1950:41 and 60; Frisk 1970—1973.I:65, I:72, and I:102; Hofmann 1966:11 **al-d-*, **al-dh-*; **al-* and 18; Chantraine 1968—1980.I:55, I:60, and I:84 **al-*; Beekes 2010.I:66—67 **h₂el-*; Ernout—Meillet 1979:23—24; Walde—Hofmann 1965—1972.I:31—32; De Vaan 2008:35; Orël 2003:12 Proto-Germanic **alanan*, 13 **aldaz*, 13—14 **aldiz*, 14 **aldīn*, 14 **aldjanan*; Kroonen 2013:19 Proto-Germanic **alan-* ‘to grow up, to rear’, 20 **alda-* ‘(grown) old’, 20 **aldi-* ‘age’, and 21 **aldra-* ‘age, life(span)’; Lehmann 1986:25 **al-* ‘to grow, to nourish’, 26 **al-+ti-*, and 29—30 **al-+to-*; Feist 1939:34, 35, and 40 **altós*, **áltjos*; De Vries 1977:4—5, 5, and 686

**altjo-*, **alti-*, **alto-*; Onions 1966:625—626; Klein 1971:511 **al-* ‘to grow, to nourish’; Boutkan—Siebinga 2005:14; Hoad 1986:322; Kluge—Mitzka 1967:16—17; Kluge—Seebold 1989:22 **al-*.

Buck 1949:4.81 strong, mighty, powerful; 4.83 well; health; 12.53 grow (= increase in size); 14.15 old. Bomhard—Kerns 1994:529—530, no. 380.

728. Proto-Nostratic (n.) **halv-a* ‘hole, hollow, cavity’:

- A. Dravidian: Tamil *alai* ‘anthill, hole in the ground, hollow in a tree, cave’; Malayalam *ala* ‘hole (in trees, in the ground)’, *allāppu* ‘hole, hollow’; Beṭṭa Kuruba *ale* ‘hole’; Kota *al* ‘cave’; Toda *olb* ‘animal’s den, cave’; Telugu *lāga* ‘hole, burrow’; Kuṛux *alap* ‘hollow place underground, cavern’, *lātā* ‘hole, cavity, den’. Burrow—Emeneau 1984:29, no. 308.
- B. Proto-Indo-European **h₂hel-wo-* [**h₂hal-wo-*] ‘hollow, cavity’: Latin *alvus* ‘belly, womb’, *alveus* ‘a hollow, cavity’; Hittite (gen. sg.) *hal-lu-wa-aš* ‘hollow, pit’, (gen. sg.) *hal-lu-u-wa-aš* ‘hollow, deep’, (denominative verb, 3rd sg. pret. act.) *hal-lu-wa-nu-ut* ‘to put down (deep), to lower, to let deteriorate’. Pokorny 1959:88—89 **u-lo-s* (**ēu-l-*) ‘pipe, tube; a hollow, elongated cavity’; Walde 1927—1932.I:25—26 **aulo-s* (: **ēul-*); Mann 1984—1987:18 **aluos*, *-ios*, *-iə* ‘hollow, channel, cavity’; Watkins 1985:4 **aulo-* and 2000:6 **aulo-* ‘hole, cavity’ (variant [metathesized] form **alwo-*); Mallory—Adams 1997:96 **h₂eluos* ~ **h₂eulos* ‘elongated cavity, hollow’; Puhvel 1984— .3:47—49; Ernout—Meillet 1979:36; Walde—Hofmann 1965—1972.I:34—35 **aul-*, **auel-*; De Vaan 2008:25 **h₂eulo-* ‘tube, belly’. Not related to: Greek αὐλός ‘any tube or pipe; flute’, αὐλὼν ‘a hollow way, defile, glen; a canal, aqueduct, trench; a channel, strait’; Lithuanian *aũlas* ‘top (of a boot)’, *aulỹs* ‘beehive’; Bulgarian *úlej* ‘beehive’; Norwegian (dial.) *aul*, *aule* ‘pipe’. In view of Hittite (nom. sg.) *a-ú-li-iš* ‘tube-shaped organ in the neck, throat (?)’, windpipe (?), without initial *a*-coloring laryngeal, the Greek, Slavic, Baltic, and Germanic forms, together with the Hittite, must be derived from Proto-Indo-European **hewlo-s* [**hawlos*] (traditional **h₂eulo-s*) ‘pipe, tube’ and, by extension, ‘any tube-shaped object’. Mann 1984—1987:42 **aulos*, *-ios* ‘hollow, channel’; Frisk 1970—1973.I:186—187; Chantraine 1968—1980.I:140—141; Boisacq 1950:101; Hofmann 1966:28; Klockhorst 2008b:229—230; Orël 2003:29 Proto-Germanic **aulaz*; Kroonen 2013:42 Proto-Germanic **aula-* ~ **eula(n)-* ‘stalk (of angelica)’; Torp 1919:9; Shevelov 1964:241; Fraenkel 1962—1965.I:25—26; Smoczyński 2007.1:34 **h₂eu-l-*; Derksen 2015:20 **h₂eul-*.

Buck 1949:12.75 hollow (= cavity); 12.85 hole.

729. Proto-Nostratic root **ham-* (~ **həm-*):(vb.) **ham-* ‘to be sharp, sour, bitter, acrid’;(n.) **ham-a* ‘any sharp-tasting, sour, bitter, or acrid foodstuff’; (adj.) ‘sharp, sour, bitter, acrid’

- A. Proto-Afrasian **ham-* ‘to be sharp, sour, acid’: Proto-Semitic **ham-atʔ-* ‘to be sharp, sour, acid’ > Biblical Hebrew *hāmēš* [ʔḥmēš] ‘that which is sour, leavened’, *hāmaš* [ʔḥmāš] ‘to be sour, leavened’; Aramaic *hāmaš* ‘to be sour, salty’; Ugaritic *hms* ‘vinegar’; Akkadian *emšu* ‘sour’; Arabic *hamuḍa* ‘to be or become sour’; Ḥarsūsi *hāmed* ‘sour’; Šheri / Jibbāli *hamz* ‘yogurt (sour milk) borrowed to start the butter-making process’; Mehri *hamūz* ‘to make butter, to shake milk for butter’, *hamz* ‘yogurt’; Amharic *homtaṭṭa* ‘sour’. Murtonen 1989:186—187; Klein 1987:222. Egyptian *hmṯ* ‘salt’; Coptic *hmu* [ḥmoy] ‘salt’. Hannig 1995:532 (*hmṯyt*); Faulkner 1962:170; Gardiner 1957:581; Erman—Grapow 1921:110 and 1923—1926.3:93—94; Vycichl 1983:299; Černý 1976:283. Cushitic: Beja / Beḍawye *hami-* ‘to be sharp, acid’. Reinisch 1895:118. West Chadic **ham-* ‘salt’ > Fyer *ʔama* ‘salt’. Central Chadic **χwam-* > **χam-* ‘salt’ > Musgu *həm-* ‘salt’. Orël—Stolbova 1995:273, no. 1231, **ham-* ‘salt’; Ehret 1995:370, no. 748, **ham-* ‘to spoil’ (Semitic, Egyptian innovation: ‘to spoil’ > ‘to sour’).
- B. Proto-Indo-European **h₂hem-* [**h₂ham-*]/**h₂hom-* ‘sharp, sour, bitter, acrid’: Sanskrit *amlá-h*, *ambla-h* ‘sour, acid’; Pāli *ambila-* ‘sour’; Maithili *āmil* ‘acidity, conserve of dried mango chips’; Marathi *āb*, *āb* ‘an acid obtained by spreading in the evening a cloth over flowering plants of *Cicer arietinum*’, *ābhē* ‘to become sour’; Hindi *ambat* ‘sour’; Bengali *āmbal* ‘sour, acid, acidity’; Old Icelandic *apr* (< **appr* < **ampar*) ‘hard, sharp; sad, despirited’; Swedish *amper* ‘bitter, sharp, astringent, pungent, acrid, acrimonious’; Middle Dutch *amper* ‘sour, bitter, harsh’. Perhaps also: Sanskrit *āmá-h* ‘raw, uncooked’; Greek ὠμός ‘raw’; Armenian *hum* ‘raw’; Latin *amārus* ‘bitter’. Pokorny 1959:777—778 **om-* ‘raw, coarse, bitter’; Walde 1927—1932.I:179 **omo-*, **ōmo-* ‘raw (bitter, sharp)’; Mann 1984—1987:18 **am-* ‘bitter’, 257 **amos* ‘raw’, 257 **amros* (**aməros*, **ambros*, **mros*) ‘sour, bitter’, 875 **ōmos* (**amos*, **ōʔmos*) ‘raw, crude, unripe, uncooked’; Watkins 1985:46 **om-* and 2000:60 **om-* ‘raw; sharp-tasting’ (suffixes form **om-ro-*); Mallory—Adams 1997:478 **h₂omós* ~ **h₂ōmós* ‘raw, uncooked’; Boisacq 1950:1082; Chantraine 1968—1980.II:1301—1302 **ōmó-*; Frisk 1970—1973.II:1149 **ōmós*; Beekes 2010.II:1680 **HeHmo-*; Hofmann 1966:430 **ōmo-*; Mayrhofer 1956—1980.I:45, I:46, and I:77; Winter 1965a:102; Walde—Hofmann 1965—1972.I:35 **am-ro-*; De Vaan 2008:37 **h₂h₃m-ro-* (?), Sanskrit *āmá-h* ‘raw, uncooked’, Greek ὠμός ‘raw’ < **h₂eh₃mo-*; Ernout—Meillet 1979:25; Orël 2003:17 Proto-Germanic **ampraz*; Kroonen 2008:25 Proto-Germanic **ampra-* (< **Hom-ro-*); De Vries 1977:11; Vercoulie 1898:11; Wodtko—Irslinger—Schneider 2008:202—204 **Hem-* (?).

- C. (?) Proto-Chukchi-Kamchatkan **(c)əmja-* ‘bitter’: Chukchi *nə-cəmja-qen*, *cəmja-lʔən* ‘bitter, unpleasant to taste’; Kerek *n-əmijə-Xi* ‘bitter’; Koryak *n-əmja-qen* ‘bitter, salty’; Alyutor *n-əmja-qin* ‘bitter, salty’; Kamchadal / Itelmen *əmc’-laX* ‘bitter’. Fortescue 2005:341; Mudrak 1989b:92 **ʔəmja-* ‘bitter’.

Buck 1949:15.36 salt; 15.37 bitter; 15.38 acid, sour. Möller 1911:8—9; Bomhard—Kerns 1994:532—533, no. 385. Slightly different etymology in Dolgopolsky 2008, no. 2587, **XomV* ‘raw, sour, inedible’.

730. Proto-Nostratic root **ham-* (~ **həm-*):

(vb.) **ham-* ‘to become still, quiet, tranquil; to rest, to settle down, to remain, to abide’;

(n.) **ham-a* ‘abode, resting place; stillness, tranquility’; (adj.) ‘seated, settled’

- A. Afrasian: Egyptian *hmzi* ‘to sit, to sit down; to dwell’, *hmzt* ‘seat’ (in the sense of ‘rank’ or ‘position’), *hmz m* ‘to dwell in, to occupy a place’, *hmzw* ‘sloth’. Hannig 1995:533—534; Erman—Grapow 1921:110 and 1926—1963.3:96—98; Faulkner 1962:170; Gardiner 1957:581.
- B. Dravidian: Tamil *amar* ‘to abide, to remain, to become tranquil, to rest, to be deposited (as a sediment), to become close and hard (as sand by rain), to be engaged (as a house), to become established (as in a work)’, *amarttu* (*amartti-*) ‘to make quiet, to restrain, to engage (as a house, servant), to establish (as one in life)’, *amarvu* ‘abode’, *amarikkai* ‘quietness, tranquility’, *amai* (-v-, -nt-) ‘to become still, quiet; to subside, to be satisfied, to acquiesce; to be settled; to be fixed up; to abide, to remain’, *amai* (-pp-, -tt-) ‘to cause to be still, to be patient, to control’, *amaiti* ‘calmness, humility’, *amaivan* ‘a sage’, *amaivu* ‘rest’; Malayalam *amaruka* ‘to subside, to settle, to be seated, to rest on; to be allayed, calmed, quiet’, *amaral* ‘abating of wind or fire, peace’, *amarcca* ‘calmness, self-government’, *ameyuka* ‘to be subject, to agree’, *amekka* ‘to subject, to join, to rule’; Tuḷu *amaruni* ‘to become quiet, calm; to settle’, *amapuni* ‘to quiet’. Burrow—Emeneau 1984:16, no. 161.
- C. Proto-Uralic **am3-* ‘to sit’: Ostyak / Xanty (Vah) *aməs* ‘to sit’, (Demyanka) *oməs-* ‘to sit; to be, to stand’, (Obdorsk) *aməs-* ‘to sit, to be seated, to place’; (?) Vogul / Mansi (Tavda) *oon-* ‘to sit’, *ont-* ‘to be seated’; Yurak Samoyed / Nenets *ḡaamćo-* ‘to sit’, *ḡaamtaa-* ‘to be seated’; Yenisei Samoyed / Enets (Hantai) *addu-* ‘to sit’, (Baiha) *ađi-*, *addo-* ‘to sit’, *adde-* ‘to be seated’; Tavgi Samoyed / Nganasan *ḡomtṭuṭu-* ‘to sit’, *ḡomtṭuṭa-* ‘to be seated’; Selkup Samoyed (Taz) *aamta-* ‘to sit’, (Ket) *aamda-* ‘to sit’, *omte-* ‘to be seated’, (Tym) *amte-* ‘to sit’; Kamassian *amna-* ‘to sit’, *amnoo-* ‘to be seated; to live, to dwell’. Rédei 1986—1988:8—9 **am3-*; Décsy 1990:97 **ama-* ‘to sit’; Janhunen 1977b:17—18 **āmtā-*; Aikio 2020:15 **amV-* ‘to sit’. Yukaghir (Southern / Kolyma)

amdet- ‘to lay down’, *amdə-* ‘to die’, *amdiḵə* ‘bedding’, *amdi-* ‘to spread under, to lay under; to prepare’. Nikolaeva 2006:102.

- D. Proto-Altaic **āmV-* ‘to be quiet, to sleep’: Proto-Tungus **ām-* ‘to sleep; to be sleepy’ > Evenki *āme-* ‘to be sleepy’; Lamut / Even *āmol-* ‘to be sleepy’; Negidal *āma-* ‘to be sleepy’; Manchu *amga-/amḵa-* ‘to sleep’, *amgana-* ‘to go to sleep’; Spoken Manchu (Sibo) *aməhə-* ‘to sleep’; Ulch *amasī-* ‘to be sleepy’; Oroch *āma-* ‘to be sleepy’; Nanay / Gold *āmalo-*, *āmasī-* ‘to be sleepy’; Oroch *āma-si-* ‘to be sleepy’; Udihe *amahi-* ‘to be sleepy’. Proto-Mongolian **amu-*, **ami-* ‘(vb.) to rest; to be or become quiet; (n.) peace, rest’ > Written Mongolian *amura-*, *amara-* ‘to rest, to relax; to feel contentment or joy, to be relieved’, *amu-* ‘to rest, to relax’, *amur* ‘peace, quiet, calm, rest; leisure, pleasure; good health, well-being; easy, not difficult; peacefully, quietly’, *amuyūlan* ‘peace, quietude, well-being, happiness; quiet, calm, peaceful, peaceable’, *amurayul-* ‘to let rest, to calm, to give comfort, to console’, *amuralta* ‘rest, repose, relaxation; vacation’, *amurli-* ‘to be or become quiet, calm, gentle, or blissful; to rest’, *amurḵan* ‘calm(ly), peaceful(ly), easy (easily), simple (simply)’, *amurḵi-* ‘to calm, to quiet down; to rest, to relax; to stop worrying’, *amuski-* ‘to take a rest’; Khalkha *amar-*, *amgal* (< **amu-gal*) ‘peace, rest; easy’, *amra-* ‘to rest’; Buriat *amar* ‘peace, rest’, *amar-* ‘to rest’, *amgalan(g)* ‘peaceful’; Kalmyk *amr*, *amγūlan* ‘peace, rest’, *amr-* ‘to rest’, Ordos *am*, *amur*, *amūlan*, *amuyūlan* ‘peace, rest’, *amara-* ‘to rest’; Dagur *amar(a)-* ‘to rest; to be or become quiet’, *amal*, *amūl* ‘peace, rest’; Shira-Yughur *amura-* ‘to rest’, *amar* ‘peace, rest’; Monguor *ḵamurā-*, *ḵamburā-* ‘to rest, to relax’. Poppe 1955:54, 198, and 279. Proto-Turkic **ām-* (vb.) to love, to desire, to rejoice; to be quiet; (adj.) beloved; gentle, quiet’ > Old Turkic (Old Uighur) *amul*, *amīl* ‘gentle, quiet’, *amraq* ‘beloved’, *amīr-*, *amran-* ‘to love, to desire, to rejoice’, *amrīl-* ‘to be quiet’; Karakhanide Turkic *amul* ‘gentle, quiet’, *amraq* ‘beloved’, *amīrt-* ‘to calm’, *amrīl-* ‘to be quiet’; Turkish (dial.) *imīl*, *umul* ‘gentle, quiet’; Uighur *amraq* ‘beloved’; Kirghiz *amīz* ‘honor’; Sary-Uighur *amīr* ‘gentle, quiet’, *amīra-* ‘to be quiet’; Khakas *amīr* ‘gentle, quiet’, *amīra-* ‘to be quiet’; Oyrot (Mountain Altai) *amīr* ‘gentle, quiet’, *amīra-* ‘to be quiet’; Tuva *amīr* ‘gentle, quiet’, *amīra-* ‘to be quiet’, *amīraq* ‘politeness’; Chuvash *ṁṁmṁr* ‘quiet and gray (weather)’; Yakut *amarax*, *amīrax* ‘compassionate’; Dolgan *amarak* ‘compassionate’. Starostin—Dybo—Mudrak 2003:298—299 **āmV* ‘to be quiet, to sleep’.
- E. (?) Chukchi-Kamchatkan: Proto-Chukotian **æmtənæv-* ‘to sleep well’ > Chukchi *emtānew-* ‘to have a good sleep’; Koryak *emtānev-* ‘to have a good sleep’. Fortescue 2005:34.

Buck 1949:4.61 sleep (vb.; sb.); 12.13 sit; 12.19 quiet (adj.).

731. Proto-Nostratic root *han- (~ *hən-):

(vb.) *han- ‘to show favor; to be gracious, affectionate, tender’;

(n.) *han-a ‘affection, tenderness, favor, graciousness’

- A. Proto-Afrasian *han- ‘to show favor; to be gracious, affectionate, tender’: Proto-Semitic *han-an- ‘to show favor; to be gracious, affectionate, tender’ > Hebrew *hānan* [חָנַן] ‘to show favor, to be gracious’, *hēn* [חֵן] ‘favor, grace, charm’; Aramaic *hənan* ‘to be gracious’; Phoenician *hnn* ‘to show favor’; Ugaritic *hnn* ‘to be gracious, to show favor’; Akkadian *enēnu* ‘to seek grace’; Eblaite *en-na* ‘to be gracious’, *en-ut* ‘grace’; Arabic *hanna* ‘to feel tenderness, affection, sympathy; to pity; to feel compassion (for)’, *hanna* ‘sympathy, pity, compassion, commiseration’, *hanān* ‘sympathy, love, affection, tenderness; commiseration, compassion, pity’. Klein 1987:223 and 224—225; Murtonen 1989:199; Zammit 2002:150.
- B. Elamo-Dravidian: Middle Elamite *ha-ne/i-* ‘to love’. Dravidian: Tamil *anpu* ‘love, attachment, friendship, benevolence, devotion, piety’, *anpan* ‘friend, husband, lover, devotee’, (?) *aṇi* ‘love’, *āṇam* ‘friendship, love, affection’, *āṇu* ‘attachment, affection’; Malayalam *anpu*, *ampu* ‘love, affection, trust, devotion’, *anpan* ‘lover, friend, husband’, *anpuka* ‘to be fond of, connected with’; Kannada *anpu*, *anpita* ‘relationship, friendship’, *ammu* ‘(vb.) to be willing, to wish, to desire; (n.) desire’. Burrow—Emeneau 1984:31, no. 330.
- C. Proto-Indo-European *h₂en-s- [/*h₂han-s-]/*h₂h₂s- ‘to be gracious, to show favor’: (?) Greek ἀπ-ηνής ‘harsh, rough, hard, unfriendly (of persons)’, προσ-ηνής ‘gentle, kind, soft’; Gothic *anst* ‘joy, thanks, favor, grace’, *ansteigs* ‘gracious’; Old Icelandic *ást* ‘affection, love’, *unna* (< *unn- < *unz- < *h₂h₂s-) ‘to love; not to (be)grudge, to grant, to allow, to bestow’; Old English *ēst* (< *ans-ti-) ‘favor, grace, bravery’, *unnan* ‘to grant; not to (be)grudge, to wish (a person to have something)’, *unna*, *unne* ‘favor, approval, permission, consent’; Old Frisian *enst* ‘favor’; Old Saxon *anst* ‘favor’; Old High German *anst* ‘joy, gratitude, favor’, *unnan*, *g(i)unnan* ‘not to (be)grudge, to allow, to grant, to permit’ (New High German *gönnen*), *gunt* ‘favor’, *abunst* ‘envy’; Middle High German *ensten* ‘to be kind’. Pokorny 1959:47 *ans- ‘well-inclined’; Walde 1927—1932.I:68 *ans-; Mallory—Adams 1997:198 (?) *h₄ens- ‘to be gracious to, to show favor’; Boisacq 1950:69; Frisk 1970—1973.I:121; Hofmann 1966:20; Chantraine 1968—1980.I:97; Beekes 2010.I:116 and II:1239; Kroonen 2013:30 Proto-Germanic *ansti- ‘love, favor’; Orël 2003:21 Proto-Germanic *anstiz, 21 *anstjanan, 435 *unnanan; *unnum (< *unz-nu-m); Feist 1939:53; Lehmann 1986:39; De Vries 1977:16 and 635; Kluge—Mitzka 1967:265 and 277; Kluge—Seebold 1989:272 and 282.
- D. Yukaghir (Southern / Kolyma) *anurə-* ‘to love, to like’. Nikolaeva 2006: 111.

Buck 1949:16.27 love (sb.; vb.); 16.35 pity (sb.). Bomhard—Kerns 1994:533, no. 386. Different (false) etymology in Dolgopolsky 2008, no. 2594, **χinV* ‘to be happy/glad, to love’.

732. Proto-Nostratic root **han-* (~ **hən-*):

(vb.) **han-* ‘to bend, to curve, to twist’;

(n.) **han-a* ‘bend, curve, twist’

A. Proto-Afrasian **han-* ‘to bend, to curve, to twist’: Proto-Semitic **han-* *aw/y-* ‘to bend, to curve, to twist; to bend down’ > Hebrew *hānāh* [חָנָה] ‘to decline, to bend down’; Aramaic *hənā* ‘to bend, to incline toward, to aim at, to reach’; Arabic *hanā* ‘to bend, to curve, to twist, to turn; to lean, to incline’; Ḥarsūsi *henō* ‘to bend’; Šheri / Jibbāli *hānī* ‘to bend, to twist’; Mehri *hənū* ‘to bend’. Klein 1987:223—224. Proto-Semitic **han-ak-* ‘to bend, to curve, to twist; to lean, to incline’ > Akkadian *unḫu* (Old Akkadian *anḫum* ?) ‘ring’; Geez / Ethiopic *hanḫaḫa* [አንጻጻ] ‘to be inclined, to slip, to slide, to be prone (to any feelings), to be in anxiety, to be fearful, to fear, to be pampered, to be capricious, to desire something that is beyond one’s capacity’, *hanḫāke* [አንጻቄ] ‘inclination, being prone to, being pampered, being capricious; anxiety, fear’; Tigrinya *hanḫākä* ‘to be spoiled, pampered’; Tigre *hanḫāka* ‘to live in luxury’. Leslau 1987:237. Proto-Semitic **han-aš-* ‘to bend, to twist’ > Akkadian *enēšu* ‘to become weak, impoverished, shaky, dilapidated’; Šheri / Jibbāli *hónús* ‘to bend, to twist’, *hénas* ‘to be bent, twisted’. Egyptian *hnk* ‘to tie up’ (formerly read *hnzk*), *hnkt* ‘braided lock of hair’ (formerly read *hnzkt*), *hnkyt* ‘she who has braided hair’ (formerly read *hnzkyt*). Hannig 1995:542; Faulkner 1962:173; Erman—Grapow 1921:111 and 1926—1963.3:116; Gardiner 1957:581. Berber: Tuareg *ahənnaka* ‘a type of cage made of flexible rods covered with veils and placed on a woman’s saddle in order to protect her from the sun’; Wargla *ahənka* ‘frame of a tent or pavilion’.

B. Proto-Indo-European **h₁hen-k^h-* [**h₁han-k^h-*]/[**h₁hon-k^h-* ‘to bend, to curve’]: Sanskrit *āñcati* ‘to bend, to curve’, *āñka-h* ‘curve, bend’; Pāli *añka-* ‘hook, mark, brand, hip’; Greek ἀγκών ‘the bend of the arm, elbow’, ἄγκος ‘a bend’, hence ‘a mountain glen, a dell, valley’, ἀγκύλη ‘a loop or noose in a cord; the thong of a javelin (by which it was hurled); a bow-string’, ἀγκύλος ‘crooked, curved’, ὄγκος ‘a barb’; Latin *ancus* ‘a person with a crook elbow’, *uncus* ‘a hook’. Rix 1998a:239 **h₂enk-* ‘to bend’; Pokorny 1959:45—47 **ank-* ‘to bend’; Walde 1927—1932.I:60—62 **ank-*; Mann 1984—1987:25 **ankatos*; **anktos*, -*ā* ‘bend, bent’, 25 **ankō*, -*īō* ‘to bend, to cramp’, 25—26 **ankos*, -*ā*, -*ōn* ‘bend, cramp; strait; constraint, end, death’, 26 **ankulos* (**ankelos*, **anklos*) ‘bent, bend, hook’; Watkins 1985:3 **ank-* (also **ang-*) and 2000:4 **ank-* (also **ang-*) ‘to bend’ (oldest forms **ḡ₂enk-*, **ḡ₂eng-*, colored to **ḡ₂ank-*, **ḡ₂ang-*); Mallory—Adams 1997:61—62 **h₂enk-* ~ **h₂eng-* ‘to bend an object so that it stays bent’;

Mayrhofer 1956—1980.I:19 and I:24; Boisacq 1950:7 **aṇq-*, **oṇq-*; Frisk 1970—1973.I:10—12 **ānq-eti*; Hofmann 1966:2 **ank-*, **onk-*; **ang-*; Beekes 2010.I:12—13 **h₂enk-* and II:1045 **h₂onk-o-*; Chantraine 1968—1980.I:10—11 **ank-*; Walde—Hofmann 1965—1972.I:46 and II:816; Ernout—Meillet 1979:32 and 746; De Vaan 2008:41 **h₂(e)nk-o-* and 640 **h₂onk-o-*. Proto-Indo-European **h₁hen-k-* [**h₁han-k-*] ‘to bend, to curve’: Sanskrit *āṅga-m* ‘limb’, (f.) *aṅgūri-h*, *aṅgūli-h*, *aṅgulī* ‘finger, toe’; Pāli *aṅga-* ‘limb’, (f.) *aṅgulī-* ‘finger’; Latin *angulus* ‘corner, angle’; Old English *anclēow* ‘ankle’; Old High German *anchal*, *enchil* ‘ankle’ (New High German *Enkel*). Pokorny 1959:45—47 **ang-* ‘to bend’; Walde 1927—1932.I:60—62 **ang-*; Mann 1984—1987:22—23 **ang-* ‘tapering; wedge, angle, cleft’; Watkins 1985:3 **ank-* (also **ang-*) and 2000:4 **ank-* (also **ang-*) ‘to bend’ (oldest forms **ǵ₂enk-*, **ǵ₂eng-*, colored to **ǵ₂ank-*, **ǵ₂ang-*); Mayrhofer 1956—1980.I:21 and I:22; Mallory—Adams 1997:61—62 **h₂enk-* ~ **h₂eng-* ‘to bend an object so that it stays bent’; Walde—Hofmann 1965—1972.I:48—49 **ang-*; **anq-*; Ernout—Meillet 1979:33; De Vaan 2008:42—43; Kroonen 2013:29 Proto-Germanic **ankula-* ‘ankle’; Orël 2003:20 Proto-Germanic **ankalaz* ~ **ank(u)lōn*; Onions 1966:38 **aṅk-*, **aṅg-*; Skeat 1898:24; Klein 1971:37; Kluge—Mitzka 1967:166; Kluge—Seebold 1989:179.

Buck 1949:4.34 finger; 9.14 bend (vb. tr.); 16.33 anxiety. Möller 1911:12; Bomhard—Kerns 1994:538—539, no. 395; Dolgopolsky 2008, no. 2599, **χ|q[a]ṇ[V]KV* (or **χ|q[a]ṇKV* ?) ‘to bend’.

733. Proto-Nostratic root **han-* (~ **hən-*):

Extended form:

(vb.) **han-V-g-* ‘to tie tightly, to constrict, to make narrow; to choke, to strangle’;

(n.) **han-g-a* ‘throat’; (adj.) ‘narrow, constricted’

- A. Proto-Afrasian (vb.) **hanVg-* ‘to tie tightly, to constrict, to make narrow’, (n.) **hang-* ‘throat, larynx’: Proto-Semitic **hang-ar-* ‘throat, larynx’ > Arabic *haṅğara* ‘larynx, throat’, *haṅğara* ‘to slaughter (by cutting the throat)’, *huṅğūr* ‘throat, gullet’; Šheri / Jibbāli *haṅğórót* ‘hollow under the Adam’s apple’; Tigrinya *tāhaṅgātā* ‘to tie round the neck and shoulders’; Harari *hangūr* ‘throat, food’ (this may be a loan from Arabic), *hangūrām* ‘voracious, big eater’; Gurage (Selti) *angōro*, (Wolane) *angoro*, (Zway) *angāro* ‘throat’, *angorram* ‘big eater, voracious’; Amharic *angūt* ‘neck’. Appleyard 1977:11; Leslau 1963:84 and 1979:62; Zammit 2002:149—150; Militarev 2012:77 Proto-Semitic **hVng(-ar)-*. Egyptian *hngg* ‘throat, gullet’. Hannig 1995:543; Erman—Grapow 1926—1963.3:121. Berber: Tuareg *aṇγ* ‘palate’; Ghadames *inəγ* ‘palate’; Tamazight *anəγ* ‘palate’; Riff

anəɣ ‘palate’; Kabyle *anəɣ*, *inəɣ* ‘palate’ [Orël—Stolbova 1995:273, no. 1234, **hankar-* ‘throat’; M. Cohen 1947:102, nos. 120 and 121.]

- B. Dravidian: Tamil *aṇaṅku* (*aṇaṅki-*) ‘(vb.) to suffer, to be distressed, to be slain; to afflict; (n.) pain, affliction, killing’, *aṇuṅku* (*aṇuṅki-*) ‘to suffer pain, to be in distress, to fade, to droop’, *aṇukku* (*aṇukki-*) ‘to distress, to cause to suffer pain’, *aṇukkam* ‘suffering, distress, pain, weakness’; Kannada *aṇaku* ‘to press into a narrower compass, to subdue, to control’, *aṇacu* ‘to depress, to humble’, *aṇaka* ‘closeness, compactness, firmness, state of being in good repair’, *aṇagu* ‘to hide, to disappear, to be humbled, to couch’, *aṇakuve* ‘humbleness, modesty’, *aṇuṅku* ‘to depress, to humble, to abate, to ruin, to destroy’, *aṇuṅgu* ‘to be depressed’; Tulu *aṇaka* ‘narrowness, closeness; narrow, small’; Telugu *aṇāgu* ‘to yield, to submit, to be humbled’, *aṇācu* ‘to suppress, to humble, to subject’, *aṇākuva* ‘humility, modesty, submissiveness’; Gondi *ancānā* ‘to press’. Burrow—Emeneau 1984:12, no. 112. Kannada *aṅgaḷa*, *aṅgaḷu*, *aṅguḷa*, *aṅguḷi*, *aṅguḷe* ‘palate’; Telugu *aṅgili* ‘palate’; Naiki (of Chanda) *aṅgul*, *aṅguṛ(u)* ‘tongue’; Malto *naqlu* ‘uvula’. Burrow—Emeneau 1984:5, no. 33.
- C. Proto-Indo-European **h₂hengh-* [**h₂hangh-*] ‘(vb.) to tie tightly, to constrict; to choke, to strangle; (adj.) narrow, constricted’: Sanskrit *aṁhú-* ‘narrow’; Greek ἄγχω ‘to compress, to press tight; to strangle’; Latin *angō* ‘to press tightly; to strangle, to throttle; to hurt, to distress’, *angor* ‘mental distress, anguish, trouble’; Gothic *aggwus* ‘narrow’; Old Icelandic *öngur* ‘narrow’; Old English *enge* ‘narrow; causing anxiety, painful, severe’; Old Saxon *engi* ‘narrow’; Dutch *eng* ‘narrow’; Old High German *angi*, *engi* ‘narrow’ (New High German *eng* ‘narrow, cramped, tight, confined’); Old Church Slavic *ꙗꙋꙋ-кѣ* ‘narrow’; Lithuanian *aĩkštas* ‘narrow, cramped, tight’. Reduplication in Hittite *ḫam(m)a(n)k-*, *ḫam(m)enk-*, *ḫami(n)k-* ‘to tie’ (as in Tamil *aṇaṅku*, cited above) (< **h₂ham-angh-* < **h₂han-angh-* through dissimilation). Perhaps also Greek ἄμφορ ‘neck, throat’ (if from **ἄγχω-ήν*). Rix 1998a:236 **h₂emǵh-* ‘to tie up’ → ‘to constrict’; Pokorny 1959:42—43 **anǵh-* ‘(adj.) narrow; (vb.) to tie up, to constrict’; Walde 1927—1932. I:62—63 **anǵh-*; Gamkrelidze—Ivanov 1984.II:781 **Hanǵ[h]-u-* and 1995.I:683 **Hanǵh-u-* ‘narrow’; Watkins 1985:2 **angh-* and 2000:4 **angh-* ‘tight, painfully restricted, painful’; Mann 1984—1987:23 **anghō*, *-iō* ‘to press, to squeeze, to strain, to confine’, 24 **anǵh-*, 24 **anǵhit-* ‘constraint’, 24 **anǵhō*, *-iō* ‘to cramp, to straighten, to force’, 24 **anǵuhəstos*, *-is* ‘narrow, constrained; anxious; strain, anguish’, 24—25 **anǵuhīnā* ‘strait, stricture’, 25 **anǵuhis*, **anǵhus* ‘narrow, thin, close, tight’, 25 **anǵuhō* ‘to narrow, to squeeze’; Mallory—Adams 1997:391 **h_aenǵhus* ‘narrow’; Mayrhofer 1956—1980.I:14; Boisacq 1950:10—11 **aṇǵh-*; Hofmann 1966:3 **anǵh-* and 17; Frisk 1970—1973.I:17—18 and I:98 (according to Schulze, Greek ἄμφορ < **ἄγχω-ήν*); Chantraine 1968—1980.I:16—17 and I:80; Beekes 2010.I:18 **h₂emǵh-*; Kloekhorst 2008b: 278—279 **h₂emǵh-*; Puhvel 1984— .3:64—68 **A₁em-ǵh-*; Tischler

1977— .1:142—143; Walde—Hofmann 1965—1972.I:47 **anġh-*; De Vaan 2008:42 **h₂emġh-e/o-* ‘to tie, to tighten’; Ernout—Meillet 1979:33; Orël 2003:19 Proto-Germanic **anġuz* ~ **anġwjaz*, 20 **anġwjanan*; Kroonen 2013:28 Proto-Germanic **angwu-* ‘narrow’ (< **h₂emġh-u-*); Feist 1939:13—14 **aŋġh-*; Lehmann 1986:9—10 **anġh-*; De Vries 1977:687; Kluge—Mitzka 1967:165—166; Kluge—Seebold 1989:178 **anġh-*; Smoczyński 2007.1:16 **h₂emġh-ú-*; Derksen 2008:338 **h₂emġh-u-* and 2015:56 **h₂emġh-u-*; Fraenkel 1962—1965.I:11; Wodtko—Irslinger—Schneider 2008:301—303 **h₂emġh-*.

- D. Uralic: Proto-Finno-Ugrian **anġe* ‘painfully constricted’ > (?) Estonian *angu-* ‘to curdle, to coagulate, to become stiff’; (?) Finnish *ankea* ‘dismal, dreary, cheerless’; Hungarian *aggódás* ‘anxiety, agonizing fear’, *aggód-* ‘to be anxious, to worry, to feel uneasy’, *aggodalom* ‘anxiety, concern, anguish, fear, uneasiness, misgiving, worry’. Rédei 1986—1988:12 **anġe* (according to Rédei, the Balto-Finnic forms may be loans from Germanic).

Buck 1949:4.29 throat; 12.62 narrow. Bomhard—Kerns 1994:528—529, no. 379; Hakola 2000:21, no. 31; Dolgopolsky 2008, no. 2591, **χam[V]gê* ‘tight, narrow; to constrain’ and, no. 2601, **XunġV* ‘throat’.

734. Proto-Nostratic root **han-* (~ **hən-*):

- (vb.) **han-* ‘to dive into water (bird)’;
(n.) **han-a* ‘an aquatic bird’

- A. Afrasian: Egyptian *hn* ‘bird’, *hnt* ‘pelican’, *hnti* ‘kingfisher’. Hannig 1995:536 and 537; Erman—Grapow 1926—1963.3:104 and 105.
B. Proto-Indo-European **h₂henH-thi-s* [**h₂hanH-thi-s*]/[**h₂h₂enH-thi-s*] ‘duck’: Sanskrit *āti-h* (f. *ātī*) ‘an aquatic bird’; Pāli *āṭa-* ‘a particular kind of bird’; Oriya *āṛi* ‘a web-footed bird’; Gawar-Bati *ārī* ‘*Turdus ginginianus*’, *ārelī* ‘duck’; Waigali *ārī* ‘duck’; Greek (Ionic) *νήσσα*, (Attic) *νήττα* (< **vātiα*) ‘a duck’; Latin *anas* ‘a duck’; Old Icelandic *önd* ‘duck’; Swedish *and* ‘duck’; Old English *æned*, *ened* ‘drake, duck’; Old Saxon *anad* ‘duck’; Dutch *eend* ‘duck’; Old High German *enit*, *anut* ‘duck’ (New High German *Ente*); Lithuanian *antis* ‘duck’; Old Prussian *antis* ‘duck’; Old Russian *uty* (< **oty*) (gen. *utvne*) ‘duck’ (Modern Russian *útka* [утка]). Pokorny 1959:41—42 **anət-* ‘duck’; Walde 1927—1932.I:60 **anəti-*, **ənəti-*; Mann 1984—1987:22 **anətis* ‘duck’; Watkins 2000:4 **anət-* ‘duck’ (oldest form **ǵ₂enǵ₂t-* colored to **ǵ₂anǵ₂t-*); Mallory—Adams 1997:171 **h_anh_ati-*, **h_aenh_ati-* ‘duck’; Mayrhofer 1956—1980.I:72—73 **h₂ti-a*; Boisacq 1950:670; Frisk 1970—1973.II:317—318; Chantraine 1968—1980.II:752—753 **h₂t₂-*; Hofmann 1966:218 **nātiā*; Beekes 1969:197 **h₂ti-* and 2010.I:1018—1019 **h₂enh₂t-*; Walde—Hofmann 1965—1972.I:44; Ernout—Meillet 1979:31 **anət-*; Lindsay 1894:274 Greek *νήσσα* (< **vāt-yā*); De Vaan 2008:41; Kroonen 2013:26 Proto-

Germanic **anad-* ‘duck’; Orël 2003:21 Proto-Germanic **anuđiz* ~ **anidiz*; Kluge—Mitzka 1967:167; Kluge—Seebold 1989:179—180 **ənət-*; De Vries 1977:687 Proto-Norse **anuđi-*; Fraenkel 1962—1965.I:11—12; Smoczyński 2007.1:17—18; Derksen 2008:387 **h₂enh₂-t-* and 2015:57 **h₂enh₂-t-*.

- C. Proto-Altaic **āṇatV* ‘a kind of duck’: Proto-Tungus **andi* ‘scoter, a kind of duck’ > Evenki *anni*, *andi*, *ende* ‘scoter, a kind of duck’; Negidal *ani* ‘scoter, a kind of duck’; Nanay / Gold *āni*, *āṇgi* ‘diver’. Proto-Mongolian **aṇgir* ‘scoter’ > Written Mongolian *aṇṅir* ‘a kind of yellow duck’; Khalkha *angir* ‘scoter’; Buriat *angir* ‘scoter’; Kalmyk *āṇgr* ‘scoter’; (?) Ordos *aṇgir* ‘yellow’. Proto-Turkic **Āṇ(k)ūt* ‘wild duck’ > Old Turkic (Old Uighur) *aṇīt* ‘wild duck’; Karakhanide Turkic *aṇīt* ‘wild duck’; Turkish *angit*, *angut* ‘the Ruddy Shelduck’; Azerbaijani *angut-bogaz* ‘long-necked duck’; Turkmenian *aṇk* ‘red duck’; Uzbek *aṇyirt* ‘red duck’; Karaim *anqit*, *ankit* ‘ostrich, vulture, dragon’; Sary-Uighur *aṇīt* ‘wild duck’; Khakas *āt* ‘wild duck’. Starostin—Dybo—Mudrak 2003:304—305 **āṇatV* ‘a kind of duck’.
- D. (?) Proto-Gilyak / Nivkh **haṇ* ‘(hazel) grouse’: Amur *haṇ* ‘hazel grouse’; South Sakhalin *haṇ* ‘(hazel) grouse’. Fortescue 2016:70.
- E. Proto-Eskimo **aṇtur-* (or **aṇlur-*) ‘to dive into water’: Alutiiq Alaskan Yupik *aṇtur-* ‘to dive into water (especially bird)’; Central Alaskan Yupik *aṇtur-* ‘to dive, to be submerged, to be baptized’; Central Siberian Yupik *aṇtur-* ‘to dive, to submerge’; Sireniki *aṇtəṛ-* ‘to dive’; Seward Peninsula Inuit *aṇluq-* ‘to dive into water (bird)’; North Alaskan Inuit *aṇluq-* ‘to dive into water’; Western Canadian Inuit *aṇluq-* ‘to dive into water’; Eastern Canadian Inuit *allu(q)-* ‘to dive into water (bird)’; Greenlandic Inuit *aṇtur-* ‘to dive into water (bird)’. Fortescue—Jacobson—Kaplan 1994:33.

Buck 1949:3.57 duck. Dolgopolsky 2008, no. 809, **Hañ[g]V(ṭV)* (or **Haṇ[g]V(ṭV)* ?) ‘duck’; Greenberg 2002:83, no. 182.

735. Proto-Nostratic root **hap^h-* (~ **həp^h-*):

- (vb.) **hap^h-* ‘to take, gather, or collect (with the hands or arms)’;
 (n.) **hap^h-a* ‘that which has been gathered or collected: plenty, fullness, abundance, wealth, possessions, property; embrace, armful, handful’

- A. Proto-Afrasian **hap-* ‘to take, gather, or collect (with the hands or arms)’:
 Proto-Semitic **hap-atṭ-* ‘to take, gather, or collect (with the hands or arms)’ > Hebrew *ḥāṣas* [חָפַס] ‘to search, to search out, to search for’; Aramaic *ḥəṣas* ‘to dig; to seek’; Ugaritic *ḥpšt* ‘straw picker’; Arabic *ḥafaṣa* ‘to gather, to grasp, to assemble’; Ḥarsūsi *ḥefōs* ‘to collect’; Šheri / Jibbāli *ḥfōs* ‘to collect (a lot of things)’; Mehri *ḥafūs* ‘to collect (a lot of things)’; Geez / Ethiopic *ḥafaṣa* [ሐፈሠ] ‘to rake up, to sweep up, to scatter as chaff, to carry away (especially an amount held in two hands), to take a

handful'; Tigrinya *ħafäsä*, *ħafäšä* 'to scoop up'; Tigre *ħafsa* 'to scrape corn together'; Harari *ħafäsa* 'to take something with one or two hands or with an instrument, to draw water from a container with a small cup'; Argobba *ħaffäsa* 'to take a large quantity of grain with one or two hands'; Amharic *affäsä* 'to take a fistful of grain with two hands, to scoop up dry grainy material with the hand'; Gurage *afäsä* 'to scoop up a large quantity of grain or flour or earth with both hands'. Klein 1987:228; Leslau 1963:80, 1979:22, and 1987:227; Murtonen 1989:192. Proto-Semitic **ħap-an-* 'to take a handful' > Hebrew *ħōḇen* [חֹבֵן] 'hollow of the hand, handful'; Aramaic *ħūḇnā* 'hollow of the hand, handful'; Akkadian *upnu* 'handful'; Arabic *ħafana* 'to scoop up with both hands; to give little', *ħafna* 'handful'; Šheri / Jibbāli *ħfun* 'to scoop (rice, etc.) in the cupped hands'; Mehri *ħafūn* 'to scoop up (rice, etc.) in the cupped hands'; Geez / Ethiopic *ħafana* [ሐፈኑ] 'to take earth or grain with two hands cupped together'; Tigre *ħafən* 'both hands full', *ħaffāna* 'to take with both hands'; Tigrinya *ħafni* 'handful'; Amharic *əffənñ* 'handful'. Murtonen 1989:191; Klein 1987:227; Leslau 1987:227. Arabic *ħafaša* 'to collect, to gather'. Arabic *ħafala* 'to gather, to assemble, to congregate; to flow copiously; to be replete, to teem', *ħāfil* 'full, filled, replete, abundant, copious', *ħufūl* 'plenty, fullness, abundance, wealth'. Note: Two separate stems have fallen together in Arabic: (A) Proto-Semitic **ħap-al-* 'to run, to flow' and (B) Proto-Semitic **ħap-al-* 'to take, gather, or collect (with the hands or arms)'. Egyptian *ħpt* 'to embrace', *ħpt* 'armful'; Coptic *ħpot* [Ⲭⲡⲟⲩ] 'fathom'. Hannig 1995:525; Faulkner 1962:168; Gardiner 1957:581; Erman—Grapow 1921:107 and 1926—1963.3:71—72; Černý 1976:290; Vycichl 1983:307. Proto-Southern Cushitic **ħap-* 'to clasp, to hold with the arms' > Iraqw (**ħapa* 'arm' >) *ħampa* 'wing'; Dahalo *ħap-* 'to snatch'. Ehret 1980:299. [Orël—Stolbova 1995:274, no. 1238, **ħapat-* 'arm, wing'.] Ehret 1995:374, no. 754, **ħap-* 'to take hold of'.

- B. Dravidian: Kannaḍa *appu*, *arpu* 'to embrace', *appu*, *alpu*, *alke*, *appuge* 'an embrace', *appay(i)su* 'to embrace, to seize eagerly'; Tuḷu *appiyuni* 'to embrace, to clasp', *appukai*, *appai* 'folding the arms on the breast'. Burrow—Emeneau 1984:16, no. 158.
- C. Proto-Indo-European **h₁hep^h-* [**h₁hap^h-*]/**h₁hop^h-* 'to gather, to collect; to gather wealth': Avestan *afnah-vant-* 'rich in possessions'; Sanskrit *āpnas-* 'possession, property'; Latin *Ops* 'the goddess of abundance', *opulens* (< **open-ont-*) 'rich, wealthy', *opēs* 'resources, means, wealth'; Hittite *ħappin-*, *ħappinant-* 'rich'; Luwian *ħappinatt-* 'wealth'. Pokorny 1959:780 **op-* 'to work'; Walde 1927—1932.I:175—176 **op-*; Watkins 1985:46 **op-* and 2000:60 **op-* 'to work, to produce in abundance' (oldest form **₂₃ep-*, colored to **₂₃op-*); Mallory—Adams 1997:637 **h₂ó/ép(e)n-* 'goods, wealth'; Mann 1984—1987:880—881 **op-* 'yield, produce', 882 **oplos* (**opulos*) 'power, force, abundance', 882 **opnos*; Gamkrelidze—Ivanov 1984.II:746 **Hop^h[h]-r/n-* and 1995.I:649—650 **Hop^h-r/n-* 'goods,

wealth, possessions; trade'; Puhvel 1984— .3:124—125 **H₁op-en-o-(nt-)* and 3:125—127; Kloekhorst 2008b:296—297 **h₃ep-en-o-*; Mayrhofer 1956—1980.I:40; Ernout—Meillet 1979:463—464; De Vaan 2008:431 **h₃e/op-(i-)* 'ability, force'; Walde—Hofmann 1965—1972.II:215—216. Note: Greek ἄφερος 'wealth' is most likely a borrowing, though the source is uncertain (cf. Frisk 1970—1973.I:195; Chantraine 1968—1980.I:146).

- D. Yukaghir (Northern / Tundra) *apte-* 'to collect, to gather', *aptiiče* 'gatherer'. Nikolaeva 2006:111.

Buck 1949:4.31 arm; 12.21 collect, gather. Bomhard—Kerns 1994:535—536, no. 391.

736. Proto-Nostratic root **haph-* (~ **həp^h-*):

(vb.) **haph-* 'to move quickly, to run, to flow';

(n.) **haph-a* '(flowing or running) water, river, stream, current'

- A. Proto-Afrasian **haph-* 'to move quickly, to run, to flow': Semitic: Arabic *hafada* 'to be active and nimble in one's work; to speed; to urge to haste, to hasten', *hafad* 'a pace of the horse'. Arabic *hafala* 'to gather, to assemble, to congregate; to flow copiously; to be replete, to teem', *hāfil* 'full, filled, replete, abundant, copious', *hufūl* 'plenty, fullness, abundance, wealth'. Note: Two separate stems have fallen together in Arabic: (A) Proto-Semitic **haph-al-* 'to move quickly, to run, to flow' and (B) Proto-Semitic **haph-al-* 'to take, gather, or collect (with the hands or arms)'. Egyptian *hp* 'to hasten, to hurry, to run', *hpt* 'running', *hpwty* 'runner'; (?) (Old Kingdom) *hp* 'Nile' (Middle Kingdom *h'py*). Hannig 1995:524; Faulkner 1962:168; Erman—Grapow 1921:107 and 1926—1963.3:68.
- B. Proto-Indo-European **h₁hep^h-* [**h₁hap^h-*] 'water, stream': Hittite (dat. sg.) *ha-pa-a* 'stream', (3rd sg. pres. act.) *ha-pa-a-iz-zi* 'to make wet, to moisten' (?); Palaic (nom. sg.) *ha-a-ap-na-aš* 'river, stream'; Luwian (nom. sg.) *ha-a-pi-iš* 'river', **hapā(i)-* 'to irrigate, to water', (acc. sg.) *ha-pa-a-ti-in* 'irrigated land', (acc. pl.) *ha-a-pi-in-ni-in-za* 'little river'; Sanskrit *āpas-* 'water'; Avestan *āfš* 'stream, current'; Old Irish *ab*, *abann* 'river'; Latin *amnis* (< **ab-ni-s*) 'river, stream'; Old Prussian *ape* 'river, stream'; Tocharian B *āp* 'water, river, stream'. Pokorny 1959:51—52 **āp-* 'water'; Walde 1927—1932.I:46—47 **āp-*; Mann 1984—1987:1 **abhmn-*, **abhnis* 'river, water'; Watkins 1985:3 **ap-* and 2000:4 **ap-* 'water' (oldest form **ǵ₂ep-*, colored to **ǵ₂ap-*); Gamkrelidze—Ivanov 1984.I:158 **H₂ap^h[-h]*- and 1995.I:136 **H₂ap^h-* 'water, river, (mountain) stream', I:186, I:193, I:238, I:578, I:579, I:760, I:763, I:814; Mallory—Adams 1997:486 **h₂eb(h)-* 'river'; Mayrhofer 1956—1980.I:74—75 **āp-*; Kloekhorst 2008b:294—295; Puhvel 1984— .3:114—115 **A₁ebh-*; Ernout—Meillet 1979:28—29; Walde—Hofmann 1965—1972.I:40 **āp-*; De Vaan 2008:39; Van Windekens 1976—1982.I:166 **āp-*; Adams 1997:44 **H₂ēp-*

~ **H₂ep-*; Wodtko—Irslinger—Schneider 2008:306—307 **h₂ep-*. Note: There may have been two variants of this stem in Proto-Indo-European: (A) **h₁hep^h-* [**h₁hap^h-*] and (B) **h₁hebh-* [**h₁hab^h-*].

C. Yukaghir (Southern / Kolyma) *apaj-* ‘to float’. Nikolaeva 2006:111.

Buck 1949:1.36 river, stream, brook; 10.32 flow (vb.). Bomhard—Kerns 1995:536—537, no. 392; Greenberg 2002:179, no. 413, **ape* ‘water’; Dolgopolsky 2008, no. 1876, **qapV* ‘to stream, to flow’.

737. Proto-Nostratic root **har-* (~ **h₂ar-*):

(vb.) **har-* ‘to prepare, to make ready, to put together’;

(n.) **har-a* ‘way, manner, method’

A. Afrasian: Egyptian *hr* ‘to prepare, to make ready’. Hannig 1995:555; Faulkner 1962:176; Erman—Grapow 1921:114 and 1926—1963.3:146—147; Gardiner 1957:582.

B. Dravidian: Tamil *aṛam* ‘moral or religious duty, virtue, dharma’, *aṛavan* ‘one who is virtuous, god, Buddha, ascetic, etc.’, *aṛavi* ‘virtue, that which is holy, female ascetic’, *aṛaviya* ‘virtuous’, *aṛaviyāṇ* ‘virtuous man’, *aṛaṇ* ‘sacrificer’; Malayalam *aṛam* ‘law, dharma’; Kannaḍa *aṛa*, *aṛu* ‘virtue, charity, alms, law, dharma’. Burrow—Emeneau 1984:29, no. 311. Tamil *āṛu* ‘way, road, path, means, manner, method’; Malayalam *āru* ‘way, manner’; Kota *-a-r* in: *o-yṇ-a-r* ‘path’, *a-l-a-r* ‘way, distance’; Toda *o-ṛ* ‘way, entrance into thicket’. Burrow—Emeneau 1984:37—38, no. 405.

C. Proto-Indo-European **h₁her-* [**h₁har-*]/[**h₂hr-*] ‘to prepare, to make ready, to put together’: Avestan *arānte* ‘to arrange, to settle, to establish, to fix’; Sanskrit *ṛtá-h* ‘right, true’, *ṛtú-h* ‘fixed time, order, rule’, *ṛtí-h* ‘way, manner’, *arpáyati* ‘to put into, to fix’, *arámati-h* ‘readiness, proper thinking’, *áram* ‘readily, enough’; Armenian *aṛnem* ‘to make’; Greek ἀρπίσκω ‘to join together, to fashion, to fix, to fit together, to construct, to prepare, to contrive, to fit, to equip, to make fitting or pleasing’; Latin *ars*, *-tis* ‘way, method, skill, profession, art, occupation’; Tocharian A *ārwar* ‘ready, prepared’. Rix 1998a:240—241 **h₂er-* ‘to be joined or fit together’; Pokorny 1959:55—61 **ar-* ‘to fix, to suit’; Walde 1927—1932.I:69—76 **ar-*; Mann 1984—1987:31 **ar-* ‘to join, to fit’, 32 **ār-* ‘to join, to tie’, 36 **artos*, *-ios*, *-us* ‘joined; adjoining; join’, 1106 **rtos*, *-os*, *-us* ‘right, proper; rightness, fitness’; Watkins 1985:3 **ar-* (also **arə-*) and 2000:5 **ar-* ‘to fit together’ (oldest form **₂ar-*); Mallory—Adams 1997:362 **h₂er-* ‘to prepare, to make ready, to put together’; Mayrhofer 1956—1980.I:48 **ar-*, I:51 **ar-*, I:122 **ar-*, and I:123 **ar-*; Hofmann 1966:22 **ar-*; Beekes 2010.I:123 **h₂er-*; Chantraine 1968—1980.I:101—102; Boisacq 1950:73; Frisk 1970—1973.I:128—129; Walde—Hofmann 1965—1972.I:70 **ar-*; Ernout—Meillet 1979:48—49; De Vaan 2008:55 **h₂r-ti-*; Adams 1999:53

- **h_aer*- ‘to fit together’; Van Windekens 1976—1982.I:169 **ar*- ‘to fit together’.
- D. Yukaghir (Southern / Kolyma) *ara(ń)ńə*- ‘light; easy, handy; frisky, dashing, adroit’, *ara* ‘adroitness’, *arajrəŋo*:- ‘energetic, laborious’, (Northern / Tundra) *arińńe*- ‘light; easy, handy; frisky, dashing, adroit’. Nikolaeva 2006:112.
- E. Proto-Altaic **ārV*- ‘(vb.) to do, to make; (n.) way, method’: Proto-Tungus **ar*- ‘(vb.) to make, to work, to construct; to come to one’s senses; to cause fear (of an evil ghost), to appear to one’s imagination; (n.) shape, form; evil spirit’ > Evenki *arit*- ‘to cause fear (of an evil ghost), to appear to one’s imagination’, *arū*- ‘to come to one’s senses’, *arinka* ‘evil spirit’; Lamut / Even *ari*-, *ar*- ‘to cause fear (of an evil ghost), to appear to one’s imagination’, *ar*- ‘to come to one’s senses’, *ariŋqə* ‘evil spirit’; Negidal *ayī* ‘evil spirit’; Manchu *ara*- ‘to do, to make’, *arbun* ‘form, shape, image’, *ari* ‘evil spirit’; Spoken Manchu (Sibo) *arəvən*, *arəvun* ‘appearance, form’; Nanay / Gold *ari* ‘evil spirit’. Proto-Mongolian **arga* ‘way, method’ > Written Mongolian *arya* ‘means, method; way out, possibility’; Khalkha *arga* ‘way, method’; Buriat *arga* ‘way, method’; Kalmyk *argə* ‘way, method’; Ordos *arga* ‘way, method’; Dagur *arga* ‘way, method’; Shira-Yughur *arag* ‘way, method’; Monguor *arga* ‘way, method’. Poppe 1955:58. Proto-Turkic **ar*- ‘to make magic, to cast spells; to deceive’ > Old Turkic (Old Uighur, Orkhon) *ar*- ‘to deceive’, *arvış* ‘magic’; Karakhanide Turkic *ar*-, *arva*- ‘to make magic, to cast spells’; Turkish (dial.) *arpay* ‘magic’; Turkmenian (dial.) *arvaχ* ‘evil spirit’; Uzbek *avra*- ‘to make magic, to cast spells; to deceive’; Uighur *a(r)ba*- ‘to make magic, to cast spells’; Tatar *arbi*- ‘to make magic, to cast spells’; Bashkir *arba*- ‘to make magic, to cast spells’; Kirghiz *arba*- ‘to make magic, to cast spells’; Kazakh *arba*- ‘to make magic, to cast spells’; Oyrot (Mountain Altai) *arba-n*- ‘to scold’; Yakut *arbā*- ‘to make magic, to cast spells’. Starostin—Dybo—Mudrak 2003:313—314 **ārV* ‘witchcraft, craft’.
- F. Proto-Eskimo **arənqiy*- ‘to fix or arrange’: Alutiiq Alaskan Yupik *arənqiy*- (Kodiak also *anqiy*-) ‘to be opportune, handy’; Central Alaskan Yupik *arənqiy*- ‘to be or make satisfactory’; Central Siberian Yupik *arənqiyənəq* ‘right hand’; Sirenik *arənəqat*- ‘to force to do, to insist that someone do something’; Seward Peninsula Inuit *aaqik*- ‘to store away’; North Alaskan Inuit *aatqik*- ‘to straighten or make the bed’; Western Canadian Inuit (Caribou) *aatqik*- ‘to repair’; Eastern Canadian Inuit *aaqqi(k)*- ‘to cure, to manage, to repair’, *aaqqisur*- ‘to arrange, to put in order’; Greenlandic Inuit *aaqqiy*- ‘to fix, to make or get better’, *aaqqišsur*- ‘to arrange, to set right’. Fortescue—Jacobson—Kaplan 1994:42.

Sumerian *har* ‘to build, to construct, to create, to produce’.

Buck 1949:9.943 fitting, suitable; 12.22 join, unite; 14.29 ready; 16.73 right (adj., in a moral sense, vs. wrong). Bomhard—Kerns 1994:531—532, no. 383.

738. Proto-Nostratic (n.) **har-a* ‘arm, hand’:

- A. Proto-Afrasian **har-* ‘arm, hand’: Central Chadic **xar-* ‘hand, arm’ > Tera *xar* ‘hand, arm’; Ga’anda *heřa* ‘arm’; Hona *hara* ‘arm’; Mofu *hár* ‘arm, hand’. Jungraithmayr—Ibriszimow 1994.II:178—179. Saho—Afar **har-* ‘arm’ > Saho *har-* ‘arm’. Cushitic: Beja / Beɣawye *hár-ka*, *hér-ka* ‘arm’. Reinisch 1895:126. Lowland East Cushitic **hark-* ‘arm’ > Galla / Oromo *harka* ‘arm, hand’; Konso *harga* ‘arm’. Werizoid: Warazi *harko* ‘arm’; Gawwada *harko* ‘arm’. Orël—Stolbova 1995:275, no. 1242, **har-* ‘arm’.
- B. Dravidian: Tamil *arañ-kai* ‘palm of the hand’; Telugu *ara-cēyi* ‘palm of the hand’, *ara-kālu* ‘sole of the foot’; Kolami *ārankei*, *ārungei* ‘palm of the hand’. Burrow—Emeneau 1984:29, no. 310.
- C. Proto-Indo-European **h₂erH-mo-* [**h₂harH-mo-*]/**h₂hrH-mo-* ‘shoulder, arm’: Sanskrit *īrmá-h* ‘arm’; Avestan *arəmə* ‘arm’; Ossetic *ärm* ‘hollow of the hand’; Latin *armus* ‘the shoulder where it is fitted to the shoulder-blade’; Gothic *arms* ‘arm’; Old Icelandic *armr* ‘arm’; Old English *earm* ‘arm’; Old Frisian *erm* ‘arm’; Old Saxon *arm* ‘arm’; Old High German *aram*, *arm* ‘arm’ (New High German *Arm*); Old Prussian *irmo* ‘arm’; Old Church Slavic *ramo*, *ramę* ‘shoulder’; Polish *ramię* ‘shoulder, arm’. Pokorny 1959:58 **arə-mo-*, **ǵ-mo-* ‘arm’; Walde 1927—1932.I:73 **ar(ə)men-*; Mann 1984—1987:260 **armos* (**ǵmos*, -*us*) ‘arm, shoulder, extension, branch’; Watkins 1985:3 **ar(ə)-mo-* under **ar-* ‘to fit together’ and 2000:5 **ar-mo-* under **ar-* ‘to fit together’ (oldest form **ǵ₂ar-*); Mallory—Adams 1997:26 **h₂érh_xmos* or **h₂ǵh_xmós* ‘arm, forequarter’, probably from **h₂er(h_x)-* ‘to fit, to attach’; Gamkrelidze—Ivanov 1984.II: 785, fn. 1, **arH-mo-/ǵH-mo-* and 1995.I:687, fn. 9, **arH-mo-/ǵH-mo-* ‘arm, shoulder (blade)’; Mayrhofer 1956—1980.I:96; Ernout—Meillet 1979:47—48; Walde—Hofmann 1965—1972.I:69; De Vaan 2008:55; Orël 2003:24 Proto-Germanic **armaz* I; Kroonen 2013:35 Proto-Germanic **arma-* ‘arm’; Feist 1938:58; Lehmann 1986:43; De Vries 1977:14; Onions 1966:50; Klein 1971:50; Boutkan—Siebinga 2005:92; Kluge—Mitzka 1967:30; Kluge—Seebold 1989:40 **arə-mo-*, **ǵə-mo-*; Derksen 2008:375 **h₂erH-mo-*, **h₂erH-men-*.
- D. (?) Yukaghir (Southern / Kolyma) *arimə* ‘sole’, *ariməl* ‘bottom’, *arul* ‘bottom’, (Northern / Tundra) *arime* ‘sole, paw, foot’. Nikolaeva 2006: 112.

Buck 1949:4.30 shoulder; 4.31 arm.

739. Proto-Nostratic root **har-* (~ **hər-*):(vb.) **har-* ‘to be superior, to be higher in status or rank, to be above or over’;(n.) **har-a* ‘nobleman, master, chief, superior’; (adj.) ‘free-born, noble’

- A. Proto-Afrasian **har-* ‘(vb.) to be superior, to be higher in status or rank, to be above or over; (adj.) free-born, noble; (n.) nobleman, master, chief, superior’: Proto-Semitic **har-ar-* ‘to be free-born, to be or become free, to set free’, **har(r)-/*hur(r)-* ‘noble, free-born’ > Hebrew *hōr* [חֹר] ‘noble’; Arabic *hurr* ‘noble, free-born; free, independent’, *harra* ‘to liberate, to free, to set free, to release, to emancipate’, *hurriya* ‘freedom, liberty, independence, unrestraint, license’; Aramaic *harar* ‘to be or become free’; Ugaritic *hrr* ‘free’; Sabaeen *hrr* ‘freemen, free-born men’; Geez / Ethiopic *harāwi* [ሐራዊ] ‘free-born, nobleman’, *harāwännā* [ሐራውና] ‘freedom’, *harännat* [ሐርነት] ‘freedom’; Tigrinya *hara* ‘free’, *harännät* ‘freedom’; Tigre *hara* ‘free; freedom’; Amharic *hurr* ‘free’; Gurage *hurru bälä* ‘to become free, to set free’. Klein 1987:211; Zammit 2002:137; Leslau 1979: 328 and 1987:240—241. Egyptian *hry* ‘chief, master, overseer, superior’, *hr* ‘on, upon, over’, *hrw* ‘upper part, top’; Coptic *hi-* [ⲱ] (< **haʒyaw* < **haryaw*) ‘on, in, at’, *hray* [Ⲭⲣⲏ] ‘upper part’. Erman—Grapow 1921:113 and 1926—1963.3:131—132, 3:133—136, 3:142—143; Hannig 1995:546, 547, and 548; Faulkner 1962:174; Gardiner 1957:582; Černý 1976:271—272 and 291—292; Vycichl 1983:285—286 and 308.
- B. Proto-Indo-European **h₂her-yo-* [**h₂har-yo-*] ‘a superior, a person higher in status or rank’: Sanskrit *ārya-h* ‘a respectable or honorable person, a highly-esteemed person; master, owner’, *ārya-h* ‘master, lord’; Pāli *ariya-* ‘noble, distinguished, of high birth’; Old Persian *ariya-* (perhaps *āriya-*) ‘Aryan’ (Farsi *ērān* ‘Iran’); Avestan *airya-* ‘noble’; Runic (m. nom. pl. superl.) *-arjoster* [ᚱᚱᚲᚲᚲᚲᚲᚲᚲ] ‘noblest’ (Tune Stone, Østfold, Norway; 400 CE); Old Irish *aire* ‘nobleman, man of rank’. Pokorny 1959:67 **arjo-* ‘lord, host’; Walde 1927—1932.I:80 **arjo-*; Mann 1984—1987:34 **arjos* ‘man, hero; manly’; Watkins 1985:3 **aryo-* ‘lord, ruler’ and 2000:5 **aryo-* self-designation of the Indo-Iranians; Mallory—Adams 1997:213 **h₄erós* ~ **h₄erjos* ‘member of one’s own (ethnic) group, peer, freeman; (Indo-Iranian) Aryan’; Mayrhofer 1956—1980.I:52 and I:79; Orël 2003:23 Proto-Germanic **arjaz*; Krause 1971:53 *arjōstēr*; Antonsen 1975:44—45 Proto-Germanic **/ar-jōst-a-ez/* (m. nom. pl. superl. of **/ar-ja-z/*).
- C. Proto-Chukchi-Kamchatkan **ærəm(æ)* ‘leader’: Chukchi *erəm(e)* ‘leader’; Kerek *ajm* ‘leader’; Koryak *ajəm(a)* ‘leader’; Alyutor *arm(a)* ‘leader’; Kamchadal / Itelmen (Eastern) *armagnan*, *erm* ‘officer’, *erm klec* ‘king, emperor’, *ermein* ‘Russian’, (Southern) *arm* ‘master’. Fortescue 2005:38.

Buck 1949:19.36 noble, nobleman; 19.41 master. Möller 1911:16; Bomhard—Kerns 1994:533—534, no. 387.

740. Proto-Nostratic root **har-* (~ **hər-*):(vb.) **har-* ‘to scratch, to scrape’ (> ‘to plow’ in the daughter languages);(n.) **har-a* ‘scraping, scratching’

- A. Proto-Afrasian **har-* ‘to scratch, to scrape’ (> ‘to plow’): Proto-Semitic **har-atʷ-* ‘to plow’ > Hebrew *hāraš* [חָרַשׁ] ‘to cut in, to engrave, to plow’; Aramaic *həraθ* ‘to plow’; Phoenician *hrš* ‘to plow’; Ugaritic *hrt* ‘to plow’; Akkadian *erēšu* ‘to plow, to till’; Arabic *harata* ‘to plow, to till’; Sabaeen *hrt* ‘plowed lands’; Šheri / Jibbāli *háróṭ* ‘to grow plants with fertilizer’; Geez / Ethiopic *harasa* [ሐረሰ] ‘to plow, to cultivate land’, *māhras* [ማሕረሰ] ‘a plow, a plowshare’; Tigrinya *haräsä* ‘to plow’, *mahräša* ‘a plow’; Tigre *harsa* ‘to plow’, *mahräša* ‘a plow’; Harari *haräsa* ‘to plow’; Amharic *arräsä* ‘to plow, to till, to cultivate’, *maräša* ‘a plow’; Gafat *arräsä* ‘to plow’; Gurage *aräsä* ‘to plow, to cultivate’, *maräša* ‘a plow’; Argobba *harräsa* ‘to plow’. Murtonen 1989:198—199; Klein 1987:234; Leslau 1963:87, 1979:91, and 1987:243; Zammit 2002:136—137. Proto-East Cushitic **ha(a)r-* ‘to scratch, to scrape’ > Afar *haar-is-* ‘to clean out the contents of viscera’; Hadiyya *haar-* ‘to scratch’; Burji *harʔ-* ‘to plow, to cultivate’; Konso *har-* ‘to scoop soil from a hole’; Gidole *haar-awwa* ‘razor, blade for shaving’. Sasse 1982:92; Hudson 1989:196 and 280. Proto-Southern Cushitic **her-* ‘to shave’ > Asa *hera* ‘razor’; Ma’a *-ha* ‘to shave’, *-haré* ‘to sharpen’, *iharíme* ‘whetstone’. Ehret 1980:301. [Ehret 1995:375, no. 757, **her-* ‘to scrape off’.] Takács 2011a:173 **h-r* (perhaps **har-*) ‘to scratch, to scrape’.
- B. Dravidian: Tamil *araka* ‘a plow with bullocks’; Malto *are* ‘a plow’. Burrow—Emeneau 1984:19, no. 198.
- C. Proto-Indo-European **h₁her(H)-* [**h₁har(H)-*] ‘to plow’: Hittite (3rd sg. pres.) *har-aš-zi* ‘to plow’; Greek ἀρόω ‘to plow’; Latin *arō* ‘to plow’; Old Irish *airim* ‘to plow’; Gothic *arjan* ‘to plow’; Old Icelandic *erja* ‘to plow’; Old English *erian* ‘to plow’, *ierp* ‘plowing’; Old High German *erran* ‘to plow’; Lithuanian *ariù*, *árti* ‘to plow, to till’; Old Church Slavonic *ralu* ‘a plow’, *orjō*, *orati* ‘to plow’; Tocharian A *äre* ‘a plow’. Rix 1998a:243 **h₂erh₂-* ‘to plow or break up (land)’; Pokorny 1959:62—63 **ar(ə)-* ‘to plow’; Walde 1927—1932.I:78—79 **arā-*; Mann 1984—1987:35 **arō*, *-iō* (**arā-*) ‘to plow’; Watkins 1985:3 **arə-* and 2000:5 **arə-* ‘to plow’ (oldest form **ar₂er₂-*, colored to **ar₂ar₂-*); Mallory—Adams 1997:434 **h_aérh₃je/o-* ‘to plow’; Gamkrelidze—Ivanov 1984.II:687—688 **Har-* and 1995.I:593—594 **Har-* ‘to work land, to plow’; Sturtevant 1942:40—41, §37f; Puhvel 1984— .3:184—185 (Puhvel considers Hittite *har(a)š-* to be a loan from Akkadian or West Semitic); Tischler 1977— .1:182—183; Kloekhorst 2008b:312—314; Frisk 1970—1973.I:147—148; Chantraine 1968—1980.I:112—113; Hofmann 1966:24; Beekes 2010.I:136—137 **h₂erh₃-*; Boisacq 1950:80; De Vaan 2008:55 **h₂erh₃-je/o-* ‘to plough’; Walde—Hofmann 1965—1972.I:69; Ernout—Meillet 1979:48 **arə-*; Orël

2003:23 Proto-Germanic **arjanan*; Kroonen 2013:28 Proto-Germanic **arjan-* ‘to plow’; Feist 1939:56—57 **arə-*; Lehmann 1986:42 **ar(ə)-*; De Vries 1977:104; Van Windekens 1976—1982.I:167; Adams 1999:49 **h₂erh₃-*; Smoczyński 2007.1:23—24 **h₂erh₃-*; Fraenkel 1962—1965.I:17; Derksen 2008:372—373 **h₂erh₃-*, 373—374, and 2015:60, 61 **h₂erh₃-iē-*; Wodtko—Irslinger—Schneider 2008:322—328 **h₂erh₃-*.

Sumerian *har(-har)* ‘to scratch, to scrape’.

Buck 1949:8.21 plow (vb., sb.). Möller 1911:15—16; Bomhard—Kerns 1994:543, no. 400; Dolgopolsky 2008, no. 2605, **XaRčV* (= **χaRčV* ?) ‘to rub/scratch’ (**XaRčV* = **χ|h̄aRčV*).

741. Proto-Nostratic **har^y-*: (1) particle introducing an alternative: ‘or’, (2) conjoining particle: ‘with, and’, (3) inferential particle: ‘then, therefore’:

Note: The *CVC-* patterning shows that this stem could not originally have been a particle, though this is how it is preserved in the daughter languages. The original meaning is unknown.

- A. Afrasian: Egyptian *hr* ‘upon, in, at, from, on account of, concerning, through, and, having on it; because’. Hannig 1995:546; Erman—Grapow 1921:113 and 1926—1963.3:131—132; Faulkner 1962:174; Gardiner 1957:582. Berber: Tuareg *ar* ‘so far, until now, if not’; Wargla *ar* ‘until, until then’; Tamazight *ar*, *al*, *all* ‘until, until then, when’; Tashelhiyt / Shilha *ar* ‘until, until then’; Riff *ar*, *al* ‘until then’; Kabyle *ar* ‘until, save, except’; Chaouia *ar* ‘until’.
- B. Proto-Indo-European **h₁her-* [**h₁har-*]/**h₁hr-* ‘then, therefore; and’: Greek ἄρα (Epic Greek ῥα [enclitic] and, before a consonant, ἄρ) inferential particle: (Epic usage) ‘then, straightway, at once’, (Attic usage) ‘then, therefore’ (much like οὐν, only less strongly); Lithuanian *ar̃* ‘whether, if’, *iṛ̃* ‘and, and then, and so’; Latvian *ir* ‘and, and also’. Pokorny 1959:62 **ar*, **r̥* ‘now, therefore’; Walde 1927—1932.I:77 **ar*, **r̥*; Mann 1984—1987:31 **ar* (**are*, **arə*) ‘indeed, so, surely’, 1105 **r̥* ‘and, also, indeed; Mallory—Adams 1997:583 **ar-* ‘and, thus’; Boisacq 1950:72 **r̥* (> Greek ῥα; Lithuanian *iṛ̃*), **or* (> Lithuanian *ar̃*); Frisk 1970—1973.I:127 **r̥*; Chantraine 1968—1980.I:100; Hofmann 1966:21; Beekes 2010.I:121 **h₂(e)r-*; Fraenkel 1962—1965.I:15; Derksen 2015:59 **h₂er-* and 202—203; Smoczyński 2007.1:21.
- C. Proto-Altaic **ar^yV* ‘or’: Proto-Turkic **ar^yu* ‘or’ > Old Turkic (Old Uighur) *azu* ‘or’; Karakhanide Turkic *azu* ‘or’; Tuva *azi* ‘or’. Starostin—Dybo—Mudrak 2003:316 **ar^yV* ‘or’.

Bomhard—Kerns 1994:535, no. 389.

742. Proto-Nostratic root **has-* (~ **həs-*):(vb.) **has-* ‘to burn, to be hot’;(n.) **has-a* ‘cinder, ember, ashes; heat’

- A. Afrasian: Semitic: Arabic *haṣḥasa* ‘to place meat on the coals’. [Orël—Stolbova 1995:275, no. 1244, **has-* ‘to roast’.]
- B. Proto-Indo-European **h₁hes-* [**h₁has-*] ‘to burn, to be hot’: Sanskrit *āsa-h* (< **h₁hēs-* [**h₁hās-*]) ‘ashes, dust’; (?) Greek ἄζω ‘to be dry’; Latin *āra* ‘altar’; Umbrian (dat. sg.) *ase* ‘altar’; Gothic *azgō* ‘cinder, ashes’; Old Icelandic *aska* ‘ashes’; Swedish *aska* ‘ashes’; Danish *aske* ‘ashes’; Old English *asce*, *æsce* ‘ashes’; Dutch *asch* ‘ashes’; Old High German *asca* ‘ashes’ (New High German *Asche*); Czech *ozd* ‘parched malt’, *ozditi* ‘to dry malt’; Tocharian B *ās-* ‘to become dry, to dry out, to dry up, to parch’, *asāre* ‘dry’; Hittite (acc. sg.) *ha-aš-ša-an* (< **h₁hes-* [**h₁has-*]) ‘hearth’, (nom. sg.) *ha-a-aš* ‘ashes (in pl.); soda ash, potash, soap’. Pokorny 1959:68—69 **ās-* ‘to burn, to glow’; Watkins 1985:3—4 **as-* and 2000:5 **as-* ‘to burn, to glow’ (oldest form **₂es-* colored to **₂as-*); Mann 1984—1987:37 **as-* ‘burnt, brown’, 37—38 **asdō*, *-iō* ‘to parch, to burn, to inflame’, 38 **asgō(n)*, *-iō(n)*, *-iə* ‘ash, dust’, 38 **āsos*, *-ā* ‘hearth, sacrificial altar’; Gamkrelidze—Ivanov 1984.I:158 **H₂as-* and 1995.I:136 **H₂as-* ‘(ritual) hearth, altar’; Mallory—Adams 1997:32 **h₂éh_xōs* ‘ash’ (< ‘±burnings’) (also **h₂h_xs-ko-* and **h₂h_xs-g(h)-*) from **h₂éh_x-* ‘to burn’; Mayrhofer 1956—1980.I:83 **ās-*; Boisacq 1950:16 (Greek ἄζω < **azd-*, extended form of **ās-*); Frisk 1970—1973.I:25—26 (Greek ἄζω ‘to be dry’ < **ās-*); Chantraine 1968—1980.I:25 (Greek ἄζω < **₂ed-*); Beekes 2010.I:26—27 **h₂ed-*; Hofmann 1966:4 **azd-*; Walde—Hofmann 1965—1972.I:61 **ās-*; Ernout—Meillet 1979:42; De Vaan 2008:49 **h₂eh₁s-h₂-*; Orël 2003:26 Proto-Germanic **askōn*; Kroonen 2013:38 Proto-Germanic **askōn-* ‘ashes’; Feist 1939:72; Lehmann 1986:54 **ās-*; De Vries 1977:15 **as-*; Falk—Torp 1903—1906.I:26; Onions 1966:54; Klein 1971:53 **ās-* ‘to burn, to glow’; Kluge—Mitzka 1967:33; Kluge—Seebold 1989:43; Adams 1999:33 and 57—58; Van Windekens 1976—1982.I:169 **ās-*; Puhvel 1984— .3:210—212 and 3:221—224; Kloekhorst 2008b:322—323 **h₂eh₁s-eh₂-*; Lindeman 1997:57 **H₂eHs-* (lengthened-grade **H₂ēs-* [phonetically **H₂ās-*] is also possible). Note: Puhvel, among others, compares Greek ἄζω ‘to be dry’ (< **āδ-īō*) with Hittite *hat-* ‘to dry up, to become parched’ instead.
- C. Uralic: Proto-Finno-Ugrian **ās3-* ‘to heat, to ignite’ > Votyak / Udmurt *esty-* ‘to heat’; Zyrian / Komi *ōzjy-* ‘to catch fire’, *ōzty-* ‘to ignite, to fire, to light’; Ostyak / Xanty *ōl-*, (Southern) *ət-* ‘to heat, to ignite’. Collinder 1955:83 and 1977:100; Rédei 1986—1988:27 **ās3-*.
- D. Proto-Altaic **ase-* (~ **p^h-*) ‘(vb.) to catch fire; (adj.) hot’: Proto-Mongolian **(h)asa-* ‘to catch fire’ > Written Mongolian *asa-* ‘to burn, to catch fire, to ignite’; Khalkha *asa-* ‘to catch fire’; Buriat *aha-* ‘to catch

fire'; Kalmyk *as-* 'to catch fire'. Proto-Turkic **isig/*isig* 'hot, warm' > Old Turkic (Old Uighur) *isig* 'hot'; Karakhanide Turkic *isig* 'hot'; Turkish *sıcak* 'hot; heat'; Azerbaijani *isti* 'warm'; Turkmenian *issi* 'hot'; Uighur *issiq* 'hot'; Karaim *issi* 'hot, warm', *isi-t-* 'to warm'; Tatar *esse* 'hot'; Kirghiz *isiq-* 'hot', *isi* 'heat, hot wind'; Kazakh *issi* 'hot'; Noghay *issi* 'hot'; Oyrot (Mountain Altai) *izü* 'hot'; Tuva *iziγ* 'hot'; Chuvash *ᐃᐃᐃᐃ* 'warm'; Yakut *itī, ičiges* (< **isi-geč*) 'warm'. Derived from **īsī-/ *isi-* 'to be hot'. Starostin—Dybo—Mudrak 2003:316—317 **ase-* (~ **p-*) 'to catch fire; hot'.

Buck 1949:1.84 ashes; 7.31 fireplace (hearth). Bomhard—Kerns 1994:530, no. 381; Greenberg 2002:32, no. 53, **as* 'burn'.

743. Proto-Nostratic root **has^v-* (~ **həs^v-*) (used as the base to designate various tree names):

(n.) **has^v-a* 'a tree and its fruit'

- A. (?) Dravidian: Tamil *āccā* 'the sal tree' (*Shorea robusta*); Kannaḍa *āsu, āca, ārse* 'the sal tree'. Burrow—Emeneau 1984:32, no. 343.
- B. Proto-Indo-European **h₁hes-* [**h₁has-*]/**h₁hōs-* originally 'a tree and its fruit' (as in Hittite), but later specialized in the post-Anatolian Indo-European daughter languages: Hittite *haššik(ka)-* 'a tree and its fruit' (?); Greek ὄξυς (< **ōsk[ε]σ-* ?) 'a kind of beech-tree'; Armenian *haçi* 'ash-tree'; Albanian *ah* (< **oskā*) 'beech-tree', *ashe* 'holly'; Ligurian *᾽Οσκίλα* 'ash forest'; Latin *ornus* (< **os-en-os*) 'mountain-ash'; Old Irish (*h*)*uinn-ius* 'ash-tree'; Welsh *onn-en* 'ash-tree'; Breton *ounn-enn* 'ash-tree'; Old Icelandic *askr* 'ash-tree', *eski* 'ashen box'; Swedish *ask* 'ash-tree'; Old English *æsc* 'ash-tree'; North Frisian *esk* 'ash-tree'; Dutch *esch* 'ash-tree'; Old High German *ask* 'ash-tree' (New High German *Esche*); Old Prussian *woasis* 'ash-tree'; Lithuanian *úosis* (< **ōs-*) 'ash-tree'; Russian *jásen'* [ясень] 'ash-tree'. Pokorny 1959:782 **ōs-*, **ōs-i-s*, **ōs-en-*, **os-k-* 'ash-tree'; Walde 1927—1932.I:184—185 **ōsi-s*, **ōsen-*, **os-k-*; Mann 1984—1987:893—894 **ōsis* (**ōsnos*, **ōsen-*) 'ash-tree; rowan', 894 **oskos*, *-us* 'a tree, ash or beech'; Watkins 1985:46 **os-* and 2000:61 **os-* 'ash-tree'; Gamkrelidze—Ivanov 1984.II:625 **Hos-*, II:942 and 1995.I:537, I:539, I:764 **Hos-* 'ash(tree)'; Mallory—Adams 1997:32 **h₃es(k)-* (**h₂os(k)-*) 'ash'; P. Friedrich 1970:92—98 **os-* 'ash-tree'; Boisacq 1950:706 **ōs-i-s*; Chantraine 1968—1980.II:806 **ōs-*, **ōsi-*, **ōsen-*; Hofmann 1966:234—235; Frisk 1970—1973.II:400; Beekes 2010.II:1088; Walde—Hofmann 1965—1972.II:223 **ōsen-os*, **ōsin-os*; Ernout—Meillet 1979:469 **ōs-*; De Vaan 2008:435; Orël 1998:2—3 and 2003:26 Proto-Germanic **askaz*, 26 **askjan*; Kroonen 2013:38 Proto-Germanic **aska-* 'ash'; De Vries 1977:15; Onions 1966:54 **ōs-*, Common Germanic **askiz*; Klein 1971:53 **ōsis*; Kluge—Seebold 1989:188 **osk-*, **ōs-*; Kluge—Mitzka 1967:174—

175 *osk-; *ōsis; Smoczyński 2007.1:705; Derksen 2015:481 *Heh₃-s-; Fraenkel 1962—1965.II:1167. Note: Neither Puhvel (1984— :3:232) nor Kloekhorst (2008b:325) give an etymology for Hittite *ḫaššik(ka)*-, but cf. Tischler (1977— :200—201).

- C. Uralic: Mordvin (Erza) *ukso*, (Moksha) *uks* ‘ash, elm’; Cheremis / Mari *oško* ‘poplar’. Collinder 1955:138—139 and 1977:149; Joki 1973:333. These may be loans from Indo-European.

Sumerian *hašhur* ‘apple, apple-tree’, *hašhur-ar-man-nu*, *hašhur-kur-ra* ‘apricot, apricot-tree’, *hašhur-a-ab-ba* ‘a kind of apple-tree’, *hašhur-babbar* ‘a tree and its fruit’, *hašhur-niš-DA* ‘pear’, *hašhur-kur-ra* ‘quince’, *hašhur-kur-ra* ‘pear-tree’.

Illič-Svityč 1971—1984.I:255, no. 117, *Hosa ‘poplar’; Bomhard—Kerns 1994:555, no. 415.

744. Proto-Nostratic root **hat*’- (~ **hət*’-):

(vb.) **hat*’- ‘to shake, to tremble; to be shaken, startled, frightened, terrified, afraid’;

(n.) **hat*’-*a* ‘trembling, shaking’

Note also:

(vb.) **hut*’- ‘to shake, to shiver, to tremble’;

(n.) **hut*’-*a* ‘trembling, shaking’; (adj.) ‘shaking, shivering, trembling’

A. Afrasian: Semitic: Arabic *ḥaṭā* (inf. *ḥaṭw*) ‘to shake’.

B. Dravidian: Tamil *atir* (-*v*-, -*nt*-) ‘to shake, to quake, to tremble (as by an earthquake, the fall of a tree, the rolling of chariots), to be startled, to be alarmed, to resound (as thunder), to reverberate, to sound (as a drum), to roar (as beasts)’, *atir* (-*pp*-, -*tt*-) ‘to alarm by shouting, to intimidate, to rebuke, to thunder, to roar (as the sea)’, *atircci* ‘quaking, shaking, trembling, loud noise or report, roaring’, *atirppu* ‘trembling, echo’, *atirvu* ‘shaking, trembling, tremolo’; Malayalam *atiruka* ‘to fear, to tremble’; Kannaḍa *adir*, *adaru*, *aduru*, *adru* (vb.) to tremble, to shake, to shiver, to fear; (n.) trembling, tremor’, *adirpu* ‘trembling, fear’, *adalu* ‘to tremble, to shake, to shiver, to fear’, *adarisu*, *adalisu* ‘to make tremble, to shake’; Tuḷu *aḍuruni*, *adaruni*, *aduruni* ‘to tremble, to quake’, *aḍurāvuni* ‘to shake, to agitate’, *aḍurāṭa* ‘shaking, trembling’, *aḍurupaduryu* ‘shaking and trembling’, *adarpuni* ‘to cause to tremble, to admonish, to rebuke’, *addalipuni* ‘to rebuke, to frighten’; Telugu *adaru* (vb.) to tremble, to shake, to quake, to shiver; (n.) trembling, shaking, tremor’, *adalu* ‘to start, to be alarmed or afraid’, *adalincu*, *adalucu*, *adalupu*, *adalpu* ‘to frighten, to rebuke, to reproach’, *adalupu*, *adalpu* ‘frightening, rebuke’, *adiri-paḍu* ‘to start, to be alarmed’, *adiri-pāṭu* (n.) a start, alarm; (adv.) suddenly,

unexpectedly'; Gadba (Salur) *adrap-* 'to shake (tr.)'; Malto *adyare* 'to be agitated'. Burrow—Emeneau 1984:14, no. 137.

- C. Proto-Indo-European **h₁het-* [**h₁hat-*] '(vb.) to terrify, to frighten; (adj.) terrible, horrible, hateful': Hittite (nom. sg.) *ha-tu-ga-aš* 'terrible, baleful, fearsome, awesome', (nom.-acc. sg.) *ha-tu-ga-tar* 'terror, awesomeness', (3rd sg. pres. act.) *ha-tu-ki-iš-zi* 'to become terrible', (3rd pl. pres. act.) (?) *ha-tu-ga-nu-wa-an-[zi]* 'to terrify'; Greek ὀδύσσομαι 'to be wroth against, to be angry with, to hate', Ὀδυσσεύς 'Ulysses, Odysseus' (< 'Fearsome'); Latin *ōdī* 'to hate', *ōdium* 'hatred, grudge, ill will, animosity, enmity, aversion', *odiōsus* 'hateful, odious, vexatious, offensive, unpleasant, disagreeable, annoying, troublesome'; Armenian *ateam* 'to hate', *ateli* 'hated, hostile'; Crimean Gothic *atochta* 'bad'; Old Icelandic *atall* 'fierce'; Old English *atol* 'terrible, dire, loathsome, horrid'; Breton *æz* 'horror', *æzi* 'to be terrified'. Rix 1998a:263 **h₃ed-* 'to hate'; Pokorny 1959:773 **od-* 'to hate'; Walde 1927—1932.I:174—175 **od-*; Mann 1984—1987:861—862 **ōd-* 'hate, fear, arousal', 862 **odjom* 'hatred, boredom'; Watkins 1985:45 **od-* and 2000:59 **od-* 'to hate'; Mallory—Adams 1997:259 **h₃ed-* 'to hate'; Puhvel 1984— .3:274—277 **Hodug-*; Kloekhorst 2008b:336—337; Boisacq 1950:685—686; Hofmann 1966:225 **od-*; Frisk 1970—1973.II:351; Beekes 2010.II:1048—1049 (pre-Greek); Chantraine 1968—1980.II:775 **od-*; De Vaan 2008:425; Ernout—Meillet 1979:458—459; Walde—Hofmann 1965—1972.II:202—203 **od-*; Orël 2003:27 Proto-Germanic **atuǵaz*, 27 **atulaz*; Feist 1939:61; Lehmann 1986:46; De Vries 1977:17.

Buck 1949:16.41 hate (sb.); 16.53 fear, fright.

745. Proto-Nostratic (n.) **haw-a* 'a relative on the mother's side':

- A. Dravidian: Tamil *avvai* 'mother, old woman, woman ascetic'; Kota *av* 'mother, mother's sister or female parallel cousin'; Kannada *avve*, *avva* 'mother (used as a title of respect and love), grandmother, any elderly woman', *abbe* 'mother'; Koḍagu *avvë* 'mother, mother's sister or female parallel cousin'; Tuḷu *abbè* 'an elderly woman, matron'; Telugu *avva* 'mother, grandmother, an old woman'; Gondi *avva*, *avā* 'mother'; Konḍa *ave* 'mother'; Maṇḍa *ava* 'elder brother's wife'; Kui *ava* 'elder brother's wife'; Kuwi *ava* 'elder brother's wife', *awa* 'sister-in-law'. Burrow—Emeneau 1984:25—26, no. 273; Krishnamurti 2003:10 **aww-a* 'mother, grandmother'.
- B. Proto-Indo-European **h₁ewh₁ho-s* [**h₁hawh₁ho-s*] 'maternal grandfather; maternal uncle': Hittite (nom. sg.) *hu-uḫ-ha-aš* 'grandfather', *huh₁hant-* '(great-)grand-father'; Luwian (instr. sg.) *hu-u-ha-ti* 'grandfather'; Hieroglyphic Luwian *huha-* 'grandfather', *huhati-* '(great-)grandfather'; Lycian *χuga-* 'grandfather' in *χugaha se-χñnaha* 'grandfather's and

grandmother's'; Armenian *hav* 'grandfather'; Latin *avus* 'grandfather', *avia* (Late Latin *ava*) 'grandmother', *avunculus* 'maternal uncle'; Old Irish *áue* 'grandson'; Welsh *ewythr* 'uncle'; Gothic **awō* (only in dat. sg. *awōn*) 'grandmother'; Old Icelandic *ái* 'great-grandfather', *afi* 'grandfather'; Old English *ēam* 'maternal uncle'; Old Frisian *ēm* 'maternal uncle'; Dutch *oom* 'uncle'; Old High German *ōheim* (< Proto-Germanic **awun-χaimaz*) 'uncle (mother's brother)' (New High German *Oheim*, *Ohm*); Old Prussian *awis* 'maternal uncle'; Lithuanian *avýnas* 'maternal uncle'; Old Church Slavonic *ujb* 'mother's brother', *ujka* 'mother's sister'; Tocharian B *āwe* 'grandfather'. Pokorny 1959:89 **ayo-s* 'maternal grandfather'; Walde 1927—1932.I:20—21 **ayo-s*; Mann 1984—1987:48 **ayos*, *-ā*, *-ios*, *-jə* 'kinsman'; Mallory—Adams 1997:237—238 **h₂eu_h₂os* 'grandfather; mother's father'; Watkins 1985:4 **awo-* and 2000:6 **awo-* 'an adult male relative other than one's father'; Gamkrelidze—Ivanov 1984.II:766 **HauHo-* and 1995.I:668 **HauHo-* 'grandfather, father's father'; Puhvel 1984— .3:355—358 **A₁ewA₁os*; Sturtevant 1951:6—7, §12, Indo-Hittite **xauxos*, 39, §62b, Indo-Hittite **xewxos* (note also fn. 29), 47, §74; Boutkan—Siebinga 2005:86—87; Kloekhorst 2008b:352—353 **h₂éuh₂-s*, **h₂eu_h₂-m*, **h₂uh₂-ós*; Tischler 1977— :260—262; Walde—Hofmann 1965—1972.I:88—89; Ernout—Meillet 1979:61—62; De Vaan 2008:66; Orël 2003:31 Proto-Germanic **awōn*; Kroonen 2013:44—45 Proto-Germanic **awa/ōn-* 'grandparent'; Feist 1939:71 **ayo-*; Lehmann 1986:53 **awen-*, **awyo-*, **awo-*; De Vries 1977:2 and 3; Kluge—Mitzka 1967:520—521; Kluge—Seebold 1989:514; Vercoullie 1898:210 **awos*; Adams 1999:56 **h₂eu_h₂o-* 'grandfather'; Fraenkel 1962—1965.I:28; Smoczyński 2007.1:38; Derksen 2008:507—508 **h₂eu_h₂-i-o-* and 2015:74 **h₂eu_h₂-*.

- C. Yukaghir (Southern / Kolyma) *abo-* (< **awa*) 'elder', *abuča*: 'address to a grandmother', *abu:j* 'elder', (Northern / Tundra) *abučie* 'grandmother, mother-in-law'. Nikolaeva 2006:115.
- D. (?) Eskimo: Proto-Yupik **avaqutaq* 'offspring' > Alutiiq Alaskan Yupik *awaqutaq* 'son'; Central Alaskan Yupik (Nunivak) *awaqutaX* 'son', (Hooper Bay-Chevak) *avankuq* 'son'; Naukan Siberian Yupik *avaqutaq* 'infant, child'; Central Siberian Yupik *avaqutaq* 'child, offspring'; Sireniki *avaqutaX* 'child, offspring' (probably borrowed from Central Siberian Yupik). Fortescue—Jacobson—Kaplan 1994:55. Proto-Yupik **avaqutaq* < **ava-* plus the postbases **q(q)un* and **q(q)utar* 'something associated with something' [cf. Fortescue—Jacobson—Kaplan 1994:422—423]. Proto-Inuit **avvasaaq* 'relative' > Seward Peninsula Inuit *avvazaaq* 'someone with the same name'; North Alaskan Inuit (Point Hope) *avvasaaq* 'close relative or friend'. Fortescue—Jacobson—Kaplan 1994:56.

Buck 1949:2.46 grandfather; 2.47 grandmother; 2.51 uncle. Bomhard—Kerns 1994:555—556, no. 416; Caldwell 1913:588.

746. Proto-Nostratic root **haw-* (~ **həw-*):
 (vb.) **haw-* ‘to surge up, to overflow, to rain’;
 (n.) **haw-a* ‘torrential rain, torrent, deluge’
 Probably related to:
 (vb.) **haw-* ‘to swell, to increase’;
 (n.) **haw-a* ‘swelling, increase, growth; great number or amount’
- A. Afrasian: Egyptian *hwi* ‘to surge up, to overflow, to rain’, *hwyt* ‘rain’, *hwhw* ‘flood’; Coptic *hōw* [ϣϣϣ], *hu-* [ϣϣ-] ‘(vb.) to rain; (n.) rain, moisture’, *humpe* [ϣϣⲙⲡⲉ] ‘rain’. Hannig 1995:515 and 520; Faulkner 1962:165; Erman—Grapow 1921:105—106 and 1926—1963.3:48, 3:49, and 3:56; Vycichl 1983:318; Černý 1976:304. Orël—Stolbova 1995:287, no. 1303, **hVw-* ‘to rain’.
- B. Dravidian: Tuḷu *barakely* ‘inundation’; Telugu *vaṛada* ‘flood, torrent, inundation, deluge’, *vaṛru* ‘flow, flood’; Parji *vered* ‘flood’; Konda *urda* ‘flood’; Kuwi *varda pīyu* ‘torrential rain’, *vāru* ‘flood’. Burrow—Emeneau 1984:481—482, no. 5323.
- C. Proto-Indo-European **hhew-r-* [**hhaw-r-*]/**hhow-r-*/**hhu-r-*, **hhw-er-*/**hhw-or-* ‘(vb.) to sprinkle, to spray, to rain; (n.) rain, moisture’: Sanskrit *vāri* ‘water, rain, fluid’; Avestan *vairi-* ‘lake’, *vār-* ‘to rain’; Tocharian A *wār*, B *war* ‘water’; Latin *ūrīna* ‘urine’; Greek οὐρον ‘urine’, ραίνω (< **Hwr̥n-yō*) ‘to sprinkle, to besprinkle’; Old Irish *feraim* ‘to pour’; Old Icelandic *aurr* ‘moist earth, clay, mud’, *ver* ‘sea’, *úr* ‘light rain, drizzle’, *ýra* ‘to drizzle’; Swedish (dial.) *örja* ‘swamp’; Old English *ēar* ‘sea’, *wēar* ‘spray’. Pokorny 1959:80—81 **auer-* ‘water, rain, river’; Rix 1998a:259 **h₂uerh₁-* ‘to sprinkle, to spray’; Walde 1927—1932.I:268—269 **uer-*; Mann 1984—1987:895—896 **ouros*, *-om* (**aur-*) ‘water, brine; moisture, mire’; Watkins 1985:44 **wēr-* and 2000:100 **wē-r-* ‘water, liquid, milk’ (contracted from earlier **weḡ₁-r-*; zero-grade **uḡ₁-r-*, contracted to **ūr-*); Mallory—Adams 1997:636 **u_é/óh_x-* ‘water’; Boisacq 1950:729 **uer-s-*, enlargement of **uer-*, and 833 **ur̥n-īō*; Chantraine 1968—1980.II:839 and II:965 **wren-*; Frisk 1970—1983.II:447 (Sanskrit *várṣati* < **uérseti*) and II:639—640 **uren-*; Beekes 2010.II:1028—1029 **uers-* and II:1272 (pre-Greek); Hofmann 1966:244—245 **uer-s-*, **uer-* and 294 **ur̥nīō* (root **uren-*); Walde—Hofmann 1965—1972.II:840 **uer-*, **uer-s-*; Ernout—Meillet 1979:755; De Vaan 2008:644; Adams 1999:577—578; Van Windekens 1976—1982.I:557—558 Pre-Tocharian **uer-*; Orël 2003:29—30 Proto-Germanic **auraz*, 450 **warōn* ~ **waraz*; Kroonen 2013:42 Proto-Germanic **aura-* ‘mud, sand, sediment’; De Vries 1977:20, 635, and 654. Proto-Indo-European **hhw-er-s-*/**hhw-or-s-*/**hhw-r-s-* ‘(vb.) to rain; (n.) rain’: Sanskrit *varṣá-m* ‘rain, raining, a shower’, *varṣati* ‘to rain’; Hittite *warša-* ‘fog, mist’ (the initial laryngeal is assumed to have been lost in Hittite [cf. Melchert 1994a:49]); Greek ἔρση ‘dew’ (Homeric ἔερση, Doric ἔρσᾱ); Old Irish *frass* ‘rain’. Rix 1998a:259—260 **h₂uers-* ‘to rain’;

Pokorny 1959:81 **uer-s-* ‘to rain’; Walde 1927—1932.I:269 **uer-s-*; Mann 1984—1987:1521 **uers-* ‘droplet, sprinkling, shower, dew, rain’, 1521 **uersō* (-*īō*, -*āīō*) ‘to shed, to sprinkle, to pour, to gush, to rain’, 1604 **urs-* ‘pour, downpour’; Watkins 1985:77—78 **wers-* and 2000:100 **wers-* ‘to rain, to drip’; Mallory—Adams 1997:477 **h₁uers-* ‘rain’; Gamkrelidze—Ivanov 1984.II:680 **uers-* and 1995.I:587 **wers-* ‘to pour, to spill’; Chantraine 1968—1980.I:375 (Sanskrit *várṣati* < **werseti*); Boisacq 1950:284 **uers-*; Frisk 1970—1973.I:566—567 (Sanskrit *várṣati* < **uérseti*), **uorseīō*, **uer-os-*, **uer-s-*; Hofmann 1966:94 **uer-s-*; Beekes 2010.I:464—465 **h₁uers-*; Melchert 1994a:49 *warša-* (< **wórso-* < **h₂wórso-*, **h₂wers-* ‘to rain’) and 163; Kloekhorst 2008b:971—972; Wodtko—Irslinger—Schneider 2008:356—357 **h₂uers-*. Proto-Indo-European **h₁hew-on(th)-* [**h₁haw-on(th)-*], **h₁hew-ŋ(th)-* [**h₁haw-ŋ(th)-*] ‘spring, well’ (also used as the base of river names): Sanskrit *avatá-h* ‘well, cistern’, *avāni-h* ‘bed of river, stream’; Latvian *avuōts* ‘spring’; Latin (river names) *Avēns*, *Aventia*. Mallory—Adams 1997:539 (?) **h₂eu(o)nt-* ‘spring’; Pokorny 1959:78 **auent-*; Mann 1984—1987:48 **auon-*, **auont-*, **auñt-* theme of river-names; Mayrhofer 1956—1980.I:57 and I:58.

- D. Yukaghir (Northern / Tundra) *awre-* ‘to gather (of rainwater on a skin (intr.))’. Nikolaeva 2006:114.

Buck 1949:1.31 water; 1.75 rain (sb.); 4.65 urinate; urine. Bomhard—Kerns 1994:530—531, no. 382.

747. Proto-Nostratic root **haw-* (~ **həw-*):

(vb.) **haw-* ‘to swell, to increase’;

(n.) **haw-a* ‘swelling, increase, growth; great number or amount’

Probably related to:

(vb.) **haw-* ‘to surge up, to overflow, to rain’;

(n.) **haw-a* ‘torrential rain, torrent, deluge’

- A. Proto-Kartvelian **xwaw-* ‘great number, many’: Georgian *xvav-* ‘heap, pile’; Mingrelian *xva-* ‘flock’ (this may be a loan from Georgian); Svan *xwāj*, *xwāj* ‘much, many’. Klimov 1964:258 **xwaw-* and 1998:328 **xwa(w)-* ‘great number, multitude’; Fähnrich—Sardshweladse 1995:549 **xwaw-*; Fähnrich 2007:682 **xwaw-*.
- B. Proto-Indo-European **h₁hew-k-* [**h₁haw-k-*]/[**h₁hu-k-*], **h₁hw-ek’(s)-*/**h₁hw-ok’(s)-* ‘to grow, to increase’: Sanskrit *úḁṣati* ‘to grow’, *ugrá-h* ‘powerful, mighty, strong’, *vakṣáyati* ‘to grow, to increase, to be strong, powerful’, *ójas-* ‘strength, vigor, energy’; Pāli *ugga-* ‘mighty, huge, strong, fierce, grave’; Avestan *vaḥṣaiti* ‘to grow’, *ugrah-* ‘powerful, mighty’, *aojah-*, *aogah-*, *aogar-* ‘strength; strong’; αὔξω ‘to increase’, Greek αὔξω ‘to increase, to enlarge’; Latin *augeō* ‘to increase, to enlarge, to strengthen’,

augmentum ‘increase, growth’, *augustus* ‘majestic, august, venerable’; Gothic *aukan* ‘to add, to increase’, *wahsjan* ‘to grow, to increase’; Old Icelandic *auka* ‘to augment, to increase’, *vaxa* ‘to increase, to grow, to grow up’; Old English *ēacan*, *ēacian* ‘to increase’, *ēacen* ‘increased, enlarged, endowed, strengthened, strong, mighty, vast, great’, *weaxan* ‘to grow, to flourish, to increase’, *weaxung* ‘increase, increase of prosperity’; Old Frisian *āken* ‘large’, *waxa* ‘to grow’; Old Saxon *ōkian* ‘to increase’, *ōkan* ‘grown, pregnant’; Old High German *ouhhōn* ‘to increase’, *wahsan* ‘to grow, to wax (as of the moon)’ (New High German *wachsen*); Lithuanian *augu*, *augti* ‘to grow, to increase’; Tocharian A *ok-*, B *auk-* ‘to grow, to increase’, B *auki* ‘an increase’, B *auks-* ‘to sprout, to grow up’. Rix 1998a:245 **h₂eug-* ‘to be strong’, **h₂éugos-* ‘strength’, **h₂ug-ró-* ‘strong’ and 257—258 **h₂ueks-* ‘to grow (up), to increase, to become enlarged’; Pokorny 1959:84—85 **aueg-* ‘to increase’; Walde 1927—1932.I:22—24 **aueg-*, **aug-*, **ug-*; Mann 1984—1987:41 **augstos*, **augstos* ‘tall; growth, height’, 41 **augō* (**-ējō*; **aug-*, **aug-s-*, **aueg-*, **aueg-s-*) ‘to increase, to grow’, 41 **augos*, *-om*, *-ios*, *-jə* ‘growth, increase, reinforcement’, 41 **augmn-* ‘growth, height’, 41 **auk-* (?) ‘full-grown, tall’, 42 **auks-* (**auksəmo-*) ‘high; height, growth’, 46 **aueks-* (**aueks-*, **auks-*, **auks-*) ‘to grow; growth’, 1475 **ūg-* ‘to grow’, 1507 **ueks-* ‘to grow, to thrive’, 1507 **uekslis*, *-os* ‘thriving’; Gamkrelidze—Ivanov 1984.I:236 **Hauk’-*, **Huek’-* and 1995.I:206 **Hauk’-*, **Hwek’-* ‘to grow’; Watkins 1985:4 *aug-* (variant **(a)weg-* [*< *ǵweg-*]; variant extended forms **wogs-*, **wegs-*) and 2000:6 **aug-* ‘to increase’ (oldest form **ǵ₂eug-*, colored to **ǵ₂aug-*, with variant [metathesized] form **ǵ₂weg-*); Mallory—Adams 1997:248 **h_aeug-* ‘to grow’; Mayrhofer 1956—1980.I:98, I:98—99 **au(e)g-*, and I:131; Boisacq 1950:101 **auq-s-*, **aueq-s-*, **aug-*; Frisk 1970—1973.I:187—188 **aug-*, **aueg-*, **aueg-s-*, **ueg-s-*; Chantraine 1968—1980.I:141 theme I **ǵ₂eu-g-* (*> aǵǵō*), theme II **ǵ₂w-eg-* (*> ā(F)éǵō*); Beekes 2010.II:170—171 **h₂eug-*, **h₂ueg-s-*; Hofmann 1966:28 **au(e)qs-*, **aug-* (in Latin *augeō*); Walde—Hofmann 1965—1972.I:82—83 **aug-*, **aueg-*; **ueg-*; **auek-s-*, **auk-s-*, **ueks-* (**uks-*); De Vaan 2008:61—62 **h₂eug-eje-*, **h₂eug-s-* ‘to grow’; Ernout—Meillet 1979:56—58 **aweg-*, **āug-*, **ug-*; Orël 2003:29 Proto-Germanic **aukanan*, 29 **aukōjanan*, 29 **aukōn*, 439 **waxsan*, 439 **waxsjanan* I, 439 **waxstiz*, 439 **waxstuz*; Kroonen 2013:42 Proto-Germanic **aukan-* ‘to grow’, 566 **wahs(j)an-* ‘to grow’ and 566 **wahstu-* ‘growth, stature’; Lehmann 1986:50 **aweg-*, **awg-* ‘to increase’ and 387 **aweg-*, **awg-*; **wōg-*; **awk-s-*, **wek-s-*; Feist 1939:67 **aueg-*, **aug-* and 541 **(a)ueg-*, **aug-*; **(a)ueks-*, **auks-*, **uks-*; De Vries 1977:19 **aueg-*, **aug-* and 648; Onions 1966:304 **aug-* and 995 **woks-*, **aweks-*, **auks-*, **uks-*; Klein 1971:240 **aweg-*, **aug-* and 822 **aw(e)ks-*, **auks-*, **weks-*; Boutkan—Siebinga 2005:13 and 433; Kluge—Mitzka 1967:829; Kluge—Seebold 1989:771 **(ə)wek-s-*; Van Windekens 1976—1982.I:329; Adams 1999:130—131

**h_aeug-*; Fraenkel 1962—1965.I:24; Smoczyński 2007.1:32; Derksen 2015:68 **h₂eug-*; Wodtko—Irslinger—Schneider 2008:328—332 **h₂eug-* and 354—356 **h₂ueks-*.

Buck 1949:12.53 grow (= increase in size); 12.55 large, big (great); 13.15 much, many; 13.16 more. Bomhard—Kerns 1994:542—543, no. 399.

748. Proto-Nostratic root **haw-* (~ **həw-*):

(vb.) **haw-* ‘to weave, to braid, to plait, to twist, to turn’;

(n.) **haw-a* ‘the act of weaving, braiding, plaiting’

- A. Afrasian: Proto-Semitic **haw-ak-* ‘to weave, to braid, to plait’ > Arabic *hāka* (base *hwk* [حوك]) ‘to weave, to interweave, to knit; to braid, to plait’; Syriac *ha(w)wāḫā* ‘a weaver’. Proto-Semitic **haw-ac-* ‘to sew, to stitch together’ > Arabic *hāša* (base *hwš* [حوص]) ‘to sew, to stitch together’.
- B. Dravidian: Tamil *vēy* ‘to cover (as a building), to roof, to thatch, to put on (as a garland)’, *vēy_{tal}* ‘thatched house’, *vēyvu* ‘covering’; Kota *ve-j-* ‘to thatch’; Tuḷu *bēpini* ‘to thatch the roof of a house’; Kolami *ve-nz-* ‘to thatch’; Telugu *vēyu* ‘to thatch a house’; Naikṛi *vēnj-* ‘to thatch’; Parji *vēñ-* ‘to thatch’; Gadba (Salur) *vēng-* ‘to thatch’; Gondi *wēsānā*, *vēsānā* ‘to thatch’, *vēs-* ‘to cover (roof)’, *vēnc-* ‘to cover (house)’; Konḍa *vī-* ‘to thatch’; Pengo *vig-* (*vikt-*) ‘to thatch’, *vikha* ‘thatch’; Maṇḍa *vēk-* ‘to thatch’; Kui *vega* (*vegi-*) ‘to roof, to thatch’; Kuwi *vīgali* ‘to thatch’, *vīka* ‘thatch’; Malto *bese* ‘to thatch’. Burrow—Emeneau 1984:505, no. 5532; Krishnamurti 2003:8 **wēy-* ‘to thatch’.
- C. Proto-Indo-European **h₁hew-* [**h₁haw-*] ‘to plait, to weave’: Lithuanian *āudžiau*, *āudžiu*, *āusti* ‘to weave’; Sanskrit (inf.) *ótum*, *ótave* ‘to weave’, *ótu-h* ‘woof of a web’. Pokorny 1959:86—87 **a_u-*, **a_uē-*; **au-dh-*, **a(u)-ēdh-*, **u-dh-* ‘to plait, to weave’; Walde 1927—1932.I:16—17 **a_u-*, **(a)uē-*; Gamkrelidze—Ivanov 1984.I:230 **Ha_u-*, **H_u-aH-* ‘to weave’ and 1995.I:200 **Haw-*, **Hw-aH-* ‘to weave’; Mallory—Adams 1997:572 **h_{2/3}eu-* ‘to weave’; Mayrhofer 1956—1980.I:132. Proto-Indo-European **h₁hw-i_hh-* [**h₁hw-eh₁h-*] (> **Hwē-*) ‘to weave, to braid, to plait’: Sanskrit (inf.) *vātave* ‘to weave, to braid, to plait’, *vāna-m* ‘the act of weaving or sewing’; Hittite (3rd sg. pres.) *ú-e-i_h-zi* ‘to turn, to fall’ (an initial laryngeal is lost in Hittite before *w* when another laryngeal follows in the word except when the second laryngeal is part of an inflectional ending [cf. Bomhard 1976:227; Polomé 1965:26]). Rix 1998a:604 **ueh₂-* ‘to turn (round)’; Pokorny 1959:86—87 **a_u-*, **a_uē-*; **au-dh-*, **a(u)-ēdh-*, **u-dh-* ‘to plait, to weave’; Mann 1984—1987:1531 **uētōs* ‘woven, enmeshed; weave, mesh’; Walde 1927—1932.I:16—17 **a_u-*, **(a)uē-*; Kloekhorst 2008b:993—996; Fraenkel 1962—1965.I:126; Smoczyński 2007.1:35 **He_u-*. Proto-Indo-European **h₁hw-ey-*/**h₁hw-oy-*/**h₁hw-i-* ‘to weave, to braid, to plait, to twist, to turn’: Sanskrit *váyati* ‘to weave, to braid, to

plait'; Latin *vieō* 'to weave together'; Lithuanian *vejù*, *výti* 'to twist'. Rix 1998a:610—611 **ueih₁-* 'to wrap (up)'; Pokorny 1959:1120—1122 **uei-*, **ueiə-*, **uī-* 'to turn'; Walde 1927—1932.I:223—227 **uei-*; Mann 1984—1987:1505 **ueiō*, **uiieiō* 'to twist, to weave, to plait, to braid'; Watkins 1985:74 **wei-* and 2000:96 **wei-* (also **weiə-*) (oldest form **wei₂-*) 'to turn, to twist'; De Vaan 2008:677; Ernout—Meillet 1970:735; Walde—Hofmann 1965—1972.II:786—787 **uei(ā*)-*; Fraenkel 1962—1965.II:1267; Smoczyński 2007:764—765. Proto-Indo-European **h₁hw-ebh-* / **h₁hw-obh-* / **h₁hu-bh-* 'to weave': Old Old Icelandic *vefa* 'to weave'; Swedish *väva* 'to weave'; English *wefan* 'to weave'; Old Frisian *weva* 'to weave'; Middle Dutch *weven* 'to weave'; Old High German *weban* 'to weave' (New High German *weben*); Tocharian A *wāp-*, B *wāp-* 'to weave'; Greek *ὄφῆ* 'a web', *ὄφαινω* 'to weave'; Sanskrit *ubhnāti* 'to cover over'. Rix 1998a:599 **uebh-* 'to wrap round, to weave'; Pokorny 1959:1114—1115 **uebh-* 'to weave'; Walde 1927—1932.I:257 **uebh-*; Mann 1984—1987:1496 **uebhō* 'to weave'; Gamkrelidze—Ivanov 1984.II:585, II:704 **Hu-eb[h]-* and 1995.I:500, I:609 **Hw-ebh-* 'to weave'; Watkins 1985:73 **webh-* and 2000:95 **webh-* 'to weave'; Mallory—Adams 1997:572 **h_{2/3}uebh-* 'to weave'; Mayrhofer 1956—1980.I:107 **webh-*; Boisacq 1950:1008—1009 **uebh-*, **uobh-*, **ubh-*; Frisk 1970—1973.II:976—977 **uebh-*; Chantraine 1968—1980.II:1163—1164 **webh-*, **ubh-*; Beekes 2010.II:1540 **(h₁)uebh-*; Hofmann 1966:388 **uebh-*; Orël 2003:451 Proto-Germanic **webanan*; Kroonen 2013:576 Proto-Germanic **weban-* 'to weave' (< **h₁uebh₁-e-*); De Vries 1977:649—650 **uebh-*; Klein 1971:823 **webh-*; Onions 1966:996—997 Common Germanic **weban*; **webh-*, **wobh-*, **ubh-*; Kluge—Mitzka 1967:841—842 **uebh-*; Kluge—Seebold 1989:779 **webh-*; Adams 1999:586 **webh-* 'to weave'; Van Windekens 1976—1982.I:557 **uebh-*. Proto-Indo-European (**h₁hw-eph-* / **h₁hw-oph-*) **h₁hu-ph-* 'to weave, to braid, to plait, to twist, to turn': Hittite (nom. sg.) *hu-u-pa-ra-aš*, *hu-(u)-up-pa-ra-aš* 'a type of cloth', (3rd sg. pres. act.) *hu-up-pa-(a)-iz-zi* '(tr.) to interlace, to entangle, to ensnare, to commingle, to (make a) blend (of); (intr.) to mingle, to mix'. Puhvel 1984— .3:384—386 the basic root is **A₁ew-* (extended forms: **A₁w-éye-*; **A₁éw-dh-*, **A₁u-dh-*, **A₁w-édh-*; **A₁éw-bh-*, **A₁ubh-*; **A₁éw-p-*, **A₁up-*).

- D. Yukaghir (Southern / Kolyma) *abut-* (< **aw-*) 'nest, hole, den, lair; case, container', *abuš-* 'to put inside', *abudu-* 'to pull', (Northern / Tundra) *awur* 'nest, hole, den, lair; case, container', *awun-saal* 'cradle without leather covering'. Nikolaeva 2006:114.

Buck 1949:6.33 weave; 9.75 plait (vb.); 10.12 turn (vb.); 10.13 turn around (vb.); 10.14 wind, wrap (vb.); 10.15 roll (vb.). Möller 1911:20—21; Bomhard—Kerns 1994:537—538, no. 394.

749. Proto-Nostratic root *hay- (~ *həy-):

(vb.) *hay- ‘to live, to be alive’;

(n.) *hay-a ‘life, age’

Extended form:

(vb.) *hay-V-w- ‘to live, to be alive’;

(n.) *hay-w-a ‘life, age’

- A. Proto-Afrasian *hay- ‘to live’: Proto-Semitic *hay-aw/y- ‘to live’ > Hebrew *ḥāyāh* [חַיָּה] ‘to live’; Syriac *ḥayā* ‘to live’; Phoenician *ḥwy* ‘to live’, *hy* ‘living’, *hym* ‘life’, *hyt* ‘animal’; Ugaritic *ḥyy* ‘to live’; Arabic *ḥayya*, *ḥayya* ‘to live’, *ḥayy* ‘living, alive’, *ḥayāh* ‘life’, *ḥayawān* ‘animal, beast; (coll.) animals, living creatures’; Sabaean *ḥyw*, *ḥyy* ‘to live’; Ḥarsūsi *ḥeyōt* ‘life’; Šheri / Jibbāli *ḥyot* ‘life’; Mehri *ḥayōt* ‘life’; Geez / Ethiopic *ḥaywa* [ሐይወ] ‘to live, to be alive, to come back to life, to revive (intr.), to be well, to be healed, to be cured, to recover, to be restored, to be saved’, *ḥaywat* [ሐይወት] ‘life, lifetime; healing, good health, salvation, restoration, state, situation’; Tigrinya *ḥaywā* ‘to live, to be healthy’, *ḥaywāt* ‘life’; Tigre *ḥaya* ‘to live’, *ḥayot* ‘life’; Harari *ḥawa* ‘to recover, to heal’, *ḥuy* ‘alive’ (probably borrowed from Arabic); Amharic *ḥaywāt* ‘life’, *ḥayaw* ‘living, alive’; Gurage (Endegeñ) *xaywāt* ‘life’. Murtonen 1989:179; Klein 1987:214; Leslau 1963:89, 1979:371, and 1987:252; Zammit 2002:154. Berber: Tuareg *iwi* ‘to be born’, *tīwit* ‘birth’, *aw*, *ag* ‘son of’, *ahaya* ‘grandson, descendant’; Tawlemmet *əhəw* ‘to be born’, *təhut* ‘birth’, *aw* ‘son’, *ahaya* ‘grandson, descendant’; Siwa *it* ‘son of’; Nefusa *aw* ‘son of’; Ghadames *u* ‘son of, descendant of’; Mzab *u*, *gg^w* ‘son of, belonging to’, *iwwa* ‘my brother, brother’; Wargla *u* ‘son’ *aytma* ‘brother’; Tamazight *u* ‘son of’; Kabyle *u* ‘son of’, *ayaw* ‘son of a sister, descendant by a sister, paternal cousin’, *tayyawt*, *taggawt* ‘son of a sister, descendant by a sister, paternal cousin’; Tashelhiyt / Shilha *yiwi* ‘my son’, *ayaw* ‘nephew, son of a sister’, *tayawt* ‘son of a sister’; Chaouia *u* ‘son of’, *awma* ‘my brother’. Cushitic: Saho-Afar *hay* ‘to live’; Beja / Beḍawye *hāy-* ‘to live’, *hāy* ‘living, alive’. Reinisch 1895:132. Note: According to Leslau (1987:252), these forms are loans from Ethiopian Semitic. Proto-Highland East Cushitic *hee-d- ‘to live’ > Gedeo / Darasa *heʔr-* ‘to live, to be present’; Hadiyya *heeʔ-* ‘to live’, *heeca* ‘life’; Kambata *heʔ-* ‘to live’, *heecata* ‘life’; Sidamo *heʔr-* ‘to live, to be present’. Hudson 1989:91—92 and 93. Diakonoff 1992:29 *ḥiw/y ‘living’; Orël—Stolbova 1995:278, no. 1257, *ḥayaw- ‘animal’; Militarev 2012:83—84 Proto-Afrasian *ḥayVw-.
- B. Proto-Indo-European *hheyw- [*hḥayw-]/*hḥoyw-, *hheyu- [*hḥayu-]/*hḥoyu- (adj.) alive; (n.) life, lifetime’: Sanskrit *āyú-h* ‘alive’; Pāli *āyu-* ‘life’; Greek *αἰών* (< *aiḥwón) ‘lifetime, age’; Latin *aevum* ‘lifetime’; Old Irish *aís*, *áes* ‘life, age’; Gothic *aiws* ‘time, lifetime, age’; Old Icelandic *ævi* ‘age, time’; Old English *æ*, *æw* ‘divine law’; Old High German *ēwa* ‘eternity, law’, *ēwīg* ‘eternal’ (New High German [poet.] *Ewe* ‘era, epoch’,

ewig ‘everlasting, eternal, endless, unending, never-ending, perpetual’), *ēwida* ‘eternity’; Tocharian A *āym-* ‘spirit, life’. Pokorny 1959:17—18 **aiy-*, **aiu-* ‘life force’; Walde 1927—1932.I:6—7 **aiy-*, **aiu-*; Mann 1984—1987:7 **aiuit-* ‘age’, 7 **aiyom* ‘age, lifetime’; Watkins 1985:1 **aiw-* and 2000:2 **aiw-* (also **ayu-*) ‘vital force, life, long life, eternity’ (oldest forms **₂eiw-*, **₂eyu-*, colored to **₂aiw-*, **₂ayu-*); Mallory—Adams 1997:352 **hₐóius* ‘vital force, life, age of vigor’; Gamkrelidze—Ivanov 1984.II:802 **aiy-* and 1995.I:237 **ai-w-om* ‘lifespan’, I:702—703 **āyu-* ‘life force, eternity’; Mayrhofer 1956—1980.I:77; Boisacq 1950:31; Frisk 1970—1973.I:49; Hofmann 1966:9; Chantraine 1968—1980.I:42—43 **ai-w-* (**₂ei-w-*); Beekes 2010.I:46—47 **h₂ei-u-*; Walde—Hofmann 1965—1972.I:21 **āiy-*: **āiyō-*, **āiyi-*, **āiyos-*, **āiyes-*, **āiūs-*; Ernout—Meillet 1979:13—14 **āyu-*; De Vaan 2008:29; Orël 2003:10—11 Proto-Germanic **aiwaz* ~ **aiwiz*, 11 **aiwipō*, 11 **ajukaz*; Kroonen 2013:16 Proto-Germanic **aiwa/ō-* ‘eternity, age’; Feist 1939:30—31 **ai-yō-*; Lehmann 1986:22 **ai-* (< **xéy-*)+-w-; **ay-wo-*, **ay-wen-*, **āy-wes-*; De Vries 1977:682; Kluge—Seebold 1989:193 **aiw-*; Kluge—Mitzka 1967:177 **aiy-*, **āiy-*; Van Windekens 1976—1982.I:173; Wodtko—Irslinger—Schneider 2008:277—287 **h₂ei-u-*.

- C. Proto-Altaic **ōye* ‘life, age’: Proto-Tungus **uyu-* ‘alive’ > Manchu *wei-xun* ‘alive’, *wei-xunge* ‘living thing’, *wei-xu-* ‘to be alive, to live’; Spoken Manchu (Sibo) *vei-xun* ‘alive’; Ulch *uyu(n)* ‘alive’; Oroch *uyu(n)* ‘alive’; Nanay / Gold *uyū* ‘alive’. Proto-Mongolian **ūye* ‘generation, age’ > Written Mongolian *ūye* ‘time, epoch, period, age; generation’; Khalkha *ūye* ‘generation, age’; Buriat *ūye* ‘generation, age’; Kalmyk *ūy* ‘generation, age’; Ordos *ūye* ‘generation, age’; Dagur *uye* ‘generation, age’; Monguor *uye* ‘generation, age’. Proto-Turkic **ōy* (?) ‘time, age’ > Tuva *ōy* ‘time, age’; Yakut (dial.) *ōyūn* ‘time, age’. Starostin—Dybo—Mudrak 2003: 1043—1044 **ōje* ‘life, age’; Illič-Svityč 1971—1984.I:242—243, no. 101, reconstructs Proto-Altaic **ōjū*.
- D. Proto-Chukchi-Kamchatkan (?) **æju-* ‘to come back to life, to revive’: Chukchi *ēju-* ‘to come to, to revive (tr. or intr.)’, *ēju-l’et-* ‘to be alive’, *ēju-l’ə-l’ən* ‘alive’; Koryak *ēju-* ‘to revive (intr.)’, *j-ēju-v-* ‘to revive (tr.)’; Alyutor *aju-* ‘to revive (intr.)’; Kamchadal / Itelmen [*ezle-kas-* ‘to revive’]. Fortescue 2005:29.

Buck 1949:74 live (= be alive); living, alive; life; 14.12 age. Möller 1911:4; Illič-Svityč 1971—1984.I:242—243, no. 101, **haju* ‘to live; life force’; Bomhard—Kerns 1994:593—594, no. 466; Greenberg 2002:109, no. 247, **ayu* ‘to live’; Dolgopolsky 2008, no. 2613, **Xay[ū]* ‘to live’.

750. Proto-Nostratic root *h_{ay}- (~ *h_{əy}-):

Extended form:

(vb.) *h_{ay}-V-t'- 'to swell, to be fat';(n.) *h_{ay}-t'-a 'a swelling, fat'; (adj.) 'fat, swollen'

- A. Proto-Afrasian *h_{ay}-t'- 'swollen, fat': Proto-East Cushitic *h_{ayd}- 'fat' > Somali *hayd* 'fat'; Konso *hayd-a* 'fat'; Gidole *hayd-a* 'fat'; Dullay *hayd-o* 'fat'. Sasse 1979:46. Proto-Southern Cushitic *h_{id}- 'thick' > K'wadza *hilama* 'mature girl not yet married'; Dahalo *hidaaḏe* 'heavy', *hidaaḏo* 'weight'; Ma'a *-hiri* 'hard'. Ehret 1980:301.
- B. Proto-Indo-European *h_{hoyt}- 'to swell': Greek οἰδάω, οἰδέω 'to swell, to become swollen', οἰδημα, οἶδος 'a swelling, tumor'; Armenian *aitnum* 'to swell'; Old High German *eiz* 'abscess, ulcer' (New High German *Eiβ*; note also *Eiter* 'pus'); Old Icelandic *eitr* 'poison', *eista* 'testicle'; Old English *āt(t)or* 'poison, venom'; Old Church Slavonic *jadъ* 'poison'; Upper Sorbian *jěd* 'poison'; Czech *jed* 'poison'; Russian *jad* [яд] 'poison'. Rix 1998a:230 *h₂eid- 'to swell'; Pokorny 1959:774 *oid- 'to swell'; Walde 1927—1932.I:166—167 *oid-; Mann 1984—1987:864—865 *oidlos (*oidalos) 'swelling, abscess', 865 *oidnu-mi (*oidan-) 'to swell', 865 *oidos, -es- 'swelling, abscess'; Watkins 1985:45 *oid- and 2000:59 *oid- 'to swell' (oldest form *₂eid- colored to *₂oid-); Mallory—Adams 1997:561 *h_aeid- 'to swell'; Hofmann 1966:226 *oid-; Boisacq 1950:688—689 *oid-; Chantraine 1968—1980.II:780 *oid- or *aid-, *oido-s or *aido-s; Beekes 2010.II:1053—1054 *h₂oid-eie-; Frisk 1970—1973.II:357—358 *oidi-, *oidos (or *aidos ?); Hübschmann 1897.I:418; Orël 2003:10 Proto-Germanic *aitaz, 10 *aitilaz, 10 *aitran; Kroonen 2013:14 Proto-Germanic *aita- 'ulcer'; De Vries 1977:98 (Old Church Slavonic *jadъ* < *oidos); Kluge—Mitzka 1967:161; Kluge—Seebold 1989:172; Derksen 2008:150 Old Church Slavonic *jadъ* < *h₁ed-; Shevelov 1964:177 Old Church Slavonic *jadъ* < *oid-.
- C. Proto-Eskimo *ayut- 'to extend or enlarge': Central Alaskan Yupik *ayutə* 'to enlarge'; Eastern Canadian Inuit (Labrador) *ayu(t)*- 'to enlarge'; Greenlandic Inuit *ayut*- 'to extend, to stretch (shoes)'. Fortescue—Jacobson—Kaplan 1994:60.

Buck 1949:12.63 thick (in dimension). Bomhard—Kerns 1994:535, no. 390.

751. Proto-Nostratic root *h_{a3}- (~ *h_{ə3}-):(vb.) *h_{a3}- 'to cut into, to carve, to notch';(n.) *h_{a3}-a 'that which is cut: incision, notch, nick; that which cuts: saw, chisel, axe, hatchet'

- A. Afroasiatic: Proto-Semitic *h_{a3}-a₃- 'to cut into, to carve, to notch' > Arabic *hazza* 'to cut, to make incisions, to carve, to notch', *hazz* 'incision, notch';

the right time, the nick of time’, *ḥazza* ‘incision, notch, nick; time; the right time, the nick of time; predicament, plight’, *maḥazz* ‘notch, nick’. Murtonen (1989:177) compares Arabic *ḥazza* ‘to cut, to make incisions, to carve, to notch’ with Hebrew *ḥəzīz* [חֲזִיז] ‘thunderbolt, lightning flash’. [Ehret 1995:376, no. 762, **ḥaaz-* ‘to cut into’ — Ehret compares Arabic *ḥazza* ‘to cut, to make incisions, to carve, to notch’ with Egyptian *ḥsq* ‘to cut off (head); to cut out (heart)’ and *ḥsqt* ‘chopper’. However, the Egyptian forms are better compared with Arabic *ḥasama* ‘to cut, to sever, to cut off’, Sabaean *ḥsm* ‘to cut, to hack to pieces (in battle)’, etc.]

- B. Dravidian: Gondi *accānā* ‘to be cut (of one’s foot on a stump, or one’s hand with a penknife), to cut off (hand, foot, etc.)’, *acc-* ‘to split, to saw’, *askānā* ‘to cut up, to divide meat’, *ask-* ‘to cut meat, to carve’; Malto *asye* ‘to chisel’. (?) Kannaḍa *haccu*, *heccu* ‘to cut in pieces’. Burrow—Emeneau 1984:6, no. 46.

Sumerian *ha-zi*, *ha-zi-in*, ^{URUD}*ha-zi-in* ‘axe, hatchet’.

Buck 1949:9.22 cut (vb.); 9.25 ax; 9.27 split (vb. tr.).

752. Proto-Nostratic root **hin-* (~ **hen-*):

Extended form:

- (vb.) **hin-V-k^h* ‘to reach, to come to, to arrive at, to gain; to offer, to present’;
(n.) **hin-k^h-a* ‘gain, mastery, experience; offering, present’

- A. Proto-Afrasian **hinVk-* ‘to reach, to come to, to arrive at, to gain; to offer, to present’: Proto-Semitic **ḥanak-* ‘to come to, to arrive at, to become experienced’ > Hebrew *ḥānaḥ* [חָנַח] ‘to train, to teach, to educate’; Arabic *ḥanaka* ‘to make experienced, worldly-wise, sophisticated’, *ḥunk*, *ḥink*, *ḥunka* ‘worldly experience, sophistication’; Geez / Ethiopic *ḥanaka* [ሐከሐ] ‘to understand, to comprehend, to perceive’. Murtonen 1989:189; Klein 1987:224; Leslau 1987:237; Zammit 2002:150. Egyptian *ḥnk* ‘to make an offering, to offer, to present, to be burdened’, *ḥnk*, *ḥnkt* ‘offerings’; Coptic *hōnk* [Ⲭⲟⲛⲕ] ‘to consecrate, to appoint’. Hannig 1995:541—542; Faulkner 1962:173; Gardiner 1957:582; Erman—Grapow 1921:112 and 1926—1963.3:117—118; Vycichl 1983:305; Černý 1976:288. (?) Proto-Southern Cushitic **hink-* ‘to push away’ > Ma’a *-hinka* ‘to push’; Dahalo *hinkið-* ‘to wipe oneself’. Ehret 1980:302. Ehret 1995:372, no. 751, **hink-/ḥank-* ‘to carry (to or from)’ (Cushitic **hink-* ‘to remove, to take away’).
- B. Proto-Elamo-Dravidian **Hinc-* (< **Hink-*) ‘to receive’: Royal Achaemenid Elamite *un-sa-* ‘to receive, to exchange’; Neo-Elamite *hu-un-sa-* ‘to allocate, to distribute’. McAlpin 1981:95 (McAlpin reconstructs Proto-Elamo-Dravidian **inc-* and Proto-Kurux-Malto **iñj-r-*). Dravidian: Kurux *iñjrnā* ‘to receive, to accept, to get’; Malto *injre* ‘to receive, to take in hand’. Burrow—Emeneau 1984:41, no 431.

- C. Proto-Indo-European **h₁ink^h-* [**h₁enk^h-*]/**h₁ṇk^h-* ‘to reach, to come to, to arrive at; to offer, to present’: Hittite (3rd sg. pres.) *hi-in-ik-zi* ‘to present, to deliver, to offer, to allot’; Sanskrit *aśnóti* ‘to reach, to come to, to arrive at, to get, to obtain; to master, to become master of; to offer’; Latin *nancior* ‘to get, to obtain’, *nanciscor* ‘to get, to gain, to receive, to meet’; Tocharian A *ents-*, B *enk-* ‘to seize, to take’, B *enkalñe* ‘grasping or clinging to existence; assumption, taking to oneself’, B *enkäl* ‘feeling, passion’. Rix 1998a:252—253 **h₂nek^h-* ‘to reach, to attain, to obtain, to achieve, to gain, to succeed in getting’; Walde 1927—1932.I:128—129 **enek^h-*, **nek^h-*, **enk^h-*, **ṇk^h-* ‘to reach’; Pokorny 1959:316—318 **enek^h-*, **nek^h-*, **enk^h-*, **ṇk^h-* ‘to reach’; Mann 1984—1987:834 **neks-* (**nek^h-*, **nekst-*) ‘approaching, near’; Watkins 1985:44 **nek-* ‘to reach, to gain’ (variant **enk-*) and 2000:57 **nek-* ‘to reach, to attain’ (oldest form **₂nek^h-*); Mallory—Adams 1997:35 **h₁enek^h-* ‘to attain’; Puhvel 1984—1989.3:289—292 **E₂énk^h-*, **E₂n-ék^h-* ‘to reach, to attain’; Kloekhorst 2008b:268—271; Mayrhofer 1956—1980.I:60 **enek^h-*, **ṇk^h-* (> Sanskrit *aś-*); De Vaan 2008:399—400; Walde—Hofmann 1965—1972.II:141—142 **en(e)k^h-*, **nek^h-*, **ṇk^h-*; Ernout—Meillet 1979:428—429 **nek^h-*; Adams 1999:77—78 **h₁nek^h-* ~ **h₁enk^h-* (zero-grade **h₁ṇk^h-*) ‘±to reach, to achieve, to take’ (> Proto-Tocharian **enk-*); Van Windekens 1976—1982.I:179—180 **enek^h-*.

Buck 1949:11.16 get, obtain; 17.24 learn; 17.25 teach. Bomhard—Kerns 1994:549—550, no. 407.

753. Proto-Nostratic root **hiw-* (~ **hew-*), **hiy-* (~ **hey-*):

- (vb.) **hiw-*, **hiy-* ‘to lack, to stand in need, to be in want’;
(n.) **hiw-a*, **hiy-a* ‘need, want, lack, deficiency’

- A. Proto-Afrasian **hiw-*, **hiy-* ‘to lack, to stand in need, to be in want’: Proto-Semitic **haw-ag-* ‘to lack, to stand in need, to be in want’ > Arabic *ʔahwaġa* ‘to have need, to stand in need, to be in want’, *hawġ* ‘need, want, lack, deficiency, destitution’; Ḥarsūsi *hātōg* (base *hwg*) ‘to need’; Šheri / Jibbāli *hótég* (base *hwg*) ‘to need’; Mehri *hātūg* (base *hwg*) ‘to need’. Zammit 2002:151. Egyptian *hwr* ‘to be poor, miserable, weak’, *hwrw* ‘beggar, poor man; destitute’. Hannig 1995:519; Faulkner 1962:166; Erman—Grapow 1921:106 and 1926—1963.3:55—56. East Cushitic: Konso *hiyy-essa* ‘poor’; Galla / Oromo *hiyy-eesa* ‘poor’; Gidole *hiyy-ayt* ‘poor’; Dullay *hiyy-akko* ‘poor’; Burji (m.) *hiyy-áyši*, (f.) *hiyy-áytee* ‘poor’, *hiyyoom-ad-*, *hiyyuum-ad-* ‘to be poor’; Gedeo / Darasa *hiyy-eessa* ‘orphan; poor’, *hiyyette* ‘widow’, *hiyyoom-* ‘to starve’, *hiyyoom-at-* ‘to be poor’, *hiyyo*, *hiyyumma* ‘poverty’; Sidamo *hiyy-eessa* (pl. *hiyy-eeyye*) ‘poor’; Kambata *hiyyessa*, *hiyyeesa* ‘orphan’. Sasse 1982:98 (Sasse notes that most, if not all, of the East Cushitic forms he cites are probably loans from Galla / Oromo); Hudson 1989:108, 115, and 412 Proto-Highland East

Cushitic **hiyy-eessa* ‘orphan; poor (one)’. Proto-Southern Cushitic **heef-* or **heeʔ-* (or **heef-* or **heeʔ-*) ‘weak, feeble, poor, deficient’ > Ma’a *hina* ‘left (hand)’; Asa *-haʔeta* ‘cheap, easy’. Ehret 1980:308.

- B. Dravidian: Tamil *ey* ‘to grow weary, to fail in strength, to flag (as from want of food); to exert oneself’, *eyppu* ‘weariness, languor, time of adversity’; Malayalam *eccu* ‘exhausted, fatigued’. Burrow—Emeneau 1984:79, no. 807.
- C. Proto-Indo-European **h₁iw-* [**h₁ew-*]/**h₁u-*, **h₁w-eA-* [**h₁w-aA-*] (> **Hw-ā-*), **h₁u-A-* (> **Hū-*) ‘to lack, to stand in need, to be in want’: Sanskrit *ūná-h* ‘wanting, deficient, defective’; Pāli *ūna-* ‘wanting, deficient’; Avestan *ūna-* ‘defective, wanting’, *ū-* ‘to be wanting, deficient’; Armenian *unaim* ‘empty’; Greek εὐνις ‘reft of, bereaved of’; Latin *vacō* ‘to be empty, void, vacant’, *vānus* ‘empty, void, vacant’, *vāstus* ‘empty, unoccupied, desolate; waste, desert’; Old Irish *fás* ‘empty’; Gothic *wan* ‘want, lack’, *wans* ‘lacking, deficient’, *wanains* ‘lack’; Old Icelandic *vanr* ‘lacking, wanting’, *vana* ‘to diminish’, *vanta* ‘to want, to lack’; Old English *wan* ‘wanting, deficient’, *wana* ‘want, deficiency’, *wanian* ‘to diminish’, *wēste* ‘waste; uninhabited’; Old Frisian *wonia* ‘to diminish’, *wan* ‘lacking’, *wost(e)* ‘waste’; Old Saxon *wanon* ‘to diminish’, *wan* ‘lacking’, *wōsti* ‘waste’; Dutch *wan* ‘shrinkage’; Old High German *wuosti* ‘waste’ (New High German *wüst*; (n.) *Wüste* ‘desert, wilderness, waste’), *wanōn*, *wanēn* ‘to diminish, to wane’, *wan* ‘lacking’. Rix 1998a:604 **ueh₂-* ‘to dwindle away, to waste away’; Pokorny 1959:345—346 **eu-*, **euə-*: **uā-*, **uə-* ‘to lack; empty’; Walde 1927—1932.I:108—109 **eu-*, **euə-*; Mann 1984—1987:355 **eunos*, *-is* (**ūn-*) ‘lacking, barren, empty’, 1487 **uak̑-*, **uak̑uos* (**uak̑ikos*) ‘empty, void; space’, 1491 **uandh-* (also **uanmn-* ?) ‘weak, faint, faint-hearted, uneasy, cramped’, 1490—1491 **uān-* ‘to stay, to dally, to linger, to limp’, 1493 **uār-* ‘limp, weak, meek’, 1485 **uāstos*, *-is* ‘empty; space’; Gamkrelidze—Ivanov 1984.II:781 **uāst^ho-* and 1995.I:684 **wāst^ho-* ‘empty, devastated’; Watkins 1985:18 **eu-* ‘lacking, empty’ (extended forms **euə-*, **wā-*, **wə-*) and 2000:25 **euə-* ‘to leave, to abandon, to give out’, whence nominal derivatives meaning ‘abandoned, lacking, empty’ (oldest form **₂eu₂-*, with zero-grade form **₂iwa₂-*, becoming **ū-*; variant [metathesized] full-grade form **₂iwe₂-*, colored to **₂iwa₂-*, contracted to **₂iwā-*); Mallory—Adams 1997:179 **h₁eu(h_a)-* ‘empty, wanting’, **uak-* ‘to be empty’, **u(e)h_astos* ‘empty’; Mayrhofer 1956—1980.I:115; Frisk 1970—1973.I:589; Boisacq 1950:296 **euā-*, **euə-*; Hofmann 1966:99 **eu(ā)-*; Beekes 2010.I:481—482; Chantraine 1968—1980.I:386; Ernout—Meillet 1979:710, 713, and 714—715 **wās-*; Walde—Hofmann 1965—1972.II:723, II:731—732 **(e)uān-*, and II:737; De Vaan 2008:649—650; Orël 2003:446 Proto-Germanic **wanan*, 446 **wanaz*, 470 **wōstaz*; Kroonen 2013:572—573 Proto-Germanic **wana-* ‘lacking, missing, void’ and 593 **wōstu-* ‘desert, waste’; Feist 1939:550 **(e)uān-*; Lehmann 1986:394 **ew-H-*, **wā-*, **wə-*

‘empty, lacking’; De Vries 1977:643 and 644; Onions 1966:991 *wǣ- and 994; Klein 1971:820 and 822; Skeat 1898:695; Weekley 1921:1612; Hoad 1986:532—533 and 534; Kluge—Mitzka 1967:870 Pre-Germanic (adj.) *wāstu-; Kluge—Seebold 1989:801; Walshe 1951:254; Vercoullie 1898: 218.

Buck 1949:5.14 hunger; 9.93 need, necessity; 13.22 empty. Bomhard—Kerns 1994:550—551, no. 409.

754. Proto-Nostratic (Eurasianic only) (n.) *hok^h-a ‘sharp point’:

- A. Proto-Indo-European *h₁hok^h- (secondary *e*-grade form: *h₂hek^h- [*h₂hak^h-]) ‘sharp point’: Sanskrit *ásri-h* ‘corner, angle, edge’, *ásrá-h* ‘corner’; Pāli *assa-* ‘corner, point’; Punjabi (f.) *assī* ‘sharp edge of anything’; Oriya *āsiā* ‘having angles’; Sindhi *āsi-pāsi* ‘on all sides’; Sinhalese *ās*, *āhā* ‘corner, angle’, *asa* ‘side’, *ahak* ‘aside’; Greek *ἄκαινα* ‘a thorn, goad’, *ἄκρος* ‘highest, topmost’, *ἄκῆ* ‘a point’, *ἄκίς* ‘point, barb’, *ἄκμῆ* ‘point, edge’, *ἄκρῆς* ‘a hill-top’, *ἄκτῆ* ‘a headland, foreland, promontory, shore’, *ἄκρον* ‘peak, highest point’, *ὀξύς* ‘sharp, keen, quick, clever’, *ὄκρῆς* ‘jagged point’; Latin *ācer* ‘sharp, cutting’, *acus* ‘needle’, *acuō* ‘to sharpen to a point’, *acūmen* ‘the sharp point of anything, sharpness of understanding’, *acutus* ‘sharpened, pointed’, *aciēs* ‘keenness, edge’; Oscan (abl. sg.) *akrid* ‘sharply, keenly’ (= Latin *acriter*); Old Icelandic *eggja* ‘to provoke, to incite, to egg on’, *egg* ‘edge’; Swedish *egg*, *ägg* ‘edge’; Old English *ecg* ‘edge; weapon, sword’; Old Frisian *egg* ‘edge’; Old Saxon *eggia* ‘edge’; Dutch *egge* ‘corner, edge, angle’; Middle High German *ekka* ‘corner, edge, angle’ (New High German *Ecke*); Old Church Slavonic *ostrъ* ‘sharp’; Lithuanian *ākstinas* ‘thorn, prick’, *akėčios* ‘harrow’; Armenian *aseln* ‘needle’. Pokorny 1959:18—22 *ak-, *ok- ‘sharp’; Walde 1927—1932.I:28—33 *ak-, Mann 1984—1987:8 *akelos, *akilos, *aklos ‘point, spike, sting’, 9 *akōtos ‘barb, spike’, 9 *akris, -os ‘sharp, point’, 10 *akus ‘point’, 10 *akā ‘keenness, sharpness’, 10 *akējō ‘to sharpen, to be sharp’, 10 *akākā; *akōkā, -jō ‘thorn, spike’, 10 *akānos, -ā, -is, -jō ‘spike, awn’, 10 *akij- ‘point, tip’, *akilos; *akelos, -ā, -us ‘point, barb; whetstone’, 10 *akis, *aki- ‘point, tip’, 10 *akmā, -is, -os ‘point, pimple’, 10 *aknis, -os, -ā ‘tip, point, awn’, 11 *akos, -es- ‘barb, tip, point, spot’, 11 *akris, -os ‘keen, swift’, 11 *akōtos ‘barb, prick’, 11 *akris, -os ‘point, tip, edge; pointed, sharp’, 12 *āksos ‘keen, sharp, clear; keenness, etc.’, 12 *akstin-, *akstin- ‘point, prick, dart, spike, pike, spit’, 12 *aktis ‘point, prick, shaft’, 12—13 *aktros; *akstros, -ā ‘sharp; sharpness, point’, 13 *akulos, -jos, -ā ‘barb, awl’, 13 *ākus ‘sharp; point’, 13 *akutos ‘barb, spike, bristle’, 870 *okris (?) ‘a pointed implement’, 870 *oks- ‘sharp, rough, bitter, harsh’, 870—871 *okris (*okris) ‘peak, spur, point’, 871 *ōkus, -os ‘sharp, keen, swift’; Watkins 1985:1 *ak- and 2000:2 *ak- ‘sharp’ (oldest

form $*_{\mathcal{Z}_2}ek-$, colored to $*_{\mathcal{Z}_2}ak-$); Mallory—Adams 1997:509 $*h_2ek-$ ‘sharp, pointed’; Mayrhofer 1956—1980.I:61; Boisacq 1950:32—33 $*ak-$, $*aq-$, $*oq-$ (o-grade of $*ak-$), 39 $*ak-$, $*aq-$, and 695 $*oq-$; Frisk 1970—1973.I:49, I:52, I:53—54, I:59, I:59—60 $*ak-$, I:61, and II:374 $*ak-$; Hofmann 1966:9 $*ak-$, 9—10 $*ak-$, 11 $*ak-$, 229 $*oq-$ (o-grade of $*ak-$), and 235; Chantraine 1968—1980.I:43—45 $*ak-$ ($*_{\mathcal{Z}_2}ek-$), II:790, and II:806—807; Beekes 1969:128 $*h_2ek-/h_2ok-$ and 2010.I:47, I:50—51, I:52 $*h_2ek-$, II:1066 $*h_2ok-ri-$, and II:1089 (Greek ὀξύς ‘sharp, keen, quick, clever’ without correspondences outside Greek); De Vaan 2008:22 and 23; Walde—Hofmann 1965—1972.I:7 $*ak-$, $*oq-$ and I:8; Ernout—Meillet 1979:5—6 $*ak-$; Kroonen 2013:4 Proto-Germanic $*agjō-$ ‘edge, blade’; Orël 2003:3—4 Proto-Germanic $*agjō-$; De Vries 1977:94 $*ak-$, $*ok-$; Onions 1966:301 $*ak-$; Klein 1971:238 $*ak-$; Boutkan—Siebinga 2005:84; Kluge—Mitzka 1967:151 $*ak-$; Kluge—Seebold 1989:164 $*ak-/ok-$; Derksen 2008:379 $*h_2ek-ro-$, 380 $*h_2ek-$, and 2015:48; Smoczyński 2007.1:8 $*h_2ék-ti-$; Fraenkel 1962—1965.I:5—6; Wodtko—Irslinger—Schneider 2008:287—300 $*h_2ek-$. Note: Some of the Indo-European forms cited here may belong under Proto-Nostratic $*hak^h-$ ($\sim *hək^h-$) ‘to be mentally sharp, keen’ instead.

- B. Uralic: Fennic / Balto-Finnic: Finnish *oka* ‘thorn, prickle, spine’; Estonian *okas* ‘thorn, prickle; needle; awn, beard; spine’. Proto-Finno-Permian $*oksa$ ‘branch, twig’ > Finnish *oksa* ‘branch, twig’; Estonian *oks* ‘branch, twig’; Lapp / Saami *oak’sē* ‘branch, twig’; Cheremis / Mari (Birsk) *uks*, (Malmyž) *uks* ‘branch, twig’; (?) Votyak / Udmurt (Sarapul) *usj*, (Kazan) *usā* ‘harrow’. Rédei 1986—1988:716 $*oksa$; Sammallahti 1988:552 $*oksa$ ‘twig’; Aikio 2020:70 $*oksa$ ‘branch’.
- C. Proto-Altaic $*ōk^ha$ ‘sharp point, notch’: Proto-Tungus $*ok-$ ‘arrow with a wooden head; fish fin; fishing hook’ > Evenki *oki-hta* ‘fish fin’; Manchu *oki yōro* ‘a large wooden arrowhead’; Oroch *ōqo* ‘fishing hook’; Udihe *o’* ‘fish gear’. Proto-Mongolian $*oki$ ‘top, tip, edge’ > Written Mongolian *oki* ‘top, ornament on top of an object; symbol; superior, first’; Khalkha *ox* ‘top, tip, edge’. Proto-Turkic $*ok$ ‘arrow’ > Old Turkic (Orkhon, Old Uighur) *oq* ‘arrow’; Karakhanide Turkic *oq* ‘arrow’; Turkish *ok* ‘arrow’; Gagauz *oq* ‘arrow’; Azerbaijani *ox* ‘arrow’; Turkmenian *oq* ‘arrow’; Uzbek *uq* ‘arrow’; Uighur *oq* ‘arrow’; Karaim *oq* ‘arrow’; Tatar *uq* ‘arrow’; Bashkir *uq* ‘arrow’; Kirghiz *oq* ‘arrow’; Kazakh *oq* ‘arrow’; Noghay *oq* ‘arrow’; Sary-Uighur *oq* ‘arrow’; Oyrot (Mountain Altai) *oq* ‘arrow’; Tuva *o’q* ‘arrow’; Chuvash *ox* ‘arrow’; Yakut *ox* ‘arrow’. Poppe 1960:55, 98, and 134; Street 1974:21 $*oki$ ‘tip, top, highest; arrow’; Starostin—Dybo—Mudrak 2003:1046 $*ōk^a$ ‘sharp point, notch’.

Buck 1949:8.55 branch; 12.352 point; 12.353 edge; 15.78 sharp. Bomhard—Kerns 1994:540—542, no. 398; Illič-Svityč 1971—1984.I:251—252, no. 113,

**Hoki* ‘point, spike’; Greenberg 2002:18, no 18, **ok* ‘arrow, point’; Hakola 2000:122, no. 527.

755. Proto-Nostratic root **hok*’-:

(vb.) **hok*’- ‘to scrape, to scratch’;

(n.) **hok*’-*a* ‘scraping, scratching’

- A. Proto-Afrasian **hok*’- ‘to scratch’: Proto-East Cushitic **hok*’-/ **hek*’- ‘to scratch’ > Burji (reduplicated) *hok’ook*’- ‘to scratch oneself’, (causative) *hok’oo-s-k*’- ‘to scratch’, *hok’ór-o* ‘rash’; Saho *hokuk*- ‘to scratch’; Somali *hoq*-, *haqhaq*- ‘to scratch’; Rendille *ox*- ‘to scratch’; Boni *ho?*- ‘to scratch’; Galla / Oromo *hook*’- ‘to scratch’; Gidole *hek*’- ‘to scratch’; Arbore *hek*- ‘to scratch’; Gedeo / Darasa *hok’ook*’- ‘to scratch’. Sasse 1979:48, 50 and 1982:99—100; Hudson 1989:129. [Orël—Stolbova 1995:282, no. 1278, **hok*- ‘to scratch’.]
- B. Dravidian: Malayalam *okkuka* ‘to indent’; Kannaḍa *okki* ‘to scratch (as fowls)’, *okku* ‘to dig’; Koraga *ogi* ‘to cut’; Gondi *uhcānā* ‘to scratch’. Burrow—Emeneau 1984:90, no. 926.
- C. Proto-Kartvelian **xok*’- ‘to scrape, to scratch’: Georgian *xok*’- ‘to scrape, to scratch’; Mingrelian *xok*’- ‘to shave, to scrape’, *ma-xok*’-*al*- ‘razor’. Klimov 1998:330 **xok*- ‘to scrape’; Fähnrich—Sardshweladse 1995:553—554 **xok*-; Fähnrich 2007:688 **xok*-.

Dolgopolsky 2008, no. 2573, **χekV* ‘to scratch, to scrape’.

756. Proto-Nostratic root **hon*’-:

(vb.) **hon*’- ‘to swell, to grow, to rise’;

(n.) **hon*’-*a* ‘height, elevation, swelling’

- A. Proto-Afrasian **hon*’- ‘to swell, to grow, to rise’: Egyptian (f.) (often dual) *hnwt* ‘horn(s)’, *hnn* ‘phallus’, *hnn*, *hnhn* ‘to swell’, *hnht* ‘swelling, ulcer, sore’ (medical term). Hannig 1995:538, 540, and 541; Faulkner 1962:172; Gardiner 1957:581; Erman—Grapow 1921:111 and 1926—1963.3:109—110, 3:115, 3:116. Southern Cushitic: Dahalo *hontò* ‘crown of the head’. Ehret 1995:302. Ehret 1995:372, no. 752, **hon*’- ‘to stick up, to project, to protrude’. [Orël—Stolbova 1995:273, no. 1233, **han*’- ‘tumor’, 279, no. 1262, **henin*’- ‘penis, testicles’, 281, no. 1271, **hin*’- ‘to grow’.]
- B. Dravidian: Tamil *ōṅku* (*ōṅki*-) ‘to grow, to rise high (as a tree), to ascend (as a flame), to be lofty, to spread, to be exalted, to be dignified, to increase in wealth or renown; to lift up, to raise (as arm, weapon, pestle)’, *ōṅkal* ‘height, rising, mountain, mound’, *ōkku* (*ōkki*-) ‘to raise, to lift up, to cause to rise’, *ōkkam* ‘height, increase, bigness’, *ōccam* ‘eminence’, *ōccal* ‘height, elevation’, *ōccu* (*ōcci*-) ‘to raise in order to strike’, *ōppu* (*ōppi*-) ‘to raise’; Malayalam *ōṇṇuka* ‘to lift up (as hand), to prepare to strike, to aim

at', *ōññal* 'threat', *ōccuka* 'to raise', *ōppuka* 'to raise, to lift'; Kota *o-k-* (*o-yk-*) 'to raise (hand to strike, corpse on to the fire)'; Kannaḍa *ōga* 'pride'. Burrow—Emeneau 1984:99, no. 1033.

- C. Proto-Altaic **ōni-* '(vb.) to grow, to rise; (adj.) high': Proto-Mongolian **ōndü-* '(vb.) to rise; (adj.) high' > Written Mongolian *ōndüyi-* 'to raise one's head, to raise oneself, to rise slightly', *ōndür* '(adj.) high, tall; (n.) height', *ōndürlig* '(adj.) high, tall; (n.) elevation', *ōndürži-* 'to go up, to rise', (causative) *ōndüržigül-* 'to raise, to lift up, to enhance', *ōndürid-* 'to be or become too high', *ōndüridke-* 'to make high, to elevate', *ōndürle-* 'to put high, to raise, to elevate'; Khalkha *ōndör* 'high', *ōndiy-* 'to rise'; Buriat *ünder* 'high', *ündi-* 'to rise'; Kalmyk *ōndr* 'high', *ōndē-* 'to rise'; Ordos *ündür* 'high', *ōndi-* 'to rise'; Dagur *χundur*, *hundere* 'high', *undi-* 'to rise'; Shira-Yughur *uṇdur*, *oṇdur* 'high', *oṇdō-* 'to rise'; Monguor *ndur*, *undur* 'high'. Poppe 1955:50 and 56. Proto-Turkic **ōn-* 'to grow, to rise' > Old Turkic (Old Uighur) *ōn-* (*ün-*) 'to grow, to rise'; Karakhanide Turkic *ōn-* (*ün-*) 'to grow, to rise'; Turkmenian *ōn-* 'to grow, to rise'; Khalay *hin-* 'to grow, to rise'; Uzbek *un-* 'to grow, to rise'; Uighur *ün-* 'to grow, to rise'; Kirghiz *ōn-* 'to grow, to rise'; Kazakh *ōn-* 'to grow, to rise'; Sary-Uighur *ün-* 'to grow, to rise'; Tuva *ün-* 'to grow, to rise'; Chuvash *ᵉᵛᵏᵏᵏ-* 'to grow, to rise'; Yakut *ūn-* 'to grow, to rise'. Poppe 1960:69 and 126; Street 1976:22 **ōn-* 'to rise, to increase'; Starostin—Dybo—Mudrak 2003:1053 **ōni* 'high'.

Buck 1949:10.21 rise (vb.); 10.22 raise, lift; 12.31 high.

757. Proto-Nostratic root **hul-* (~ **hol-*):

(vb.) **hul-* 'to destroy, to lay waste, to cause to perish';

(n.) **hul-a* 'ruin, destruction; end, death'

- A. Dravidian: Tamil *ula* 'to become diminished, to be wasted, to be devoid of, to die, to terminate', *ulakkai* 'end, ruin, death', *ulappu* 'wasting, perishing, defect, death, limit', *ulai* 'to perish, to be ruined, to ruin', *ulaivu* 'ruin, destruction, defeat, trouble, poverty'; Malayalam *ulakkuka* 'to shrink up', *ulayuka* 'to be impoverished, ruined', *ulaccal*, *ulavu* 'ruin'. Burrow—Emeneau 1984:66, no. 671.
- B. Proto-Indo-European **h₁hul-* (> **h₁hol-*) 'to smite, to destroy': Hittite (3rd sg. pres.) *hu-ul-la-a-i* 'to smite, to destroy', (ptc.) *hu-ul-hu-li-ya-an-te-eš* 'smitten', *hu-ul-la-an-za-iš* 'battle'; Greek ὄλλωμι 'to destroy, to make an end of', ὄλεθρος 'ruin, destruction, death'; Latin *ab-oleō* 'to destroy'. Rix 1998a:264 **h₃elh₁-* 'to perish, to be ruined or destroyed'; Pokorny 1959:777 **ol-(e)-* 'to destroy'; Mann 1984—1987:871—872 **ol-*, **olu-* 'to destroy'; Watkins 1985:46 **ol-* and 2000:60 **olə-* 'to destroy' (oldest form **₂₃el₂₁-*, colored to **₂₃ol₂₁-*; with variant [metathesized] form **₂₃le₂₁-*, contracted to **₂₃lē-*); Mallory—Adams 1997:158 **h₃elh₁-* 'to rend, to

destroy'; Couvreur 1937:143—144; Tischler 1977— :273—276; Cowgill 1965:146—147 **Ol-ne-O-mi*; Boisacq 1950:696; Hofmann 1966:230; Beekes 1969:131 **h₃elh₁-*, 236, and 2010.II:1069—1070 **h₃elh₁-*; Frisk 1970—1973.II:378—379; Chantraine 1968—1980.II:792—793; Ernout—Meillet 1979:3—4; Walde—Hofmann 1965—1972.I:4—5; De Vaan 2008: 21. Puhvel (1984— :3:363—368), however, rejects this etymology. See also Kloekhorst 2008b:358—360.

Sumerian *hul* 'to destroy'.

Buck 1949:9.21 strike (hit, beat); 11.27 destroy. Bomhard—Kerns 1994:552—553, no. 412.

758. Proto-Nostratic (n.) **hur-a* (and/or **her-a* ?) 'hawk-like bird: falcon, hawk, eagle, kite':

- A. Afrasian: Egyptian *Hr*, *Hrw* 'the god Horus (one of the two brother hawk-gods)'; Coptic *hōr* [ϣϣ] 'the god Horus'. Hannig 1995:543—544; Erman—Grapow 1921:112 and 1926—1963.3:122—124; Faulkner 1962: 173; Gardiner 1957:582; Vycichl 1983:307—308; Černý 1976:291.
- B. Dravidian: Tamil *eruvai* 'a kind of kite whose head is white and whose body is brown, eagle'; Malayalam *eruva* 'eagle, kite'. Burrow—Emeneau 1984:80, no. 818.
- C. Proto-Indo-European **h₁hor-/h₁hr-* 'eagle': Hittite *hara(n)-* (< **h₁hr-n-*) (nom. sg. *ha-a-ra-aš*, gen. sg. *ha-ra-na-aš*) 'eagle', (?) *harrani-* or *hurrani-* name of an ornithomatic bird; Palaic *ha-ra-a-aš* 'eagle'; Greek ὄρνις 'bird'; Armenian *oror* 'kite, gull'; Welsh *eryr* 'eagle'; Gothic *ara* 'eagle'; Old Icelandic (poet.) *ari*, *örn* (< **arnu-*) (gen. sg. *arnar*, acc. *örnu*, pl. *ernir*) 'eagle'; Old English *earn* 'eagle' (Middle English *ern(e)*, *earn*); Old High German *aro*, *arn* 'eagle' (New High German [poetic] *Aar*); Lithuanian *erēlis* (dial. *arēlis*) 'eagle'; Latvian *ērglis* 'eagle'; Old Prussian *arelie* 'eagle'; Old Church Slavic *orъlbъ* 'eagle'; Russian *orël* [orěɫ] 'eagle'; Czech *orel* 'eagle'; Polish *orzeł* 'eagle'; Upper Sorbian *worjol* 'eagle'; Lower Sorbian *jerjol*, *jerjel* 'eagle'; Bulgarian *orēl* 'eagle'; Serbo-Croatian *órao* 'eagle'. Pokorny 1959:325—326 **er-*, **or-* 'eagle'; Walde 1927—1932.I:135 **er-*, **or-* 'eagle'; Mann 1984—1987:889—890 **ornis* (**ornūis* ?) 'petulant, dashing; dasher, flier', 890—891 **oros*, -*ios* (**ʔoros*) 'eagle, hawk'; Watkins 1985:46 **or-* and 2000:60 **or-* 'large bird' (earliest form **₂₃er-*, colored to **₂₃or-*); Mallory—Adams 1997:173 **H₃or-* 'eagle'; Gamkrelidze—Ivanov 1984.I:158 **H₃or-* and 1995.I:136 *H₃or-* 'eagle' (also I:455, I:765 **Her-*, *o*-grade **Hor-*); Sturtevant 1951:31, §58, Indo-Hittite **γorn-*; Puhvel 1984— :3:137—139 Hittite *hāraniš* < **H₁órones* and 3:139; Tischler 1977— :170—171; Kloekhorst 2008b: 301—302; Boisacq 1950:714; Frisk 1970—1973.II:421—422 **or-(elo-)n-*;

Hofmann 1966:238 **er-*; Chantraine 1968—1980.II:822—823; Beekes 1969:130 and 2010.II:1106 **h₃er-n-*; Orël 2003:25 Proto-Germanic **arōn*; Kroonen 2013:32 Proto-Germanic **aran-* ‘eagle’; Feist 1939:54—55; Lehmann 1986:40; De Vries 1977:13 and 688; Onions 1966:324; Klein 1971:256; Kluge—Mitzka 1967:1; Kluge—Seebold 1989:1; Fraenkel 1962—1965.I:122; Derksen 2008:376—377 **h₃er-il-o-* and 2015:155 **h₃er-*; Smoczyński 2007.1:147. Pokorny (1959:325—326) reconstructs Proto-Indo-European **er-* on the basis of Lithuanian *erēlis*, but Cowgill (1965:146, fn. 2) questions the validity of this reconstruction since he takes Lithuanian *erēlis* to be assimilated from the dialectal form *arēlis*. Cowgill points out that the relative antiquity of the Lithuanian dialectal form is confirmed by Old Prussian *arelie*. Finally, he points out that Latvian *ērglis* has undergone even more remodeling.

Sumerian *hu-ri-in* ‘eagle’.

Buck 1949:3.64 bird. Bomhard—Kerns 1994:548, no. 406; Dolgopolsky 2008, no. 741, **yerʔV* ‘eagle’; Blažek 2013:41, no. 7.

Comment: Both Dolgopolsky (2008, no. 741) and Blažek (2013:41, no. 7) compare the following Semitic forms here (data taken from Blažek [modified to reflect traditional transcription]):

Proto-Semitic **ġar-(an-)* ‘eagle’ > Akkadian *erû* (~ *arû*) ‘eagle’, *urinnu* ‘eagle’; Old Aramaic *ʿr* ‘bearded vulture’; Aramaic *ʿar* ‘a kind of eagle’; Arabic *ġaran-* ‘a kind of eagle’. See also Militarev—Kogan 2005.II:58—59, no. 40, *ʿarw/y-*, *ʿawr-* ‘bird of prey’ and II:131, no. 90, **γVrVn-* ‘eagle’). Note: Militarev—Kogan’s (2005.II:59, no. 40) comparison of Arabic *ʔaʿwar* ‘corbeau’ (‘crow’) here seems rather unlikely.

The Semitic forms go far better with the Dravidian forms cited above, while Egyptian *Ḥr*, *Ḥrw* ‘the god Horus (one of the two brother hawk-gods)’; Coptic *hōr* [ϣϣϣ] ‘the god Horus’ go better with the Indo-European (and Sumerian) forms. This seems to indicate that two separate stems must be reconstructed for Proto-Nostratic: (1) **hur-a* ‘hawk-like bird: falcon, hawk, eagle, kite’ and (2) **yer-a* ‘eagle’.

759. Proto-Nostratic root **hur-* (~ **hor-*):

- (vb.) **hur-* ‘to pound, to grind, to crush, to waste away or wear down by rubbing’;
- (n.) **hur-a* ‘pestle, mortar’

- A. Proto-Afrasian **hur-* ‘to pound, to grind, to crush’: East Cushitic: Burji *hurd-* ‘to pound (in a mortar)’; East Galla / East Oromo *hurr-aaw-* ‘to become fine, powdery’. Hudson 1989:200; Sasse 1982:102.
- B. Dravidian: Tamil *ural* ‘mortar, mould for making vermicelli or the like’; Malayalam *ural* ‘wooden mortar for beating rice’; Koḍagu *ora* ‘mortar of stone or wood’; Tuḷu *oralu*, *uralu*, *uralu* ‘a large mortar’; Telugu *rōlu*, *rōlu* ‘mortar’. Burrow—Emeneau 1984:62—63, no. 651. Tamil *urai* (-v-, -nt-) ‘to be reduced into a powder or paste, to wear away by attrition, to be indented or effaced by rubbing’, *urai* (-pp-, -tt-) ‘to rub into a paste, to wear away by rubbing, to grate, to test on the touchstone, to smear, to polish’, (n.) *urai* ‘rubbing, friction, attrition; fineness of gold or silver as tested on the touchstone’, *urai-kal* ‘touchstone, small stone for rubbing pills into powder’, *uraical* ‘friction’, *uraicu* (*uraici-*) ‘to rub against (intr.)’, to chafe, to wear away by use; to rub hard (tr.), to scour, to waste away by rubbing’, *uraiñcu* (*uraiñci-*) ‘to rub (tr.)’, *uraippu* ‘rubbing, assaying’, *uracu* (*uraici-*) ‘to rub against’, *uriñcu* (*uriñci-*) ‘to rub oneself, to rub against; to wear away by rubbing (tr.), to grind away, to scrape, to smear, to anoint’, *uriñu* (*uriñi-*) ‘to rub (intr.)’, *uriñcal* ‘rubbing, chafing’, *urāy*, *urāyñcu* (*urāyñci-*) ‘to rub (intr., as an animal against a tree, as two branches together)’, *urōcu*, *urōñcu* (*urōñci-*) ‘to rub (intr.)’; Malayalam *urasuka* ‘to rub, to come into contact, to contend, to form into a pill’, *urasal* ‘friction, contest’, *ura* ‘rubbing, a stroke’, *ura-kallu*, *uravu-kallu* ‘touchstone’, *urayuka* ‘to rub, to wear by friction’, *uravu* ‘rubbing, touch’, *urekka* ‘to rub, to grate, to polish, to grind, to assay metal’, *uriyuka* ‘to be chafed’, *uruññuka*, *urammuka*, *urummuka*, *urattuka* ‘to rub against, to graze, to touch’, *urusuka* ‘to wear off, to diminish’; Kota *orv-* (*ort-*) ‘to rub into paste, to rub with a stone in making pot’, *orv-* (*ord-*) ‘to touch or stroke gently’, *orj-* (*orj-*) ‘to rub’, *uj-* (*uj-*) ‘to rub, to file, to sharpen’; Toda *warf-* (*wart-*) ‘to rub into paste, to wipe, to wash’, *ud-* (*udy-*) ‘to smear on body’; Kannaḍa *urdu*, *uddu*, *ujju* ‘to rub, to make fine by rubbing’, *ujjisu* ‘to cause to rub’, *ujju*, *urdi* ‘rubbing’, *ore* (*orad-*) ‘(vb.) to touch, to rub, to smear, to apply to a touchstone, to examine, to grind, to make thin or fine; (n.) rubbing, etc.’, *orasu*, *orisu*, *orsu* ‘(vb.) to touch, to rub gently, to stroke, to rub, to scour, to rub out, to crush, to separate by friction (as grain from the ears), to smear; (n.) friction, rubbing, destroying’, *ore-gal* ‘touchstone’, *rubbu* ‘(vb.) to grind in a mortar; (n.) grinding’, (?) *ruddu* ‘to beat soundly’; Koḍagu *udd-* (*uddi-*) ‘to rub’; Tuḷu *urepuni* ‘to try metals by touchstone’, *uresuni* ‘to try metals by touchstone, to rub, to polish’, *urduni* ‘to rub, to file, to polish’, *ujjuni* ‘to rub’, *ure-kallu*, *ore-kallu* ‘touchstone’, *orevuni* ‘to rub, to wipe’, *oresuni* ‘to diminish (intr.), to wear off; to rub (tr.), to wipe’, *orabēḷu* ‘rice once cleaned off its husk only’, *orabēḷu* ‘work involving the removal of husk from paddy’, *ocipuni* ‘to wipe off, to rub out, to clean’, *occuni* ‘to wipe off, to rub out, to clean, to whet, to sharpen’; Telugu *ora* ‘rubbing, touch, testing on a touchstone’, *ora-gallu*

‘touchstone’, *orapiḍi* ‘rubbing, friction’, *oracu* ‘to rub, to try by touchstone’, *orayu* ‘to rub, to test by touchstone, to touch; to be slightly bruised’, *orayika* ‘rubbing, friction’, *uriyu* ‘to be rubbed’, *ruddu* ‘to rub, to scour, to clean’, *rudduḍu* ‘rubbing, scouring, cleaning’, *rubbu* ‘to grind in a mortar’, *rubbu-guṇḍu* ‘stone pestle or roller used in grinding things in a mortar’, (?) *ruttu* ‘to strike or beat’, (?) *rōkali* ‘a large wooden pestle’; Kolami *rubgund* ‘stone pestle’ (Telugu loan), *rokāl*, *rōka* ‘pestle’ (Telugu loan); Naikri *rōkal* ‘pestle’ (Telugu loan); Parji *urc-* ‘to skim off (cream), to scrape’; Gadba (Ollari) *urs-* ‘to wipe (sweat)’; Gondi *uriyānā* ‘to powder’, *urisānā* ‘to sprinkle or crumble salt, sugar, sandal powder, etc.’, *rōkal* ‘pestle’ (Telugu loan), *ūc-* ‘to scrape, to plane’, *us-* ‘to pare’, *oochana* ‘a carpenter’s plane’; Konda *rōs-* ‘to touch slightly, to stroke, to rub against’; Kui *rūga* (*rūgi-*) ‘to be smooth’, *rūsa* (*rūsi-*) ‘(vb.) to crush, to grind; (n.) crushing, grinding’, *rūska* (*rūski-*), *rūseni* ‘to press for grinding sugarcane’; Kuwi *rūbali* ‘to smear’, *rub(b)inai* ‘to smear, to rouge’, *rub-* ‘to rub on (oil, etc.)’. Burrow—Emeneau 1984:64—65, no. 665; Krishnamurti 2003:118 **ur-ay* ‘to rub’. (?) Parji *ud-* ‘to crush (nits, lice)’ (only recorded in the phrase *pēnul udomo*); Konda *ur-* (*uRt-*) ‘to butt, to gore (buffalo, etc. with horns), to crush (nits)’; Pengo *uz-* (*ust-*) ‘to butt, to gore; to crush (lice)’; Maṇḍa *uy-* ‘(cow) to gore; to crush (lice)’; Kui *ubga* (*ugb-*) ‘to collide, to strike against, to butt’; Kuwi *ur-* ‘to butt, to gore’, *ūrhalī* ‘to butt’. Burrow—Emeneau 1984:69, no. 706.

- C. (?) Kartvelian: Georgian *xrc* ‘en-/xrc’*n-* ‘to decompose’.
 D. (?) Proto-Gilyak / Nivkh **hur-ki-* ‘to hollow out’ (verbalizing affix *-ke- / *-ki-): Amur *hurki-dʷ* ‘to hollow out’, *hurkif* ‘cave, den, ravine’; South Sakhalin *hurki* ‘something hollow, cave’ (also ‘to hollow out’, according to Hattori). Fortescue 2016:78.

Sumerian *hur* ‘to hollow out, to scratch, to scrape, to dig in, to rub, to grate, to grind’.

Buck 1949:5.56 grind; 8.22 dig; 9.31 rub; 12.72 hollow (= concave).

760. Proto-Nostratic root **hut-* (~ **hot-*):
 (vb.) **hut-* ‘to shake, to shiver, to tremble’;
 (n.) **hut-a* ‘trembling, shaking’; (adj.) ‘shaking, shivering, trembling’
 Note also:
 (vb.) **hat-* ‘to shake, to tremble; to be shaken, startled, frightened, terrified, afraid’;
 (n.) **hat-a* ‘trembling, shaking’
 A. Proto-Afrasian **hut-* ‘to shake, to shiver, to tremble’: Proto-Highland East Cushitic **hut-* ‘to shiver, to tremble’ > Hadiyya *hut-eʔ-* ‘to shiver, to tremble’, *hut-is-ša* ‘shivering’; Sidamo *hut-iʔr-* ‘to shake, to shiver, to

tremble'; Kambata *hut'* 'to shiver, to tremble', *hut'-is-ša* 'shivering'. Hudson 1989: 133.

- B. Dravidian: Tamil *utaru* (*utari-*) 'to shake off, to shake out (as a cloth), to renounce (as the world, friends, etc.); to shake (as one's hands, feet, or body) through cold, fear, or anger', *utai* (*-pp-*, *-tt-*) 'to tremble with fear, to shiver with cold', *utaippu* 'fright, alarm', *utir* (*-v-*, *-nt-*) 'to be shaken with the wind', *utir* (*-pp-*, *-tt-*) 'to shake off'; Malayalam *utaruka* 'to be in a hurry or confusion, to shake off'; Kannada *odaru* '(vb.) to shake, to shake off; (n.) shaking, etc.', *odariisu* 'to cause to shake'; Tuḷu *udēvuni* 'to throw out (the hands to shake, as in sickness)'; Gadba (Ollari) *udurp-* (*udurt-*) 'to shake'; Telugu *udaru*, *uduru*, *udilu* '(vb.) to tremble, to shake, to shiver, to quake; (n.) trembling, shaking'. Burrow—Emeneau 1984:59—60, no. 613.

Buck 1949:10.26 shake (vb. tr.).

22.37. PROTO-NOSTRATIC *ʕ

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
ʕ-	ʕ-	Ø-	Ø-	ʕh-	Ø-	Ø-	Ø-
-ʕ-	-ʕ-	-Ø-	-Ø-	-ʕh-	-Ø-	-Ø-	-Ø-

761. Proto-Nostratic root *ʕag- (~ *ʕag-):

(vb.) *ʕag- ‘to bud, to sprout, to grow’;

(n.) *ʕag-a ‘outgrowth, bud, sprout, protuberance’

- A. Proto-Afrasian *ʕag- ‘(vb.) to bud, to sprout, to grow; (n.) outgrowth, bud, sprout, protuberance’: Proto-Semitic *ʕag-ar- ‘(vb.) to bud, to sprout, to grow; (n.) outgrowth, protuberance, knot, knob’ > Arabic ‘ağara ‘to be stout, big, paunch-bellied; to be knotty; to be still ripe and green; to be hard and strong’, ‘ağar ‘outgrowth, protuberance, excrescence, projection, knot, knob’, ‘ağir, ‘ağur ‘knotty, knobby; thick above the joint; still unripe or green’, ‘ağr ‘green, unripe’, ‘uğra ‘knot, knob, hump, protuberance, excrescence’. Proto-Highland East Cushitic *agada ‘stalk (e.g., of maize)’ > Gedeo / Darasa agada ‘stalk (e.g., of maize)’; Sidamo agada, agasšo (< *agad-co) ‘stalk (e.g., of maize)’; Kambata agada ‘stalk (e.g., of maize)’. Also found in Amharic agäda ‘stalk (of sugar cane, of maize)’ and Galla / Oromo (h)agadaa ‘sugar cane’ (loanwords ?). Hudson 1989:142. Southern Cushitic: Proto-Rift *ʕag- ‘a kind of grain’ > Iraqw ‘ayiti’i ‘maize’; K’wadza agentiko ‘bulrush millet’ (?). Ehret 1980:376. [Ehret 1995:346, no. 675, *ʕaag- ‘grain’.]
- B. Dravidian: Tamil akai (-v-, -nt-) ‘to flourish, to sprout’, akai (-pp-, -tt-) ‘to sprout, to rise; to raise’, akaippu ‘rising, elevation’; Malayalam aka ‘germ, bud, shoot’, akekka ‘to bud’, ava ‘bud, especially the fruit-like sprout of *Artocarpus*’, avekka ‘to sprout’; Kannaḍa age ‘seedling, shoot from the root of a plant or tree, sprout’; Koḍagu age ‘paddy, seedling’; Tuḷu agge ‘the shoot of a branch’; Kuṛux akhuā ‘seed-bud, sprout, shoot’, akrānā ‘to germinate, to shoot, to sprout’. Burrow—Emeneau 1984:4, no. 15. Kannaḍa āku ‘leaf, young rice not yet transplanted, young sprouts of corn, any filament’; Telugu āku ‘leaf, petal; seedlings of paddy for transplantation’; Gadba (Salur) ākupacan ‘green’; Gondi (many dialects) ākī ‘leaf’; Konḍa āku ‘leaf’; Pengo āki ‘leaf’. Burrow—Emeneau 1984:32, no. 335.
- C. Altaic: Mongolian ayli ‘excrescence, burl, or canker on a tree’; Manchu ageli ‘a swelling found on the larch (*Larix leptolepis*) that is used as a medicine’ (cf. Norman 1978:7; not in Starostin—Dybo—Mudrak 2003).

Buck 1949:8.42 grain.

762. Proto-Nostratic root *ʕak^h- (~ *ʕə^h-):

(vb.) *ʕak^h- ‘to beat, to strike, to break’;

(n.) *ʕak^h-a ‘the act of beating, striking, breaking’

- A. Proto-Afrasian *ʕak- ‘to beat, to attack’: Proto-Semitic *ʕak-ak- ‘to beat, to attack’ > Arabic ʕakka ‘to attack, to conquer, to convict; to beat, to whip, to flog’, ʕakkār ‘who attacks repeatedly’. Proto-Southern Cushitic *ʕaak- or *ʕaak^w- ‘to attack’ > Iraqw akut- ‘to leap, to jump’, ʕaqmit- ‘to fly’; Kʼwadza ak- ‘to seize’, akat- ‘to catch’; Asa ʔak- ‘to seize’. Ehret 1980:276. Proto-Southern Cushitic *ʕaaku- ‘war’ > Kʼwadza ʔagumuk ‘war’; Ma’a akú ‘war’. Derivative of *ʕaak- or *ʕaak^w- ‘to attack’. Ehret 1980:276. Ehret 1995:346, no. 677, *ʕaak- or *ʕaak^w- ‘to attack’.
- B. Dravidian: Tamil akai (-v-, -nt-) ‘to be broken, crumpled; to suffer’, akai (-pp-, -tt-) ‘to break, to cut in pieces, to beat, to trouble, to oppress’; Gadba (Salur) ag- ‘to be torn’, akp- ‘to tear’; Telugu agalu ‘to break or go to pieces, to burst’, agalincu, agul(u)cu ‘to break (tr.), to burst’. Burrow—Emeneau 1984:4, no. 16. Tamil akkakkāy ‘asunder’; Tuḷu akkakka, akkoḷu ‘(n.) part; (adv.) asunder’. Burrow—Emeneau 1984:4, no. 19.
- C. Uralic: Proto-Finno-Ugrian *äktä- ‘to cut, to strike’ > Lapp / Saami (Arjeplog) akʼte- ‘to kill (animals for food), to flay and cut up’; Zyrian / Komi okty- ‘to hew, to fell (a tree)’; Vogul / Mansi jäkt- ‘to cut’; Ostyak / Xanty ögət- ‘to cut, to cut off’. Collinder 1960:402 and 1977:88; Rédei 1986—1988:23 *äktz-; Sammallahti 1988:542 *äktä- ‘to cut’; Aikio 2020: 35 *äktä- ‘to cut’.

Sumerian AK ‘to beat, to strike, to hit’.

Buck 1949:9.21 strike (hit, beat); 9.26 break (vb. tr.).

763. Proto-Nostratic root *ʕal- (~ *ʕə^l-):

(vb.) *ʕal- ‘to be high, tall, elevated, exalted; to rise high; to ascend’;

(n.) *ʕal-a ‘highest point: peak, summit, mountain’;

(particle) *ʕal- ‘on, upon, on top of, over, above, beyond’

- A. Proto-Afrasian *ʕal- ‘(vb.) to be high, exalted; to rise high; to ascend; (particle) on, upon, on top of, over, above, beyond’: Proto-Semitic *ʕal-aw/y- ‘(vb.) to be high, exalted; to rise high; to ascend; (particle) on, upon, on top of, over, above, beyond’ > Akkadian elū ‘to travel uphill or to a higher ground, to go up, to ascend; to rise, to grow, to emerge’, elū ‘tall, high, exalted, proud’, eli ‘on, above, upon, more than, over, to, towards, against, beyond’, elēn ‘above, over’, elēnu (adv.) ‘above, upstream’, el ‘on, above, beyond’, eliš (adv.) ‘up, on high, on top; upward, upstream’;

- Hebrew *ʿālāh* [עָלָה] ‘to go up, to ascend, to climb; to spring up, to grow’, *ʿal* [עַל] ‘height’, *ʿal* [עַל] ‘upon, on, over, above, by, beyond, to, towards’; Aramaic *ʿalē* ‘to go up’; Syriac *ləʿal* ‘upward, above’; Ugaritic *ʿly* ‘to go up’, *ʿl* ‘upon’; Arabic *ʿalā* ‘to be high, elevated; to rise high, to exceed; to surpass’, *ʿulūw* ‘height, tallness, elevation, altitude’, *ʿalā* ‘on, upon, on top of, over, above, by, beyond, to, towards’, *ʿalīy* ‘high, tall, elevated’; Sabaeen *ʿly* ‘to be high’, *ʿly* ‘above, upon, toward’; Soqotri *ʿálha* ‘high’; Mehri *ʿālēw* ‘at the top’; Harsūsi *b-áʿla* ‘on, on top of’, *ʿálwa* ‘north, northwards’; Geez / Ethiopic (reduplicated) *ʿalʿala* [ላለላ] ‘to raise, to elevate’, (with the preposition *la* agglutinated to the root *ʿly* [cf. Leslau 1987:304]) *laʿala* [ላለላ], *ləʿla* [ላለላ] ‘to be high, superior, elevated’, *ʿalʿala* [አለላለ], *ʿalaʿala* [አለላለ] ‘to lift up, to raise, to elevate, to exalt, to extol’, *lāʿla* [ላለላ] ‘above, against, on, upon, over, about, concerning’ (with suffix pronouns, the form is *lāʿle-* [ላለሌ-]); Tigre *ʿalʿala* ‘to raise’, *lāʿal* ‘on, above’; Tigrinya *lāʿalā* ‘to raise’, *ləʿli* ‘above’; Gurage *lalä* ‘on, above’; Amharic *ləʿul* ‘high, exalted; prince’ (loan from Geez), *lay* ‘on, above’; Gafat *lağğä* ‘on, above’; Harari *lāʿay*, *lāy* ‘above, on, over, top, upper’. Murtonen 1989:319; Klein 1987:473; Leslau 1963:98, 1979:378, and 1987:60 and 303—304; Bergsträsser 1928:187 and 1983:218—219; Zammit 2002:295. Egyptian *ʿr* ‘to ascend’ (earlier *iʿr*), *ʿrʿr* ‘to rise up, to go up, to ascend’; Coptic *ale* [ⲁⲗⲉ] ‘to go up, to ascend’. Hannig 1995:31 and 148; Faulkner 1962:24; Erman—Grapow 1921:6 *iʿr* (since Middle Kingdom *ʿry*) and 1926—1963.1:41, 1:208; Gardiner 1957:551 *iʿr* (later *ʿr*) ‘to ascend, to mount up, to approach’; Černý 1976:4 and 228 (*ōl* [ⲱⲗ] ‘to hold, to take, to lift up’); Vycichl 1983:6 and 249. Berber: Tamazight *aləy* ‘to climb up, to ascend’, *al* ‘until, up to’; Kabyle *ali* ‘to climb up, to ascend’. Proto-East Cushitic **ʕal-* ‘mountain, highland’ > Dullay *ʕal-e* ‘mountain, highland’; Arbore *el* ‘stone’; Saho *ʕal* ‘mountain’; Somali *ʕal* ‘any lofty, coastal range of mountains’; Rendille *hal* ‘mountain’. Sasse 1979:35 and 36. Proto-Highland East Cushitic **ale* ‘over, above’ > Sidamo *ale* ‘top’, *alé* ‘upper, upwards’, *al-icco* ‘highland, top’, *aliidi* ‘over, above’, *aliido* ‘north’; Kambata *ale(e-n)* ‘on (top of)’, *alee-n*, *ali* ‘over, above’, *aluuda* ‘north; over, above’; Gedeo / Darasa *alaalle* ‘north; over, above’. Hudson 1989:109. Diakonoff 1992:30 **ʕal* (> **ʕyl*, **ʕly*) ‘to rise up’; Orël—Stolbova 1995:238, no. 1060, **ʕal-* ‘to rise’, 238—239, no. 1061, **ʕal-* ‘top’, and 247—248, no. 1102, **ʕilay-* ‘to rise’ (derived from no. 1060 **ʕal-* ‘to rise’); Ehret 1995:347, no. 679, **ʕal-* ‘to ascend, to go up’.
- B. Proto-Uralic **älz-* ‘to lift, to raise’: Vogul / Mansi *älm-* ‘to lift up, to raise’; Ostyak / Xanty *äləm-* (imptv. *ilmi*) ‘to lift, to raise, to carry’; Hungarian *emel-* (< **elme-*) ‘to lift, to raise’; Yurak Samoyed / Nenets (?) *jila-* ‘to pick up’; Tavgi Samoyed / Nganasan (?) *jili-*, *jila-* ‘to pick up’; Selkup Samoyed (?) *ila-* ‘to pick up, to nurse’. Collinder 1955:5 and 1977:27; Rédei 1986—1988:24 **älz-*; Décsy 1990:98 **älä-* ‘(to) lift, (to) carry’; Janhunen 1977b:26 **ilä-*.

- C. Altaic: Tungus: Manchu *ala* ‘a hill with a level top’, *alin* ‘mountain’; Nanay / Gold *ala* ‘small mountains’; Jurchen *alin* ‘mountain’. Written Mongolian *ala* ‘flat-topped hill’; Khalkha *al* ‘flat-topped hill’. Turkic: Kirghiz *aliq* ~ *aluq* ‘peak, summit’. Starostin—Dybo—Mudrak (2003:292) include Manchu *alin* ‘mountain’ and Jurchen *alin* ‘mountain’ under Proto-Altaic **ālā* ‘to cross (a mountain)’. However, Dolgopolsky maintains that they belong here instead.

Buck 1949:1.22 mountain, hill; 10.21 rise (vb.); 10.22 raise, lift; 10.61 carry (bear). Bomhard—Kerns 1994:519—520, no. 367; Dolgopolsky 2008, no. 126, **ʕAlV* (= **ʕalE* or **ʕālī*) ‘height, top; to climb, to go up’; Illič-Svityč 1971—1984.I:274—275, no. 137, **ʕalʼA* ‘to cross a mountain’.

764. Proto-Nostratic root **ʕal-* (~ **ʕəl-*):

- (vb.) **ʕal-* ‘to make a fire, to light a fire, to ignite, to kindle, to burn’;
(n.) **ʕal-a* ‘fire, torch’

- A. Afrasian: Proto-Semitic **ʕal-aw/y-* ‘to burn’ > Hebrew *ʕōlāh* [עֹלָה] ‘burnt offering’; Aramaic *ʕālāthā* ‘burnt offering’; Syriac *ʕālāthā* ‘burnt offering, altar’; Palmyrene *ʕltʔ* ‘altar’. Klein 1987:466. Proto-Semitic **ʕal-ak-* ‘to make a fire, to light a fire, to ignite, to kindle’ > Arabic *ʕalaḵa* ‘to ignite, to catch fire, to kindle’; Mehri *ʕālōḵ* ‘to make a fire’, *hālōḵ* ‘to light, to kindle’; Šheri / Jibbāli *aʕlēḵ* ‘to light, to kindle’; Harsūsi *ʕālōḵ* ‘to light, to kindle’.
- B. Proto-Indo-European **ʕhel-* [**ʕhal-*] ‘to burn’: Sanskrit *alāta-m* ‘a fire-brand, coal’; Kashmiri *alāv* ‘fire in a pit’; Gujarati *alāv* ‘fire kindled in a ditch around which Moslems dance at Muharram’; Shina (Guresi) *alāū* ‘bonfire’, (Gilgiti) *lāi* ‘unlit torch’; Latin *altar*, *altāre*, *altāria*, *altārium* ‘that which is placed upon an altar proper (*āra*) for burning of the victim; a high altar (more splendid than *āra*)’, *adoleō* ‘to burn a sacrifice’; Swedish *ala* ‘to blaze, to flame, to flare up, to burn’. Rix 1998a:234 **h₂el-* ‘to burn’; Pokorny 1959:28 **al-* ‘to burn’; Walde 1927—1932.I:88 **al-*; Mallory—Adams 1997:87 **hₐel-* ‘to burn’; Mayrhofer 1956—1980.I:55; Ernout—Meillet 1979:9 and 24; Walde—Hofmann 1965—1972.I:4—5 and I:32; De Vaan 2008:24—25.

Buck 1949:1.85 burn (vb.); 22.14 altar; 22.15 sacrifice, offering. Bomhard—Kerns 1994:525, no. 376; Illič-Svityč 1971—1984.I:276, no. 140, (?) **ʕAΛA* ‘to burn (sacrificial offerings)’; Dolgopolsky 2008, no. 127, **ʕ[a]lV* ‘to burn (especially sacrifices), to use magic means (sacrifices, magic formula, etc.) to produce a particular result’.

765. Proto-Nostratic root **ʕam-* (~ **ʕəm-*):(vb.) **ʕam-* ‘to sink, to dip, to plunge’;(n.) **ʕam-a* ‘deep place, valley’; (adj.) ‘sunken, deep’

- A. Proto-Afrasian **ʕam-* ‘to be or become deep’: Proto-Semitic **ʕam-ak-* ‘to be or become deep’ > Hebrew *ʕāmaḵ* [ʕmḵ] ‘to be deep’, *ʕēmeḵ* [ʕmḵ] ‘vale, valley, lowland; open country’, *ʕāmōḵ* [ʕmḵ], *ʕāmēḵ* [ʕmḵ] ‘deep’; Syriac *ʕamaḵ* ‘to be deep’; Ugaritic *ʕmḵ* ‘valley, plain’; Phoenician *ʕmḵ* ‘plain, valley’; Arabic *ʕamuḵa* ‘to be or become deep, profound; to deepen, to make deep or deeper; to penetrate deeply, to go deeply, to become absorbed’, *ʕamḵ*, *ʕumḵ* ‘depth, profoundness, profundity; bottom’, *ʕamīḵ* ‘deep, profound’; Sabaeen *ʕmḵ* ‘(cultivated) valley’; Mehri *ʕāmḵ* ‘middle’; Šheri / Jibbāli *ʕamḵ* ‘middle’; Ḥarsūsi *ʕāmḵ* ‘middle’; Geez / Ethiopic *ʕamaḵa* [ʕmḵ], *ʕamaḵʷa* [ʕmḵʷ] ‘to be deep, to submerge (intr.)’, *ʕamaḵ* [ʕmḵ] ‘depth, deepness’; Tigrinya *ʕamäḵʷä* ‘to be deep’; Tigre *ʕamḵa* ‘to be concave, to be hollowed’; Amharic *ammäḵä* ‘to be deep, to make deep’, *mäḵmāḵ* ‘abyss (referring to hell)’. Murtonen 1989:321—322; Tombäck 1978:250—251; Klein 1987:476; Leslau 1987:63; Zammit 2002:295—296. Semitic loan in Late Egyptian *ʕmq* ‘valley floor or bottom, plain’. Hannig 1995:141.
- B. Dravidian: Tamil *amiṛ* ‘to be immersed, to be plunged, to sink’, *amiṛttu* (*amiṛtti-*) ‘to cause to sink, to immerse, to engulf, to press down, to cover (as eyelids the eyes)’, *amiṛntu* (*amiṛnti-*) ‘to sink’; Malayalam *amiṛuka* ‘to sink’, *amiṛttuka*, *amuṛttuka* ‘to fix, to set’; Kannada *aguṛ* ‘to sink in water, to be immersed, to dive’, *aguṛcu* ‘to cause to sink in water, to immerse’. Burrow—Emeneau 1984:16—17, no. 167.
- C. Proto-Chukchi-Kamchatkan **əm-* ‘deep’: Chukchi *n-əməcqə-qen*, *əməcqə-lʔən* ‘deep’, *əm-at-* ‘to flood, to overflow banks’; Koryak *n-əm-qen* ‘deep (water)’, *am-ka* ‘deep(ly)’; Alyutor *n-əm-qin* ‘deep (water)’; Kamchadal / Itelmen *ʕam-laX* ‘deep’, *ʕamʔam* ‘deep place’, (Western) *amlag* ‘deep’, (Eastern) *amam* ‘deep’, (Southern) *ama* ‘deep’. Fortescue 2005:341.

Buck 1949:12.67 deep.

766. Proto-Nostratic root **ʕam-* (~ **ʕəm-*):(vb.) **ʕam-* ‘to lift, to raise, to make high’;(n.) **ʕam-a* ‘highest point, tip, top’

Extended form (Semitic and Indo-European):

(vb.) **ʕam-V-d-* ‘to lift, to raise, to make high’;(n.) **ʕam-d-a* ‘highest point, tip, top’

- A. Proto-Afrasian **ʕam-* ‘(vb.) to lift, to raise, to make high; to raise up, to stand upright, to support; (n.) point, tip, top’: Proto-Semitic **ʕam-ad-* ‘to raise up, to stand upright, to support’ > Akkadian *emēdu* ‘to lean against, to

reach, to cling to, to come into contact, to stand (near); to place, to lean (something upon or against something), to load, to impose (obligations to pay taxes or fines)’, *imdu* (*indu*) ‘stanchion, support; tax, impost, obligation to work’; Arabic *ʿamada* ‘to support (by a pillar or a column), to prop up, to buttress, to shore up’, *ʿumda* ‘support, prop, shore; main subject, main issue, basic issue’, *ʿimād* ‘column, support, pillar, tent-pole, pilaster’; Sabaeen (pl.) *ʿʿmd* ‘vine-props’; Šheri / Jibbāli *ʿāmūd* ‘beam, pillar’, *aʿmid* ‘to put a pillow under the head’; Harsūsi *ʿamdāt* ‘beam’, *ʿāmīd* ‘pillow, cushion’; Mehri *ʿāmawd* ‘ceiling beam, beam’, *hāmōd* ‘to prop up someone’s head (with a pillow, arm)’; Phoenician *ʿmd* ‘column’; Hebrew *ʿāmaḏ* [ʿmḏ] ‘to take one’s stand, to stand’, *ʿammūḏ* [ʿmḏ], *ʿammūḏ* [ʿmḏ] ‘pillar, column’; Imperial Aramaic *ʿmd* ‘to stand’; Syriac *ʿammūḏā* ‘pillar, column’; Geez / Ethiopic (denominative) *ʿammada* [ʾmmḏ] (also *ʿammada* [ʾmmḏ]) ‘to erect a column, to stand (as a column), to sustain, to prop up (with a column), to strengthen, to form’, *ʿamd* [ʾmmḏ] (also *ʿamd* [ʾmmḏ]) ‘column, pillar, post, mast, balustrade, column of a page’; Tigrinya *ʿamdi* ‘column’; Tigre *ʿamd* ‘column’; Amharic *amd* ‘column’ (Geez loan). Murtonen 1989:321; Klein 1987:474; Leslau 1987:62—63. (?) Egyptian *ʿmm* body part (in the head of animals), perhaps ‘brain’ (semantic development from ‘highest part of the head, top of the head’ as in Old English *brægen* ‘brain’ [cf. Onions 1966:113], related to Greek *βρεγχύος* ‘top of the head’, *βρέγμα* ‘the front part of the head’). Faulkner 1962:43; Erman—Grapow 1926—1963.1:186; Hannig 1995:141. Proto-Southern Cushitic **ʕaam-* ‘tip, point’ > Iraqw *ʿamay* ‘cist, swollen gland; East Coast fever’, *anta* ‘grave’, *antoni* ‘anthill’; Burunge *anta* ‘anthill’; Alagwa *anta* ‘anthill’; Kʿwadza *ambayiko* ‘tail’; Dahalo *ʿeeme* ‘thorn; needle’. Ehret 1980:274. North Omotic: Bench / Gimira *amu* ‘thorny’; Yemsa / Janjero *àamà* ‘mountain’. Ehret 1995:348, no. 682, **ʕaam-* ‘(vb.) to raise; (n.) tip of anything’.

- B. Proto-Indo-European (**ǵhmdh-i* >) **ǵhmdh-i* ‘on top of, over, above; in addition to’: Sanskrit *ádhi* (as a prefix to nouns and verbs) ‘over, over and above, besides’; (as a separable adverb or preposition) ‘over, from above, from, from the presence of, after’, *adhika-h* ‘(adj.) additional, subsequent, later; superior, more numerous; abundant, excellent; (n.) surplus, abundance, redundancy, hyperbole; (indeclinable) exceedingly, too much, more’; Pāli *adhi* (prep. and prefix of place where) ‘on top of, over, above, on; in addition to’, (prep. and prefix of direction denoting a movement towards a definite end or goal) ‘up to, over, toward, to, on’, *adhika-* ‘exceeding, superior, extraordinary’; Armenian *ənd* in the senses: ‘to, over, by, with’. Mann 1984—1987:856 **ǵdh-* (**ǵdhe*, **ǵdhə*, **ǵdhōm*) ‘to, till, toward, near’; Mayrhofer 1956—1980.1:31; Burrow 1973:286 — Burrow also cites Avestan *aidī*, *aiḍi* and Old Persian *adiy*; Hübschmann 1897:447.

Buck 1949:4.203 brain; 9.51 beam; 10.22 raise, lift; 12.33 top. Different etymology in Dolgopolsky 2008, no. 135, **ʕ[o]mdE* ‘to stand upright, to rise’.

767. Proto-Nostratic root **ʕam-* (~ **ʕəm-*):

(vb.) **ʕam-* ‘to shoot, to hurl, to throw’;

(n.) **ʕam-a* ‘arrow’

- A. Proto-Afrasian **ʕam-* ‘(vb.) to shoot, to hurl, to throw; (n.) arrow’: Egyptian *ʕmʕt* ‘throw-stick’, *ʕmʕ* ‘to throw the throw-stick’. Hannig 1995:140; Gardiner 1957:557; Faulkner 1962:42; Erman—Grapow 1926—1963.1:186. Highland East Cushitic: Sidamo *amaatt’o* ‘arrow’. Hudson 1987:21 and 350.
- B. Dravidian: Tamil *ampu* ‘arrow’, *appu-kkaṭṭu* ‘a sheaf of arrows’; Malayalam *ampu* ‘arrow, porcupine quill’; Kolami *amb*, *am* ‘arrow, flensing knife’; Toda *ob* ‘arrow’; Kannaḍa *ambu* ‘arrow’; Koḍagu *ambi* ‘arrow’; Tuḷu *ambu* ‘arrow’, *ambige* ‘hunter’; Telugu *ambu*, *ambakamu*, *ammu*, *ampa-* (in compounds) ‘arrow’, (pl.) *ampara* ‘arrows’, *ampakāḍu* ‘archer’; Parji *amb* ‘arrow’; Gadba (Ollari) *amb* ‘arrow’; Konḍa *am* ‘arrow’; Pengo *am* ‘arrow’; Maṇḍa *amb* ‘arrow’; Kui *āmba* ‘arrow, arrowhead’, *ambu* ‘arrow’; Kuwi *ambū* ‘arrowhead’, *ambu* ‘arrow; bow’. Burrow—Emeneau 1984:17, no. 178; Krishnamurti 2003:9 **ampu* ‘arrow’.
- C. Uralic: Proto-Finno-Permian **amp3* ‘to shoot, to launch’ > Finnish *ampu-* ‘to shoot, to fire, to launch’, *ammus* ‘charge, projectile, shell, ammunition’; Estonian *amb* ‘cross-bow, arbalest’, *ambu-* ‘to shoot with the (cross-)bow’, *ambur* ‘archer, bowman’; Votyak / Udmurt (Sarapul) *īb-*, (Kazan) *āb-*, (Glazov) *ībī-* ‘to shoot; to throw, to hurl’. Rédei 1986—1988:606—607 **amp3* ‘to shoot, to launch’ — Rédei also includes Lapp / Saami (Norwegian) *ab’bo* ~ *-bb-* ‘to boil over, to boil so fast that part of the contents runs away’; Sammallahti 1988:552 **ampa-* ‘to shoot’; Aikio 2020:13—14 **ampV-* / **empV-* ‘to shoot’.

Buck 1949:10.25 throw (vb.); 20.25 arrow. Hakola 2000:20, no. 29.

768. Proto-Nostratic root **ʕan-* (~ **ʕən-*):

(vb.) **ʕan-* ‘to breathe, to respire, to live’;

(n.) **ʕan-a* ‘life, breath’

- A. Afrasian: Egyptian *ʕnh* ‘(vb.) to live; (n.) life; living person’, *ʕnh̄y*, *ʕnh̄w* ‘a living being’, *ʕnh̄w* ‘life’; Coptic *ōnh* [ⲱⲛⲁ] ‘to live, to be alive’. Hannig 1995:144—146; Faulkner 1962:43—44; Erman—Grapow 1921:26 and 1926—1963.1:193—200; Gardiner 1957:557; Vycichl 1983:250; Černý 1976:228. [Ehret 1995:352, no. 690, **ʕan̄γ^w* ‘to rise, to grow’.]
- B. Proto-Indo-European **ʕh̥enE-* [**ʕh̥anE-*] ‘to breathe, to respire, to live’: Greek *ἄνεμος* ‘wind’; Sanskrit *ániti*, *ánati* ‘to breathe, to respire, to live’,

aná-h ‘breath, respiration’, *ánila-h* ‘wind’; Latin *anima* ‘breath, wind; the breath of life, vital principle, soul (physical)’, *animal* ‘a living being, animal’, *animō* ‘to animate, to give life to’, *animōsus* ‘full of breath, wind, life’; Old Irish *ánál* ‘breath’; Gothic *uz-anan* (only in 3rd sg. pret.) ‘to breathe one’s last’; Old Icelandic *anda* ‘to breathe, to live’, *andi* ‘breath, wind, spirit’, *önd* ‘breath’; Norwegian *anda* ‘to breathe’, *ande* ‘breath’; Old English *ōþian* (< **anθō-jan*) ‘to pant’; Old Frisian *omma*, *amma* (< **an-man-*) ‘breath’; Tocharian A *āñcām*, B *āñme* ‘self; inner being, soul’. Rix 1998a:238—239 **h₂enh₁-* ‘to breathe’; Pokorny 1959:38—39 **an(ə)-* ‘to breathe’; Walde 1927—1932.I:56—58 **an-*; Mann 1984—1987:21 **andhos*, *-ā*, *-us* ‘soul, spirit, rancor’, 22 **anāmos*, *-ā* ‘breath, soul, spirit, air’, 22 **anātlo-*; **anātro-*, *-ā* ‘breath’, 22 **anātos*, *-jos*, *-is*, *-ōn* ‘breath, soul’, 26—27 **anō*, *-iō* ‘to blow, to breathe’, 27 **anos* ‘breath, soul, fragrance’; Mallory—Adams 1997:82 **h_aénh₁mi* ‘to breathe’, **h_aénh₁mos* ‘breath’, **h_aénh₁-tlo-* ‘breath’ (in Celtic), **h_aénh₁-* ‘to breathe’; Gamkrelidze—Ivanov 1984.II:466 **anH-* and 1995.I:388 **anH-* ‘(vb.) to breathe; (n.) breath’; Watkins 1985:2 **anə-* and 2000:4 **anə-* ‘to breathe’ (oldest form **₂₂en₂₁-*, colored to **₂₂an₂₁-*), suffixed form **anə-mo-*; Wodtko—Irslinger—Schneider 2008:307—311 **h₂enh₁-*; Boisacq 1950:61 **anēi-*; Hofmann 1966:18; Frisk 1970—1973.I:105; Beekes 2010.I:101—102 **h₂enh₁-mo-*; Chantraine 1968—1980.I:86; Mayrhofer 1956—1980.I:33 and I:34; Ernout—Meillet 1979:34; De Vaan 2008:43; Walde—Hofmann 1965—1972.I:49—50; Kroonen 2013:27 Proto-Germanic **anan-* ‘to breathe’; Orël 2003:17 Proto-Germanic **an(a)mōn*, 17—18 **ananan*, 18 **andōjanan*, 18—19 **andōn*; Feist 1939:538 **ane-*; Lehmann 1986:385 **an(ə)-*; Boutkan—Siebinga 2005:294; De Vries 1977:9 and 687; Torp 1919:5; Van Windekens 1976—1982.I:164 **an₂₁-*; Adams 1999:41—42 **h_aen(h₁)-*.

- C. Proto-Eskimo **anər-* ‘to breathe (out)’: Alutiiq Alaskan Yupik *anərməq* ‘breath, spirit’; Central Alaskan Yupik *anərnəq* ‘spirit, soul, breath’; Naukan Siberian Yupik *anərnərir(ar)* ‘to get out of breath’; Central Siberian Yupik *anəXtə-* ‘to breathe, to continue to function normally’, *anərnəq* ‘breath, the way things are’; Sirenik *anəcəcəXtəX* ‘breath’; North Alaskan Inuit *anirniq* ‘breath’; Western Canadian Inuit *anirniq* ‘breath’; Eastern Canadian Inuit *anirniq* ‘breath, spirit’; Greenlandic Inuit *anirniq* ‘breath’. Fortescue—Jacobson—Kaplan 1994:28. Proto-Eskimo **anər-təqə-* ‘to breathe’: Alutiiq Alaskan Yupik *anəXtəqə-* ‘to breathe’; Central Alaskan Yupik *anəXtəqə-* ‘to live, to breathe’; North Alaskan Inuit *aniqtiri-* ‘to breathe’; Sirenik *anəXsaqə(s)-* ‘to breathe’; Western Canadian Inuit *aniqtiri-* ‘to breathe’; Eastern Canadian Inuit *aniqtiri-* ‘to breathe’; Greenlandic Inuit *anirtiri-* ‘to breathe deeply, to groan’. Fortescue—Jacobson—Kaplan 1994:28. Proto-Eskimo **anərya(C)ar-* ‘to take a breath’: Alutiiq Alaskan Yupik *anəryaar-* ‘to sigh’; Northern Siberian Yupik *anrayuriṇatəq* ‘catching one’s breath’; Central Alaskan Yupik

anəryaar- ‘to take a breath, to sigh’; Seward Peninsula Inuit *anīqsaag-* ‘to breathe’; North Alaskan Inuit *anīqsaag-* ‘to take a breath’; Western Canadian Inuit *anīqsaag-* ‘to breathe’; Eastern Canadian Inuit *anīksaatuq-* ‘to breathe’; Greenlandic Inuit *anīksaar-* ‘to breathe’, *anīksaaq* ‘spirit, ghost’. Fortescue—Jacobson—Kaplan 1994:28. Proto-Inuit **an(ə) rilək-* ‘to gasp for breath’ > Greenlandic Inuit *arḡili(y)-* ‘to gasp for breath’. Fortescue—Jacobson—Kaplan 1994:28.

Buck 1949:4.51 breathe; breath; 4.74 live (= be alive); living, alive; life. Illič-Svityč 1971—1984.I:261, no. 125, **ʔanqʌ* ‘to breathe’; Dolgopolsky 2008, no. 138a, **ʕiñ[V]qV* ‘to live’; Bomhard—Kerns 1994:521, no. 369; Fortescue 1998:152.

769. Proto-Nostratic (n.) **ʕaŋ-a* ‘upper part’; (particle) **ʕaŋ-* ‘up, above’:

- A. Proto-Afrasian **ʕaŋ-* ‘(n.) upper part; (particle) up, above’: Proto-Southern Cushitic **ʕaŋ-* ‘up, above’ > Iraqw *aŋ* ‘in the past, long ago’; Burunge *oŋ* (pl. *omeri*) ‘mountain’; K’wadza *onka* (pl. *oma*) ‘mountain’; Ma’a *aná* ‘above’, *aŋilá* ‘above’. Ehret 1980:276. Proto-Southern Cushitic **ʕaŋ-* ‘head’ > Ma’a *muʔa*, *angálo* ‘head’; Dahalo *ʕáni* ‘head’. Ehret 1980:276. Highland East Cushitic: Sidamo *aaná* ‘on (top of)’, *aana* ‘over, above’. Hudson 1989:348. [Ehret 1995:351, no. 689, **ʕaŋ-/ʕiŋ-* ‘tip, peak, top’.]
- B. [Dravidian: Tamil *aŋ* ‘upper part’, *aŋa* ‘to lift the head’, *aŋar* ‘to rise, to move upwards’, *aŋavu* (*aŋavi-*) ‘to go upward, to ascend’, *aŋṇal* ‘greatness, exaltation, superiority, great man, king, god’, *aŋṇā* ‘to look upward, to gape, to hold the head erect’; Malayalam *aŋṇa* ‘upwards, above’, *aŋṇal* ‘high, God, esp. Arhat’, *aŋṇā* ‘looking upwards’; Kannaḍa *aŋṇe*, *aŋṇa*, *aŋa* ‘excellence, purity’; Tuḷu *aŋāvuni*, *aŋṇāvuni* ‘to look up, to lift up the face, to gaze’. Burrow—Emeneau 1984:12, no. 110. Tamil *āṇi* ‘excellence, superiority’, *āṇi-ppon* ‘gold of the finest quality’, *āṇi-muttu* ‘pearl of the finest quality’; Kannaḍa *āṇi* ‘excellence, superiority, preciousness’, *āṇi-pon* ‘gold of the finest quality’; Malayalam *āṇikkaram* ‘the choicest of anything’, *āṇi-pponnu* ‘finest gold’. Burrow—Emeneau 1984:33, no. 354.]
- C. [(?) Proto-Altaic **āŋo* ‘(front, front side) >’ ‘right (side)’: Proto-Tungus **āŋ(gi)-* ‘right’ > Evenki *anḡū*, *āḡū* ‘right’; Lamut / Even *āngḡγ* ‘right’; Negidal *anḡi-dā* ‘right’; Oroch *āḡžā* ‘right’; Udihe *ayaŋaža* ‘right’; Solon *angida* ‘right’. Proto-Mongolian **enge-* ‘south; front (of cloth)’ > Written Mongolian *enger* ‘flap of a garment, lapel(s); southern slope of a mountain or hill’, *eŋ* ‘width (of material), dimension, extent’, *eŋ* ‘very, most’ (*eŋ terigün* ‘first of all, very first’); Khalkha *enger* ‘south; front (of cloth)’; Buriat *enger* ‘front (of cloth)’; Kalmyk *enḡə*, *enḡr* ‘shore’; Ordos *enger* ‘front (of cloth)’; Dagur *enge* ‘front (of cloth)’; Dongxiang *engie* ‘front (of cloth)’; Monguor *ŋge* ‘front (of cloth)’. Proto-Turkic **oŋ* ‘right; good,

lucky; west' > Old Turkic (Old Uighur) *oŋ* 'right; good, lucky; west'; Karakhanide Turkic *oŋ* 'right; good, lucky'; Turkish (dial.) *on* 'right; good, lucky'; Turkmenian *oŋ* 'good, lucky'; Uzbek *oŋ* 'right; good, lucky'; Uighur *oŋ* 'right'; Karaim *oŋ* 'right; good, lucky'; Tatar *uŋ* 'right; good, lucky'; Bashkir *uŋ* 'right; good, lucky'; Kirghiz *oŋ* 'right; good, lucky'; Kazakh *oŋ* 'right'; Noghay *oŋ* 'right; good, lucky'; Sary-Uighur *oŋ* 'right'; Oyrot (Mountain Altai) *oŋ* 'right; good, lucky'; Tuva *oŋ* 'right'; Yakut *uŋa* 'right; southern', *uŋuor* 'on the other bank'. Starostin—Dybo—Mudrak 2003:305 ***āŋo* 'right'.]

Sumerian *an* 'high', *an* 'heaven', *an* 'over, above', *an-da* 'more than; over, above, on top of', *an-na* 'to be raised, elevated', *an-na* 'high', *an-na* 'over, above', *an-na* 'in heaven'.

Buck 1949:1.22 mountain; hill; 4.20 head; 12.33 top; 12.41 right; 12.48 south. Note: the Dravidian and Altaic forms are phonologically ambiguous — they may belong with Proto-Nostratic **xaŋ-* (~ **xəŋ-*) '(vb.) to lift, to raise; to rise, to go upward, to ascend; (n.) that which is most prominent, visible, or noticeable; (particle) on top of, over, above' instead.

770. Proto-Nostratic root **ʕap*'- (~ **ʕəp*'-):

- (vb.) **ʕap*'- 'to grasp, to seize, to take hold of, to take by force';
(n.) **ʕap*'-*a* 'grasp, hold, seizure'

- A. Proto-Afrasian **ʕap*'- 'to grasp, to seize, to take hold of, to take by force': Proto-Semitic **ʕab-at*'- 'to take hold of, to take by force; to hold tightly, to hold fast' > Akkadian *ebētu* 'to tie, to bind; to tighten, to put someone in straits'; Mandaic *abt* 'to bind, to hold fast'; Epigraphic South Arabian *ʕbt* 'compulsory service, calamity'; Geez / Ethiopic *ʕabbaṭa* [ḳḳḳ], *ʕabaṭa* [ḳḳḳ] 'to exact compulsory service, to compel, to force, to coerce, to take by force, to requisition; to ruin; to push; to place an obstacle'; Tigrinya *ʕabäṭä* 'to hurl oneself upon to tear to pieces'; Amharic *abbäṭä* 'to trouble, to upset, to compel'. Leslau 1987:55. Proto-Highland East Cushitic **abad*-(?) 'to hold, to seize' > Gedeo / Darasa *abid*- 'to hold, to seize'; Hadiyya *amad*- 'to hold, to seize, to start, to begin, to touch'; Sidamo *amad*- 'to hold, to seize, to touch'. Hudson 1989:80.
- B. Elamo-Dravidian: Royal Achaemenid Elamite *ha-pi*- 'to press, to squeeze out'. Dravidian: Tamil *appu* (*appi*-) 'to stick with the hand (as sandal paste), to plaster with a trowel (as mortar), to apply repeatedly (as fomentation), to press against (as in wrestling), to thrust in the mouth', *appali* 'to remove unevenness in the wall by placing pieces of brick or tile with chunam when plastering'; Malayalam *appi*, *appu* 'plaster', *appuka* 'to stick to, to attach to, to press against (as plaster), to press in'; Kota *ap*- (*apy*-) 'to throw (clay) into a crevice to plug it, to beat strongly with the

hand'; Kannaḍa *appige*, *apige*, *appaḍe*, *appuge* 'the act of joining, cementing, soldering, etc.; a patch', *appaḷisu* 'to strike against, to stroke, to flap, to slap', *apparisu* 'a stroke'; Tuḷu *appaḷipuni* 'to strike anything with the open hand, to squash'; Telugu *appaḷincu* 'to slap, to touch, to tap, to strike gently with the open hand, to smear, to apply', *appaḷinta* 'slapping, etc.', *appaḷamu* 'clapping, flapping, striking'. Burrow—Emenau 1984:16, no. 157.

- C. Uralic: Finnish *apaja* 'fishing grounds; catch, haul'; Karelian *apaja*, *abaja* 'fishing grounds; catch, haul'; Estonian *abajas* 'cove, bay, creek, backwater, inlet'.
- D. Proto-Altaic **apV-* 'to take': Proto-Tungus **abgu-* 'to pull out, to take from; (refl.) to appear' > Evenki *abgin-* 'to appear'; Negidal *abgu-* 'to pull out, to take from'; Ulch *agbumbu-* 'to pull out, to take from', *agbun-* 'to appear'; Orok *agbun-* 'to appear'; Nanay / Gold *agbi-mbogo-* 'to pull out, to take from', *agbiaci-* 'to appear'; Oroch *ābu-* 'to pull out, to take from'; Udihe *agbu-* 'to pull out, to take from'. Proto-Mongolian **ab-* 'to take' > Written Mongolian *ab-* 'to take, to grasp, to get hold of', *abta-* (passive of *ab-*) 'to be taken or seized, to be taken out, to be capable of being taken, to be overtaken, to suffer from, to come under the influence of', *abuldu-* (reciprocal of *ab-*) 'to seize or hold each other, to interlock, to stick together, to be glued together', *abuča* 'taking, receiving, accepting'; Khalkha *av-* 'to take, to grasp, to get hold of'; Buriat *aba-*, *ab-* 'to take, to grasp, to get hold of'; Kalmyk *aw-* 'to take, to grasp, to take hold of'; Ordos *ab-*, *aw-* 'to take, to grasp, to get hold of'; Moghol *afu-* 'to take, to grasp, to get hold of'; Dagur *aw-* 'to take, to grasp, to get hold of'; Monguor *awu-*, *abu-* 'to take, to grasp, to get hold of'. Poppe 1955:25, 100, and 278. Proto-Turkic **abuč-* 'handful' > Karakhanide Turkic *avut*, *avut-ča*, *avuč-ča*, *avuč* 'handful'; Turkish *avuc* 'palm of the hand, handful'; Gagauz *auč* 'handful'; Azerbaijani *ovuč* 'handful'; Turkmenian *ovuč* 'handful'; Uzbek *χowuč* 'handful'; Uighur *oč* 'handful'; Karaim *avuč*, *uvuč*, *uvuc* 'handful'; Tatar *uč* 'handful'; Bashkir *us* 'handful'; Kirghiz *ūč* 'handful'; Kazakh *uwīs* 'handful'; Noghay *uvīs* 'handful'; Oyrot (Mountain Altai) *ūs* 'handful'; Chuvash *ivṣṣ* 'handful'. Poppe 1960:44; Street 1974:7 **ab-* 'to take, to grasp', **ab-uča* 'grasp, handful'; Starostin—Dybo — Mudrak 2003:309—310 **apV* 'to take'.

Buck 1949:9.16 bind (vb. tr.); 9.342 press (vb.); 11.13 take; 11.14 seize, grasp, take hold of. Bomhard—Kerns 1994:526—527, no. 378; Hakola 2000:22, no. 35, **apa-* 'to take, to carry'.

771. Proto-Nostratic (n.) **ɬar-a* 'back, rear; hindquarters, behind':

- A. Proto-Afrasian **ɬar-* 'back, hindquarters': Semitic: Akkadian *erūtu* (*arūtu*) 'back'. Egyptian *ʿrt* 'hinder parts (of men), hindquarters (of animals)'.

Faulkner 1962:45; Hannig 1995:149; Gardiner 1957:558; Erman—Grapow 1926—1963.1:209. West Chadic: Tsagu *áárí* ‘back’. East Chadic: Dangla *ááron* ‘back’; Birgit *ʔàrà* ‘back’; Mubi *hâr* ‘back’. Jungraithmayr—Ibriszimow 1994.2:6—7.

- B. Proto-Altaic **āra* ‘back, behind’: Proto-Tungus **arka-n* ‘back’ > Evenki *arkan* ‘back’; Lamut / Even *arq̄n* ‘back’; Negidal *aykan* ‘back’; Orok *atta(n)* ‘back’; Oroch *akka(n)* ‘back’; Udihe *aka(n)* ‘back’; Solon *arkā* ‘back’. Proto-Mongolian **aru* ‘back, behind’ > Middle Mongolian *aru* ‘back’, *aradan* ‘behind’, *ārudur* ‘to the back’; Written Mongolian *aru* ‘back, rear; north, northern; verso of a sheet or folio’; Khalkha *ar* ‘back, rear; the north facing, shady side of a mountain or a house; north, northern; background, reverse’; Buriat *ara* ‘back’; Kalmyk *arə, ārə, arkə* ‘back’; Ordos *aru* ‘back; east’; Dagur *ar, arkən* ‘back’; Shira-Yughur *ār* ‘back’. Proto-Turkic **arka* ‘back’ > Old Turkic (Old Uighur) *arqa* ‘back’; Karakhanide Turkic *arqa* ‘back’; Turkish *arka* ‘back, back part; reverse side’; Gagauz *arqa* ‘back’; Azerbaijani *arxa* ‘back’; Turkmenian *arqa* ‘back’; Uzbek *arqa* ‘back’; Uighur *a(r)qa* ‘back’; Karaim *arqa, arxa* ‘back’; Tatar *arqa* ‘back’; Bashkir *arqa* ‘back’; Kirghiz *arqa* ‘back’; Kazakh *arqa* ‘back’; Noghay *arqa* ‘back’; Sary-Uighur *arqa, harqa* ‘back’; Khakas *arxa* ‘back’; Oyrot (Mountain Altai) *arqa* ‘back’; Tuva *a’rya* ‘mountain forest’; Chuvash *orya-l̥x* ‘saddle, strips’; Yakut *aryā, arya-s* ‘back’; Dolgan *arga-lā-* ‘to turn one’s back towards somebody’. Starostin—Dybo—Mudrak 2003:311—312 **āra* ‘back, behind’; Poppe 1960:78, 94, and 129; Street 1974:8 **aru* ‘rear, back’.

Buck 1949:4.19 back. Dolgopolsky 2008, no. 146, **ʕarH₂|wu ~ *ʕaH₂ru* ‘back, loins’.

772. Proto-Nostratic root **ʕar-* (~ **ʕər-*):

Extended form:

(vb.) **ʕar-V-g-* ‘to climb on, to mount; to rise, to ascend; to lift up, to raise’;

(n.) **ʕar-g-a* ‘climbing, mounting’

- A. Afrasian: Proto-Semitic **ʕar-ag-* ‘to climb on, to mount; to rise, to ascend’ > (?) Hebrew *ʕāray* ‘to long for, to yearn for’; Arabic *ʕaraġa* ‘to ascend, to mount, to rise’ (according to Leslau [1987:70], this may be a loan from Geez / Ethiopic); Epigraphic South Arabian *ʕrg* ‘eminent’ (?); Geez / Ethiopic *ʕarga* [ᐪᐸᐱ] ‘to ascend, to go up, to climb’, *ʕaʕraga* [ᐱᐸᐱᐱ] ‘to raise, to take up, to lead up to, to offer (sacrifice)’; Tigre *ʕarga* ‘to go up, to ascend’; Tigrinya *ʕarägä* ‘to go up’; Amharic *arrägä* ‘to go up into heaven’; Gurage *arägä* ‘to have sexual intercourse’. Murtonen 1989:329; Klein 1987:484; Leslau 1979:87 and 1987:70; Zammit 2002:284. Cushitic: Bilin *ʕarag-* ‘to go up, to ascend’ (loan from Ethiopian Semitic). Reinisch 1887:49.

- B. Dravidian: Kuṛux *argnā* (*argyas*) ‘to climb, to mount an animal, to rise (as sun, moon, stars), to rise in pitch (as a drum), to get puffed up, (eyes) to be turned up before death’, *argnā* (*argas*) ‘to make climb, to lift, to haul up, to take upon one’s shoulders, to lay a burden on, to begin, to raise, to increase’, *argtaʔānā*, *argaʔānā* ‘to make climb, to lift up’; Malto *arge* ‘to climb’, *argtre* ‘to lift, to raise’. Burrow—Emeneau 1984:22, no. 231.

Bomhard—Kerns 1994:564—565, no. 428.

773. Proto-Nostratic root **ʕath-* (~ **ʕaṯh-*):

(vb.) **ʕath-* ‘to move, to proceed, to advance (in years)’;

(n.) **ʕath-a* ‘maturity, old age; advance’; (adj.) ‘mature, old; advanced’

- A. Proto-Afrasian **ʕat-* ‘to move, to proceed, to advance (in years)’: Proto-Semitic **ʕat-uk-* ‘to move, to proceed, to advance (in years)’ > Hebrew *ʕāṯēk* [ʔāṯēk] ‘to move, to proceed, to advance (in years)’; Ugaritic *ʕtk* ‘to pass’; Akkadian *etēku* ‘to pass through’; Arabic *ʕatuka* ‘to grow old, to age, to mature; to mellow (wine)’, *ʕatīk* ‘old, ancient, antique, matured, mellowed, aged (wine)’, *ʕitk* ‘age, vintage (wine)’. Murtonen 1989:334; Klein 1987:490. [Orël—Stolbova 1995:255, no. 1143, **ʕVtuk-* ‘to go’.]
- B. Proto-Indo-European **ʕhet-* [**ʕhat-*] ‘to move, to proceed, to advance (in years)’: Sanskrit *átati* ‘to go (constantly), to walk, to run, to wander’, *atná-h* ‘sun’; Latin *annus* (< **at-no-s*) ‘year’; Oscan *akenei* (*-k-* < *-t-*) ‘in the year’; Umbrian (acc. pl.) *acnu* ‘years’; Gothic (dat. pl.) *apnan* ‘year’. Rix 1998a:244 **h₂et(H)-* ‘to go, to wander’; Pokorny 1959:69 **at-* ‘to go; year’; Walde 1927—1932.I:41—42 **at-* ‘to go’; Mann 1984—1987:40 **atnos*, *-om* ‘year, period’; Watkins 1985:4 **at-* and 2000:5 **at-* ‘to go’; Gamkrelidze—Ivanov 1984.I:442—443, fn. 1, **at^[h]nos* and 1995.I:370, fn. 26, **at^hnos*; Mallory—Adams 1997:228 **h_aet-* ‘to go’; Mayrhofer 1956—1980.I:26 and I:28; Walde—Hofmann 1965—1972.I:51 **at-nos*; Ernout—Meillet 1979:35; De Vaan 2008:43—44 **h₂et-no-*, **h₂et-nio-* ‘which goes, a year’; Orël 2003:28 Proto-Germanic **apnaz*, 28 **apnjan*; Kroonen 2013:40 Proto-Germanic **apna-* ‘year’; Feist 1939:62—63 (Latin *annus* < **at-nos*); Lehmann 1986:47 **at-* ‘to go’.

Buck 1949:14.73 year. Brunner 1969:63, no. 320; Bomhard—Kerns 1994: 518—519, no. 366.

774. Proto-Nostratic root **ʕen-*:

(vb.) **ʕen-* ‘to see, to notice, to pay attention’;

(n.) **ʕen-a* ‘sight, view, attention’

- A. Proto-Afrasian **ʕen-* ‘to see, to notice, to pay attention’: Proto-Semitic **ʕan-an-* ‘to come into view, to appear’ > Arabic *ʕanna* ‘to present itself to

view, to offer itself (to someone); to take shape, to form, to arise, to spring up (in someone's mind), to suggest itself; to appear (to someone)'; Sabaeen ʕnn 'to manifest one's self (of a deity)'. Proto-Southern Cushitic *ʕeen- or *ʕaan- 'sight, view' > Asa nuʕus- 'to show', nuʕuset- 'to see'; Dahalo ʕeenaað- 'to see from afar'. Ehret 1980:274. [Ehret 1995:349, no. 686, *ʕan- or *ʕaan- 'to come into view, to appear'.]

- B. (?) Uralic: Finnish *enne* 'omen, augury; sign', *ennustaa* 'to predict, to prophesy, to forecast, to foretell', *ennustus* 'prediction; prophesy'; Estonian *enne* 'omen, portent, foretoken, presage, augury', *ennustama* 'to foretell, to predict, to forecast, to prognosticate, to prophesy, to presage, to tell fortunes', *ennustus* 'prediction, forecast, prognosis, prophesy, presage'.
- C. Proto-Altaic *enu- (~ -o) '(vb.) to beware; (n.) attention': Proto-Tungus *(χ)en-te- '(vb.) to beware; (adv.) attentively, slowly' > Evenki *ente-* 'to beware', *ēntukukēn* 'attentively, slowly'; Manchu *entexeme* 'always, eternally'. Proto-Mongolian *(h)an- '(vb.) to pay attention, to beware; (adj.) vigorous, attentive' > Written Mongolian *aŋqar-* 'to give attention to, to look attentively; to be attentive, to pay attention, to observe, to regard', *aŋqarul* 'attention, regard, interest', *anuγu-* 'vigorous, attentive', *ana-* 'to beware, to be cautious, to take precautions'; Khalkha *aŋxa-* 'to pay attention', *anūr* 'attentive, cautious, circumspect', *anūχan* 'hale and hearty (of old people)', *ana-* 'to beware'; Buriat *aŋxar-* 'to pay attention', *anda-*, *anžar-* 'to notice', *andadag* 'very sensitive'; Kalmyk *aŋxər-* 'to pay attention'; Ordos *anug-* 'to aim at'. Proto-Turkic *anu- '(vb.) to get ready; (adj.) ready, certain' > Old Turkic (Old Uighur) *anu-* 'to get ready', *anuq* 'ready, certain'; Karakhanide Turkic *anu-* 'to get ready', *anuq* 'ready, certain'; Tatar *aniq* 'ready, certain'; Bashkir *aniq* 'ready, certain'; Turkish (dial.) *anik-* 'to get ready'; Turkmenian *aniq* 'ready, certain'; Uzbek *eniq* 'ready, certain'; Uighur *eniq* 'ready, certain'; Karaim *aniq* 'ready, certain'; Kirghiz *aniq* 'ready, certain'; Kazakh *aniq* 'ready, certain'. Starostin—Dybo—Mudrak 2003:508 *enu (~ -o) '(vb.) to beware; (n.) attention'.
- D. (?) Proto-Chukchi-Kamchatkan *enareð- 'to look for': Chukchi *enarer-* 'to look for, to search, to conduct a search'; Kerek *inajtat-* 'to look for'; Koryak *enajej-* 'to look for'; Alyutor *inarit-* (Palana *enaret-*) 'to look for (tr.)'; Kamchadal / Itelmen *enxtzo-s*, *inxztzu-* 'to look for'. Fortescue 2005:79. Semantic development as in Czech *hledati* 'to search, to look for' from the same stem found in Old Church Slavic *ględati* 'to look at', Serbo-Croatian *ględati* 'to look at', Russian *gljadět'* [глядеть] 'to look (at), to fasten one's eyes upon, to gaze (at)', etc.
- E. (?) Proto-Gilyak / Nivkh *n(ə)tə- 'to see': Amur *ində-dʷ* / *idə-dʷ* / *-nřə-dʷ* 'to see, to find' (the *i-* is an undergoer prefix); East Sakhalin *idə-d* 'to see'; South Sakhalin *intə-nt* / *-nřə-* 'to see'. Fortescue 2016:112.

Buck 1949:11.31 seek; 12.84 sign (sb.); 15.51 see; 15.52 look (vb.), look at; 15.53 sight (sb.); 15.54 sight (obj.), look (obj.), appearance; 15.55 show (vb.);

22.47 omen. Hakola 2000:27, no. 58, **ennz* ‘sign, omen’ — Hakola compares the Uralic forms cited above with Tamil *eṇṇu* (*eṇṇi-*) ‘to think, to consider, to determine, to esteem, to conjecture, to count, to reckon, to compute, to set a price upon’, etc. However, the original meaning of the Uralic forms was more likely to have been something like ‘to beware of, to notice, to see’ (cf. Buck 1949:12.84 sign [sb.] and 22.47 omen), which would place them here instead of with Proto-Nostratic root **ʕeṇ-* ‘to think, to consider’.

775. Proto-Nostratic root **ʕeṇ-*:

(vb.) **ʕeṇ-* ‘to think, to consider’;

(n.) **ʕeṇ-a* ‘thought, idea, notion, concept, intention, deliberation’

- A. Afrasian: Proto-Semitic **ʕan-ay-* ‘to mean, to intend’ > Arabic *ʕanā* ‘to mean, to signify; to concern, to refer to’, *maʕnan* ‘sense, meaning, signification, import; concept, notion, idea, thought’, *ʕināya* ‘concern; care, solicitude, providence; care(fulness), painstaking, meticulousness; heed, notice, regard, attention; interest’; Ḥarsūsi *méʕna* ‘meaning’; Mehri *hānō* ‘to decide, to intend’, *mānē* ‘example; intention, intent, meaning’; Šheri / Jibbāli *aʕnī* ‘to mean’, *maʕné* ‘intention, meaning; example’. Murtonen (1989:322—323) also compares the following: Hebrew *ʕānāh* [אָנָה] ‘to answer, to respond’; Aramaic *ʕanā* ‘to answer, to respond’; Ugaritic *ʕny* ‘to respond, to reply’, *mʕn* ‘response, reply’ (cf. Gordon 1965:458, no. 1883); Palmyrene *ʕnh* ‘to answer, to respond’. Klein (1987:476), however, does not compare the Arabic and South Arabian forms with Hebrew *ʕānāh* [אָנָה].
- B. Dravidian: Tamil *eṇṇu* (*eṇṇi-*) ‘to think, to consider, to determine, to esteem, to conjecture, to count, to reckon, to compute, to set a price upon’, *eṇ* ‘thought, intention, deliberation, esteem, calculation, mathematics, number’, *eṇṇam* ‘thought, idea, respect, deliberation, anxiety, mathematics’, *eṇṇar*, *eṇṇalar* ‘mathematicians’, *eṇṇal* ‘intention, counting, deliberation’, *eṇṇikkai* ‘numbering, esteem, reverence’, *ēṇi* ‘number’; Malayalam *eṇ* ‘number, thought’, *eṇṇam* ‘number, counting’, *eṇṇuka* ‘to count, to number, to esteem, to relate’, *eṇṇikka* ‘(vb.) to get counted, to account for; (n.) counting’; Toda *ōṇ-* (*ōṇy-*) ‘to count’, *ōṇm* ‘counting, numbers’; Kannaḍa *eṇike*, *eṇṇike* ‘counting, number, thinking, observation’, *eṇisu*, *eṇasu*, *eṇusu*, *eṇṇisu* ‘to add together, to enumerate, to count, to estimate, to appreciate, to consider, to think, to plan, to compare’, *eṇṇu* ‘to count, to think’; Koḍagu *ēṇṇ-* (*ēṇṇi-*) ‘to say, to tell’; Tuḷu *eṇṇuni* ‘to count, to think, to presume, to expect’, *eṇṇige*, *eṇike*, *eṇe*, *eṇke* ‘calculation, estimation’; Telugu *ennu* ‘to count, to reckon, to think, to believe, to esteem, to care for, to criticize’, *ennika* ‘counting, number, esteem, regard, opinion, hope’, *encu* ‘to count, to reckon, to enumerate, to think, to consider, to believe, to judge, to esteem’. Burrow—Emeneau 1984:78, no. 793; Krishnamurti 2003:13 **eṇ-* ‘to count’.

- C. Proto-Altaic **ēŋV-* ‘to think, to understand’: Proto-Tungus *(*χ*)*ēŋē-* ‘to peer at, to investigate’ > Lamut / Even *ēŋēli-*, *ēŋēt-* ‘to peer at, to investigate’. Proto-Mongolian **ayuda-la-* ‘to look into, to investigate’ > Written Mongolian *ayudala-* (*kereg ayudalaχu*) ‘to look into, investigate, or reveal a matter or affair’; Khalkha *ūdla-* (кэрэг уудлах) ‘to investigate or expose a matter’; Buriat *ūdal-* ‘to look into, to investigate’; Kalmyk *ūdl-* ‘to look into, to investigate’; Ordos *ūdala-* ‘to look into, to investigate’; Moghol *audɔl-* ‘to look into, to investigate’, (Zirni Manuscript) *oudal* ‘investigation’. Proto-Turkic **āŋ* ‘intelligence’, **āŋ-la-* ‘to hear, to understand, to discern’ > Old Turkic (Old Uighur) *aŋla-* ‘to understand’; Karakhanide Turkic *aŋla-* ‘to understand’; Turkish *anla-* ‘to understand’; Azerbaijani *anla-* ‘to understand’; Uighur *aŋla-* ‘to hear’; Tatar *aŋ-γar-* ‘to understand’; Turkmenian *āŋla-* ‘to understand’, *āŋ* ‘intelligence’; Kirghiz *aŋ* ‘intelligence’; Chuvash *ӗӵӵ* ‘intelligence’; Yakut *aŋlā-* ‘to discern’. Starostin—Dybo—Mudrak 2003:511 **ēŋV* ‘to think, to understand’.

Buck 1949:11.66 account, reckoning; 17.13 think (= reflect); 17.14 think (= be of the opinion); 17.16 understand.

776. Proto-Nostratic root **ʕey-*:

- (vb.) **ʕey-* ‘to know, to recognize’;
(n.) **ʕey-a* ‘sight, recognition’; (adj.) ‘known, seen, recognized’

- A. Proto-Afrasian **ʕeyn-* ‘eye’: Proto-Semitic **ʕayn-* ‘eye’ > Akkadian *īnu* (*ēnu*) ‘eye’; Hebrew *ʕayin* [ʔʕ] ‘eye’ (Post-Biblical Hebrew *ʕēnāʔ* [Nʔʕ]) [from Aramaic]; Aramaic *ʕenā* ‘eye’; Syriac *ʕaynā* ‘eye’; Mandaic *aina* ‘eye’; Phoenician *ʕyn*, *ʕn* ‘eye’; Nabatean *ʕyn* ‘eye’; Palmyrene *ʕyn* ‘eye’; Mandaic *aina* ‘eye’; Ugaritic *ʕn* ‘eye’; Arabic *ʕayn* ‘eye’; Sabaean *ʕyn* ‘eye’; Harsūsi *ʔāyn* ‘eye’; Mehri *ʔāyn* ‘eye’; Šheri / Jibbālī *ʕihn* ‘eye’; Geez / Ethiopic *ʕayn* [ዕዩን] ‘eye’; Tigrinya *ʕayni* ‘eye’; Tigre *ʕin* ‘eye’; Amharic *ayn* ‘eye’; Argobba *ayn* ‘eye’; Gurage (Gyeto) *ayn*, (Chaha, Eža, Muher, Masqan, Gogot) *en*, (Endegeñ) *ēn*, (Soddo, Wolane) *in*, (Selti, Zayse) *īn*, (Ennemor) *ēr* ‘eye’; Gafat *inā* ‘eye’; Harari *īn* ‘eye’. Murtonen 1989:317—318; Klein 1987:470; Zammit 2002:301; Leslau 1963:27, 1979:117, and 1987:79—80; Militarëv 2010:66, no. 25, Proto-Semitic **ʕayn-* — the Southern Cushitic forms cited by Militarëv are included under Proto-Nostratic **ʕen-* ‘to see, to notice, to pay attention’ instead; Bergsträsser 1983:212—213. Egyptian *ʕn*, *ʕyn-* hieroglyphic determinative sign for ‘eye’. Faulkner 1962:43 (under *ʕn* ‘beautiful’); Hannig 1995:142—143 and 1033 (D8); Erman—Grapow 1921:25 and 1926—1963.1:189. [Orël—Stolbova 1995:243, no. 1084, **ʕayVn-* ‘eye’.]

Comment: Militarëv—Kogan (2000.I:28—29, no. 28) reconstruct Proto-Semitic (n.) **ʕayn-* ‘eye’. They do not list any non-Semitic cognates.

- B. Dravidian: Tamil *ey* ‘to know, to understand’, *eyyāmai* ‘ignorance’; Toda *īy-* (*īs-*) ‘to know how to’; Gadba *etap-* (*etat-*) ‘to think’; Konḍa *nes-* ‘to know, to be capable of’. Burrow—Emeneau 1984:79, no. 806.
- C. (?) Indo-European: Tocharian A/B *aik-* ‘to know, to recognize’; B *aiśamo* ‘wise’, *aiśamñe* ‘wisdom’, *aiśi* ‘knowing’, *aiśaumye* ‘(n.) wise person, sage; (adj.) wise’. The traditional comparison of the above Tocharian forms with Gothic *aigan* ‘to have’, etc. (cf. Adams 1999:101—102; Van Windekens 1976—1982.I:139—140) should accordingly be abandoned. Also to be abandoned is Mann’s (1984—1987:6) suggestion that Tocharian *aik-* may be from a putative Proto-Indo-European **aiǵiō* ‘to show, to tell, to declare’ and related to Gothic *af-aikan* ‘to deny’, Latin *aiō* ‘to affirm, to say, to assert, to state’, etc. Thus, it appears that Tocharian *aik-* is isolated within Indo-European.
- D. Yukaghir (Southern / Kolyma) *ejmə-* ‘to stare (intr.)’, *ejməri-* ‘to stare at (tr.)’. Nikolaeva 2006:154.

Buck 1949:4.21 eye; 15.51 see; 17.16 understand; 17.17 know.

777. Proto-Nostratic (n.) **ŷig-a* ‘young of an animal, calf’:

- A. Proto-Afrasian **ŷig(a)l-* ‘young of an animal, calf’: Proto-Semitic **ŷigl-* ‘young of an animal, calf’ > Hebrew *ʿēṣel* [עֶסֶל] ‘calf’; Aramaic *ʿeglā* ‘calf’; Phoenician *ʿgl* ‘calf’; Arabic *ʿiǧl* ‘calf’; Ugaritic *ʿgl* ‘calf’; Sabaeen *ʿgl* ‘calf’; Geez / Ethiopic *ʿəḡwl* [አግላ], *ʿəḡwal* [ዕግላ], *ʿəḡwl* [ዕግላ] ‘the young of any animal or fowl’; Tigre *ʿəḡal* ‘calf’; Tigrinya *gəlgäl* ‘young mule or horse’; Amharic (reduplicated) *gəlgäl* ‘lamb’; Harari *gīgi* ‘young of animals’; Gurage *gəlgəl* ‘the young of an animal’. According to Leslau (1979:273), “[t]he root *glgl* is a reduplicated *gl-gl* going back to *ʿḡwl*, *ʿgl*.” Murtonen 1989:309—310; Leslau 1963:70, 1979:273, and 1987:11; Klein 1987:463; Diakonoff 1992:82, fn 123, **ŷəḡw-* (Diakonoff rejects the comparison of the above forms with Akkadian *agālu* ‘donkey’); Zammit 2002:282. Egyptian *ʿg-*, *ʿgn-* (placed before several words dealing with cattle); Coptic *ačol* [ⲁϭⲟⲗ] ‘calf’. Erman—Grapow 1926—1963.1:236; Černý 1976:19 (questioned); Vycichl 1983:23 (Coptic *ačol* [ⲁϭⲟⲗ] < **ŷaggāl* < **ŷaggāl*). M. Cohen 1947:86, no. 43. Orël—Stolbova 1995:247, no. 1100, **ŷigal-* ‘cow, calf’; Militarëv 2009:101; Militarëv—Kogan 2005. II:43—46, no. 28, Proto-Afrasian **ŷi-gal-* ‘cow, calf’.
- B. Proto-Indo-European **ŷhig^h-* [**ŷheg^h-*] ‘with young (of animals)’: Sanskrit (f.) *ahī* ‘cow’; Avestan *azī* ‘with young (of cows or mares)’; Armenian *ezn* ‘bull’; (?) Middle Irish *ag* ‘ox, cow’, *ál* (< **aglo-*) ‘litter, brood’. Pokorny 1959:7 **aǵh-* ‘pregnant animal’; Walde 1927—1932.I:38; Mann 1984—1987:233 **eǵhis* ‘ox, cow’; Mayrhofer 1956—1980.I:68; Vendryès 1959— :A-22 **aǵh-* and A-58; Mallory—Adams 1997:135 **h₁eǵh-* ‘cow’ (Mallory—Adams note: “This word is usually reconstructed as **h_aeǵh-* but

such a reconstruction makes it impossible to include Arm *ezn* ‘cow’. The Indo-Iranian forms are ambiguous as to whether the initial vowel was **h₁e-* or **h_ae-*; only the Celtic seems to require **h_ae-*. However, there is some precedent for an initial **e-* appearing as *a-* in Celtic, cf. OIr *aig* ‘ice’ from **iēgi-*. As the word is attested at the margins of the IE world this strongly suggests PIE status.”).

Buck 1949:3.23 cow; 3.24 calf. Bomhard—Kerns 1994:518, no. 365; Dolgopolsky 2008, no. 119, **[ʃ]ogUIV* (or **H₂oqUIV*) ‘offspring, child, young’.

778. Proto-Nostratic root **ɣim-* (~ **ɣem-*):

(vb.) **ɣim-* ‘to suck, to swallow’;

(n.) **ɣim-a* ‘the act of sucking, swallowing; breast, nipple, teat’

- A. Proto-Afrasian **ɣim-* ‘to suck, to swallow’: Egyptian *ʿm* ‘to swallow; to absorb’, (causative) *sʿm* ‘to swallow down, to wash down (food)’. Hannig 1995:138; Faulkner 1962:42; Erman—Grapow 1921:25 and 1926—1963.1:183—184; Gardiner 1957:557. West Chadic: Karekare *ʔimpà* ‘to suck’; Bole *ʔyump-* ‘to suck’, *ʔyùmpá* (n.) ‘the act of sucking’. Jungraithmayr—Ibrizimow 1994.II:310. West Chadic: Pa’a *ʔmma* ‘to eat (soft food)’. East Chadic: Somray *ʔám* ‘to eat (soft food)’; (?) Migama *ʔáy mó* ‘to eat (hard food)’; (?) Sokoro *áymē* ‘to eat (hard food)’. Jungraithmayr—Ibrizimow 1994.II:119 and II:120—121. North Omotic: Bench / Gimira *mʔ* ‘(vb.) to eat; (n.) food, meal’; Yemsa / Janjero *me* ‘to eat’, *mu*, *muwu* ‘to eat’.
- B. Proto-Uralic **imi-* ‘to suck’: Finnish *ime-* ‘to suck, to suckle’; Estonian *ime-* ‘to suck’; Zyrian / Komi *nim-* ‘to suck’; Ostyak / Xanty *em-* ‘to suck’; Old Hungarian *em-* ‘to suck’, *emlő* ‘breast, nipple, teat’ (Hungarian *emésztő* ‘digesting, digestive; consuming, wasting’, *emésztés* ‘digestion, digesting’); Yurak Samoyed / Nenets (derivative) (Obdorsk) *nimíe-* ‘to suck’; Tavgi Samoyed / Nganasan (derivative) *nimiri-* ‘to suck’; Selkup Samoyed *níma-* ‘to suck’, *nemarna-*, *newara-* ‘to give the breast’; Kamassian (derivative) *nimeer-* ‘to suckle, to suck’; Taigi *nímu* ‘to suck’. Collinder 1955:15—16 and 1977:37; Décsy 1990:98 **imä* ‘to suck’; Rédei 1986—1988:82—83 **ime-* ‘to suck’; Sammallahti 1988:536 *imi-* ‘to suck’; Janhunen 1977b:110—111 **nim-*; Aikio 2020:59—60 **imi-* ‘to suck’; Zhivlov 2023:169 Proto-Uralic **imi-* ‘to suck’. Yukaghir (Southern / Kolyma) *ib-* ‘to suck’. Nikolaeva 2006:178—179.
- C. Proto-Altaic **emV* (~ **ami*) ‘to suck’: Proto-Mongolian **em-kü-* ‘to chew, to put into the mouth’ > Written Mongolian *emkü-* ‘to chew, to put into or hold in the mouth’, *emkü* (n.) ‘bite, morsel, mouthful’; Khalkha *ömχö-* ‘to chew, to put into the mouth’; Buriat *ümχe-* ‘to chew’; Ordos *uṅku* ‘mouthful’; Dagur *unku-*, *umku-*, *enku-* ‘to chew’; Monguor *uṅkwā*

‘mouthful’, *χangu-* ‘to put into the mouth’. Poppe 1955:48. Proto-Turkic **em-* ‘to suck’ > Old Turkic (Old Uighur) *emig* ‘breast’; Karakhanide Turkic *em-* ‘to suck’, *emig* ‘beast’; Turkish *em-* ‘to suck’, *emme* ‘the act of sucking’, *emzik* ‘nipple, teat’; Azerbaijani *ämžäk* ‘nipple’; Turkmenian *em-* ‘to suck’, *emžek* ‘breast’; Uzbek *emčak* ‘breast’; Uighur *äm-* ‘to suck’, *ämčäk* ‘breast’; Tatar *im-* ‘to suck’, *imček* ‘breast’; Bashkir *imsäk* ‘breast’; Kirghiz *emček* ‘breast’; Noghay *emšek* ‘breast’; Sary-Uighur *emiy* ‘breast’; Tuva *em-* ‘to suck’, *emig* ‘breast’; Chuvash *əwm-* ‘to suck’; Yakut *em-* ‘to suck’, *emij* ‘breast’; Dolgan *emij* ‘breast’. Starostin—Dybo—Mudrak 2003:505—506 **emV* (~ **ami*) ‘to suck’.

Buck 1949:4.41 breast (of woman); 4.58 bite (vb.); 5.11 eat; 5.13 drink (vb.); 5.16 suck (vb.). Dolgopolsky 2008, no. 134, **ġim[ē]* ‘to suck, to swallow’; Illič-Svityč 1971—1984.I:248, no. 109, **H/E/mi* ‘to suck, to swallow’; Greenberg 2002:159—160, no. 371; Hakola 2000:39, no. 125.

779. Proto-Nostratic root **ʕorʷ-*:

(vb.) **ʕorʷ-* ‘to turn or twist round’;

(n.) **ʕorʷ-a* ‘turning, twisting; binding, tying; sewing, weaving’

- A. Proto-Afrasian **ʕor-* ‘to turn or twist round’: Egyptian *ʕrq* ‘to bind; to put on (clothes), to get dressed’, *ʕrf* (vb.) ‘to envelop, to tie up; (n.) bag, bundle’; Coptic (Bohairic) *ōrf* [ⲱⲣⲑ] ‘to enclose, to restrict, to surround’. Hannig 1995:151; Faulkner 1962:45; Gardiner 1957:558; Erman—Grapow 1921:27, 28 and 1926—1963.1:210—211, 1:211; Vycichl 1983:250; Černý 1976:229. Proto-Southern Cushitic **ʕor-* ‘to bind, to tie’ > Alagwa *ʕor-* ‘to tangle’; Iraqw *ʕoru* ‘cow seized by force’; Asa *ʕeras-* ‘to shut’; Ma’a -*ʕóro* ‘to tie, to tether’; Dahalo *ʕur-* ‘to sew’. Ehret 1980:279.
- B. Dravidian: Tamil *orukku* (*orukki-*) ‘to draw out (as gold thread)’; Kota *or̥k-* (*or̥ky-*) ‘to embroider’; Toda *wīrk-* (*wīrky-*) ‘to embroider’; Tuḷu *nūloḍu* ‘a spindle’; Telugu *oḍuku*, *vaḍuku* ‘to spin’; Naiki (of Chanda) *oc-/os-* ‘to sew’; Gondi *vaḍūyānā* ‘to twist a rope’, *vaḍḍānā*, *vaḍitānā* ‘to spin’, *waditānā* ‘to twist or twirl fiber into a thread’; Kota *var̥k-* ‘to spin’; Pengo *roc-* ‘to sew; to plait, to weave’; Maṇḍa *ruc-* ‘to plait’; Kui *osa* (*osi-*) (vb.) ‘to sew, to weave; (n.) sewing, weaving’; Kuwi *ohʔnai* ‘to mesh’, *huc-* ‘to weave’; Kuṛux *ōjnā* ‘to spin, to twist’, *ōjjnā* ‘to sew, to stitch together’; Malto *ōje* ‘to twist’, *ōjgre* ‘to be twisted’. Burrow—Emeneau 1984:97, no. 1012; Krishnamurti 2003:8 **oṛ-ukk-* ‘to spin’.

Buck 1949:6.31 spin; 6.32 spindle; 6.33 weave; 6.35 sew; 9.75 plait (vb.); 10.12 turn (vb.); 10.13 turn around (vb.); 10.14 wind, wrap (vb.); 10.15 roll (vb.).

780. Proto-Nostratic (n.) *ʕub-a ‘bosom, breast’:

- A. Proto-Afrasian *ʕub- ~ *ʕib- ‘breast’: Semitic: Arabic ʕubb, ʕibb ‘breast pocket’. Berber: Tashelhiyt / Shilha *tibbit* ‘woman’s breast’; Tamazight *bubbu* ‘breast’; Kabyle *bubbu* ‘breast’. Central Chadic: Lamang *úba* ‘breast’; Mandara *úúba* ‘breast’; Glavda *úúbà* ‘breast’; Guduf *úba* ‘breast’; Dghwede *úba* ‘breast’. Jungraithmayr—Ibriszimow 1994.II:46—47. Lowland East Cushitic: Somali ʕib- ‘nipple’. Orël—Stolbova 1995:245, no. 1094, *ʕib-/ʕub- ‘breast, bosom’.
- B. Proto-Kartvelian *ube-/a- ‘breast, bosom’: Georgian *ube-* ‘bosom’; Mingrelian *uba-*, *luba-*, *laba-* ‘bosom, breasts (of woman)’; Laz *uba-*, *oba-* ‘bosom’. Fähnrich—Sardshweladse 1995:344 *ube-; Fähnrich 1994:253 and 2007:418 *ube-; Klimov 1964:185 *ube-/a- and 1998:195 *ube//a- ‘breast, lap’.

Sumerian *ubur* ‘woman’s breast’.

Buck 1949:4.40 breast (front of chest); 4.41 breast (of woman). Illič-Svityč 1971—1984.I:275, no. 138, *ʕ/e/bU- ‘breast’; Bomhard—Kerns 1994:525, no. 375; Dolgopolsky 2008, no. 107, *ʕ[æ]bU ‘female breast, bosom’.

781. Proto-Nostratic root (Eurasian only) *ʕuk^{wh}- (~ *ʕok^{wh}-):

(vb.) *ʕuk^{wh}- ‘to perceive, to notice, to observe’ (> ‘to see’);

(n.) *ʕuk^{wh}-a ‘perception, observation; seeing, sight’ (> ‘eye’)

- A. Proto-Indo-European *ʕhok^{wh}- ‘(vb.) to see; (n.) eye’: Sanskrit *ákṣi* ‘eye’; Armenian *akn* ‘eye’; Greek (nom. du.) ὄσσε ‘eyes’, ὄσσομαι ‘to see’; Latin *oculus* ‘eye’; Gothic *augō* ‘eye’; Old Icelandic *auga* ‘eye’; Norwegian *auge* ‘eye’, *augne* ‘to catch sight of’; Swedish *öga* ‘eye’; Danish *øie* ‘eye’; Old English *ēage* ‘eye’; Old Frisian *āge* ‘eye’; Old Saxon *ōge* ‘eye’; Dutch *oog* ‘eye’; Old High German *ouga* ‘eye’ (New High German *Auge*); Lithuanian *akis* ‘eye’; Latvian *acs* ‘eye’; Old Prussian *ackis* ‘eyes’; Old Church Slavonic *oko* ‘eye’; Russian *oko* [oko] ‘eye’; Tocharian A *ak*, B *ek* ‘eye’. Pokorny 1959:775—777 *ok^u- ‘to see’; *ok^u-, *ok^ui-, *ok^u(e)n- (in oblique cases), *ok^u(e)s-, *ok^u-p- ‘eye’: Walde 1927—1932.I:169—172 *oq^u- ‘to see’; *oq^u-, *oq^ui-, *oq^u(e)n- (in oblique cases), *oq^u(e)s- ‘eye’; Mann 1984—1987:882 *oqu- ‘eye’, 882—883 *oquĩlos (*oquĩlos) ‘eye’, 883 *oquis (*oqus) ‘eye’. 883 *oquĩō ‘(n.) eye; (vb.) to peer, to watch, to show’, 883 *oquĩios (*oquĩios) ‘eyed’, *oquĩmn- (*oquĩnom) ‘eye, eyehole’, 884 *oquĩos (*oquĩios, *oquĩio(n)); Watkins 1985:45—46 *ok^w- and 2000:60 *ok^w- ‘to see’ (oldest form *ʔ₃ek^w-, colored to *ʔ₃ok^w-; zero-grade *ʔ₃k^w-); Rix 2001:297—298 *h₃ek^u- ‘to fix one’s eyes upon, to have in view, to catch sight of, to set eyes upon, to behold’; Mallory—Adams 1997:188 *h₃ok^w-

‘eye’ and 505 **h₃ek^w-* ‘to see’; Wodtko—Irslinger—Schneider 2008:370—383 **h₃ek^u-*; Benveniste 1935:48 **ok^w-*; Mayrhofer 1956—1980.I:16; Frisk 1970—1973.II:436 **oq^u-ī*; Boisacq 1950:722—723 **oq^u-*; Beekes 2010.II:1118 *h₃ek^w-* ‘to see’; Martirosyan 2009:22—23; Ernout—Meillet 2001:458; Walde—Hofmann 1965—1972.II:200—202 **oq^u-*, **oq^uelos*; De Vaan 2008:425 **h₃e/ok^w-*, **h₃e/ok^w-(e)lo-*; Kroonen 2013:41 Proto-Germanic **augōn-* < **h₃ok^w-*; Orël 2003:29 Proto-Germanic **augōn* < **ok^w-*; Feist 1939:64—65; Lehmann 1986:48 **ok^wi-*; Falk—Torp 1910—1911.II:1417—1419 Proto-Germanic **augōn*; De Vries 1977:19 **ok^u-*; Hellquist 1922:1230—1232 **ok^u-je*; Torp 1919:9—10; Onions 1966:340 Proto-Germanic **augōn* < **oq^w-*; Klein 1971:270 **oq^w-*; Boutkan—Siebinga 2005:11 **h₃ek^w-*; Vercoulie 1898:14—15; Kluge—Mitzka 1967:38 **ok^u-*; Kluge—Seebold 1989:49 **oqu-*; Walshe 1951:12; Derksen 2008:365 **h₃ek^w-o-* and 2015:47 **h₃ek^w-i-*; Fraenkel 1962—1965.I:5; Smoczyński 2007:6—7; Adams 2013:78—79 **h₃e/ok^w-*; Van Windekens 1976—1982.I:141 **oq^u-*.

- B. Proto-Altaic **uk^hu* ‘to understand, to look into’: Proto-Tungus **oksa-* ‘to submerge in thoughts; to change one’s mind; to resent, to be offended’ > Lamut / Even *oysa-* ‘to change one’s mind’; Evenki *okso-* ‘to submerge in thoughts’; Nanay / Gold *oqsa-* ‘to resent, to be offended’. Tsintsius 1975—1977.II:11. Proto-Mongolian **uka-* ‘(vb.) to understand, to think; (n.) mind’ > Written Mongolian *uqa-* ‘to understand, to know, to comprehend, to realize’, *uqayan* ‘intellect, mind, intelligence, reason; consciousness; meaning, substance, essence; way, means’, *uqaburi* ‘understanding, comprehension, consciousness, imagination’; Khalkha *uxa-* ‘to understand, to think’, *uxā* ‘reason’, *uxān* ‘reason, understanding, mind’; Buriat *uxa-* ‘to understand, to think’, *uxā(n)* ‘mind’; Kalmyk *uxə-* ‘to understand, to think’, *uxān* ‘mind’; Ordos *uxā*, *uxān* ‘mind’; Dagur *ogo*, *owo* ‘brain’. Proto-Turkic **uk-* ‘to understand, to hear’ > Old Turkic (Orkhon, Old Uighur) *uq-* ‘to understand’; Karakhanide Turkic *uq-* ‘to understand’; Azerbaijani (dial.) *uyuz* ‘knowing much’; Uzbek *uq-* ‘to understand’; Uighur *uq-* ‘to understand’; Tatar (dial.) *ux-* ‘to hear’; Kirghiz *uq-* ‘to hear’; Kazakh *uyın* ‘to understand’; Oyrot (dial.) *uq-* ‘to hear’; Tuva *uy-* ‘to understand’. Räsänen 1969:511—512. Starostin—Dybo—Mudrak 2003:1490—1491 **úk^u* ‘to understand, to look into’.

Buck 1949:4,21 eye; 15.51 to see; 15.52 to look, to look at; 15.53 sight (subj.); 15.54 sight (obj.), look (obj.), appearance; 17.14 to think’ (= ‘to reflect’); 17.16 to understand. Illič-Svityč 1971—1984.I:255—256, no. 118, **HuKa* ‘eye; to see’; Dolgopolsky 2008:202—205, no. 124, **ġuKa* (or **ġukVʔa* or **ġAwuKa* or **ġAwuKVʔa*) ‘to see; eye’. Note: The alleged Afrasian, Uralic, and Dravidian cognates proposed by Dolgopolsky are not included here due to faulty sound correspondences, though the semantics are acceptable.

782. Proto-Nostratic root *ʕunʷ- (~ *ʕonʷ-):

(vb.) *ʕunʷ- ‘to eat, to drink, to swallow; to feed (on), to suck (milk from a breast)’;

(n.) *ʕunʷ-a ‘food, meal’

- A. Proto-Afrasian *ʕun- ‘to eat, to drink, to swallow; to feed (on), to suck (milk from a breast)’: Semitic: Arabic *ʕaṅṅara* ‘to smack the lips, to put the lips out and curl them’. Lowland East Cushitic: Somali *ʕun-* ‘to eat’; Rendille *hūn-* ‘to drink milk, blood’. Heine 1978:100. Ehret 1995:351, no. 688, *-ʕon- ‘to swallow’.
- B. Dravidian: Tamil *uṇ* ‘to eat or drink, to suck (as a child), to take food, to swallow without biting, to enjoy, to experience’, *uṇṭaru-* ‘to eat and digest, to experience to the fullest extent’, *uṇṭi* ‘food, boiled rice, food of birds and beasts, experience’, *uṇṇi* ‘one who eats’, *uṇṇīr* ‘drinking water’, *uṇa* ‘food’, *uṇavu*, *uṇā* ‘food, boiled rice, foodstuffs’, *ūṇ* ‘eating, food, experience of joys and sorrows by the soul as the inevitable results of *karma*’, *ūṇaṇ* ‘glutton’, *ūṇi* ‘one who eats’; Malayalam *uṇṇuka* ‘to eat (especially rice), to suck’, *uṇṇi* ‘sucking, infant’, *ūṇ* ‘food, boiled rice, meal’; Kota *uṇ-* (*uṇ-*) ‘to drink, to suck’, *uṇkc-* (*uṇkc-*) ‘to make to drink, to make to feast’; Toda *uṇ-* (*uṇ-*) ‘to drink, (child) to take breast; (rain) to rain’, *u-ṇ* ‘food, feast’; Kannaḍa *uṇ* (*uṇ-*), *uṇṇu*, *umbu* ‘to eat what forms a person’s (or in poetry, certain animals’) real meal, or (with regard to children) mother’s milk; to enjoy (as riches), to take (as interest in money)’, *uṇi* ‘person who feeds on’, *uṇike* ‘taking a meal’, *uṇisu* ‘(vb.) to cause to take a meal; (n.) what is fed on, a meal’, *uṇṇi* ‘taking a meal, a meal’, *ummu* ‘boiled rice (a term used when speaking to children)’; Kōḍagu *uṇṇ-* (*umb-*, *uṇ-*) ‘to eat a meal’, *umbaḷa-mane* ‘kitchen’; Tulu *uṇṇipini*, *uṇṇupini* ‘to take one’s meal, to dine, to eat rice (in opposition to a slight repast of fruits, cakes, etc.)’, *uṇasy*, *oṇasy* ‘a meal, dinner, boiled rice and curry’, *uṇkely* ‘the time of evening, the night meal’, *uṇṇpu* ‘boiled rice, solid food’, *umpu*, *nuppu* (= *uṇṇpu*) ‘cooked rice’; Kolami *un-* (*und-*) ‘to drink’, *unip-* (*unipt-*) ‘to make to drink, not giving with one’s own hand’; Naikri *un-* (*uṇ-*) ‘to drink’; Naiki (of Chanda) *un-* (*uṇ-*) ‘to drink, to smoke (cigarettes)’; Gadba (Ollari) *un-* (*uṇ-*) ‘to eat, to drink’, *uṇḍke* ‘food’, *uṇpe* ‘food, boiled rice’; Gondi *uṇḍānā* ‘to drink’, *jawā uṇḍānā* ‘to take food’ (*jawā* ‘porridge, food’); Kōṇḍa *uṇ-* (*uṭ-*) ‘to drink’; Parji *un-* (*uṇ-*) ‘to drink’, *uṇṭip-* ‘to cause to drink’; Pengo *uṇ-* (*uṭ-*) ‘to drink’; Kui *uṇba* (*uṭ-*) ‘(vb.) to drink, to partake of food (with *ēja* ‘a meal’), to smoke tobacco; (n.) the act of drinking, smoking’; Kuwi *ūṇḍali* ‘to drink’; Māṇḍa *un-* (*uc-*) ‘to drink, to smoke’; Kuṛux *ōṇṇā* (*oṇḍas*) ‘to drink, to eat rice’, *ōṇkā* ‘thirst’, *ōṇṭa?ānā* ‘to give a meal, to make drink’; Malto *ōne* (*oṇḍ-*) ‘to drink, to be colored’, *onde* ‘to drink, to color, to dye’. Burrow—Emeneau 1984:58—59, no. 600; Krishnamurti 2003:110 **uṇ-* ‘to drink’.

Buck 1949:5.11 eat; 5.12 food; 5.13 drink (vb.); 5.15 thirst (sb.); 5.16 suck (vb.). Dolgopolsky 2008, no. 719, *[g]ûnV (or *ġûnV) ‘to drink, to eat’.

783. Proto-Nostratic root *ġur- (~ *ġor-):

(vb.) *ġur- ‘to be firm, hard, strong’;

(n.) *ġur-a ‘firmness, hardness, strength’; (adj.) ‘firm, hard, strong’

- A. Proto-Afrasian *ġur- ‘to be firm, hard, strong’: Proto-Semitic *ġar-ad- ‘hard, firm, stiff’ > Arabic ʿard, ʿardal ‘hard, firm, stiff’. Proto-Semitic *ġar-at- ‘to be hard’ > Arabic ʿarata ‘to be hard’. Proto-Semitic *ġar-aġ- ‘to be strong, hard’ > Arabic ʿaraza ‘to be strong and hard’, ʿarzab ‘hard, firm’, ʿarzam ‘firm’. Egyptian ʕ(i) (< *ġr) ‘great; greatness’, ʕr ‘bravery, courage, valor’. Hannig 1995:125 and 129; Faulkner 1962:37 and 38; Gardiner 1957:557; Erman—Grapow 1921:22 and 1926—1963.1:161—164. Proto-Southern Cushitic *ġur- or *ġuur- ‘strength’ > Iraqw ʿuru ‘strength’; Alagwa ʿuru ‘strength’; Ma’a ur ‘strength’. Ehret 1980:279. Ehret 1995:354, no. 697, *ġuur- ‘strength’ and 511 (no. 697); Takács 2011a:143.
- B. Dravidian: Tamil ura ‘to become firm, hard (as the soil); to become thick, coarse (as paper)’, urappu ‘hardness (as of rice that is not well boiled), coarseness or roughness (as of cloth or paper), resoluteness, strength’, uram ‘strength, hardness, compactness, resolution, heart of a tree, manure (as strengthening the soil)’, uraṇ ‘strength of will, support’, uraṇar ‘persons of strong will’, uravu (uravi-) ‘to become vigorous, to get strong’, uravam ‘strength, force’, uravaṇ, uraviyaṇ, uravōṇ ‘strong man’, uravu ‘strength, firmness, strength of mind, increasing’; Malayalam urakka ‘to be strong’, urattan ‘strong man’, uram ‘strength, firmness’; Kota orp- (orpy-) ‘to excel’; Kannaḍa uraṭu, uraṭa, uruṭa, ur(u)ṭu, uṭṭu, oraṭu, orṭu ‘coarseness (of cloth, thread, hair), thickness, stoutness’, orpu ‘strength, firmness, durability, coarseness (of cloth)’, (?) urku, ukku ‘power, valor’; (?) Telugu ukku ‘strength, vigor, courage, spirit’. Burrow—Emeneau 1984:62, no. 649. Tamil urai ‘to become firm, steadfast, decided (as the mind)’, uraiṇṇu ‘firmness, steadfastness’, uruti ‘firmness, strength, capacity, assurance’; Malayalam urayuka ‘to be firm in’, urekka ‘to be firm, fixed, settled’, urakkē ‘strongly, firmly, aloud’, urappu ‘firmness, stay, support, assurance’, urappikka ‘to seize, to hold firmly, to make fast; to resolve, to assure, to convince’, uruka ‘to be firm’, uruti ‘firmness’; Kota urv- (urd-) ‘to sink into ground or hole of its own weight’, urv- (urt-) ‘to press forcibly into hole or ground’; Telugu orapu ‘steadiness, firmness, strength’, uriya ‘a brave man’; Kuṛux ordnā ‘to support’. Burrow—Emeneau 1984:71, no. 721.
- C. Uralic: Proto-Finno-Ugric *ur3 ‘man, male’ > Finnish uros ‘male (of animals), adult man, brave man, hero’; (?) Lapp / Saami váres, (Lule) ores ‘male animal, a male’, várek, (Lule) orek ‘two-year old male reindeer’; (?)

Hungarian *úr* ~ *ura-* ‘lord, husband’. Collinder 1955:121 and 1977:134; Rédei 1986—1988:545—546 **ur*₃; Sammallahti 1988:542 **ur*_ā ‘male’. Semantic development as in Telugu *ur̥i*_{ya} ‘a brave man’ cited above or Latin *vir* ‘man, male; husband’, Sanskrit *vīrā*-*h* ‘man, hero’, Gothic *wair* ‘man’, Lithuanian *výras* ‘man, husband’, etc. (< **wī*^h-*ro-* ‘man, male; husband; hero’, from the same root found in Latin *vīs* ‘force, power, strength’).

Buck 1949:2.21 man (vs. woman); 2.23 male (of human beings); 3.12 male (of animals); 4.81 strong; mighty; powerful; 15.74 hard; 15.76 rough; 16.52 brave. Hakola 2000:202, no. 902.

784. Proto-Nostratic root **ʕut*- (~ **ʕot*-):

(vb.) **ʕut*- ‘to smell’;

(n.) **ʕut*-*a* ‘smell, odor, fragrance’

- A. Afroasiatic: Proto-Semitic **ʕat*-*ar*- ‘to have a good smell, to be fragrant’ > Arabic *ʕatira* ‘to perfume, to scent’, *ʕatir* ‘sweet-smelling, fragrant’; Syriac *ʕetrā* ‘incense’; Šheri / Jibbālī *ʕátór* ‘to have a good smell’, *ʕétir* ‘perfume’; Mehri *ʕātáwr* ‘to have a nice smell, to be perfumed’, *ʕātər* ‘perfume, perfume bottle’; Harsūsi *ʕáter* ‘perfume, perfume bottle’. Proto-Semitic **ʕat*-*an*- ‘to smell bad, to stink’ > Arabic *ʕatina* ‘to rot, to decay, to putrefy’, *ʕatīn* ‘putrid, rotten, stinking’; Geez / Ethiopic *ʕatana* [፬፻፲], *ʕatana* [፬፻፲] ‘to burn incense’, *ʕātān* [፬፻፲] ‘incense’; Tigrinya *ʕātānā* ‘to fumigate, to perfume, to render fragrant with incense’; Tigre *ʕatna* ‘to fumigate’, *ʕatan* ‘incense’; Amharic *aṭtānā* ‘to perfume with incense, to fumigate, to smoke’; Harari *aṭāna* ‘to fumigate’, *aṭān* ‘incense’; Gurage (Chaha) *aṭānā* ‘to perfume’, *aṭan* ‘incense’. Leslau 1963:37, 1979:109, and 1987:76.
- B. Proto-Indo-European **ʕhot*- ‘to smell’: Armenian *hot* ‘smell, odor’, *hotim* ‘to smell’; Greek (Ionic) ὀδμή, (Attic) ὀσμή, (Doric) ὀδμᾶ (< *ὀδ-σ-μᾶ) ‘smell, scent, odor’, ὀζω ‘to smell’; Latin *odor* ‘smell, odor’; Lithuanian *uodžiu*, *uosti* ‘to smell’; Latvian *uōžu*, *uōst* ‘to smell’. Rix 1998a:263 **h*₃*ed*- ‘to give off an odor’; Pokorny 1959:772—773 **od*- ‘to smell’; Walde 1927—1932.I:174 **od*-; Mann 1984—1987:862 **ōd*- ‘to smell’, 862—863 **odmā* (**odimā*, **ōdsmā*) ‘smell’; Watkins 1985:45 **od*- and 2000:59 **od*- ‘to smell’; Mallory—Adams 1997:528 **h*₃*ed*- ‘to smell’ (‘to give off a smell’); Frisk 1970—1973.II:353—355 Greek ὀζω < **ōd*-*iō*; Boisacq 1950:684—685 **ods*-; Hofmann 1966:224—225 Greek ὀζω < **ōd*₁ω; **ods*-; Beekes 2010.II:1050—1051 **h*₃*ed*-; Chantraine 1968—1980.II:777 **od*- (**ḡed*-); Ernout—Meillet 1979:459; Walde—Hofmann 1965—1972.II:203 **od*-; De Vaan 2008:425—426; Winter 1965a:102; Smoczyński 2007.1:705 **Ho*-*Hd*- < **h*₃*e*-*h*₃*d*- < **h*₃*ed*-; Fraenkel 1962—1965.II:1167—1168; Derksen 2015:482 **h*₃*ed*-.

Buck 1949:15.21—15.24 smell. Bomhard—Kerns 1994:522, no. 371.

785. Proto-Nostratic (n.) **ɬuw-a* (~ **ɬow-a*) ‘herd of small animals, sheep and goats’:

- A. Afrasian: Egyptian (collective) ‘wt ‘sheep and goats, animals, flocks, herds (of small cattle)’. Erman—Grapow 1921:23 and 1926—1963.1:170—171; Faulkner 1962:39; Gardiner 1957:557; Hannig 1995:132 and 2006:488—489.
- B. Proto-Indo-European **ǵhowi-s* ‘sheep’: Sanskrit *ávi-h* ‘sheep’; Greek *óĩs*, *oĩs* ‘sheep’; Latin *ovis* ‘sheep’; Armenian *hov-iw* ‘shepherd’; Old Irish *oĩ* ‘sheep’; Gothic *awēþi* ‘herd of sheep’; Old English *ēow*, *ēaw*, *ēw* ‘sheep’, *ēowu*, *ēowe* ‘ewe’, *ēowd*, *ēowde* ‘herd of sheep’; Old Frisian *ei* ‘ewe’; Old Saxon *ewwi* ‘ewe’; Dutch *ooi* ‘ewe’; Old High German *ouwi*, *ou* ‘ewe’, *ewit*, *owiti* ‘herd of sheep’; Lithuanian *avis* ‘sheep’; Latvian *avs* ‘sheep’; Old Church Slavic *ovbca* (< **owi-kā*) ‘sheep’; Hittite (nom. sg. or pl. ?) *ḫa-a-u-e-eš* ‘sheep’; Hieroglyphic Luwian *hawis* ‘sheep’; Luwian (nom. sg.) *ḫa-a-ú-i-iš* ‘sheep’; Lycian *χava-* ‘sheep’; Tocharian B *eye* ‘sheep’, *ā(u)w* ‘ewe’, *aiyye* ‘ovine, pertaining to sheep’. Pokorny 1959:784 **óui-s* ‘sheep’; Walde 1927—1932.I:167 **oui-s*; Mann 1984—1987:897 **ouis* ‘sheep’; Watkins 1985:45 **owi-* and 2000:61 **owi-* ‘sheep’ (oldest form **₂owi-*); Gamkrelidze—Ivanov 1984.II:577—578 **Howi-* and 1995.I:493 **Howi-* ‘sheep’; Mallory—Adams 1997:510 **h₂ouis* ‘sheep’; Mayrhofer 1956—1980.I:59; Orël 2003:31 Proto-Germanic **awidjan*, 31 **awistran*, 31 **awiz*; Kroonen 2013:45 Proto-Germanic **awi-* ‘ewe’, **awidja-* ‘flock of sheep’, **awist(r)a-* ‘sheepfold’; Feist 1939:70 **ouis*; Lehmann 1986:52 **owis*; Onions 1966:332; Klein 1971:263; Puhvel 1984— .3:279—280 **A₂éwi-* or **H₁ówi-*; Kloekhorst 2008b:337—338; Boisacq 1950:692—693 **oui-s*; Chantraine 1968—1980.II:786; Frisk 1970—1973.II:367—368 **óui-s*; Hofmann 1966:228 **ouis*; Beekes 2010.II:1060—1061 **h₃eui-*; Walde—Hofmann 1965—1972.II:229 **ouis*; Ernout—Meillet 1979:471—472; De Vaan 2008:437—438; Adams 1999:35 **h₂ówis*, 92, and 104; Winter 1965a:102; Smoczyński 2007.1:38—39 **h₂óui-s*; Fraenkel 1962—1965.I:28; Derksen 2008:384 **h₃eu-i-* and 2015:74 **h₃eu-i-*; Wodtko—Irslinger—Schneider 2008:335—339 **h₂óu-i-*, **h₂éu-i-*.
- C. Proto-Uralic (?) **owči* / **uwči* ‘sheep’ (< **uwi-či* [*-*či* is a hypocoristic suffix]) > Finnish *uuhi*, *uutu* ‘sheep, ewe’; Estonian *uhe* ‘sheep’; Mordvin (Moksha) *uča* ‘sheep’; Cheremis / Mari *užga* (-*ga* is a suffix) ‘fur coat of sheepskin’; Votyak / Udmurt *yž* ‘sheep’; Zyrian / Komi *yž* ‘sheep’; Vogul / Mansi *oš*, *os* ‘sheep’; Ostyak / Xanty *ač* ‘sheep’. Collinder 1955:121 and 1977:134; Rédei 1986—1988:541 **uče*; Aikio 2020:80—81 (?) **owčV* / **uwčV* ‘sheep’; Sammallahti 1988:552 **uuči* ‘sheep’. Notes: (1) The vowel *-*i-* in the suffix *-*či* is reconstructed on the basis of the Finnic forms. Mordvin, on the other hand, points to *-*ča*. (2) Some Uralicists consider this to be a loan from Indo-European.

- D. Proto-Altaic **uykV* (*-kV* is a suffix) ‘mountain ram, mountain goat’: Proto-Tungus **uyKam* ‘mountain ram; a kind of horned animal’ > Evenki *uyam* ‘mountain ram’; Lamut / Even *uyama* ‘mountain ram’; Negidal *oyamka* ‘a kind of horned animal’; Manchu *weyχen* ‘a kind of horned animal’. Proto-Mongolian **ugalža* ‘male mountain goat’ > Written Mongolian *uγalža* ‘male wild mountain sheep’ (Haltod—Hangin—Kassatkin—Lessing 1960:864 list *uγulža*); Khalkha *ugalž* ‘male mountain sheep’ (cf. Hangin 1986:539 *γaλž*); Ordos *ug^walži* ‘male mountain goat’. Proto-Turkic **ograk* ‘mountain goat’ > Karakhanide Turkic *oyraq* ‘mountain goat’. Starostin—Dybo—Mudrak 2003:1486 **ujkV* ‘a kind of horned animal’.

Buck 1949:3.25 sheep. Dolgopolsky 2008, no. 749, **I[o]wV* ‘wild sheep/goats’; Bomhard—Kerns 1994:521—522, no. 370; Blažek 2013:47, no. 25 — Blažek reconstructs Proto-Afrasian **ʕawy-* and mentions possible Cushitic and Chadic cognates.

22.38. PROTO-NOSTRATIC *x

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
x-	x-	Ø-	x-	ḥh-	Ø-	Ø-	Ø-
-x-	-x-	-Ø-	-x-	-ḥh-	-x-	-Ø-	-Ø-

786. Proto-Nostratic root **xal-* (~ **xəl-*):

(vb.) **xal-* ‘to wear down, to wear out, to weaken; to be worn out, worn down, weakened’;

(n.) **xal-a* ‘weakness, exhaustion, fatigue, weariness’; (adj.) ‘weak, worn out, tired, exhausted, weary’

Note also:

(vb.) **hal-* ‘to lay waste, to destroy, to kill, to slaughter’;

(n.) **hal-a* ‘destruction, violence, killing, slaughter’

- A. Proto-Afrasian **xal-* ‘to wear down, to wear out, to weaken; to be worn out, worn down, weakened’: Proto-Semitic **xal-ak-* ‘to wear out, to wear down, to make smooth; to be worn down, worn out, ended, finished, terminated, wasted, destroyed’ > Hebrew *ḥālāk* [חָלַךְ] ‘(Qal) to be smooth, slippery; (Hif.) to beat smooth (metal, with a hammer)’, *ḥālāk* [חָלַךְ] ‘smooth, bald’; Ugaritic *ḥlk* ‘to perish (?)’, to destroy’; Arabic *ḥalaka* ‘to be old, worn, shabby (garment); to wear out (something), to let (something) become old and shabby’, *ḥalak* ‘shabby, worn (garment), threadbare’; Akkadian *ḥalāku* ‘to disappear, to vanish, to become missing or lost, to perish; to escape, to flee; to destroy, to ruin’; Geez / Ethiopic *ḥalka* [ገልቀ], *ḥalka* [ገልቀ] ‘to be consumed, to be wasted, to perish, to cease, to come to an end, to be accomplished, to be terminated, to be finished, to be destroyed, to fail, to dwindle away, to be spent, to be decided upon, to be determined’; Tigrinya *ḥalākā* ‘to finish, to be finished’; Amharic *ällākā* ‘to come to an end, to be finished, to be consumed’; Argobba *allāka* ‘to be finished’; Gurage (Soddo) *allākā*, *allāʾā* ‘to be finished, ended’, *əllaki* ‘worn out’. Murtonen 1989:184; Klein 1987:220; Leslau 1979:40 and 1987:261. Proto-Semitic **xal-aw/y-* ‘to be worn out, weak, sick’ > Akkadian *ḥalū* ‘to suffer’; Hebrew *ḥālāh* [חָלָה] ‘to be weak, sick; to be smooth (to the taste), to be sweet; (Pi.) to soften, to sweeten; to soothe, to assuage; (Hif.) to assuage, to soften; to make sick, to wear out’; Aramaic *ḥalā* ‘to be sick’. Murtonen 1989:182; Klein 1987:217. Proto-Semitic **xal-aš-* ‘to be weak’ > Hebrew *ḥālaš* [חָלַשׁ] ‘to be weak, prostrate; to weaken, to disable, to prostrate’; Aramaic *ḥalaš* ‘to be weak’. Murtonen 1989:184; Klein 1987:220. Egyptian *ḥj* (medical term) ‘to pound, to crush, to pulverize’. Hannig 1995:629. [Orël—Stolbova 1995:272, no. 1229, **halak-* ‘to be smooth’ and 291—292, no. 1327, **halak-* ‘clothes’ (Proto-

Semitic **ḥulāk-/ḥālūk-* ‘old or torn clothes’ < Proto-Semitic **ḥVIVk-* ‘to be torn’).]

- B. Dravidian: Tamil *ala* ‘to suffer, to be in distress, to suffer privation, to be in want’, *alu* ‘to be weary, to be tired by overwork or care’, *allā* ‘to suffer, to be in distress’, *alam* ‘distress, pain, misery’, *alacu* (*alaci-*) ‘to suffer, to be distressed, to be exhausted, to become weary’; Malayalam *ala* ‘lamentation’, *alaññuka*, *alukka* ‘to be worn out, to grow lean’; Kota *alv-* (*ald-*) ‘to become wearied by walking or searching’; Kannaḍa *ala*, *alapu*, *alupu*, *alavu*, *alavike*, *alasike* ‘fatigue, weariness, trouble’, *alasu* ‘to become weary, to be tired, to be vexed, to be disgusted, to loiter’; Tuḷu *alasuni*, *alajuni* ‘to be fatigued, to be vexed, to suffer gripping pain’, *albe* ‘thin, weak, lean’; Telugu *alayu* ‘to be tired, to be disgusted’; Kolami *alay-* (*alayt-*) ‘to become tired’; Kui *ālāri* ‘fatigue, distress from fatigue, exhaustion’. Burrow—Emeneau 1984:22—23, no. 236. Malayalam *aliyuka* ‘to melt, to dissolve (as salt, heart)’, *alikka*, *aliyikka* ‘to melt’; Koḍagu *ali-* (*aliv-*, *aliñj-*) ‘to dissolve (intr.)’, *ali-* (*alip-*, *alic-*) ‘to dissolve (tr.)’; Tuḷu *aliyuni* ‘to dissolve, to decay’, *eliyuni*, *ēluni* ‘to melt’. Burrow—Emeneau 1984:24, no. 250. Tamil *alku* (*alki-*) ‘to shrink, to diminish, to lessen’, *alkal* ‘deficiency, poverty’; Kannaḍa *akkuḍisu* ‘to become small, to wane’. Burrow—Emeneau 1984:24, no. 252.
- C. Proto-Indo-European **ḥhel-* [**ḥhal-*] ‘to wear down, to grind’: Sanskrit *āṇu-ḥ* (< **al-nu-*) ‘fine, minute’; Pāli *aṇu-* ‘small’; Greek ἀλέω ‘to grind, to bruise, to pound’; Armenian *alam* ‘to grind’. Pokorny 1959:28—29 **al-* ‘to grind’; Walde 1927—1932.I:189 **al-*; Mann 1984—1987:14 **alejō* ‘to grind, to pound, to crush’, 14 **aleur-* (**aleyər-*) ‘millings, flour’; Watkins 1985:2 **al-* and 2000:3 **al-* ‘to grind, to mill’; Mallory—Adams 1997:247 **h₄el-* ‘to grind down’; Mayrhofer 1956—1980.I:26 **al-nu-*; Boisacq 1950:43; Frisk 1970—1973.I:70—71; Chantraine 1968—1980.I:59; Beekes 2010.I:65 **h₂elh₁-*; Hofmann 1966:12. Perhaps also the following: Sanskrit *alasa-ḥ*, *ālasa-ḥ* ‘inactive, lazy, tired’; Lithuanian *alsà* ‘tiredness’; Tocharian B *alāšmo* ‘sick’, *alāsk-* ‘to be sick’. Mayrhofer 1956—1980.I:55; Couvreur 1950:126; Van Windekens 1976—1982.I:620 (Van Windekens considers Tocharian B *alāsk-* to be adapted from Sanskrit *alasa-ḥ*); Adams 1999:25—26; Fraenkel 1962—1965.I:184; Smoczyński 2007.I:219—220; Derksen 2015:53.
- D. Yukaghir (Southern / Kolyma) *al’a:-* ‘to thaw’, *al’o:-* ‘melted’, *al’a:š-* ‘to melt’, *al’o:jə* ‘ice-hole; thawed patch’, *al’ununnu-* ‘to thaw’, (Northern / Tundra) *al’aa-* ‘to thaw’, *al’uo-* ‘melted’, *al’uorii-* ‘to keep melted’. Nikolaeva 2006:100.
- E. Proto-Altaic **āle* ‘weak, tired, confused’: Proto-Tungus **āli-* ‘to become tired’ > Negidal *ālī-* ‘to become tired’; Ulch *āl(i)-* ‘to become tired’; Oroch *ālī-* ‘to become tired’; Nanay / Gold *ālī-* ‘to become tired’. Proto-Mongolian **al-da-*, **al-žī-*, **al-ga-* ‘(vb.) to become tired; to lose, to miss; (adj.) disturbed, absent-minded, lazy’ > Mongolian *alda-* ‘to lose, to let go,

to drop; to lose control of, to be unable to control; to do something by mistake or by accident', *alday-a* 'mistake, error, fault, blunder, omission; defect; loss', *aldaydal* 'defect, deficiency, lack, want', *aldal* 'loss, slip, omission, mistake, error, fault, blunder', *aldara-* 'to come loose, to untie, to come off; to be freed from; to disappear, to vanish; to lose courage or strength or to weaken physically', *aldas* 'mistake, slip, omission, fault', *alyur* 'slow(ly), quiet(ly), calm(ly), leisure(ly), gradual(ly)', *alyasa-* 'to be distracted, confused, absent-minded, inattentive; to be unstable; to be worried; to be concerned; to miss, to skip', *almal* 'careless(ness), absent-minded(ness), inattentive(ness), forgetful(ness)', *alžiya-* 'to be or become tired, exhausted, weary; to be troubled', *alžiyal* 'fatigue, weariness; worry, anxiety, trouble', *alžiyas* 'fatigue, trouble, worry, temptation, allurements, enticement; error'; Khalkha *alda-* 'to lose, to miss', *alžā-* 'to become tired', *algū*, *almal* 'disturbed, absent-minded, lazy'; Buriat *alžā-* 'to become tired', *almay* 'disturbed, absent-minded, lazy'; Kalmyk *aldə-* 'to lose, to miss', *almā* 'disturbed, absent-minded, lazy'; Ordos *alda-* 'to lose, to miss'; Dagur *alšē-* 'to become tired', *alede-* 'to lose, to miss'; Monguor *χaržā-* 'to become tired', *(a)rda-* 'to lose, to miss'. Proto-Turkic **āl-* 'weak, tired, old, worn out, etc.' > Old Turkic (Old Uighur) *alaŋ-ad-* 'to become weak'; Karakhanide Turkic *aliγ* 'bad', *aliq* 'to be vile (of a man), to turn septic (of a wound)'; Turkish *alık*, (Osmanli) *alu* 'weak, inferior', (dial.) *alaz*, *aliz* 'weak, inferior', (dial.) *alkın* 'upset'; Gagauz *aliq* 'crazy; fool'; Turkmenian *al-η-a-sa-* 'to hurry'; Uighur *alaq*, *alaŋ* 'crazy'; Karaim *alas* 'weakness'; Tatar *ala-ma* 'bad; old, worn-out'; Bashkir *alama* 'bad; old, worn-out', *al-yawu* 'to go mad'; Kirghiz *alaŋ*, *alaŋ-dī* 'absent-minded, inattentive'; Kazakh *alaŋ* 'lazy man'; Oyrot (Mountain Altai) *alā* (< *alay*) 'dumb, foolish', *alu* (< *aliγ*) 'fool', *alaŋ* 'doubt, surprise', *alyas* 'upset', *al-īn-* 'to go mad'; Noghay *ala-η-γa-s-ar* 'absent-minded, inattentive'; Sary-Uighur *alyač* 'lazy man'; Tuva *alāq-* 'to be in doubt', *alaŋ* 'doubt, surprise'; Yakut *alyas* 'error'. Starostin—Dybo—Mudrak 2003:286—287 **āle* 'weak, tired, confused'.

F. Gilyak / Nivkh *al-* 'to be tired'. Note: Not in Fortescue 2016.

Buck 1949:4.82 weak; 4.84 sick; sickness; 4.91 tired, weary; 5.56 grind; 16.31 pain, suffering. Greenberg 2002:170, no. 395, **ali* 'tired'; Bomhard—Kerns 1984:545—546, no. 404.

787. Proto-Nostratic root **xal-* (~ **xəl-*):

(vb.) **xal-* 'to divide, to allot, to apportion, to enumerate, to count';

(n.) **xal-a* 'division, allotment, portion, share; measurement, calculation, number'

A. Proto-Afrasian **xal-* 'to divide, to allot, to apportion, to enumerate, to count': Proto-Semitic **xal-ak-* 'to divide, to allot, to apportion, to

enumerate, to count' > Hebrew *ḥālaḳ* [חָלַק] 'to divide, to allot, to share', *ḥēleḳ* [חֶלֶק] 'part, portion, share (of booty, of property)'; Syriac *ḥəlaḳ* 'to allot', *ḥəlkā* 'lot, portion'; Arabic *ḥalaḳa* 'to measure (out leather before cutting it)'; Geez / Ethiopic *ḥwallakʷa* [ከ-ለቁ] 'to count, to number, to enumerate, to take account, to review, to impute, to consider'; Tigrinya *ḥəlkʷ* 'number, count'; Amharic *əlk*, *əlko* 'number'; Harari *ḥēlāḳa* 'to count, to consider'; Gurage (Wolane) *elākā*, (Selti) *ēlākā*, (Zway) *ilākā* 'to count', (Wolane, Selti) *əlk*, (Zway) *ələḳ* 'number'. Murtonen 1989:184; Klein 1987:220; Leslau 1963:82—83, 1979:41, and 1987:261.

- B. Dravidian: Tamil *alaku* 'number, calculation, cowries (as signs of number in reckoning)'; (?) Koḍagu *alu* 'cowrie'. Burrow—Emeneau 1984:23, no. 238. Tamil *aḷa* 'to measure, to limit, to define', *aḷapu*, *aḷappam* 'measurement', *aḷappu* 'measurement, limit, bounds', *aḷavu* 'measure, extent, size, number', *aḷavi* 'limit', *aḷavai* 'measure, bounds, limit', *aḷavan* 'one who measures grain'; Malayalam *aḷakka* 'to measure', *aḷavu* 'measure, capacity, measure of time', *aḷattam* 'measurement', *aḷavan* 'measurer'; Kota *aḷv-* (*aḷd-*) 'to measure', *aḷv* 'limit'; Toda *aḷ-* (*aḷθ-*) 'to measure', *aḷt-* 'measure'; Kannaḍa *aḷe* (*aḷad-*, *aḷed-*) '(vb.) to measure; (n.) measure', *aḷate*, *aḷte* 'measure, extent, measurement', *aḷavu*, *aḷabu* 'measure'; Koḍagu *aḷa-* (*aḷap-*, *aḷand-*) 'to measure', *aḷate* 'act of measuring'; Tuḷu *aḷa* 'measure, capacity', *aḷakè*, *aḷatè* 'measurement', *aḷapuni* 'to measure', *aḷaka* 'large basket for measuring rice'; Telugu *aḷavi* 'measure, extent', *lāvu* 'dimensions, magnitude'. Burrow—Emeneau 1984:28, no. 295.

Sumerian *hal* 'to separate, to divide; to deal out, to distribute', *ha-la* 'portion, share', (reduplicated) *hal(-hal)* 'to apportion, to allot, to deal out, to distribute'.

Buck 1949:12.54 measure (vb.); 13.12 number. Bomhard—Kerns 1994:551—552, no. 411.

788. Proto-Nostratic root **xam-* (~ **xəm-*):

(vb.) **xam-* 'to be wild, fierce, brave, strong, manly';

(n.) **xam-a* 'a male (human or animal)'

Extended form (Dravidian and Indo-European):

(vb.) **xam-V-d-* 'to be wild, fierce, brave, strong, manly';

(n.) **xam-d-a* 'a male (human or animal)' (**xam-d-* > **xan-d-*)

- A. Afrasian: Egyptian *ḥm* '(to be) wild (of animals)'. Hannig 1995:599; Faulkner 1962:190. (?) Highland East Cushitic: Burji *hamʔ-anée* 'big'. Sasse 1982:91; Hudson 1989:8 and 196.

- B. Dravidian: Parji *enḍka* 'young male pig'; Pengo *andren* 'male, man'; Maṇḍa *andren* 'male, man'; Kui *andra* 'a male animal or bird; male'; Kurux *andra* 'male (said only of animals)', *andṛyā* 'fierce, unmanageable'

(of bulls, bullocks, and male buffaloes), haughty, overbearing (of men)'; Malto *andya* 'a bull'. Burrow—Emeneau 1984:509, no. 7. Dravidian loanword in Sanskrit *aṇḍīra-h* 'male, man; strong'.

- C. Indo-European: Greek ἄνθρωπος 'man (used both as a generic term and of individuals)', (Mycenaean) *a-to-ro-qo* (an^hrōk^wos) 'man', ἀνθρώπειος, ἀνθρώπινος, ἀνθρωπικός 'human', ἀνθρωπισμός 'humanity'. Boisacq 1950:63; Chantraine 1968—1980.I:90—91; Hofmann 1966:19; Beekes 2010.I:106 (probably substrate origin); Frisk 1970—1973.I:110—111. Semantic development as in Dravidian, cited above. Notes: (1) Found only in Greek. (2) ἄνθρωπος appears to be a compound < pre-Greek **and^hro-* + **(H)ok^w-o-*. The meaning of **(H)ok^w-o-* is not clear. If it is ultimately a derivative of the Proto-Indo-European root **Hok^wh-* 'to see', as some have claimed, the original meaning may have been something like 'having the look, appearance, or characteristics of a man, like a man' (cf. Greek ὄψις 'the look or appearance of a person or thing, his or its aspect', ὄψανον 'appearance').

Buck 1949:2.1 man (human being); 2.23 male; 3.12 male (adj.).

789. Proto-Nostratic root **xan-* (~ **xən-*):

(vb.) **xan-* 'to sprout, to flourish, to bloom';

(n.) **xan-a* 'sprout, bloom, blossom'

- A. Afrasian: Proto-Semitic **xan-ab-* 'to sprout, to flourish' > Akkadian *ḥanābu* 'to sprout, to flourish, to grow abundantly', *ḥanbu*, *ḥānibu* 'luxuriant', *ḥunnubu* 'very thriving'. Proto-Semitic **xan-am-* 'to thrive, to be luxuriant' > Akkadian *ḥanāmu* 'to thrive, to be luxuriant; to bloom', *ḥannāmu* 'very luxuriant'. Proto-Semitic **xan-at-* 'to ripen, to mature' > Akkadian *ḥunṭu* 'ripeness, maturity', *ḥunnuṭu* '(state of) ripening'.
- B. Proto-Indo-European **^hhen-d^h-* [**^hhan-d^h-*] 'to sprout, to blossom, to bloom', **^hhen-d^h-os-* [**^hhan-d^h-os-*] 'sprout, blossom, bloom, flower': Sanskrit *ándhas-* 'sprout of the soma plant; herb'; Greek ἄνθος 'blossom, flower'. ἀνθέω 'to blossom, to bloom', ἄνθη 'full bloom'; Albanian *ëndem* 'to blossom, to bloom', *ënde* 'flower'. Rix 2001:266 (?) **h₂end^h-* 'to sprout, to bloom'; Pokorny 1959:40—41 **andh-*, **anedh-* 'to sprout, to bloom, to blossom', **andhos* 'bloom, blossom, herb'; Walde 1927—1932.I:67—68 **andhos*; Mann 1984—1987:21 **andhos*, *-es-*, **andh₂* 'plant, flower'; Watkins 1985:2 **andh-* and 2000:4 **andh-* 'bloom'; Mallory—Adams 1997:207 **h_aéndhes-* ± 'flower'; Mayrhofer 1956—1980.I:36; Boisacq 1950:62—63; Hofmann 1966:19; Frisk 1970—1973.I:108—109; Chantraine 1968—1980.I:89—90; Beekes 2010.I:104—105 **h₂end^h-*; Orël 1998:87; Hamp 1965a:141.

Buck 1949:8.53 plant; 8.57 flower.

790. Proto-Nostratic root *xəŋ- (~ *xəŋ-):

(vb.) *xəŋ- ‘to lift, to raise; to rise, to go upward, to ascend’;

(n.) *xəŋ-a ‘that which is most prominent, foremost, visible, or noticeable’;

(particle) *xəŋ- ‘on top of, over, above’

Extended form:

(n.) *xəŋ-th-a ‘the most prominent or foremost (person or thing), front, front part’

- A. Afrasian: Proto-Highland East Cushitic **han*- ‘over, above, on (top of)’ > Gedeo / Darasa *hana* ‘over, above’; Hadiyya *hana* ‘over, above’, *hane* ‘top’; Sidamo *aana* ‘over, above’, *aaná* ‘on (top of)’. Hudson 1989:109. The following Semitic forms probably belong here as well (see below): Proto-Semitic **xan-at*- ‘(vb.) to stick out, to project, to protrude; (n.) that which is most prominent, foremost, visible, or noticeable’ > Mehri *xəntāy* ‘front part of a camel’; Harsūsi *xenīl* ‘one of the fore-teats of a camel’; Šheri / Jibbāli *xanī* ‘front, front part of anything’ (also *šxənīl* ‘to come out, away from; to get out’, *xunī* ‘outside’, *xanīn* ‘out, absent’; *axnīl* ‘to take out, to take off; to evacuate the bowels; to be full to overflowing; to go out in the spring’). Arabic *ḥunṭūl* ‘long horn or penis’. Arabic *ḥinšir*, *ḥinšar* ‘little finger or toe’.
- B. [Dravidian: Tamil *aṇ* ‘upper part’, *aṇa* ‘to lift the head’, *aṇar* ‘to rise, to move upwards’, *aṇavu* (*aṇavi*-) ‘to go upward, to ascend’, *aṇṇal* ‘greatness, exaltation, superiority, great man, king, god’, *aṇṇā* ‘to look upward, to gape, to hold the head erect’; Malayalam *aṇṇa* ‘upwards, above’, *aṇṇal* ‘high, God, esp. Arhat’, *aṇṇā* ‘looking upwards’; Kannaḍa *aṇṇe*, *aṇṇa*, *aṇa* ‘excellence, purity’; Tuḷu *aṇāvuni*, *aṇṇāvuni* ‘to look up, to lift up the face, to gaze’. Burrow—Emeneau 1984:12, no. 110. Tamil *āṇi* ‘excellence, superiority’, *āṇi-ppon* ‘gold of the finest quality’, *āṇi-muttu* ‘pearl of the finest quality’; Kannaḍa *āṇi* ‘excellence, superiority, preciousness’, *āṇi-pon* ‘gold of the finest quality’; Malayalam *āṇikkaram* ‘the choicest of anything’, *āṇi-pponnu* ‘finest gold’. Burrow—Emeneau 1984:33, no. 354.]
- C. [(?) Proto-Altaic **āŋo* (‘front, front side’ >) ‘right (side)’: Proto-Tungus **āŋ(gi)*- ‘right’ > Evenki *anŋū*, *ānŋū* ‘right’; Lamut / Even *āngɣɣ* ‘right’; Negidal *anŋi-dā* ‘right’; Oroch *ānžū* ‘right’; Udihe *ayaŋaža* ‘right’; Solon *angida* ‘right’. Proto-Mongolian **eŋge*- ‘south; front (of cloth)’ > Written Mongolian *eŋger* ‘flap of a garment, lapel(s); southern slope of a mountain or hill’, *eŋ* ‘width (of material), dimension, extent’, *eŋ* ‘very, most’ (*eŋ terigün* ‘first of all, very first’); Khalkha *enger* ‘south; front (of cloth)’; Buriat *enger* ‘front (of cloth)’; Kalmyk *eŋgə*, *eŋgr* ‘shore’; Ordos *enger* ‘front (of cloth)’; Dagur *enge* ‘front (of cloth)’; Dongxiang *engie* ‘front (of cloth)’; Monguor *ŋge* ‘front (of cloth)’. Proto-Turkic **oŋ* ‘right; good, lucky; west’ > Old Turkic (Old Uighur) *oŋ* ‘right; good, lucky; west’; Karakhanide Turkic *oŋ* ‘right; good, lucky’; Turkish (dial.) *on* ‘right; good,

lucky'; Turkmenian *oŋ* 'good, lucky'; Uzbek *oŋ* 'right; good, lucky'; Uighur *oŋ* 'right'; Karaim *oŋ* 'right; good, lucky'; Tatar *uŋ* 'right; good, lucky'; Bashkir *uŋ* 'right; good, lucky'; Kirghiz *oŋ* 'right; good, lucky'; Kazakh *oŋ* 'right'; Noghay *oŋ* 'right; good, lucky'; Sary-Uighur *oŋ* 'right'; Oyrot (Mountain Altai) *oŋ* 'right; good, lucky'; Tuva *oŋ* 'right'; Yakut *uŋa* 'right; southern', *uŋuor* 'on the other bank'. Starostin—Dybo—Mudrak 2003:305 ***āŋo* 'right'.]

- D. Proto-Gilyak / Nivkh **an-(ə)k(i)* 'earlier', (converb affix) **-an-ke* 'before', (postposition) **-an-k* 'in front of, before': Amur *ənk* 'earlier, before'; East Sakhalin *anar* 'earlier'; South Sakhalin *anəki* 'earlier'. Fortescue 2016:14 and 176 (table of affixes).

Buck 1949:10.21 rise (vb.); 10.22 raise, lift; 12.31 high; 12.33 top; 12.41 right; 12.48 south. Bomhard—Kerns 1994:553—554, no. 413. Note: the Dravidian and Altaic forms are phonologically ambiguous — they may belong with Proto-Nostratic **ʕaŋ-* (~ **ʕəŋ-*) '(n.) upper part; (particle) up, above' instead.

791. Proto-Nostratic root **xaŋ-* (~ **xəŋ-*):

Extended form:

(n.) **xaŋ-th-a* 'the most prominent or foremost (person or thing), front, front part'

Derivative of:

(vb.) **xaŋ-* 'to lift, to raise; to rise, to go upward, to ascend';

(n.) **xaŋ-a* 'that which is most prominent, foremost, visible, or noticeable';

(particle) **xaŋ-* 'on top of, over, above'

- A. Afrasian: Egyptian *hnt* 'face, front part', *hnt* 'in front of, among, from', *hnt* 'to ascend, to rise (the Nile)', (adv.) *hntw* 'before, earlier', *hnt*, *hnty* 'nose, face', *hnty* 'who or which is in front of (of place), who is at the head of, foremost, pre-eminent in, principal (of degree), protruding (of shape)'; Coptic *šant* [ϣⲁⲛⲧ] 'nose'. Eрман—Grapow 1921:129—130 and 1926—1963.3:302—306; Gardiner 1957:585; Hannig 1995:607—608; Faulkner 1962:194; Vycichl 1983:254. Note: Dolgopolsky (2002:45—46 and 2008, no. 1875) compares the following South Arabian forms with the Egyptian forms cited here: Mehri *xəntāy* 'front part of a camel'; Ḥarsūsi *xenī* 'one of the fore-teats of a camel'; Šheri / Jibbāli *xanī* 'front, front part of anything' (also *šxənī* 'to come out, away from; to get out', *xunī* 'outside', *xanīn* 'out, absent'; *axnī* 'to take out, to take off; to evacuate the bowels; to be full to overflowing; to go out in the spring'). These cannot be separated from Arabic *hunṭūl* 'long horn or penis'. The original meaning was probably something like 'that which is most prominent, foremost, visible, or noticeable'. The Proto-Semitic ancestor may be reconstructed **xan-at* 'to stick out, to project, to protrude', that is, root **xan-* with *-at*-extension. That the root is to be reconstructed as **xan-* to which various

extensions have been added in Semitic proper is shown by the related Arabic *ḥinšir*, *ḥinšar* ‘little finger or toe’, itself from earlier **xan-ac*-. Thus, the Semitic forms can be compared, but not directly with Egyptian *hnt* ‘face, front part’ as Dolgopolsky has attempted to do.

- B. Proto-Indo-European **h₁henth-s* [**h₁hanth-s*] ‘front, front part’, **h₁henth_i* [**h₁hanth_i*] ‘in front of, before’: Hittite *ḫa-an-za* ‘front, front part’, *ḫa-an-ti* ‘in front of, before’, *ḫa-an-te-iz-zi-iš* ‘first, foremost’; Luwian (nom. sg.) *ḫa-an-te-le-eš* ‘first, foremost’, (acc. sg.) *ḫa-an-da-wa-te-en* ‘leader, chief’; Lycian (3rd sg. pret.) *χṇte-wete* ‘to lead, to direct’, *χṇte-wata-* ‘leader, chief’; Sanskrit *ánti* ‘before’, *ánta-h* ‘end, limit, boundary’, *ántya-h* ‘last (in time, place, or order)’; Pāli *antika-* ‘near’; Sindhi (f.) *andī* ‘edge, edge of a web of cloth as left in weaving’; Kashmiri *and* ‘edge, limit’; Marathi *āt* ‘as far as’, *ātī* ‘at the end of, after, on’; Greek *ἀντί* ‘opposite’, *ἄντα* ‘over, against, face to face’; Latin *ante* ‘before’; Oscan *ant* ‘till’; Gothic *and* ‘along, throughout, towards’, *andeis* ‘end’; Old Icelandic (prefix) *and-* ‘opposite, against, towards’, *endi*, *endir* ‘end’, *endr* ‘in times past, formerly’, *enda* ‘to end, to bring to an end’; Old English (prefix) *and-*, *ond-* ‘opposite, against, towards’, *ende* ‘end, limit, border’; Old Frisian *enda* ‘end’; Old Saxon (prefix) *and-*, *ant-* ‘opposite, against, towards’, *endi* ‘end’; Dutch *einde* ‘end’; Old High German (prefix) *ant-*, *int-*, *ent-* ‘opposite, against, towards’ (New High German *ant-*, *ent-*), *anti*, *enti* ‘end’ (New High German *Ende*); Lithuanian *ant* (earlier *antà*) ‘on, upon’; Tocharian A *ānt*, B *ānte* ‘surface, forehead’. Pokorny 1959:48—50 **ant-s* ‘front’, **anti* ‘in front of, before’; Walde 1927—1932.I:65—67 **anti*; Mann 1984—1987:27—28 **anti* (**anti*, **anti*, **anti*); **antis*, -*os*, -*ios* ‘towards, against, facing; face, front, side, edge, end’; Gamkrelidze—Ivanov 1984.I:158 **H₂ant[h]*-, I:203, II:814 **Hant[h]*-, **Hant[h]jo-* and 1995.I:136 **H₂ant^h*- ‘forehead, front part of face, forehead’, I:175, I:713 **Hant^h*-, **Hant^hyo-*; Watkins 1985:3 **ant-* ‘front, forehead’, inflected form (loc. sg.) **anti* ‘against’ and 2000:4 **ant-* ‘front, forehead’ (oldest form **ant₂ent-*, colored to **ant₂ant-*), inflected form (loc. sg.) **anti* ‘against’, with derivatives meaning ‘in front of, before’, also ‘end’; Mallory—Adams 1997:60 **H₂enti* ‘in front’ and 209 **H₂ent-* ‘forehead’; Mayrhofer 1956—1980.I:35 and I:36; Puhvel 1984— .3:89—96 **A₁ent-* and 3:108—112; Boisacq 1950:64 (Latin *ante* < **anti*); Frisk 1970—1973.I:112—113 and I:113—114; Chantraine 1968—1980.I:91—92; Hofmann 1966:19; Sihler 1995:439, §406.1, **H₂enti* ‘in front and facing’; Beekes 2010.I:107—108 **h₂ent-* and I:109 **h₂ent-*; Ernout—Meillet 1979:36—37; De Vaan 2008:45; Walde—Hofmann 1965—1972.I:53—54 **anti*, **anta*; **antjō-*, **ántjō-*; Orël 2003:18 Proto-Germanic **andā*, 18 **andjaz*, 18 **andjōjanan*; Kroonen 2013:27 Proto-Germanic **andja-* ‘end, extreme’; Feist 1939:46 and 49; Lehmann 1986:34 and 36; De Vries 1977:9 and 102; Onions 1966:313 **antjō-*; Klein 1971:247 **anta-*, **anti-*; Boutkan—Siebinga 2005:88; Kluge—Mitzka 1967:25 **anta*, **anti*, 165 **antjō-*, and 166—

167; Kluge—Seebold 1989:178 and 179; Smoczyński 2007.1:17 **h₂ent-*; Fraenkel 1962—1965.I:11; Derksen 2015:57; Adams 1999:43 **H₂ento-*, **H₂ent-* ‘front, forehead’; Van Windekens 1976—1982.I:163; Sturtevant 1942:40, §37c, Indo-Hittite **xants*, (dat.) **xánti*; Kloekhorst 2008b:287—289 **h₂ent-*. Adams (1999:14 and 2013:15) has shown that Tocharian A *āmpi*, B *antapi* ~ *āntpi* ‘both’ probably belong here as well, being derived from Proto-Indo-European **h₂hent^h-b^ho-* [**h₂hanth^h-b^ho-*] (Adams writes **h₂ent-b^ho-*). On the basis of the Tocharian forms, which are particularly archaic, Greek ἄμφω ‘both’ and Latin *ambō* ‘both’ must now be derived as follows: **h₂hem-b^ho-* [**h₂ham-b^ho-*] < **h₂hent^h-b^ho-* [**h₂hanth^h-b^ho-*], with assimilation of original **-nt^h-* to **-m-* before **-b^ho-* (cf. Beekes 2010.I:96 **h₂(e)nt-b^hoh₁*; De Vaan 2008:37—38 **h₂(e)nt-b^hoH*).

- C. Proto-Uralic **aŋta* ‘horn, antler’: Ostyak / Xanty (Vah) *āŋət* ‘horn’, (Upper Demyanka) *oŋət*, (Obdorsk) *aŋət*; Vogul / Mansi (Tavda) *εεŋt* (*-ŋt* < **-nt* < **-ŋt*) ‘horn’, (Pelymka) *oŋt* ‘horn’, (Sosva) *aaŋt* ‘horn’; Yurak Samoyed / Nenets (Obdorsk) *ŋaamt* ‘horn, antler (of reindeer)’; Yenisei Samoyed / Enets (Hantai) *eddo* ‘horn’, (Baiha) *naddo*; Tavgi Samoyed / Nganasan *ŋamta* ‘horn’; Selkup Samoyed (Narym) *amd*, *aamd* ‘horn, antler’; Kamassian *amno* ‘horn’; Koibal *amna* ‘horn’; Motor *amdu* ‘horn’. Rédei 1986—1988:12—13 **aŋt₃* (**oŋt₃*); Décsy 1990:97 **angta* ‘horn’; Janhunen 1977b:20 **ämtā*; Aikio 2020:19—20 (?) **aŋta* ‘antler’.
- D. (?) Altaic **a[ŋ]t^ha* ‘hill, slope’ (< ‘front slope’?): Proto-Tungus **antaga* ‘slope of a mountain’ > Evenki *antaya* ‘slope of a mountain’; Lamut / Even *antɣ* ‘slope of a mountain’; Negidal *antaya* ‘slope of a mountain’; Manchu *antu* ‘the south side of a mountain, the sunny side of a mountain’; Nanay / Gold *antažia* ‘slope of a mountain’; Udihe *anta* ‘slope of a mountain’. Turkmenian *aŋŋat* ‘sandhill, mound’ may belong here as well. Starostin—Dybo—Mudrak 2003:302 **ant’a* ‘hill, slope’.
- E. Etruscan *hanθin* ‘in front of’.

Buck 1949:4.17 horn; 4.204 face; 12.35 end. Bomhard—Kerns 1994:554, no. 414; Dolgopolsky 2002:45—46 **qan/ñtV* ‘forehead, front’ and 2008, no. 1875, **qanñV* ‘forehead, front’; Greenberg 2002:24—25, no. 35, **hant* ‘before’.

792. Proto-Nostratic root **xat-* (~ **xət-*):

- (vb.) **xat-* ‘to cut into, to hollow out, to engrave, to prick, to pierce’;
 (n.) **xat-a* ‘slice, carving, engraving, engraved line, incision’

- A. Proto-Afrasian **xat-* ‘to cut into, to hollow out, to engrave, to prick, to pierce’: Proto-Semitic **xat-at-* ‘to cut into, to hollow out, to engrave, to carve’ > Arabic *ḥaṭṭa* ‘to carve, to engrave, to inscribe, to draw or trace a line, to write’; Akkadian *ḥaṭātu* ‘to make a ditch, to excavate, to dredge a river’, *ḥiṭṭatu* ‘trench; foundation pit’; Sabaean *ḥiṭṭ* ‘to fix the boundaries of a piece of land’; Ḥarsūsi *xṭāṭ* ‘to make signs on the ground by the road to

guide travelers’, *xatf* ‘letter, line’; Šheri / Jibbāli *xetf* ‘to write, to make signs on the ground to point out a route’; Mehri *xəf* ‘to make signs on the ground to point out (a route)’. Zammit 2002:163. Orël—Stolbova 1995:294, no. 1341, **haṭ-* ‘to dig’ and 302, no. 1380, **huṭ-* ‘to dig, to scratch’ (connected with **haṭ-* ‘to dig’).

- B. Elamo-Dravidian: Achaemenid Elamite *at-tu-* ‘to excavate, to dig’, *at-ti* ‘a kind of tool’, perhaps ‘shovel’ or ‘hoe’.
- C. Kartvelian: Svan *xt’ūr-* ‘to cut into pieces, to slice, to carve’.
- D. Proto-Indo-European **h₁het’-* [**h₁hat’-*] ‘to cut into, to hollow out, to engrave, to prick, to pierce’: Armenian *hatanem* ‘to cut’, *hat* ‘piece, cut, slice’; Hittite (3rd sg. pres.) *ha-at-zi*, *ha-at-ta-i*, *ha-at-ta-a-i*, *ha-ad-da-i*; *ha-az-zi-zi*, *ha-az-zi-az-zi* ‘to make a hole (in), to pierce, to prick, to stab, to slash, to perforate, to penetrate, to stick (as a means of killing), to hit (a target), to strike (especially a musical instrument), to engrave (a tablet)’, (1st sg. pres.) *ha-at-ta-ra-a-mi* ‘to prick, to incise, to engrave, to inscribe’, (nom.-acc. sg.) *ha-at-tal-la-an* ‘club, mace’, (nom.-acc. sg.) *ha-at-ta-ra-a[n]* ‘prick, awl’, (nom. sg.) *ha-at-tal-ki-iš-na-aš* ‘thorn-bush’, (3rd sg. pres.) *ha-at-ra-a-iz-zi* ‘to write, to send written word (about), to report, to order, to dispatch’; Hieroglyphic Luwian *ha-tu+ra/i-à-s* ‘letter’, (imptv.) *ha-tu+ra/i+à* ‘write!’; Luwian (3rd sg. pret.) *ha-at-ta-ri-it-ta* ‘to prick, to pierce’, (acc. sg.) *ha-at-ta-ra-an* ‘prick’; Lycian *χttadi* ‘to hurt, to damage’, *χdrñna* (?) ‘inscription’ (?); Avestan *aðu* ‘water-course, brook, canal’. Pokorny 1959:4 **ad(u)-*, **ad-ro-* ‘water-course’; Kloekhorst 2008b:330—332, 332, 333—334, and 335—336; Puhvel 1984— .3:248—255, 3:255—256, 3:256—257, 3:263—265, and 3:269—274; Tischler 1977— :226—227. Though the comparison of Armenian *hatanem* with the Anatolian forms is semantically flawless, there are problems with the phonology (cf. Puhvel 1984— .3:254), since double writing of the dental stop in Hittite points to original *-*t^h*-, while the Armenian form points to original *-*t*-. However, double writing of medial stops in Hittite can also indicate the former presence of a laryngeal (see Chapter 5 for details) as in (nom. sg.) *me-ik-ki-iš* ‘large’, which is to be derived from earlier **mek’-* plus the suffix *-*Hi-* > **mek’Hi-* > the attested Hittite *me-ik-ki-iš*. Thus, comparison of Armenian *hatanem* with the Anatolian forms having medial double writing can be maintained if we derive the Anatolian forms from earlier **h₁het’H-* [**h₁hat’H-*], which would yield Hittite *hatta-* as the regular outcome (cf. Bomhard 1992d:5—11 and 2000:35—46, especially 44—45). Support for this interpretation may be found in Hittite *hatrai-*, which has consistent single writing. Thus, it is possible to envision a pre-Proto-Anatolian root **h₁het’-* [**h₁hat’-*], which was then extended by two separate suffixes in Proto-Anatolian proper: (A) **h₁het’-Ha-* [**h₁hat’-Ha-*], yielding Hittite *hatta-* upon loss of the medial laryngeal, and (B) **h₁het’-ra-* [**h₁hat’-ra-*], yielding Hittite *hatra-*. Stem (A) was further extended by a suffix *-ra-*, giving the attested agent noun *hattara-* ‘prick, awl’, which, in turn,

served as the basis of the denominative verb *hattarai-*. Other derivatives of stem (A) are *hattatta-* ‘club, mace’ and *hattalkešna-* ‘thorn-bush’. The agent noun **hatra-*, from stem (B) and from which the denominative verb *hatrai-* is derived, is unattested.

- E. Chukchi-Kamchatkan: Proto-Chukotian **atənvə* ‘wound’ > Chukchi *atən* (pl. *atənwət*) ‘wound’, *atənw-at-* ‘to wound’; Kerek *atnuuŋa* ‘wound’, *atnw-aat-* ‘to wound’. Fortescue 2005:24.

Buck 1949:1.36 river; stream; brook; 8.22 dig; 18.51 write. Bomhard—Kerns 1994:547—548, no. 405.

793. Proto-Nostratic root **xol-*:

(vb.) **xol-* ‘to be separated or apart from, by oneself, alone; to set apart’;

(n.) **xol-a* ‘solitude, seclusion, loneliness’; (adj.) ‘alone, lonely’

- A. Proto-Afrasian **xol-* ‘to be separated or apart from, to be by oneself, to be alone; to set apart’: Proto-Semitic **xal-aw/y-* ‘to be separated or apart from; to be alone’ > Arabic *ḥalā* ‘to be empty, vacant; to be free, to be alone’, *ḥalā* ‘except, save, with the exception of’, *ḥilw* ‘alone, in a private place, free (from)’, *ḥalawī* ‘lonely, solitary, secluded, isolated, outlying’; Sabaean *ḥlw* ‘except, with the exception of’ (contexts fragmentary); Šheri / Jibbāli *xálé* ‘to be empty; to be unmarried, alone with (b-), *xálé?* ‘empty place, something empty; loneliness’, *xáló?* ‘divorce’, *xalwét* ‘loneliness’; Mehri *xáyli* ‘to be empty, to be alone with (b-) someone’, *xōli* ‘to divorce’, *xəlē?* ‘desert; hungry; alone; empty (*mən*) of’, *xəlōy* ‘divorce’; Ḥarsūsi *xéli* ‘to be empty’, *xāl* ‘to divorce’, *xelōy* ‘divorce’, *xelē?*, *xelā* ‘empty place, desert’, *xéli* ‘undressed’. Zammit 2002:166. Highland East Cushitic: Hadiyya *holl-* ‘to chase, to divorce’. Hudson 1989:283.
- B. Proto-Kartvelian **xolo* ‘alone, sole; only, merely, solely’: Georgian *xolo* ‘only, and (conjunction)’, *mxolo* ‘the only’, *xole* ‘alone, only’, *mxolod* ‘only, merely’; Mingrelian *xvale* ‘only, alone’; Laz *xvala* ‘only’. Schmidt 1962:159; Klimov 1964:260—261 **xole-* and 1998:330 **xolo* ‘only’.

Buck 1949:13.33 alone, only (adj.; adv.). Bomhard—Kerns 1994:551, no. 410.

22.39. PROTO-NOSTRATIC *x^w

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
x ^w -	x ^w -	v-/Ø-	xw/u-	ḥ ^w -	w-		v-
-x ^w -	-x ^w -	-v-	-xw/u-	-ḥ ^w -	-x-		-v-

794. Proto-Nostratic root *x^wal- (~ *x^wəl-):

(vb.) *x^wal- ‘to pull (off, out), to tear (off, out)’;

(n.) *x^wal-a ‘the act of pulling or tearing (off, out)’

- A. Proto-Afrasian *x^wal- ‘to pull (off or out)’: Proto-Semitic *xal-af- ‘to pull (off or out)’ > Arabic *ḥalaʿa* ‘to take off, to put off, to slip off (a garment); to extract, to pull; to wrench, to dislocate, to luxate (a joint); to depose, to remove, to dismiss, to discharge (someone from an office); to renounce, to forgo, to give up (something), to withdraw (from); to throw off, to cast off’, *ḥalʿ* ‘slipping off, taking off (of clothes); deposition (for example, of a ruler); dislocation, luxation; extraction of teeth’. Zammit 2002:165. Proto-Semitic *xal-ag- ‘to draw or tear out, to remove’ > Arabic *ḥalaḡa* ‘to draw, to attract; to tear out’, *ḥilliḡ* ‘far, remote’; Šheri / Jibbālī *xólḡs* ‘to cause to grieve at the loss or removal of a child’; Mehri *xəlāwg* ‘grieving at the loss or removal of a child’. Proto-Semitic *xal-ac- ‘to rob, to steal, to filch; to lose, to be deprived (of)’ > Arabic *ḥalasa* ‘to steal (something), to pilfer, to filch, to swipe, to purloin (something); to obtain (something) under false pretenses or means; to embezzle, to misappropriate’, *ḥulsatan* ‘by stealth, stealthily, surreptitiously, furtively’, *ʿiḥtilās* ‘embezzlement, misappropriation’; Mehri *xəlūs* ‘to stray, to get lost; to lose, to lose in court; to guess wrong; to miss’; Šheri / Jibbālī *xólōs* ‘to miss something; to lose; to guess’, *axtelēs* ‘to lose something precious; to be deprived, bereaved of a child’, *šxelās* ‘to filch; to filch food, etc., when one’s parents are absent’; Harsūsi *xelōs* ‘to miss (a shot)’, *xlōs* ‘to lose, to mislead’. Proto-Semitic *xal-ac’- ‘to pull out or tear out, to remove’ > Hebrew *ḥālaš* [חָלַשׁ] ‘to draw off or out, to withdraw; to pull out, to tear out; to rescue, to deliver’; Aramaic *ḥəlaš* ‘to undress, to take (something) off; to withdraw’; Phoenician *hlš* ‘to deliver’; Akkadian *ḥalāšu* ‘to press, to squeeze out; to comb out’, *ḥalšu* ‘obtained by pressing out (said of oil), pressed out (said of sesame seeds), combed (said of flax)’, *ḥilšu* ‘combed wool’; Arabic *ḥalaša* ‘to be or become free, to be freed, to be liberated (from), to be cleared, to get rid (of); to extract (something from)’, *ḥalās* ‘liberation, deliverance, riddance; rescue, salvation (from), redemption; payment, settlement, liquidation (of a bill)’, *taḥalluš* ‘freedom, libertation, release, extrication, escape (from)’, *ḥulāša* ‘excerpt; extract, essence; quintessence,

substance, gist (of something); abstract, résumé, summary, epitome, synopsis'. Murtonen 1989:184; Klein 1987:220; Zammit 2002:164–165. (?) Egyptian *hnp* (if for **hlp*) 'to snatch, to catch; to steal'. Hannig 1995:603; Faulkner 1962:192; Gardiner 1957:585; Erman—Grapow 1921:128 and 1926—1963.3:290. Southern Cushitic: Proto-Rift **xwal-* 'to dig up' > Alagwa *xwal-* 'to dig up'; K'wadza *soxwal-* 'to till, to cultivate'. Ehret 1980:375. Ehret 1995:230, no. 400, **xwal-*, **xwal-* 'to extract, to take or draw out'.

- B. Dravidian: Tamil *vali* 'to draw, to pull, to row; to have contortions or convulsions', *vali*, *valippu* 'pulling, dragging, spasm, convulsion'; Malayalam *vali* 'drawing, pull, tug, spasm', *valikka* 'to draw, to drag, to row; to have spasms', *valippikka* 'to cause to pull', *valippu* 'drawing, pulling, spasm', *valiyuka* 'to be drawn, to extend, to have spasmodic pain'; Kodagu *bali-* (*balip-*, *balic-*) 'to snatch, to pull', *balip-* 'the act of dragging'; Koraga *bali* 'to pull'; Kui *velba-* (*ves-*) '(vb.) to pull, to pull up; (n.) pulling'. Burrow—Emeneau 1984:477, no. 5282.
- C. Proto-Indo-European **h^hwel-/h^hwol-/h^hwl-* 'to draw, to pull, to tear out': Latin *vellō* 'to pluck, to pull, to tear out'; Lithuanian *velkù*, *vilkti* 'to drag, to pull'; Old Church Slavic *vlěkō*, *vlěšti* 'to draw, to drag'; Avestan (in compounds) *varək-* 'to draw'; Gothic *wilwan* 'to rob, to plunder', *wilwa* 'robber'. Rix 1998a:620 **uelk-* 'to drag, to draw, to pull'; Pokorny 1959:1144—1145 **uel-* 'to tear', 1145 **uelk-* 'to pull'; Walde 1927—1932.I:304—305 **uel-* and I:305 **uelk-*; Mann 1984—1987:1509 **uel-* 'to snatch, to tug', 1511 **uelk-* 'to pull, to tug, to jerk', 1512 **uelum-* 'pull, tear, jerk; fleece', 1512 **ueluō*, *-iō* 'to snatch, to pluck, to rob', 1572 **uolk-*; Watkins 1985:76 **wel-* and 2000:98 **wel-* 'to tear, to pull'; Gamkrelidze—Ivanov 1984.II:492, fn. 1, **uel-* and 1995.I:413, fn. 1, **wel-* 'to lacerate, to tear apart; to wound; to kill'; Mallory—Adams 1997:471 **h₄uelk-* 'to pull'; Walde—Hofmann 1965—1972.II:744—745 **uel-*; Ernout—Meillet 1979:718 **wel-*; De Vaan 2008:659; Orël 2003:454 Proto-Germanic **welwanan*; Feist 1939:564—565 **uel-*; Lehmann 1986:404 **wel-* 'to tear, to rob; to wound'; Smoczyński 2007.1:753—754 **h₂uelk-*; Fraenkel 1962—1965.II:1253; Derksen 2008:514 and 2015:504 **u(e)lk(w)-*.

Buck 1949:9.28 tear (vb. tr.); 9.33 draw, pull; 11.56 steal; 11.57 thief. Bomhard—Kerns 1994:608—609, no. 485; Dolgopolsky 2008, no. 2480, **[']w[A]l[iy]V* (or **[']wōl[iy]V?*) 'to draw, to pull (out, off)'.

795. Proto-Nostratic root **xwat-* (~ **xwət-*):
 (vb.) **xwat-* 'to scratch, to scrape';
 (n.) **xwat-a* 'the act of scratching, scraping'

- A. Proto-Afrasian *x^wat'- 'to scratch, to scrape, to sweep': (?) Semitic: Akkadian *haṭāpu* (to process grain in some way); 'to wipe away (tears)'. Proto-East Cushitic *haad- 'to scrape (ground), to sweep' > Burji *haad-* 'to dig'; Somali *haad-* 'to sweep'; Galla / Oromo *haad-* 'to scrape the ground'. Hudson 1989:195; Sasse 1982:87.
- B. Dravidian: Pengo *vat-* '(fowl) to scratch the ground', *vatpa-* '(fowl) to scratch the ground', *vatki ki-* '(fowl) to scratch the ground'; Manda *vetki ki-* '(fowl) to scratch the ground'. Burrow—Emeneau 1984:473, no. 5248.
- C. Proto-Kartvelian *xwet'-/*xwt'- 'to scrape': Georgian *xvet-* 'to scrape; to tear off; to sweep'; Mingrelian *xvat-* 'to scratch; to gnaw, to bite'; Laz *xvat-* 'to gnaw, to bite'; Svan *xwet-/xwt-* 'to perish (of a multitude)'. Klimov 1964:259 *xwet- and 1998:328—329 *xwet- : *xwt- 'to scrape'; Fähnrich—Sardschweladse 1995:550—551 *xwet-; Fähnrich 2007:683—684 *xwet-.

Buck 1949:18.51 write.

796. Proto-Nostratic root *x^wat'- (~ *x^wat'-):

(vb.) *x^wat'- 'to chatter, to speak';

(n.) *x^wat'-a 'chatter, talk'

- A. Afrasian: Proto-Semitic *xat'-ab- 'to speak' > Arabic *haṭaba* 'to deliver a public address, to make a speech; to preach, to deliver a sermon'; *ḥuṭba* 'public address, speech; oration; letter, note, message', *taḥāṭub* 'conversation, talk, discussion, (inter)communication'. Proto-Semitic *xat'-il- 'to talk nonsense, to prattle' > Arabic *ḥaṭila* 'to talk nonsense, to indulge in idle or unseemly talk', *ḥaṭal* 'idle talk, prattle', *ḥaṭil* 'garrulous, chattering, given to silly talk; stupid, foolish'.
- B. Dravidian: Tamil *vataru* (*vatar-i-*) 'to chatter, to prate, to be talkative, to lisp, to abuse'; Kannaḍa *oḍaru* 'to sound, to cry aloud, to shout, to shriek, to howl', *oḍarukive* 'sounding, crying aloud'; Tuḷu *badaritana* 'defamation'; Telugu *vadaru*, *vaduru* 'to prattle, to prate, to babble, to chatter, to jabber', *vadarūbōtu* 'prattler, babbler'. Burrow—Emeneau 1984:473, no. 5244.
- C. Proto-Indo-European *h^hwet'- 'to say, to speak': Sanskrit *vāda-h* 'speech, discourse, talk, utterance, statement', *vādati* 'to speak, to say, to utter, to tell, to report, to speak to, to talk with, to address'; Greek (?) ἀείδω (< *āFēidō < *awe-ud- < *H₂we-H₂ud- [cf. Sihler 1995:55, §61.1.a, and 86, §90; Buck 1933:89; Grammont 1948:137—138 *a-we-wdō]) 'to sing', αὐδᾶω 'to utter sounds, to speak', αὐδῆ (Doric αὐδᾶ) 'the human voice, speech', (?) ἀηδών, ἀηδών 'nightingale'; Lithuanian *vađinù*, *vađinti* 'to call, to name'. Rix 1998a:225 *h₂uedH- 'to sound, to speak' (note: Rix [1998a:256—257] derives Greek ἀείδω from *h₂uejd- 'to sing'); Pokorny 1959:76—77 *au- *aued- 'to speak'; Walde 1927—1932.I:251—252

ued-*; Mann 1984—1987:45 **aued-* (əued-*, **aud-*, **əud-*) ‘to sing’, 1496 **ued-* ‘to speak, to utter’, and 1558 **uod-* ‘call, sound’; Watkins 1985:73 **wed-* (possibly oldest root form **əwed-* becoming **awed-*) and 2000:95 **wed-* ‘to speak’ (oldest form **₂wed-*); Mallory—Adams 1997:535 **ued-* ‘to raise one’s voice’; Boisacq 1950:15, 17 **ued-* (or **aued-*), and 99; Chantraine 1968—1980.I:21—22 Greek ἀείδω < **ḗ-Fε-ιδ-ειν*, dissimilated from **ḗ-Fε-Fδ-ειν*, I:26, and I:137—138; Hofmann 1966:4, 5, and 28; Frisk 1970—1973.I:22—23, I:26 *(*a*)*ued-*, and I:184 **aued-*; Wyatt 1972a:51—52 Greek ἀείδω < **weid-* ‘to make known’; Prellwitz 1905:8, 10, and 64; Beekes 1969:56—57 (Beekes rejects derivation of Greek ἀείδω from **ḗ-Fε-Fδ-ειν*), 89 **h₂uēd-* : **h₂eud-*, and 2010.I:23 **h₂ueid-*, I:27 (ἄηδῶ, ἄηδῶν ‘nightingale’ could be pre-Greek), I:168 **h₂ued-*; L. Meyer 1901—1902.I:23—24; Wharton 1890a:18; Polomé 1965:24 Greek ἄηδῶν < **Aw-e-Awd-*; Smoczyński 2007.1:710 **h₂uedH-* Fraenkel 1962—1965.II:177—178; Derksen 2015:484.

- D. Uralic: Finno-Ugrian: Finnish *vatustaa*, *vatvoa* ‘to dwell on something, to chatter’; Estonian *vada* ‘to chatter, to prattle, to jabber’.
- E. (?) Chukchi-Kamchatkan **vetyav-* ‘to speak’: Chukchi *wetyaw-* ‘to speak (out)’, *wetyaw* ‘speech, word’, *rə-wetyaw-* ‘to speak (with someone), to decide’; Alyutor *vityav-* ‘to decide’, (Palana) *nə-ta-vety-əη-qen* ‘talkative’; Koryak *vetyav-* ‘to reach agreement’, *nə-vetyəη-qen* ‘talkative’. Fortescue 2005:316.

Buck 1949:18.21 speak, talk. Hakola 2000:211, no 944.

797. Proto-Nostratic root **xwelʷ-*:

(vb.) **xwelʷ-* ‘to gulp down’;

(n.) **xwelʷ-a* ‘neck, throat’

- A. Dravidian: Malayalam *vēḷa* ‘throat’; Koḍagu *boḷe* ‘neck’; Gondi *warēr*, *verer*, *verer*, *veredi*, *varer*, *verer* ‘neck’, *verer*, *vederu*, *vedāgā* ‘throat’, *warer* ‘neck, throat’. Burrow—Emeneau 1984:506, no. 5547.
- B. Proto-Kartvelian **xwl-ep-*/**xwl-ip-* ‘to gulp (down), to choke’: Georgian *xvrep-*/**xvrip-*-, (Gurian) *xvlep-*/**xvlip-* ‘to gulp (down), to choke’; Mingrelian *xvip-* ‘to gulp (down), to choke’; Laz *xlap-*/**xlip-* ‘to gulp (down), to choke’; Svan *xwlip-* ‘to gulp (down), to choke’ (this may be a Zan loan). Klimov 1964:259 **xwlip-* and 1998:329 **xwl-ep-* : **xwl-ip-* ‘to gulp (down), to choke’; Fähnrich—Sardschweladse 1995:552 **xwlep-*/**xwlip-*; Fähnrich 2007:684—685 **xwlep-*/**xwlip-*.

Buck 1949:4.28 neck; 4.29 throat.

798. Proto-Nostratic root *x^wir- (~ *x^wer-):(vb.) *x^wir- ‘to make a loud noise, to make a shrill sound’;(n.) *x^wir-a ‘loud noise’

- A. Proto-Afrasian *x^wir- ‘to rumble, to sound, to snore’: Proto-Semitic *xar-ar- ‘to roar, to rumble, to snore’ > Arabic *ħarra* ‘to murmur, to bubble, to gurgle, to purl (of running water); to ripple, to trickle; to snore’, *ħarīr* ‘purl, murmur, ripple (of water)’, (reduplicated) *ħarħara* ‘to snore’; Akkadian *ħarāru* ‘to croak, to rumble’. Egyptian *ħr* (defective verb) ‘to say, to speak’, *ħrtw* ‘declaration, statement’, *ħrw* ‘voice, noise’; Coptic *hrow* [Ⲭⲣⲟⲟϥ] ‘voice, sound’; *hrubbai* [Ⲭⲣⲟϥⲃⲁⲓ], *hrmpe* [Ⲭⲣⲙⲡⲉ], *hrumpe* [Ⲭⲣⲟϥⲙⲡⲉ] ‘thunder’. Hannig 1995:611 and 614; Faulkner 1962:196; Erman—Grapow 1921:131 and 1926—1963.3:317—318, 3:318, and 3:324—325; Gardiner 1957:585; Černý 1976:295; Vycichl 1983:308, 309, and 311. Southern Cushitic: Proto-Rift *xiri- (< *x^wir-) ‘to rumble, to roar’ > Iraqw *xuray* ‘to rumble, to roar’. Proto-Rift *xiriʔus- ‘to rumble’ > Burunge *xuruʔus-* ‘to thunder’; Asa *hoʔorus-* ‘to snore, to growl’. Ehret 1980:370. Ehret 1995:232, no. 405, *x^wir- ‘to rumble’.
- B. Dravidian: Tamil *vīr-vīr-eṇal* onomatopoeic expression of screaming, shrieking, *vīr-eṇal* onomatopoeic expression of a sharp, shrill cry, *vīr-iṭu* ‘to cry out suddenly, to scream’; Malayalam *vīr-iṭuka* ‘to squeak, to bellow’, *vīr* ‘the roar of elephants, the grunt of pigs’; Kui *vere vere* ‘the squeal of a pig’. Burrow—Emeneau 1984:496, no. 5458.
- C. Proto-Kartvelian *xwr-en-/ *xwr-in- ‘to snore’: Georgian *xvren-/xvrin-* ‘to snore’; Mingrelian *xurxin-*, *xirxin-* ‘to snore’. Klimov 1964:259—260 *xwr-in- and 1998:329 *xwr-en- : *xwr-in- ‘to snore’.
- D. Proto-Indo-European **h¹wer-k^h*- ‘to cry, to squeal’: Old Church Slavic *vrěštq*, *vrěštati* ‘to cry, to squeal’; Czech *vřískat*, *vřeštět* ‘to cry, to whimper’; Lithuanian *verkiù*, *veĩkti* ‘to weep, to cry’, *verkšnà* ‘cry-baby’, *verksmas* ‘weeping, crying’. Mann 1984—1987:1519 **uerkijō* (**uerkskō*) ‘to squeal, to cry, to utter, to say’; Smoczyński 2007.1:737; Fraenkel 1962—1965.II:1226; Derksen 2015:497 **uerk-*.

Buck 1949:15.44 sound (sb.).

22.40. PROTO-NOSTRATIC * γ

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
γ -	γ -	\emptyset -	γ -	$\S h$ -	\emptyset -	\emptyset -	\emptyset -
$-\gamma$ -	$-\gamma$ -	$-\emptyset$ -	$-\gamma$ -	$-\S h$ -	$-\emptyset$ -	$-\emptyset$ -	$-\emptyset$ -

799. Proto-Nostratic root * γam - (~ * γam -):

(vb.) * γam - ‘to be or become dark; to cover, to hide’;

(n.) * γam -a ‘darkness; sunset, evening’

- A. Afrasian: Proto-Semitic * γam -am- ‘to be or become dark; to cover, to hide’ > Arabic *ḡamma* ‘to cover, to veil, to conceal; to be overcast’, *ḡamām* ‘clouds’; Sabaean *ḡmm* ‘clouds’; Šheri / Jibbāli *āgmīm* ‘to make a smoke-screen, dust-cloud’, *ḡiūm* ‘heat-mist, fog’; Mehri *āgmēm* ‘to see only as a blurred image, to see as in a fog’; Hebrew *‘āmam* [אָמַם] ‘to darken, to dim’, (reduplicated) *‘im‘ēm* [אִמְעַמְ] ‘to dim, to darken, to obscure’; Geez / Ethiopic *‘amama* [ፀመመ] ‘to be dark, black, dirty’. Leslau 1987:63; Klein 1987:475 and 476; Zammit 2002:310. Proto-Semitic * γam -ad- ‘to cover, to hide, to conceal; to obscure; to set (sun)’ > Arabic *ḡamada* ‘to cover, to conceal, to veil; to close the eyes; to sheathe’; Šheri / Jibbāli *ḡōd* ‘to be hidden, obscured; to obscure; to set (sun)’, *oḡōd* ‘to go at sunset; to be covered in gloom after the death of the best member of the family’, *ḡumd* ‘sunset’; Mehri *ḡamēd* ‘sunset’; Ḥarsūsi *ḡemōd* ‘to set, to go down in the evening’. Arabic *ḡamā* (*ḡmw*) ‘to cover’, *ḡamūs* ‘deep; dark, obscure; difficult’. [Orël—Stolbova 1995:229, no. 1019, **ḡum*- ‘to cover, to shut’.]
- B. Proto-Kartvelian * γam - ‘(last) night’: Georgian *ḡam-e* ‘night, at night’, *sa-ḡam-o* ‘evening’; Laz *ḡom-a(n)* ‘yesterday’; Mingrelian *ḡum-a* ‘last night’; (?) Svan *ḡam*- in *li-ḡam-n-e* ‘to wait’. Klimov 1964:200—201 **ḡamen*- and 1998:220 **ḡame*- ‘last night’; Schmidt 1962:138; Fähnrich—Sardshweladse 1995:384 **ḡam*-; Fähnrich 2007:476—477 **ḡam*-. Note: Klimov rejects the comparison of the Svan form.
- C. Yukaghir (Southern / Kolyma) *emu*- ‘dark’, *emidej*- ‘to grow dark’, *embə*- ‘black’, *emid’ə* ‘blackness, birthmark’, *emil* ‘night’, *emike*- ‘to darken’, *am-mal*- (< **em-mal*-) ‘to spend the night’. Nikolaeva 2006:157—158.
- D. Proto-Chukchi-Kamchatkan **amecat*- ‘to disappear, to hide’: Chukchi *amecat*- ‘to disappear, to hide’; Kerek *amicḡan* ‘to disappear, to hide (?)’, *pəḷka ameḡnatək* ‘after sunset’; Alyutor (Palana) *amecat*- ‘to disappear, to hide’; Kamchadal / Itelmen *amelat-kas* ‘to disappear, to hide’ (this may be a loan from Chukotian). Fortescue 2005:21.

Buck 1949:1.62 darkness; 12.26 cover (vb.); 12.27 hide, conceal; 14.42 night.

800. Proto-Nostratic root *γil- (~ *γel-):

(vb.) *γil- ‘to bear, to give birth, to beget (of humans)’;

(n.) *γil-a ‘child, youth, young person’; (adj.) ‘young, immature’

- A. Proto-Afrasian *γil- ‘(vb.) to give birth, to beget (of humans); (adj.) young, immature; (n.) child, youth, young person’: Proto-Semitic *γil-m- ‘youth, young person; young man, lad, boy’ > Hebrew (m.) *‘elem* [עֶלֶם] ‘young man’, (f.) *‘almāh* [אַלְמָה] ‘young woman, maiden’; Imperial Aramaic *‘lym* ‘servant, slave’; Syriac *‘əlaymā* ‘boy, youth, young man, servant’; Phoenician *‘lm* ‘youth’, *‘lmt* ‘young woman’; Palmyrene *‘lmt* ‘female servant, female slave’; Nabatean *‘lym* ‘servant’; Ugaritic *glm* ‘boy’, *glm* ‘girl; Sabaeen *glm* ‘child, boy, youth’; Arabic *ḡulām* (pl. *ḡilmāt*) ‘boy, youth, lad; slave, servant, waiter’, *ḡulāmat* ‘girl, slave-girl’. Murtonen 1989:320; Klein 1987:473; Tomback 1978:246; Zammit 2002:308. Cushitic: Proto-Sam **ilem* ‘small boy’ > Somali *ilmo* ‘child, baby’; Boni *ēlej* ‘boy’. Heine 1978:65. Proto-Highland East Cushitic **il-* ‘to give birth, to beget (of humans)’ > Gedeo / Darasa *il-* ‘to give birth, to beget’, *ila* ‘generation’, *ildaatt’e* ‘fertile (of woman)’, *ileenša* ‘generation’; Sidamo *il-* ‘to give birth, to beget (of humans)’, *il-ama* ‘relative’, *il-aasinco* ‘fertile (of woman)’, *ilama* ‘generation’; Kambata *il-* ‘to give birth, to beget (of humans)’, *il-amu* ‘relative’, *il-mucco* ‘last born; brother, youngest’. Hudson 1989:246—247, 323—324, and 374.
- B. Proto-Dravidian *ila- (< *ilya-) ‘child, youth, young person’: Tamil *ila*, *ilam*, *ilai* ‘young, tender’, *ilai* ‘youth, tender age’, *ilaimai* ‘youth’, *ilaicci* ‘younger sister’, *ilañan* ‘younger brother, lad, young man’, *ilaitu* ‘that which is young and not fully developed’, *ilaiyar* ‘youths, young men, servants’, *ilaiyavar*, *ilaivār* ‘young women’, *ilaiyavan* ‘younger person, lad, youth, younger brother’, *ilaiyan*, *ilaiyān*, *ilaiyōn* ‘younger brother’, *ilaku* (*ilaki-*) ‘to sprout afresh, to send forth tender shoots’, *ilacu* ‘that which is young or tender’, *ilaval* ‘younger brother, lad, son’, *ilamai* ‘childhood, youth, tenderness, amorousness, immaturity of knowledge and intellect’, *ilantai* ‘youth, tender years’; Malayalam *ila* ‘tender, young, weak’, *ilappam* ‘state of being young, juvenility, tenderness’, *ilama* ‘youth, tender age, junior *rāja*’, *ilayavan* ‘young, younger’; Kota *eḷ* ‘time of youth; young’; Toda *eḷ* ‘young; tipcat (the small stick hit in the game)’, *eḷk* ‘time of youth’; Kannada *eḷ*, *eḷa*, *eḷe* ‘tenderness, youth, weakness, moderation’, *eḷaku* ‘young age’, *eḷatu*, *eḷadu*, *eḷedu* ‘that is tender, young’, *eḷetana* ‘tenderness, youth’; Koḍagu *ēleē* ‘youth’; Tulu *eḷatu* ‘tender, green, not fully grown’, *lattu* ‘young, tender, unripe, green, imperfect’, *ellyāye* ‘a youth, junior, minor’, *lambu* ‘tender’, *lambè* ‘a tender fruit’; Telugu *lēta*, *lē-* ‘young, tender, light, delicate, soft’, *lēka* ‘servant’, *lēga* ‘a sucking or young calf’, *lēma* ‘a woman, tender’, *ela* ‘young, tender, delicate, slight, gentle’, *ela-nāga* ‘damsel’, *eḍa* ‘tender, young’, *nelāta*, *nelātuka* ‘woman’;

Kolami *le-ŋga* ‘calf’; Naiki *lēŋga* ‘calf’, *lēta* ‘young (of infants)’; Parji *iled* ‘young man, youth’, *ile* ‘young woman, girl’; Gadba (Ollari) *ile* ‘bride’, *iled* ‘grown-up girl, woman’, *ilend* ‘bridegroom’; Konḍa *lēŋa* ‘calf’; Kui *lāvenju* ‘grown-up boy, young man, youth’, *lāa* ‘grown-up girl, young woman’, *leti* ‘soft, yielding’; Kuwi *lāa* ‘virgin’; Kuṛux *lidum* ‘soft’; (?) Brahui *ilum* ‘brother’. Burrow—Emeneau 1984:50—51, no. 513.

- C. Uralic: Proto-Finno-Ugric **ilmə* ‘human, human being, man, person’ > Finnish *ilminen* (= *ihminen*) ‘human, human being, man’; Vogul / Mansi (Konda) *ēlēm-kholēs* ‘person’. (Cf. Rédei 1986—1988:81—82, under **ilma* ‘heaven, weather; God’.)
- D. Proto-Chukchi-Kamchatkan **əllæŋju* ‘younger (brother)’: Chukchi *ətlenji* (pl. *ətlenjut*) ‘younger brother’; Kerek *əlla* ‘younger brother (of boy)’; Koryak *əccaŋi*, *əllaŋi* ‘younger (brother)’; Alyutor *əllaŋi* (stem *əllaŋju*-) ‘younger brother’; Kamchadal / Itelmen (Eastern) *ilulin* ‘younger (son or daughter)’, (Western) *il, ul* ‘younger’. Fortescue 2005:340.

Buck 1949:4.71 beget (of father); 14.14 young. Dolgopolsky 2008, no. 713, **gil[U]* ‘boy, young man’.

801. Proto-Nostratic root **ɣor-*:

(vb.) **ɣor-* ‘to leave, to go away, to depart; to separate; to abandon’;

(n.) **ɣor-a* ‘leaving, departure; separation; abandonment’

Extended form:

(vb.) **ɣor-V-b-* ‘to leave, to go away, to depart; to separate; to abandon’;

(n.) **ɣor-b-a* ‘leaving, departure; separation; abandonment’

- A. Afrasian: Proto-Semitic **ɣar-ab-* ‘to leave, to go away, to depart’ > Arabic *ġaraba* ‘to go away, to depart, to absent (oneself), to withdraw (from), to leave (someone, something); to go to a foreign country; to expel from the homeland, to banish, to exile’, *ġarba-t* ‘removal, departure’, *ġurba-t* ‘absence from one’s homeland; separation from one’s native country, banishment, exile; life, or place, away from home’; Mehri *əġtərōb* ‘to be abroad, away from home’, *ġərbēt* ‘strange place, unknown place’; Šheri / Jibbāli *əġtérēb* ‘to be abroad, away from home’, *ġərbēt* ‘strange, unknown place; abroad’. Perhaps also Punic *ʿrbt* ‘desolation’ (?) in *kl ʿrbt* ‘the voice of desolation’ (interpretation highly uncertain) (cf. Hoftijzer—Jongeling 1995:887).
- B. Dravidian: Gondi *ori-* ‘to move aside’, *vorke* ‘aside’; Tamil *oruvu* (*oruvi-*) ‘to abandon, to renounce, to pass over, to escape, to be excepted’, *oruvu*, *orūu*, *orūutal* ‘leaving, separation, renunciation’. Burrow—Emeneau 1984: 95, no. 993.
- C. Proto-Indo-European **ǵhorbʰ-* (with non-apophonic *-o-*) ‘to be or become separated, abandoned, bereft’, **ǵhorbʰ-o-s* ‘(n.) orphan, servant; (adj.) bereft, abandoned, deprived (of)’: Sanskrit *ārbha-ḥ* ‘little, small; child’;

Armenian *orb* ‘orphan’; Greek ὀρφανός ‘orphan, without parents, fatherless; (metaph.) abandoned, bereft’; Latin *orbus* ‘bereft, deprived by death of a relative or other dear one; bereaved (of); childless; an orphan’; Old Irish *orb* ‘heir’, *orb(b)e*, *orpe* ‘inheritance’; Gothic *arbi* ‘inheritance’, *arbja* ‘heir’ (f. *arbjō* ‘heiress’); Old Icelandic *arfi* ‘heir, heiress’, *arfr* ‘inheritance, patrimony’, *erfa* ‘to inherit’, *erfð* ‘inheritance’; Old Swedish *arve*, *arver* ‘heir’; Danish *arv* ‘heir’; Norwegian *arv* ‘heir’; Old English *ierfa*, *irfa* ‘heir’, *ierfe* ‘inheritance, bequest, property’, *erfe*, *irfe*, *yrfe* ‘inheritance, (inherited) property’, *irfan*, *yrfan* ‘to inherit’; Old Frisian *erva* ‘heir’, *erve* ‘inheritance, inherited land, landed property’; Old Saxon *erbi* ‘inheritance’; Middle Dutch *erve* ‘heir’; Old High German *arbi*, *erbi* ‘inheritance’, *arbo*, *erbo* ‘heir’ (New High German *Erbe* ‘inheritance; heir’); Old Church Slavonic *rabъ* ‘servant, slave’; Russian *rab* [pa6] ‘slave, serf, bondsman’ (f. *rabá* [pa6a] ‘slave, serf, bondmaid’); Hittite (3rd sg. pres. act.) *ḫar-ap-zi* ‘to separate oneself and (re)associate oneself elsewhere’. Pokorny 1959:781—782 **orbho-* ‘weak, abandoned; slave, orphan’; Walde 1927—1932.I:183—184 **orbho-*; Mallory—Adams 1997:411 **h₂/h₃orbhos* ‘orphan, heir’; Mann 1984—1987:884 **orbhākos* ‘young, tender; deprived, blind’, 884 **orbhānikos* ‘young, minor, underage’, 884—885 **orbhāt-*, **orbhit-* ‘deprived, bereft; deprivation, bereavement’, 885 **orbhijos* adjectival form of **orbhos*, 885 **orbhmmos* (**orbhmos*) ‘bereft, deprived’, 885—886 **orbhos*, *-ijos*, *-iā* ‘deprived, bereft; child, orphan’; Watkins 1985:46 **orbh-* ‘to put asunder, to separate’ (suffixed form **orbh-o-* ‘bereft of father’) and 2000:60 **orbh-* ‘to change allegiance, to pass from one status to another’ (oldest form **₂orbh-*, colored to **₂orbh-*) (suffixed form **orbh-o-* ‘bereft of father’ also ‘deprived of free status’); Gamkrelidze—Ivanov 1995.I:399, I:651 **orbho-* ‘deprived of one’s share, deprived of possessions; orphan; servant, slave’, I:781 **orbho-*; Mayrhofer 1956—1980.I:52 and 1986—2001.I:119—120; Beekes 2010.II:1113—1114 **h₃orbh-o-*; Boisacq 1950:719 **orbho-s*; Frisk 1970—1973.II:431 **orbho-s*; Chantraine 1968—1980.II:829 **orbho-*; Hofmann 1966:240 **orbhos*; Matirosyan 2008:535—536 **Horbh-o-*; Hübschmann 1897:482, no. 335, **orbhos*; Walde—Hofmann 1965—1972.II:219—220 **orbhos*, **orbhjo-*; Ernout—Meillet 1979:466—467; De Vaan 2008:433 **h₃orbh-o-*; Derksen 2008:373 **h₃erbh-*; Kroonen 2013:33 Proto-Germanic **arbja-* ‘inheritance’ (< **h₃orbh-jō-*), 33 Proto-Germanic **arbjān-* ‘heir’ (< **h₃orbh-jōn-*); Orël 2003:22 Proto-Germanic **arbaz*, 22 Proto-Germanic **arbjaz*; Lehmann 1986:41—42 **orbho-*; Feist 1939:56 **orbhjo-*; De Vries 1977:12 and 13; Falk—Torp 1910—1911.I:34; Torp 1919:7; Boutkan—Siebinga 2005:93 **h₃erbh-*; Walshe 1951:48; Kluge—Mitzka 1967:170 **orbho-*; Kluge—Seebold 1989:183—184 **orbhjo-*, **orbho-*; Kloekhorst 2008b:311—312 **h₃erbh-to-*; Puhvel 1984— .3:176—183. Note: Indo-European loan in Uralic (Finno-Ugrian): Proto-Finno-

Ugrian **orpa* ‘orphan’ > Finnish *orpo* ‘orphan; orphaned’; Karelian *orboi* ‘orphan’; Saami / Lapp (Northern) *oarbes* ‘without father, without mother, orphan; lonely and deserted’; Ostyak / Xanty *-uri* in *jəŋkuri* ‘orphan’; Mordvin (Erza) *uros*, (Moksha) *urōs* ‘orphan’; Hungarian *árva* ‘orphaned’. Joki 1973:297—298 Proto-Finno-Ugrian **orpa(-s)* ~ **orva(-s)*; Rédei 1986—1988.I:343 Proto-Finno-Ugrian **orpa(sə)* ~ **orwa(sə)* ‘orphan’; Sammallahhti 1988:542 Proto-Finno-Ugrian **orpå* ‘orphan’, Proto-Finno-Permian **orpa*; Collinder 1955:134, 1960:413 Proto-Finno-Ugrian **orpo* ‘orphan’, and 1977:145; Aikio 2020:79—80 **orpa* / **orpasi* ‘orphan’ (“A loan from some early reflex PIE **Horb^{ho}-* ...”).

Buck 1949:2.75 orphan; 11.48 heir.

22.41. PROTO-NOSTRATIC *y

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
y-	y-	y-/Ø-	y-/Ø-	y-	y-		y-
-y-	-y-	-y-		-y-	-y-	-y-	-y-

802. Proto-Nostratic root *yaʔ- (~ *yəʔ-):

(vb.) *yaʔ- ‘to tie, to bind, to gird’;

(n.) *yaʔ-a ‘binding, bond, bandage; belt, girdle’

- A. Afrasian: Egyptian *ibm* ‘to tie, to bind’, *ibdt* ‘net’. Gardiner 1957:551; Hannig 1995:24 and 27; Faulkner 1962:9 and 10; Erman—Grapow 1921:6 and 1926—1963.1:31, 1:36.
- B. Dravidian: Tamil *yā* ‘to bind, to tie up, to dam up, to confine, to compose (a poem), to tell, to utter, to be inseparable from’, *yākkai* ‘tie, bond, body’, *yāppu* ‘binding, bond, meter, prosody, affection’, *yāttu* ‘stitch’, *yāttār* ‘close friends’, *ā* ‘to bind’, *āppu* ‘bandage, tie, body’, *āttan* ‘friend’, *āttam* ‘friendship, intimacy’, *ākkai* ‘body, strips of fiber used in thatching’; Malayalam *ākka* ‘a strip of fiber used in thatching’; Kota *e-p* ‘long sticks used as outside layer (that is, binding) of bundle of small twigs for firewood’; Kuṛux *hēʔenā* (*hēc-*) ‘to tie, to imprison, to unite in one body’, *hērnā* ‘to be tied, to be put in bonds, to be united together’, *ēp* ‘string, cord, rope’; Malto *eye* (*éc-*) ‘to tie, to bind’, *ēpu* ‘fibers of a wild plant of which cord is made’. Burrow—Emeneau 1984:465, no. 5149.
- C. Proto-Indo-European *yoʔ-s- (> *yōs-) ‘to gird’: Avestan *yāsta-* ‘girt, girded’, (3rd sg. pres.) *yāñhayeiti* ‘to gird’; Kafiri (Prasun) *yāsē* ‘belt’; Greek ζώννυμι ‘to gird, to gird around the loins’, ζωστός ‘girded’, ζωστήρ ‘girdle’, ζῶμα (< *ζωσ-μα) ‘that which is girded, a girded frock or doublet’, ζώνη (< *ζωσ-νᾱ) ‘belt, girdle’; Albanian *n-gjesh* ‘to gird’; Lithuanian *júosiu*, *júosti* ‘to gird’, *júostas* ‘girded, girt’, *júosta* ‘belt, waistband’, *juosmuō* ‘waist, loins’, *juosėti* ‘to wear a belt or girdle’; Old Church Slavonic *po-jašq*, *po-jasati* ‘to gird’, *po-jasъ* ‘belt’; Czech *pás* ‘belt’; Polish *pas* ‘belt’; Russian *pójas* [пояс] ‘belt’. Perhaps also Sanskrit *rāsnā* ‘girdle’ if from *yās-nā, with *y- > *r- under the influence of *raśanā* ‘rope, cord, strap; vein, bridle, girdle’. Rix 1998a:275—276 **ieh*₃s- ‘to gird’; Pokorny 1959:513 **iō[u]s-* : **iūs-* ‘to gird’, **iōs-to-s* ‘girt, girded’, **iōs-men-* ‘girdle, belt’; Walde 1927—1932.I:209 **iōs-*; Mann 1984—1987:452 **iōs*i*ō* (**iōsmi*, **iōsnu-*) ‘to gird, to gird on, to gird oneself’, 452 **iōsmn-* (**iōsmā*, **iōsmo-*) ‘girth, belt’, 453 **iōst-* ‘girt, girdle’; Watkins 1985:79 **yōs-* and 2000:103 **yōs-* ‘to gird’ (oldest form **ye*₂*s-*, colored to **yo*₂*s-*, contracted to **yōs-*); Mallory—Adams 1997:223—224 **ieh*₃s- ‘to

gird'; Mayrhofer 1956—1980.III:57; Boisacq 1950:312 **jō(u)-s-*; Frisk 1970—1973.I:617—618 Greek ζωστός < **jōs-tos*; Hofmann 1966:104 **jōs-*; Beekes 2010.I:504—505 **ieh₃s-*; Chantraine 1968—1980.I:402 **yōs-*; Huld 1983:99; Orël 1998:299; Smoczyński 2007.1:239; Fraenkel 1962—1965.I:198; Derksen 2008:409 **ie/oh₃s-o-* and 2015:214—215 **ieh₃s-*; Wodtko—Irslinger—Schneider 2008:391—392 **ieh₃s-*.

- D. Proto-Uralic **yāye* 'belt, band, strap, girdle': Votyak / Udmurt *jä* 'broad girth-strap, band (around a sheaf)'; Zyrian / Komi *ji, jy* 'girth, girdle; band (around a sheaf)'; Yurak Samoyed / Nenets *ni* 'girdle', (Forest) *niina, wijä, niwija* (*wijä, wija* 'strap'); Tavgi Samoyed / Nganasan *nieja* 'strap'; Yenisei Samoyed / Enets (Hantai) *niojo*, (Baiha) *niejjo* 'strap'; Selkup Samoyed *küü, t'ü, cö* 'strap', *kündi-* 'to put on the girdle'; Kamassian *t'i, žii* 'girdle'. Collinder 1955:17—18, 1960:406 **jäje*, and 1977:38; Rédei 1986—1988:90 **jäje*; Décsy 1990:99 **jäjä* 'belt'; Janhunen 1977b:102 **n'i* (? **n'iä*). Yukaghir (Southern / Kolyma) *jö*: 'belt', *jodo-* 'to tie, to bind', *jodul, jodu-, jodi*: 'winding', *jodol* 'bundle, package', *jodutä-* 'to wind, to twist'. Nikolaeva 2006:190 and 192.

Buck 1949:6.57 belt, girdle. Illič-Svityč 1971—1984.I:278—279, no. 143, **jaHU* (or **joHΛ*) 'bandage, girdle'; Bomhard—Kerns 1994:598—599, no. 472; Hakola 2000:220, no. 988.

803. Proto-Nostratic (n.) **yam-a* 'water, sea':

- A. Proto-Afrasian **yam-* 'sea': Proto-Semitic **yam(m)-* 'sea' > Akkadian *yāmu* 'sea' (West Semitic loan); Amorite *yammum* 'sea'; Ugaritic *ym* 'sea'; Hebrew *yām* [יָם] 'sea'; Phoenician *ym* 'sea'; Aramaic *yammā* 'sea'; Arabic *yamm* 'open sea'. Murtonen 1989:216; Klein 1987:259. Late Egyptian *ym* 'sea' (Semitic loan); Coptic *yom* [ϣⲟⲙ] 'sea'. Hannig 1995:47; Faulkner 1962:18; Erman—Grapow 1921:12 and 1926—1963.1:78; Gardiner 1957:556; Vycichl 1983:63; Černý 1976:46. Cushitic: Beja / Beḍawye *yam* 'water'. Central Chadic **yami-* 'water' > Tera *?yim* 'water'; Margi *?imi* 'water'; Higi Nkafa *jiemi* 'water'; Fali Kiria *jiami* 'water'; Lamang *imi/limi* 'water'; Matakam (Kaffa) *iyām/yām* 'water'; Sukur *jiam sətə/yām* 'water'; Gisiga *yam* 'water'; Musgoy *yim* 'water'; Daba *jem/yim* 'water'; Musgum-Pus *yim* 'water'. Jungraithmayr—Ibriszimow 1994.II:340—341. Ehret 1995:475, no. 1002, **yam-* 'body of water', **yam-* 'to submerge, to go under water'; Orël—Stolbova 1995:536, no. 2575, **yam-* 'water, sea'.
- B. Uralic: Proto-Samoyed **yama* 'sea' > Yurak Samoyed / Nenets *jām?*, (Forest) *jeam* 'river, sea'; Tavgi Samoyed / Nganasan *jam* 'sea'. Hajdú 1968:59.
- C. Chukchi-Kamchatkan: Proto-Chukotian **jæməlqə(n)* 'swampy place' > Koryak *jeməlqən* 'swamp, wet tundra'; Alyutor *jaməsqaṇ* 'swamp, wet

tundra'. Fortescue 2005:111. According to Fortescue, **jæmɛlqə(n)* contains the derivational suffix *-*lq(ən)* '(on) top of'.

Buck 1949:1.31 water; 1.32 sea. Illič-Svityč 1971—1984.I:279—280, no. 144, **jam* (?) 'water'; Bomhard—Kerns 1994:598, no. 471; Dolgopolsky 1998:25, no. 13, **yamV* 'water body' ('sea, lake' > 'pond'), 'water' and, 2008, no. 2633, **yāmV* 'body of water' ('sea, lake') → 'water'.

804. Proto-Nostratic root **yan-* (~ **yən-*):

(vb.) **yan-* 'to say, to speak';

(n.) **yan-a* 'saying, word, expression'

- A. Proto-Afrasian **yan-* 'to say, to speak': Egyptian *in* 'to say'. Hannig 1995:73; Faulkner 1962:22; Gardiner 1957:554; Erman—Grapow 1921:13 and 1926—1963.1:89. Berber: Tuareg *ənn* 'to say', *tinawt* 'act of speaking, speech, discourse, spoken words, comments made with the intention of causing harm', *tənna* 'act of speaking, speech, discourse'; Ghadames *ən* 'to say'; Wargla *ini* 'to say, to ask, to call, to name'; Mzab *ini* 'to say'; Tamazight *ini* 'to say, to tell, to call'; Tashelhiyt / Shilha *ini* 'to say, to tell'; Riff *ini* 'to say, to speak'; Kabyle *ini* 'to say, to ask'; Chaouia *ini* 'to say, to ask'. Highland East Cushitic: Gedeo / Darasa *yaan-em-* 'to talk, to speak'. Hudson 1989:265. Proto-Afrasian apparently had several stems beginning with *y- with similar meanings: **yan-* 'to say, to speak' (see above), **yo-* 'to say' (cf. Ehret 1995:471, no. 991), **yah-* 'to respond, to speak out in response' (cf. Ehret 1995:472, no. 996), **ya-* 'to call, to speak' (cf. Orël—Stolbova 1995:534, no. 2564).
- B. Proto-Dravidian **yan-* 'to say': Tamil *en* (*enp-*, *enr-*) 'to say, to utter, to express', *enkai* 'saying', *enpi* 'to make one establish or prove (as a statement)'; Malayalam *ennuka* 'to sound, to say, to think; to sound thus, to appear thus, to be such' (auxiliary verb); Kota *in-* (*iḍ-*) 'to say (so-and-so)'; Toda *in-* (*iḍ-*) 'to say (so-and-so)'; Kannaḍa *en-* (*end-*), *ennu*, *an-* (*and-*), *annu* 'to say, to speak, to call, to name', *enisu*, *ennisu*, *enasu*, *anasu*, *anisu*, *annisu* 'to cause to say, to cause oneself to say, to cause to be called, to cause oneself to be called, to be called, to be spoken of', *embu*, *imbu* 'a saying, a word', *enuha*, *ennike*, *ennuvike*, *annuvike* 'saying, calling, naming'; Koḍagu **enn-* (*emb-*, *end-*) 'to say (so-and-so)'; Tuḷu *anpini*, *inpini* 'to say, to speak', *endruni* 'to say fully'; Telugu *anu* 'to say, to utter, to speak'; Kolami *en-* (*ent-*), *in-* 'to say (so-and-so), to be said to be (so-and-so)'; Naikri *en-* (*ent-*) 'to say'; Naiki (of Chanda) *en-* (*enḍ-*) 'to say'; Parji *en-* (*end-*, *ett-*) 'to say (so-and-so)'; Gadba (Salur) *in-* 'to say (so-and-so)'; Gondi *indānā* (*inj-*) 'to say, to call', *ind-* (*itt-*), *in-* 'to say'; Konda *in-* (*ir-*) 'to say'; Pengo *in-* (*ic-*) 'to say'; Maṇḍa *in-* (*ic-*) 'to say'; Kui *inba-* (*is-*) 'to say, to be articulate'; Kuwi *injali*, *innai*, *in-* (*icc-*) 'to say'; Malto *āne* 'to think, to say, or do thus'; Kuṛux *ānnā* 'to say, to tell, to

salute as, to point out, to designate'. Burrow—Emeneau 1984:84, no. 868. McAlpin (1971:96) reconstructs Proto-Dravidian **en-* 'to say' and Proto-Elamo-Dravidian **en-* 'to say'. The Elamite (Middle Elamite and Royal Achaemenid Elamite) cognate is *na-* 'to say' (cf. Achaemenid Elamite *na-an-gi* 'I said', *na-an-ri* 'he says; he said', *na-um-be* 'they say; they said', etc.). McAlpin notes: "[p]resumably the P[roto-]E[lamite] form is **ena-*".

Buck 1949:18.21 speak, talk; 18.22 say; 18.26 word. Bomhard—Kerns 1994:599—600, no. 473; Illič-Svityč 1971—1984.I:280—281, no. 146, **jAna* 'to talk'; Dolgopolsy 2008, no. 2635, **yän[h|ʔ]V* (or **änh|ʔV* ??) 'to speak, to say'.

805. Proto-Nostratic root **yaw-* (~ **yəw-*):

(vb.) **yaw-* 'to produce young';

(n.) **yaw-a* 'youth, young person, child'; (adj.) 'young'

- A. Proto-Afrasian **yaw-* 'to produce young': Egyptian *iwr* 'to conceive a child, to become pregnant'; Coptic *ōō* [ⲱⲱ] 'to conceive a child, to become pregnant', (qualitative) *eet* [ⲉⲉⲧ] 'to be pregnant'. Hannig 1995:36; Erman—Grapow 1921:9 and 1926—1963.1:56; Gardiner 1957:552; Faulkner 1962:13; Vycichl 1983:248; Černý 1976:227. Proto-Cushitic **yaw-* ~ **yuw-* 'child' > Proto-Rift **ya-* 'child' > Burunge (pl.) *yaʔay* 'children'; Kʼwadza *yoʔo* 'child'. Ehret 1980:384 (according to Ehret, Alagwa *hati* 'child', *haʔay* 'children' are from a different root). Chadic: Ngizim *ʔàwú* 'to bear, to give birth (human, animal, plant)'; Hausa *yááròò* 'boy, child', *ʔáá* 'daughter'; Higi Nkafa *ye* 'to give birth'; Matakam *ya* 'to give birth'; Musgoy *ye* 'to give birth'; Kabalay *yà̀yà̀* 'to give birth'; Somray *yà̀* 'to give birth'. Schuh 1981:178; Jungraithmayr—Ibriszimow 1994.I:193 **yw* ~ **wy* 'to give birth' and II:74—75 and II:160—161. Ehret 1995:476, no. 1004, **yaw-* 'to produce young'.
- B. Proto-Indo-European **yew-/yow-/yu-* '(adj.) young; (n.) youth, young person' in: **yuwen-*, **yuwn̥kʰos* 'young'; **yuwn̥th-eA*, *-os*, *-is* 'youth, young person'; Sanskrit *yúvan-*, *yūn-* 'young, youthful; young man', *yuvatī-h* 'young woman', *yuvaká-h* 'youthful'; Avestan *yvan-*, *yūn-* 'youth, young man'; Latin *iuuencus* '(adj.) young; (n.) a young man', *iuvenca* 'a young woman, a maiden', *iuventa* 'youth', *iuvenis* '(adj.) young, youthful; (n.) a young man, a young woman, one in the prime of life (between the ages of 20 and 45)', *iuventās* 'youth, the time of youth', *iuventus* 'youth, prime of life'; Umbrian *iuengar* (acc. pl. *iuenga*, *iveka*) 'a young cow, heifer', (dat. pl.) *iouies* 'young men' (acc. pl. *iouie*); Old Irish *oac*, *óac* 'young' (comparative *óa*, superlative *óam*), *óetiu*, *óitiu* 'youth'; Old Cornish *iouenc* 'young'; Breton *iaouank* 'young' (comparative *iaou*); Welsh *ieuanc* 'young' (comparative *iau*); Gothic *juggs* 'young', *junda*

‘youth’; Old Icelandic *ungr* ‘young’; Faroese *ungur* ‘young’; Norwegian *ung* ‘young’; Swedish *ung* ‘young’; Danish *ung* ‘young’; Old English *geong* ‘young, youthful’, *geogop* ‘(period of) youth; young persons, youth; new-born animals’; Old Frisian *jung* ‘young’, *jogethe* ‘youth’; Old Saxon *jung* ‘young’, *juguð* ‘youth’; Dutch *jong* ‘young’, *jeugd* ‘youth’; Old High German *jung* ‘young’ (New High German *jung*), *jugund* ‘youth, adolescence’ (New High German *Jugend*); Lithuanian *jáunas* ‘young’; Latvian *jaúns* ‘young’; Old Church Slavic *junъ* ‘young’. Pokorny 1959:510—511 **ieu-* ‘young’ (positive **iuyen-* [∶ **iün-*], comparative **ieu-ijos*); Walde 1927—1932.I:200—201 **ieu-* (positive **iuyen-* [∶ **iün-*], comparative **ieu-ijos*); Mann 1984—1987:447 **ieunos* (**ieunos*, **ieunos*, -is) ‘young’, 447 **ieuntā* (**ieuntā*, **ieunātā*, **iūntā*) ‘early life, youth’, 448 **ieunkos* (**iounk-*, **iūnk-*) ‘young creature, young person’; Mallory—Adams 1997:655 **h₂ieu-* ‘young’ and 655—656 **h₂iuh_x-h₂kós* ‘youth’; Watkins 1985:79 **yeu-* (suffixed zero-grade form **yuwen-*) and 2000:103 **yeu-* ‘vital force, youthful vigor’ (suffixed zero-grade form **yuwen-*); Vendryès 1959— :O-18; Ernout—Meillet 1979:330—331; Walde—Hofmann 1965—1972.I:735—736 **iuyen-*; De Vaan 2008:317—318; Orël 2003:207 Proto-Germanic **junǵalingaz*, 207—208 **junǵaz*, 208 **junǵōn*; Kroonen 2013:274—275 Proto-Germanic **junga-* ‘young’ and 276 **ju(w)unpi-* ‘youth’; Feist 1939:303—304 **iūnpkós*, **iūnpkós* and 304—305 **iūntā*, **iūntis*; Lehmann 1986:212 **yeHw-* and 213; De Vries 1977:635 **yuyen-*; Falk—Torp 1903—1906.II:414—415; Torp 1919:837; Onions 1966:1021 **juwen-*, **jūn-*; Klein 1971:838 **yuwṇkós*; Boutkan—Siebinga 2005:205—206; Kluge—Mitzka 1967:335 **iūnpk-kos*; Kluge—Seebold 1989:342 and 343 **ju(w)ṇ-*; Derksen 2008:208 **h₂i-eu-Hn-o-*; Smoczyński 2007.I:230—231; Fraenkel 1962—1965.I:190—191; Mayrhofer 1956—1980.III:23—24; Bartholomae 1904:1305.

Buck 1949:14.14 young.

806. Proto-Nostratic (Eurasian only) (n.) **yiw-a* (~ **yew-a*) ‘grain’:

- A. Proto-Indo-European **yewo-* ‘grain’: Sanskrit *yáva-h* ‘grain, barley’; Avestan *yava-* ‘grain’; Greek (f. pl.) ζεαί ‘grain, spelt’; Lithuanian *jāvas* (pl. *javai*) ‘grain, crop’. Pokorny 1959:512 **ieuo-* ‘grain’; Walde 1927—1932.I:202—203 **ieuo-*; Mann 1984—1987:448—449 **ieuos*, -es- (**ieui(ə)-*) ‘a grain (barley, spelt)’; Mallory—Adams 1997:236 **ieuos* ~ **ieum* ‘grain (particularly barley?)’; Gamkrelidze—Ivanov 1984.II:655—656, II:928 **ieuo-* and 1995.I:565, I:821 **yewo-* ‘barley’; Watkins 1985:79 **yewo-* 2000:103 **yewo-* ‘grain’; Mayrhofer 1956—1980.III:9—10; Boisacq 1950:307 **ieu-ia*; Beekes 2010.I:496—497 **ieuh₁-*; Chantraine 1968—1980.I:397; Hofmann 1966:102 **ieu-ia*; Frisk 1970—1973.I:608—

609 **ieuo-*; Smoczyński 2007.1:232; Fraenkel 1962—1965.I:192; Derksen 2015:210 **ieu-o-*; Wodtko—Irslinger—Schneider 2008:407—409 **ieyh₁-*.

- B. Uralic: Proto-Finno-Permian **yewä* (> Proto-Finno-Votyak **yüwä*) ‘grain’ > Finnish *jyvä* ‘grain’; Mordvin *juv* ‘husk, chaff; oats’; Votyak / Udmurt *ju*, *d’u* ‘grain, crop’. Collinder 1955:130 and 1977:142; Rédei 1986—1988:633—634 **jewä* (> **yüwä*); Joki 1973:265.

Buck 1949:8.42 grain. Bomhard—Kerns 1994:596, no. 469.

807. Proto-Nostratic (n.) **yor-a* ‘set of two, group of two; a pair of ...’ (> ‘two’):

- A. Dravidian: Tamil *iraṇṭu*, (coll.) *reṇṭu* ‘two’, *iraṇṭām*, *iraṇṭāvatu* ‘second’, *iraṇai* ‘couple, pair’, *iraṇṭai* ‘pair, married couple, twins, even numbers’, *iraṇṭaiyar* ‘twins’, *iraṇṭi* ‘(vb.) to double; (n.) double quantity’, *iraṇṭippu* ‘double quantity’, *iraṇṭu* (*iraṇṭi-*) ‘(vb.) to double (intr.), to sound alternatively, to wave alternatively (tr.); (n.) doubleness’, *iru* (before consonants), *īr* (before vowels) (adj.) ‘two’, *iru-patu*, *iru-vatu* ‘twenty’, *iru-nūru* ‘two hundred’, *irumai* ‘twofold state’, *iruvar* ‘two persons’, *ivv-iraṇṭu* ‘two by two’; Malayalam *raṇṭu* ‘two’, *raṇṭ-āka* ‘to be divided, to be doubled’, *raṇṭām* ‘second’, *raṇṭikka* ‘to be divided, to disagree; to double, to multiply’, *iraṇṭa* ‘double, even’, *iraṇṭi* ‘double, twice as much’, *iraṇṭikka* ‘to double, to multiply’, *iru* (before consonants), *īr* (before vowels) (adj.) ‘two’, *iruvar* ‘two persons’, *iru-patu* ‘twenty’, *iru-nūru* ‘two hundred’, *ī-raṇṭu* ‘by twos’; Iruḷa *raṇḍu*, *reṇḍu* ‘two’; Kota *eyḍ* ‘two’, *ir va-d* ‘twenty’, *irrv-a-d* ‘by twenties’, *i nu-r* ‘two hundred’; Toda *e-ḍ* ‘two’, *ī foθ* ‘twenty’, *ī nu-r* ‘two hundred’, *i-r o-r* ‘two years’, *i-ṭy* ‘double, even (of numbers)’, *īm* ‘double’, *īmu* ‘twins’, *ī-ṣtyu* ‘twice’; Kannaḍa *eraḍu*, *erḍu*, *eraṇ* ‘two’, (adj.) *iru*, *ir*, *ic*, *ik* ‘two’, *irpattu*, *ippattu* ‘twenty’, *innūru* ‘two hundred’, *irbar*, *ibbar*, *irvar* ‘two persons’, *irme*, *imme* ‘twice’; Koḍagu *pann-eraṇḍi* ‘twelve’, *iru-vadi* ‘twenty’, *in-nu-rī* ‘two hundred’; Tuḷu *raḍḍu* ‘two things’, *raḍḍanē* ‘second; middling’, *iry*, *īr* (adj.) ‘two, double, both’, *ir-nūdu* ‘two hundred’, *irva* ‘twenty’, *irbaḍi* ‘double’, *irveru* ‘two persons’, *irvoḷu* ‘twice’; Koraga *eyḍi* ‘two’; Telugu *reṇḍu* ‘two things’, *reṇḍava* ‘second, another’, *renca* ‘two (in gambling)’, *reṇṭa* ‘two ways or courses’, *reṇṭa* ‘double, twofold’, *reṇṭi* ‘twice as much’, *reṇṭincu* ‘to double’, *reṇṭimpu* ‘doubling, double’, *panneṇḍu* ‘twelve’, *iru-vadi*, (coll.) *iru-vai* ‘twenty’, *in-nūru* ‘two hundred’; Kolami *irve* ‘twenty’; Naikri *iddar* ‘two men’, *iraḷ* ‘two women’; Naiki (of Chanda) *erndi* ‘two things’, *iroṭel*, *iroṭer* ‘two men’, *ira* ‘two women’, *ir nān* ‘two days’, *erndik* ‘two years’, *erndiḍa* ‘twice’; Parji *irḍu* ‘two things’, *irul* ‘two men’, *iral* ‘two women’, (adj.) *ir*, *iroṭ* ‘twice’; Gadba (Ollari) *inḍi* ‘two things’, *irul* ‘two men’, *iral* ‘two women’, (adj.) *ir*, *iḍḍig* ‘two’; Gondi (in most dialects) *rand* ‘two’; Konda *riʔ-/ri-* ‘two’, (f. and neut.) *rundi* ‘two’, *riʔer* ‘two men’, *riza* ‘twice’; Pengo *ri* ‘two’, *rikar* ‘two men’, *rinḍek* ‘two women’.

(neut.) *rinḍaṇ* ‘two’; Manda *ri* ‘two’; Kui *rī* ‘two’ (adj. preceding noun), *rīaru* ‘two men’, *rīṇḍe*, *rīṇḍi* ‘two women or things’ (adj. following noun), *rīthe* ‘twice’, *riko* ‘on two sides’, (dialect spoken by the Kuṭṭia Kandhs of Northeast Koraput) *ri* (adj.) ‘two’; Kuwi *rī* ‘two’; Kuṛux *irb* ‘two persons’, *irbar*, *irbarim* ‘both’, *ēr*, *ēṇḍ* ‘two things’; Malto *iwr* ‘two persons’; Brahui *iraṭ* ‘two (entities)’, (adj.) *irā* ‘two’. Burrow—Emeneau 1984:46, no. 474; Krishnamurti 2003:46 **īr/*ir-*, 97 **īr*: **ir-u*, 159—160 **īr/*ir-V-*, 197 **īr/*ir-V-*, and 395 **īr/*ir-V*; Caldwell 1913:327. Note: original initial *y- was lost in the Dravidian daughter languages except in Old Tamil, where it is found before *ā in about thirty words (cf. Krishnamurti 2003:142—143, §4.5.4.2; Zvelebil 1970:159—160). Consequently, we can envision the following phonetic developments in Pre-Proto-Dravidian: **yor-* > **yīr-* > **īr-* (with a vowel change similar to what is found in Mingrelian *žir-*, *žar-* cited below).

- B. Proto-Kartvelian **yor-* ‘two’: Georgian *or-*, *vor-* ‘two’; Mingrelian *žir-*, *žar-* ‘two’; Laz *žu(r)-*, *žu(r)-*, *jur-* ‘two’; Svan *jōri*, *jori*, *jerbi* ‘two’. Klimov 1964:149 **jor-* and 1998:144—145 **jor-* ‘two’; Schmidt 1962:129 **jor-i*; Fähnrich 1965, 1994:228, and 2007:323—324 **jor-*; Fähnrich—Sardshweladse 1995:267—268 **jor-*; Blažek 1999b:82.
- C. Chukchi-Kamchatkan: Proto-Chukotian **-jərr(ə)n* ‘set, group of’ (< ‘set of two, group of two; a pair of ...’) > Chukchi *-jərʔən*, *-jərʔ-* ‘set, group of’; Koryak *-jəcrən* ‘set or group of -s’; Alyutor *-jərrən*, (Palana) *-jərʔən* ‘set or group of -s’. Fortescue 2005:411—412.

22.42. PROTO-NOSTRATIC *w

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
w-	w-	v-/Ø-	w-	w-	w-		v-
-w-	-w-	-v-	-w-	-w-	-w-		-v-

808. Proto-Nostratic 1st person personal pronoun stem *wa- (~ *wə-) ‘I, me; we, us’:

- A. Proto-Afrasian *wa- 1st person personal pronoun stem: Egyptian (1st sg. dependent pronoun) *wi* ‘I, me; my’. Hannig 1995:179; Gardiner 1957:45, §43, and 560; Faulkner 1962:56; Erman—Grapow 1921:33 and 1926—1963.1:270—271; Loprieno 1995:64. Chadic: Ngizim (1st pl. inclusive) *wà* ‘we, us; our(s)’. Schuh 1981:170. Omotic: Hamar (general, stem-form) *wo* ‘we’, (independent, *a*-form) *wosi*, *wodi*, (dependent, *no*-form) *won*; (possessive, stem-form) *wono* ‘ours’, (possessive, *a*-form) *wontia*, (possessive, *na*-form) *wonna*, (possessive *no*-form) *wonno*. Bender 2000:196; Lydall 1976:414—415.
- B. Proto-Kartvelian *-we- in: *čk-we-[na] ‘we’, *čk-we-m- ‘my’, *čk-we-n- ‘our’: Georgian *čven* ‘we’ (Old Georgian *čuen*), *čem-* ‘my’, *čven-* ‘our’; Mingrelian *čki*, *čkə* ‘we’, *čkim-* ‘my’, *čkin-*, *čkən-* ‘our’; Laz *čkun*, *čkin*, *šku* ‘we’, *čkim-*, *škim-* ‘my’, *čkun-*, *čkin-*, *škun-*, *škin-* ‘our’; Svan *šgwej* in: (inclusive) *gu-šgwej* ‘our’, (exclusive) *ni-šgwej* ‘our’; *šgwi*, *šgu* in: *mi-šgwi*, *mi-šgu* ‘me’. Jahukyan 1967:96 *č-wen ‘we’; Schmidt 1962:147 *čkun-*, *čkwen-; Klimov 1964:219 *čem- ‘my’, 219—220 *čwen- ‘we’, 220 *čwen- ‘our’ and 1998:255 *č(w)em- ‘my’, 256 *čwen ‘we’, and 256—257 *čwen- ‘our’; Fähnrich—Sardshweladse 1995:434—435 *čem- and 436—437 *čwen-; Fähnrich 2007:539—540 *čem- and 541—542 *čwen-; Gamkrelidze—Mačavariani 1982:87 (1st pl. inclusive) *čwe-na, (1st sg. possessive) *čwe-m-, (1st pl. possessive) *čwe-n-; Gamkrelidze—Ivanov 1984.I:254 (1st pl. inclusive) *č-we-[na] ‘we’, (1st sg. possessive) *č-we-m- ‘my’, (1st pl. possessive) *č-we-n- ‘our’ and 1995.I:221 (1st pl. inclusive) *č-we-[na] ‘we’, (1st sg. possessive) *č-we-m- ‘my’, (1st pl. possessive) *č-we-n- ‘our’. According to Dolgopolsky (1984:73), *č- was the marker of genitive and possessive in Proto-Kartvelian: *čem- ‘my’ (< *č(e)-+m(i)), *šwen- ‘thy’ (< *č-+swe-n-).
- C. Proto-Indo-European *we-/wo-, *wey- 1st person dual and plural personal pronoun stem: Hittite *ú-i-e-eš* ‘we’; Sanskrit (dual) *vām* ‘we two’, (pl.) *vayām* ‘we’; Avestan (dual) *vā*, (pl.) *vaēm* ‘we’; Gothic (dual) *wit* ‘we two’, (pl.) *weis* ‘we’; Old Icelandic *vér* ‘we’; Swedish *vi* ‘we’ (Old Swedish *wī(r)*); Danish *vi* ‘we’; Old English *wē* ‘we’; Old Frisian *wi* ‘we’;

Old Saxon *wi*, *we* ‘we’; Dutch *wij* ‘we’ (Old Dutch *wi*, *wū*, *wij*); Old High German *wir* ‘we’ (New High German *wir*); Old Church Slavonic (dual) *vě* ‘we two’; Tocharian (pl.) A *was*, B *wes* ‘we, us’, (dual) B *wene* ‘we two’. Verb endings: Luwian (1st sg.) *-wi*; Hieroglyphic Luwian (1st sg.) *-wi*; Palaic (1st pl.) *-wani*; Hittite (1st pl.) *-weni*, *-wani*, *-wen*, *-wašta*, *-waštati*, *-waštat*; Sanskrit (1st dual) *-vas*, *-va*, *-vahe*, *-vahi*; Lithuanian (1st dual) *-va*; Old Church Slavonic (1st dual) *-vě*. Brugmann 1904:407 and 593; Szemerényi 1996:217; Fortson 2004:127 **uei*-; Burrow 1973:266 and 313; Pokorny 1959:1114 (dual) **uē*-, (pl.) **uei*- ‘we’; Walde 1927—1932.I:220 **ue*-; Mann 1984—1987:1505 **uejes* ‘we’, 1527 **uēs* (**uejes*) ‘we’; Watkins 1985:73 **we*- (suffix variant form **wei-es*) and 2000:95 **we*- ‘we’ (suffix variant form **wey-es*); Gamkrelidze—Ivanov 1984.I:292—293 **uei*-, **ues*-, **ue*- and 1995.I:254 **wei*-, **wes*-, **we*- (Gamkrelidze—Ivanov interpret **wei*-, **wes*-, **we*- as 1st person plural inclusive); Mallory—Adams 1997:454—455 **uēi* ‘we’; Kloekhorst 2008b:1004; Orël 2003:460 Proto-Germanic **wēz* ~ **wīz*; Kroonen 2013:590—591 Proto-Germanic **wīz* ‘we’; Feist 1939:560 **uei-es*; Lehmann 1986:400 **wey*-; De Vries 1977:654 **uei*-; Falk—Torp 1903—1906.II:441; Klein 1971:822; Onions 1966:995—996 **wei*; Kluge—Mitzka 1967:862; Kluge—Seebold 1989:795 **wei*-; Boutkan—Siebinga 2005:446—447; Adams 1999:265—266 **wei*-; Van Windekens 1976—1982.I:547 **uei*-; Mayrhofer 1956—1980.III:147.

Bomhard—Kerns 1994:602, no. 475; Dolgopolsky 2008, no. 2555, **wʕyʕ* ‘we’.

809. Proto-Nostratic sentence particle **wa*- (~ **wə*-) ‘and, also, but; like, as’:

- A. Proto-Afrasian **wa* sentence particle: ‘and, also, but’: Proto-Semitic **wa* sentence particle: ‘and, also, but’ > Akkadian *u* ‘and’; Hebrew *wə* [ʔ] ‘and, also, even, and indeed, with, and in addition, but’; Phoenician *-w* ‘and’; Syriac *wə* ‘and, also, for, but, however, since, because, that, in order that, then, or, even, again’; Ugaritic *w* ‘and’; Arabic *wa* ‘and, and also, with’; Sabaeen *w* ‘and, together with, but’; Soqotri *wə*- ‘and’; Ḥarsūsi *w(e)*- ‘and’; Mehri *w*- *w*, *əw*, *wə* ‘and’; Geez / Ethiopic *wa*- [w-] ‘and’; Tigre *wā* ‘and’; Harari *-wa* ‘and’; Gurage (Selṭi, Masqan, Zway) *-wa*, (Wolane) *-wā* ‘and’. D. Cohen 1970— :473—480; Klein 1987:189; Leslau 1963:157, 1979:639, and 1987:602; Zammit 2002:425.
- B. Kartvelian: Georgian *-ve* enclitic particle.
- C. Proto-Indo-European **we*, **u* sentence particle: ‘and, also, but; like, as’: Sanskrit *va* ‘like, as’, *vā* ‘as, like, just, even, indeed’, *iva* (*i+va*) ‘like, so, just so, just, exactly, indeed, very’, *u* ‘and, also, further’, *utā* ‘and, also’; Greek ἡ-ὅτε (< *ḡ[F]é+ute) ‘as, like as’, εὔτε ‘when, at the time when, whenever, so often as, since, seeing that’; Latin *ut*, *utī* ‘how?, as, when,

while, since, where, that, in order that'; Umbrian *ute, ote* 'but'; Gothic enclitic particle *-u*; Tocharian B *wa* 'therefore, nevertheless', *wat* 'or, rather than', *wai* 'and' (conjoins only nouns). Pokorny 1959:73—75 **au-*, **u-* 'that, other'; Walde 1927—1932.I:187—189 **u-* (: **ue-*, **uo-* and **au-*); Mann 1984—1987:1473 **u* a sentence particle: 'and, also', 1482 **ute*, **utə*, **uti*, **ut* a sentence particle, 1496 **ue* (**uē*, **uə*, **u*) enclitic: 'and, but, or, also, so, indeed'; Watkins 1985:4 **au-* and 2000:6 **au-* pronominal base appearing in particles and adverbs; Beekes 2010.I:485 and I:527; Boisacq 1950:299; Hofmann 1966:99; Frisk 1970—1973.I:595 and I:646; Chantraine 1968—1980.I:388—389 and I:418; Feist 1939:508; Lehmann 1986:370 **au-*, **u-*; Adams 1999:575 **wē*, 575—576 **wē+tu*, and 611 **wē* + the particle **e*; Van Windekens 1976—1982.I:540 **uē*; Mayrhofer 1956—1980.III:180. Note: The sentence particle **we*, **u* should be differentiated from the pronominal base **hew-* [**haw-*].

- D. Yukaghir (Southern / Kolyma) *aj* 'again; also, too', *aji* 'yet, still', (Northern / Tundra) *waaj* 'again; also, too', *waji* 'yet, still', *wajin* 'soon, immediately', *wajide(k)* 'more'. Nikolaeva 2006:450.
- E. Chukchi-Kamchatkan: Proto-Chukotian **wælx(w)* 'at least' > Chukchi *welw* 'at least'; Koryak *walʉ* 'at least'. Chukotian loan in Kamchadal / Itelmen *welknu* 'at least'. Fortescue 2005:325. Proto-Chukotian **wælxəð* 'even if?' > Chukchi *weler*, *welet* 'although, enough'; Kerek *walʉj(ram)* 'anyway, even so'; Koryak *walat* 'thanks, fine'; Alyutor *walat* 'even (if)'. Chukotian loan in Kamchadal / Itelmen *welk* 'nonetheless, as if, only'. Fortescue 2005:325—326.

Bomhard—Kerns 1994:603, no. 477; Dolgopolsky 2008, no. 2452, **wa* 'also, same' ([in descendant languages] → 'and').

810. Proto-Nostratic root **waf-* (~ **wəf-*):

- (vb.) **waf-* 'to call, to cry out, to shout';
- (n.) **waf-a* 'cry, howl, clamor, shout, noise'

- A. Proto-Afrasian **waf-* 'to call, to cry out, to shout': Proto-Semitic (reduplicated) **waf-waf-* 'to cry out, to shout, to howl' > Arabic *waʕwaʕa* 'to howl, to yelp, to bark, to bay'; Geez / Ethiopic *wawwəʕa* [wəw-ə], *wawwəʕa* [wəw-ə] 'to clamor, to raise a shout, to shout loudly, to cry aloud, to howl, to roar, to wail', *wəwwəʕā* [wəw-ə], *wawwəʕā* [wəw-ə] 'clamor, shout, noise, cry, thunder'; Tigre *wāwʕa*, *wāʕa* 'to cry loudly'; Amharic *wa*, *wawa* 'sound of a crow'; Gurage *wawat* 'crow'. Leslau 1987:623; D. Cohen 1970—:572—573. Egyptian *wʕ3* 'to cry out, to conjure, to curse, to blaspheme'; Coptic *wa* [ⲱⲗⲁ] 'blasphemy'. Hannig 1995:182; Faulkner 1962:57; Erman—Grapow 1926—1963.1:279; Vycichl 1983:229; Černý 1976:208. Proto-East Cushitic **waf-* 'to shout, to call, to invite' > Saho *waʕ-* 'to shout, to call, to invite'; Somali *waʕ-* 'to shout, to call, to invite';

- Rendille *waḥ*- ‘to shout, to call, to invite’; Dasenech *ve*?- ‘to shout, to call, to invite’; Elmolo *we*?- ‘to shout, to call, to invite’; Galla / Oromo *waa-m*- ‘to shout, to call, to invite’; Dullay *o*?- ‘to shout, to call, to invite’. Sasse 1979:42; Heine 1978:76. Central Cushitic: Bilin *wa*? *y*- ‘to cry, to shout’; Kemant *əw y*- ‘to cry, to shout’; Awngi / Awiya *əwáy n*- ‘to cry, to shout’. Appleyard 2006:50. Proto-Southern Cushitic **waa*?- ‘to curse, to revile’ > Asa *wa’am*- ‘to curse, to revile’; Dahalo *waa*?- ‘to curse, to revile’. Ehret 1980:313. Proto-Chadic **wa*- ‘to call’ > Bachama *wá* ‘to call’; Mubi *waa* ‘to call’; Tumak *wəg* ‘to call’. Newman 1977:23; Jungraithmayr—Ibriszimow 1994.II:58—59. Ehret 1995:470, no. 990, **waa*?- ‘to yell’.
- B. Dravidian: Tamil *vāṇku* (*vāṇki*-) ‘to call, to abuse, to reproach’; Kannada *bāṇku* ‘cry of a dog’; Telugu *vāgu* ‘to sound, to ring, to chatter, to babble’; Gondi *vēñ*- ‘to sound (bell)’, *vēnc*- ‘to ring (bell)’. Burrow—Emeneau 1984:483, no. 5337.
- C. Proto-Indo-European **we*?*h*- [**wa*?*h*-]/**wo*?*h*- > **wā*-/**wō*- ‘to call, to cry out’: Greek ἡχή (< **Fāχā*) ‘sound, noise’; Latin *vāgiō* ‘to cry, to whimper’; Gothic *wōpjan* ‘to call, to cry out’; Old Icelandic *æpa* ‘to cry, to shout; to call, to cry out (to someone)’, *óp* ‘shout, shouting; crying, weeping’; Old English *wēpan* ‘to weep’ (past participle *wōpen*), *wōp* ‘weeping’; Old Frisian *wēpa* ‘to cry aloud’; Old Saxon *wōpian* ‘to bewail’; Old High German *wuoffen*, *wuofan* ‘to bewail’, *wuof* ‘weeping, sobbing’; Old Church Slavic *vabljo*, *vabiti* ‘to call, to entice’. Rix 1998a:606 **ueh*₂*g*^h- ‘to call, to cry out, to shriek’; Pokorny 1959:1109 **uāb*- ‘to call, to cry’, 1110 **uāg*- ‘to call, to shriek’, and 1110 **uāgh*- ‘to shriek’; Walde 1927—1932.I:217 **uab*-, I:214—215 **uag*-, and I:215 **uāgh*-; Mann 1984—1987:1483 **uābiō* ‘to shout, to call’; Watkins 1985 **wāb*- and 2000:94 **wāb*- ‘to cry, to scream’; Mallory—Adams 1997:89 **ueh*_a*b*- ‘to cry, to scream’; Chantraine 1968—1980.I:418; Frisk 1970—1973.I:646—647; Boisacq 1950:331 *(*s*)*uāgh*-; Beekes 2010.I:528 *(*s*)*ueh*₂*g*^h-; Hofmann 1966:110; Walde—Hofmann 1965—1972.II:725—726 **uāg*(*h*)-; **uāg*-, **uāb*-; Ernout—Meillet 1979:711; De Vaan 2008:651 (?) **ueh*₂- ‘to cry’; Orël 2003:470 Proto-Germanic **wōpjanan* I, 470 **wōpjanan* II; Feist 1939:572 **uā*-; Lehmann 1986:409 **wā*-; De Vries 1977:419 and 684; Onions 1966:998 Common Germanic **wōp*-; Klein 1971:823 **wap*-, **wāb*-, **ūp*-, **ūb*-; Derksen 2008:511—512 **ueh*₂*b*- or **ueh*₃*b*-.

Buck 1949:18.13 shout, cry out. Dolgopolsky 2008, no. 2473, **waHIV* ‘to cry, to speak’; Bomhard—Kerns 1994:605—606, no. 481.

811. Proto-Nostratic root **wad*- (~ **wəd*-):
 (vb.) **wad*- ‘to take, to lead, to carry, to bring’;
 (n.) **wad-a* ‘the act of taking, leading, carrying, bringing’

- A. Proto-Afrasian **wad-* ‘to take away, to lead, to carry off, to bring’: Proto-Semitic **wad-ay-* ‘to take away, to carry off or away, to lead to, to bring’ > Arabic *wadā* (inf. *tawdiya-t*) ‘to carry one off; to send, to bring, to lead to’; Šheri / Jibbāli *wudi* ‘to take away’; Ḥarsūsi *awēd* ‘to turn away’; Mehri *awōdi* ‘to take away’. D. Cohen 1970— :500. Proto-Southern Cushitic **wad-* ‘to carry’ > K’wadza *walit-* ‘to wear’; Asa *wades-* ‘to lift, to carry’; Dahalo *wad-*, *wadat-* ‘to carry’. Ehret 1980:311. [Ehret 1995:455, no. 954, **wad-* ‘to move’.]
- B. Proto-Kartvelian **wed-* ‘to go away’: Georgian *ved-*, *vid-* ‘to go away’; Mingrelian *id-* ‘to go away’; Laz *id-* ‘to go away’. Schmidt 1962:108; Klimov 1964:84 **wid-* ‘to start, to leave’ and 1998:51 **wed-* : **wid-* ‘to go, to walk’; Fähnrich—Sardshweladse 1995:130—131 **wed-*; Fähnrich 2007:158 **wed-*.
- C. Proto-Indo-European **wed^h-*/**wod^h-* ‘to lead, to bring, to carry’: Hittite (3rd sg. pres.) *ú-i-da-(a-)iz-zi*, *ú-wa-da-az-zi* ‘to bring, to carry’; Avestan *vādayeiti* ‘to lead, to draw, to pull, to drag’; Old Irish *fedid* ‘to lead, to bring’; Lithuanian *vedù*, *vèsti* ‘to lead, to guide, to direct, to conduct, to marry’; Old Church Slavonic *vedo*, *vesti* ‘to lead, to take’; Russian *vodít’* [водить] ‘to lead, to conduct’; Czech *vedu*, *vesti* ‘to lead, to conduct’, *voditi* ‘to lead, to conduct’. Rix 1998a:600 **ued^h-* ‘to lead’; Walde 1927—1932.I:255—256 **ued^h-*; Pokorny 1959:1115—1116 **ued^h-* ‘to lead’; Mann 1984—1987:1497 **ued^h-* ‘to lead, to bring, to carry’, 1559 **uodhos-*, *-ā*; **uodhmn-* ‘lead, front; leader, head’; Mallory—Adams 1997:346 **h₂ued(h_x)-* ‘to lead, to take to wife’; Gamkrelidze—Ivanov 1984.II:756 **Hued[h]-* and 1995.I:658 **Hwed^h-* ‘to lead away, to carry off a bride (by force)’; Kloekhorst 2008b:1009—1010; Derksen 2008:517 **ued^h-*, 523 **uod^h-*, and 2015:599 **ued^h-*; Smoczyński 2007.1:743—743; Fraenkel 1962—1965.II:1231—1232.
- D. Proto-Uralic **wetä-* ‘to take, to guide, to lead, to carry’: Finnish *vetä-* ‘to pull, to draw, to haul, to drag’; Estonian *veda-* ‘to draw, to pull, to tug, to haul’; Mordvin (Erza) *ved’a-*, *viti-* ‘to take, to guide, to lead’; Cheremis / Mari *wüde-*, *wide-* ‘to guide, to lead, to carry’; Hungarian *vezet-* ‘to lead, to guide’, *vezér* ‘leader’; (?) Yurak Samoyed / Nenets *waada-*, *wada-* ‘to pull, to drag; to train, to raise; to produce, to give birth to; to feed, to nourish; to cultivate’, *waadalpi-*, *wadalpa-* ‘to lead’; (?) Tavgi Samoyed / Nganasan *bada-* ‘to feed, to nourish (a child)’; (?) Yenisei Samoyed / Enets (Hantai) *bara-*, (Baiha) *bada-* ‘to feed, to nurture, to breed’; (?) Selkup Samoyed *kuōda-* ‘to breed, to nurse, to tend’; (?) Kamassian *bædä-*, *budä-* ‘to feed, to nourish’. Collinder 1955:67, 1965:32, and 1977:84; Joki 1973:344—345; Rédei 1986—1988:569—570 **wetä-*; Sammallahti 1988:551 **wetä-* ‘to pull’; Janhunen 1977b:172 **wâtä-*.

Buck 1949:10.61 carry (bear); 10.62 bring; 10.64 lead (vb.); 12.18 leave.
 Bomhard—Kerns 1994:601, no. 474; Hakola 2000:214, no. 958; Dolgopolsky
 2008, no. 2462, **wedhA* ‘to cause to go’ (‘to drive, to lead’).

812. Proto-Nostratic root **wah-* (~ **wəh-*):

(vb.) **wah-* ‘to strike, to stab, to wound’;

(n.) **wah-a* ‘wound, scar; knife, sword, blade, spear(head)’

- A. Proto-Afrasian **wah-* ‘to strike, to stab, to wound’: Egyptian *whj* ‘to hew or cut stone, to reap (crops), to pluck (flowers, plants)’, *whs* ‘to cut off (hair), to kill (rebels), to quell (tumult)’, *whʿ* ‘to wound, to stab with a knife, to sting (of a scorpion)’, *whi-t*, *whʿ-t* ‘scorpion’; Coptic *woʿohe* [ⲱⲟⲟⲥⲉ] (< **waʿha-t* < **wahha-t*) ‘scorpion’. Hannig 1995:209, 210, and 212; Faulkner 1962:66 and 67; Erman—Grapow 1921:39 and 1926—1963.1:346, 1:347, and 1:351; Vycichl 1983:242; Černý 1976:223. Central Chadic: Gisiga *wah-* ‘to break’. Proto-Southern Cushitic **wahar-* ‘large blade’ > Ma’a *kawahá* ‘knife’, *muwahá* ‘sword’; Dahalo *wáraha* (with metathesis of *-h-* and *-r-*) ‘spear, spearhead’. Ehret 1980:312, no. 10, **warah-* ‘large blade’. Orël—Stolbova 1995:524, no. 2509, **wah-* ‘to break’; Ehret 1995:457, no. 960, **wah-* ‘to cut’ (Proto-Cushitic **wahr-* or **warh-* ‘large blade’).
- B. Proto-Indo-European **weh-* [/**wahh-*]/[**woh-*] > **wā-*/**wō-* ‘to strike, to wound’: Greek *άάω* (< **āFα-*) ‘to hurt, to damage’, *άτη* (for **άάτη* < **āFάτη*) ‘bane, ruin’, (Homeric) *ώτειλή* (< **ōFατελιῶ*) ‘wound, scar’; Lithuanian *voṭis* ‘ulcer’; Latvian *vāts* ‘wound’. Pokorny 1959:1108 **uā-*, **uō-*, **uə-* ‘to strike, to wound’; Walde 1927—1932.I:211 **uā-*, **uō-*, **uə-*; Boisacq 1950:96 and 1084 **auō-*; Hofmann 1966:27 and 431; Frisk 1970—1973.I:2, I:178, and II:1153; Chantraine 1968—1980.I:3 **wā-* and II:1305—1306; Beekes 2010.I:3 **h₂eu_h-* and I:162—163; Smoczyński 2007.1:767—768; Derksen 2015:510 (Derksen rejects the comparison of Lithuanian *voṭis* ‘ulcer’ with Greek *άάω* ‘to hurt, to damage’); Fraenkel 1962—1965.II:1275.
- C. (?) Altaic: Proto-Tungus **wā-* ‘to kill’ > Evenki *wā-* ‘to kill’; Lamut / Even *wā-* ‘to kill’; Negidal *wā-* ‘to kill’; Manchu *wa-* ‘to kill, to slay’; Spoken Manchu (Sibo) *vā-* ‘to kill’; Oroch *wā-* ‘to kill’; Nanay / Gold *wā-* ‘to kill’; Oroch *wā-* ‘to kill’; Udihe *wā-* ‘to kill’; Solon *wā-* ‘to kill’. Note: Starostin—Dybo—Mudrak (2003:512—513) derive Proto-Tungus **wā-* ‘to kill’ from Proto-Altaic **ēpo* ‘to hunt, to kill’, assuming that **wā-* = **ebā-*. Starostin—Dybo—Mudrak do not reconstruct initial **w-* for Proto-Altaic. The tentative inclusion of the Tungus material here follows Illič-Svityč (1965:330), who reconstructs Proto-Altaic **uā-*.
- D. Proto-Gilyak / Nivkh **wa* ‘sword’, **wa-* ‘fight’: Amur *va* ‘sword’, *wa-d* ‘fight, battle’; North Sakhalin *wa* ‘sword’, *va-t* ‘fight’; East Sakhalin *wa*

‘sword’, *vax* ‘sword, blade’, *va-d* ‘fight’; South Sakhalin *wa* ‘sword’, *wař*₁ ‘blade’, *wa-* ‘fight’, *vaf-* ‘to hit’. Fortescue 2016:158.

Buck 1949:4.85 wound (sb.); 9.21 strike (hit, beat). Illič-Svityč 1965:330 **wa/h/*_Λ ‘to beat’ (‘бить’); Bomhard—Kerns 1994:617—618, no. 497; Greenberg 2002:188—189, no. 435.

813. Proto-Nostratic root **wak*’- (~ **wək*’-):

(vb.) **wak*’- ‘to rouse, to stir up, to excite’;

(n.) **wak*’-*a* ‘energy, vigor, strength, power, might’

- A. (?) Afrasian: Proto-Semitic **wak*’-*at*^{y-} (~ **yak*’-*at*^{y-}) ‘to be awake, to awaken, to arouse, to stir up’ > Hebrew *yāqāṣ* [ʔʔʔ] ‘to be awake’, *yāqēṣ* [ʔʔʔ] ‘awake’; Ugaritic *yḳḡ* ‘to be alert’; Arabic *yaḳiẓa* ‘to be awake, to wake up, to awaken, to arouse, to stir up, to provoke’; Sabaeen *myḳz(m)* ‘sleeplessness, insomnia’; Mehri *awōkəḏ* ‘to awaken’; Šheri / Jibbāli *ōkuḏ* ‘to wake’; Ḥarsūsi *awḳāwḏ* ‘to wake, to awaken’. Murtonen 1989:220; D. Cohen 1970— :604—605 **w/yqṭ*; Klein 1987:263.
- B. Proto-Indo-European **wək*’-/**wok*’- ‘to rouse, to stir up, to excite, to awaken’: Sanskrit *vājāyati* ‘to incite’, *vāja-ḥ* ‘strength, vigor, energy; contest, conflict, battle’, *vāja-ḥ* ‘(Indra’s) weapon, thunderbolt’; Avestan *vazrō* ‘cudgel’, *vāzišta-* ‘greatly endowed with strength’; Latin *vegeō* ‘to stir up, to quicken, to excite’, *vigilō* ‘to be awake, to keep awake, to watch’, *vegetus* ‘lively, vigorous, fresh’, *vigil* ‘wakeful, watchful, alert’; Gothic *wakan* ‘to wake, to be awake’, *pairh-wakan* ‘to stay awake, to keep watch’, *us-wakjan* ‘to wake up’, *wahtwō* ‘watch’, *wōkains* ‘watch’; Old Icelandic *vaka* ‘to be awake, to keep awake’, *vakna* ‘to awake, to wake up’, *vakr* ‘watchful, alert, wakeful’, *vekja* ‘to awaken, to arouse from sleep’, *vökull* ‘wakeful, vigilant’; Swedish *vaka* ‘to be awake’, *väcka* ‘to awaken’; Danish *vakker* ‘vigorous, fine, brave’; Old English *wacan* ‘to awaken, to arise’, *wacian* ‘to be awake or active, to keep awake, to keep watch’, *wacor*, *wæccer* ‘watchful, vigilant’, *wacol* ‘awake, watchful, vigilant’, *wæcce* ‘keeping awake, vigil; watch’, *wæcen*, *wacon* ‘keeping awake, watching (over), guarding’; Old Frisian *wakia* ‘to be awake’; Old Saxon *wakōn* ‘to be awake’, *wahta* ‘watch, guard’; Dutch *waken* ‘to be awake’, *wakker* ‘awake’; Old High German *wahhēn*, *wahhōn* ‘to be awake’ (New High German *wachen*), *wecchen* ‘to cause to wake up’ (New High German *wecken*), *wachal* ‘awake’, *wahta* ‘watch, guard’ (New High German *Wacht*). Rix 1998a:601—602 **ueḡ-* ‘to become awake, lively, powerful, strong’; Pokorny 1959:1117—1118 **ueḡ-* ‘to be lively, to be strong’, **uoḡ-ro-s* ‘powerful, strong’; Walde 1927—1932.I:246—247 **ueḡ-*; Mann 1984—1987:1499 **ueḡer-* (**ueḡər-*) ‘to rouse; lively’, 1499 **ueḡō-*, *-eḡō* ‘to rouse, to make move, to move’, 1560 **uoḡeros* (**uoḡər-*, **uoḡr-*) ‘alert, lusty, mighty’, 1560 **uoḡeḡō* ‘to rouse, to stir’, 1560 **uoḡōtos* ‘watch,

watchful'; Watkins 1985:74 **weg-* and 2000:95 **weg-* 'to be strong, lively'; Mallory—Adams 1997:550 **ueġ-* 'strong'; Walde—Hofmann 1965—1972.II:741 and II:788; Ernout—Meillet 1979:716—717; De Vaan 2008:657—658; Orël 2003:441—442 Proto-Germanic **wakēnan*, 442 **wakjanan*, 442 **waknēnan* ~ **waknōjanan*, 442 **wakōn* 442 **wakraz*, 442 **wakrōjanan*, 442 **wakulaz*; Kroonen 2013:568 Proto-Germanic **wakan-* 'to awaken', 568 **wakjan-* 'to awaken', and 568 **wakra-* 'alert, awake'; Feist 1939:547—548; Lehmann 1986:392; De Vries 1977:639, 639—640, 652, and 673; Falk—Torp 1903—1906.II:421; Klein 1971:819 and 822; Onions 1966:989 and 994; Vercoullie 1898:317; Boutkan—Siebinga 2005:427—428; Kluge—Mitzka 1967:828 and 842; Kluge—Seebold 1989:771 and 780; Mayrhofer 1956—1980.III:126 and III:182.

- C. Uralic: Proto-Finno-Ugrian **wāke* 'strength, power' > Finnish *väki* 'people, folk, men; force', *väkevä* 'strong, powerful', *väkevyy* 'strength, power, intensity'; Estonian *vägi* (gen. sg. *väe*) 'power, strength, might; army'; Lapp / Saami *viikkâ* (adv. of degree) 'fairly, rather', (adj.) 'rather large, rather important, strong', (Kola) *vikk* 'power; army' (perhaps influenced by Finnish); Mordvin *vij* 'power; crowd'; Cheremis / Mari *wi*, *wij* 'power'; Votyak / Udmurt *kat'-vi* 'power, force, might'; Vogul / Mansi *wöä*, *waag* 'power'; Ostyak / Xanty *wög* 'power'. Collinder 1955:124—125 and 1977:136; Rédei 1986—1988:563 **wāke*; Décsy 1990:110 **vākä* 'power'; Sammallahti 1988:551 **wāki* 'power'.

Buck 1949:4.63 wake; 4.81 strong, mighty, powerful. Bomhard—Kerns 1994: 621—622, no. 499; Dolgopolsky 2008, no. 2464, **wākŕē* (= **wākŕē* ?) 'strong, vigorous; strength'; Illič-Svityč 1965:364 **wāka* 'strong' ('сильный').

814. Proto-Nostratic root **wal-* (~ **wəl-*):

(vb.) **wal-* 'to be or become strong';

(n.) **wal-a* 'strength, power'

- A. Afrasian: Highland East Cushitic: Sidamo *walk'á* 'strength, power', *walk'a-beelo* 'lacking strength, tired, weak'. Hudson 1989:400.
- B. Dravidian: Tamil *val* 'strong, hard, forceful, skilful', *vallamai*, *vallam*, *vallai* 'strength', *vali* '(vb.) to be strong, hard; to compel; (n.) strength, power', *valiya* 'strong, big', *valuppu* 'firmness, strength', *valu* '(vb.) to be strong or hard; (n.) strength, skill, ability'; Malayalam *val*, *valu*, *valiya* 'strong, powerful, great', *valluka* 'to be able, strong'; Kannada *bal* 'to grow strong or firm', *bali* 'to increase; to grow; to grow strong, stout; to become tight, firm, hard; to increase (tr.); to make strong, firm', *bal(u)*, *bolu* 'strength, firmness, bigness, greatness, abundance, excess', *balisu* 'to make strong'; Tuḷu *bala* 'strength', Koḍagu *bala* 'strength, power', *ballyē* 'great'; Telugu *vali* 'big, large', *valamu* 'largeness, stoutness', *baliyu* 'to grow fat, to increase', *baluvu* 'strength, intensity; heavy, great, excessive,

big, strong, severe'; Gadba *valan* 'thick, stout'. Burrow—Emeneau 1984:476—477, no. 5276; Krishnamurti 2003:394 **wal* 'strong'.

- C. Proto-Indo-European **wal-* 'to be strong': Latin *valeō* 'to be strong'; Old Irish *faln-*, *foln-* (in deponent forms) 'to rule', *flaith* (< **wlati-*) 'lordship'; Welsh *gwledig* 'prince', *gwlad* 'country'; Gothic *waldan* 'to rule, to govern'; Old Icelandic *valda* 'to wield, to rule over', *vald* 'power, authority'; Swedish *våla* 'to cause, to be the cause of'; Old English *geweald* 'power', *wealdan* 'to have control over, to wield (weapon); to govern; to possess; to cause', *gewealden* 'under control, subjected', *wealdend* 'ruler, king, controller', *gewieldan* 'to overpower, to subdue, to domesticate', *wielde* 'strong, victorious'; Old Frisian *walda* 'to have power over, to rule over', *wald* 'power, control'; Old Saxon *waldan* 'to rule, to have control over, to govern', *giwald* 'power, control'; Old High German *waltan* 'to rule, to govern' (New High German *walten*), *giwalt* 'power, control' (New High German *Gewalt*); Lithuanian *valdaũ*, *valdyti* 'to govern', *valdōnas* 'ruler, lord, master'; Old Church Slavic *vladq*, *vlasti* 'to rule', *vlastb* 'power'; Tocharian A *wāl*, B *walo* 'king', A/B *wlāw-* 'to control', B *wawlāwar*, *wlāwalñe* 'control'. Rix 1998a:617—618 **uelH-* 'to be strong, to have control or power over'; Pokorny 1959:1111—1112 **ual-*, **ual-d(h)-* 'to be strong'; Walde 1927—1932.I:219 **ual-*; Mann 1984—1987:1488 **ual-* 'good, strong, able', 1488 **ualdh-*, 1509—1510 **uel-* 'big, great; greater, stronger; to be big, to be strong, to be able; greatly, strongly, very', 1552 **uldh-* 'to grow strong, to thrive', 1570—1571 **uoldh-* 'to rule, to control, to possess'; Watkins 1985:73—74 **wal-* and 2000:95 **wal-* 'to be strong'; Mallory—Adams 1997:490 **ual-* 'to be strong, to rule'; De Vaan 2008:651—652; Walde—Hofmann 1965—1972.II:727—728; Ernout—Meillet 1979:711—712 **w^olē-*; Orël 2003:443 Proto-Germanic **waldan*, 443 **waldanan*, 443 **waldaz*, 443 **waldigaz* ~ **waldūgaz*, 443 **waldiz*, 443 **waldjan*, 443 **waldōn*; Kroonen 2013:569 Proto-Germanic **waldan-* 'to rule over, to have authority over'; Feist 1939:548 **ual-*; Lehmann 1986:392 **wal-*, **wal-dh-*; De Vries 1977:640; Onions 1966:1006 **wal-*; Klein 1971:827—828 **wal-dh-*, extended form of **wal-*; Boutkan—Siebinga 2005:428; Kluge—Mitzka 1977:835—836 **ual-*; Kluge—Seebold 1989:776; Van Windekens 1976—1982.I:554 **uel-* and I:576—577 **uelā-*; Adams 1999:581—582 and 617 **wl-eh_a-w-*; Fraenkel 1962—1965.II:1188—1189; Smoczyński 2007.1:730—731; Derksen 2008:524, 526, and 2015:485—486 **uolh_i-dh-*.
- D. Yukaghir (Northern / Tundra) *wola-* 'to force'. Nikolaeva 2006:457.

Buck 1949:4.81 strong, mighty, powerful; 19.31 rule (vb.), govern. Bomhard—Kerns 1994:610—611, no. 487; Illič-Svityč 1971—1984.II:109—110, no. 350, **wol<a>* 'big'; Dolgopolsky 2008, no. 2469, **walV* 'to be strong, to be able'.

815. Proto-Nostratic root *wal- (~ *wəl-):

(vb.) *wal- ‘to pull (out)’;

(n.) *wal-a ‘pulling, dragging’

- A. Dravidian: Tamil *vali* ‘to draw, to pull, to row’, *vali*, *valippu* ‘pulling, dragging, spasm, convulsion’; Malayalam *vali* ‘drawing, pull, tug, spasm’, *valikka* ‘to draw, to drag, to row, to have spasms’, *valippikka* ‘to cause to pull’, *valippu* ‘drawing, pulling, spasm’, *valiyuka* ‘to be drawn, to extend, to have spasmodic pain’; Kodagu *bali-* ‘to snatch, to pull’; Koraga *bali-* ‘to pull’; Kui *velba* (*ves-*) (vb.) ‘to pull, to pull up; (n.) pulling’. Burrow—Emeneau 1984:477, no. 5282.
- B. Proto-Indo-European *wel-/ *wōl-/ *wl̥- ‘to draw, to pull, to tear out’: Latin *vellō* ‘to pluck, to pull, to tear out’; Lithuanian *velkù*, *vilkti* ‘to drag, to pull’; Old Church Slavic *vlěkō*, *vlěšti* ‘to draw, to drag’; Avestan (in compounds) *varək-* ‘to draw’; (?) Gothic *wilwan* ‘to plunder’, *wilwa* ‘robber’. Rix 1998a:620 **uelk-* ‘to drag, to draw, to pull’; Pokorny 1959:1144—1145 **uel-* ‘to tear’, 1145 **uelk-* ‘to pull’; Walde 1927—1932.I:304—305 **uel-* and I:305 **uelk-*; Mann 1984—1987:1509 **uel-* ‘to snatch, to tug’, 1511 **uelk-* ‘to pull, to tug, to jerk’, 1512 **uelum̥n-* ‘pull, tear, jerk; fleece’, 1512 **ueluō*, *-iō* ‘to snatch, to pluck, to rob’, 1572 **uolk-*; Watkins 1985:76 **wel-* and 2000:98 **wel-* ‘to tear, to pull’; Gamkrelidze—Ivanov 1984.II:492, fn. 1, **uel-* and 1995.I:413, fn. 1, **wel-* ‘to lacerate, to tear apart; to wound; to kill’; Mallory—Adams 1997:471 **h₄uelk-* ‘to pull’; Ernout—Meillet 1979:718 **wel-*; Walde—Hofmann 1965—1972.II:744—745 **uel-*; De Vaan 2008:659; Orël 2003:454 Proto-Germanic **welwanan*; Feist 1939:564—565 **uel-*; Lehmann 1986:404 **wel-* ‘to tear, to rob; to wound’; Derksen 2008:514; Fraenkel 1962—1965.II:1253; Smoczyński 2007.1:753—754.
- C. Yukaghir (Northern / Tundra) *walitid’aa-* ‘stubborn’, *walaa-* ‘to carry along, to be keen on (tr.)’. Nikolaeva 2006:451.

Buck 1949:9.28 tear (vb. tr.); 9.33 draw, pull. Dolgopolsky 2008, no. 2480, **[’]w[A]l[iy]V* (or **[’]wōl[iy]V* ?) ‘to draw, to pull (out, off)’; Bomhard—Kerns 1994:608—609, no. 485.

816. Proto-Nostratic root *wal- (~ *wəl-):

(vb.) *wal- ‘to cry out, to call out, to shout’;

(n.) *wal-a ‘sound, noise, cry, wail, lamentation, howl, hubbub’

- A. Proto-Afrasian *wal- ‘to cry out, to call out, to lament’: Proto-Semitic *wal- (*wal-al-, *wal-wal-) ‘to lament, to wail’ > Arabic *walwala* ‘to cry “woe”, to lament, to wail, to howl, to break into loud wails’, *walwala* (pl. *walāwil*) ‘wailing, wails’; Hebrew *yelel* [יֵלֵל] (base *yll* [יָלַל] ‘to wail, to howl, to lament’ [< *wll]) ‘wailing, howling, lamenting’; Imperial Aramaic

- **yll* ‘to wail, to lament’. D. Cohen 1970— :542—544; Klein 1987:259; Murtonen 1989:215. Berber: Tuareg *awal* ‘speech, language; birdsong, croaking of frogs, hissing of snakes’, *siwəl* ‘to speak’, *əmassəwəll* ‘talkative, chatty, wordy’; Siwa *siwəl* ‘to speak’; Nefusa *awal* ‘speech’, *siwəl* ‘to speak, to call’; Ghadames *awal* ‘speech, language’; Mzab *awal* ‘speech, word’; Wargla *awal* ‘speech, word’; Tamazight *awal* ‘speech, word, expression, language, gossip, story’; Riff *awal* ‘speech, word, discourse, conversation’, *siwəl*, *siwər* ‘to speak’; Tashelhiyt / Shilha *awal* ‘speech’, *sawəl* ‘to speak’; Kabyle *awal* ‘speech, word; proverb’, *siwəl* ‘to call; to say; to resonate, to resound’, *sawwal* ‘to make an echo’; Chaouia *awal* ‘word, speech’, *awəl* ‘to speak, to talk’, *ssiwəl* ‘to interpret, to call’; Zenaga *awəğ* ‘speech, word, language’, *siwəğ* ‘to speak’. West Chadic **wal* / **wil*- ‘cry, sob’ > Angas *wāl* ‘cry, sob’; Chip *wil* ‘cry, sob’. East Chadic **wal*- ‘funeral song’ > Sokoro *olu* ‘funeral song’. Orël—Stolbova 1995:526, no. 2519, **wal*- ‘lamentation, weep’.
- B. Dravidian: Tamil *vali* ‘(vb.) to say, to tell, to narrate; (n.) sound’; Koraga *valli* ‘to bark’; Gondi *vallih*- ‘to call, to invite’. Burrow—Emeneau 1984:477, no. 5283. Tamil *vaḷavaḷappu* ‘talkativeness, wordiness, vain talk, babbling’, *vaḷavaḷa* ‘to be talkative, wordy; to babble’; Malayalam *vaḷavaḷā* ‘the sound of babbling’; Tuḷu *baḷakē* ‘boasting’; Telugu *vaḷāvaḷi* ‘noise, fuss, hubbub’, *vaḷāvaḷikāḍu* ‘a noisy or fussy man, babbler’; Gondi *vaṛk*- ‘to say, to speak’. Burrow—Emeneau 1984:480, no. 5310.
- C. Proto-Indo-European **wal*- ‘to shout’: (?) Greek ἀλαζών ‘(n.) vagabond, false pretender, imposter, quack; (adj.) swaggering, boastful, braggart’ (according to Chantraine 1968—1980.I:53, Frisk 1970—1973.I:62, Beekes 2010.I:60, and Hofmann 1966:11, ἀλαζών is derived from the Thracian tribal name Ἀλαζώνες), ἀλαζονικός ‘boastful, braggart’, ἀλαζονεύομαι ‘to make false pretensions’; Czech *volat* ‘to shout’; Old Icelandic *völva* (also spelled *völfa*) ‘prophetess, sibyl, wise woman, witch’. Mann 1984—1987:1488 **wal*- ‘to shout’; De Vries 1977:674.
- D. Uralic: Finno-Volgaic: Finnish *vala* ‘oath, vow’, *valitta*- ‘to complain, to moan, to groan, to bewail’, *valitus* ‘complaint’; Lapp / Saami *vaalloot*- ‘to complain’; Mordvin (Erza, Moksha) *val* ‘word’. Rédei 1986—1988:812 Finno-Volgaic **wala* ‘word’. Yukaghir (Southern / Kolyma) *almə* ‘shaman’, *almo*- ‘to be a shaman’, *almad’e* ‘practicing witchcraft’, *aldu*- ‘to conjure’, *aldud’a*- ‘to conjure, to practice magic; to swear’, *alyəɖaj*- ‘to say invocations (tr.)’, (Northern / Tundra) *wolme* ‘shaman’, *wolmonaa*- ‘to practice shamanism’. Nikolaeva 2006:451.
- E. (?) Proto-Altaic **ūlo*- ‘to cry, to howl’: Proto-Mongolian **uli*- ‘to cry, to howl (of dogs, wolves, etc.)’ > Written Mongolian *uli*- ‘to howl (of dogs, wolves, etc.)’; Khalkha *uli*- ‘to cry, to howl’; Buriat *uli*- ‘to cry, to howl’; Kalmyk *ul*-, *ulə*- ‘to cry, to howl’; Ordos *uli*- ‘to cry, to howl’; Shira-Yughur *olo*- ‘to cry, to howl’. Proto-Turkic **ūli*- ‘to cry, to howl’ > Old Turkic (Old Uighur) *ulī*- ‘to cry, to howl’; Karakhanide Turkic *ulī*- ‘to cry,

to howl'; Turkish *ulu-* 'to howl', *uluma* 'the howling of dogs'; Gagauz *ulu-* 'to cry, to howl'; Azerbaijani *ula-* 'to cry, to howl'; Turkmenian *ūli-* 'to cry, to howl'; Uighur *ulu-* 'to cry, to howl'; Karaim *ulu-* 'to cry, to howl'; Tatar *ula-* 'to cry, to howl'; Bashkir *ūlū-* 'to cry, to howl'; Kirghiz *ulu-* 'to cry, to howl'; Kazakh *ūli-* 'to cry, to howl'; Noghay *ulī-* 'to cry, to howl'; Oyrot (Mountain Altai) *ulu-* 'to cry, to howl'; Tuva *ulu-* 'to cry, to howl'; Chuvash *ʷlaχ-* 'to neigh'; Yakut *uluy-* 'to cry, to howl'; Dolgan *uluy-* 'to cry, to howl'. Starostin—Dybo—Mudrak 2003:1493—1494 **ūlo* 'to cry, to howl'.

Buck 1949:18.13 shout, cry out; 18.21 speak, talk; 18.41 call (vb. = summon).
Bomhard—Kerns 1994:611, no. 488; Hakola 2000:207, no. 928.

817. Proto-Nostratic root **wal-* (~ **wəl-*):

(vb.) **wal-* 'to go, to go away, to depart';

(n.) **wal-a* 'departure, flight, escape'

- A. Proto-Afrasian **wal-* 'to go, to go away, to depart': (?) Semitic: Geez / Ethiopic *walaga* [ʈʌʎ] 'to sneak away from a task, to slip away'; Amharic *wällägä*, *wallägä* 'to sneak away from a task'. D. Cohen 1970— :545; Leslau 1987:613. Proto-Highland East Cushitic **waal-* 'to come' > Gedeo / Darasa *waal-* 'to leave (something), to divorce'; Hadiyya (imptv. pl.) *waalle* 'come!'; Kambata *waal-* 'to come'. Hudson 1989:43.
- B. Dravidian: Tamil *valacai*, *valacal* 'emigration, flight from home; crowd'; Kannada *valase*, *valise*, *olase* 'flight, removal from home for fear of a hostile army, emigration'; Telugu *valasa* 'emigration, migration, flight or removal from one's country to another'. Burrow—Emeneau 1984:477, no. 5278.
- C. Proto-Kartvelian **wal-/wl-* 'to go': Georgian *val-/vl-* 'to go'; Mingrelian *ul-* (< **vul-*), *ur-* 'to go'; Laz *ul-* 'to go'. Schmidt 1962:108; Klimov 1964:84—85 **wl-* and 1998:49 **wal-/wl-* 'to go'; Fähnrich—Sardshweladse 1995:126—127 **wal-*; Fähnrich 2007:154 **wal-*. Proto-Kartvelian **wl-a-* 'to walk': Georgian *svla-* 'to walk'; Mingrelian *ula-* 'to walk'; Laz *ulva-*, *ülva-* 'to walk'. Klimov 1998:54 **wl-a-* 'to walk'. Proto-Kartvelian **wlt'-* 'to run away, to escape': Georgian *vlt'-* (3rd sg. *i-vlt'-i-s*) 'to run away, to escape', *si-vlt'-o-la* 'running away, escape'; Mingrelian *rt'-*, *nt'-* 'to run away, to escape'; Laz *rt'-*, *mt'-* 'to run away, to escape'; Svan *li-t'w* 'to run away, to escape' (*t'w-* < **wlt'-* with loss of *-l-* and metathesis of *wt'-* to *t'w-*). Note: The Mingrelian and Laz forms have lost the initial *w-* and have replaced the resulting *lt'-* with more common clusters. Klimov 1964:85 **wlt-* and 1998:54 **wlt-* 'to run away, to escape'; Fähnrich—Sardshweladse 1995:136 **wlt-*; Fähnrich 2007:164—165 **wlt-*.
- D. Uralic: Proto-Finno-Ugrian **walka-* 'to go, to go away, to depart' > Finnish *valka(ma)* 'landing-place, harbor, small haven' (earlier 'departure'

?); Lapp / Saami *vuol'ge-* 'to go, to start, to depart; to go, to leave (home)'; Mordvin *valgo-* 'to descend, to go down (of stars); to come down and sit (of birds)'; Cheremis / Mari *wale-*, *wole-* 'to descend; to lower (in price); to go down (of the sun)'; Vogul / Mansi *jol-wagl-* 'to descend' (*jol-* 'down'); Ostyak / Xanty *vygəl-*, (Southern) *wagət-* 'to descend, to sink, to come down'; Hungarian *vál-* 'to part, to split off (intr.); to divorce; to become; to redound to'. Collinder 1955:122 and 1977:135; Rédei 1986—1988:554 **walka-* 'to descend, to go down'; Sammallahti 1988:551 **wilkā-* 'to descend'.

Buck 1949:10.47 go; 10.48 come; 10.49 go away, depart. Hakola 2000:204—205, no. 915.

818. Proto-Nostratic root **wal-* (~ **wəl-*):

(vb.) **wal-* 'to flow, to wet, to moisten';

(n.) **wal-a* 'flow, trickle; wetness, moisture, dampness'; (adj.) 'wet, damp'

- A. Afrasian: Semitic: Arabic *waliḥa-t* 'well-watered, rich in vegetation'. D. Cohen 1970—:550. (?) Highland East Cushitic: Burji *wáall-a* 'cloud, fog'. Sasse 1982:186—187 (Sasse notes that *wáall-a* may be a loan from Omotic). For the semantics, cf. Old High German *wolchan*, *wolkan* 'cloud', cited below.
- B. Dravidian: Tamil *oliyal* 'river'; Malayalam *oliyuka* 'to flow', *olikka* 'to flow, to run (as water, blood from wounds)', *olippu* 'flowing, looseness of bowels', *olivu* 'flowing', *ōluka* 'to flow, to ooze out', *ōla* 'trickling', *ōli* 'a spring, temporary well', *ōlōla* 'falling in drops, trickling'; Kota *oyl* 'waterfall in channel or river'; Toda *wasy* 'waterfall'; Iruḷa *uli* 'waterfall'; Telugu *oluku* 'to be spilled, to run, to flow, to overflow, to gush out'. Burrow—Emeneau 1984:96, no. 999. Kannaḍa *ōl-āḍu* 'to sport in water, to swim, to bathe'; Telugu *ōl-āḍu*, *ōlal-āḍu* 'to sport in water'. Burrow—Emeneau 1984:101, no. 1068. Tamil *vāli* 'drizzle'; Malayalam *vāhuka* 'to run, to drip, to be strained, to be distilled', *vāl* 'spittle'; Tuḷu *bāluni* 'to run over, to go out'. Burrow—Emeneau 1984:486, no. 5367.
- C. Proto-Kartvelian **wlt'-* 'to wet, to become wet': Georgian *vlt'-*, *lt'-* in *da-vlt'-ob-a*, *vlt'-ob-a* 'to wet, to become wet'; Mingrelian *rt'-* 'to wet, to become wet'. Klimov 1964:122 **ltw-* and 1998:110 **ltw-* (also possible **wlt'-*) 'to wet, to get wet'; Fähnrich—Sardshweladse 1995:137 **wlt'-*; Fähnrich 2007:164—165 **wlt'-*.
- D. Proto-Indo-European **wel-kh-/wol-kh-/wl-kh-*, **wel-k-/wol-k-/wl-k'-*, and **wel-gh-/wol-gh-/wl-gh-* 'to wet, to moisten': Old Irish *folc* 'washing, rain, downpour', *folcaim* 'I wash, I bathe'; Welsh *golchi* (< **gwolchi*) 'to wash'; Old English *wealg* 'lukewarm', *wlæc*, *wlacu* 'lukewarm', *weolcen*, *wolc*, *wolcen* 'cloud'; Old Frisian *wolken*, *wulken* 'cloud'; Old Saxon *wolkan* 'cloud'; Dutch *wolk* 'cloud'; Old High German

welh ‘wet’, *welc*, *welch* ‘damp, wet’ (New High German *welk*), *wolchan*, *wolkan* ‘cloud’ (New High German *Wolke*); Old Prussian *welgen* ‘cold (in the head)’; Lithuanian *vilgau*, *vilgyti*, *válgyti* ‘to moisten’; Latvian *valgs* ‘wet’; Old Church Slavic *vlaga* ‘moisture’; Russian *vólgljy* [волглый] ‘damp, humid’. Pokorny 1959:1145—1146 **uelk-*, **uelg-* ‘damp, wet’; Walde 1927—1932.I:306 **uelq-*, **uelg-*; Mann 1984—1987:1510 **uelgos* ‘damp, soaked, flaccid’, 1551 **uliqu-* ‘wet, liquid’, 1552—1553 **ulg-* ‘(adj.) wet, damp; (vb.) to dampen’, 1571 **uolghos*, *-is* ‘lukewarm, damp, moist’, **uolk-* ‘to wet, to soak, to wash’; Watkins 1985:76 **welg-* and 2000:98 **welg-* ‘wet’; Mallory—Adams 1997:639 **uelk-*, **uelg-* ‘wet’; Orël 2003:474 Proto-Germanic **wulk(a)nan*; Onions 1966:999 **wolg-*, **welg-*, **wlg-*; Klein 1971:824 **welg-*; Kluge—Mitzka 1967:851 **uelg-*, **uelk-* and 867 **uelg-*; Kluge—Seebold 1989:786 and 798 **wlg-*; Derksen 2008:524—525; Fraenkel 1962—1965.II:1251; Smoczyński 2007.1:716—717.

- E. Uralic: Proto-Finno-Volgaic **wala-* ‘to pour’ > Finnish *vala-* ‘to pour’; Karelian *vala-* ‘to pour’; Estonian *vala-* ‘to pour’, *valang* ‘downpour; outpour, outpouring, effusion’; Mordvin *valo-* ‘to pour; to spill’. Rédei 1986—1988:812 **wala-*. Note also Finnish *valu-* ‘to flow, to run, to drip’.

Buck 1949:1.72 cloud; 10.32 flow (vb.); 15.83 wet, damp’. Illič-Svityč 1965:333 **wila* ‘moist’ (‘влажный’); Möller 1911:265; Bomhard—Kerns 1994:626—627, no. 504.

819. Proto-Nostratic root **wal-* (~ **wəl-*):

- (vb.) **wal-* ‘to set fire to, to burn, to heat up, to warm’;
(n.) **wal-a* ‘heat, warmth, boiling’

- A. Afrasian: Semitic: Arabic *waliʿa* ‘to catch fire, to burn; to kindle, to light, to set fire (to)’; Tigrinya *wälläʿa* ‘to kindle, to set fire (to)’; Tigre *wälləʿa* ‘to kindle’. D. Cohen 1970—:553.
B. Dravidian: Telugu *oliki* ‘a funeral pyre’; Parji *olngam* ‘blaze of fire’, *olip-* (*olit-*) ‘to char, to scorch’; Kurux *ōlnā* ‘to be on fire, (crop) to be scorched by excessive heat’, *olʹdnā* ‘to set fire to, to scorch’. Burrow—Emeneau 1984:96, no. 1001.
C. Proto-Indo-European **wel-/wōl-/wǵ-* ‘to heat, to warm, to boil’: Armenian *gol* ‘heat’, *golanam* ‘to warm oneself’; Albanian *valë* ‘heat, boiling’, *vloj* ‘to boil, to ferment, to seethe’; Gothic *wulan* ‘to be aglow with, to seethe’; Old Icelandic *vella* ‘to bubble, to boil’, *ylja* ‘to warm’, *ylr* (< Proto-Norse **wuljar*) ‘warmth’, *olmr* (< Proto-Norse **wulma-*) ‘furious’; Old Danish *valm*, *volm* ‘boiling, cooking’; Old English *weallan* ‘to boil, to be hot’, *wielm* ‘boiling, surging, raging (of fire)’, *wyllan* ‘to boil’; Old Frisian *walla* ‘to surge, to well, to boil up’; Old Saxon *wallan* ‘to surge, to well, to boil up’; Old High German *walm* ‘boiling, fervor’, *wallan*

‘to bubble, to simmer; to boil, to seethe’ (New High German *wallen*), *wāl* ‘heat’, (adv.) *walō* ‘hotly’; Middle High German *wellen* ‘to boil, to steam, to simmer’; Lithuanian (inf.) *vilditi* ‘to make lukewarm’. Rix 1998a:618 **uelH-* ‘to bubble, to simmer; to boil, to seethe’; Pokorny 1959:1140 **uel-* ‘lukewarm, warm’ (?); Walde 1927—1932.I:302; Mann 1984—1987:1550 **ulāiō* (**ulāiō*) ‘to surge, to seethe’, 1569 **uol-* (**uolis*, *-iə*) ‘heat, surge, boiling, ferment’; Mallory—Adams 1997:264 **uel-* ‘to warm, to heat’; Orël 1998:494 and 2003:444 Proto-Germanic **walljōn* ~ **walljaz*, 444 **walljanan*, 444 **walmiz*, 453 **wellanan* II, 453 **wellōn*; Kroonen 2013:571 Proto-Germanic **wallan-* ‘to well up, to boil, to seethe’; Feist 1939:575—576 **uel-*; Lehmann 1986:411 “[e]tymology difficult; probably based on PIE **wel-*, **wel-ʔ-* ‘turn, roll’...”; De Vries 1977:418, 641, 653, and 678; Klein 1971:824; Onions 1966:999 West Germanic **wallan*, besides **wellan* found in Old Icelandic *vella*, Middle High German *wellen*; Kluge—Mitzka 1967:835 **uel-* ‘to twist, to turn’; Kluge—Seebold 1989:775 **wel-* ‘to roll, to rotate, to turn’. Note: The Germanic forms are both phonologically and semantically ambiguous. Some of them may belong with Proto-Nostratic (vb.) **welʷ-* ‘to well up, to surge, to flow forth, to flood’; (n.) **welʷ-a* ‘deluge, flood, inundation; surge, wave’ instead.

Buck 1949:1.85 burn (vb.); 1.86 light (vb.), kindle; 5.22 boil. Bomhard—Kerns 1994:616—617, no. 495.

820. Proto-Nostratic root **wal-* (~ **wəl-*):

(vb.) **wal-* ‘to crush, to grind, to wear out; to rub, to press; to be worn out, weak; to fade, to wither, to waste away’;

(n.) **wal-a* ‘distress, pain, difficulty; weakness, hunger, starvation’

A. (?) Afrasian: Proto-Semitic (reduplicated) **wal-wal-* ‘to wipe off, to wipe, to polish’ > Tigre (*ʔa*)*wälwälä* ‘to wipe off, to wipe, to polish’; Tigrinya *wälwälä* ‘to wipe off, to wipe, to polish’; Amharic *wäläwwälä* ‘to wipe off, to wipe, to polish’; Gurage *wäläwälä* ‘to wipe off, to wipe, to polish’. D. Cohen 1970—:550; Leslau 1979:653.

B. Dravidian: Tamil *vali* ‘(vb.) to be painful; (n.) pain, ache, trouble, difficulty’; Malayalam *valayuka* ‘to be straitened, pressed, distressed’, *valekka* ‘to distress, to vex, to imprison’, *valaccal* ‘distress, poverty’; Telugu *valiya* ‘to be tired, to become thin or reduced’; Tuḷu *balepuni* ‘to be distressed, vexed’; Kui *valga* (*valgi-*) ‘to become emaciated, thin, withered’. Burrow—Emeneau 1984:477, no. 5281. Tamil *olku* (*olki-*) ‘to grow weak or faint, to pine, to be disheartened; to become reduced, slender, thin, emaciated’, *or̥ku* (*or̥ki-*) ‘to be deficient, to be wanting, to fall short, to droop’, *or̥kam* ‘poverty, indigence, destitution, weakness, feebleness, deficiency, dearth’, *olli* ‘thin person, thinness, slenderness’;

Malayalam *olkuka* ‘to grow weak, to contract’, *ollāṭi* ‘a thin, slender person’; Telugu *ollā-bōvu* ‘to faint, to grow or turn pale, to fade’; Tuḷu *olandala*, *olandale* ‘swoon, faintness’. Burrow—Emeneau 1984:96, no. 1004.

- C. Proto-Indo-European **wel-/wol-/wl-* ‘to crush, to grind, to wear out; to press; to be worn out, weak; to fade, to wither, to waste away’: Tocharian A **walts-*, B **wāłts-*, **wāłts-* ‘to press, to crush’; Welsh *gwlydd* ‘mild, soft, tender, gentle’; English (dial.) *welk* ‘to wilt, to wither’, *wilt* ‘to fade, to wither, to droop’; Old High German (*ir*)*welhēn* ‘to become weak, faded, withered’, *welh* ‘weak, faded, withered’; Middle High German *welken* ‘to fade, to decay’ (New High German *welken*), *welc* ‘withered’ (New High German *welk*). Mann 1984—1987:1509 **uel-* ‘to press, to squeeze’, 1510 **ueld-* ‘to suppress, to be suppressed’, 1552 **uḷdh-* ‘mild, lukewarm’; Mallory—Adams 1997:142 **ueld-* ‘to crush, to grind, to wear out; to be worn out’; Orël 2003:453 Proto-Germanic **welkaz*; Onions 1966:999 and 1007; Klein 1971:824 **welg-* and 828; Kluge—Mitzka 1967:851 **uelg-*, **uelk-*; Kluge—Seebold 1989:786; Adams 1999:597 **wel-s-* ‘to press, to squeeze’; Van Windekens 1976—1982.I:542—543 **uel-*, **uol-*, **uḷ-*.
- D. Proto-Altaic **ōli-* (~ *-e-*) ‘to be weak from hunger, to starve to death; to die, to fade, to wither’: Proto-Tungus *(*χ*)*olbu-* ‘soul of the dead; shadow’ > Evenki *elbu*, *olbu-n* ‘soul of the dead; shadow’. Proto-Mongolian **ōl-* ‘to be weak from hunger, to starve to death’ > Written Mongolian *ölüs-* ‘to suffer starvation, famine; to become or feel hungry’, *ölüṅ* ‘(n.) starvation, famine, hunger; (adj.) starving, hungry’, *ölübür* ‘weak, having poor health’; Khalkha *ōls-* ‘to be hungry’, *ölön* ‘hungry’; Buriat *ūld-* ‘to be hungry’, *ülen* ‘hungry’; Kalmyk *ōls-* ‘to be hungry’; Ordos *ölödö-* ‘to be hungry’, *öl* ‘hunger’; Moghol *üläsu-* ‘to be hungry’; Dagur (*χ*)*unsu-* (< **ulsu-* < **öles-*), *ulese-*, *ulsu-* ‘to be hungry’; Shira-Yughur *öl* ‘hunger’; Monguor *losə-* ‘to be hungry’. Poppe 1955:50, 55, 89, and 156. Proto-Turkic **ōl-* ‘to die, to fade, to wither’, (causative) **ōl-tür-* ‘to kill’ > Old Turkic (Old Uighur) *öl-* ‘to die’, *ölür-* ‘to kill’; Karakhanide Turkic *öldür-* ‘to kill’; Turkish *öl-* ‘to die, to fade, to wither, to lose freshness, to suffer great grief or anxiety’, *öldür-* ‘to kill, to render soft or tender’, *ölüm* ‘death’, *ölmüş* ‘dead’, *ölmez* ‘undying, immortal’, *ölü*, *ölük* ‘dead; feeble, lifeless; faded, withered; corpse’, *ölücü* ‘mortal’, *ölgün* ‘faded, withered; enervated, calm (sea)’; Gagauz *jöl-* ‘to die’, *öldür-* ‘to kill’; Azerbaijani *öl-* ‘to die’, *öldür-* ‘to kill’; Turkmenian *öl-* ‘to die’, *öldür-* ‘to kill’; Uzbek *ul-* ‘to die’, *uldir-* ‘to kill’; Uighur *öl-* ‘to die’, *öltür-* ‘to kill’; Karaim *ol-* ‘to die’, *older-* ‘to kill’; Tatar *ül-* ‘to die’, *üter-* ‘to kill’; Bashkir *ül-* ‘to die’, *ülter-* ‘to kill’; Kirghiz *öl-* ‘to die’, *öltür-* ‘to kill’; Kazakh *öl-* ‘to die’, *öltir-* ‘to kill’; Noghay *öl-* ‘to die’, *öltir-* ‘to kill’; Sary-Uighur *jül-* ‘to die’, *jülir-* ‘to kill’; Oyrot (Mountain Altai) *öl-* ‘to die’, *öltür-* ‘to kill’; Tuva *öl-* ‘to die’, *ölür-* ‘to kill’; Chuvash *vil-* ‘to die’, *v̥wler-* ‘to kill’; Yakut *öl-* ‘to die’, *ölör-* ‘to kill’; Dolgan *öl-* ‘to die’, *ölör-* ‘to kill’. Décsy 1998:121 *öl-*

‘to die’. Starostin—Dybo—Mudrak 2003:1049 **ōli* (~ -*e*) ‘to die; to be hungry, exhausted’; Poppe 1960:108 and 125; Street 1974:22 **ōl-* ‘to be sick, to starve, to die’.

Buck 1949:4.75 die; dead; death; 4.82 weak; 5.14 hunger (sb.). Bomhard—Kerns 1994:628—629, no. 506.

821. Proto-Nostratic root **walʷ-* (~ **wəlʷ-*):

(vb.) **walʷ-* ‘to turn, to roll, to revolve’;

(n.) **walʷ-a* ‘circle, circumference; turn, rotation’; (adj.) ‘round’

- A. Proto-Afrasian **wal-* ‘to revolve’: Proto-Semitic **wal-ay-* ‘to turn to or towards, to turn away, to turn around’ > Arabic *waliya* ‘to turn (to or towards); to turn away, to avoid, to shun; to turn around, to turn back, to wheel around, to flee’; Ḥarsūsi *wel* ‘towards’; Šḥeri / Jibbāli *ōli* ‘to turn towards, to guide someone towards’; Mehri *həwlū* ‘to turn back, to go back to, to come back, to direct oneself to’. D. Cohen 1970— :544 and 549—550. Proto-Semitic **wal-ab-* ‘to turn’ > Tigre *wällābā* ‘to turn’. D. Cohen 1970— :544; Littmann—Höfner 1962:428—429. Berber: Tuareg *awəl* ‘to turn, to change direction; to be turned; to leap (animal)’, *tawila* ‘bearing, deportment (way of turning physically [said of women])’, *wələnwilət* ‘to spin’, *wəliwəl* ‘to be spun around; to wobble; to spin by itself’; Nefusa *uləlli* ‘spider’; Wargla *əlli* ‘to surround, to encircle; to be surrounded’, *awnənni* ‘spider’; Mzab *twala* ‘side, direction’, *awləlli* ‘spider’, *əmlillay* ‘to have vertigo’; Tamazight *llay* ‘to turn, to swing; to stir up the air; to have vertigo’, *timləllay* ‘vertigo’, *illay* ‘to move, to depart; to make room; to approach, to draw near’; Tashelhiyt / Shilha *mlilli* ‘to have vertigo’, *timlillay* ‘vertigo’; Riff *əmlulli*, *əmruggi* ‘to turn round, to revolve; to be overturned’; Kabyle *əwləli* ‘to spin, to rotate’, *timləllay* ‘vertigo’; Chaouia *iwləlli* ‘spider’. Proto-Southern Cushitic **wel-* or **wal-* ‘to go round and round, to revolve’ > Iraqw *harwel* ‘to surround’; Dahalo *walam-* in *wālampāni* ‘whirlwind’. Ehret 1980:314. [Ehret 1995:460, no. 968, **wel-* or **wal-* ‘to go round’.]
- B. Dravidian: Tamil *vaḷai* ‘to surround, to hover around, to walk around, to move about (as fetus in the womb)’, *veḷaivu* ‘circle, circumference’, *vaḷaiyam* ‘ring, circle, bracelet, ambit’, *vaḷāvu* (*vaḷāvi-*) ‘to surround’, *vaḷākam* ‘enclosing, surrounding’; Malayalam *vaḷayuka* ‘to surround’, *vaḷekka* ‘to enclose’, *vaḷaccal* ‘enclosing’, *vaḷayal* ‘surrounding’, *vaḷa* ‘ring, bracelet’; Kota *vaḷc-* (*vaḷc-*) ‘to walk in a circle, to make round’, *vaḷ* ‘bangle’, *vaḷ ca-rym* ‘all around’; Kannaḍa *baḷasu* ‘(vb.) to go in a circle or round, to walk or wander about, to be surrounded, to surround; (n.) act of surrounding or encompassing, what surrounds, state of being circuitous, one round or turn (as of a rope, etc.)’, *baḷe* ‘ring, armlet, bracelet’; Telugu

balayu ‘to surround’, *valayu* ‘to turn around (intr.)’. Burrow—Emeneau 1984:480, no. 5313.

- C. Proto-Indo-European **wel-/wol-/wǵ-* ‘to turn, to roll, to revolve’: Sanskrit *válati*, *válate* ‘to turn, to turn around, to turn to’; Armenian *gelum* ‘to twist, to press’, *glem* ‘to roll’, *glor* ‘round’; Greek εἰλέω (< *Fελ-v-έω) ‘to roll up, to pack close, to wind, to turn around, to revolve’, εἰλύω ‘to enfold, to enwrap’; Latin *volvō* ‘to roll, to wind, to turn around, to twist around’; Old Irish *fillid* ‘to fold, to bend’; Gothic *af-walwjan* ‘to roll away’, *at-walwjan* ‘to roll to’; Old Icelandic *valr* ‘round’, *velta* ‘to roll’, *válka* ‘to toss to and fro, to drag with oneself’, *válk* ‘tossing to and fro (especially at sea)’; Old English *wielwan* ‘to roll’, *wealwian* ‘to roll’, *wealte* ‘a ring’, *wealcan* ‘to roll, to fluctuate (intr.)’, to roll, to whirl, to turn, to twist (tr.), *wealcian* ‘to roll (intr.)’, *gewealc* ‘rolling’, *welung* ‘revolution (of a wheel)’; Middle English *walken* ‘to walk, to roll, to toss’, *walkien* ‘to walk’; Middle Dutch *welteren* ‘to roll’, *walken* ‘to knead, to press’; Old High German *walzan* ‘to roll, to rotate, to turn about’ (New High German *wälzen*), *walken*, *walchen* ‘to knead, to roll paste’; Tocharian B *wäl-* ‘to curl’. Rix 1998a:616 **uel-* ‘to turn, to twist, to revolve, to rotate’; Pokorny 1959:1140—1144 **uel-*, **uelə-*, **ulē-* ‘to turn, to roll’; Walde 1927—1932.I:298—304 **uel-*; Mann 1984—1987:1508—1509 **uel-* ‘(vb.) to turn, to bend, to twist, to revolve, to deceive; (n.) turn, bending, deceit’, 1150 **uēlənōs*, *-ā* (**uelen-*) ‘roller, cylinder’, 1510 **uelər-* (**ueljər-*) ‘twisted, bent; twist, bend, curved’, 1511 **ueluel-*, 1511—1512 **uelumn-* ‘turn, twist, curve, bend’, 1512 **ueluō*, *-iō* ‘to twist, to turn, to bend, to roll’, 1555 **ulunt-* (?) ‘roll, ball, round, twist, bend’, 1555—1556 **uluō*, *-iō* ‘to roll’, 1556 **ulus*, *-ā*, *-iə* ‘twist, turn, wrap, twisted’, 1556 **lutā*, *-is* (**lutā*, *-is*) ‘roll, scroll, wind’, 1569 **uol-* (**uolos*) ‘turn, roll, cylinder’, 1569—1570 **uōl-* (**uōlos*) ‘turn’, 1571—1572 **uōliō*, **uoleiō* ‘to roll, to overturn, to ruin’; Mallory—Adams 1997:607 **uel-* ‘to turn, to wind, to roll’; Watkins 1985:75—76 **wel-* and 2000:98 **wel-* ‘to turn, to roll’; Boisacq 1950:224—225 **uelu-*; Frisk 1970—1973.I:457—458 and I:461—462 **ul-ne-u-(ti)*; Chantraine 1968—1980.I:319—320 **Fελ-* ‘to turn’ and I:320—321 **wehu-*; Hofmann 1966:72—73 **uelu-*, extended form of **uel-*; Beekes 2010.I:384—385 **uel-*; De Vaan 2008:689—690; Walde—Hofmann 1965—1972.II:832—834; Ernout—Meillet 1979:752; Mayrhofer 1956—1980.III:161; Orël 2003:443 Proto-Germanic **walaz* I, 444 **walkanan*, 444 **walkōjanan*, 444 **waltjanan*, 444 **waltō*, 445 **walwjanan*, 453 **wellanan* I; Kroonen 2013:570 Proto-Germanic **walkan-* ‘to roll’ and 570 **walk/gōn-* ‘to roll’; Lehmann 1986:9 **wel?*-, **welw-*, etc.; Feist 1939:13 **uel-*; De Vries 1977:641, 642, and 653 **uel-*; Klein 1971:820 **walg-*; Onions 1966:989 Germanic **walk-*, of unknown origin; Kluge—Mitzka 1967:836 **uel-*; Kluge—Seebold 1989:776 **wel-*; Adams 1999:596 **wel-* ‘to wind, to twist, to bend’; Van Windekens 1976—1982.I:555 **uel-*.

- D. Yukaghir (Northern / Tundra) *wej-* ‘to turn, to move’. Nikolaeva 2006:455.
 E. Chukchi-Kamchatkan: Proto-Chukotian **wæltə-* ‘to twist face’ > Kerek *waltə-* ‘to twist face’; Koryak *weltə(tku-)* ‘to twist face’. Fortescue 2005: 326.

Buck 1949:10.12 turn (vb.); 10.13 turn around (vb.); 10.14 wind, wrap (vb.); 10.15 roll (vb.). Bomhard—Kerns 1994:609—610, no. 486; Dolgopolsky 2008, no. 2477, **wA[l̥][V][h]V* ‘to turn, to roll, to revolve’.

822. Proto-Nostratic root **walv-* (~ **wəlv-*):

(vb.) **walv-* ‘to blaze, to shine, to be bright’;

(n.) **walv-a* ‘whiteness, glitter, luster, brightness, light’; (adj.) ‘shining, bright, white’

- A. Dravidian: Tamil *oḷi* ‘light, brightness, splendor, sun, moon, star, fire, sunshine, lamp, beauty’, *oḷir*, *oḷiru* (*oḷiri-*) ‘to shine’, *oḷiyavan*, *oḷiyōṇ* ‘sun’, *oḷirvu*, *oḷiru* ‘brightness’; Malayalam *oḷi* ‘splendid, bright; the light’, *oḷima*, *oḷivu* ‘brightness’, *oḷayuka*, *oḷiyuka* ‘to shine, to glitter’; Kannada *oḷa*, *oḷapu* ‘to shine, to blaze’, *uḷku* ‘to shine, to blaze, to appear’, *uḷku*, *uḷuku* ‘a shining substance, a meteor’; Tuḷu *oḷi* ‘light, splendor’; Koṇḍa *oḷini(ka)* ‘white, bright’. Burrow—Emeneau 1984:98, no. 1016. Tamil *vāḷ* ‘luster, splendor, brightness, fame’; Telugu *vālu* ‘to increase, to rise, to swell, to flourish; to be splendid, to shine’. Burrow—Emeneau 1984:487, no. 5377.
- B. Proto-Kartvelian **wel-* ‘to flash (lightning)’: Georgian *el-* ‘to flash (lightning)’, *elva* ‘lightning’; Mingrelian *val-* ‘to flash (lightning)’; Laz *val-* ‘to flash (lightning)’; Svan *el-*, *hel-*, *hl-* in: *hel* ‘lightning’, *li-el-e* (< **li-hel-e* ?) ‘to flash (lightning)’, *li-hl-āl-i* ‘to flash forth (lightning)’. Schmidt 1962:106; Fähnrich—Sardshweladse 1995:131 **wel-*; Fähnrich 2007:158—159 **wel-*; Klimov 1964:78—79 **el-* and 1998:46—47 **el-* ‘to sparkle (of lightning)’.
- C. Uralic: Proto-Finno-Ugrian **walvk₃* ‘shining, white, light (of color)’ > Finnish *valkea* ‘white, light (of color); fire’, *valkaise-* ‘to whiten, to bleach’, *valko-* ‘white’; Estonian *valge* ‘white, light (of color), blond’; (?) Lapp / Saami *viel’gād*, (attr.) *vil’gis* ‘white or light, pale’, *vielgok* ‘white or light, pale, quadruped’; Cheremis / Mari *walgōdō*, *wolgōdō* ‘(adj.) light, bright; (n.) light, brightness’, *walgalta-*, *wolgalta-* ‘to shine, to dawn, to get light’; (?) Hungarian *világ* ‘light, world’. Collinder 1955:122—123, 1960:414 **wal’ka*, and 1977:135; Rédei 1986—1988:554—555 **walk₃*; Sammallahhti 1988:551 **wilki-* ‘light’. Proto-Finno-Ugrian **walv₃-* ‘to shine, to gleam’ > Finnish *vaalea* ‘light (of color), pale, fair’, *valo* ‘light’; Zyrian / Komi *vol’al-* ‘to shine’; Votyak / Udmurt *val’*, *val’i* in: *čil-val’*, *čili-val’i* ‘luster’ (*čil* ‘shining, radiant’), *val’k*, *val’t* ‘resplendent, lustrous’; Vogul / Mansi *wol’g-* ‘to shine’; Hungarian *villám* ‘(flash of) lightning’.

Collinder 1955:122—123 and 1977:135; Rédei 1986—1988:555—556
*wal'3.

Buck 1949:1.55 lightning; 15.51 see; 15.52 look (vb.), look at; 15.53 sight (subj.); 15.543 sight (obj.), look (obj.), appearance; 15.56 shine; 15.57 bright; 15.61 color (sb.); 15.64 white. Illič-Svityč 1965:363 *w/a/l'(k)A 'bright, light' ('светлый'); Bomhard—Kerns 1994:614—616, no. 494; Hakola 2000:208, no. 931; Pudas-Marlow 1974:158, no. 742; Dolgopolsky 2008, no. 2484, *walK[a] 'to be bright/white, to shine'.

823. Proto-Nostratic root *wam- (~ *wəm-):

(vb.) *wam- 'to eject, to spit out, to spit up';

(n.) *wam-a 'spittle, vomit'

A. Dravidian: Tamil *umi* 'to spit, to gargle', *uminīr* 'spittle, saliva', *umivu* 'spitting', *umīr* 'to spit, to gargle, to emit, to vomit'; Malayalam *umiyuka*, *umikka* 'to spit out', *umi*, *umīru* 'spittle', *umīrka* 'to spit, to emit'; Koraga *umi* 'saliva'; Kannaḍa *ummalu*, *ummulu* 'phlegm, mucus'; Telugu *umiyu* 'to spit, to spit out', *ummi* 'spittle, saliva'. Burrow—Emeneau 1984:61, no. 636.

B. Proto-Indo-European *wem-/ *wom-/ *wṃ- 'to vomit, to spit up': Sanskrit *vāmiti*, *vamati* 'to vomit, to spit up, to eject, to emit'; Avestan *vam-* 'to vomit'; Greek ἐμέω 'to vomit, to throw up'; Latin *vomō* 'to vomit, to throw up'; Old Icelandic *váma* 'qualm, ailment', *vámr* 'a loathsome person', *væma* 'nausea, sea sickness'; Lithuanian *vemiù*, *vėmti* 'to vomit, to throw up'. Rix 1998a:621 **uemh*₁- 'to vomit'; Pokorny 1959:1146 **uem*-, **uemə*- 'to vomit'; Walde 1927—1932.I:262—263 **uem*-, **uemē*-; Mann 1984—1987:1512 **uemō*, *-iō* 'to vomit'; Watkins 1985:76 **wem*- and 2000:98 **wemə*- 'to vomit' (oldest form **wemə*₁-); Mallory—Adams 1997:536 **uémh*_x*mi* 'to spew, to vomit'; Boisacq 1950:247 **uemē*-; Frisk 1970—1973.I:504—505; Chantraine 1968—1980.I:343; Sihler 1995:41, §42, **wemH*₁-; Hofmann 1966:80—81 **uemə*-; Beekes 2010.I:416—417 **uemh*₁-; Walde—Hofmann 1965—1972.II:835 **uemō*; Ernout—Meillet 1979:752—753; De Vaan 2008:690; Orël 2003:445 Proto-Germanic **wamman*, 445 **wammaz*; De Vries 1977:642; Smoczyński 2007.1:734; Fraenkel 1962—1965.II:1222; Derksen 2015:497 **uemh*₁-; Mayrhofer 1956—1980.III:146.

Buck 1949:4.56 spit (vb.); 4.57 vomit (vb.). Dolgopolsky 2008, no. 2492, **wûmHV* (or **hûmhV* ?) 'to spit out, to vomit'; Bomhard—Kerns 1994:612, no. 490.

824. Proto-Nostratic root **wan-* (~ **wən-*):(vb.) **wan-* ‘to stay, to remain’;(n.) **wan-a* ‘abode, dwelling’

- A. Proto-Afrasian **wan-* ‘to stay, to remain’: Arabic *wanaka* ‘to dwell amongst’. D. Cohen 1970—:562. Egyptian *wn*, *wnn* ‘to be, to exist’; Coptic *won* [ⲱⲛ] ‘to be’. Hannig 1995:194; Faulkner 1962:62; Gardiner 1957:561 (supplies missing parts of *īw* ‘is, are’); Erman—Grapow 1921:36 and 1926—1963.1:308—309; Vycichl 1983:233; Černý 1976:212—213. Central Cushitic: Bilin *wān-* ‘to be’, *wāntā* ‘existence’; Xamir *wən-* ‘to be’; Kemant *wan-* ‘to be’. Appleyard 1984:50 and 2006:29; Reinisch 1887:357.
- B. Kartvelian: Georgian *van-* ‘dwelling’; Mingrelian *on-* name of a city in Rača; Svan *wan* ‘plain, lowland, flat mountain’. Blažek 1992a:141, no. 29.
- C. Indo-European: Proto-Germanic **wunan* ‘to dwell, to abide, to remain’ > Old Icelandic *una* ‘to be content in a place; to dwell, to abide’; Old English *wunian* ‘to dwell, to remain, to continue (in time and space); to inhabit, to remain in’, *wuna* ‘habit, custom’, *wunung* ‘dwelling (act and place)’; Old Frisian *wonia*, (*w*)*unia* ‘to dwell, to remain’; Old Saxon *wunōn*, *wonōn* ‘to dwell, to remain’; Old High German *wonēn*, *wonan*, *wanēn* ‘to dwell, to remain’ (New High German *wohnen*), *wonunga* ‘dwelling’ (New High German *Wohnung*). Orël 2003:475 Proto-Germanic **wunēnan*; Kroonen 2013:599 Proto-Germanic **wunēn-* ‘to be used to’; De Vries 1977:634; Kluge—Mitzka 1967:867 **ūen-*; Kluge—Seebold 1989:797. Note: this stem is distinct from Proto-Indo-European **wen(H)-* ‘to strive for, to wish for, to desire’ (cf. Pokorny 1959:1146—1147).

Sumerian *unu*, *ūnu*, *unu*₇ ‘dwelling, residence; dwelling-place, place of residence’.

Buck 1949:7.11 dwell; 9.91 be. Bomhard 1996a:213, no. 612; Blažek 1992a:141, no. 29. Different etymology in Dolgopolsky 2008, no. 2495a, **wV[ʃV]NV* ‘to stay’.

825. Proto-Nostratic (n.) **wan-a* ‘share, portion, period (of time)’:

- A. Proto-Afrasian **wan-* ‘period (of time)’: Egyptian *wnwt* ‘hour, division of time’; Coptic *unu* [ⲱⲛⲟⲩ] ‘hour’. Hannig 1995:196—197; Faulkner 1962:61; Erman—Grapow 1921:36 and 1926—1963.1:316—317; Gardiner 1957:561; Vycichl 1983:233; Černý 1976:214. Highland East Cushitic: Kambata *wannuri* ‘next year’. Hudson 1989:343.
- B. Dravidian: Kannaḍa *ontu*, *vantu*, *vanti* ‘a turn, time’, *ontu* ‘share, portion’; Tuḷu *onti* ‘a turn, time’, *ontu* ‘a turn, time; once’, *ontigē* ‘a contribution’; Telugu *vantu* ‘share, portion, a turn by rotation, a round’. Burrow—Emeneau 1984:93, no. 979.

- C. Proto-Kartvelian *wona- ‘time’: Georgian (Moxevian) *ona-ze* ‘very fast’; Svan (*w*)*ona* ‘time’. Fähnrich 2007:165 *wona-.

Buck 1949:14.11 time. Bomhard 1996a:216—217, no. 620.

826. Proto-Nostratic (n.) *wan-a ‘first, first-born, eldest’:

- A. Afrasian: Proto-Highland East Cushitic *wanaa ‘first’ > Burji *wanáy* ‘first-born’, *wanawwa* ‘elder sister’, *wanay*, *wonáy* ‘elder brother’; Kambata *wana(a) beetu* ‘first-born’ (*beetu* = ‘child’), *wanabii* ‘first’. Sasse 1982:190; Hudson 1989:225, 226, 342, and 343.
- B. Dravidian: Kolami *vanna* ‘brother’s wife’; Naikri *vanna* ‘older brother’s wife’; (?) Konḍa *oni* ‘older brother’s wife, maternal uncle’s daughter (older than person concerned)’; Pengo *oni* ‘older brother’s wife’. Burrow—Emeneau 1984:474, no. 5251.
- C. Uralic: Proto-Finno-Permian *wanša ‘old’ > Finnish *vanha* ‘old’, *vanhemmat* ‘parents’; Estonian *vana* ‘old’; Votyak / Udmurt *vuž* ‘old’; Zyrian / Komi *važ* ‘old’. Rédei 1986—1988:813 *wanša; Sammallahti 1988:554 Proto-Finno-Permian *vanša ‘old’. (?) Proto-Finno-Ugrian *wšn3 ‘old’ > Zyrian / Komi *vener* ‘old’; Hungarian *vén* ‘old’. Rédei 1986—1988:589—590 *wšn3.

Buck 1949:13.34 first; 14.15 old. Bomhard 1996a:271, no. 621. Different etymology in Dolgopolsky 1998:89, no. 112, *[ħ|χV]wän|nV ‘relative (of a younger/the same generation) of the opposite exogamous moiety’ (> ‘brother/sister-in-law, son-in-law’) and 2008, no. 2494, *wänV ⇐ *[XV]wänV ‘relative (of a younger/the same generation) of the opposite exogamous moiety’ ([in descendant languages] → ‘brother/sister-in-law, son-in-law’).

827. Proto-Nostratic root *wan- (~ *wən-):

- (vb.) *wan- ‘to bend’;
(n.) *wan-a ‘bend, curve’; (adj.) ‘crooked, bent, curved’

- A. Proto-Afrasian *wan- ‘to bend, to twist; to be bent, twisted, crooked’: Proto-Semitic *wan-aw/y- ‘to twist, to press, to deceive’ > Old Akkadian *wanāʾum* ‘to press, to oppress; to deceive, to trick’; Hebrew *yānāh* [יָנָה] ‘to oppress, to tread down, to trample underfoot; to deceive, to trick, to cheat, to delude, to bamboozle, to mistreat, to vex, to annoy, to irritate’; Aramaic *yənī* ‘to oppress, to take advantage of’; Arabic *wanā* ‘to be or become faint, weak, tired, dispirited, despondent, sapless, effete; to lose vigor, to flag, to languish’. D. Cohen 1970—:562; Murtonen 1989:216; Klein 1987:260; Zammit 2002:442. Egyptian *wn* ‘to do wrong, to commit a sin or a fault’, *wn* ‘defect, error, fault, mistake, offense’, *wnnw* ‘evildoer’, *wn-ty* ‘transgressor, offender’, *wn* ‘a sinful or erring man, one who cheats’.

- wn-ib* ‘an evil-hearted man’. Hannig 1995:196; Gardiner 1957:561; Faulkner 1962:61; Erman—Grapow 1921:36 and 1926—1963.1:314.
- B. Dravidian: Tamil *vaṇki* ‘a kind of armlet; a kind of iron hook or curved instrument’; Kannaḍa *vaṇki*, *oṇki* ‘hook, gold armlet of a curved shape’; Tuḷu *oggi*, *uggi* ‘handle, hook’, *oṇki*, *vaṇki* ‘a bracelet worn on the arms’; Telugu *vaṇkī* ‘curved ornament worn by women on the upper arm’, *oṇkiya*, *oṇke* ‘hook or peg fixed in a wall’; Gondi *vakonjee* ‘an elephant goad’. Burrow—Emeneau 1984:471, no. 5210. Tamil *vaṇaṇku* (*vaṇaṇki*-) ‘to bend, to yield, to be submissive; to worship, to salute respectfully’, *vaṇakku* (*vaṇakki*-) ‘to bend (tr.), to make flexible (as the body), to make submissive’, *vaṇakkam*, *vaṇakku* ‘bending, worship, submission’, *vaṇar* ‘to bend (intr.), to curl (as the hair)’, *vaṇar* ‘vault’, *vaṇai* ‘to bend (intr.)’; Malayalam *vaṇaṇṇuka* ‘to bend, to bow, to salute respectfully’, *vaṇakkam* ‘obeisance, reverence’, *vaṇakkuka* ‘to bend (tr.)’. Burrow—Emeneau 1984:473, no. 5236. Tamil *vāṇku* (*vāṇki*-), *vēṇku* (*vēṇki*-) ‘to bend (intr., tr.), to sink, to subside, to move to one side, to withdraw’, *vāṇku* ‘bending’, *vāṇkal* ‘bending, curve, inclination’, *vāṅku* ‘bend, irregularity’; Malayalam *vāṇṇuka* ‘to bend, to shrink, to draw back’; Kota *vag-* (*vagy-*) ‘to be slightly bowed down, to crouch, to be obedient to orders’, *vak-* (*vaky-*) ‘to bend (intr.), to be cowed’; Kannaḍa *bāgu* ‘to bend (intr.), to bow, to incline, to stoop; to bend (tr.)’, *bāgu* ‘bending, inclination, curve’, *bāgisu* ‘to bend (tr.), to cause to bend’, *baṅku* ‘to be crooked, bent’, *baggu*, *boggu* ‘to bend, to bow, to become submissive’, *baggisu*, *boggisu* ‘to bend (tr.)’, *baṅkane* ‘in a bending or bent way’, *bokka* ‘with a turn, bend, or bow’; Koḍagu *ba-ṅg-* (*ba-ṅgi-*) ‘to become bent, to slope’, *bagg-* (*baggi-*) ‘to stoop, to bend down’; Tuḷu *bāguni*, *bāṅguni* ‘to bow, to stoop, to lean on one side’, *bāṅgāvuni* ‘to cause to bend or stoop’; Telugu *vaṅgu* ‘to bend, to stoop, to bow, to become crooked, to become low or humbled’, *vancu*, *vampu* ‘to bend, to cause to stoop, to subdue, to humble, to overpower’, *vampu* ‘(n.) bend, curve, crookedness; (adj.) bent, curved, crooked’, *vāncu* ‘to bend the head, to cause to bend’, *vāka* ‘crooked’; Kolami *vaṅg-* (*vaṅkt-*) ‘to bend (intr.)’, *vaṅgip-* (*vaṅgipt-*) ‘to bend (tr.)’; Naikṛi *vaṅg-* ‘to bend (intr.)’; Parji *vaṅg-* ‘to bend (intr.)’; Gondi *vak-*, *vaṅg-* ‘to bend (intr.)’, *vaṅgānā* ‘to be bent’, *vaṅkor*, *vaṅko* ‘bent, crooked’; Konḍa *vaṅ-* ‘to bend, to become bent’, *vak-* ‘to bend (tr.)’; Kuwi *vwāṅgali* ‘to be crooked’, *vwakhali* ‘to bend’; Kuṛux *beṅknā*, *beṅka’ānā* ‘to turn (tr.) from a straight line, to bend, to curve’, *beṅkō*, *beṅkā* ‘crooked, bent, curved’. Burrow—Emeneau 1984:482—483, no. 5335.
- C. Proto-Indo-European **wen-dh-/ *won-dh-/ *wṇ-dh-* ‘to bend, to twist, to turn’: Sanskrit *vandhūra-m* ‘wicker carriage’; Armenian *gind* ‘ring’; Gothic *bi-windan* ‘to wrap, to wind’, *wandjan* ‘to turn’, *inwinds* ‘perverse, unjust’; Old Icelandic *vinda* ‘to twist, to wring, to wind, to squeeze’, *venda* ‘to wend, to turn; to change, to pervert’; Norwegian *vinda* ‘to twist, to turn, to wind, to plait’; Swedish *vinda* ‘to twist, to turn, to wind, to plait’;

Danish *vinde* ‘to twist, to turn, to wind, to plait’; Old English *windan* ‘to wind, to twist, to turn, to weave, to plait, to curl’, *wendan* ‘to turn, to convert, to change; to go’; Old Frisian *winda* ‘to wind, to twist, to turn’; Old Saxon *windan* ‘to wind, to twist’; Old High German *wintan* ‘to wind, to wrap’ (New High German *winden*); Tocharian A/B *wānt-* ‘to cover, to envelop’, B *wente* ‘covering’ (?). Rix 1998a:623 **uendh-* ‘to turn, twist, or wind (around)’; Pokorny 1959:1148 **uendh-* ‘to twist, to turn’; Walde 1927—1932.I:261 **uendh-*; Mann 1984—1987:1513 **uendh-* ‘to turn’, 1556—1557 **uṇdhos, -is, -iə* ‘twist, turn, curl, bend’, 1575 **uondh-* ‘bend, turn; switch, rod, hook’; Gamkrelidze—Ivanov 1984.II:729, fn. 1, **uend[h]-* and 1995.I:632, fn. 39, **wendh-* ‘to weave, to plait’; Watkins 1985:76 **wendh-* and 2000:99 **wendh-* ‘to turn, to wind, to weave’; Mallory—Adams 1997:607 **uendh-* ‘to wind, to twist’; Orël 2003:446 Proto-Germanic **wandjanan*, 454 **wendan*; Kroonen 2013:587 Proto-Germanic **windan-* ‘to wind’; Feist 1939:98 **uendh-*; Lehmann 1986:74 **wendh-*; De Vries 1977:653 and 665; Falk—Torp 1903—1906.II:448; Onions 1996:1000, and 1007—1008; Klein 1971:828 **wendh-*, **wṇdh-*; Kluge—Mitzka 1967:852 and 861; Kluge—Seebold 1989:787 and 793—794; Mayrhofer 1956—1980.III:143; Van Windekens 1976—1982.I:556 **uendh-*; Adams 1999:592 **wendh-* and 608 **wondho-*. Indo-European **wen-kh-/won-kh-/wṇ-kh-* ‘to bend, to twist, to turn’: Sanskrit *vañcati* ‘to go crookedly, to totter, to stagger, to waver’, (causative) *vañcayati*, *vañcayate* ‘to cause to go astray, to deceive, to cheat, to defraud of’, *vañkate* ‘to be crooked, to go crookedly’, *vakra-ḥ* ‘crooked, curved, bent, twisted, wry’, *vañka-ḥ*, *vañkara-ḥ* ‘the bend of a river’, *vañkú-ḥ* ‘going crookedly or hurriedly’, *vāñkri-ḥ* ‘a rib’; Gothic **un-wāhs* ‘blameless’ (nom. pl. n. *un-wāha*); Old English *wōh* ‘(adj.) crooked, perverse, wrong, unjust; (n.) error, wrong, wickedness’; Old Saxon *wāh* ‘evil’. Rix 1998a:624 **uenk-* ‘to go crookedly, to totter, to stagger, to waiver’; Pokorny 1959:1134—1135 **uek-*, **ue-n-k-* ‘to bend’; Mayrhofer 1956—1980.III:127; Mann 1984—1987:1491—1492 **uankos, -ā, -us* ‘crooked, bent; crook, bend’; Orël 2003:447 Proto-Germanic **wanxaz*; Lehmann 1986:379 **wek-*, **we-n-k-* ‘to bend’, **wonko-* ‘cooked’; Feist 1939:525 Gothic **un-wāhs* (< **ṇ uanko-*). Proto-Indo-European **wen-k’-/won-k’-/wṇ-k’-* ‘to curve, to bend’: Sanskrit *vāṅgati* ‘to go lamely, to limp’; Old Icelandic *vakka* (< Proto-Germanic **wankōn*) ‘to stray, to hover about’, *vanka* ‘to rove, to stroll about as if disturbed in mind; to wink’; Old English *wincian* ‘to shut the eyes, to blink, to wink’, *wancol* ‘unstable’, *wincel* ‘corner’, *wince* ‘winch, pulley’; Old Saxon *wincan* ‘to nod, to wink’; Middle Dutch *winken* ‘to nod, to wink’; Old High German *winchan* ‘to sway, to stagger, to nod’ (New High German *winken*), *winkel* ‘corner’ (New High German *Winkel*); Lithuanian *vėngiu, vėngti* ‘to avoid, to shun’, *vangùs* ‘idle, lazy’, *vėngis* ‘bend, curve’, *vėngrùs* ‘twisty’. Rix 1998a:623 (?) **ueng-* ‘to bend, to be bent’; Pokorny 1959:1148—1149 **ue-n-g-* ‘to be

bent'; Walde 1927—1932.I:218 **ua-n-g-* 'to be bent'; Mann 1984—1987:1514 **ueng-* 'to turn, to bend', 1514 **ueng-*, 1557 **uṅgos, -is, -ios, -jə* 'bend, twist, turn', 1575 **uṅg-* '(n.) bend, curve; (adj.) bent, curved, twisted'; Watkins 1985:76 **weng-* and 2000:99 **weng-* 'to curve, to bend'; Mallory—Adams 1997:63 **ueng-* 'to bend; to make a sudden veering motion'; Fraenkel 1962—1965.II:1223; Smoczyński 2007.1:734—735; Orël 2003:447 Proto-Germanic **wankōjanan* 455 **wenkjanan*; De Vries 1977:639; Onions 1966:1007 **weng-* and 1008 **weng-*, **wong-*; Klein 1971:828 and 829 **wag-* 'to bend'; Kluge—Mitzka 1967:861 **ueng-*; Kluge—Seebold 1989:794. Proto-Indo-European **wen-gh-/won-gh-/wṇ-gh-* 'to turn, to twist, to go crookedly': Sanskrit *vaṅghate* 'to go, to set out, to begin, to move swiftly; to blame, to censure'; Swedish *vingla* 'to stroll; to wangle, to cheat'; English *wangle* 'to accomplish or obtain by irregular or insidious means'. Mann 1984—1987:1514 *uengh-* 'to go, to move'; Onions 1966:991; Klein 1971:820 "prob. rel. to *wankle*".

- D. (?) Uralic: Proto-Finno-Permian **waṅka* 'bent or curved object: hook, handle, knob, lever, elbow, etc.' > Finnish *vanko, vanka, vanku* 'hook, lever used for rolling burning logs across a burn-beaten clearing'; Estonian *vang* (gen. sg. *vanga, vangu*) 'bent piece of wood or metal; handle, door-handle; bend, curve', *käe-vang* 'elbow' (*käe* = gen. sg. of *käsi* 'hand, arm'); Votyak / Udmurt *vug* 'bent handle or ear of a vessel'; Zyrian / Komi *vug* 'handle, knob'. These forms are usually considered to be loans from Indo-Iranian (cf. Joki 1973:335—336). Collinder 1955:139 and 1977:149; Rédei 1986—1988:814 **waṅka*; Sammallahti 1988:554 **vēṅka* 'handle'.
- E. Chukchi-Kamchatkan: Proto-Chukotian **wən-* 'to bend' > Chukchi *wəne-ntat-* 'to bend (intr.)'; Koryak *wən-*, *wənə-tko-* 'to bend'. Fortescue 2005:335.

Buck 1949:9.14 bend (vb.); 12.74 crooked; 16.68 deceit; 16.74 wrong; 16.75 sin; 16.76 fault, guilt. Illič-Svityč 1965:336 **wanka* 'to bend' (ГНУТЬ); Dolgopolsky 2008, no. 2505, **wāṅka* 'to bend'; Bomhard—Kerns 1994:618—621, no. 498; Hakola 2000:208—209, no. 933.

828. Proto-Nostratic root **waṇ-* (~ **wəṇ-*):

- (vb.) **waṇ-* 'to strike, to stab, to wound, to cut';
(n.) **waṇ-a* 'cut, slash, gash, wound; harm, injury; dagger, knife'

- A. Dravidian: Malayalam *vaṅki* 'a certain dagger'; Kannaḍa *vaṅki* 'a sort of knife or sword', *vaṅkuḍi, baṅkuḍi* 'dagger'; Telugu *vaṅki, vaṅkiṇi* 'dagger'. Burrow—Emeneau 1984:471, no. 5211.
- B. Proto-Kartvelian **wn-* 'to injure, to harm': Georgian *vn-* 'to injure, to harm'; Mingrelian *n-* (< **vn-*) 'to injure, to harm'. Klimov 1998:54—55 **wn-* 'to injure, to harm; to torment, to suffer'; Fähnrich—Sardshweladse 1995:137 **wn-*; Fähnrich 2007:165 **wn-*.

- C. Proto-Indo-European *wen-/won-/wŋ- ‘to wound’: Gothic *wunds* ‘wounded’, *ga-wundōn* ‘to wound’, **wundufni* ‘plague, illness’ (only in acc. pl. *wundufnjōs*); Old Icelandic *und* ‘wound’, *undaðr* ‘wounded’; Old English *wund* ‘wound’, *wundian* ‘to wound’; Old Frisian *wunde* ‘wound’; Old Saxon *wund* ‘wounded’, *wunda* ‘wound’; Old High German *wunt* ‘wounded’ (New High German *wund*), *wunta* ‘wound’ (New High German *Wunde*); (?) Armenian *vandem* ‘to destroy’. Pokorny 1959:1108 **uen-* ‘to strike, to wound’; Walde 1927—1932.I:212 **uen-*; Mallory—Adams 1997:548—549 **uen-* ‘to strike, to wound’; Watkins 1985:76 **wen-* and 2000:98—99 **wen-* ‘to beat, to wound’; Orël 2003:474 Proto-Germanic **wundaz*, 474 **wundiz* ~ **wundō*, 474 **wundōjanan*; Kroonen 2013:599 Proto-Germanic **wunda-* ‘wounded’; Feist 1939:577—578 **uŋ-tó-*; Lehmann 1986:413; De Vries 1977:634 **uen-*; Klein 1971:832; Onions 1966:1013—1014; Kluge—Mitzka 1967:869; Kluge—Seebold 1989:800.
- D. Uralic: Proto-Finno-Ugrian **waŋ3-* (Proto-Ugrian **waŋk3-*) ‘to strike, to cut’ > (?) Votyak / Udmurt *vand-* ‘to cut, to cut off, to cut up, to strike’; (?) Zyrian / Komi (Sysola, Permyak) *vundi-*, (East Permyak) *vundi-* ‘to cut, to strike; to stab’; Ostyak / Xanty (Vah) *waŋ-*, (Upper Demyanka) *waŋχ-*, (Obdorsk) *waŋ-* ‘to hew’; Vogul / Mansi (Tavda) *waŋk-*, (Middle Konda, Pelymka) *woŋk-* ‘to strike’, (Upper Lozva) *woŋχap* ‘hammer’; Hungarian *vág-* ‘to cut, to hew down (wood or timber), to chop; to slaughter’, *vágás* ‘cutting; cut, slash, gash; slaughtering, killing; stroke, blow’, *vagdalt* ‘chopped (up)’, *vágott* ‘cut, chopped’ (*vágott seb* ‘wound made by cutting’). Rédei 1986—1988:558 Proto-Finno-Ugrian **waŋ3-* (Proto-Ugrian **waŋk3-*).

Buck 1949:4.85 wound (sb.); 9.21 strike (hit, beat); 11.28 harm, injure, damage (vb.). Dolgopolsky 2008, no. 2502, **waŋE* ‘to hit, to injure’.

829. Proto-Nostratic (n.) **war-a* ‘man, male, male animal’:

- A. Proto-Afrasian **war-* ‘man, male, male animal’: Semitic: Tigre *wär’e* ‘mountain goat’. D. Cohen 1970— :616; Littmann—Höfner 1962:435. Egyptian *wr* ‘a kind of cattle’, (f.) *wrt* ‘sacred cow’, *wr* ‘animal’. Hannig 1995:204 and 205; Faulkner 1962:64; Erman—Grapow 1926—1963.1:331. Highland East Cushitic: Sidamo *war-aamo* ‘older male calf; ox, bull’, *wa’r-icco* ‘female calf’, *warbá* ‘brave, strong’; Burji (pl.) *warbanna* ‘young sheep, lamb’, *warbi* ‘ram; young sheep, lamb’; Hadiyya *waraad-icco* (pl. *waraada*) ‘young man’. Hudson 1989:225, 302, and 400. West Chadic **warar-* ‘vicious bull’ > Hausa *waaraarii* ‘vicious bull’. Orël—Stolbova 1995:527, no. 2527, **war-* ‘bull, cow’ (the Semitic and Highland East Cushitic forms are not in Orël—Stolbova).
- B. Proto-Kartvelian **werž-* ‘male, ram’: Georgian *ver3-* ‘ram’; Mingrelian *erž-* ‘male, ram’ (cf. *šxuriši erži* ‘male of sheep’, *erž-ak’a* ‘lamb’).

Schmidt 1962:109; Klimov 1964:84 *wer₃_I- and 1998:52 *wer₃_I- ‘male, ram’; Fähnrich—Sardshweladse 1995:133 *wer₃_I-; Fähnrich 2007:160—161 *wer₃_I-.

- C. Proto-Indo-European *wers-/*wrs- ‘man, male, male animal’: Sanskrit *vṛṣa-h* ‘man, male, husband, bull’, *vṛṣan-* ‘male, manly, any male animal, bull, stallion’, *vṛṣṇi-h* ‘ram’; Latin *verrēs* ‘boar’; Lithuanian *veršis* ‘calf’; Latvian *versis* ‘ox’. Pokorny 1959:81 *wrsen-, *wersē/i- ‘male’; Walde 1927—1932.I:269 *uer-s-; Mann 1984—1987:1519 *uerks- (*wṛks-) ‘young animal’, 1521 *uers- ‘young of animal’, 1521 *uersēn- ‘male of animal’; Mallory—Adams 1997:363 *uērsēn- ‘male (as sire)’; Walde—Hofmann 1965—1972.II:761 *uers-; Ernout—Meillet 1979:724; De Vaan 2008:666; Derksen 2015:498 *uers-; Fraenkel 1962—1965.II:1228—1229; Smoczyński 2007.1:740; Mayrhofer 1956—1980.III:251—252; Wodtko—Irslinger—Schneider 2008:722—724 *uers-.

Buck 1949:2.23 male (human); 3.12 male (animal); 3.20—3.24 (3.21 bull; 3.22 ox; 3.23 cow; 3.24 calf); 3.26 ram. Bomhard—Kerns 1994:563—564, no. 427; Dolgopolsky 2008, no. 2530, *w[i]R₃V ‘young herbivorous animal (calf, lamb, etc.)’.

830. Proto-Nostratic root *war- (~ *wār-):

(vb.) *war- ‘to look, to watch out for, to observe, to care for’;

(n.) *war-a ‘watch, vigil, guardianship, care; watchman, guard, keeper, warder’

- A. Afrasian: Egyptian *wrš* ‘to spend the day, to spend one’s time, to be awake’, *wršy* ‘guard, sentry’, *wršṯ* ‘watch, vigil’; Coptic *werše* [ⲱⲉⲣⲱⲥⲉ] ‘watch, watch-tower’. Hannig 1995:206 and 207; Faulkner 1962:65; Gardiner 1957:562; Erman—Grapow 1921:38 and 1926—1963.1:335, 1:336; Černý 1976:215—216; Vycichl 1983:12 and 237.
- B. Proto-Indo-European *wer-/*wor-/*wṛ- ‘to look, to watch out for, to observe, to care for’: Gothic *wardja ‘guard, watchman’; Old Icelandic *varr* ‘aware; wary, cautious’, *vörðr* ‘ward, warder; guard, watch’ (*halda vörð* ‘to keep watch or guard’); Old English *warian* ‘to beware, to warn, to guard’, *wær* ‘wary, cautious’, *weard* ‘watchman, sentry, guardian’, *bewarian* ‘to watch over, to guard’, *weardian* ‘to watch over, to guard’; Old Saxon *ward* ‘guard’; Old High German *biwarōn* ‘to beware’ (New High German *bewahren* ‘to guard, to keep, to look after, to mind’), *wartēn* ‘to guard’ (New High German *warten* ‘to wait, to stay, to abide’), *wart* ‘keeper, warder’ (New High German *Wart*), *warto* ‘guard, watchman’, *giwar* ‘careful, attentive’ (New High German *gewahr* in: *werden gewahr* ‘to become aware of, to see, to perceive, to notice, to observe, to discern, to catch sight of’); Hittite *ú-e-ri-te-ma-aš* ‘anxiety’; Latin *vereor* ‘to have respect for, to revere’; Latvian *véru*, *vērt* ‘to look at, to notice’; Tocharian

B *yārp-* ‘to oversee, to observe, to take care of’. Perhaps also Hittite (nom. sg. c.) *wa-ar-ri-iš* ‘helpful; help’; Luwian *[w]a-ar-ra-ḫi-ta-aš-ši-iš* ‘being of help’; Hieroglyphic Luwian *wariya-* ‘to help’. Rix 1998a:626 **uer-* ‘to observe, to watch; to look after, to protect’; Pokorny 1959:1160—1162 **uer-* ‘to observe, to watch, to notice’; Walde 1927—1932.I:280—283 **uer-*; Mann 1984—1987:1516 **uer-* ‘to look, to watch, to observe, to care for’, 1517 **uerejō* ‘to look, to watch, to observe, to care for’, 1520 **uēros* ‘watchful, watch’, 1576 **uor-* ‘watch, guard’, 1577 **uorājō* (**uorejō*, **uorjō*) ‘to watch, to observe’, 1578 **uorejō* (**uorājō*, **uorjō*) ‘to watch, to observe’; Watkins 1985:77 **wer-* and 2000:99—100 **wer-* ‘to perceive, to watch out for’; Mallory—Adams 1997:417 **uer-* ‘to perceive, to give attention to’, **uer-b(h)-* ‘to observe, to protect’; Gamkrelidze—Ivanov 1984.II:808—809 **uer-* and 1995.I:709 **wer-* ‘to look, to pay attention, to be careful’, I:645, I:780 **wer-* ‘to defend (oneself), to save (oneself), to protect (oneself)’; Walde—Hofmann 1965—1972.II:757—758; Ernout—Meillet 1979:723 **wer-*; De Vaan 2008:665; Orël 2003:447—448 Proto-Germanic **waraz*, 448 **wardaz* II, 448 **wardjanan*, 448 **wardō(n)*, 448 **wardōjanan*; Kroonen 2013:574 Proto-Germanic **wara-* ‘aware’; Feist 1939:551 **uer-*; Lehmann 1986:394 **wer-* ‘to give heed to’; De Vries 1977:647 **uer-* and 675; Onions 1966:992 West Germanic **wardō* and 992 Common Germanic **war-*, **wer-* ‘to observe, to take care’; Klein 1971:821 **wer-* ‘to guard, to keep safe, to protect’ and 821 **wer-* ‘to be or become aware of; to guard, to keep safe, to protect’; Kluge—Mitzka 1967:832 **uer-*; Kluge—Seebold 1989:773 **werə-* ‘to pay attention to, to take notice of’; Adams 1999:499 **wer-w-*; Van Windekens 1976—1982.I:593—594; Klockhorst 2008b:962—963 and 1003—1004.

- C. Uralic: Proto-Ugric **war3-* ‘to watch over, to look after, to tend, to attend to, to keep, to guard, to wait for, to wait on’ > Vogul / Mansi *oor-*, *uur-* ‘to watch over, to look after, to tend, to attend to, to keep, to guard, to wait for, to wait on’; Hungarian *vár-* ‘to wait, to be waiting, to wait for, to await, to look out for’, *váró* ‘waiting’. Rédei 1986—1988:898—899 **war3-*. Yukaghir (Southern / Kolyma) *arpə-* ‘cautious, careful’, *arpəš-* ‘to take care of, to warn (tr.)’, *arpo:l’bo:-* ‘careful, cautious’, (Northern / Tundra) *worpe-* ‘cautious, careful’, *worperi-* ‘to pasture’, *warečuore-* ‘to take care of (tr.)’, *worperiče*, *worperije* ‘guard’, *ward’e* ‘herd’. Nikolaeva 2006:453.

Buck 1949:11.24 preserve, keep safe, save; 16.14 care (sb.); 19.58 help, aid (verbs). Bomhard—Kerns 1994:604—605, no. 480; Hakola 2000:209, no. 935; Dolgopolsky 2008, no. 2511, **warV* ‘to look, to watch’.

831. Proto-Nostratic root **war-* (~ **wər-*):
 (vb.) **war-* ‘to comb’;
 (n.) **war-a* ‘comb’

- A. Dravidian: Tamil *vār* ‘to comb (as hair)’, *vāru* (*vāri-*) ‘to comb (as hair), to play upon the strings of a lute’, *vāri* ‘a comb’; Malayalam *vāruka* (*vārnt-*), *vāruka* (*vāri-*) ‘to comb’; Kannaḍa *bācu*, *bārcu* ‘to comb’, *bācaṇige* ‘a comb’; Tuḷu *barcuni*, *bācuni*, *bāruni* ‘to comb’, *barcanè*, *bāraṇè*, *bāranè*, *bācaṇigè*, *bārpaṇi* ‘a comb’; Kuṛux *bāgnā* ‘to comb’, *bāg^lrkā* ‘wooden comb worn by boys and girls’. Burrow—Emeneau 1984:485, no. 5357.
- B. Proto-Kartvelian **warcx-* ‘to comb; a comb’: Georgian *varcxn-* ‘to comb’, *sa-varcx-al-* (< **sa-varcx-ar-*) ‘a comb’; Mingrelian *orcx-onž-*, *orcx-ond-* ‘a comb’; Laz *oncx-ož-* (< **orcx-* < **warcx-*), *ocx-ož-* ‘a comb’. Klimov 1998:49 **warcx-wn-* ‘to comb’; Fähnrich—Sardshweladse 1995:128 **warcx-*; Fähnrich 2007:155 **warcx-*.

Buck 1949:6.91 comb. Dolgopolsky 2008, no. 2516, **waHrV* ~ **warHV* ‘to comb, to scrape’.

832. Proto-Nostratic root **war-* (~ **wər-*):

- (vb.) **war-* ‘to stretch, to extend, to expand’;
 (n.) **war-a* ‘width, breadth, length’; (adj.) ‘wide, broad’
 Probably identical to:
 (vb.) **war-* ‘to raise, to elevate, to grow, to increase’;
 (n.) **war-a* ‘uppermost, highest, or topmost part’

- A. Proto-Afrasian **war-* (vb.) to stretch, to extend, to expand; (adj.) wide, broad; (n.) width, breadth’: Semitic: Arabic *warafa* ‘to stretch, to extend, to become long (shadow)’; (?) Tigre *wārfā* ‘to do more than necessary (for instance, drink)’. D. Cohen 1970— :632. Geez / Ethiopic *ward* [ወርድ], *warad* [ወረድ] ‘breadth, length’; Tigrinya *wārdi* ‘breadth, length’; Amharic *wārd* ‘breadth, length’. D. Cohen 1970— :619. According to Leslau (1987:617) the Ethiopian forms are from Arabic *‘ard* ‘breadth, length’. Leslau notes that this form is also found in Cushitic: Saho *warde* ‘breadth, length’. Egyptian *wr*, *wrr* ‘great; much, many’, *wr* ‘greatness (of size), sufficiency, excess’, *wrt* ‘greatness (of rank)’, *wr* ‘great one, magnate; chief’, *wr* ‘how much?’; Coptic *wēre* [ⲱⲛⲣⲉ] ‘great’, *wēr* [ⲱⲛⲣ] ‘how much?, how many?’. Hannig 1995:201—202 and 204; Faulkner 1962:63 and 64; Gardiner 1957:561; Erman—Grapow 1921:37, 38 and 1926—1963.1:326—331; Vycichl 1983:236; Černý 1976:214 and 215. Chadic: Angas *war-ŋ* ‘big’; Ankwe *warr* ‘strength’; Galambu *war-* ‘to surpass’. [Orël—Stolbova 1995:528, no. 2529, **war-/*ɔur-* ‘to be big, to be strong’; Ehret 1995:463, no. 974, **war-/*wir-* ‘to grow (person, animal)’.]
- B. Dravidian: Tamil *vār* ‘length, elongation; height, straightness’; Kannaḍa *bār(u)* ‘length’. Burrow—Emeneau 1984:485, no. 5358.
- C. Proto-Kartvelian **wřč-* ‘to be broad, wide’: Georgian *vrc-* ‘to widen’; Mingrelian [*pirč-*] ‘to be broad’; Laz [*pirč-*] ‘to be broad’. Klimov 1998:55 **wrc₁-* ‘to be broad, wide’; Fähnrich—Sardshweladse 1995:137—138

- *wrc₁-; Fährnrich 2007:165—166 *wrc₁-. Proto-Kartvelian *wřč-el- ‘broad, wide’: Georgian *vrce*- ‘wide, vast’; Mingrelian *pirča*- ‘with wide-open eyes, branchy (of trees)’; Laz [*pirče*-] ‘broad, wide’ in: *leke-pirče*- ‘spot’. Klimov 1964:85—86 *wřc₁e-l- and 1998:55 *wrc₁-el- ‘broad, wide’.
- D. Proto-Indo-European *wer-/ur- ‘(vb.) to stretch, to extend; (adj.) wide, broad, extended, great, large’: Sanskrit *urú-h* ‘wide, broad, spacious, extended, great, large, much’, *váras*- ‘width, breadth, expanse, room, space’; Avestan (in compounds) *vouru*- ‘wide, broad’; Greek εὐρύς (< *ē-řpús or through metathesis *řepús [cf. Frisk 1970—1973.I:592—593]) ‘wide, broad’, εὖρος ‘breadth, width’; Tocharian A *wärs*, B *aurtse* ~ *wartse* ‘wide, broad’, *aurtsesa* ‘fully’, *aurtsäññe* ‘breadth’. Pokorny 1959:1165 *uer- ‘wide’; Walde 1927—1932.I:285 *uer-; Mann 1984—1987:255 *eurus (*ur-) ‘wide’; Watkins 1985:77 *werə- and 2000:100 *werə- ‘wide, broad’ (oldest form *wer₂-); Mallory—Adams 1997:83 *uerh₁us ‘wide, broad’; Boisacq 1950:297—298 (Sanskrit *urú-h* < *urru-) *euer-; Hofmann 1966:99 (Sanskrit *urú-h* < *uerú-); Chantraine 1968—1980.I:387—388 *wřrus-, *weros; Prellwitz 1905:164; Frisk 1970—1973.I:592—593 *urru-s, *éros-; Beekes 2010.I:483—484 *h₁urH-u- (?); Mayrhofer 1956—1980.I:110 and III:150; Burrow 1973:182; Adams 1999:133; Van Windekens 1976—1982.I:562—563 (according to Van Windekens, Tocharian A *wärs*, B *aurtse* ~ *wartse* are from Proto-Indo-European *urdh-to-s, as in Sanskrit *vřddhá-h*).
- E. Proto-Gilyak / Nivkh *wer- ‘wide’: Amur *ver-d* ‘wide, broad’, *verke-d* ‘equal in width’ (West Sakhalin Amur *verkař* / *verla-d* ‘wide, broad’); North Sakhalin *verkař* / *verlak* ‘wide’; East Sakhalin *v(j)eř-d* / *veřla-d* / *v(j)er-t* ‘wide’. Fortescue 2016:162.

Buck 1949:12.55 large, big (great); 12.61 wide, broad. Bomhard—Kerns 1994:606—607, no. 482. Slightly different etymology in Dolgopolsky 2008, no. 2523, *w[i]řh[ü|u] ‘to be wide/broad, to expand, to spread’.

833. Proto-Nostratic root *war- (~ *wər-):

(vb.) *war- ‘to raise, to elevate, to grow, to increase’;

(n.) *war-a ‘uppermost, highest, or topmost part’

Probably identical to:

(vb.) *war- ‘to stretch, to extend, to expand’;

(n.) *war-a ‘width, breadth, length’; (adj.) ‘wide, broad’

- A. Afrasian: Proto-Semitic *war-am- ‘to raise, to elevate, to grow, to increase, to swell’ > Arabic *warima* ‘to be swollen; to swell, to become swollen; to cause to swell, to inflate’, *waram* ‘swelling, intumescence, tumor’, *tawarrum* ‘swelling, rising, intumescence’; Syriac *ʿawrēm* ‘to magnify, to raise to honor’; Mandaic *iwrāma* ‘high ground; strong, violent (wind)’; Tigrinya *wāram* ‘balloon’. D. Cohen 1970— :630—631. Berber: Tuareg

tawrirt ‘cone-shaped pile (of wheat, dates, grain, sand, etc.)’; Mzab *awrir* ‘mountain, large hill’, *tawrirt* ‘hill, mound’; Tashelhiyt / Shilha *tawrirt* ‘hill’; Tamazight *awrir* ‘high ground, hill, knoll, hillock’, *tawrirt* ‘hill’; Kabyle *awrir* ‘high ground, knoll, hillock’, *tawrirt* ‘hill, knoll, hillock’; Chaouia *tawrirt* ‘hill’.

- B. Dravidian: Tamil *varai* ‘mountain, peak, slope of hill’; Kannada *bare* ‘steep, slope’; Koḍagu *bare* ‘steep slope’; Tuḷu *bare* ‘steep precipice’. Burrow—Emeneau 1984:476, no. 5274.
- C. Proto-Indo-European **wer-dh-/ *wor-dh-/ *w̥r-dh-* ‘to raise, to elevate; to grow, to increase’: Sanskrit *vārdhati*, *vārdhate*, *v̥rdhāti* ‘to increase, to augment, to strengthen, to cause to prosper or thrive; to elevate, to exalt, to gladden, to cheer, to exhilarate; to grow, to grow up, to increase, to be filled or extended; to become longer or stronger; to rise, to ascend’, *v̥rddhá-h* ‘grown, become larger or longer or stronger, increased, augmented, great, large’, *v̥rddhi-h* ‘growth, increase, rise, augmentation, advancement, extension, welfare, prosperity, success, fortune’, *vārdha-h* ‘increasing, augmenting, gladdening’, *ūrdhvá-h* ‘rising or tending upwards, raised, elevated, erected, erect, upright, high, above’, *ūrdhva-m* ‘height, elevation’; Pāli *uddhaṇ* (adv. and prep.) ‘high up, on top, above’; Avestan *varəd-* ‘to grow, to increase’; Greek ὀρθός (< *FopθFός, cf. Doric βορθό-) ‘upright, erect; straight, right’, ὀρθόω ‘to set upright, to set up, to raise up, to make straight’. Rix 1998a:627 **ueRdh-* ‘to become great, strong’; Pokorny 1959:1167 **uerdh-*, **uredh-* ‘to grow, to increase; high’; Walde 1927—1932.I:289—280 **ueredh-*, **ueradh-*; Mann 1984—1987:1578 **uordhos* (**uordhos*) ‘grown, full-grown, upright, tall’, 1598 **u̥rdh-* ‘raised, upright, tall’; Mallory—Adams 1997:269 **uórh₂dhus* ‘upright, high’; Mayrhofer 1956—1980.I:117 and III:157—158; Chantraine 1968—1980.II:818—819; Boisacq 1950:711—712 **u̥rdhuó-s*; Frisk 1970—1973.II:415—416; Hofmann 1966:237 **ueredh-*; Beekes 1969:241 **uerh₃dhu-* or **uorh₂dhu-* and 2010.II:1101 **h₃rdhuo-*. Proto-Indo-European **wer-s-/ *wor-s-/ *w̥r-s-* ‘highest, uppermost, or topmost part’: Sanskrit *varṣmán-* ‘height, top’, *várṣman-* ‘height, top, surface, uppermost part’, *varṣīman-* ‘height, length, width, breadth’, *várṣiṣṭha-h* ‘highest, uppermost, longest, greatest’; Avestan *varəšō* ‘forest’; Lithuanian *viršūs* ‘top, head, upper part’, *viršininkas* ‘superior, boss’, *virš* ‘over, beyond, above’; Old Church Slavic *vrъxъ* ‘summit’; Russian *verx* [вєрх] ‘top, head; height, summit’. Pokorny 1959:1151—1152 **uer-* ‘raised place’; Walde 1927—1932.I:266—268 **uer-*; Watkins 1985:76 **wer-* and 2000:99 **wer-* ‘to raise, to lift, to hold suspended’; Mann 1984—1987:1519 **uerks-* ‘top’, 1601—1602 **urks-* (**urksos*, *-us*, *-ios*) ‘tip, top, summit’; Mayrhofer 1956—1980.III:160—161; Mallory—Adams 1997:416 **uers-* ‘peak’; Fraenkel 1962—1965.II:1262—1263; Smoczyński 2007.1:759; Derksen 2008:538 **urs-u-* and 2015:506 **urs-u-*. Perhaps also Armenian *ger* (< **wer-*) ‘up, upon’. Mann 1984—1987:1516 **uer-* (?) ‘up, upon’. Finally,

the following may ultimately be related to the above forms as well: Proto-Indo-European *wer-/ *wor-, (extended form) *wer-H-k'- 'to swell' (> 'to be or become fat, strong, furious, angry, etc.'): Hittite (nom. sg. c.) *wa-ar-kán-za* 'fat', (3 sg. pret. act.) *wa-ar-ke-eš-ta* 'to grow fat', (acc. sg.) *wa-ar-ku-uš-ša-an* 'anger, fury' (Luwian form); Luwian (acc. sg.) *wāra- 'anger, strength', *wa-ar-ku-u(š-ša-an)* 'anger', (nom. sg.) *wa-a-ra-an-ni-iš* 'having strength'; Sanskrit (caus.) *ūrjáyati* 'to strengthen, to invigorate, to refresh; to nourish; to be strong or powerful', *ūrjá-h* 'strong, powerful, eminent; invigorating, strengthening', *ūrjá* 'power, strength, vigor'; Avestan *varəz-* 'strength'; Greek ὀργάω 'to swell', ὀργή 'anger, wrath; passion'; Old Irish *ferg* 'anger'. Pokorny 1959:1169 **uerǵ-*, **uorǵ-* 'to be puffed up, swollen; to swell'; Walde 1927—1932.I:289 **uer(e)ǵ-*; Mann 1984—1987:1578 **uorg-* 'to rouse, to stir, to excite, to incite; incitement, rage', 1599 **uǵ-* 'force, energy, work'; Mallory—Adams 1997:208 **uór(h)_xǵs* (gen. **uǵ(h)_xǵós*) 'nourishment, strength'; Boisacq 1950:710 **uǵǵā*; Hofmann 1966:236; Chantraine 1968—1980.II:815—816; Beekes 2010.II:1097; Mayrhofer 1956—1980.I:116; Goedegebuure no date; Kloekhorst 2008b: 963—965; Matasović 2009:414 **werg-* 'anger, strength'.

- D. Proto-Uralic **wari* '(wooded) hill or mountain' > Finnish *vaara* 'hill, mountain, (especially) wooded hill'; Estonian *vaar* 'hillock, mound'; Lapp / Saami *varre/vare-* 'mountain', (Kola) 'forest'; (?) Votyak / Udmurt *vyr* 'hill'; (?) Zyrian / Komi *võr* 'forest'; Vogul / Mansi *wæær* 'forest'; Ostyak / Xanty (Northern) *wūr* (*wār*) 'wooded mountain ridge; dense (hardwood) forest'. Collinder 1955:121—122 and 1977:134; Sammallahti 1988:551 **wārā* 'hill; forest'; Zhivlov 2023:160 Proto-Uralic **wari* 'hill, forest'. Hakola (2000:204, no. 912, **wār3* 'hill, mountain') proposes a different etymology: Finnish *vaara* 'hill, mountain', *varustaa* 'to equip, to provide, to fortify', *varustus* 'equipment, fortification', *vare* 'pile of stones'; Estonian *vare* 'pile of stones, stone ruin'; Hungarian *vár* 'fortress, stronghold, castle, citadel', *város* 'town, city, municipality'.

Buck 1949:1.22 mountain; hill; 4.81 strong, mighty, powerful; 12.31 high; 12.33 top; 12.58 tall; 16.42 anger. Illič-Svityč 1965:337 **wārA* 'mountain' (ropa); Bomhard—Kerns 1994:622—623, no. 500; Tyler 1968:809, no. 115; Hakola 2000:204, no. 912. Different (improbable) etymologies in Dolgopolsky 2008, no. 2515, **waŕrê* 'wooded hill/mountain' and, no. 2526, **woRdV* 'to grow (trans.)', 'to raise, to bring up (children/animals)'.

834. Proto-Nostratic root **war-* (~ **wār-*):

(vb.) **war-* 'to burn, to blaze';

(n.) **war-a* 'blaze, flame, heat, warmth'

- A. Proto-Afrasian **war-* 'to burn, to blaze': Semitic: Arabic *warā* (base *wry* [ورى]) 'to kindle, to fire, to strike fire; to burn, to blaze'. Zammit 2002:

- 431—432. Egyptian *wrt* ‘flame, fire’, (reduplicated) *wṣwṣt* ‘fire, glow’. Erman—Grapow 1926—1963.1:250 and 1:332; Faulkner 1962:53 *wṣwṣt* ‘fiery one’ (?); Hannig 1995:172. Central Chadic **war-* ‘to roast’ > Zime *wor-* ‘to roast’. Southern Cushitic: Iraqw *warʿes-* ‘to flash (of lightning)’. Ehret 1980:312. Orël—Stolbova 1995:528, no. 2528, **war-* ‘(vb.) to burn; (n.) flame’; Ehret 1995:462, no. 973, **war-* ‘light’.
- B. Dravidian: Tamil *uru* ‘to burn, to smart, to be angry’, *urumam* ‘heat (as of the sun, of the atmosphere), sultriness, noon’; Kannaḍa *uri* ‘to burn, to blaze; to glow; to burn with fever, rage, envy; to burn or smart (as a wound, as mouth with pepper)’, *uripu*, *urisu* ‘to cause to burn, to inflame’, *uru*, *urapu*, *uripu*, *urupu*, *uruvu*, *urpu* ‘burning, flame’; Tuḷu *uri* ‘blaze, flame, heat, acute pain, wrath’, *uriyuni* ‘to burn; to blaze; to feel a burning sensation; to be angry, envious, (belly) hungry’; Telugu *uriyu* ‘to burn (intr.), to be afflicted, to grieve’, *uralu* ‘to burn (intr.), to be ablaze’; Kui *ruta* (*ruti-*) ‘to set fire, to ignite’. Burrow—Emeneau 1984:63, no. 656.
- C. Proto-Kartvelian **war-* ‘to glow, to light, to blaze; to glitter, to flash’: Georgian (reduplicated) *var-var-* ‘to glow, to light, to blaze’; Svan (reduplicated) *war-wāl* ‘to glitter, to flash, to glance’. Fähnrich—Sardshweladse 1995:127 **war-*; Fähnrich 2007:155 **war-*.
- D. Proto-Indo-European **wer-/ *wor-* ‘to burn’: Hittite (3rd sg. pres.) *wa-a-ra-i* ‘to kindle, to light’, *wa-ra-a-ni* ‘is burnt’; Armenian *vaṛim* ‘to burn’, *vaṛ* ‘glow’; Gothic *warmjan* ‘to warm’; Old Icelandic *varmr* ‘warm’, *vermi* ‘warmth’, *verma* ‘to warm’; Swedish *varm* ‘warm’; Danish *varm* ‘warm’; Old English *wearm* ‘warm’, *wierman*, *wyrman* ‘to warm, to make warm’; Old Frisian *warm* ‘warm’; Old Saxon *warm* ‘warm’, *wermian* ‘to warm’; Dutch *warm* ‘warm’, *warmen* ‘to warm’; Old High German *warma* ‘warm’ (New High German *warm*), *wirma* ‘warmth, heat’ (New High German *Wärme*), *wermen* ‘to warm’ (New High German *wärmen*); Old Church Slavic *varъ* ‘boiling water, heat’; Russian *varít’* [варить] ‘to boil’; Tocharian A *wrātk-* ‘to cook’. Rix 1998a:630 **uerH-* ‘to be hot’; Pokorny 1959:1166 **uer-* ‘to burn’; Watkins 1985:77 **wer-* and 2000:100 **wer-* ‘to burn’; Mallory—Adams 1997:88 **uer-* ‘to burn’; Gamkrelidze—Ivanov 1984.II:683 **uer-* and 1995.I:590 **wer-* ‘to burn’; Orël 2003:449 Proto-Germanic **warmaz*, 449 **warmjanan*; Kroonen 2013:575 Proto-Germanic **warma-* ‘warm’ (< **g^{wh}or-mo-*); Feist 1939:552; Lehmann 1986:394—395 **wer-* ‘to burn, to cook’; Falk—Torp 1903—1906.II:428; De Vries 1977:646 and 656; Klein 1971:821; Onions 1966:992—993 Common Germanic **warmaz*, with variant **werm-*; Kluge—Mitzka 1967:838 **uer-*, **uor-*; Kluge—Seebold 1989:777 Germanic **warma-*; Kloekhorst 2008b: 923—925; Derksen 2008:512—513.

Sumerian (reduplicated) *ur₄-ur₄* ‘to burn up, to consume, to flicker, to flame, to glitter, to glisten’.

Buck 1949:1.85 burn (vb.); 15.85 hot, warm. Bomhard—Kerns 1994:612—613, no. 491; Dolgopolsky 2008, no. 2508, *wAr[i] ‘to burn, to heat’.

835. Proto-Nostratic root *war- (~ *wār-) and/or *wir- (~ *wer-):

(vb.) *war- and/or *wir- ‘to say, to speak, to tell, to point out, to make known’;

(n.) *war-a and/or *wir-a ‘news, report, gossip, speech’

- A. Proto-Afrasian *war- ‘to say, to speak, to tell, to point out, to make known’: Proto-Semitic *war-ay- ‘to say, to speak, to tell, to point out, to make known’ > Arabic *warā* (base *wry* [وَرَى]) ‘to show’; Sabaean *wry* ‘to make known, to announce’; Geez / Ethiopic *waraya* [ወረየ] ‘to tell news, to narrate’, *ware* [ወረ] ‘news’; Amharic *wäre* ‘news’; Tigrinya *wäre* ‘notice, fame’; Tigre *wära* ‘to announce’, *wäre* ‘communication’. Leslau 1987:618. Arabic (reduplicated) *warwara* ‘to sharpen one’s look, to look sharply at; to speak fast’. D. Cohen 1970—:623—624. Egyptian (Demotic) *wḥ* (< *wḥ) ‘message, matter, news’; Coptic *wō* [ⲟⲩⲱ] ‘news, report’. Vycichl 1983:230; Černý 1976:210. Proto-East Cushitic *war- ‘to make known, to tell news’ > Burji *waar-iy-* ‘to tell’; Saho-Afar *war-e* ‘news’; Somali *war* ‘news’; Sidamo *waar-* ‘to gossip, to tell (news), to talk, to speak’, *wor-e* ‘noteworthy thing’; Hadiyya *wor-e* ‘fame’; Galla / Oromo *war-ee* ‘fame’. Sasse 1979:42 and 1982:187; Hudson 1989:225 and 399. Proto-East Cushitic (caus. mid.) *war-s-t- ‘to inquire about news’ > Burji *wors-ad-* ‘to ask’; Afar *war-is-*, *war-s-it-* ‘to tell news’; Somali *war-s-ad-* ‘to get news’; Rendille *war-s-ad-*, *wor-s-ad-* ‘to ask’. Hudson 1989:22; Sasse 1979:42 and 1982:181. Chadic: Ngizim *wārdú* ‘to cry out’. Omotic: Mocha *wóro* ‘news’. Ehret 1995:462, no. 972, *war-/ *wir- ‘to call out’.
- B. Proto-Dravidian *ver- ‘to say, to speak, to tell’: Gondi *vehānā* ‘to tell’; Konda *ver-* ‘to speak, to tell’; Pengo *vec-* (*vecc-*) ‘to speak’; Maṇḍa *veh-* ‘to tell, to say’; Kui *vespa* (*vest-*) ‘to say, to speak, to tell’; Kuṛux *bārnā* ‘to be called, termed; to have a title’; Malto *bāce* ‘to relate, to tell’. Burrow—Emeneau 1984:502, no. 5514.
- C. Proto-Indo-European *wer- ‘to say, to speak, to tell’: Greek εἶπω (< *ἑριω) ‘to say, to speak, to tell’; Hittite (3rd sg. pres.) *ú-e-ri-ya-zi* ‘to invite, to summon, to name’; Palaic (3rd sg. pres.) *ú-e-er-ti* ‘to say, to call’; Latin *verbum* ‘word’; Gothic *waurd* ‘word’; Old Icelandic *orð* ‘word’, *orðigr* ‘wordy’, *yrða* ‘to speak’; Old English *word* ‘word’, *ge-wyrd(e)* ‘conversation’, *wordig* ‘talkative’; Old Frisian *word* ‘word’; Old Saxon *word* ‘word’; Dutch *woord* ‘word’; Old High German *wort* ‘word’ (New High German *Wort*); Old Prussian (nom. sg. m.) *wīrds*, *wirds* ‘word’ (acc. sg. m. *wirdan*); Lithuanian *vaĩdas* ‘name’. Pokorny 1959:1162—1163 **uer-* ‘to speak’; Walde 1927—1932.I:283—284 **uer-*; Mann 1984—1987:1516 **uer-* (**uerō*, *-iō*) ‘to speak’; Watkins 1985:77 **wer-* (also **werā-*) and 2000:100 **werā-* (also **wer-*) ‘to speak’ (oldest form **wer₂-*,

with variant [metathesized] form **wre₂-*, contracted to **wrē-*; Gamkrelidze—Ivanov 1984.I:231 **_uer-* and 1995.I:200 **_uer-*, **_uer-eH-* ‘to call, to talk’; Rix 1998a:630—631 **_uerh₁-* ‘to say’; Mallory—Adams 1997:535 **(s)_uer-* ‘to say, to speak’; Chantraine 1968—1980.I:325—326 **wre₂-*/**wrē-*; Frisk 1970—1973.I:469—471; Hofmann 1966:74 **_uer-*; Boisacq 1950:229—230 **_uer-*; Beekes 2010.I:393 **_uerh₁-*; Walde—Hofmann 1965—1972.II:756—757 **_uere-*, **_uerē(i)-*; Ernout—Meillet 1979:723; De Vaan 2008:664—665; Orël 2003:475 Proto-Germanic **_uurđan*, 475 **_uurđigaz*, 475 **_uurđjan*, 475 **_uurđjanan*, 475—476 **_uurđōjanan*; Kroonen 2013:600 Proto-Germanic **_uurda-* ‘word’; Feist 1939:554 **_uerdh-*, extended form of **_uer-*; Lehmann 1986:396 **_uer-* ‘to speak’; De Vries 1977:419 **_uer-* and 679; Klein 1971:831 **_uerdh-*, extended form of **_uer-*, **_uere-*, **_uerē-*; Onions 1966:1012 **_urdho-*, **_uerdh-*, based on **_uer-*; Boutkan—Siebinga 2005:430—431; Kluge—Mitzka 1967:868 **_urdho-*; Kluge—Seebold 1989:799 **_uerdho-*; Derksen 2015:489 **_u(e/o)rdh-o-*; Smoczyński 2007.1:721; Fraenkel 1962—1965. II:1198; Klockhorst 2008b:1002—1003; Wodtko—Irslinger—Schneider 2008:729—730 **_urdh-ó-*, **_uordh-o-* ‘word’. Note: Hittite (1st sg. pres. act.) *ḫu-u-wa-ar-taḫ-ḫi* ‘to curse’, (nom. sg.) *ḫur-ta-iš*, *ḫur-ta-aš*, *ḫur-da-a-iš*, *ḫu-u-ur-ta-iš* ‘curse’ do not belong here.

Buck 1949:18.21 speak, talk; 18.22 say. Bomhard—Kerns 1994:613—614, no. 492, and 1996a:233—234; Dolgopolsky 2008, no. 2513, **_uerV* ‘to speak; communication’.

836. Proto-Nostratic root **was^y-* (~ **wəs^y-*):

(vb.) **was^y-* ‘to be or become worn out, tired, weary, fatigued, exhausted’;

(n.) **was^y-a* ‘weariness, fatigue, exhaustion’

Identical to:

(vb.) **was^y-* ‘to crush, to grind, to pound, to wear out; to wither, to fade, to rot away, to waste away, to dry up, to decay’;

(n.) **was^y-a* ‘the act of crushing, grinding, pounding; wasting away, decay, decomposition’

- A. Proto-Afrasian **was^y-* ‘to be or become worn out, tired, weary, fatigued, exhausted’: Proto-Semitic **was^y-in-* ‘to sleep, to go to sleep, to be asleep’ (originally ‘to be tired, weary, fatigued, exhausted, sleepy’) > Hebrew **yāšēn* [ʔš̂n] ‘to sleep, to go to sleep, to be asleep’, *yāšēn* [ʔš̂n] ‘sleeping’; Ugaritic *yšn* ‘to sleep’; Arabic *wasīna* ‘to sleep, to slumber’, *wasan* ‘deep sleep, slumber, nap’, *wasnān* ‘in deep sleep, slumbering, sleepy, lazy’. D. Cohen 1970—:647 (Cohen notes that Fronzaroli thought it necessary to posit two separate stems for Proto-Semitic: **wašin-* ‘asleep’ and **šin-at-* ‘sleep’); Klein 1987:266; Murtonen 1989:223—224; Zammit 2002:434. Berber: Tuareg *iwhar* ‘to be old’, *zəwhər* ‘to cause to become old, to cause

to age', *tuhere* 'old age'; Tawlemmet *ucar* 'to grow old', *tucəray* 'old age'; Nefusa *usər* 'to be old', *awəssar* 'old'; Ghadames *usər* 'to be old', *awəssar* 'an old man' (f. *tawəssart*); Mzab *əwsər* 'to be or become old', *awəssar* 'old'; Tamazight *wsir* 'to be old, to grow old', *ssəwir* 'to cause to become old, to cause to age', *tusər* 'old age, decrepitude', *awəssar* 'old'; Tashelhiyt / Shilha *iwsir* 'to grow old', *tawssərt* 'old age'; Riff *usər* 'to be old, to grow old', *tussər* 'old age', *awəssar* 'old; old man' (f. *tawəssart*); Kabyle *iwsir* 'to be old, to be very old, to be decrepit', *awəssar* 'old, decrepit'; Chaouia *usər* 'to be old', *tuser* 'old age, senility', *awəssar* 'old, old man' (f. *tawəssart*).

- B. Dravidian: Kannaḍa *baccu* 'to be tired', *baccelu* 'tiredness', *basvəli* 'to be fatigued'; Tuḷu *baccuni* 'to be wearied, tired, fatigued', *baccāvuni* 'to tire, to fatigue', *baccely* 'fatigue, weariness, tiredness', *baccaṅgely* 'tiredness, fatigue'; Pengo *vāh-* (*vāst-*) 'to be or become tired'; Kui *vaha* (*vahi-*) '(vb.) to be tired, exhausted; to tire, to faint; (n.) weariness, exhaustion'; Kuwi *vwahali*, *wahinai* 'to be tired', *vāh-* 'to be tired, to become tired', *vāhu* 'weariness'. Burrow—Emeneau 1984:471, no. 5215. Tamil *vēcāṭai* 'sorrow', *vēcāru* (*vēcāruv-*, *vēcār-*) 'to be weary, fatigued, vexed, distressed', *vēcaram*, *vēcārikkai*, *vēcāravu* 'sorrow, weariness, fatigue', *vēcāṭal* 'mental agitation', *vēcāru* (*vēcāri-*) 'to be weary, fatigued, vexed, distressed; to be consoled; to rest', *vēcāral* 'weariness, sorrow; becoming consoled or pacified, rest'; Malayalam *vēcāru* 'anxiety'; Koḍagu *be-ja-ra* 'sorrow'; Kannaḍa *bējāru* 'weariness (from fatigue, pain, vexation), annoyance', *bēsār(u)* (*bēsatt-*) 'to grow weary or fatigued, to become tired of, to be disgusted or vexed', *bēsāra*, *bēsārake*, *bēsārike* 'weariness, fatigue', *bēsārisu* 'to cause to be weary'; Telugu *vēsāṭa* 'fatigue, weariness', *vēsaramu* 'trouble, fatigue', *vēsāru* 'to be troubled or fatigued; to be disgusted', *vēsārinu* 'to trouble'; Tuḷu *bējāru* 'weariness, fatigue, disgust; fatigued, weary'; Koraga *bisirige* 'homesickness'. Burrow—Emeneau 1984:504, no. 5524.
- C. Uralic: Proto-Finno-Permian **wäsʷä-* 'to be or become tired, weary, fatigued, exhausted' > Finnish *väsy-* 'to become tired, weary, exhausted', *väsähtä-* 'to become (a little) tired, to be overcome with weariness'; Estonian *väsi-* 'to become tired, weary, exhausted'; Lapp / Saami (Northern) *viessä-/viesä-* 'to get a little tired, fatigued, languid', *viesse* 'that easily gets tired'; Votyak / Udmurt *viš-* 'to ache, to be sick'. Rédei 1986—1988:818 **wäsä*.

Buck 1949:4.61 sleep (vb., sb.); 4.84 sick; sickness; 4.91 tired, weary. Illič-Svityč 1965:370 **wä/s/ä* 'to become tired (of)' ('уставать'); Bomhard—Kerns 1994:623—624, no. 501; Hakola 2000:210, no. 941, **wäs3-* 'to become tired'.

837. Proto-Nostratic root **wasʷ-* (~ **wəsʷ-*):

(vb.) **wasʷ-* ‘to crush, to grind, to pound, to wear out; to wither, to fade, to rot away, to waste away, to dry up, to decay’;

(n.) **wasʷ-a* ‘the act of crushing, grinding, pounding; wasting away, decay, decomposition’

Identical to:

(vb.) **wasʷ-* ‘to be or become worn out, tired, weary, fatigued, exhausted’;

(n.) **wasʷ-a* ‘weariness, fatigue, exhaustion’

- A. Afrasian: Egyptian *wš* ‘to fall out (of hair), to be destroyed’, *wšr* ‘to dry up, to be barren, to be despoiled’. Hannig 1995:218 and 221; Faulkner 1962:70; Erman—Grapow 1921:41 and 1926—1963.1:368, 1:374; Gardiner 1957:562.
- B. Dravidian: Tuḷu *ujjēṛy*, *ujverṛy* ‘a pestle’, *ujḍe*, *jiḍḍe* ‘a small mortar’; Belari *ijde* ‘mortar’, *ijgeri* ‘pestle’; Parji *uyp-* to husk (rice)’; Gadba (Ollari) *uyup-* (*uyut-*) ‘to pound (rice, etc.)’; Gondī *ussānā*, *us-*, *usānā* ‘to pound with a pestle, to husk rice’, *uskāl* ‘a big pestle, rice-pounder’, *uskal*, *usval*, *usmal*, *uspal* ‘pestle’; Pengo *uh-* (*ust-*) ‘to husk (rice)’; Maṇḍa *uhka-* ‘to pound’; Kui *uhpa* (*uht-*) ‘(vb.) to strike against, to impress, to make a mark, to write; (n.) the act of writing against, marking, writing’; Kuwī *ūssali*, *us-* (*uht-*) ‘to pound paddy’, *uh’nai* ‘to pound with a pestle’. Burrow—Emeneau 1984:571, no. 583.
- C. Proto-Indo-European **wes-* ‘to crush, to grind, to pound, to wear out; to wither, to fade, to rot away, to waste away, to dry up, to decay’: Hittite *wešuriya-*, *wišuriya-* ‘to press, to oppress’; Old Icelandic *vesall* ‘poor, destitute, wretched’, *visna* ‘to wither’, *visinn* ‘withered’; Swedish *vissna* ‘to wither’, *vissen* ‘withered, faded’; Danish *visne* ‘to fade, to wither, to droop’, *vissen* ‘faded, withered, dry, arid’; Old English *wisnian*, *weosnian* ‘to dry up, to wither’, *forwesan* ‘to wither away, to fade, to decay’; Old High German *wēsanēn* ‘to wither, to fade’, *firwēsan* ‘to destroy, to decay’ (Middle High German *verwēsen*, New High German *verwesen* ‘to putrefy, to decompose, to decay, to mold, to rot’). Mann 1984—1987:1524—1525 **ues-* ‘to wither, to fade, to rot, to waste away’; Mallory—Adams 1997:142 **ues-* ‘to crush, to grind, to pound, to wear out; to wither, to fade’; Orël 2003:458 Proto-Germanic **wesalaz*, 467 **wīsanān*; De Vries 1977:657 and 668; Falk—Torp 1903—1906.II:452—453; Kluge—Mitzka 1967:819—820 Middle High German *verwēsen* < Proto-Germanic **wīs-*; Kluge—Seebold 1989:764.

Buck 1949:5.56 grind; 11.27 destroy; 15.84 dry.

838. Proto-Nostratic root *waš- (~ *wəš-):

(vb.) *waš- ‘to add (to), to augment, to increase, to heap up’;

(n.) *waš-a ‘augmentation, increase, addition, increment’; (adj.) ‘increased, augmented, heaped up, filled, full’

A. Proto-Afrasian *was- ‘to add (to), to augment, to increase, to heap up’: Proto-Semitic *was-ak- ‘to add (to), to augment, to increase, to heap up’ > Geez / Ethiopic *wassaka* [ወሰከ] ‘to add, to join to, to augment, to supplement, to increase’, *wassəkot* [ወሰኩት] ‘increase, increment’, *wəssāke* [ወሰኩ] ‘addition, increment, increase, extra amount’; Tigrinya *wəssākā* ‘to add’; Tigre *wəssākā* ‘to add’; Amharic *wəssākā* ‘to add’; (?) Akkadian *esēhu* (Mari *esēku*) ‘to assign, to apportion (lots)’. D. Cohen 1970—:568; Leslau 1987:619—620. Proto-Semitic *was-ak- ‘to add (to), to augment, to increase, to heap up’ > Arabic *wasaka* ‘to store, to heap up, to load freight’. D. Cohen 1970—:571—572; Zammit 2002:433. Egyptian *wsr* ‘to be rich, wealthy; to be strong, mighty, powerful’, *wsr* ‘a wealthy man’, *wsrw* ‘strength, power, might’, *wsrw-t* ‘strength, power, might’, (causative) *swsr* ‘to make powerful’. Hannig 1995:215; Faulkner 1962:69; Erman—Grapow 1921:40 and 1926—1963.1:360—363; Gardiner 1957:562.

B. Proto-Kartvelian *weš-/ *wəš- ‘to fill, to be filled’, *(š)a-wš-e- ‘full’: Georgian *vs-* ‘to fill, to be filled’, *sa-vs-e-* ‘full’; Mingrelian (*p*)š- ‘to fill, to be filled’, *o-pš-a-*, *e-pš-a-*, *go-pš-a-* ‘full’; Laz *pš-* ‘to fill, to be filled’, (*j*)*o-pš-a-* ‘full’; Svan *gweš-/gwəš-* ‘to fill, to be filled’, *gweš-i*, *goš-i* ‘full’ (initial *g-* is secondary). Klimov 1964:86 **ws_I-* and 1998:52—53 **wes_I-* : **ws_I-* ‘to fill, to be filled’, 173—174 *(*s*)*a-ws_I-e-* ‘full, complete’; Fähnrich—Sardshweladse 1995:133—134 **wes_I-*, **s_Ia-ws_I-e-*; Fähnrich 2007:161—162 **wes_I-*, **s_Ia-ws_I-e-*; Schmidt 1962:110.

Buck 1949:4.81 strong, mighty, powerful; 11.42 wealth, riches; 11.51 rich; 13.21 full. Bomhard 1996a:208, no. 606.

839. Proto-Nostratic root *wath- (~ *wəth-):

(vb.) *wath- ‘to pass (of time); to grow old, to age’;

(n.) *wath-a ‘year, age’; (adj.) ‘old’

A. Afroasiatic: Proto-Semitic **wat-ar-* ‘to continue (for a long time)’ > Ugaritic *wtr-hd* ‘everlasting’; Arabic *watara*, *ʔawtara* ‘to follow in uninterrupted succession, to continue regularly’; Epigraphic South Arabian *wtr-ʔl* ‘everlasting God’; Geez / Ethiopic *ʔawtara* [አውተረ] ‘to do something with attention, to direct attention to, to pursue earnestly, to fix (the eyes upon), to persevere, to continue, to be assiduous’, *watr* [ወተር] ‘uninterrupted time, continuous period of time’, *watra* [ወተረ] ‘continually, perpetually, assiduously, frequently, always, often’, *wətura* [ወተረ] ‘continuously, entirely’; Tigrinya *wätru* ‘always, continuously’; Amharic *wätro* ‘always,

continually, as in the past'; Gurage (Muher) (*a*)*zwättärä* 'to do something often' (denominative from [Geez / Ethiopic] *za-watr* [ዘ-ወትር] 'often'). Leslau 1979:718 and 1987:622; D. Cohen 1970— :654; Zammit 2002: 426—427. Egyptian *wṯi* 'to be old', *wṯw*, *wṯwṯi* 'oldest son'. Hannig 1995:223; Erman—Grapow 1926—1963.1:377 and 1:378. Probably also: Highland East Cushitic: Kambata *watara*, (f.) *watara-t*, (f. pl.) *watarra-t* 'young of animals', *waataan-cu* 'calf, young; new-born'; Hadiyya *watara* 'young of animals'. Hudson 1989:172—173. Semantic development as in Sanskrit *vatsá-h* 'yearling, calf, the young of any animal', cited below.

- B. Proto-Indo-European **weth-* '(vb.) to pass (of time); to grow old, to age; (adj.) old; (n.) year, age': Hittite (acc. sg.) *ú-it-tan* 'year'; Sanskrit *vatsará-h* 'a year', *vatsá-h* 'yearling, calf, the young of any animal'; Albanian *vit*, *vjet* 'year', (adv.) *vjet* 'last year', *viç* 'calf', *vjeç* 'years old'; Sogdian *wšnyy* 'old'; Greek *ῥέτος*, *ἔτος* 'year'; Latin *vetus* 'old, ancient, of long standing (that is, not new or young)', *veterō* 'to grow old', *vitulus* 'a bull-calf'; Gothic *wīþrus* 'lamb'; Old Icelandic *veðr* 'wether'; Norwegian *veder* 'wether'; Swedish *vädur* 'wether'; Danish *væder* 'wether'; Old English *weþer* 'wether, sheep'; Old Saxon *withar*, *wethar* 'wether'; Dutch *weder* 'wether'; Old High German *wider*, *widar* 'wether' (New High German *Widder* 'ram'); Old Lithuanian *vėtušas* 'old'; Old Church Slavic *vetъxъ* 'old'. Pokorny 1959:1175 **uet-* 'year'; Walde 1927—1932.I:251 **uet-*; Mann 1984—1987:1530—1531 **uetesjos*, **uetsjos* (**uetsos*) 'year-old animal; yearling', 1531 **uetalos*, *-om* 'year-old, yearling', 1531 **uetos*, *-es-* 'year, age'; Watkins 1985:78 **wet-* and 2000:101 **wet-* 'year'; Gamkrelidze—Ivanov 1984.II:783 **uet^[h]o-* and 1995.I:685 **wetho-* 'old'; Mallory—Adams 1997:654 **uet-* 'year'; Boisacq 1950:293; Frisk 1970—1973.I:583—584 **uet-*, **uetes-*, **uetes-o-*, **uets-i-*, **uet-o-*, **uetuso-*; Hofmann 1966:97—98; Beekes 2010.I:476—477 **uet-os*; Chantraine 1968—1980.I:382—383 **wet-*; Walde—Hofmann 1965—1972.II:776—777; Ernout—Meillet 1979:730 **wet-*; De Vaan 2008:672—673; Orël 1998:509 and 2003:459—460 Proto-Germanic **weþruz* ~ **weþraz*; Kroonen 2013:584 Proto-Germanic **weþru-* '(male) lamb, yearling'; Feist 1939:571 **uét-os*; Lehmann 1986:408 **wet-*, **wetos-* 'year'; De Vries 1977:649 **uetos*; Falk—Torp 1903—1906.II:460; Torp 1919:852; Onions 1966:1000 Common Germanic **weþruz*; Klein 1971:825 **wet-* 'year'; Kluge—Mitzka 1967:856 **uet-* 'year'; Kluge—Seebold 1989:790 **wet-* 'year'; Walshe 1951:250; Derksen 2008:517 **uet-us-o-* and 2015:500 **uet-us-o-*; Smoczyński 2007.1:745; Fraenkel 1962—1965.II:1233; Huld 1984:129—130; Mayrhofer 1956—1980.III:133.
- C. Proto-Altaic **ōthe* 'old': Proto-Tungus **(χ)ut-* 'old; earlier, before; old age' > Evenki *utakān* 'old age', *utu* 'old', *utēle* 'earlier, before'; Lamut / Even *ute* 'old', *ōtel* 'earlier, before'; Negidal *utēle* 'earlier, before'; Udihe *uteli* 'earlier, before'; Solon *utaci* 'grandfather'. Proto-Mongolian **ōte-* '(vb.) to grow old; (adj.) old; (n.) old man' > Written Mongolian *ōtel-* 'to

age, to grow old', *ötelül* 'the state of being old, aging, senility', *ötegü* 'old man, senior'; Khalkha *ötöl* 'old', *ötgös* 'elders, seniors'; Buriat *ütelhe(n)* 'old', *ütö* 'old man'; Kalmyk *ötl* 'old', *ötəgə* 'old man'; Ordos *ötöl-* 'to grow old'; Moghol *ütäγü* 'old man'; Dagur *utel* 'constantly, traditionally', *utele-* 'to grow old', *utāči* 'old man'; Monguor *sdöli-* 'to grow old', *sdögu* 'old man'. Proto-Turkish **ötü-* 'old' > Old Turkic (Orkhon) *ötügen* name of the homeland of the Turks ('old country'); Karakhanide Turkic *ötügen* name of the homeland of the Turks ('old country'); Tuva *ötükän* name of a mountain ridge in Tuva; Chuvash *vad* 'old'; Yakut *ötöχ* 'old, abandoned house'; Dolgan *ötök* 'everything old'. Starostin—Dybo—Mudrak 2003:1067—1068 **öt'e* 'old'; Poppe 1960:51 and 108; Street 1974:22 **öte* 'old (of people)'.

Buck 1949:14.15 old; 14.73 year. Illič-Svityč 1965:337 **w/e/ta* 'year' ('год') and 1966b:316, no. 1.33; Bomhard—Kerns 1994:625—626, no. 503; Takács 2004a:214, no. 1714; Dolgopolsky 2008, no. 2550, **wetV* 'year' (and/or 'long time' [→ 'old'] ??).

840. Proto-Nostratic root **wath-* (~ **wəth-*):

- (vb.) **wath-* 'to say, to speak, to be talkative';
(n.) **wath-a* 'sound, cry, chatter, babble, report'

- A. Proto-Afrasian **wat-* 'to call, to speak': West Chadic **wat-* 'to call' > Pero *wat-* 'to call'. Central Chadic **wat-* 'to call' > Tera *wat-* 'to call'. Omotic **wat-/yat-* 'to say, to speak' > Ometo *ot, yot, iwet-* 'to say, to speak'; Yemsa / Janjero *it-* 'to say, to speak'; Bench / Gimira *ayt-* 'to say, to speak'. Orël—Stolbova 1995:529, no. 2534, **wat-* 'to call, to speak'.
- B. Dravidian: Tamil *vataru* (*vatarī-*) 'to chatter, to prate, to be talkative, to lisp, to abuse'; Kannada *odaru* 'to sound, to cry aloud, to shout, to shriek, to howl' (causative *odarisu*), *odaruvike* 'sounding, crying aloud'; Telugu *vadaru, vaduru* 'to prattle, to prate, to babble, to chatter, to jabber', *vabarübōtu* 'prattler, babbler', *odaru* 'to prattle, to prate, to abuse'; Tuḷu *badaritana* 'defamation'. Burrow—Emeneau 1984:473, no. 5244.
- C. Proto-Indo-European **wethH-/wothH-* 'to say, to speak': Latin *vetō* 'to forbid, to prohibit' (Old Latin *votō*); Old Welsh (3rd sg. rel.) *guet-id* 'says'; Middle Welsh *dy-wed-* 'to speak', *dy-wawt* 'said' (Modern Welsh *gwad-* in: *gwadaf na* 'I do not say that, I deny that'). Rix 1998a:634—635 **ueth₂-* 'to say, to speak'; Ernout—Meillet 1979:730; Walde—Hofmann 1965—1972.II:776 (**uot-* in Welsh *gwadu* 'to deny'); De Vaan 2008:672; Morris Jones 1913:369—370 **uat-* (**uet-*), **uet/d-* 'to say'.
- D. Uralic: Finnish *vatustaa* 'to be harping, to chatter'; Estonian *vada* 'to prattle, to chatter, to jabber'.
- E. Proto-Altaic **ōthe-* (~ *-t-*) 'to say, to recite; to ask, to request, to pray; to sing': Proto-Tungus **(χ)ot-* 'to shout, to cry' > Evenki *otutka-* 'to shout, to

cry'. Proto-Mongolian **öči-* 'to report; to pray; to sing a song' > Written Mongolian *öči-* 'to say, to answer, to testify; to pray, to offer (Buddhist)'; Khalkha *öč-* 'to report; to pray'; Kalmyk *öčə-* 'to report; to pray'; Ordos *öčö-* 'to recite loudly (prayer)'; Dagur *učule-* 'to sing a song'. Proto-Turkic **öt-* 'to sing (of birds); to say; to ask, to request' > Old Turkic (Old Uighur) *öt-* 'to sing (of birds)', *ötün-* 'to ask, to request'; Karakhanide Turkic *öt-* 'to sing (of birds)', *ötün-* 'to ask, to request'; Turkish *öt-* 'to sing (of birds)'; Turkmenian *ötün-* 'to ask, to request'; Uighur *ötün-* 'to ask, to request'; Tatar *öten-* 'to ask, to request'; Chuvash *avət-* 'to sing (of birds)'; Yakut *et-* 'to say'; Dolgan *et-* 'to say'. Starostin—Dybo—Mudrak 2003:1068 **öt'e* (~ *-t-*) 'sound'; Poppe 1960:51 and 135; Street 1974:22 **öti-* 'to inform, to pray'.

Buck 1949:18.21 speak, talk; 18.22 say. Hakola 2000:211, no. 944; Illič-Svityč 1965:336 **wata* 'to speak' (говорить).

841. Proto-Nostratic (n.) **wat*^{y-a} 'the belly, stomach, bowels; womb; the interior or inside of anything':

- A. Proto-Dravidian **vac(-Vṛ)-* 'the belly, stomach, bowels; womb; the interior or inside of anything': Tamil *vayiru* 'belly, stomach, paunch, womb, center, heart of a tree, interior, inner space, mind', *vayin* 'belly, stomach', *vayā* 'fetus, womb'; Malayalam *vayaru* 'belly, stomach, inside, receptacle of fruit-seeds', *vayaram* 'big-bellied'; Kannada *basar(u)*, *basir*, *basur(u)*, *basru* 'belly, abdomen, womb, pregnancy, embryo, the inside, hold of a ship', *basari*, *basuri* 'pregnant woman'; Kota *vi-r* 'belly, pregnant'; Tuḷu *bañji* 'stomach, belly, womb, interior or inner part (as of a tree), mind, heart', *basuri*, *basuru* 'pregnancy'; Konḍa *vaski* 'small intestines'; Pengo (pl.) *vahiṇ* 'intestines'; Maṇḍa *vahiṇ* 'intestines'; Kui *vahi* 'intestines, entrails, bowels'; Kuwi *vwāhi* 'entrails', *wahi* 'stomach, intestines'. Krishnamurti 2003:484 **wac-Vṛ* 'stomach, fetus'; Burrow—Emeneau 1984:474, no. 5259.
- B. Proto-Indo-European **wet'-er-o-/ut'-er-o-* 'the belly, stomach, bowels; womb; the interior or inside of anything': Sanskrit *udāra-m* 'the belly, stomach, bowels; womb; the interior or inside of anything'; Avestan *udara-* 'belly, stomach'; Greek (Hesychius) ὄδρεος (with ó- for ú-) 'stomach' (cf. Attic ὄδρεος 'dropsy'), (Hesychius) ὄστρος 'stomach', (Attic) ὄστέρα, (Ionic) ὄστέρη (< **udsterā*) 'the womb'; Latin *uterus* (with *-t-* for *-d-*; perhaps, as suggested by Thurneysen, from **udris*) 'the womb'; Old Prussian *weders* 'insides, stomach'; Lithuanian *vėdaras* 'insides, stomach'; Latvian *vēders*, *vēdars* 'stomach'; Tocharian B *wāstarye* 'liver'. Pokorny 1959:1104—1105 **udero-*, **uēdero-* 'belly'; Walde 1927—1932.I:190—191 **udero-*, **uēdero-*; Mann 1984—1987:1474 **uderos*, *-om* 'belly, stomach'; Watkins 1985:72 **udero-* and 2000:94 **udero-*

‘abdomen, womb, stomach’; Mallory—Adams 1997:2 **udero-* ‘abdomen, stomach’, **udstero/eh_a-* ‘abdomen, stomach’; Frisk 1970—1973.II:956 **udero-*, **uēdero-* and II:975—976 **ud-terā*; Boisacq 1950:1008 (Latin *uterus* < **udero-s*); Chantraine 1968—1980.II:1151 and II:1162; Hofmann 1966:387 **ud-tero-*; Beekes 2010.II:1526 **udero-* and II:1539 **ud-tero-*; Mayrhofer 1956—1980.I:104; De Vaan 2008:647 *(H)*ud-ér-o-* ‘outer, sticking out’; Walde—Hofmann 1965—1972.II:846 **udris*; **ud-tro-*, **udero-*; Ernout—Meillet 1979:757; Van Windekens 1976—1982.I:565; Adams 1999:598 **udstryo-*, **ud-tero-*, **ud-ero-*; Smoczyński 2007.1:727; Fraenkel 1962—1965.II:1210—1211; Derksen 2015:494 **ud-ero-m*.

- C. Uralic: Proto-Finno-Ugrian **wat^ʷa* ‘the belly, stomach, bowels; womb; the interior or inside of anything’ > Finnish *vatsa* ‘stomach, belly’; Vogul / Mansi *vaś* ‘stomach’. Collinder 1955:123 and 1977:136; Rédei 1986—1988:547 **waća*.

Buck 1949:4.46 belly, stomach. Illič-Svityč 1965:341 **wa/ć/λ* ‘abdomen’ (‘живот’); Bomhard—Kerns 1994:617, no. 496; Hakola 2000:211, no. 943.

842. Proto-Nostratic exclamation **way* ‘woe!’:

- A. Proto-Afrasian **way* exclamation: ‘woe!’: Proto-Semitic **way* exclamation: ‘woe!’ > Akkadian *ai* ‘woe!’; Syriac *wāy* ‘woe!’; Arabic *way* ‘woe!, shame!’; Soqotri *woy* ‘woe!’; Geez / Ethiopic *way* [ወይ] ‘woe!, ah!, alas!’; Tigrinya *wāy*, *way* ‘woe!’; Tigre *wāy* ‘woe!’; Harari *wāy* ‘woe!, misery’; Amharic *wāyy*, *wāyyo*, *wāyyāw*, *awāyy*, *əwayy* ‘woe!’; Gurage *wa*, (Eža) *way* exclamation expressing pain: ‘woe!’. Leslau 1963:162, 1979:639, and 1987:623; D. Cohen 1970—:531; Zammit 2002:443. Egyptian *wy* ‘woe!’; Coptic *woy* [ⲱⲮⲟ(ⲉ)ⲓ] ‘woe!’. Hannig 1995:179; Vycichl 1983:230; Černý 1976:209. Cushitic: Beja / Beḍawye *way* ‘alas!’; Quara *wē* ‘alas!’. Reinisch 1895:240. Chadic: Hausa *wāi* ‘woe!’.
- B. Proto-Indo-European **way* exclamation: ‘woe!’: Avestan *vayōi*, *avōi*, *āvōya* ‘woe!’; Latin *vae* ‘alas!, woe!’; Welsh *gwa* ‘woe!’; Armenian *vay* ‘woe!’; Gothic *wai* ‘woe!’; Old Icelandic *vá*, *vei* ‘woe!’; Old English *wā*, *wæ* ‘woe!’; Old Frisian *wē* ‘woe!’; Old Saxon *wē* ‘woe!’; Dutch *wee* ‘woe!’; Old High German *wē* ‘alas!, woe!’ (New High German *weh*); Lithuanian *vaĩ* ‘woe!’; Hittite *uwai-* ‘woe’. Pokorny 1959:1110—1111 **uai* ‘woe!’; Walde 1927—1932.I:212—213 **uai*; Mann 1984—1987:1485 **uai* ‘alas; woe’; Watkins 1985:73 **wai* and 2000:94 **wai* ‘alas’ (interjection); Walde—Hofmann 1965—1972.II:724 **uai*; Ernout—Meillet 1979:711; De Vaan 2008:650; Orël 2003:440 Proto-Germanic **wai*; Kroonen 2013:556 Proto-Germanic **wai* (interjection) ‘woe’; Feist 1939:541; Lehmann 1986:387—388 **wai* (interjection) ‘woe’; De Vries 1977:637; Onions 1966:1011; Klein 1971:830 **wai-*; Kluge—Vercoullie

1898:321; Seebold 1989:781 Germanic **wai*; Kluge—Mitzka 1967:843 **yai*; Kloekhorst 2008b:937—939; Fraenkel 1962—1965.II:1179.

- C. Uralic: Finnish *voi* in, for example: *voi sinua raukkaa!* ‘poor you!’, *voi kunpa tietäisin* ‘I wish I knew’.

Sumerian *ù-a*, *ù* ‘woe!’.

Bomhard—Kerns 1994:604, no. 479.

843. Proto-Nostratic root **waǵ-* (~ **wǵǵ-*):

(vb.) **waǵ-* ‘to flow’;

(n.) **waǵ-a* ‘running water’

- A. Proto-Afrasian **waǵ-* ‘to flow’: Semitic: Arabic *wazaba* ‘to flow (water)’, *mīzāb* ‘drain pipe, drain; gutter, sewer; roof gutter’. D. Cohen 1970— : 515. Arabic *wazaġa* ‘to make water in jets (said especially of a she-camel which sprays its urine while walking along)’, *wazaġ* ‘shower’. D. Cohen 1970— : 517—518. Egyptian *wš* ‘to urinate’, *wšt* ‘urine’. Gardiner 1957:562; Hannig 1995:217; Faulkner 1962:69; Erman—Grapow 1921:40 and 1926—1963.1:357, 1:358. Note: Orël—Stolbova (1995:530, no. 2543) reconstruct Proto-Afrasian **wuĉ-* ‘urine’ on the basis of the Egyptian forms cited above and several East Chadic forms. Jungraithmayr—Ibriszimow (1994.I:192), however, reconstruct Proto-East Chadic **wicē* ‘urine’, which cannot possibly be connected phonetically with the above Egyptian forms. Therefore, the Chadic forms are not included here.
- B. Dravidian: Tamil *vaci* ‘rain, water’; Kannaḍa *basi*, *bose* ‘to drip, to drop, to trickle, to ooze, to flow; to pour off water from boiled rice, etc., by inclining the vessel, to strain’, *basu* ‘oozing’; Tuḷu *basabasa* ‘gushing, flowing in a stream’, *bassa* ‘overflowing’. Burrow—Emeneau 1984:471, no. 5214.
- C. Proto-Kartvelian **weǵ-* ‘mineral spring’: Georgian *veǵ-a* ‘mineral spring’; Mingrelian *menǵ-* (< **waǵ-*) ‘mineral spring’. Fähnrich 2007:162 **weǵ₁₋*; Fähnrich—Sardshweladse 1995:134—135 **weǵ₁₋*; Klimov 1998:53 **weǵ₁₋* ‘mineral spring’;

Buck 1949:1.31 water; 1.36 river; stream; brook; 4.65 urinate; urine; 10.32 flow (vb.).

844. Proto-Nostratic root **wed-*:

(vb.) **wed-* ‘to strike (with a weapon)’;

(n.) **wed-a* ‘death, ruin, murder; strike, cut, wound, scar; weapon, axe’

- A. Afrasian: Semitic: Arabic *wadā* (base *wdy* [وَدَى]) ‘to kill, to destroy; to perish, to die; to cut off; to kill, to destroy’, *wadiʔ* ‘death, ruin, murder,

destruction'. D. Cohen 1970— :500 (?*awdā(y)* 'to perish'); Zammit 2002:430. Berber: Kabyle *wəddəc* 'to hit, to beat, to strike'.

- B. Dravidian: Tamil *veṭṭu* (*veṭṭi-*) '(vb.) to cut (as with sword or axe), to cut off, to engrave, to dig (as a well), to injure, to destroy; (n.) cutting, wound, cut, engraving'; Malayalam *veṭṭuka* 'to cut with a sword or axe, to dig, to engrave', *veṭṭu* 'strike, cut, wound, sunstroke, stitch, felling trees, digging, engraving'; Kota *veṭ* 'cut, mark of a scar'; Kannaḍa *beṭṭu* '(vb.) to cause to enter firmly, to strike forcibly into, to impress, to stamp, to coin; (n.) tool for making impressions'; Tuḷu *beṭṭuni* 'to cut, to circumcise', *boṭṭuni* 'to beat (as a drum), to hammer (as metal), to knock (as a door)', *boṭṭāvuni*, *boṭṭele* 'drummer'. Burrow—Emeneau 1984:497—498, no. 5478.
- C. Proto-Indo-European **wedh-* (secondary *o*-grade form: **wodh-*) 'to cut, to strike, to slay': Sanskrit *vadhāti* 'to strike, to kill, to slay, to destroy', *vadhā-h* 'one who kills, slayer, vanquisher, destroyer', *vādhār-*, *vadhānā* 'weapon'; Avestan *vāḍāya-* 'to repulse'; Greek (Homeric) ἔθων 'pushing, shoving'; Lithuanian *vedegà* 'a type of axe'; Old Prussian *wedigo* 'carpenter's axe'; Tocharian B *wāt-* 'to fight', *weta* 'struggle, battle', *wetāu* 'warrior', A *wac* 'combat, struggle'. Rix 1998a:600—601 **uedh_h-* 'to strike'; Pokorny 1959:1115 **uedh-* 'to hit'; Walde 1927—1932.I:254—255 **uedh-*; Mann 1984—1987:1498 **uedh-* 'to fight', 1558 **uōdhejō* 'to contend, to fight; to enrage, to incite; to rage, to bluster'; Watkins 1985:73 **wedh-* and 2000:95 **wedhə-* 'to push, to strike'; Mallory—Adams 1997:471 **uedh-* 'to push, to strike'; Mayrhofer 1956—1980.III:135—136; Frisk 1970—1973.I:449—450; Chantraine 1968—1980.I:316 **wedh-*; Hofmann 1966:70 and 84 **uedh-*; Beekes 2010.I:378—379; Adams 1999:590 **wedh-* 'to strike (down)' and 608; Van Windekens 1976—1982.I:541—542 (Van Windekens rejects derivation of the Tocharian forms from Proto-Indo-European **uedh-*); Fraenkel 1962—1965.II:1211.

Buck 1949:4.76 kill; 9.21 strike (hit, beat). Illič-Svityč 1965:362 **weda* 'to chop with a weapon' ('рубить'); Bomhard—Kerns 1994:603—604, no. 478; Dolgopolsky 2008, no. 2460, **wedV* (or **we?VdV* ?) 'to push, to strike, to cut (with weapon)'.

845. Proto-Nostratic root **wel-*:

(vb.) **wel-* 'to slay, to fight';

(n.) **wel-a* 'conquest, victory, defeat, slaughter, massacre; fight, battle, attack'

- A. Dravidian: Tamil *vel* (*velv-*, *venr-*) 'to conquer, to overcome, to subdue, to destroy, to remove, to excel', *verrimai* 'victoriousness, victory, distinctive greatness', *verran*, *verral*, *verri*, *ven*, *venri* 'victory, success'; Malayalam *velluka* 'to overcome, to surpass, to kill', *venni*, *verri* 'victory'. Burrow—Emeneau 1984:499, no. 5493.

- B. Proto-Indo-European **welH-/w̥lH-* (secondary *o*-grade form: **wolH-*) ‘to strike, to wound’: Hittite (3rd sg. pres.) *wa-al-aḥ-zi*, *wa-al-ḥa-an-na-i* ‘to strike, to attack’; Luwian *u(wa)lant-* ‘death’, *u(wa)lantal(l)i-* ‘mortal’; Hieroglyphic Luwian *wal(a)-* ‘death’, *walatali-* ‘mortal’; Greek οὐλή (< **Fol-vā*) ‘wound, scar’; Latin *vulnus* (*volnus*) ‘wound’, *vulnerō* (*volnerō*) ‘to wound, to injure’; Old Irish *fuil* ‘blood’; Welsh *gweli* ‘wound’; Old Icelandic *valr* ‘the slain’; Old English *wæl* ‘slaughter, carnage, field of battle’, *wōl* ‘pestilence, mortality, disease’, *wælan* ‘to torment, to afflict’; Old Saxon *wōlian* ‘to kill, to slaughter’, *wal* ‘battlefield’; Old High German *wal* ‘battlefield’, *wuol* ‘defeat, ruin’; Lithuanian *vėlė* ‘the soul of a dead person, ghost’, *vėlnias* ‘devil’, *velys* ‘death’; Tocharian A *wāl-*, *wal-* ‘to die’, B *wāl-* ‘to strike, to break’ (perhaps also *Ylaiñäkte* ‘Indra’ [< ‘smiter’]), (?) *wāls-* ‘to crush, to grind; to agitate, to trouble’. Rix 1998a:619—620 **uelh₃-* ‘to strike, to attack’; Pokorny 1959:1144—1145 **uel-* ‘to tear, to rob, to wound’; Walde 1927—1932.I:304—305 **uel-*; Mann 1984—1987:1571—1572 **uōlīō*, **uoleiō* ‘to roll, to overturn, to ruin’; Watkins 1985:76 **welə-* and 2000:98 **welə-* ‘to strike, to wound’ (oldest form **wel₂-*); Gamkrelidze—Ivanov 1984.II:492, fn. 1, **uel-* and 1995.I:413, fn. 1, **wel-* ‘to lacerate, to tear apart; to wound; to kill’; Mallory—Adams 1997:650 **uolno/eh_a-* ‘(bloody) wound’, **uelh₂-* ‘to strike, to kill, to die’; Boisacq 1950:727 **uel-*; Frisk 1970—1973.II:443—444 **uel-*; Chantraine 1968—1980.II:836—837; Hofmann 1966:244 **uel-*; Beekes 2010.II:1125—1126 **uel-*; Walde—Hofmann 1965—1972.II:827 **uel-*; Ernout—Meillet 1979:749—750 Latin *volnus* (<? **welenos*); De Vaan 2008:687; Kroonen 2013:569 Proto-Germanic **wala-* ‘the slain’; Orël 2003:443 Proto-Germanic **walaz* II; De Vries 1977:642 **uel-*; Van Windekens 1976—1982.I:554—555 **uel-*, **uol-*, **ul-* and I:555 **ul-*, **uel-*; Adams 1999:519 and 588—589 **welh₂-* ‘to strike’; Derksen 2015:496 **uelh₃-*; Smoczyński 2007.1:732; Fraenkel 1962—1965.II:1218—1219; Kloekhorst 2008b:945—946 **uélh₃-til** *ulh₃-énti*.
- C. Uralic: Proto-Finno-Ugrian **wel₃-* ‘to strike, to kill, to slay, to slaughter’ > Hungarian *öl-* ‘to kill, to slay, to put to death, to slaughter, to butcher’, *öles* ‘killing, slaying, slaughtering’, *öldöklés* ‘massacre, butchery, slaughter’; Votyak / Udmurt *vi(j)y-* ‘to kill’; Zyrian / Komi (Permyak) *vij-* ‘to kill, to slay’, (Sysola) *vi-* ‘to strike (not dead)’; Vogul / Mansi *ääl-* ‘to kill’; Ostyak / Xanty *wel-*/(imptv.) *wälä-*, (Southern) *wet-* ‘to kill, to catch’. Collinder 1955:105, 1960:413 **wel’ə-*, and 1977:119; Rédei 1986—1988:566—567 **wed₃-*; Sammallahti 1988:551 **wilä-* ‘to kill’. I favor Collinder’s and Sammallahti’s reconstructions over the one proposed by Rédei. Illič-Svityč (1965:367) reconstructs Proto-Uralic **w/e/la*.
- Buck 1949:4.75 die; dead; death; 4.85 wound (sb.); 11.27 destroy. Bomhard—Kerns 1994:629, no. 507; Illič-Svityč 1965:367 **wel₁* ‘to slay, to fight’ (‘сражать[ся]’) — Illič-Svityč also includes Altaic material under this

etymology. However, the Altaic material appears to go better with Proto-Nostratic *wal- (~ *wəl-) ‘to crush, to grind, to wear out; to rub, to press; to be worn out, weak; to fade, to wither, to waste away’ (cf. Proto-Altaic *ōli- ‘to be weak from hunger, to starve to death; to die, to fade, to wither’). Forms meaning ‘to kill’ in the Altaic daughter languages (such as Turkish *öldür-* ‘to kill’, for example) are clearly secondary developments.

846. Proto-Nostratic root *welʷ-:

(vb.) *welʷ- ‘to be open, to be vacant’;

(n.) *welʷ-a ‘open space, open land, field, meadow’

- A. Dravidian: Tamil *veli* ‘(vb.) to be open or public; to be vacant, empty; (n.) open space, outside, plain, space, intervening space, gap, room, openness, plainness, publicity’, *velippu* ‘outside, open space, enclosed space’, *veliyār* ‘outsiders, strangers’; Malayalam *veli* ‘open field; notoriety; outside’, *veliccam* ‘publicity’; Telugu *veli* ‘the outside, exterior, excommunication; outside, external’, *velalu* ‘to go or come out, to start’, *velalucu* ‘to send out’, *velupala* ‘the outside, exterior; outside, external’, *vellaḍi* ‘open space; publicity; openness’, *veliparacu*, *velipuccu* ‘to make public or known’, *velārincu*, *velār(u)cu* ‘to send or drive out, to make public’; Kannada *beḷavāra* ‘an outcaste’; Parji *valip-* (*valit-*) ‘to expel, to drive away’; Konḍa *veli* ‘outside’; Kuwi *velli kīnai* ‘to excommunicate’. Burrow—Emeneau 1984:500—501, no. 5498.
- B. Proto-Kartvelian *wel- ‘field’: Georgian *vel-* ‘field, plain’; Mingrelian *ve(l)-* ‘field’. Klimov 1964:82—83 *wel- and 1998:51 *wel- ‘valley, field’.
- C. Proto-Indo-European *wel- ‘field, meadow’: Greek ἑλυσίων ‘the Elysian fields’; Hittite *wellu-* ‘meadow’. Gamkrelidze—Ivanov 1984.II:824 **uel-* and 1995.I:793 *wel- ‘pasture’; Mallory—Adams 1997:200—201 (?) **uēlsu-* ‘meadow, pasture’; Beekes 2010.I:517 (pre-Greek); Kloekhorst 2008b:998 **uēlnu-* (?).
- D. Yukaghir (Southern / Kolyma) *ejlo:-*, *ejl'o:-* ‘wide, broad’, *ejlumu-* ‘to widen’, *ejlu* ‘width, breadth’, *ejlaš-* ‘to broaden’, (Northern / Tundra) *wejluo-* ‘wide, broad’, *wejlumu-* ‘to widen’, *wejlu:* ‘space, expanse’, *wejluorireŋ* ‘widely’. Nikolaeva 2006:455.

Sumerian *ùl* ‘field, cultivated land, meadow’, *ul₄* ‘field, meadow’, *ùlul* ‘field, meadow, open land, steppe’.

Buck 1949:1.23 plain, field. Blažek 1992a:141, no. 30; Bomhard 1996a:213, no. 612; Dolgopolsky 2008, no. 2478, *w[e]l[í][V]hV (or *wi[í][V]hV ?) ‘field, plain’.

847. Proto-Nostratic root **welʷ-*:(vb.) **welʷ-* ‘to well up, to surge, to flow forth, to flood’;(n.) **welʷ-a* ‘deluge, flood, inundation; surge, wave’

- A. Dravidian: Tamil *veḷḷam* ‘flood, deluge, sea, wave’; Malayalam *veḷḷam* ‘water’; Kannada *beḷḷa* ‘flood’; Tulu *boḷḷa* ‘flood, inundation’; Telugu *velli*, *vellika* ‘flow, flood, stream’, *velluva* ‘flood, inundation’; (?) Brahui *bēl* ‘large hill-torrent’. Burrow—Emeneau 1984:501, no. 5503.
- B. Proto-Indo-European **welH-/w̥lH-* (secondary *o*-grade form: **wolH-*) ‘(vb.) to well up, to surge, to flow forth, to boil up; (n.) surge, wave’: Sanskrit *ūrmi-h* ‘wave, billow’; Avestan *varəmi-* ‘wave’; Gothic **wulan* ‘to seethe’; Old Icelandic *vella* ‘to boil; to well up, to swarm’; Old English *weallan* ‘to be agitated, to rage, to toss, to well, to bubble, to seethe, to foam, to be hot, to boil; to flow, to swarm; to rise (of a river)’, *wiell* ‘fountain, spring’, *wielm* ‘boiling, surging, raging; flowing, bursting forth’; Old Saxon *wallan* ‘to surge, to well up, to boil up’; Old High German *wella* ‘wave’ (New High German *Welle*), *wallan* ‘to bubble, to simmer, to boil, to seethe; to undulate, to float, to flow, to wave’ (New High German *wallen*); Lithuanian *vilnis* ‘wave’; Old Church Slavic *vlъna* ‘wave’; Czech *vlna* ‘wave’; Polish *welna* ‘wave’; Bulgarian *válná* ‘wave’. Rix 1998a:618 **uelH-* ‘to roll; to well up, to surge’; Pokorny 1959:1140—1144 **uel-*, **uelə-*, **ulē-* ‘to turn, to roll’; Walde 1927—1932.I:298—304 **uel-*; Mann 1984—1987:1553 **ulm-* ‘surge, billow; wide mouth, gulf’, 1554 **uln-* (**ulnis*, *-ā*) ‘surge, wave’; Watkins 1985:75—76 **wel-* and 2000:98 **wel-* ‘to turn, to roll’; Mallory—Adams 1997:637 (?) **ulh_xmi-* ‘wave’; Mayrhofer 1956—1980.I:117; Feist 1939:575—576 **uel-*; Lehmann 1986:411 etymology difficult; probably based on Proto-Indo-European **wel-*, **wel-ʔ-* ‘to turn, to roll’; Orël 2003:444 Proto-Germanic **walljōn* ~ **walljaz*, 444 **walljanan*, 444 **walmiz*, 453 **wellanan* II, 453 **wellōn*; Kroonen 2013:571 Proto-Germanic **wallan-* ‘to well up, to boil, to seethe’; De Vries 1977:653; Onions 1966:999 West Germanic **wallan*, beside **wellan*; Klein 1971:824 **wel-* ‘to turn, to roll’; Skeat 1898:702; Kluge—Mitzka 1967:835 **uel-* and 851 **uel-*; Kluge—Seebold 1989:775 **wel-* and 786; Derksen 2008:547; Fraenkel 1962—1965.II:1254; Smoczyński 2007.1:754 **uelH-C*. Note: The Germanic forms are both phonologically and semantically ambiguous. Some of them may belong with Proto-Nostratic (vb.) **wal-* ‘to set fire to, to burn, to heat up, to warm’; (n.) **wal-a* ‘heat, warmth, boiling’ instead.
- C. Uralic: Finnish *vello-* ‘to surge, to heave, to swell’.

Buck 1949:1.35 wave. Bomhard—Kerns 1994:627—628, no. 505; Illič-Svityč 1965:333 **wila* ‘moist’ (‘влажный’); Hakola 2000:212—213, no. 951.

848. Proto-Nostratic root *wet'-:

(vb.) *wet'- 'to wet, to moisten';

(n.) *wet'-a 'water'

- A. (?) Afrasian: Semitic: Arabic *waṭafa* 'to pour abundantly', *waṭfāʾ* 'raining abundantly (cloud)'. D. Cohen 1970—:530. Berber: Ahaggar *ūdūf* 'ritual ablution'. Orël—Stolbova 1995:534, no. 2563, *wVtVf- 'to rain, to pour' (Orël—Stolbova derive *wVtVf- from *tif- 'drop, rain'). Perhaps also Egyptian *wdḥ* (later written *wḏḥ*) 'to pour out, to pour off', *wdḥw* (later written *wḏḥw*) 'offering, offering-table'; Coptic *wōth* [ⲱⲮⲧⲧ] 'to pour, to melt'. Hannig 1995:229; Faulkner 1962:73; Erman—Grapow 1921:43 and 1926—1963.1:393; Gardiner 1957:563; Vycichl 1983:239; Černý 1976:220. Ehret (1995:455, no. 955) derives the Egyptian form from Proto-Afrasian *wadl- 'to flow'.
- B. Dravidian: Tamil *ōtam* 'moisture, dampness, flood, sea, wave'; Malayalam *ōtam* 'dampness in rainy season'; Kannaḍa *odde* 'wetness, dampness, moisture'; Tuḷu *odde* 'wetness, dampness, moisture; wet', *veddē* 'moist, wet'; Naiki (of Chanda) *vad*, *vod* 'dew'. Burrow—Emeneau 1984:100, no. 1047.
- C. Proto-Indo-European *wet'-/*ut'- (secondary o-grade form: *wot'-) (vb.) to wet, to moisten; (n.) water': Luwian (dat. sg.) *ú-i-ti* 'water'; Hittite (nom.-acc. sg.) *wa-a-tar* 'water' (gen. sg. *ú-i-te-na-aš*, nom.-acc. pl. *ú-i-da-a-ar*); Sanskrit *udán* 'water', *ud-*, *und-* (*unátti*, *undati*) 'to flow, to wet, to bathe'; Greek ὕδωρ 'water' (gen. sg. ὕδατος [< Pre-Greek *udḥtos]); Armenian *get* 'river'; Umbrian *utur* 'water'; Gothic *watō* 'water' (gen. sg. *watins*); Old Icelandic *vatn* 'water', *vátr* 'wet'; Old Swedish *vætur* 'water' (Modern Swedish *vatten*); Norwegian *vatn* 'water'; Old English *wæt* 'wet, moist, rainy', *wætan* 'to wet, to moisten, to water', *wæter* 'water'; Old Frisian *water*, *weter* 'water'; Old Saxon *watar* 'water'; Old High German *wazzar* 'water' (New High German *Wasser*); Latvian *ūdens* 'water'; Old Church Slavic *voda* 'water'; Russian *vodá* [вода] 'water'; Czech *voda* 'water'; Polish *woda* 'water'; Albanian *ujë* 'water'. Rix 1998a:599 **ued-* 'to flow forth'; Pokorny 1959:78—81 **a_ued-*, **aud-*, **ūd-* 'to wet, to sprinkle', **uédōr*, **uódōr* 'water'; Walde 1927—1932.I:252—254 **ued-*; Mann 1984—1987:1474 **ūdōr* (**udar*, obl. **udn-*) 'water', 1497 **uēd-* 'wet, damp', 1558 **uoden-*, **uodn-* oblique stem of type **uodōr* (**uodār*), 1558 **uodōr* (**uodār*), (obl.) **uoden-*, **uodn-* (**uodḥt-*) 'water'; Watkins 1985:73 **wed-* and 2000:95 **wed-* 'water; wet' (suffixed o-grade form **wod-ōr*); Gamkrelidze—Ivanov 1984.I:188, II:942 **u_uet-* and 1995.I:216 **wet-* 'water', I:579 **wet'-/*ut'-* 'water', I:583, fn. 13, **wot-* 'water', I:835 **wet-* 'water'; Mallory—Adams 1997:636 **uód_l* 'water'; Boisacq 1950:998—999 **ued-*, **ud-*; Frisk 1970—1973.II:957—959; Chantraine 1968—1980.II:1152—1153; Hofmann 1966:382 **uédōr* (**uódōr*), (gen.) **udnēs*; Beekes 2010.II:1526—1527 **uod-r*, **ud-n-*, (collective) **ud-ōr*;

Mayrhofer 1956—1980.I:103; Huld 1984:121; Orël 1998:483—484 **ued-* and 2003:451 Proto-Germanic **watnan* ~ **watar*; Kroonen 2013:575—576 Proto-Germanic **watar-* ~ **watan-* ‘water’ (< **uod-r/n-*); Lehmann 1986:395—396 **wed-*; Feist 1939:553—554 **ued-*; De Vries 1977:648 **uod-*, **ud-*; Torp 1919:848; Onions 1966:994 **wod-*; **wēd-*; **ud-* and 1000; Klein 1971:822 and 825; Kluge—Mitzka 1967:840 **wēd-*; **wod-*; **ūd-*; Kluge—Seebold 1989:778 **wedōr*; Kloekhorst 2008b:987—988 **uód-r*, **ud-én-*; Derksen 2008:523 **uod-r/n-*; Wodtko—Irslinger—Schneider 2008:706—715 **ued-*.

- D. Proto-Uralic **wete* ‘water’: Finnish *vesi/vete-* ‘water’; Estonian *vesi* ‘water’; Mordvin *ved’* ‘water’; Cheremis / Mari *wət*, *wüt* ‘water’; Votyak / Udmurt *vu* ‘water’; Zyrian / Komi *va* ‘water’; Vogul / Mansi *wit* ‘water’; Hungarian *víz/vize-* ‘water’; Forest Yurak Samoyed / Forest Nenets *wit* ‘water’; Tavgi Samoyed / Nganasan *beeʔ/beda-* ‘water’; Yenisei Samoyed / Enets *biʔ/bido-* ‘water’; Selkup Samoyed *ūt*, *öt* ‘water’; Kamassian *büü* ‘water; river; lake’. Collinder 1955:77, 1965:32, 147 **wete*, and 1977:83; Joki 1973:344 **vete*; Rédei 1986—1988:670 **wete*; Décsy 1990:220 **vetä* ‘water’; Sammallahti 1988:541 **weti* ‘water’; Janhunen 1977b:176—177 **wit*.

Buck 1949:1.31 water. Bomhard—Kerns 1994:607—608, no.483; Illič-Svityč 1965:334 **wet*₁ ‘water’ (‘вода’); Hakola 2000:214, no. 957; Dolgopolsky 2008, no. 2544, **wetē* ‘(flowing) water’; Greenberg 2002:181, no. 416.

849. Proto-Nostratic root **wig-* (~ **weg-*):

(vb.) **wig-* ‘to carry, to convey’;

(n.) **wig-a* ‘burden, load; conveyance, cart, vehicle’

- A. Proto-Afrasian **wig-* ‘to carry’: (Pre-Proto-Semitic **wigʷ-* > **widʷ-* > **wəʒ-* [~ **waʒ-*] >) Proto-Semitic **waʒ-ar-* ‘to carry’ > Arabic *wazara* ‘to take a heavy burden upon oneself and carry it’, *wizr* ‘heavy burden, load’; Hebrew *wāzār* [ʔ̂] ‘criminal, guilty’. D. Cohen 1970— :518—519; Murtonen 1989:213; Klein 1987:190; Zammit 2002:431—432. Proto-Semitic **waʒ-an-* ‘to weigh’ > Arabic *wazana* ‘to weigh’, *wazn* ‘weight, measure’; Ugaritic *mznm* (base *wzn*) ‘scales, balances’; Ḥarsūsi *wezōn* ‘to weigh’; Šheri / Jibbāli *ezún* ‘to weigh’, *mízún* ‘balance’; Mehri *wəzūn* ‘to weigh’. D. Cohen 1970— :517 (< **zn-*); Zammit 2002:432—433. Egyptian (**wigʷ-* > **widʷ-* > **wḏn* >) *wdn* ‘to be heavy, to weigh’, *wdnt* ‘heavy block of stone’, *wdnw* ‘load, burden, weight’. Hannig 1995:228; Faulkner 1962:73; Erman—Grapow 1921:43 and 1926—1963.1:390.
- B. Proto-Indo-European **wegʰ-* (secondary *o*-grade form: **wogʰ-*) ‘to carry, to convey, to weigh’: Sanskrit *vāhati* ‘to carry, to transport, to convey; to lead, to conduct, to bear along (water, said of rivers); to draw (a cart), to guide (horses, etc.); to lead towards, to bring, to procure, to bestow; to

carry away, to carry off, to rob'; Avestan *vazaiti* 'to carry, to draw, to drive'; Greek (Pamphylian) *ἔχέτω* 'he should bring', *ἔχω* 'to carry, to transport, to convey; to drive, to ride, to sail', *ὄχος* 'anything that bears: a carriage, a chariot'; Albanian *vjedh* 'to steal'; Latin *vehō* 'to carry, to convey'; Old Irish *fén* 'wagon'; Gothic **gawigan* 'to move, to shake'; Old Icelandic *vega* 'to lift, to weigh', *vagn* 'vehicle, sledge, wagon, carriage'; Norwegian *vega* 'to weigh'; Swedish *väga* 'to weigh'; Danish *veie* 'to weigh'; Old English *wegan* 'to carry, to weigh', *wægn* 'carriage, cart, chariot'; Old Frisian *wega*, *weia* 'to move, to weigh', *wein* 'wagon'; Old Saxon *wegan* 'to weigh'; Old High German *wegan* 'to move, to shake, to weigh' (New High German *wägen* 'to weigh, to balance'), *wagan* 'wagon, cart, carriage' (New High German *Wagen*); Lithuanian *vežti*, *vėžti* 'to carry, to convey, to take'; Old Church Slavic *vezō*, *vesti* 'to transport', *vozъ* 'cart'. Rix 1998a:602—603 **ueġh-* 'to carry, to transport, to convey; to go, to travel, to drive, to ride'; Pokorny 1959:1118—1120 **ueġh-* 'to move'; Walde 1927—1932.I:249—250 **ueġh-*; Mann 1984—1987:1499—1500 **ueġh-* '(vb.) to carry, to convey, to transport; (n.) conveyance, roadway, means of transport', 1500 **ueġhen-* (**ueġhn-*) 'carrier, conveyor, conveyance; carriage, cartage', 1500 **ueġhidhlom-*, *-tlom-*, *-trom-*, 1500 **ueġhs-*, 1500—1501 **ueġhtis* 'lift, weight, conveyance', 1561 **uoġhejō-*, 1561 **uoġhos-*, *-ā-*, *-is-*, *-ō(n)-*, *-ios-*, *-iā-* 'conveying, conveyance, cart'; Watkins 1985:74 **wegh-* and 2000:95—96 **wegh-* 'to go, to transport in a vehicle'; Gamkrelidze—Ivanov 1984.II:723 and II:942 **ueġ[h]-* and 1995.I:95, I:360, I:623, I:627, I:835 **weġh-* 'to ride, to convey, to carry by vehicle'; Mallory—Adams 1997:91 **ueġh-* 'to bear, to carry' also 'to ride' (?); Boisacq 1950:735—736 **ueġh-*; Frisk 1970—1973.I:604 (Latin *vehit* < **ueġheti*), II:455—456, and II:457—458 **uoġho-s-*; Hofmann 1966:247 **ueġh-*; Chantraine 1968—1980.I:394, II:843—844, and II:845; Beekes 2010.I:491 **ueġh-*; Walde—Hofmann 1965—1972.II:742—743; Ernout—Meillet 1979:717 **weg'h-*; De Vaan 2008:658; Mayrhofer 1956—1980.III:177—179; Kroonen 2013:577—578 Proto-Germanic **wegan-* 'to move, to carry'; Orël 1998:510 and 2003:452 Proto-Germanic **weġanan*, 452 **weġaz*, 460 **wēġiz*, 460 **wēġiz* ~ **wēġō*, 460 **wēġjan*; Feist 1939:212 **uegh-*; Lehmann 1986:154 **wegh-*; De Vries 1977:639 and 650; Falk—Torp 1903—1906.II:434; Torp 1919:853; Klein 1971:819 and 824 **weġh-*; Onions 1966:988 and 998 Common Germanic **weġan* (< **wegh-*, **wogh-*, **wēgh-*); Boutkan—Siebinga 2005:434—435; Kluge—Mitzka 1967:831; Kluge—Seebold 1989:772; Fraenkel 1962—1965.II:1236; Smoczyński 2007.1:746; Derksen 2008:518 **ueġh-* and 2015:500 **ueġh-*.

- C. Proto-Uralic **wixi-* 'to bring, to carry, to convey' > Finnish *vie-* 'to take (away), to bring somewhere (else), to carry, to convey, to lead'; Estonian *vii-* 'to take (away), to bring somewhere (else), to carry, to convey, to lead'; Lapp (Kola) *vj'kka-/vj'ga-* 'to take (away), to bring somewhere (else), to carry, to convey, to lead'; Mordvin *vije-*, *vijā-* 'to take (away), to

bring somewhere (else), to carry, to convey, to lead'; Votyak / Udmurt *vajy-* 'to bring (here); to produce, to bear fruit, to bear'; Zyrian / Komi *vaj-* 'to bring, to hand over, to give; to take (as wife, to marry); to bear (to give birth to)'; Hungarian *viv-* 'to take, to bring somewhere (else), to carry'. Collinder 1955:140 and 1977:150 Proto-Finno-Ugrian **wiye-*; Rédei 1986—1988:573 **wiye-*; Sammallahiti 1988: 551 **wixi-* 'to take'; Joki 1973:345—346; Zhivlov 2023:170 Proto-Uralic **wixi-* 'to take, to carry, to transport'. Yukaghir (Southern / Kolyma) *ege-* 'to lead by hand', (Northern / Tundra) *wegie-* 'to lead, to carry', *wegii* 'loaded caravan'. Nikolaeva 2006:455.

Buck 1949:10.61 carry (bear); 10.66 ride (vb.). Illič-Svityč 1965:351 **wegλ* 'to carry' ('нести'); Bomhard—Kerns 1994:455—457, no. 301; Hakola 2000:214, no. 959; Greenberg 2002:33—34, no. 57; Dolgopolsky 2008, no. 2463, **w[i]g[ʔ]ê* 'to carry, to take (somewhere)'.

850. Proto-Nostratic root **wilʷ-* (~ **welʷ-*):

- (vb.) **wilʷ-* 'to become bright, to manifest, to appear, to come into view';
- (n.) **wilʷ-a* 'appearance, manifestation; light, brightness, radiance, splendor';
- (adj.) 'bright, manifest, clear'

- A. Proto-Afrasian **wil-* 'to become bright, to manifest, to appear, to come into view': Berber: Tuareg *awəl* 'to keep an eye on, to watch over, to watch', *amāwal* 'supervisor'; Ghadames *awall* 'eye'; Riff *wala*, *wara* 'to see, to perceive', *allən* 'eyes'; Tamazight *allən* 'eyes'; Tashelhiyt / Shilha *allən* 'eyes'; Kabyle *wali* 'to see, to look at; to think, to consider', *allən* 'eyes'. Highland East Cushitic: Kambata *will y-* (?) 'to appear suddenly'; Sidamo *willi y-* 'to appear suddenly'. Hudson 1989:21. Southern Cushitic: Proto-Rift **welah-* 'to appear, to emerge into view' > Iraqw *welahat-* 'to appear, to emerge into view'; K'wadza *wilit-* 'to come out of hiding'. Ehret 1980:383.
- B. Dravidian: Tamil *veḷ* 'white, pure, shining, bright', *veḷi* 'to break (as day), to clear, to whiten, to become bright', *veḷiru* (*veḷiri-*) '(vb.) to grow white, to become pale; (n.) whiteness, paleness, light, becoming clear', *veḷu* 'to become white or pale, to dawn, to become clear or manifest, to whiten (tr.; as clothes)', *viḷaṅku* (*viḷaṅki-*) 'to shine, to become renowned, to be polished, to be clear or plain, to know'; Malayalam *veḷi*, *veḷivu* 'light, clearness', *veḷukka* 'to dawn, to grow white, to be white, to be clean or bright', *viḷaṅṅuka* 'to shine forth, to reflect light, to show itself clearly, to be polished or clean'; Kannada *beḷagu* 'to shine, to become bright, to manifest oneself; to cause to shine, to kindle (as a lamp), to scour, to polish', *beḷar* 'to become white or bright', *beḷa*, *beḷaku*, *beḷagu* 'light, lamp'; Kodagu *boḷi-* (*boḷip-*, *boḷit-*) 'to become white', *boḷi* 'light'; Kota *veḷ* 'white, true', *veḷk* 'lamp', *veḷp* 'whiteness, lightness'; Tulu *boḷiruni* 'to

become white or clear'; Telugu *velūgu* '(vb.) to shine, to give light; to burn, to flame, to blaze; (n.) light, brightness, shining, splendor', *veluka* 'whiteness', *velacu* 'to clean', *velayu* 'to shine, to be splendid, to be renowned', *velaru* 'whiteness', *veli*, *velidi* 'white'; Parji *vil* 'white', *vili* 'to be white'; Gadba (Ollari) *viled-* 'white'; Kuwi *vella* 'white', *rinj-* 'to be white', *rinj-* 'to be white, to burn, to flash, to blaze', *rih-* (*rist-*) 'to make fire, to burn'; Kuṛux *bilcnā* 'to shine, to glitter, to sparkle, to be conspicuous', *billi* 'light, that which is the source of light (lamp, candle), flame, mental or moral illumination'; Malto *bilbilre* 'to shine brilliantly'. Burrow—Emeneau 1984:499—500, no. 5496; Krishnamurti 2003:391 **wel/*wen* 'white'.

- C. Proto-Indo-European **wel-/*w_l-* (secondary *o*-grade form: **wol-*) 'to see, to look, to view': Latin *vultus*, *voltus* 'the expression of the face, countenance, appearance, look, aspect'; Old Irish *fili* 'poet, seer'; Welsh *gweled* 'to see'; Breton *gwelet* 'to view'; Gothic *wlaitōn* 'to look around', *wlits* 'face, appearance', *anda-wleizn* 'face, countenance', *wulpus* 'splendor'; Old Icelandic *lita* 'to look, to see, to behold', *litr* (< Proto-Germanic **wlitu-z*) 'color, hue', *leita* 'to look for, to seek, to search'; Old English *wlitan* 'to look', *wlitig* 'beautiful', *wlite* 'brightness, beauty, splendor, appearance, form', *wlitu* 'form, species', *wlātian* 'to gaze', *and-wlita* 'face, countenance, surface (of earth); form, shape', *and-wlite* 'face, forehead', *wuldor* 'glory, praise'; Old Frisian *wlite* 'radiance, appearance'; Old Saxon *wliti* 'radiance, appearance'; Tocharian B *yel-* (< **wel-*) 'to investigate', (n. pl.) *yälloñ* 'sense-functions'. Semantic development as in Greek λεύσσω 'to look at, to behold' < **lewkh-* '(vb.) to shine, to be bright; (adj.) shining, bright, light'. Rix 1998a:616—617 **uel-* 'to see, to notice, to observe, to become aware of'; Pokorny 1959:1136—1137 **uel-* 'to see'; Walde 1927—1932.I:293—294 **uel-*; Mann 1984—1987:1509 **uel-* 'to see, to look'; Watkins 1985:75 **wel-* and 2000:97 **wel-* 'to see' (suffixed zero-grade form **wl-id-*); Mallory—Adams 1997:505 **uel-* 'to see'; De Vaan 2008:688—689; Walde—Hofmann 1965—1972.II:831; Ernout—Meillet 1979:751 **uel-*; Orël 2003:469 Proto-Germanic **wlaitōjanan*, 469 **wlitiz*, 469 **wlit(j)an*, 469 **wlītanan*; Kroonen 2013:591 Proto-Germanic **wlītan-* 'to see'; Feist 1939:571—572 **ulej-*, **uel-* and 577 **uel-* 'to see', **ul-ejd-*, **ul-ejs-*; Lehmann 1986:35—36 **wel-* 'to see', **wl-ey-d-*, 408 **wel-* 'to see', **w_l-tu-* 'appearance', and 413 **wel-* 'to see', **w_l-tu-* 'appearance'; De Vries 1977:352, 358, and 359; Van Windekens 1976—1982.I:591 **uel-* 'to see' and I:596 **uel-* 'to see'; Adams 1999:500 and 507 **wel-* 'to see'.

Buck 1949:15.51 see; 15.52 look (vb.), look at; 15.53 sight (subj.); 15.543 sight (obj.), look (obj.), appearance; 15.56 shine; 15.57 bright; 15.61 color (sb.); 15.64 white. Dolgopolsky 2008, no. 2488, **w[e]lV* 'to shine, to lighten'.

851. Proto-Nostratic root **win-* (~ **wen-*) or **wiŋ-* (~ **weŋ-*):
 (vb.) **win-* or **wiŋ-* ‘to strive for, to wish for, to desire’;
 (n.) **win-a* or **wiŋ-a* ‘wish, desire’
- A. Proto-Afrasian **win-* ~ **wan-* ‘to be pleasant, joyful’: Egyptian *wnf* ‘to be joyful, to rejoice’; Coptic *unof* [ⲟⲩⲛⲟⲩ] ‘to rejoice’. Hannig 1995:198; Faulkner 1962:61—62; Erman—Grapow 1921:36 and 1926—1963.1:319; Černý 1976:214; Vycichl 1983:235. Proto-Southern Cushitic **win-* or **wan-* ‘nice, pleasant, comfortable’ > Iraqw *wanana* ‘soft, gentle’, *wanʔes-* ‘to soften’, *wananaʔut-* ‘to be loose’; Dahalo *wine* ‘good, clean’. Ehret 1980:314. Semantic development as in Old High German *wunna* ‘great joy, bliss’, Old English *wynn* ‘joy, rapture, pleasure, delight, gladness’, *wynsum* ‘pleasant, delightful, joyful, merry’, etc., cited below.
- B. Dravidian: Tamil *vēṇṭu* (*vēṇṭi-*) ‘to want, to desire, to beg, to entreat, to request’, *vēṇṭum*, *vēṇum* ‘it will be required, necessary, indispensable; it must’, *vēṇṭām* ‘it will not be required, necessary, indispensable; it must not’, *vēṇṭal* ‘desiring, petition’, *vēṇṭāmai* ‘aversion, dislike, absence of desire, contentment’, *vēṇṭār* ‘those who have no desires; enemies’, *vēṇṭiya* ‘indispensable, required, sufficient, many’, *vēṇṭiyavan* ‘friend, well-wisher’, *vēṇṭunar* ‘those who wish for or desire a thing’, *vēṇ* ‘desire’; Malayalam *vēṇam*, *vēṇṭum* ‘it must, ought, is desired’, *vēṇ* ‘necessary’, *vēṇṭa* ‘useful, required’, *vēṇṭu* ‘must’, *vēṇṭa* ‘must not, need not’, *vēṇṭuka* ‘being necessary, friendship’, *vēṇṭikka* ‘to make necessary, to procure, to acquire’; Kannaḍa *bēṭa*, *bēṇṭa* ‘longings, sexual passion, amorous pleasure’; Telugu *vēḍu* ‘to pray, to beg, to ask for, to wish, to desire’, *vēḍuka* ‘pleasure, joy, desire, wish, fun’. Burrow—Emeneau 1984:504—505, no. 5528; Krishnamurti 2003:278 **wēṇ-ṭu* ‘wish’.
- C. Proto-Indo-European **wen(H)-*/**wṇ(H)-* (secondary *o*-grade form: **won(H)-*) ‘to strive for, to wish for, to desire’: Sanskrit *vānati*, *vanóti* ‘to like, to love, to wish, to desire; to gain, to acquire, to procure; to conquer, to win, to become master of, to possess’, *vānas-* ‘longing, desire’, *vaní-h* ‘wish, desire’, *vanita-h* ‘solicited, asked, wished for, desired, loved’, *vanú-h*, *vanús-* ‘zealous, eager’; Avestan *vanaiti* ‘to win, to strive for, to conquer’; Latin *venus* ‘charm, loveliness, attractiveness; sexual love’, *vēnor* ‘a hunt’, *venia* ‘grace, indulgence, favor’, *veneror* ‘to ask reverently, to beseech with awe; to revere, to respect, to worship, to honor’; Old Irish *fine* ‘a family’; Gothic *wēns* ‘hope’, *winnan* ‘to suffer’, *winna* ‘passion’; Old Icelandic *una* ‘to enjoy, to be happy in, to be content with a thing’, *unað* ‘delight, happiness’, *vinr* ‘friend’, *yndi* ‘delight, happiness’, *væna* ‘to give one hope’, *ván* ‘hope, expectation’, *vænn* ‘fine, beautiful’, *vinna* ‘to work, to labor, to do work’, *vinna* ‘work, labor’, *vinningr* ‘gain, profit’, *ýskja*, *æskja* ‘to wish’; Old English *wynn* ‘joy, rapture, pleasure, delight, gladness’, *wynsum* ‘pleasant, delightful, joyful, merry’, *wine* ‘friend’, *wēnan* ‘to hope, to expect’, *wēn*, *wēnung* ‘hope, expectation’, *winnan* ‘to

toil, to endure hardship, to suffer', *gewinnan* 'to gain, to acquire, to conquer, to take', *winn* 'labor, effort, hardship', *wýscan* 'to wish'; Old Frisian *wēna* 'to hope, to expect', *wēn* 'opinion', *winna* 'to obtain'; Old Saxon *wān* 'hope', *winnan* 'to suffer, to win'; Old High German *wān* 'opinion, hope', *giwinnan* 'to gain by labor' (New High German *gewinnen*), *wunna* 'great joy, bliss', *wunsken* 'to wish' (New High German *wünschen*). Rix 1998a:623—624 **uenH-* 'to grow fond of'; Pokorny 1959:1146—1147 **uen-*, **uenə-* 'to desire, to strive for'; Walde 1927—1932.I:258—260 **uen-*; Mann 1984—1987:1511—1512 **uēn-* 'desire, hope, favor, outlook, charm', 1514 **uenos, -es-* 'desire', 1515 **uēnskō* 'to desire'; Watkins 1985:76 **wen-* and 2000:98 **wen-* 'to desire, to strive for'; Mallory—Adams 1997:158 **uenh_x-* 'to desire, to strive to obtain'; De Vaan 2008:661 and 663; Ernout—Meillet 1979:719, 720—721, and 721—722 **wen-* 'to desire, to wish for'; Walde—Hofmann 1965—1972.II:747, II:749—750, and II:752—753 **uen-*; Feist 1939:561 **uen-* and 566 **uen-*; Lehmann 1986:401 Gothic *wēns* possibly from **wen-* 'to strive, to wish' and 404 **wen-*, **wenH-* 'to strive, to wish, to gain'; Orël 2003:455 Proto-Germanic **weniz*, 455 **wennanan*, 455 **wennō(n)*; Kroonen 2013:579 Proto-Germanic **wēni-* 'expectation' and 599 **wunskjan-* 'to wish'; De Vries 1977:634 Proto-Norse **wunēn*, 666, and 678 Old Icelandic *yndi* < **wunepia*; Onions 1966:998 Common Germanic **wen-*, 1007, and 1009 Common Germanic **wunska-*, -*ō*; Klein 1971:828 **wen-* and 829 **wen-*; Boutkan—Siebinga 2005:451; Kluge—Mitzka 1967:256 and 869 **uen-*; Kluge—Seebold 1989:265 **wenə-* and 800 **wenə-*; Mayrhofer 1956—1980.III:141—142.

- D. Yukaghir (Northern / Tundra) *wenke* 'passion, inspiration, enthusiasm', *wenkeñ-* 'not meant to live long', *wenkend'e-rukun* 'promising'. Nikolaeva 2006:456.

Buck 1949:16.22 joy; 16.61 will, wish (vb.); 16.62 desire (vb.); 20.41 victory. Bomhard 1996a:216, no. 619. Different etymology in Dolgopolsky 2008, no. 2495, **w[o]ñV* 'wish, love; luck'.

852. Proto-Nostratic (n.) **wir-a* 'a kind of tree: aspen, alder, poplar, or the like':

- A. Dravidian: Tamil *viracu*, *viricu*, *virucu* 'large sebesten', *viriyāṇ* 'common sebesten'; Malayalam *viriśu* 'a tree'; Telugu *virigi* '*Cordia sebestena*'. Burrow—Emeneau 1984:490, no. 5408.
- B. Proto-Kartvelian **werxw-* 'aspen': Georgian *verxv-* 'aspen'; Mingrelian *vex-* 'aspen'. Klimov 1964:84 **werxw-* and 1998:52 **werxw-* 'aspen'; Fähnrich 2007:161 **werxw-*. According to Klimov (1998:52), Mingrelian *verxv-* 'aspen' and Svan *jerxw-*, *werxw-* 'aspen, poplar' appear to be recent loans from Georgian.

- C. Proto-Indo-European **wer-n-* ‘alder, poplar’: Sanskrit *varaṇá-h*, *varāṇa-h*, *vāruṇa-h* ‘the tree *Crataeva roxburghii* (used in medicine and supposedly containing magical powers)’; Armenian *geran* ‘a beam’; Albanian *verr* ‘alder, white poplar’; Middle Irish *fern* ‘alder; mast’; Breton *gwern* ‘alder; mast’; Old Cornish *guern* ‘mast’. Pokorny 1959:1169 **uer-(e)nā* ‘alder, poplar’; Walde 1927—1932.I:292 **uer-(e)nā*; Mann 1984—1987:1520 **uern-* (**uernā*, *-is*, *-ios*) ‘withy, shoot, sucker; alder’; Gamkrelidze—Ivanov 1984.II:635 **uer-n-* and 1995.I:546 **wer-n-* ‘alder, poplar; log, beam, mast’; Mallory—Adams 1997:11 **uerno/eh₄* ‘alder’; Mayrhofer 1956—1980.III:149; P. Friedrich 1970:149; Orël 1998:500.
- D. Chukchi-Kamchatkan: Proto-Chukotian **wirwir* ‘bark of alder’ > Chukchi *wirwir* ‘bark of alder’; Kerek *ujuj* ‘bark of alder’; Koryak *wicwij* ‘bark of alder’; Alyutor *wirwir* ‘bark of alder’. Fortescue 2005:330.

Bomhard—Kerns 1994:614, no. 493. Dolgopolsky 2008, no. 2524, **wirχV* ‘tree (poplar, alder, or similar), shoot’.

853. Proto-Nostratic root (Eurasianic only) **wos-*:

- (vb.) **wos-* ‘to trade, to deal’;
(n.) **wos-a* ‘trade, commerce’

- A. Proto-Indo-European **wos-/us-* (secondary *e*-grade form: **wes-*) ‘to trade, to deal’: Hittite (3rd sg. pres.) *uš-(ša-)ni-ya-zi* ‘to sell’, (3rd sg. pres.) *wa-a-ši* ‘to buy’; Sanskrit *vasná-m* ‘price, value’; Greek (Homeric) ὄνοϝος (< **Fóσ-vo-ς*), (Attic-Ionic) ὀνή (< **Fos-vā*), (Doric) ὀνά, (Lesbian) ὀνῶ ‘price, sum paid’; Latin *vēnum* ‘sale’, *vendō* ‘to put up for sale, to sell’; Old Russian *věno* ‘payment; bride price’; Czech *věno* ‘bride price’; Upper Sorbian *wěno* ‘dowry’; Polish *wiano* ‘bride-price’; Lydian *wsta-* ‘expense’ (?). Rix 1998a:634 **ues-* ‘to buy, to sell’; Walde 1927—1932.I:311—312 **ues-*; Pokorny 1959:1173 **ues-* ‘to buy, to sell’; Mann 1984—1987:1524 **ues-* ‘to put, to place, to give, to offer, to sell’, 1529 **uesnom* (**uosnom*) ‘price’; Gamkrelidze—Ivanov 1984.II:747 **ue/os-(n-)* and 1995.I:650 **we/os-(n-)* ‘(vb.) to buy, to sell; (n.) price, trade, value’; Watkins 1985:78 **wes-* and 2000:100 **wes-* ‘to buy, to sell’ (suffixes **wes-no-*; suffixes *o*-grade form **wos-no-*); Mallory—Adams 1997:185 **ues-no-* ‘purchase’; Boisacq 1950:1082 (Sanskrit *vasná-m* < **uesno-*); Chantraine 1968—1980.II:1302—1303 **wes-*, **wes-no-*; Hofmann 1966:430 **uosnos*, **uosnā* (?), **uesnós*, **uesnom*; Beekes 2010.II:1680—1681 **uos-no-*; Frisk 1970—1973.II:1149—1150 **ues-no-*, **uos-no-*; Derksen 2008:519—520 (Old Russian *věno* ‘payment; bride price’, etc. < **h₁ued-no-m*); Kloekhorst 2008b:980—981; Walde—Hofmann 1965—1972.II:753—754 **uesno-*, **uosno-*; De Vaan 2008:663 **ues-no-* ‘price’; Ernout—Meillet 1979:721 Latin *vēnum* < **wesno-* or **wēsno-*; **wosnā* (> Lesbian ὀνῶ); Mayrhofer 1956—1980.III:177.

- B. Uralic: Proto-Finno-Ugrian *wosa ‘trade, commerce’ > (?) Finnish *osta-* ‘to buy’; Lapp / Saami (Lule) *oases/oassasâ-* ‘commerce, ware’; (?) Cheremis / Mari *wôžale-, užale-* ‘to sell’; Votyak / Udmurt *vuz* ‘commerce, ware’; Vogul / Mansi *waatel-* ‘to trade, to deal’, *waata-qum* ‘merchant’ (*qum* = ‘man’); Zyrian / Komi *vuz* ‘commerce, sale, payment, tax’, *vuzal-* ‘to sell’. Rédei 1986—1988:585 *wosa; Collinder 1955:104 and 1977:119; Joki 1973:298 *vos(a)-; Sammallahti 1988:551 *wo/isa ‘to buy’.

Buck 1949:11.81 buy; 11.82 sell. Koskinen 1980:110, no. 396; Bomhard—Kerns 1994:608, no. 484.

854. Proto-Nostratic root *woth-:

- (vb.) *woth- ‘to take hold of, to seize, to grasp, to collect, to take away’;
(n.) *woth-a ‘the act of taking, seizing, grasping’

- A. (?) Afrasian: Semitic: Geez / Ethiopic *wataga, wattaga* [ወተገ] ‘to flee, to escape, to hide (by fleeing), to rob’, *watg* [ወተግ] ‘fugitive’. D. Cohen 1970—:650; Leslau 1987:622. Egyptian *wth* ‘to flee’, *wthw* ‘fugitive’. Hannig 1995:324; Gardiner 1957:562; Erman—Grapow 1921:42 and 1926—1963.1:381; Faulkner 1962:71 and 72. Semantic development probably as follows: ‘to take, to steal, to rob’ > ‘to steal something and run away with it’ > ‘to flee, to escape, etc.’, much as the English phrase *to steal away* is used colloquially to mean ‘to flee, to escape, to go away (in secret)’.
- B. Dravidian: Kui *ota (oti-)* ‘to fetch (persons)’; Kuṛux *otth^ornā (otthras)* ‘to take out, to bring out, to expel’, *ond^ornā (ondras)* ‘to bring, to take along, to take for wife’; Malto *otre* ‘to take out, to bring out’, *ondre* ‘to bring’. Burrow—Emeneau 1984:93, no. 976.
- C. Uralic: Proto-Finno-Ugrian *wotta- ‘to take hold of, to gather, to collect’ > Finnish *otta-* ‘to take’; Estonian *võtta-* ‘to take’; Zyrian / Komi *vot-* ‘to pick, to gather, to collect’; Vogul / Mansi *waat-* ‘to pick’. Collinder 1955:105 and 1977:119; Rédei 1986—1988:586 *wotta-.

Buck 1949:10.62 bring; 11.13 take; 11.14 seize, grasp, take hold of; 12.21 collect, gather. Illič-Svityč 1971—1984.II:111, no. 351, *woṭa ‘to get, to obtain, to overtake’; Bomhard—Kerns 1994:633, no. 512.

855. Proto-Nostratic root (Eurasian only) *woy-:

- (vb.) *woy- ‘to make an effort, to act with energy’;
(n.) *woy-a ‘strength, power’

- A. Proto-Indo-European *woy(H)-/*wi(H)- (secondary *e*-grade form: *wey-) ‘(vb.) to make an effort, to act with energy; (n.) strength, power’: Sanskrit *vī-* ‘to go, to approach, to set in motion, to arouse, to excite, to impel, to

further, to promote', *váyas-* 'energy, strength, health, vigor, power, might; vigorous age, youth, prime of life, any period of life, age'; Avestan *vī-* 'to go after, to drive, to pursue'; Greek *ῖς* (*ῖς*) 'strength, force' (note also Hesychius *γίς* [= *ῖς*]); Latin *vīs* 'force, power, strength'. Pokorny 1959:1123—1124 **uei-*, **uejə-* : **uī-* 'to let fly at, to go for', **uīs-* 'strength, force, power'; Walde 1927—1932.I:228—231 **uei-*, **uejā-*; Mann 1984—1987:1545 **uis* 'strength, youth', 1545—1546 **uisājō*, *-ējō* 'to get strong', 1546 ***uisəros* 'vigorous'; Mallory—Adams 1997:209 **ueih_{xs}* 'vital force', **ueih_x-* 'to be strong'; Watkins 1985:74—75 **weia-* 'vital force' and 2000:97 **weia-* '(vb.) to go for something, to pursue with vigor, to desire; (n.) force, power', zero-grade form **wī-* (< **wiā-*); Frisk 1970—1973.I:735—736 **uī-s-*; **uīs-n-*; **uis-en-*; **uīs-*; **uī-n-*; Chantraine 1968—1980.I:469 **wīs-*; Boisacq 1950:382 **uei-*; Hofmann 1966:126 **uei-*; Beekes 2010.I:599 **uiH-*; Ernout—Meillet 1979:740; Walde—Hofmann 1965—1972.II:800—801 **uei-* 'to be vigorous', identical with **uei(ā)-* 'to pursue with vigor'; De Vaan 2008:683; Mayrhofer 1956—1980.III:147—148. Proto-Indo-European **wey-kh-*/**woy-kh-*/**wi-kh-* '(vb.) to overcome, to overpower, to conquer; (n.) fight, battle': Old Irish *fichid* 'to fight'; Middle Irish *fich* 'battle'; Welsh *gwyth* 'anger'; Latin *vincō* 'to conquer, to overcome, to defeat, to subdue, to vanquish'; Gothic *waihjō* 'battle', *weiha* 'to dispute'; Old Icelandic *vega* 'to fence, to fight (smite) with a weapon; to attack, to fight against one; to smite, to slay, to kill', *veig* 'pith, strength', *víg* 'fight, battle', *vígr* 'in fighting condition, able to fight', *véla* 'to defraud, to betray'; Old English *wīgan* 'to fight', *wīg* 'war', *wægan* 'to afflict, to frustrate, to deceive', *wīgend* 'warrior'; Old Frisian *wīch* 'battle', *wīgand-* 'brave'; Old Saxon *wīg* 'battle', *wēg(i)an* 'to torment', *wīgand* 'warrior'; Old High German *wīhan* 'to fight, to struggle', *wīgan* 'to battle', (past participle) *gi-wigan* 'destroyed', *widar-wigo* 'opponent', *wīg*, *wīc* 'war, battle', *wīgant* 'warrior', *weigan* 'to torment', *weiger* 'bold'; Lithuanian *veikiù*, *veikti* 'to do, to work, to act, to make', *veikà* 'activity, work', *veikimas* 'activity, action', *viėkas* 'life, strength', *apveikiù*, *apveikti* 'to overcome'; Latvian *veikt* 'to carry out'; Old Church Slavic *věkъ* 'age, strength'. Rix 1998a:611—612 **uejk-* 'to overcome, to overpower, to conquer'; Pokorny 1959:1128—1129 **ueik-* 'strong, mighty; hostile force'; Walde 1927—1932.I:232—233 **ueiq-*; Mann 1984—1987:1503 **ueik-* (**ueikō*, *-jō*; **uink-*, **uīk-*) 'force, struggle', 1563 **uoigh-* 'hold, grip; strength, fortress', 1563 **uoikos* (**uik-*) 'effort, strain'; Mallory—Adams 1997:201 **ueik-* 'to fight'; Watkins 1985:75 **weik-* and 2000:97 **weik-* 'to fight, to conquer'; Walde—Hofmann 1965—1972.II:791—792 **ueikmi*, **uikmés*; Ernout—Meillet 1979:736—737; De Vaan 2008:679—680; Orël 2003:465 Proto-Germanic **wīzan*, 465 **wīgaz*, 465—466 **wīxanan* ~ **wīzanan*; Kroonen 2013:586 Proto-Germanic **wīhan* 'to fight'; Feist 1939:542 and 557; Lehmann 1986:388 **weyk-* and 397—398 **weyk-* 'to exert force'; De Vries 1977:650 **ueik-*, 651, 652—

653, 661, and 662; Boutkan—Siebinga 2005:447—448; Fraenkel 1962—1965.II:1213—1214; Smoczyński 2007.1:728; Derksen 2015:494—495 *ueik-.

- B. Uralic: Proto-Finno-Ugrian *woye- ‘(vb.) to be able, to have power or capability; (n.) strength, power’ > Finnish *voida*- ‘to be able (to), to be capable (of)’, *voima* ‘strength, force, power’, *voimakas* ‘strong, powerful’, *voitta*- ‘to win, to gain, to conquer, to beat, to overcome’, *voitto* ‘victory, triumph’; Estonian *või*- ‘to be able’, *võita*- ‘to triumph over, to conquer, to defeat, to win (in a game)’, *võitle*- ‘to fight, to struggle with, to contend’, *võim*- ‘strength, ability’; Hungarian *vív*- ‘to fight, to struggle with, to fence’, *vívód*- ‘to fight, to struggle against’, *vajúd*- ‘to be in labor’. Rédei 1986—1988:579 *woje-.
- C. Altaic: Proto-Turkic *u(y)- ‘to be able, to have power or capability’ > Uighur *u*- ‘to be able’. Menges 1968b:153; Décsy 1998:156 *u*- ‘to be able, to endure’.

Buck 1949:4.81 strong, mighty, powerful; 9.95 can, may (3rd sg.). Illič-Svityč 1965:364 *woj(H)л ‘strength’ (‘сила’); Bomhard—Kerns 1994:629—631, no. 508; Dolgopolsky 2008, no. 2557, *woy[ʔ]é ⇐ *wo[ʔ]yê ‘power, ability’.

856. Proto-Nostratic root (vb.) *woy-:

Extended form:

(vb.) *woy-V-*kh*- ‘to arrange or put in order’;

(n.) *woy-*kh*-*a* ‘arrangement, order; straightness, correctness, rectitude’; (adj.) ‘straight, right, correct, true’

- A. Dravidian: Kannada *oykane* ‘orderly, properly, exactly, clearly’; Tuḷu *vaimē* ‘straightness, fitness, rectitude’; Telugu *ogi* ‘order, a range or line’, *ogin* ‘in order’; Kuṛux *uiraʔānā* ‘to put in order, to arrange’. Burrow—Emeneau 1984:94, no. 986.
- B. Proto-Indo-European *woy^{kh}-/*wik^h- (secondary *e*-grade form: *wey^{kh}-) ‘(vb.) to arrange or put in order, to make equal or similar; (n.) that which is reasonable, true, equal, or similar’: Greek εἰκών (Cyprian [acc.] Ἔεικόνα) ‘likeness, image, portrait’, εἰκός ‘likely, probable, reasonable; reasonably fair, equitable’, εἶκω ‘to be like, to seem likely’, εἰκάζω ‘to make like to, to represent by a likeness, to portray; to liken, to compare’, εἰκός, εἰκός (Ionic οἰκός) ‘seeming like, like; fitting, seemly, meet; likely, probable’; Old English *wīg*, *wīh*, *wēoh* ‘image, idol’; Lithuanian *į-vỹkti* ‘to happen, to occur, to take place, to come true, to be fulfilled’, *pavėikslas* ‘picture, painting, canvas, image’; Latvian *vīkt* ‘to prepare, to make ready’. Rix 1998a:612 *ueik- ‘to be similar, like’ (?); Pokorny 1959:1129 *ueik- ‘to happen, to prove right’ (?); Walde 1927—1932.I:233 *ueik-; Mann 1984—1987:1503 *ueiksəlos, -ā ‘aspect, figure, likeness; like, similar’, 1503 *ueik- ‘like, likeness; likelihood’; Watkins 1985:76 *weik- and 2000:97

**weik-* ‘to be like’; Mallory—Adams 1997:25 **ueik-* ‘to appear’; Boisacq 1950:222; Frisk 1970—1973.I:454—455; Hofmann 1966:71; Chantraine 1968—1980.I:354—355 **weik-*; Beekes 2010.I:382 **ueik-*; Orël 2003:465 Proto-Germanic **wīxan*.

- C. Uralic: Proto-Finno-Ugrian **woyke* ‘straight, right, correct, true’ > Finnish *oikea* ‘right, just, correct; right (hand)’, *oiko-* ‘to set right, to rectify, to straighten’, *oikein* ‘right, correct; rightly’; Karelian *oikie*, *oigie* ‘right, true, straight, correct’; Estonian *õige* ‘right, true, straight, correct’; Lapp / Saami (Northern) *vuoi’gâ* ‘really, straight, right, truly’, *vuoi’gâd* ‘right, reasonable, straightforward, outspoken’; Cheremis / Mari *wie-* ‘to become straight’; Mordvin (Erza) *vijede*, (Moksha) *vide* ‘straight; right, just, true’; (?) Hungarian *igaz* ‘true, genuine, real, veritable, authentic’. Collinder 1955:103, 1960:412 **wojkz*, and 1977:118; Rédei 1986—1988:824—825 **wojke*.

Buck 1949:12.51 form, shape; 12.91 equal; 12.92 like, similar. Illič-Svityč 1965:358 **woj/k/λ* (?) ‘straight’ (‘прямой’); Bomhard—Kerns 1994:631—632, no. 510; Hakola 2000:122, no. 526; Dolgopolsky 2008, no. 2468, **woykV* ‘straight, even, fit’.

857. Proto-Nostratic (n.) **wun-d-a* (~ **won-d-a*) ‘(young, fine, or soft) hair’:

- A. Dravidian: Tamil *oṭṭu* (< **oṇṭu*) ‘stubble’; Malayalam *oṭu* ‘stubble’; Tuḷu *oḍḍu* ‘stubble’. Burrow—Emeneau 1984:93, no. 966.
- B. Proto-Indo-European **wondh-*/**wṇdh-* (secondary *e*-grade form: **wendh-*) ‘beard, (young, fine, or soft) hair’: Greek ἰωνθος (< **F̥i-Fonθos*) ‘the root of a hair, young hair, eruption on the face which often accompanies the first growth of the beard’, ἰωνθάς ‘shaggy’ (epithet of the wild goat); Middle Irish *find* (< **wṇdh-* or **wendh-*) ‘a hair’; Old High German *wint-* (< **wendh-*) in *wintbrāwa* ‘eyelash’; Old Prussian *wanso* ‘the first beard’; Russian Church Slavic **vosъ*, *osъ* (< **wondh-s-o-*) ‘moustache’; Russian *us* [yc] ‘moustache, whisker’. Pokorny 1959:1148 **uendh-* ‘hair, beard’; Walde 1927—1932.I:262 **uendh-*; Mallory—Adams 1997:252 **uendh-* ‘(a single) hair’, **ue/ondhso-* ‘facial hair’; Boisacq 1950:378 Greek ἰωνθος < **ui-uondho-*; **uṇdhā*; **uendh-s-o-*; **uondh-so-*; **uendho-*, -ā; **uendh-es-*, **uondh-es-*; Frisk 1970—1973.I:729—730 Greek ἰωνθος < **F̥i-Fonθos*; **uṇdh-* (**uendh-* ?); **uendh(o)-*; **uendh-s-o-*; **uondh-s-o-*; Chantraine 1968—1980.I:466 **wendh-*; Beekes 2010.I:594 **ui-uondh-o-*; Derksen 2008:386 **uondh-s-om*.
- C. Proto-Uralic **wuntz* ‘(young, fine, or soft) hair’: Finnish *untuva* ‘fine hair, pubescence, lanugo, fluff, down’; Yenisei Samoyed / Enets *muddut’e?* ‘beard’; Selkup Samoyed *umde*, *unde* ‘beard’; Yurak Samoyed / Nenets *munate*, *munoc?* ‘beard’; Tavgi Samoyed / Nganasan *mundujśaŋ* ‘beard’; Kamassian *mü?zen* ‘beard’; Motor *mundučen* ‘beard’. Collinder 1955:65

and 1977:82; Janhunen 1977b:96 **muntʰəjtʰsɜn* (? **muntʰəjtʰsɜn*); Rédei 1986—1988:587—588 **wunčɜ* (**wuntɜ*); Décsy 1990:110 **vunta* ‘beard, fuzz’.

Buck 1949:4.14 hair; 4.142 beard. Illič-Svityč 1965:335 **w/o/mdʌ* ‘facial hair’ (‘волосы’); Bomhard—Kerns 1994:632—633, no. 511.

858. Proto-Nostratic (n.) **wur-a* (~ **wor-a*) ‘squirrel’:

- A. Dravidian: Tamil *uruttai* ‘squirrel’; Telugu *uruta* ‘squirrel’. Burrow—Emeneau 1984:70, no. 713.
- B. Proto-Indo-European **wer-* ‘squirrel’ also ‘polecat, ferret’ (reduplicated forms: **we-wer-*, **wer-wer-*, **wi-wer-*, **way-wer-*, etc.): Farsi *varvarah* ‘squirrel’; Latin *vīverra* ‘ferret’; Welsh *gwiwer* ‘squirrel’; Breton *gwiber* ‘squirrel’; Scots Gaelic *feorag* ‘squirrel’; Old Icelandic *ikorni* ‘squirrel’; Norwegian *ikorn*, *ikorna* ‘squirrel’; Danish *egern* ‘squirrel’; Swedish *ekorre* ‘squirrel’; Old English *ācweorna* ‘squirrel’ (*āc-* = ‘oak’); Middle Low German *ēkeren*, *ēkhorn* ‘squirrel’; Dutch *eekhoorn* ‘squirrel’; Old High German *eihhurno*, *eihhorno* ‘squirrel’ (New High German *Eichhorn*); Lithuanian *vėveris*, *vaiverė*, *voverė* ‘squirrel’, *vaiveris* ‘male polecat’; Latvian *vāvere* ‘squirrel’; Old Prussian *weware* ‘squirrel’; Czech *veverka* ‘squirrel’; Old Russian *věverica* ‘squirrel’ (Russian *věverica* [веверица]). Walde 1927—1932.I:287—288 **uer-* ‘squirrel’ (reduplicated **uer-uer-*, **ue-uer-*, **uai-uer-*, **ui-uer-*, **uā-uer-*); Pokorny 1959:1166 **uer-* (reduplicated **uer-uer-*, **ue-uer-*, **uai-uer-*, **ui-uer-*, **uā-uer-*) ‘squirrel’ also ‘polecat, ferret’; Mann 1984—1987:1550 **uīūerā*, *-is* ‘squirrel’; Watkins 1985:77 **wer-* reduplicated expressive form **wī-wer(r)-* and 2000:100 **wer-* ‘squirrel’ (reduplicated expressive form **wī-wer(r)-*); Gamkrelidze—Ivanov 1984.II:522 **ue(i)-uer-* and 1995.I:441 **we(i)wer-* ‘squirrel’ or ‘polecat’; Mallory—Adams 1997:540 **ueruer-* ‘squirrel’ and 2006:137 **werwer-*; Walde—Hofmann 1965—1972.II:808 **uer-*; De Vaan 2008:685 **ue(r)-uer-*; Ernout—Meillet 1979:742—743 **wer-*; Huld 2009 **A₁uer-* ‘to raise up, to lift, to suspend, to become vertical’; Orël 2003:7 Proto-Germanic **aikwernōn* ~ **ikwernōn*; Kroonen 2013:10—11 Proto-Germanic **aikwernan-* ~ **ikurnan-* ‘squirrel’; Torp 1919:241 Germanic **ik-werna-n.* **aik-werna-n*; Falk—Torp 1903—1906.I:134; De Vries 1977:284; Kluge—Mitzka 1967:154—155 **aik-wernan*; Kluge—Seebold 1989:167—168; Preobrazhensky 1951:106; Smoczyński 2007.1:768; Fraenkel 1962—1965.II:1233—1234; Derksen 2015:510—511. Note: The usual Modern Russian word for ‘squirrel’ is *bélka* [белка].
- C. Proto-Uralic **ora* ‘squirrel’ > Finnish *orava* ‘squirrel’; Estonian *orav*, *oravas* ‘squirrel’; Lapp / Saami (Norwegian) *oar’re* ‘squirrel’; Mordvin *uro*, *ur* ‘squirrel’; Cheremis / Mari *ur* ‘squirrel’; Zyrian / Komi *ur* ‘squirrel’. Collinder 1955:44 and 1977:63; Rédei 1986—1988:343 **ora*;

Décsy 1990:105 **ora* ‘squirrel’; Sammallahti 1988:552 **ora* ‘squirrel’;
Zhvlov 2023:162 Proto-Uralic **ora* ‘squirrel’.

(?) Sumerian *ur-a* ‘beaver, otter’.

Dolgopolsky 2008, no. 70, **ʔUrV* (*ba*) ‘squirrel’; Hakola 2000:124, no. 537;
Pudas-Marlow 1974:73, no. 225.

859. Proto-Nostratic root **wurʷ-* (~ **worʷ-*):

(vb.) **wurʷ-* ‘to scratch, to incise, to dig up’;

(n.) **wurʷ-a* ‘pit, ditch’

- A. Proto-Afrasian **wur-* ‘(vb.) to scratch, to incise, to dig up; (n.) ditch, pit, hole’: Semitic: Arabic *warr-at-* ‘ditch’. D. Cohen 1970— :636. West Chadic **wur-* ‘pit’ > Ngizim *wúríyà* ‘borrow pit; any open pit where water can collect’. Central Chadic **wur-* ‘hole’ > Higi Nkafa *wure* ‘hole’. Orël—Stolbova 1995:531, no. 2548, **wur-* ‘pit, hole’.
- B. Proto-Dravidian (**wuru* >) **uru* ‘to plow, to dig up’: Tamil *uru* ‘to plow, to dig up, to root up (as pigs), to scratch, to incise (as bees in a flower)’, *uravan*, *uravōn*, *urāvan* ‘plowman, agriculturalist’, (f.) *uratti*, *uravu* ‘plowing, agriculture’, *urāl* ‘plowing, scratching, probing (as bees the flowers)’, *urunar* ‘plowmen’, *urakku* (*urakki-*) ‘to plow’; Malayalam *uruka*, *urukuka*, *urutuka* ‘to plow’, *urama* ‘tillage’, *uravan* ‘plowman, farmer’; Kota *ug-* (*urt-*) ‘to plow, to be plowed’, *ukl* ‘the act of plowing’; Toda *uʃf-* (*uʃt-*) ‘to plow’; Kannada *ur-* (*urt-*, *utt-*) ‘to plow’, *urata*, *uruta*, *urame*, *urime*, *urume*, *ural* *uruvike*, *urike*, *uruke*, *urke*, *ukke* ‘plowing’; Telugu *dunnu*, *dunu* ‘to plow, to till’, *dukki* ‘plowing, tillage’; Kolami *ur-* (*urt-*) ‘to harrow, to plow’; Naikri *ur-* ‘to plow, to harrow’; Parji *ur-* ‘to plow’; Gadba (Salur) *ūd-* ‘to plow’; Gondi *urānā*, *ur-*, *ud-* (written *ud-*), *urānā*, *urđānā* ‘to plow’; Konḍa *rū-* ‘to plow, to till soil’; Pengo *rū-* ‘to plow’; Kui *rūva* (*rūt-*) ‘(vb.) to plow; (n.) plowing’, *ūra* (*ūri-*) ‘to dig with snout, to root up’; Kuwi *rū-* ‘to plow’, *ruki* ‘plowing, bullock’; Kurux *uīnā/uynā* (*ussas*) ‘to plow’, *ugtā* ‘a plow, plowshare’; Malto *use* ‘to turn up the soil (as pigs do)’. Krishnamurti 2003:152 **uz-u* ‘to plow, to dig up’; Burrow—Emeneau 1984:67, no. 688.
- C. Proto-Indo-European **wor-/w̥r-* ‘(vb.) to plow; (n.) furrow, ditch’: Latin *urvum* ‘the curved part of a plow, plow-tail’, *urvō* ‘to plow round, to mark out with a plow’; Oscan *uruvú* ‘boundary-ditch’; Greek ὄρος (Ionic οὐρος) ‘boundary’, (Mycenaean) *wo-wo* (FopFoi) ‘boundary-ditch, boundary’. Mann 1984—1987:1480 **ur̥uos* (**ur̥uos*) ‘boundary-ridge, ditch’, 1581—1582 **uor̥uos* ‘boundary, moat, boundary-ditch’, 1606 ***ur̥u-* (**ur̥uos*) ‘boundary-ditch, moat’; Mallory—Adams 1997:215 (?) **uor̥uos* ‘furrow’; Ernout—Meillet 1979:755; Walde—Hofmann 1965—1972.II:843 and II:843—844 **ur̥uo-*; De Vaan 2008:645; Frisk 1970—1973.II:425—426

(Latin *urvus* < **ur̥uos*, as opposed to **uor̥uos*); Boisacq 1960:716 (Italic **urvo-* < **ur̥uo-*); Beekes 2010.II:1109 **ueru-*, **uoru-o-*; Chantraine 1968—1980.II:825—826 **worwo-*; Prellwitz 1905:837—838 **ῥόφος*; Hofmann 1966:239.

Sumerian *uru*₄, *ur*₁₁(-ru) ‘to plow’.

Buck 1949:8.21 plow (vb., sb.); 8.212 furrow; 8.22 dig; 19.17 boundary. Bomhard—Kerns 1994:611—612, no. 489; Dolgopolsky 2008, no. 2532, **wûrû* ‘to scratch’ ([in descendant languages] → ‘to plow’).

860. Proto-Nostratic root (Eurasianic only) **wuy-* (~ **woy-*) or **Huy-* (~ **Hoy-*):

(vb.) **wuy-* or **Huy-* ‘to swim, to float’;

(n.) **wuy-a* or **Huy-a* ‘swim, swimming, floating’

A. Proto-Uralic *(w)*uyi-* ‘to swim’: Finnish *ui-* ‘to swim’, *uitta-* ‘to float’; Estonian *uju-*, *oju-* ‘to swim’; Livonian *vojgõ-* ‘to swim’; Lapp / Saami *vuoggjâ-/vuojâ-* ‘to swim’; Mordvin (Erza) *uje-*, (Moksha) *ujə-* ‘to swim’; Cheremis / Mari (Eastern) *ija-*, (Western) *iä-* ‘to swim’; Votyak / Udmurt *uj-*, *üj-* ‘to swim, to navigate, to go by boat’; Zyrian / Komi *uj-* ‘to swim, to wade’; Vogul / Mansi *uj-*, *wuj-* ‘to swim’; Ostyak / Xanty *ot’-* ‘to swim’ (imptv. *ut’ä*), (Northern) *os’-*, *woś-* ‘to swim’, (Southern) (deriv.) *ut’-* ‘to swim’; Hungarian (deriv.) *úsz-* ‘to swim’; Yurak Samoyed / Nenets *ηuu-* ‘to swim’; Selkup Samoyed (deriv.) *uurna-* ‘to swim’. Collinder 1955:64, 1960:409 **ujõ-* (**wojõ-*), and 1977:81; Rédei 1986—1988:542 **uje-* ~ **oje-*; Décsy 1990:110 **uja* ‘to swim’; Sammallahti 1988:536 **uxi-* ‘to swim’; Janhunen 1977b:29 **u-*; Zhivlov 2003:166 Proto-Uralic **uji-* ‘to swim’. (?) Yukaghir: (Southern / Kolyma) *oj-* ‘to stream’, *ojl’*, *oj* ‘stream, current’, *ojnə-* ‘fast (of a stream)’, (Northern / Tundra) *ua-*, *wa-* ‘to flow’, *waajl* ‘stream, current’, *woiñe-*, *uoiñe-*, *uaine-*, *uoine-*, *woine-* ‘to flow’, *wajdije* ‘spurt’, *waj(a)γa-* ‘to flow, to stream’, *wajγuol* ‘log brought from upstream’, *wajayije* ‘stream’. Nikolaeva 2006:457.

B. Proto-Altaic **oye-* ‘to swim’: Proto-Tungus **uyV-* ‘to swim (of birds)’ > Evenki *uyu-*, *uyu-hta-* ‘to swim (of birds)’; Negidal *oyi-yan-* ‘to swim (of birds)’; Orok *onnō-* ‘to swim (of birds)’; Nanay / Gold *oñoan-*, *oyana-* ‘to swim (of birds)’; Udihe *wuyan-*, *uyan-* ‘to swim’. Proto-Mongolian **oyi-mu-* ‘to swim’ > Written Mongolian *oyima-*, *oyimu-* ‘to swim, to swim across, to ford’; Khalkha *oymo-* ‘to swim’; Kalmyk *ōm-* ‘to swim’; Ordos *oḡmo-* ‘to pass the ford’. Starostin—Dybo—Mudrak 2003:1043 **oje* ‘to swim’; Poppe 1960:140; Street 1974:22 **oyimu-* ‘to swim (across)’.

Buck 1949:10.34 float (vb.); 10.35 swim (vb.). Bomhard—Kerns 1994:631, no. 509; Illič-Svityč 1965:355 **woja-* ‘to swim’ (‘плыть’); Nakola 2000:199, no. 891; Dolgopolsky 2008, no. 2614, **XōyV* ‘to swim, to float, to flow’.

22.43. PROTO-NOSTRATIC *m

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
m-	m-	m-	m-	m-	m-	m-	m-
-m-	-m-	-m-	-m-	-m-	-m-	-m-	-m-

861. Proto-Nostratic indefinite pronoun stem **ma-* (\sim **mǝ-*), **mi-* (\sim **me-*), **mu-* (\sim **mo-*) ‘one, someone, somebody, anyone, anybody; other, another’:

Note: This may originally have been a demonstrative stem (as suggested by Illič-Svityč), with three degrees of distance:

Proximate: **ma-* (\sim **mǝ-*) ‘this’;

Intermediate: **mi-* (\sim **me-*) ‘that’;

Distant: **mu-* (\sim **mo-*) ‘that yonder’

As in the stems:

Proximate: **k^ha-* (\sim **k^hǝ-*) ‘this’;

**t^ha-* (\sim **t^hǝ-*) ‘this’;

Intermediate: **k^hi-* (\sim **k^he-*) ‘that’;

**t^hi-* (\sim **t^he-*) ‘that’;

Distant: **k^hu-* (\sim **k^ho-*) ‘that yonder’

**t^hu-* (\sim **t^ho-*) ‘that yonder’

- A. Afrasian: Ehret (1995:300, no. 568) reconstructs a Proto-Afrasian indefinite pronoun stem **m-* ‘one, someone, somebody’ (cf. Ugaritic *mn* ‘any, a certain’; Arabic *man* ‘he/she/those who, the one who; those who’; Egyptian *mn* ‘someone, so-and-so’). According to Lipiński (1997:330), “indefinite pronouns strictly speaking do not exist in Semitic. The forms used as a kind of indefinite pronouns are based on the interrogative pronoun” (see also Moscati 1964:115). Instead of being derived from the interrogative pronoun, as is commonly assumed, the Semitic forms may indeed be relics of an old indefinite (< demonstrative) stem as proposed by Ehret.
- B. Proto-Kartvelian **a-ma-* ‘this, that’, **ma-* pronominal stem of the third person: ‘this, he; this one, that one’: Georgian *ama-/am-* ‘this, that’, *ma-* ‘this, he; this one, that one’; Mingrelian *amu-* ‘this, that’, *mu-* ‘this, he; this one, that one’; Laz (*h*)*amu-* ‘this, that’, *mu-* ‘this, he; this one, that one’; Svan *am(a)-* ‘this, that’. Klimov 1964:44 **a-ma-*, 124 **ma-* and 1998:2 **a-ma-* ‘this, that’, 112—113 **ma-* pronominal stem of the third person; Fähnrich—Sardshweladse 1995:226 **ma-*; Fähnrich 2007:276 **ma-*.
- C. (?) Indo-European: Welsh *y^{ma}* (poetical *y^{man}*) ‘here’; Breton *ama*, *amañ*, *-ma*, *-mañ* ‘here’, (Vannetais) *ama*, *amann*, *amenn* ‘here’; Cornish *yma*, *omma*, *-ma*, *-man* ‘here’. Morris Jones 1913:433; Lewis—Pedersen 1937: 221. Note: Only preserved in relic forms in Celtic.

- D. Uralic: Proto-Finno-Ugrian **mu* ‘other, another’ > Finnish *muu* ‘(somebody, something) else; other, another’; Estonian *muu* ‘other, something (or somebody) else’; Lapp / Saami (Ume) *mubbe* ‘one (of two); the other; another, other; (the) second’ (contains the suffix of the comparative); Votyak / Udmurt (derivative) *myd, möd* ‘other’. Collinder 1955:100 and 1977:115; Rédei 1986—1988:281—282 **mu*. Yukaghir (Southern / Kolyma) (interjection) *ma, ma?* ‘here it is’, *mə* (affirmative marker) ‘here it is, here you are’, (Northern / Tundra) (interjection) *ma* ‘here it is’, (focus marker) *me(r)*-. Nikolaeva 2006:255 and 261. Probably also: Yukaghir (Southern / Kolyma) *migi(də)*- ‘here’, (Northern / Tundra) *migi*- ‘here’. Nikolaeva 2006:268.
- E. Altaic: Common Turkic (**mū*/**mō* >) **bū*/**bō* ‘this’ > Middle Kipchak *bu* ‘this’; Chagatay *bu* ‘this’; Turkish *bu* ‘this’; Azerbaijani *bu* ‘this’; Turkmenian *bu* ‘this’ (oblique *mun*-); Tatar *bu* ‘this’; Kazakh *bul* ‘this’; Noghay *bu* ‘this’; Kirghiz *bul* ‘this’; Uzbek *bu* ‘this’; Yakut *bu* ‘this’. Menges 1968b:121—122; Róna-Tas 1998:74; Décsy 1998:61. Examples from Johanson—Csató 1998. Mongolian *mön* deictic particle serving as a demonstrative pronoun, adjective, adverb, and copula: ‘just this one; certainly, surely, really’.

Sumerian *man, mìn* ‘other, another’.

Illič-Svityč 1971—1984.II:70—71, no. 303, **mu* demonstrative pronoun: ‘this, that’; Bomhard—Kerns 1994:675—676, no. 555; Nafiqoff 2003:47—49 **mu*; Dolgopolsky 2008, no. 1510, **mu*[wV] ‘this, that’; Fortescue 1998:155.

862. Proto-Nostratic (nursery word) (n.) **ma(a)* ‘mother, mommy’, (reduplicated) **mam(m)a*, **mema* ‘mother; (mother’s) breast, milk’; used as a verb, the meaning was probably ‘to suckle, to nurse; to suck (the breast)’ (as noted by Watkins 2000:50: “[a] linguistic near-universal found in many of the world’s languages, often in reduplicated form”; see also Jakobson 1971[1960]):
- A. Dravidian: Kannaḍa *mammu* ‘food (in children’s language)’; Tuḷu *mamma* ‘breast’; Parji *mama* ‘milk (children’s word)’; Kuṛux *mamā* ‘rice (in nursery language)’. Burrow—Emeneau 1984:415, no. 4703.
- B. Proto-Indo-European (nursery word) **mā* ‘mother, mommy, mama’, (reduplicated) **mamma* ‘mother, mommy, mama; (mother’s) breast’, (dissimilated) **mānā*, **mannā*: Sanskrit *mā* ‘mother’; Greek μάμη ‘mama, mommy’, also ‘mother’s breast’; Armenian *mam* ‘grandmother’; Latin *mamma* ‘breast’; Welsh *mam* ‘mother’; Old Icelandic *móna* ‘mother’; New High German (Alemannic) *Mamme* ‘mother’; Albanian (Tosk) *mëmë*, (Gheg) *mamë* ‘mother’; Lithuanian *mamà, momà* ‘mother’; Russian *máma* [мама] ‘mama, mommy’. Pokorny 1959:694 **mā* nursery word for ‘mother’, (reduplicated) **māmā*, **mammā*, (dissimilated) **mānā*,

mannā*; Walde 1927—1932.II:221—222 **mā* nursery word for ‘mother’, (reduplicated) **māmā*, **mammā*, (dissimilated) **mānā*, **mannā*; Mann 1984—1987:729 **māmā* (mammā*) ‘mother, grandma, female, nurse’ (onomatopoeia); Mallory—Adams 1997:386; Watkins 1985:38 **mā-* and 2000:50 **mā-* ‘mother’; Boisacq 1950:606; Prellwitz 1905:276 and 280; Hofmann 1966:189; Frisk 1970—1973.II:168—169; Chantraine 1968—1980.II:663; Beekes 2010.II:899; Walde—Hofmann 1965—1972.II:21—22; Ernout—Meillet 1979:381; De Vaan 2008:361; De Vries 1977:392; Meyer 1891:272; Orël 1998:260. Proto-Indo-European **mā-ther-* ‘mother’ (no laryngeal!); Sanskrit *mātār-* ‘mother’; Avestan *mātar-* ‘mother’; Old Persian *mātar-* ‘mother’; Old Phrygian *ματαρ* ‘mother’; Greek *μήτηρ* ‘mother’ (Doric *μᾶτηρ*; Mycenaean *ma-te*); Armenian *mayr* ‘mother’; Latin *māter* ‘mother’; Oscan (gen. sg.) *maatreis* ‘mother’; Faliscan *mate* ‘mother’; Umbrian (gen. sg.) *matrer* ‘mother’; Old Irish *máthir* ‘mother’; Old Icelandic *móðir* ‘mother’; Faroese *móðir* ‘mother’; Norwegian *moder* ‘mother’; Swedish *moder* ‘mother’; Danish *moder* ‘mother’; Old English *mōdor* ‘mother’; Old Frisian *mōder* ‘mother’; Old Saxon *mōdar* ‘mother’; Dutch *moeder* ‘mother’; Old High German *muotar* ‘mother’ (New High German *Mutter*); Lithuanian *mótė*, *motė* ‘wife’, *móteris* ‘woman’, *mótina*, *mótyna* ‘mother’, *motušė* ‘mama’; Latvian *māte* ‘mother’; Old Church Slavic *mati* ‘mother’; Russian *mat’* [мать] ‘mother’; Tocharian A *mācar*, B *mācer* ‘mother’. Pokorny 1959:700—701 **mātēr-* ‘mother’; Walde 1927—1932.II:229—230 **mātēr-*; Mann 1984—1987:735 **mātē* ‘mother’, 735 **mātēr-* (**māter-*, **mātŷ*) ‘mother’, 736 **mātī* (**mātījə*) ‘mother, nanny’; Gamkrelidze—Ivanov 1984.I:49 **māt[h]er-*, I:184 **māt[h]er-s* > **māt[h]ēr-Ø*, II:913, fn. 3, **māt[h]er-* and 1995.I:43—44 **māthēr-* ‘mother’, I:158 **māthēr-s* > **māthēr-Ø*, I:808, fn. 37, **māthēr-*; Mallory—Adams 1997:385 **méh_atēr* (or **meh_atēr* or **mātēr*) ‘mother’; Benveniste 1973:175—179; Mayrhofer 1956—1980.II:619—620; Boisacq 1950:635 **mātēr*; Prellwitz 1905:293; Frisk 1970—1973.II:232 Greek *μήτηρ*, etc. from a nursery word **mā*; Hofmann 1966:201 **māter-* from a nursery word **mā*; Chantraine 1968—1980.II:698—699 Greek *μήτηρ*, etc. from a nursery word **mā*; Beekes 2010.II:948 **meh₂ter-*; Walde—Hofmann 1965—1972.II:49—50 **mātēr*; De Vaan 2008:367; Ernout—Meillet 1979:389—390; Orël 2003:273 Proto-Germanic **mōdēr*, 273 **mōdernjan*; Kroonen 2013:371 Proto-Germanic **mōder-* ‘mother’; De Vries 1977:391; Falk—Torp 1903—1906.I:520—521; Torp 1919:430; Onions 1966:592 Common Germanic **mōðar-*; Klein 1971:478 **māter-*; Boutkan—Siebinga 2005:266 **meh₂ter-*; Walshe 1951:156; Kluge—Mitzka 1967:497 **mātēr-*; Kluge—Seebold 1989:494—495 **mātēr*; Van Windekens 1976—1982.I:283—284 **māter-*; Adams 1999:447; Derksen 2008:303 **meh₂ter-* and 2015:323—324 **meh₂ter-*; Smoczyński 2007.1:409—410, 1:410, and 1:411; Fraenkel 1962—1965.I:465—466; Wodtko—Irslinger—Schneider 2008:457—461 **māh₂ter-/māh₂tr-*.

- C. Uralic: Finnish *mamma* ‘grandma, granny; ma, mama; old woman’; Estonian *mamma* ‘mom, mommy’; Hungarian *mama* ‘mother, mommy’.
- D. Proto-Altaic **mēmV* ‘breast (female)’: Proto-Tungus **meme* ‘breast (female), udder; wet nurse’ > Manchu *meme* ‘wet nurse’; Nanay / Gold *meme* ‘breast (female), udder’. Proto-Mongolian **mömü* ‘female breast’ > Written Mongolian *mömü* ‘female breast’; Khalkha *mōm*, *mōmō*, *mēm* ‘female breast’. Proto-Turkic **mēme* (**bēme*) ‘breast, nipple’ > Turkish *meme* ‘teat, nipple’; Gagauz *māmā* ‘breast (female)’; Azerbaijani *māmā* ‘nipple’; Turkmenian *māme* (poetical) ‘breast’; Uighur *māmā* ‘breast (female)’; Karaim *māmā* ‘nipple’; Tatar *mēmi*, *mēmey* ‘breast (female)’; Bashkir *māmāy* ‘breast (female)’; Noghay *māmāy* ‘breast (female)’; Yakut *mēmē* ‘baby’s pacifier’. Starostin—Dybo—Mudrak 2003:911 **mēmV* ‘female breast, foster-mother’.
- E. Proto-Gilyak / Nivkh **mam* ‘old woman’: Amur *mam* ‘old woman, wife’; North Sakhalin *mam* ‘old woman’; East Sakhalin *mam* / *mamx̣* ‘old woman’; South Sakhalin *mam* ‘old woman’. Fortescue 2016:101.
- F. Proto-Eskimo **mamar(-)* ‘to suck (breast)’: Central Siberian Yupik *mamaq* ‘breast, milk’, *mamar-* ‘to suck (breast)’; Sirenik *mamər-* ‘to suck (breast)’, *maməX* ‘milk’, *mamaX*, *maməX* ‘breast’; Seward Peninsula Inuit (Qawiaaraq) *mamaq-* ‘to smell good’; North Alaskan Inuit *mamaq-* ‘to taste good’, *mamaun* ‘udder’; Western Canadian Inuit *mamaq-* ‘to taste good’, *mamaun* ‘udder’ (in Copper, also ‘woman’s breast’); Eastern Canadian Inuit *mamaq-* ‘to taste good’, *mamauti* ‘udder’; Greenlandic Inuit *mamar-* ‘to taste good’, *mamma* ‘food (in baby talk)’. Fortescue—Jacobson—Kaplan 1994:188.

Buck 1949:2.31ff. words for family relationship (p. 94); 4.41 breast (of woman). Dolgopolsky 2008, no. 1356, **ma[?]a(-yV)* ‘mother’.

863. Proto-Nostratic negative/prohibitive particle **ma(?)*- (~ **mə(?)*-) ‘no, not’:

- A. Proto-Afrasian **ma(?)*- negative/prohibitive particle: ‘no, not’: Proto-Semitic **ma(?)* negative/prohibitive particle: ‘no, not’ > Arabic *mā* ‘not’; Harari *mē?* ‘not’. Egyptian *m* imperative of the negative verb *imī*: ‘do not!’. Hannig 1995:312; Faulkner 1962:100; Erman—Grapow 1921:59 and 1926—1963.2:3; Gardiner 1957:567. Berber: Ayer *ma* ‘not’; Shawiya *ma* ‘not’; Nefusa *mō* ‘no’. Proto-East Cushitic **ma(?)* negative particle > Afar *ma*; Rendille *ma-* negative prefix; Somali *ma?* (Central Somali *mə* main sentence negative particle); Dasenech *ma*. Sasse 1979:52. Southern Cushitic: Iraqw *ma* ‘do not!’. Ongota negative imperative verb prefix *ma-*, negative non-imperative verb prefix *mi-* (cf. Fleming 2002b:40). Diakonoff 1988:83, §4.4.3; Ehret 1995:301, no. 572, **ma-* ‘to not have’; Militarëv 2012:80—81.

- B. Proto-Kartvelian **ma-* negative/prohibitive particle: ‘no, not’: Laz *mo(t)* verbal prohibitive particle; Svan *mā-d(e)*, *mō-d(e)* particle of modal negation: ‘no, not’, *mām(a)* ‘not’, *māma* ‘no’. Klimov 1964:124—125 **mad* and 1998:113 **mad* verbal negative particle; Fähnrich—Sardshweladse 1995:227 **ma-*; Fähnrich 2007:277 **ma-*.
- C. Proto-Indo-European **mē* negative/prohibitive particle: ‘no, not’: Sanskrit *mā* prohibitive particle: ‘not, that not’; Avestan *mā* prohibitive particle: ‘not’; Old Persian *mā* prohibitive particle: ‘not’; Greek μή ‘not’; Armenian *mi* prohibitive particle: ‘do not!’; Tocharian A/B *mā* ‘not, no’ (simple negation and prohibition); Albanian *mos* (< **mē+k^{wh}e*) prohibitive particle: ‘do not!’. Brugmann 1904:111; Pokorny 1959:703 **mē* ‘not’; Walde 1927—1932.II:236—237 **mē*; Mann 1984—1987:738 **mē*, **mēqui* ‘do not’; Mayrhofer 1956—1980.II:614; Mallory—Adams 1997:395 **mē* ‘not’; Boisacq 1950:631 **mē*; Frisk 1970—1973.II:222 **mē*; Hofmann 1966:199; Beekes 2010.II:941 **meh₁*; Chantraine 1968—1980.II:692 **mē*; Prellwitz 1905:292; Huld 1984:94—95; Orël 1998:274; Van Windekens 1976—1982.I:282—283 **mē(-)*; Adams 1999:445—446 **mē*.
- D. Proto-Altaic **ma* negative/prohibitive particle: ‘no, not’: Proto-Tungus **-me* prohibitive particle > Manchu *ume* used for negating imperatives (stands before the imperfect participle); Spoken Manchu (Sibo) *emə* ‘do not’; Jurchen *ume* prohibitive particle; Nanay / Gold *em* prohibitive particle; Oroch *em* prohibitive particle. Proto-Turkic **-ma-* negative particle > Old Turkic *-ma-* negative particle; Karakhanide Turkic *-ma-* negative particle; Turkish *-ma-* negative particle; Gagauz *-ma-* negative particle; Azerbaijani *-ma-* negative particle; Turkmenian *-ma-* negative particle; Uzbek *-ma-* negative particle; Uighur *-ma-* negative particle; Karaim *-ma-* negative particle; Tatar *-ma-* negative particle; Bashkir *-ma-* negative particle; Kirghiz *-ma-* negative particle; Kazakh *-ma-* negative particle; Noghay *-ma-* negative particle; Oyrot (Mountain Altai) *-ma-* negative particle; Tuva *-ma-* negative particle; Chuvash *-ma-* negative particle; Yakut *-ma-* negative particle. Menges 1968b:144; Johanson—Csató 1998. Greenberg 2000:213—214; Starostin—Dybo—Mudrak 2003: 893 **ma* a negative particle. Starostin—Dybo—Mudrak remark: “A monosyllabic root, but, unlike the 1st p. pron. or the accusative particle, it did not undergo denasalization in P[roto]-A[ltaic]. This may be explained by the fact that it was in most cases already incorporated into the verbal form as a suffix. It is interesting to note Mong[olian] **büi*, **bu* ‘neg. particle’ — which may be originally the same morpheme, but functioning as a separate word and thus subject to the rule **mV* > **bV*.”

Illič-Svityč 1971—1984.II:56—57, no. 290, **mā* prohibitive particle; Möller 1911:158; Bomhard—Kerns 1994:644, no. 523; Greenberg 2000:213—214, no. 57; Dolgopolsky 2008, no. 1353, **mā* → **māh[o]* ‘do not’ (prohibitive particle) and ‘not’ (negative).

864. Proto-Nostratic root *maʔ- (~ *maʔʔ-):

(vb.) *maʔ- ‘to increase (in number), to be abundant, to be many’;

(n.) *maʔ-a ‘large quantity, plenty, abundance’; (adj.) ‘great, big, large, many, abundant’

- A. Proto-Afrasian *maʔ- ‘to increase (in number), to be many, to be abundant’: Proto-Semitic *maʔ- ‘to increase (in number), to be many, to be abundant’ > Hebrew *məʔōd* [מְעוֹד] ‘(n.) strength, might, power; (adv.) very, greatly, exceedingly’, *məʔōdī* [מְעוֹדִי] ‘very, much, abundant’, *mēʔāh* [מֵעָאָה] ‘hundred’; Ugaritic *mīd* ‘much’, *mīt* ‘hundred’; Akkadian *maʔādu* (*mādu*, *miādu*) ‘to be or become much; numerous, plentiful, abundant’, *maʔdū* (*mādū*) ‘large quantity, plenty’, *meat* (*māt*, *mē*) ‘hundred’, *mētā* ‘hundred times’; Eblaite *mi-at* ‘hundred’; Arabic *maʔada* ‘to grow, to increase’, *miʔa* ‘hundred’; Sabaean *mʔt* ‘hundred’; Ḥarsūsi *myīt* ‘hundred’; Šheri / Jibbāli *mūt* ‘hundred’; Mehri *əmyīt* ‘hundred’; Soqotri *miʔe* ‘hundred’; Geez / Ethiopic *məʔat* [ሞአት], *məʔat* [ሞዕት] ‘hundred, century’; Tigrinya *maʔti* ‘hundred’; Tigre *məʔat* ‘hundred’; Gurage (Soddo) *māto* ‘hundred’; Amharic *māto* ‘hundred’; Argobba *māto* ‘hundred’. Murtonen 1989:252—253 and 253; Klein 1987:308; Leslau 1979:435 and 1987:324; Militarev 2011:89 Proto-Semitic *mVʔad-; Zammit 2002:377 Arabic *miʔa* ‘hundred’. Central Chadic: Daba *mādde* ‘large’ (< *mVʔad-). Orël—Stolbova 1995: 392, no. 1811, *mVʔad- ‘to be large’.
- B. Proto-Indo-European *meʔ-/moʔ- > *mē-/mō- ‘abundant, considerable, more’: Old Irish *már* ‘great’; Oscan *mais* ‘more’; Gothic *mais* ‘more’; Old Icelandic *meiri* (n. *meira*) ‘greater, bigger, larger, more’, (adv.) *meirr* ‘more’; Norwegian *meir* ‘more’; Swedish *mer* ‘more’; Danish *mer* ‘more’; Old English *māra* (f. and n. *māre*) ‘more’; Old Frisian *māra* ‘more’; Old Saxon *mēro* ‘more’; Dutch (adv.) *meer* ‘more’; Old High German *mēro* ‘more’ (New High German *mehr*). Pokorny 1959:704 *mē-, *mō- ‘big, considerable’; Walde 1927—1932.II:238 *mē-, *mō-; Mallory—Adams 1997:344 **meh₁ros* ~ **moh₁ros* ‘large’; Mann 1984—1987:798 **mōros* (**māros*) ‘large, great’; Watkins 1985:39 *mē- and 2000:51—52 *mē- ‘big’ (contracted from earlier **me₂-*); Kroonen 2013:350 Proto-Germanic **maizan-* ‘more’; Orël 2003:257 Proto-Germanic **maiz*, 257 **maizōn*; Lehmann 1986:241 *mē-; Feist 1939:341 **mē-īs-*, *-is-*; De Vries 1977:382 **mē-īs*; Torp 1919:419; Falk—Torp 1903—1906.I:510—511; Onions 1966:583 Common Germanic **maiz* (< **meis*) and 589; Hoad 1986:300 **māis*; Klein 1971:476; Boutkan—Siebinga 2005:250—251; Kluge—Mitzka 1967:471; Kluge—Seebold 1989:470—471 *mē-.

Sumerian *me* ‘abundance, plenty’.

Buck 1949:13.15 much; many; 13.16 more. Möller 1911:155; Bomhard—Kerns 1994:560—561, no. 422; Assadian—Hakola 2003:84, no. 271.

865. Proto-Nostratic root **mad-* (~ **məd-*):(vb.) **mad-* ‘to stretch, to expand, to lengthen, to draw out, to measure out’;(n.) **mad-a* ‘measure, measurement, amount; extent, limit’

Note also:

(vb.) **mat-* ‘to stretch, to expand, to lengthen, to draw out, to measure out’;(n.) **mat'-a* ‘measure, measurement, amount; extent, limit’

- A. Proto-Afrasian **mad-* ‘to stretch, to expand, to lengthen, to draw out, to measure out’: Proto-Semitic **mad-ad-* ‘to stretch, to expand, to lengthen, to draw out, to measure out’ > Akkadian *madādu* ‘to measure the length of something’; Hebrew *māḏaḏ* [מָדַד] ‘to measure’; Phoenician *mdd* ‘to measure’, *mdt* ‘scale’; Ugaritic *mdd* ‘to measure’, (m. pl.) *mdm* ‘surveyors’ (?); Arabic *madda* ‘to extend, to distend, to expand, to dilate; to stretch, to stretch out (something), to crane (the neck); to draw out, to protract (something); to spread out (something); to lay out (tracks, pipeline); to spread (a net); to lengthen, to elongate, to prolong (something); to grant a respite or delay; to rise (flood, river); to help, to aid, to assist (someone), to support (someone by or with); to supply, to provide (with); to reinforce (an army); to fertilize’, *madd* ‘extension; distension, dilation, expansion; spreading; stretching; lengthening, elongation, prolongation, protraction; drawing out of the voice over long vowels (in Koran recitation); rising, rise (of water, of a flood)’, *mudda* ‘period (of time), space of time, interval; while; duration; limited or appointed time; term’, *mādd* ‘stretching, expanding, extending, spreading; trailing, creeping (plant)’; Sabaeen (adj.) *mmd* ‘prolonged, extended’, *md-t* ‘period of time’; Ḥarsūsi *med* ‘to stretch out, to aim (a gun)’; Mehri *məd* ‘to stretch out, to stretch (one’s limbs); to give; to push forward, to point (a gun)’, *maddēt* ‘period; generosity’; Šheri / Jibbāli *midd* ‘to stretch out, to stretch (one’s arms after resting); to give; to extend (a gun); to point’, *maddēt* ‘period; generosity’; Geez / Ethiopic *madada* [መደደ] ‘to spread, to level; to hit, to execute’; Tigre *mādda* ‘to spread, to stretch, to attack’; Tigrinya (reduplicated) *mādmāddā* ‘to level, to flatten’; Amharic (reduplicated) *māddāmmāddā* ‘to level, to flatten, to cut down one after another (trees), to destroy’. Murtonen 1989:253—254; Klein 1987:318; Leslau 1987:329; Militarev 2011:92 Proto-Semitic **mdd*; Tomback 1978:166; Zammit 2002:379—380. (?) Late Egyptian *mdd* ‘a vessel for measuring wine’; Coptic *mtōte* [ⲙⲧⲟⲩⲧⲉ] meaning unknown, perhaps ‘a kind of vessel’. Hannig 1995:379; Erman—Grapow 1926—1963.2:183; Černý 1976:94.
- B. Dravidian: Tamil *maṭṭam* ‘measure, evenness, flatness, rule, line, gauging rod, limit, extent, bound, degree, guess, conjecture; equality in height, size, measure; whole quantity leaving no surplus; moderation’, *maṭṭu* ‘measure, quantity, standard, degree, size, proportion, amount, limit, extent, scope, range, estimate, conjecture, moderateness, that which is middling, that which is commonplace, a standard of measurement’, *maṭṭāy* ‘moderately,

temperately’, *maṭaṅku* ‘measure, quantity, degree’; Malayalam *maṭṭa* ‘a certain measure of length’, *maṭṭam* ‘the rule, level of a bricklayer, carpenter’s square’, *maṭṭu* ‘measure, limit’; Kota *maṭm* ‘level place; all’; Kannaḍa *maṭṭa*, *maṭa*, *maṭṭasa* ‘measure, extent, height, bound, limit, proper limit, levelness, evenness, equality, regularity, exactness, carpenter’s level or square’, *maṭṭu* ‘measure, extent, height, limit’, *maṭṭa* ‘exactness’; Tuḷu *maṭṭa* ‘carpenter’s or bricklayer’s square, level, height, measure’, *maṭṭu* ‘measure, extent, limit, capacity, ability’; Telugu *maṭṭamu* ‘level, a leveling instrument, a level’, *maṭṭugā* ‘moderately, limitedly’, *maṭṭu* ‘limit, bound, restriction, measure, extent, degree; limited, moderate’. Burrow—Emeneau 1984:412, no. 4660.

- C. Altaic: Manchu *mada-* ‘to expand, to swell, to grow (of interest); to stand on end (of hair)’, *madanga* ‘elastic, extensile’.

Buck 1949:9.32 stretch; 12.34 measure (vb.). Dolgopolsky 2008, no. 1498, **mAtVdV* \neg **mAdVtV* ‘to stretch, to measure’.

866. Proto-Nostratic (n.) **mad-w-a* ‘honey, mead’:

- A. Dravidian: Tamil *maṭṭu* ‘honey, toddy, fermented liquor, sweet juice, drink taken at the time of sexual union’, *maṭṭam* ‘toddy’; Malayalam *maṭu* ‘sweetness, honey’, *maṭṭu* ‘nectar’; Tuḷu *miṭṭi* ‘sweetness’, *miṭṭe* ‘pollen’. Burrow—Emeneau 1984:412, no. 4662.
- B. Proto-Indo-European **med^hw/u-* ‘honey, mead’: Sanskrit *mádhu* ‘mead, honey’; Pāli *madhu-* ‘honey, wine made from the blossom of *Bassia latifolia*’; Hindi *mau* ‘honey’; Avestan *maḍu-* ‘honey, mead’; Greek μέθυ ‘wine, mead’; Old Irish *mid* ‘mead’; Welsh *medd* ‘mead’, *meddŵ* ‘drunk’; Old Icelandic *mjǫðr* ‘mead’; Faroese *mjǫður* ‘mead’; Norwegian *mjød* ‘mead’; Swedish *mjöd* ‘mead’; Danish *mjød* ‘mead’; Old English *medu*, *meodu* ‘mead’; Old Frisian *mede* ‘mead’; Old Saxon *mede* ‘mead’; Old High German *metu*, *mitu* ‘mead’ (New High German *Met*); Lithuanian *medūs* ‘honey’; Old Church Slavonic *medъ* ‘honey, mead’; Tocharian B *mit* ‘honey’; Hittite ^{NINDA}*madu* ‘sweet bread’ or ‘honey bread’; Luwian (nom.-acc. sg.) *ma-ad-du* ‘wine’; Hieroglyphic Luwian *matu-* ‘wine’. Pokorny 1959:707 **médhu* ‘honey, mead’; Walde 1927—1932.II:261 **médhu*; Mann 1984—1987:742—743 **medhu* ‘sweet drink, liquid honey, mead’; Watkins 1985:39 **medhu* and 2000:52 **medhu* ‘honey’ also ‘mead’; Gamkrelidze—Ivanov 1984.II:603—605 **med^hju* and 1995.I:517—518 **med^hu* ‘mead, honey’; Mallory—Adams 1997:271 **médhu* ‘mead’; Mayrhofer 1956—1980.II:570—572 **medhu-*; Boisacq 1950:619—620 **medhu*; Frisk 1970—1973.II:191—192 **médhu*; Hofmann 1966:194 **medhu*; Beekes 2010.II:919 **med^hu-*; Chantraine 1968—1980.II:675—676; Morris Jones 1913:75; Falileyev 2000:111 **medhu*; Orël 2003:265 Proto-Germanic **meduz*; Kroonen 2013:361 Proto-Germanic **medu-*

‘mead, alcoholic liquor made of honey and water’ (< **med^h-u-*); Falk—Torp 1903—1906.I:518—519; De Vries 1977:390; Torp 1919:428; Onions 1966:564 **medhu-*; Klein 1971:452 **medhu-* ‘honey, sweet drink’; Kluge—Mitzka 1967:476 **medhu*; Kluge—Seebold 1989:475 **medhu-*; Van Windekens 1976—1982.I:298 **medhu*; Adams 1999:461 **méd^hu-*; Puhvel 1984— .6:100—101 **medhu-*; Fraenkel 1962—1965.I:425; Smoczyński 2007.1:382; Derksen 2008:306—307 **med^hu* and 2015:309 **med^hu-*; Wodtko—Irslinger—Schneider 2008:467—468 **méd^hu-*.

C. Uralic: Proto-Finno-Ugrian **mete* ‘honey’ > Finnish *mesi*/*mete-* ‘honey, nectar’; Estonian *mesi* ‘honey’; Mordvin *med’* ‘honey’; (?) Cheremis / Mari *mü, müj* ‘honey’; Votyak / Udmurt *mu* ‘honey’; Zyrian / Komi *ma* ‘honey’; Hungarian *méz* ‘honey’. Collinder 1955:132 and 1977:143—144; Joki 1973:283—285; Rédei 1986—1988:273 **mete*; Sammallahhti 1988:545 **meti* ‘honey’. These forms are usually considered to be loans from Indo-European.

D. Etruscan *maθ* ‘honey, honeyed wine’.

Buck 1949:5.91 mead. Bomhard—Kerns 1994:665—666, no. 543; Hakola 2000:104, no. 446; Dolgopolsky 1998:64, no. 79, **madu* ‘honey’ and 2008, no. 1369, **mAdû* ‘honey’.

867. Proto-Nostratic root **mag-* (~ **mæg-*):

(vb.) **mag-* ‘to be of great influence, importance, or power; to be eminent, exalted, highly esteemed, glorious, illustrious’;

(n.) **mag-a* ‘strength, power, might; glory, splendor, magnificence, grandeur, nobility, honor, distinction, excellence’; (adj.) ‘strong, powerful, eminent, exalted, highly esteemed, glorious, illustrious’

A. Proto-Afrasian **mag-* ‘to be of great influence, importance, or power; to be eminent, exalted, highly esteemed, glorious, illustrious’: Proto-Semitic **mag-ad-* ‘to be eminent, exalted, highly esteemed, glorious, illustrious’ > Arabic *mağada* ‘to be glorious, illustrious, exalted; to praise, to extol; to laud, to glorify; to celebrate; to be extolled, glorified, lauded, praised; to boast’, *mağd* ‘glory, splendor, magnificence, grandeur, nobility, honor, distinction’; Hebrew *meyēd* [מַעֲדָה] ‘excellence, excellent or choice things (always of gifts of nature)’; Aramaic *miydā* ‘fruit, something precious’; Syriac *maydā* ‘fruit’. Murtonen 1989:253; Klein 1987:314; Zammit 2002:378. (?) Proto-Highland East Cushitic **magano* ‘god, sky’ > Gedeo / Darasa *magano*, *mageno* ‘sky, god’; Kambata *maganu* ‘god’; Sidamo *magano* ‘god, sky’. Hudson 1989:71 and 136. [Orël—Stolbova 1995:370, no. 1704, **mag-* ‘to be numerous, to be big’.]

B. Kartvelian: Georgian *mag-ar-i* ‘strong, powerful’.

C. Proto-Indo-European **meg^h-*/**mog^h-* ‘to be of great influence, importance, or power; to be eminent, exalted, highly esteemed, glorious, illustrious’:

Sanskrit *mahati*, *maháyati* ‘to magnify, to esteem highly, to revere’, *máhas-* ‘greatness, might, power, glory’, *mahá-h* ‘great, mighty, strong, abundant’, *mahánt-* ‘great, large, powerful, venerable’; Pāli *maha-* ‘greatness’; Avestan *mazant-* ‘great’; Gothic *magan* ‘to have power, to be able’, *mahteigs* ‘mighty, able, possible’, *mahts* ‘might, power, strength’; Old Icelandic *magna* ‘to charm, to make strong by spell; to increase in power, to grow strong’, *mega* ‘to be able to do’, *meġin* ‘might, power, strength’, *magn* ‘strength, power’, *meġð* in *úmeġð* ‘helplessness’, *meġn* ‘strength; strong, mighty’, *meġna* ‘to be able, to have strength to do a thing’, *máttr* ‘might, strength; health’, *máttigr* ‘mighty’; Old English *magan* ‘to be able, to have power, to be strong, to be competent, to avail, to prevail’, *maga* ‘strong, powerful, able’, *mægen* ‘strength, might, power’, *meaht*, *miht* ‘might, power, ability’, *mihtig* ‘powerful, mighty, possible’, *gemægh* ‘power, greatness’; Old Frisian *mecht*, *macht* ‘power, strength’; Old Saxon *meġin* ‘power, strength’, *maht* ‘power, strength’; Old High German *mugan*, *magan* ‘to be able, to be possible’ (New High German *mögen*), *meġin* ‘power, strength’, *maht* ‘might, authority, sway (over), influence, control (of), grip (on), force, strength, power’ (New High German *Macht*); Old Church Slavic *mogŏ*, *mošti* ‘to be able’. Rix 1998a:379 *mag^h- ‘to be able, capable’; Pokorny 1959:708—709 *meġ(h)- ‘big, great’; Walde 1927—1932.II:257—259 *meġ(h)-; Mann 1984—1987:745 *meġh- notational root to accommodate Sanskrit *mahá-h*, Avestan *mazant-*, etc., 783 *mogh- ‘large, powerful, big’, 784 *moghant- (*moghnt-) ‘big, great, strong’, 784 *moghatos, -ā, -is ‘strong; strength’, 784 *moghlos, -jos, -jə ‘grip, firmness; clamp, bolt, mainstay’, 784 *moghnos (*moghinos), -om ‘strong, big; strength, size, ability’, 785 *moghō, *moghmi ‘am able, can’, 785 *moghtis ‘power’; Watkins 1985:38 *magh- and 2000:50 *magh- ‘to be able, to have power’; Mallory—Adams 1997:3 *magh- ‘to be able’; Mayrhofer 1956—1980.II:608—609 and II:609—610 Proto-Indo-Iranian *mažhānt-; Gonda 1975.II:448—483 *meg(h)-; Orël 2003:253 Proto-Germanic *maženan, 253 *maženaz, 253 *maženōjanan, 254 *maxtizaz, 254 *maxtiz; Kroonen 2013:347 Proto-Germanic *mahti- ‘strength’ and 373 *mugan- ‘to be able’; Lehmann 1986:239—240 *māgh-, *magh- ‘to be able’ and 240; Feist 1939:338—339 *māgh- and 340; De Vries 1977:375, 380, and 381; Onions 1966:563 *mogh-, *mēgh- and 575 Common Germanic *maxtiz, from *mağ- ‘to be able’; Klein 1971:451 *māgh-, *māgh- ‘to be able’ and 464 *māgh-, *māgh-; Boutkan—Siebinga 2005:248; Kluge—Mitzka 1987:452 and 484 *māgh-; Kluge—Seebold 1989:453 and 484; Derksen 2008:321 *mogh-.

- D. Proto-Altaic *mīaga ‘glory, praise’: (?) Proto-Tungus *m[ia]g- ‘to shamanize; to be noisy’ > Evenki *migdi* ‘to be noisy, to make noise’; Oroch *magui* ‘to shamanize’. Proto-Mongolian *magta- ‘to praise, to glorify’ > Middle Mongolian *maxta* ‘to praise, to laud’; Written Mongolian *mayta* ‘to praise, to eulogize, to laud, to extol, to glorify’;

Khalkha *magta*- ‘to praise, to glorify’; Buriat *magta*- ‘to praise, to glorify’; Kalmyk *maktə*- ‘to praise, to glorify’; Ordos *magta*- ‘to praise, to glorify’; Dagur *maktāl* ‘praise’; Shira-Yughur *maḡda*- ‘to praise, to glorify’; Monguor *maḡda*- ‘to praise, to glorify’. (?) Proto-Turkic **bAgatur* ‘hero’ > Old Turkic (Orkhon) *baγatur* ‘hero’; Oyrot (Mountain Altai) *bātīr* ‘hero’; Turkmenian *bātīr* ‘hero’; Kirghiz *bātīr* ‘hero’; Tuva *mādīr* ‘hero’; Yakut *bātīr* ‘hero’. Starostin—Dybo—Mudrak 2003:919 **mīaga* ‘glory, praise’.

Buck 1949:9.95 can, may (3rd sg.); 16.16 honor; 16.47 glory; 16.79 praise (sb.); 22.12 god. Illič-Svityč 1965:331 **magā* ‘great, big, strong’ [‘большой’]; Bomhard—Kerns 1994:635—636, no. 514.

868. Proto-Nostratic (Eurasianic only) (n.) **mag-a* ‘earth, land’:

- A. Proto-Indo-European **mag^h-* ‘earth, land’: Sanskrit *mahī* ‘earth’ (substance = ‘ground, soil’), ‘the earth’ (= ‘the world’); Gaulish *-magus* in: *Arganto-magus*; Old Irish *mag* ‘plain, open field’; Middle Welsh *ma*- ‘place’; Welsh *maes* (< **magesto-*) ‘field, plain’, *maen* ‘stone’; Cornish *mes* ‘field’, *men* ‘stone’; Breton *meaz* ‘field’, *mean* ‘stone’. Mann 1984—1987:1641 **magh-*, **maghən-* ‘stone’; Pokorny 1959:709; Walde 1927—1932.II:258; Lewis—Pedersen 1937:28; Matasović 2009:253 **megh₂-*.
- B. Proto-Uralic **mexi* ‘earth, land’: Finnish *maa* ‘earth, soil, ground, country, land’; Estonian *maa* ‘earth, soil, ground, country, land’; Cheremis / Mari (Malmyž) *mū-*, *mūj-*: *mūnō* ‘on the ground, on the floor, down (of position)’, *mūgō*, *mūjān* ‘to the ground, to the floor, down’, *mūjūcūn* ‘from the ground, from the floor’; Votyak / Udmurt *mu* ‘earth, land, field’; Zyrian / Komi *mu* ‘earth, land, field’; Vogul / Mansi *maa*, *mōō* ‘earth, land, place’; Ostyak / Xanty *mæg*, (Northern) *mūw* ‘earth, land’; Tavgi Samoyed / Nganasan *mou* ‘earth’; (?) Selkup Samoyed *ma-* in: *maś qula* the name of a Selkup tribe: ‘earth-people’. Collinder 1955:33, 1960:407 **mayō*, and 1977:52; Rédei 1986—1988:263—264 **maye*; Sammallahhti 1988:546 Proto-Finno-Ugrian **mixi* ‘earth, land’; Décsy 1990:102 **manga* ‘land’; Zhivlov 2023:161 Proto-Uralic **mexi* ‘earth’.

Buck 1949:1.21 earth, land; 1.23 plain, field. Illič-Svityč 1965:342 **magā* ‘soil, earth’ [‘земля’]; Bomhard—Kerns 1994:674—675, no. 553; Greenberg 2002:56, no. 118, **mag* ‘earth’; Hakola 2000:99, no. 422; Dolgopolsky 2008, no. 1374, **magē* ‘earth, land’.

869. Proto-Nostratic (n.) **mag-a* ‘young person, child’; (adj.) ‘young’:

- A. Dravidian: Tamil *maka* ‘child, infant, young of animal, son or daughter, young age’, *makaṭu*, *makaṭū* ‘female, woman, wife’, *makavu* ‘infant, son, young of animals living in trees (as of monkeys)’, *makaḷ* ‘daughter,

woman, female, wife, damsel', *makaṇmai* 'sonship, manliness', *makār* 'sons, children', *makkaḷ* 'human beings', *mākkaḷ* 'men, people, mankind, children', *makiṇaṇ* 'husband, chief of an agricultural tract, lord'; Malayalam *makan* 'son', *makkaḷ* 'children (especially sons), the young of animals'; Kota *mog* 'child, wife'; Toda *mox* 'child, son, daughter; male; woman'; Kannaḍa *maga* 'son, male person', *makan* 'son', *magu*, *magavu*, *maguvu*, *moga*, *mogu*, *moguvu* 'child of any sex', *magal* 'daughter' *makkaḷ*, *markaḷ*, *makkaḷir* 'children', *magalmā* 'a wife who is faithful to her husband'; Koḍagu *makka* 'children'; Tuḷu *mage* 'son', *magalu* 'daughter', *makkaḷ* 'children'; Telugu *maga*, *moga* 'male', *magāṭimi* 'manliness, bravery, prowess', *magāḍu* 'husband, man, male, king, hero', *maganru* 'son', *magatanamu* 'virility, manliness, courage, bravery, boldness, spirit', *magadi* 'male of any animal, beast, or bird', *maganālu* 'wife, married woman', *magapāḍi* 'manliness, honor, bravery', *magalāgu* 'manliness', *magavāḍu* 'man, male, hero', *magavu* 'woman', *maguvatanamu* 'womanhood'; Kolami *magvan* 'husband'; Gadba (Ollari) *maginḍ sinḍ* 'man, husband', (Salur) *maga sinḍu* 'boy child', *magginḍ* 'husband'; Konda *moga koṛo* 'boy child; husband, young man'; Kuwi *maka* (voc.) used to daughters and sisters in affection; Malto *maqe* 'boy', *maqi* 'girl', *maḳo* 'small, little one (animal)'. Burrow—Emeneau 1984:407—408, no. 4616; Krishnamurti 2003:10 and 163 **mak-antū* 'son, male', **mak-aḷ* 'daughter'.

- B. Proto-Indo-European **magh-* 'young', **maghu-* 'young person, child': Avestan *mayava-* 'unmarried'; Old Irish *macc* 'son'; Gothic *magus* 'boy, servant', *magaps* 'maiden, girl'; Runic (gen. sg.) *magor* [𐌚𐌗𐌰𐌶] 'son'; Old Icelandic *mögr* 'son, boy, youth'; Old English *magu* 'child, son; man, warrior; attendant, servant', *mæg(e)þ* 'maiden, girl; virgin' (Modern English *maid(en)*); Old Frisian *magēd*, *megith* 'maiden, girl'; Old Saxon *magu* 'servant', *magad* 'maiden, girl'; Old High German *magad* 'maiden, girl' (New High German *Magd* 'maid[servant]', diminutive *Mädchen* 'girl'), *maga-* in: *magaczogo* 'trainer'; Latvian *mač* (gen. sg. *mača*) 'small'. Pokorny 1959:696 **maghos*, -ā 'young', **maghu-* 'boy, child'; Walde 1927—1932.II:228 **maghu-*; Mann 1984—1987:785 **moguḥilā* 'woman, maid', 785 **moguḥiḍ* (**māguḥiḍ* ?) 'girl, maiden', 785 **moguḥos* (**māguḥos*) 'boy, youth, man'; Watkins 1985:38 **maghu-* and 2000:50 **maghu-* 'young person of either sex'; Mallory—Adams 1997:656 **maghus* 'young man'; Orël 2003:253 Proto-Germanic **maḡapiz*, 253—254 **maḡuz*, 254 **maḡwilō(n)*, 254 **maḡwjō*; Kroonen 2013:346—347 Proto-Germanic **magapi-* 'girl, maiden' and 347 **magu-* 'boy, relative'; Feist 1939:339 Germanic stem **maḡa-* beside **maḡu-*; Lehmann 1986:240; De Vries 1977:400; Onions 1966:546 **moghus* 'boy, young man'; Klein 1971:439; Boutkan—Siebinga 2005:251—253 and 253; Kluge—Mitzka 1967:453 **maghu-*; Kluge—Seebold 1989:454; Krause 1971:50, §28.4.

Buck 1949:2.25 boy; 2.41 son; 12.56 small, little. Bomhard—Kerns 1994:667, no. 545; Caldwell 1913:601.

870. Proto-Nostratic root **maḥ-* (~ **məḥ-*):

(vb.) **maḥ-* ‘to increase, to swell, to exceed, to surpass, to be great’;

(n.) **maḥ-a* ‘bigness, greatness, fullness, excellence’; (adj.) ‘big, great, full’

- A. Proto-Afrasian **maḥ-* ‘to increase, to swell, to exceed, to surpass, to be great’: Semitic: Geez / Ethiopic *maḥasa* [መሐሰ] ‘to cause to grow, to rear’. Leslau 1987:337. Egyptian *mḥ* ‘to fill, to be full (of); to make whole; to complete, to finish; to be full; to be complete’, *mḥw* ‘filling, packing, stuffing; a mouthful’. Faulkner 1962:113; Hannig 1995:352; Gardiner 1957:569; Erman—Grapow 1921:68 and 1926—1963.2:116—117.
- B. Dravidian: Tamil *mā* ‘great’, *mātu* ‘greatness’, *māl* ‘greatness; great man’, *māl* (*mālv-*, *māṇr-*) ‘to be magnified, glorified’; Malayalam *mā* ‘great’; Kannaḍa *mā* ‘big, great’; Gondi *māy(i)* ‘very big’, *mayali* ‘big’. Burrow—Emeneau 1984:425, no. 4786. Tamil *māṇ* (*māṇp-*, *māṇt-*) ‘(vb.) to become excellent, glorious, to be good, worthy; to be full, abundant, great; (n.) greatness, glory, splendor, excellence, dignity’, *māṇtal* ‘being great, being worthy’, *māṇpu* ‘honor, dignity, beauty, greatness, excellence, goodness’, *māṇal* ‘greatness, excellence, goodness’, *māṇi* ‘beauty’, *māṇam* ‘greatness, excellence’; Malayalam *māṇpu* ‘glory, beauty’; Telugu *mānu* ‘beauty, excellence; beautiful, elegant, fit, proper, worthy’. Burrow—Emeneau 1984:427, no. 4803.
- C. (?) Proto-Indo-European **meḥh-kh-* [**maḥh-kh-*] > **mā-kh-* ‘to increase; to cause to grow, to breed’: Welsh (f.) *mag* ‘nurture, breeding’, (m.) *magi* ‘nurture, breeding’, *magad* (m.) ‘brood, multitude’, (inf.) *magu* ‘to breed’; Latvian (m.) *makāns* ‘fattened animal’. Mann 1984—1987:726—727 **māk-* ‘to force, to press, to push ahead, to increase, to rear’.

Sumerian *mah* ‘to be or make great, magnificent; to be much, many’.

Buck 1949:12.55 large, big (great); 13.15 much, many; 13.16 more; 13.21 full. Bomhard—Kerns 1994:634—635, no. 513.

871. Proto-Nostratic (n.) **makḥ-a* ‘neck’:

- A. Afrasian: Egyptian *mkḥ* ‘back of the head, occiput’ (according to Sethe, composed of **mki* + *ḥ* ‘occiput; back [of ear]; behind, around’); Coptic *makh* [ⲙⲁⲕⲭ] ‘neck’. Hannig 1995:372; Faulkner 1962:119; Erman—Grapow 1921:72 and 1926—1963.2:163; Vycichl 1983:111; Černý 1976:80. North Cushitic: Beja / Beḍawye *mōk* (< **mākeX*) ‘neck’. Reinisch 1895:167; Blažek 2003b:16, no. 38.

- B. Dravidian: Kolami *mak* ‘neck’; Naikri *makk* ‘neck’. Burrow—Emeneau 1984:408, no. 4622.
- C. Proto-Altaic **mjak^hu* ‘neck’: Tungus: Evenki *muka* ‘skin from a deer’s neck’. Turkic: Karakhanide Turkic *baqan* ‘necklace, torque’. Starostin—Dybo—Mudrak 2003:920 **mjak^hu* ‘neck’.

Buck 1949:4.28 neck.

872. Proto-Nostratic root **mak^h-* (~ **mək^h-*):

- (vb.) **mak^h-* ‘to deceive, to trick, to cheat; to be deceived, troubled, confused, perplexed’;
- (n.) **mak^h-a* ‘deception, trickery, confusion’

- A. Proto-Afrasian **mak-* ‘to deceive, to trick, to cheat; to be deceived, troubled, confused, perplexed’: Proto-Semitic **mak-ar-* ‘to deceive’ > Arabic *makara* ‘to deceive, to delude, to cheat, to dupe, to gull, to double-cross’, *makra* ‘ruse, artifice, stratagem, wile, trick, dodge’, *makr* ‘cunning, craftiness, slyness, wiliness, double-dealing, deception, trickery’; Mehri *məkūr* ‘to fill someone with talk against someone’, *šəmūr* ‘to be turned by talk against someone’; Šheri / Jibbāli *mókór* ‘to fill someone with talk against someone; to turn against someone’, *məkrún* ‘treacherous, cunning’. Zammit 2002:386. Highland East Cushitic: Sidamo *makkal-* ‘to be crazy’. Hudson 1989:384.
- B. (?) Indo-European: Greek μακκοῦω ‘to be stupid’ (either derived from Μακκώ the name of a stupid woman, or the other way around). Origin unknown (cf. Frisk 1970—1973.II:164; Boisacq 1950:603; Chantraine 1968—1980.II:660; Hofmann 1966:188; Beekes 2010.II:895; Prellwitz 1905:279). Assuming here semantic development from ‘bewildered, perplexed, confused’ as in Sanskrit *mūḍhā-ḥ* ‘stupid, foolish, dull, silly, simple’, literally, ‘stupefied, bewildered, perplexed, confused, uncertain of or at a loss about’, from *muh-* ‘to be stupefied or unconscious, to be bewildered or perplexed, to err, to be mistaken, to go astray’ (cf. Mayrhofer 1956—1980.II:662); note also Mongolian *megde-* ‘to be or become excited, worried; to be or become embarrassed, troubled, perplexed, or confused; to become stupid or imbecilic; to remain motionless and without feeling, to remain paralyzed’, cited below.
- C. Proto-Altaic **mak^he-* ‘to be deceived, perplexed’ > Proto-Tungus **maka-* ‘to become dizzy, confused; to be afraid; to hate’ > Manchu *maqqa-* ‘to become muddled, to become confused in one’s thinking’; Orok *maqqa-* ‘to hate’; Nanay / Gold *māqā-* ‘to gaze at’; Udihe *maka-* ‘to be afraid’. Proto-Mongolian **mek(e)-* ‘(vb.) to be disturbed, troubled, confused, perplexed, embarrassed; to deceive, to cheat; (n.) deceit, trickery’ > Written Mongolian *meke* ‘deceit, fraud, trick, ruse; cunning, artfulness; astuteness, assimilation’, *mekei* ‘bashful, shy, modest’, *megde-* ‘to be or become

excited, worried; to be or become embarrassed, troubled, perplexed, or confused; to become stupid or imbecilic; to remain motionless and without feeling, to remain paralyzed', *mekele-* 'to deceive, to cheat, to outwit, to mystify; to act craftily'; Khalkha *meχ* 'deceit, trickery', *megd-* 'to be disturbed, perplexed', *mexiy* 'embarrassed'; Buriat *meχe* 'deceit, trickery', *megde-* 'to be disturbed, perplexed'; Kalmyk *mekə* 'deceit, trickery'; Ordos *meχe* 'deceit, trickery'. Starostin—Dybo—Mudrak 2003:896—897 **mak'e* 'to be deceived, perplexed'.

Buck 1949:16.68 deceit; 17.22 foolish, stupid; 17.23 insane, mad, crazy.

873. Proto-Nostratic root **mak'*- (~ **mək'*-):

(vb.) **mak'*- 'to be great, strong, mighty, powerful';

(n.) **mak'-a* 'strength, power'; (adj.) 'great, strong, powerful; much, many'

Note also:

(vb.) **mik'*- 'to exceed, to surpass, to be in excess, to grow, to increase, to swell, to expand';

(n.) **mik'-a* 'growth, excess, increase, abundance, fullness'; (adj.) 'large, big, great, much'

- A. Afrasian: Highland East Cushitic: Kambata *mak'aamu* 'strong, powerful', *mak'o* 'strength, power'; Sidamo *mak'ae* 'strength, power'. Hudson 1989:332 and 384.
- B. Proto-Kartvelian **mak'*- 'heavy' (> 'pregnant'): Georgian *mak'en-*, *mak'n-* 'to become pregnant', *mak'e-* 'pregnant'; Mingrelian *mok'a-*, *monk'a-* 'heavy', *si-monk'-a-* 'heaviness', *monk'atu-* 'pregnant'; Laz *monk'a-* 'heavy', *monk'an-* 'to become pregnant'. Schmidt 1962:122; Fähnrich 2007:278 **mak-*; Fähnrich—Sardshweladse 1995:228 **mak-*; Klimov 1964:125 **make-*, **maken-* and 1998:113 **make-* 'heavy', 113—114 **maken-* 'to get heavy, pregnant'. Note: The *-n-* found in the Mingrelian and Laz forms is secondary.
- C. Proto-Indo-European **mak'*- 'great, strong, mighty, powerful': Albanian *madh* (< **mak'(H)-yo-*) 'big, large, tall'; Latin *magnus* (< **mak'(i)no-*) 'large, great, tall; outstanding, powerful, mighty', (adv.) *magis* 'more, to a greater extent, rather'; Old Irish *maige* (< Proto-Celtic **mag-yo-*) 'great', (poetic) *mál* (< Proto-Celtic **mag-lo-*) 'noble, prince'. Perhaps also Lithuanian *māgulas* 'numerous'. Pokorny 1959:708—709 **meġ(h)-* 'big'; Walde 1927—1932.II:257—259 **meġ(h)-*; Mann 1984—1987:726 **măġ-* 'big', 744 **meġ-* (**măġ-*) 'great, big', Watkins 1985:39—40 **meg-* and 2000:52 **meg-* 'great'; Gamkrelidze—Ivanov 1984.II:782 **mek'H-* and 1995.I:684 **mek'H-* 'large'; Mallory—Adams 1997:344 **meġha-* 'large, great'; De Vaan 2008:358—359; Walde—Hofmann 1965—1972.II:10—12 Latin *magnus* < **mġ-nós*; Ernout—Meillet 1979:377—379 Latin *magis* < **mag-yō-s*; **meg'ə-*; Orël 1998:240; Huld 1983:88—89 Albanian *madh*

< **maġE₂-jo-*; Fraenkel 1962—1965.I:395; Smoczyński 2007.1:367; Matasović 2009:253 Proto-Celtic **magyo-*. Note: According to Adams (1999:446—447), two separate stems must be reconstructed for Proto-Indo-European: **meġh_a-* and **maġ-*.

- D. [Chukchi-Kamchatkan: Proto-Chukotian **mək-* ‘many’ > Chukchi *nə-mkə-qin* ‘many’, *mək-et-* ‘to increase (intr.)’, *rə-mk-ew-* ‘to increase (tr.)’; Kerek *nə-mkə-Xi* ‘many’, *məkə-ŋ* ‘more’, *mək-at-* ‘to increase’; Koryak *nə-mkə-qin* ‘many’, *mək-at-* ‘to increase (intr.)’, *jəmk-av-* ‘to increase (tr.)’; Alyutor *nə-mkə-qin* ‘many’, *mək-at-* ‘to increase (intr.)’. Fortescue 2005:181.] Either here or with Proto-Nostratic **mik-* (~ **mek-*) ‘(vb.) to exceed, to surpass, to be in excess, to grow, to increase, to swell, to expand; (n.) growth, excess, increase, abundance, fullness; (adj.) large, big, great, much’.

Buck 1949:4.73 pregnant; 4.81 strong, mighty, powerful; 12.55 large, big (great).

874. Proto-Nostratic root **mak-* (~ **mək-*):

(vb.) **mak-* ‘to be happy, cheerful; to be pleasant, agreeable’;

(n.) **mak-a* ‘happiness, joy, pleasure’

- A. Afrasian: Proto-Southern Cushitic **mak-* or **maak-* ‘to be happy’ > Iraqw *misqis-* (< **maqsis-*) ‘to smile’; Alagwa *maq-* ‘to be cheerful’; Ma’a *-māka* ‘to wonder, to be astonished’. Ehret 1980:155.
- B. Dravidian: Tamil *makir* ‘(vb.) to rejoice, to exult, to forget oneself in joy, to bubble up (in boiling), to drink; (n.) joy, exhilaration, intoxication (from liquor), toddy’, *makircci* ‘joy, pleasure, delight, gladness’, *makirvu* ‘joy, mirth’; Malayalam *makiruka* ‘to rejoice’; Brahui *maxing* ‘to laugh’. Burrow—Emeneau 1984:408, no. 4618.
- C. Indo-European: Old Icelandic *makindi* ‘friendly intercourse; rest, ease’, *makr* ‘easy to deal with: (only in comparative) more suitable, becoming, convenient’, *mak-ráðr* ‘pleasant, agreeable’, *maki* ‘a match’, *makligr* ‘meet, proper, becoming, fitting, deserving’; Old English *gemæc* ‘well-matched, suitable (wife); equal, being a match for’, (*ge*)*mæcca* ‘mate, equal, one of a pair, comrade, companion’; Old High German *gimah* ‘comfortable, suitable’; New High German *gemach* ‘easy, softly, quietly, gently, slowly’, *gemächlich* ‘comfortable, easy, leisurely’, *Gemächlichkeit* ‘comfort, ease, leisure’. Orël 2003:257 Proto-Germanic **makaz*, 257 **makōn*; Kroonen 2013:350 Proto-Germanic **maka-* ‘fit, comfortable’; De Vries 1977:376; Onions 1966:561; Klein 1971:449; Skeat 1898:358; Kluge—Mitzka 1967:245—246; Kluge—Seebold 1989:255.

Buck 1949:9.943 fitting, suitable; 16.22 joy; 16.23 joyful, glad; 16.24 happy; happiness; 16.25 laugh (vb.); smile (vb.).

875. Proto-Nostratic (n.) **mal-a* ‘hill, mountain’:

- A. Dravidian: Tamil *malai* ‘hill, mountain’; Malayalam *mala* ‘mountain, raised land, hill-land’; Kannaḍa *male* ‘mountain, forest’; Koḍagu *male* ‘thick jungle land, cardamom plantation in jungle on mountainside’; Tuḷu *malè* ‘forest, hill overgrown with forest’; Telugu *mala* ‘mountain’; Kolami *ma·le* ‘hill’; Parji *malang* ‘forest’. Burrow—Emeneau 1984:420, no. 4742.
- B. Proto-Indo-European **mel-/mol-* ‘hill, mountain’: Gaulish (in place names) *melos*; Albanian *mal* ‘mountain’; (Dacian substratum in) Romanian *mal* ‘promontory, bank’; Lithuanian (obsolete) *malà* ‘country, landscape’; Latvian *mala* ‘bank, shore’. Perhaps also Greek προ-μολή in the meanings ‘foothills of a mountain, fountainhead of a river’. Pokorny 1959:721—722 **mel-*, **melə-* : **mlō-* ‘to come forth’; Walde 1927—1932.II:294—295 **melā^x-*; Mann 1984—1987:752 **melos* ‘hill, mound’, 793 **molos*, *-is*, *-ā*, *-us* ‘pile, heap, hill, mountain’; Beekes 2010.I:223; Chantraine 1968—1980.I:182; Frisk 1970—1973.I:246—247; Georgiev 1981:143; Meyer 1891:256—257; Huld 1984:89; Orël 1998:243; Katičić 1976.I:142; Cihac 1870—1879.II:183—184; Vinereanu 2008:523.

Buck 1949:1.22 mountain, hill; 1.27 shore; 1.41 woods, forest. Caldwell 1913:622; Bomhard—Kerns 1984:671—672, no. 550; Dolgopolsky 2008, no. 1411, **mal/[ɟ]V* ‘hill, mountain, something protruding’; Illič-Svityč 1971—1984.II:51, no. 286, **MALA* ‘mountain’; Leschber 2016:242.

876. Proto-Nostratic root **mal-* (~ **māl-*):

(vb.) **mal-* ‘to fill, to be or become full, to increase’;

(n.) **mal-a* ‘fullness, abundance’; (adj.) ‘full, filled, abundant, numerous, many’

- A. Proto-Afrasian **mal-* ‘(vb.) to fill, to be full; (adj.) full, filled, abundant’: Proto-Semitic **mal-aʔ-* ‘to fill, to be full’ > Hebrew *mālēʔ* [מָלֵךְ] ‘to fill, to be full’; Aramaic *mālā* ‘to fill, to be full’; Phoenician *mlʔ* ‘to fill’; Ugaritic *mlā* ‘to be full’; Amorite *mlʔ* ‘to be full’; Akkadian *malū* ‘to be full, to fill up’; Arabic *malaʔa* ‘to fill, to become filled, to be full’, *malīʔ* ‘full (of), filled, replete (with); bulging, swelling (with); plump, stout, fat, corpulent, obese; rich, abounding (in), well-to-do, wealthy’; Sabaean *mlʔ* ‘to fill’; Ḥarsūsi *mēleʔ* ‘to be full’, *melō* ‘to fill’; Šheri / Jibbāli *mélé* ‘to fill’, *mūtli* ‘to be full, to have a swollen belly through illness’, *mel* ‘fullness’; Mehri *mīlāʔ* ‘to be full’, *mōlāʔ* ‘to fill’, *mlū* ‘to fill’, *mātli* ‘to have a swollen belly caused by illness’, *mēl* ‘fullness, filling; full’; Soqotri *mileʔ* ‘to be full’, *móleʔ* ‘to fill’; Geez / Ethiopic *malʔa* [መልአ] ‘to fill, to fill up, to complete, to multiply, to be full, to be filled, to overflow, to be fulfilled, to be completed, to be abundant, to abound, to come to an end’, *məluʔ* [ሞሉአ] ‘full, filled, abundant, copious, replenished, complete’, *məlʔ* [ሞልአ]

‘fullness, that which fills’; Tigre *mālʔa* ‘to be full’; Tigrinya *mālʔe* ‘to be full’; Gurage (Masqan) *mälla* ‘to be full, to fill, to have plenty of, to level the ground by filling the uneven places’, *mula* ‘full’; Amharic *mälla* ‘to be full’, *mulu* ‘whole, full, complete’, *molla* ‘to fill, to be filled, to fill out, to fill up, to be plentiful, to abound, to flood, to overflow’, *mälla* ‘whole, entire’; Argobba *mälla* ‘to be full’; Harari *mālaʔa* ‘to fill, to fulfill’, *mulluʔ* ‘full’. Murtonen 1989:259; Klein 1987:347; Militarëv 2010:72 Proto-Semitic **mlʔ*; Zammit 2002:386—387; Leslau 1963:107, 1979:401, and 1987:342; Tomback 1978:158.

- B. Dravidian: Tamil *mali* ‘to abound, to be plentiful, to be full, to increase, to be proud, to become large, to swell, to spread, to expand’, *mal* ‘fertility, richness, strength’, *malipu* ‘excess, abundance’, *malir* ‘to flood, to come frequently’, *malivu* ‘to abound, to become full’, *malku* (*malki-*) ‘to increase, to abound, to grow, to flourish’, *mallal* ‘strength, abundance, wealth, fertility, richness, elegance, brilliance, beauty’, *mallai* ‘richness, fertility, greatness’; Malayalam *malika* ‘to abound, to overflow’, *malekka* ‘to grow thick, to swell’, *malka* ‘to abound’; Tuḷu *malla*, *mallavu*, *mallāvu* ‘great, large, big, extensive, chief, principal, important, loud’, *mallastigē*, *mallādigē* ‘greatness, superiority, loftiness, pride’, *mallāye* ‘a man senior in age, a rich man, a grown-up man’ (f. *mallāḷu*); Kannaḍa *male* ‘to be raised or elevated, to be haughty, to be puffed up, to be insolent, to act in an overbearing manner’, *malya* ‘great, big, chief, principal’, *mallali* ‘a large concourse, crowd’, *mammala*, *malamala* ‘excessively’; Telugu *malayu* ‘to spread, to rejoice, to be pleased, to be eager, to be delighted, to shine, to be splendid, to unfold, to display’, *malucamu* ‘superior, fine’, *mallaramu* ‘pride, arrogance’, *mallaḍi* ‘a crowd’. Burrow—Emeneau 1984:419, no. 4729.
- C. Proto-Indo-European **mel-/mol-/m̥l-* ‘much, many, very much’: Latin *multus* (sg.) ‘much, many’, (pl.) ‘many, numerous’; Greek μάλα ‘very, very much’, μᾶλλον (with secondary long vowel) ‘more’, μάλιστα ‘most’; Latvian *milns* ‘very much’. Pokorny 1959:720 **mel-* ‘strong, big’; Walde 1927—1932.II:292 **mel-*; Mann 1984—1987:777 **m̥ltos* ‘much’, 1642 **mel-*, **mol-*, **m̥l-*; Watkins 1985:40 **mel-* and 2000:53 **mel-* ‘strong, great’ (suffixed [comparative] form **mel-yos-*; suffixed zero-grade form **m̥l-to-*); Frisk 1970—1973.II:165; Boisacq 1950:603—604 **mel-* ‘large, numerous’; Chantraine 1968—1980.II:661; Beekes 2010.II:895—896 **mel-*; Hofmann 1966:188 **mel-*; De Vaan 2008:394; Ernout—Meillet 1979:419—420; Walde—Hofmann 1965—1972.II:124—125 Latin *multus* < **m̥ltós*. Proto-Indo-European **mel-gh-/mol-gh-/m̥l-gh-* ‘to fill up, to swell’: Sanskrit *malhá-h* ‘having teats in the dewlap’; Avestan *mərəzāna-* ‘paunch’; Armenian *malj* ‘gall, bile’; Latvian *meļzu*, *miļzu*, *miļzt* ‘to swell, to fester’. Pokorny 1959:723 **melgh-* ‘to swell’; Walde 1927—1932.II:300 **melgh-*; Mayrhofer 1956—1980.II:602.

- D. (?) Proto-Altaic **m̥iolo-* ‘(vb.) to fill; (adj.) full, thick’: Proto-Tungus **mila-* ‘wide, open, broad’ > Manchu *mila* ‘open, wide open’, *milaḡūn* ‘wide open, gaping’, *milara-* ‘to open wide’, *milata* ‘wide open, agape’. Proto-Mongolian **mel-/m̥öl-* ‘(vb.) to be or become full; (adj.) (very) full’ > Written Mongolian *melmei-* ‘to become very full or completely full’, *melmelže-*, *mölmülže-* ‘to be full to overflowing, to well up; to be or become overfull (with liquid)’, *melmelžemel* ‘very full, replete’; Khalkha *melmiy-*, *melmelze-* ‘to be or become full’; Buriat *melmelze-* ‘to be or become full’; Kalmyk *melme-* ‘to be or become full’, *mel* ‘(quite) full’; Ordos *melčirme-* ‘to be or become full’, *melī*, *melē* ‘(quite) full’. Proto-Turkic **bol* ‘abundant, full’ > Turkish *bol* ‘wide, loose, copious, abundant’; Turkmenian *bol* ‘abundant, full’; Uzbek *bol*, *mol* ‘abundant, full’; Tatar *mul* ‘abundant, full’; Kirghiz *mol* ‘abundant, full’; Chuvash *püle-mes* ‘abundant, full’, *pül-lə* ‘stalwart’. Starostin—Dybo—Mudrak 2003:927 **m̥iolo* ‘(vb.) to fill; (adj.) full, thick’. (?) Proto-Altaic **miltʰe* (~-i) ‘(vb.) to fill; (adj.) full’: Proto-Tungus **milte-* ‘full, whole’ > Evenki *miltʰrʰ* ‘full, whole’; Oroch *milte-milte* ‘full, whole’. Proto-Mongolian **melteyi-* ‘to fill, to overflow’ > Written Mongolian *melteyi-* ‘to be full to overflowing’; Khalkha *meltyi-* ‘to fill, to overflow’; Buriat *melti-* ‘to fill, to overflow’; Kalmyk *melte-* ‘to fill, to overflow’. Starostin—Dybo—Mudrak 2003:917 **miltʰe* (~-i) ‘(vb.) to fill; (adj.) full’. Starostin—Dybo—Mudrak note: “The root is very similar to **m̥iolo* ‘full, fill’ and may indeed be derived: **m̥iol-tʰi*. Such an explanation, however, would involve a metatony in Japanese and borrowing in T(ungus)-M(anchu) (*milte-* < Mongolian *melte-*), so we prefer to separate the two roots for the time being.” Note: while the Altaic material fits perfectly semantically here, there are problems with the phonology.
- E. Proto-Gilyak / Nivkh **malʷo* ‘much, many’: Amur *malro-dv* ‘much, many’; North Sakhalin *malʷo-t* ‘much, many’; East Sakhalin *malʷo-d* ‘much, many’; South Sakhalin *malxu-nt/malʷoř* ‘much, many’. Fortescue 2016:101.

Buck 1949:13.15 much, many. Illič-Svityč 1971—1984.II:41, no. 278, **malʷ* ‘numerous, abundant’; Möller 1911:162; Bomhard—Kerns 1994:651—652, no.528; Greenberg 2002:115—116, no. 262; Dolgopolsky 2008, no. 1410, **mālʷ* ‘full, much’.

877. Proto-Nostratic root **mal-* (~ **māl-*):

- (vb.) **mal-* ‘to be favorably disposed towards, to care about, to be devoted to, to like’;
 (n.) **mal-a* ‘goodness, pleasantness’; (adj.) ‘good, pleasant, pleasing’

- A. Proto-Afrasian **mal-* ‘(vb.) to do good; (adj.) good’: Semitic: Arabic *malīḥ* ‘good’; Ugaritic *mlḥ* ‘good, pleasant’; (?) Geez / Ethiopic *malḥa*, *malləḥa*

- [𐎠𐎡𐎣] ‘to do, to work’, possibly ‘to do good work’. Leslau 1987:343; Militarëv 2008a:196 and 2010:74. Note: Both Leslau and Militarëv suggest derivation from Proto-Semitic **milh-* ‘salt’; this is rejected here. Egyptian *mnḥ* ‘(vb.) to be efficient, beneficent, excellent; (adj.) potent (of king); trusty (of officials); well-disposed, devoted; splendid (of buildings); excellent (of deeds, of occasions); costly (of materials); lavish (of worship); famous; well-established (of endowment)’, *mnḥw* ‘excellence, virtues (of someone)’. Hannig 1995:340—341; Erman—Grapow 1921:65 and 1926—1963.2:84—86; Gardiner 1957:569; Faulkner 1962:109. Orël—Stolbova 1995:392, no. 1816, **mVIVḥ-/mVIVḥ-* ‘to be good’.
- B. Dravidian: Tamil *mālimi* ‘youthful friendship’; Telugu *mālimi* ‘familiarity, love, affection’. Burrow—Emeneau 1984:429, no. 4826.
- C. Proto-Indo-European **mel-/mol-/m̥l-* ‘(vb.) to be favorably disposed towards, to care about, to be devoted to, to like; (adj.) good, pleasant’: Latin (comparative of *bonus*) *melior* ‘better’; Lithuanian *malonūs* ‘nice, pleasant’, *malōniai* ‘pleasantly, nicely, good’. Pokorny 1959:720 **mel-* ‘strong, big’; Walde 1927—1932.II:292 **mel-*; Mann 1984—1987:728 **māl-* ‘to like, to prefer; better’; Watkins 1985:40 **mel-* and 2000:53 **mel-* ‘strong, great’; Mallory—Adams 1997:235 **mel-* ‘good’; Ernout—Meillet 1979:394—395; De Vaan 2008:370; Walde—Hofmann 1965—1972.II: 63—64 **mel-* ‘strong, great’. Different etymology in Fraenkel 1962—1965.I:402—403 and Smoczyński 2007.1:370. The following probably belong here as well: Hittite (nom.-acc. sg.) *ma-al*, *ma-a-al* ‘brains, wits, wisdom, mindset, disposition’, (3rd sg. pres.) *ma-la-a-i* ‘to have in mind, to (be in) favor (of), to agree (with), to consent (to), to approve, to authorize, to endorse, to sanction, to acknowledge’ (common as a technical term in oracle texts), (nom. sg.) *ma-l/i-ya-aš-ha-aš* ‘agreement, consent, approval’; Greek μέλω ‘to be an object of care, to care for’, μελεδαίνω ‘to care for, to be concerned about; to tend, to attend to’, μελέτη ‘care, attention’, μελετάω ‘to care for, to attend to’, μέλημα ‘the object of care, darling (of persons)’, μέλλω ‘to think of doing, to intend to do, to be about to do’. Puhvel 1984— .6:20—21 and 6:25—28; Kloekhorst 2008b:545—546 **mól-*; Boisacq 1950:625 **mel-*; Frisk 1970—1973.II:202—203 and II:204—206; Hofmann 1966:196; Chantraine 1968—1980.II:682—683 and II:684; Beekes 2010.II:927 and II:928—929.
- D. Etruscan *m̥laχ*, *m̥lac* ‘beautiful’.
- E. Proto-Chukchi-Kamchatkan **mæl-* ‘good’: Chukchi *nə-mel-qin* ‘good’, *melmel* ‘good weather’, *mel-et-* ‘to clear up (weather)’; Kerek *nə-mal-Xi* ‘good’, *malmaal-at-* ‘to be good weather’; Koryak *nə-mel-qin* ‘good, dear, easy’, *melmel* ‘good weather’, *mel-et-* ‘to clear up (weather)’; Alyutor *nə-mal-qin* ‘good’; Kamchadal / Itelmen *mel-laX* ‘good’, *mel* ‘well, strongly’. Fortescue 2005:171—172; Mudrak 1989b:101 **mel-* ‘good’. Proto-Chukchi-Kamchatkan **mæləv-* ‘to cure or be cured’: Chukchi *melew-* ‘to be cured, to regain one’s health’, *rə-melew-et-* ‘to cure, to treat’; Kerek

malau- ‘to cure’, *malaw-jan* ‘hospital’; Koryak *melev-* ‘to be cured, to regain one’s health’, *jə-melev-* ‘to cure, to treat’, *malaw-jan* ‘hospital’; Alyutor *masyav-* ‘to get better’, *tə-masyav-*, *ta-n-masyav-ŋə-* ‘to cure’; Kamchadal / Itelmen *mele-* ‘to regain one’s health’. Fortescue 2005:172.

Buck 1949:16.71 good (adj.); 16.81 beautiful (also pretty). Bomhard—Kerns 1994:652—653, no. 529; Illič-Svityč 1971—1984.II:41, no. 278, **mala* ‘numerous, abundant’.

878. Proto-Nostratic (n.) **mal-a* ‘honey’:

- A. Proto-Afrasian **mal-* ‘honey’: (?) Semitic: Ugaritic *mll* ‘honey (?)’. Proto-East Cushitic **malab-* ‘honey’ > Saho-Afar *mala(a)b-* ‘honey’; Boni *malub-* ‘honey’; Somali *malab* ‘honey’; Rendille *malab* ‘honey’; Gedeo / Darasa *malebo* ‘honey’; Hadiyya *marabo* ‘honey’; Kambata *malabu* ‘honey’; Sidamo *malab-o* ‘honey’. Sasse 1979:14; Hudson 1989:81. Proto-Southern Cushitic **mala* ‘mead’ > Ma’a *mála* ‘beer’ (generic); Dahalo *móla* ‘mead’. Ehret 1980:154; Takács 2008:218—219.
- B. Proto-Indo-European **mel-i-th* (gen. sg. **mel-n-es*) ‘honey’: Hittite (nom.-acc. sg.) *mi-li-it* ‘honey’, (3rd sg. pret. act.) *me-li-te-iš-ta* ‘to be or become sweet’, (nom.-acc. sg. c.) *mi-li-id-du-uš* ‘honeyed, sweet’ (nom.-acc. n. *mi-li-id-du*); Palaic (dat.-loc. pl.) *ma-li-ta-an-na-aš* ‘honeyed, sweet’; Luwian (nom.-acc. sg.) *ma-al-li* ‘honey’; Hieroglyphic Luwian *ma-li-ti-mi-a-š* ‘sweet’; Greek μέλι ‘honey’; Armenian *mehr* ‘honey’; Albanian *mjaltë* ‘honey’; Latin *mel* (gen. sg. *mellis*) ‘honey’; Old Irish *mil* ‘honey’; Gothic *milip* ‘honey’; Swedish *mjöldagg* ‘mildew’; Danish *meldugg* ‘mildew’; Old English *mil-*, *mele-* in: *mildēaw*, *meledēaw* (< Proto-Germanic **meliθ* ‘honey’ + **dawwaz* ‘dew’) ‘honeydew, nectar’; Old Saxon *milidou* ‘mildew’; Dutch *meeldauw* ‘mildew’; Old High German *milidou* ‘mildew’ (New High German *Mehltau* [with assimilation to *Mehl*] ‘powdery mildew’, *Meltau* ‘mildew, blight’). Pokorny 1959:723—724 **meli-t*, (gen. sg.) **mel-nés* ‘honey’; Walde 1927—1932.II:296 **melit*; Mann 1984—1987:751 **melit* (**meli*) ‘honey’; Gamkrelidze—Ivanov 1984.II:603—605 **mel-i-t[h]-* and 1995.I:517 **mel-i-th-* ‘honey’ (Latin gen. sg. *mellis* < **mel-n-es*); Mallory—Adams 1997:271 **mélit* ‘honey’; Watkins 1985:41 **melit-* and 2000:54 **melit-* ‘honey’; Puhvel 1984— .6:153—158; Kloekhorst 2008b:580—581; Benveniste 1935:7—8; Boisacq 1950:624 **melit*; Frisk 1970—1973.II:200—201 **meli-t* (Latin gen. sg. *mellis* < **mel-n-és?*); Beekes 2010.II:925—926 **melit-*; Hofmann 1966:196 **melit*; Chantraine 1968—1980.II:681—682; Ernout—Meillet 1979:394; Walde—Hofmann 1965—1972.II:61—62 **mel-i-t*, (gen. sg.) **mel-n-és*; De Vaan 2008:370; Meyer 1891:281—282; Kroonen 2013:363 Proto-Germanic **melip-* ‘honey’; Orël 1998:268 and 2003:266 Proto-Germanic **meliskaz*, 266 **meliskōn*, 266 **melip*; Falk—Torp 1903—1906.I:507; Lehmann

1986:255—256 **mel-i-t*; Feist 1939:359—360 **melit*, (gen. sg.) **melitos*; Walshe 1951:149; Kluge—Mitzka 1967:473 **melit*; Kluge—Seebold 1989:470; Onions 1966:576 Common Germanic **melip*; Klein 1971:465 **melit*-.]

- C. (?) Altaic: Proto-Turkic **bal* ‘honey’ (if from **mal*-) > Karakhanide Turkic *bal* ‘honey’; Turkish *bal* ‘honey’; Gagauz *bal* ‘honey’; Azerbaijani *bal* ‘honey’; Turkmenian *bal* ‘honey’; Uzbek *bol* ‘honey’; Uighur *bal* ‘honey’; Karaim *bal* ‘honey’; Tatar *bal* ‘honey’; Bashkir *bal* ‘honey’; Kirghiz *bal* ‘honey’; Kazakh *bal* ‘honey’; Noghay *bal* ‘honey’; Chuvash *pil* ‘honey’. [Starostin—Dybo—Mudrak 2003:897—898 **male* ‘honey, plant oil’.]

Buck 1949:5.84 honey; 5.91 mead. Bomhard—Kerns 1994:657, no. 545; Greenberg 2002:97, no. 213.

879. Proto-Nostratic root **mal*- (~ **māl*-):

(vb.) **mal*- ‘to draw (out), to squeeze (out), to suck (out); to give suck, to suckle, to nurse’;

(n.) **mal-a* ‘milk; breast’

- A. Proto-Afrasian **mal*- ‘to draw (out), to squeeze (out), to suck (out); to give suck, to suckle, to nurse’: Semitic: Arabic *malaġa* (inf. *malġ*) ‘to suck (the mother’s breast)’, *malaġa* (inf. *ʔimlāġ*) ‘to give suck’. Arabic *malaġa* ‘to give suck’. Proto-Sam **maal*- ‘to milk’ > Somali *maal*- ‘to milk’; Rendille *maal*- ‘to milk’. Heine 1978:90. [Orël—Stolbova 1995:392, no. 1815, **mVlog*- ‘bosom; to suck’.]
- B. Proto-Indo-European **mel-k*-/**mol-k*-/**m̥l-k*- ‘(vb.) to draw (milk), to milk, to suck; to give suck, to suckle; (n.) milk’: Greek ἀμέλω ‘to milk, to draw milk from animals, to squeeze out like milk; to drink’, ἀμολγεύς ‘a milk-pail’, ἀμολγαῖος ‘of milk, made with milk’; Albanian *mjel* ‘to milk’; Latin *mulgeō* ‘to milk’, *mulctra* ‘a milk-pail’; Old Irish *mlicht*, *blicht* (< **m̥lk*-) ‘milk’, *mliuchtae*, *mlichtae* ‘milch’, (3rd sg.) *mligid* ‘to milk; to draw (out), to extract’; Middle Irish (1st sg.) *bligim* (< **mligim*) ‘to milk’, *melg* ‘milk’; Welsh *blith* (< **mlikt*- < **m̥lk*-*thi*-) ‘milk’; Gothic *miluks* ‘milk’; Old Icelandic *mjólka* ‘to milk, to give milk’, *mjólk* ‘milk’, *mjólkr* ‘milch, giving milk’, *mylkja* ‘to suckle’; Swedish *mjöl*k ‘milk’; Old English *melcan* ‘to milk’, *melc* ‘giving milk, milch’, *meolc*, *meoluc*, *milc* ‘milk’, *meolcian* ‘to give milk, to suckle’, *molcen* ‘curdled milk’; Old Frisian *melok* ‘milk’; Old Saxon *miluk* ‘milk’; Dutch *melk* ‘milk’; Old High German *melchan* ‘to milk’ (New High German *melken*), *miluh* ‘milk’ (New High German *Milch*); Lithuanian *mélžu*, *mīlžti* ‘to milk’, *málžau*, *málžyti* ‘to milk’, *malžì* ‘giving milk’; Russian Church Slavic *mълzu*, *mlěsti* ‘to milk’; Russian *molokó* [молоко] ‘milk’, *molózivo* [молозиво] ‘beestings, colostrum’; Tocharian A *mālk*- ‘to milk’, A *malke* ‘milk’, B

malkwer ‘milk’. Rix 1998a:249—250 **h₂melǵ-* ‘to milk’; Pokorny 1959:722—723 **mēlǵ-* (or **melǵ-* ?) ‘to stroke off, to wipe, to milk’; Walde 1927—1932.II:298—299 **melǵ-*; Mann 1984—1987:750 **melǵō* ‘to caress, to titillate, to massage, to milk’, 750 **melǵos*, *-ā*, *-is* ‘milk; milky sap, latex’, 750—751 **melǵtis* ‘milk’, 774—775 **mǵ-*, 775 **mǵō*, *-jō* ‘to caress, to wipe, to milk’, 775 **mǵt-*, 792 **molǵ-* ‘drip, milk’; Watkins 1985:41 **melg-* (zero-grade form **mǵg-*) and 2000:54 **melg-* ‘to rub off’, also ‘to milk’ (oldest form **ǵ₂melǵ-*) (zero-grade form **mǵg-*); Gamkrelidze—Ivanov 1984.II:569—571 **melk̃-* and 1995.I:486—488 **melk̃-* ‘(vb.) to milk; (n.) milk’; Mallory—Adams 1997:381 **h_amelǵ-* ‘to milk’; Benveniste 1935:157 **ǵ₂m-él-g-*; Hofmann 1966:15; Chantraine 1968—1980.I:74—75 **mēlǵ-*, **mǵg-*; Frisk 1970—1973.I:91; Boisacq 1950:52 **amelǵ-*; Beekes 2010.I:86 **h₂melǵ-*; Walde—Hofmann 1965—1972.II:121 **melǵ-*; Ernout—Meillet 1979:418 **mēlǵ’-*, **mǵg’-*; De Vaan 2008:393; Orël 1998:270 and 2003:266—267 Proto-Germanic **melkanan*, 267 **melkaz*, 267 **melktaz*, 267 **melukōjanan*, 267 **melukz*; Kroonen 2013:347 Proto-Germanic **meluk-* ‘milk’, 364 **meluka-* ‘giving milk’, and 364—365 **mel(u)kan-* ‘to milk’; Feist 1939:360—361 **melǵ-*; Lehmann 1986:256 **mēlǵ-*, **mǵg-*; De Vries 1977:389 and 397; Boutkan—Siebinga 2005:254—255; Onions 1966:575 and 576 **melg-*, **mǵg-*; Klein 1971:464 and 465; Kluge—Mitzka 1967:473 **melǵ-* and 478; Kluge—Seebold 1989:472 **melǵ-* and 478; Huld 1984:256; Preobrazhensky 1951:550—551; Derksen 2008:307 and 2015:310—311 **h₂melǵ-*; Fraenkel 1962—1965.I:434—435; Smoczyński 2007.1:387—388; Van Windekens 1976—1982.I:284 **melǵ-*; Adams 1999:442 **melǵ-*.

- C. Uralic: Proto-Finno-Ugrian **mälki* ‘breast’ > Karelian *mälvi* ‘the breast meat of a bird’; Estonian *mälv* ‘wishbone, breastbone, sternum’; Lapp / Saami *miel’gâ* ‘breast, chest (of animals; of humans only in certain expressions)’; Cheremis / Mari *mel* ‘breast’; Vogul / Mansi *mägl* ‘breast’; Votyak / Udmurt *myl-* in *myl-až* ‘the front side of the breast’; Mordvin (Moksha) *mälhkä* ‘breast’; Hungarian *mell* ‘chest, breast, bosom’; Ostyak / Xanty *mögəl* ‘breast’. Rédei 1986—1988:267 **mälke*; Collinder 1955:97 and 1977:114; Sammallahti 1988:546 **mälki* ‘breast’. Yukaghir (Southern / Kolyma) *melut* ‘breast’. Nikolaeva 2006:263. Semantic development as in Old Church Slavic *сѣсѣ* ‘breast’ < *сѣсѣ*, *spsati* ‘to suck’ or Gujarati *dhāvvū* ‘to suck at the breast’, *dhāvaṇ* ‘mother’s milk, the breasts’, *dhāi* ‘woman’s breast or teat’, all derived from Vedic *dhāpáyate* ‘to suckle’. Note also the reverse semantic development in Modern Greek, where *βυζαίνω* ‘to suck, to suckle’ is derived from Late Greek *βυζίον* ‘woman’s breast’.
- D. (?) Proto-Gilyak / Nivkh **malr* ‘female genitals’: Amur *malχ* ‘female genitals’; South Sakhalin *malχ* ‘female genitals’. Fortescue 2016:101.
- E. Eskimo: Proto-Inuit **malak* or **malaq* ‘upper part of breast’ > North Alaskan Inuit *malak* ‘chest’; Eastern Canadian Inuit *malak* ‘upper part of

breast of mammals'; Greenlandic Inuit *malaq* 'front of throat'. Fortescue—Jacobson—Kaplan 1994:186 **malak* or **malaq* 'front of throat'. Proto-Eskimo **məluɣ*- 'to suck (breasts)': Alutiiq Alaskan Yupik *məluɣ*- 'to suck'; Central Alaskan Yupik *məluɣ*- 'to suck'; Naukan Siberian Yupik *məluɣ*- 'baby's "pacifier" of walrus or reindeer fat'; Central Siberian Yupik *məluɣ*- 'to suck'; Sirenik *məɬəɣ*- 'to suck or breathe in'; Seward Peninsula Inuit *məlu* (Imaqliq) 'nipple', (Qawiaaraq) 'breast, udder, milk'; North Alaskan Inuit *miluk* 'nipple, breast', (Malimiut) 'milk'; Western Canadian Inuit *miluk* 'woman's breast', (Siglit) 'milk' (probably influenced by English); Eastern Canadian Inuit *miluk*- 'to suck', *millua(q)*- 'to suckle'; Greenlandic Inuit *miluy*-, *miɬuy*- 'to suck'. Fortescue—Jacobson—Kaplan 1994:197—198.

Buck 1949:4.40 breast (front of chest); 4.41 breast (of woman); 5.16 suck (vb.); 5.86 milk (sb.); 5.87 milk (vb.). Bomhard—Kerns 1994:672—674, no. 552; Dolgopolsky 1998:28—29, no. 19, **mälge* 'breast, female breast' and 2008, no. 1414, **mälge* (or **mälkê* ?) 'breast, udder'; Illič-Svityč 1971—1984.II:57—58, no. 291, **mälgi* 'breast, udder'; Hakola 2000:102, no. 436; Greenberg 2002:122—123, no. 281; Fortescue 1998:155.

880. Proto-Nostratic root (Eurasian only) **mal*- (~ **məl*-):

(vb.) **mal*- 'to rub, to wipe, to stroke';

(n.) **mal-a* 'the act of rubbing, wiping, stroking'

- A. Proto-Indo-European **mel-k*'-/ **mol-k*'-/ **m̥l-k*'- 'to wipe, to stroke': Sanskrit *mṛjáti* 'to wipe, to rub, to cleanse, to polish, to clean, to purify, to adorn; to make smooth, to curry (for example, a horse or other animal); to stroke; to wipe off or out, to remove, to destroy', *mṛjā* 'wiping, cleansing, washing, purification, ablution', *mṛṣṭá-h* 'washed, cleansed, polished; clean, pure; smeared, besmeared with', *márjya-h* 'cleansed, prepared'; Avestan *mərəzaiti* 'to wipe, to touch'. Rix 1998a:249—250 **h₂melǵ*- 'to milk'; Pokorny 1959:722—723 **mēlǵ*- (or **melǵ*- ?) 'to stroke off, to wipe, to milk'; Walde 1927—1932.II:298—299 **melǵ*-; Mann 1984—1987:749 **melǵō* 'to caress, to titillate, to massage, to milk' and 775 **m̥lǵō*, -*ǵō* 'to caress, to wipe, to milk'; Mayrhofer 1956—1980.II:670—671 **melǵ*-; Watkins 1985:41 **melg*- (zero-grade form **m̥lg*-) and 2000:54 **melg*- 'to rub off', also 'to milk' (oldest form **ǵ₂melǵ*-) (zero-grade form **m̥lg*-). Proto-Indo-European **mel-kʰ*-/ **mol-kʰ*-/ **m̥l-kʰ*- 'to touch, to stroke, to handle': Sanskrit *mṛśáti* 'to touch, to stroke, to handle'; Latin *mulceō* 'to stroke, to touch lightly', *mulcō* 'to thrash, to cudgel; to handle roughly'. Rix 1998a:250 **h₂melk*- 'to touch, to stroke'; Pokorny 1959:724 **melk*- 'to rub, to stroke'; Walde 1927—1932.II:297—298 **melk*-; Mann 1984—1987:776 **m̥lkō*, -*ǵō* 'to touch, to taste, to caress'; Mayrhofer 1956—1980.II:677—678; Walde—Hofmann 1965—1972.II:120 Latin

mulceō < **molkejō*, *mulcō* < **molkājō*; stem **melk-* and II:121; Ernout—Meillet 1979:418; De Vaan 2008:392—393.

- B. Uralic: Proto-Finno-Ugrian **mälz-* ‘to feel, to handle, to touch’ > Votyak / Udmurt *mählehtä-* ‘to recall, to remember’; Estonian *mälu* ‘memory’, *mäle-*, *mäleta-* ‘to remember’; Zyrian / Komi (Sysola) *malal-* ‘to feel, to handle, to touch’; Ostyak / Xanty (Vah) *mäl-* ‘to touch with the fingers, etc.’. Rédei 1986—1988:267—268 **mälz-*.
- C. Proto-Altaic **mali-* originally ‘to rub, to wipe, to stroke’, then also ‘(vb.) to beat; (n.) club, mallet, cudgel’: Proto-Tungus **mala-* ‘(vb.) to beat; (n.) club, mallet’ > Manchu *mala* ‘a wooden mallet’, *malaša-* ‘to beat to death fish caught under ice’; Udihe *muleu* ‘club, pestle’; Solon *malā* ‘club, pestle’. Proto-Mongolian **milaya* ‘whip’ > Written Mongolian *milaya* ‘whip, scourge’, *milayada-* ‘to whip’; Khalkha *malia* [малиа] ‘whip’; Buriat *minā* ‘whip’; Kalmyk *malā* ‘whip’; Ordos *milā* ‘a strip for fixing a whip on its handle’; Dagur *minā*, *nimā* ‘whip’; Shira-Yughur *munā* ‘whip’. Note also Written Mongolian *milaya-* (also *maliya-*) ‘to anoint, to smear with oil’. Proto-Turkic **baltu* ‘axe’ > Old Turkic (Old Uighur) *baltu* ‘axe’; Karakhanide Turkic *baldu* ‘axe’; Turkish *balta* ‘axe’; Azerbaijani *balta* ‘axe’; Turkmenian *palta* ‘axe’; Uzbek *bolta* ‘axe’; Karaim *balta* ‘axe’; Tatar *balta* ‘axe’; Bashkir *balta* ‘axe’; Kirghiz *balta* ‘axe’; Kazakh *balta* ‘axe’; Noghay *balta* ‘axe’; Oyrot (Mountain Altai) *malta* ‘axe’; Yakut *balta*, *baltisax* ‘arrow with a blunt end’. Starostin—Dybo—Mudrak 2003:898 **mali* ‘stick, cudgel’.
- D. Proto-Chukchi-Kamchatkan **male-* ‘to wipe or sweep up’: Chukchi *male-* ‘to wipe, to stroke (affectionately)’, *mal-ecyən* ‘towel’; Kerek *ma(a)li-*, *ma(a)lā-* ‘to wipe’, *mali-ttu-* ‘to smooth out, to stroke, to caress’, *mal-iitn* ‘rag for cleaning’, *in-maali-i-u-* ‘comfort’; Koryak *male-* ‘to wipe, to sweep’, *malie-* ‘to stroke (affectionately)’; Alyutor (Palana) *maletat-* ‘to sweep up’, *mali-* ‘to touch, to brush away’; Kamchadal / Itelmen *male-kas* ‘to sweep up’, (Western) *malete-s* ‘to sweep out’, (Eastern) *malixc* ‘to sweep out’. Fortescue 2005:169—170; Mudrak 1989b:102 **mali-* ‘to sweep’.

Buck 1949:9.21 strike (hit, beat); 9.31 rub; 9.37 sweep; 15.71 touch (vb.); 15.72 feel (vb.), feel of; 15.73 touch (sb.).

881. Proto-Nostratic (adj.) **mal-a* ‘other, next, second’:

- A. Afrasian: North Cushitic: Beja / Beḍawye *málo*, *mállo* ‘two’, *málho* ‘duality, a pair’. Reinisch 1895:168 and 169; Almkvist 1881—1885.I:82 and III:45.
- B. Dravidian: Kannaḍa *mala* ‘other, next, second (in compounds)’; Telugu *malu* ‘next, second’. Burrow—Emeneau 1984:419, no. 4732.

- C. Yukaghir (Northern / Tundra) *maala-* ‘both sides, opposite’, *maalayur* ‘both sides of something’, (Southern / Kolyma) *ma:ləyul’əlgə* ‘around’. Nikolaeva 2006:257.
- D. Proto-Eskimo **malruk* ‘two’: Alutiiq Alaskan Yupik *malluk* ‘two’; Central Alaskan Yupik *malruk* ‘two’; Naukan Siberian Yupik *malruk* ‘two’; Central Siberian Yupik *malruk* ‘two’; Sirenik *malruk* ‘two’; Seward Peninsula Inuit *marluuk*, (Qawiaq) *malruk* ‘two’; North Alaskan Inuit *malruk* ‘two’; Western Canadian Inuit *malruk* ‘two’; Eastern Canadian Inuit *marruuk* ‘two’; Greenlandic Inuit *martuk* ‘two’. Fortescue—Jacobson—Kaplan 1994:187. Proto-Eskimo **malri* ‘twin’: Alutiiq Alaskan Yupik *mal<R>ik* ‘twins’; Central Alaskan Yupik *malri* ‘twin’; Central Siberian Yupik *malrik* ‘twins’; Seward Peninsula Inuit *malri* ‘twin’; North Alaskan Inuit *malri* ‘twin’; Western Canadian Inuit *malrik*, *malriak* ‘twins’; Eastern Canadian Inuit *marruliak* ‘twins’; Greenlandic Inuit *marhuliaq* ‘twin’. Fortescue—Jacobson—Kaplan 1994:187. Proto-Eskimo **malru(C)it* ‘two sets’: Alutiiq Alaskan Yupik *malruin* ‘two sets’; Central Alaskan Yupik *malruin* ‘two sets’; Seward Peninsula Inuit *marluit* ‘two sets, pairs, or groups’; North Alaskan Inuit *malruit* ‘two sets’; Eastern Canadian Inuit *marruit* ‘two sets’; Greenlandic Inuit *marhuit* ‘two sets’. Fortescue—Jacobson—Kaplan 1994:187.

Dolgopolsky 2008, no. 1400, **malV* ‘another, second’ or ‘two’.

882. Proto-Nostratic root **mal-* (~ **məl-*):

(vb.) **mal-* ‘to bend, to twist, to turn’;

(n.) **mal-a* ‘bend, turn’

Derivative:

(vb.) **mal-* ‘to be confused, perplexed, disturbed, bewildered, mistaken’;

(n.) **mal-a* ‘confusion, perplexity, bewilderment’

- A. Afrasian: Proto-Semitic **ma-(ya-)l-* ‘to bend, to bend down, to incline’ > Arabic *māla* (base *myl*) ‘to bend, to bend down; to bow down, to lean over, to turn (toward someone); to incline, to slope, to slant, to tilt, to tip; to be inclined, slanting, oblique; to incline toward, to tend, to be favorably disposed (to); to have a predilection, a liking, an inclination, a propensity (for); to feel sympathy (for), to sympathize (with), to favor; to take sides, to side (with); to be partial, biased, prejudiced; to lean (against); to revolt, to rebel (against), to be hostile (to someone); to be disinclined, to be adverse (to something); to have an antipathy, a distaste, a dislike (for); to deviate, to digress, to turn away, to depart (from); to drag or take someone or something along to’, *mayl* ‘inclination, tilt; bend, turn, deflection; obliqueness, obliquity, slant; slope, incline, declivity; deviation, divergence, declination; affection (for), attachment (to); predilection, liking, sympathy (for); propensity, disposition, bent, leaning, proclivity,

taste, desire, wish, longing, tendency, trend, drift (to or toward)', *mā'il* 'inclining (to or toward); bending down, bowing down, leaning over; bent, tilted; sloping, declivitous (terrain); inclined, slanting, oblique'; Ḥarsūsi *meṣōl* 'to turn away, to turn aside'; Mehri *məyūl* 'to look, to turn sideways, to turn aside, to incline to one side', *həmyūl* 'to incline to one side'; Šheri / Jibbāli *mēl* 'to turn sideways, to incline', *šəmyél* 'to be inclined to one side'. Zammit 2002:392. Arabic *malwiyy* 'twisted, plaited', *malwūk* 'bent, folded; distorted', *mulawwa* 'distorted'.

- B. Dravidian: Tamil *malukku* 'slip-knot'; Kannaḍa *malaku* 'a turn, twist, fold, bend; a sash', *mallāṇi*, *mallāṇi* 'turning round, wandering about'; Telugu *malāgu* 'to wander, to roam about, to turn back (intr.); to become crooked', *malāpu* 'to turn back (intr.)', *malapu* 'to turn back (tr.)', *malācu* 'to turn back, to bend, to cause to slant', *mala-gonu* 'to be twisted', *malayu* 'to be twisted; to wander, to roam', *malāka* 'a twist, curved line, crookedness, spiral', *maluku* 'a turn, twist, fold, slip-knot', *malugu*, *maluvu* 'a turning'; Kolami *malay-* 'to return', *malāy-* 'to return, to roam'; Parji *mell-* 'to return'; Gondi *mallānā*, *mall-*, *mal-*, *maldānā* 'to return', (caus.) *malluhtānā*, *mallahtānā* 'to turn back'. Burrow—Emeneau 1984:419, no. 4734. Kannaḍa *malagu*, *malāngu* '(vb.) to recline, to rest, to lie down; (n.) pillow, cushion'; Koḍagu *maṇṅ-* (*maṇṅi-*) 'to lie down, neglecting work'; Tuḷu *malaguni* 'to lie down, to sleep', *maṇṅuni* 'to recline, to lean against'; Kolami *maṅ-* (*maṅkt-*) 'to sleep, to have sexual intercourse', *maṅ-* 'to sleep'; Naikri *maṅ-* 'to sleep'; Naiki (of Chanda) *maṅ-* 'to sleep, to lie down', *maṅup-* 'to make to sleep'; Gondi *malḥ* 'bedstead'; Pengo *mag-* (*makt-*) 'to lie, to sleep', *mak-* 'to cause to lie, to fell (tree)'; Kuwi *meg-* 'to fall down, to fall off'. Burrow—Emeneau 1984:419, no. 4735. Tamil *malar* 'to turn the face or mouth upward (as a pot)', *malarttu* (*malartti-*) 'to throw on one's back (as in wrestling)', *mallā*, *mallār* 'to fall or lie on the back', *mallāttu* (*mallātti-*) 'to make a person or thing lie on the back'; Malayalam *malaruka* 'to lie on the back', *malarttuka* 'to place on the back, to lie open', *malakkam* 'standing upright and bending the head backwards'; Koḍagu *mala-ra* 'outstretched with face upward', *male-* (*malev-*, *maland-*) 'to turn face upward (intr.)', *mala-* (*malap-*, *malat-*), *malat-* (*malati-*) 'to turn face upward (tr.)'; Tuḷu *malāṅkaṇi*, *malāṅkaṇē* 'on the back'. Burrow—Emeneau 1984:420, no. 4740. Toda *malf-* (*malt-*) '(buffalo) to look sideways before charging'; Kannaḍa *mālu* 'to bend', *māla*, *mālu* 'sloping, slanting; slope, descent', *mālisu* 'to look obliquely, to turn the eye and cast a look from the corner, to bend to one side (as a post, etc.), to behold for the first time'; Tuḷu *māluni* 'to lean, to incline, to reel, to stagger, to totter', *mālāvuni* 'to make lean or incline, to cause to lean', *malave* 'man with squint eyes', *maleyuni*, *malevuni* 'to frown, to scowl, to stare'. Burrow—Emeneau 1984:428—429, no. 4825. Perhaps also: Tamil *mālai* 'garland, wreath, necklace, anything strung together, line, row', *malai*, *milai* 'to wear, to put on (as a garland)'; Malayalam *māla* 'garland,

wreath, necklace, dewlap'; Kannada *māle* 'wreath, garland, necklace, row, line, series (one of the tatsamas)'; Koḍagu *ma·le* 'necklace, dewlap, jungle cock's ruff of neck-feathers'; Tuḷu *mālè* 'garland, wreath, necklace'; Telugu *māla* 'garland, wreath, necklace'. Burrow—Emeneau 1984:429, no. 4827. Tamil *māl* 'a kind of net'; Malayalam *māl* 'a kind of net for carrying fruits, fishing, etc.', *māli* 'a coir net'. Burrow—Emeneau 1984:428, no. 4823.

- C. Proto-Altaic **malt^{he}* 'to bend, to twist': Proto-Tungus *maltu-* 'to bend' > Evenki *maltu-* 'to bend'; Lamut / Even *malt^h*- 'to bend'; Negidal *maltⁱ*- 'to bend'; Orok *māltima* 'folding knife'; Solon *malta-* 'to bend'. Proto-Mongolian **mōltū-re- ~ *multu-ra-* (< **malt^{he}-rV*) 'to twist, to contort, to disentangle' > Written Mongolian *mōltüre-* 'to loosen, to detach; to be dislocated, disjointed; to escape', *mōltüle-* 'to dislocate, to disjoint', *multura-* 'to pull out, to disentangle oneself; to be freed from; to disjoint; to slip off, to escape; to break loose', *multul(a)-* 'to free by taking off or out, to pull out completely (as a plant with its roots); to unharness, to unyoke; to unlock, to uncouple, to unlink, to disconnect, to unscrew, to disjoint, to luxate'; Khalkha *mōltlō-* / *multla-* 'to separate, to disconnect, to pull loose; to dislocate; to unharness, to unyoke; to free', *mōltrō-* / *multra-* 'to break loose, to come loose; to become untied, disentangled; to become free'; Buriat *mūlterxey* 'slippery, intangible'; Kalmyk *mōltarə-* 'to twist, to contort, to disentangle'; Dongxiang *multurə-* 'to twist, to contort, to disentangle'; Monguor *mutirē-*, *mutərē-*; *mutili-*, *mutəla-* 'to twist, to contort, to disentangle'. Starostin—Dybo—Mudrak 2006:899 **malt^e* 'to bend, to twist'.
- D. Chukchi-Kamchatkan: Proto-Chukotian **məla-* 'supple, flexible' > Chukchi *m(ə)l-at-* 'to become supple (skin)', *rə-məla-w-* 'to make supple (skin), to make strong or agile (person)', *nə-mlilə-qin* 'flexible, supple'; Kerek *nə-ml[?]a-u-* 'to soften skin'; Koryak *jə-mla-w-* 'to make supple', *nə-mlə-qin* 'flexible'; Alyutor *msa-* 'supple (skin)'. Fortescue 2005:182. Proto-Chukotian **məl(ro)-* 'nimble' > Chukchi *nə-mətlə-qen*, *mətlə-l[?]en*, *nə-mlə-qen* 'nimble, quick', *məla-twe-* 'to become nimble' [Bogoraz has *nə-mlə-qen* 'nimble, flexible' but *nə-mlə-qin* 'lively']; Alyutor *məlrū-*, (Palana) *ne-mcə-qen* 'nimble'; Kerek *nə-məlvuu-Xi* 'nimble, bold'; Koryak *nə-məll'o-qen* 'nimble'. Fortescue 2005:181—182. Proto-Chukchi-Kamchatkan (?) **məlav-* 'to dance': Chukchi *məlaw-* 'to dance'; Kerek *mlau-* 'to dance'; Koryak *məlav-* 'to dance', *məlaw* (n.) 'dance'; Alyutor *məliav-* 'to dance', *məlavvə* (n.) 'dance'; Kamchadal / Itelmen *ma[?]tkas* 'play', *ma[?]te-s* 'game', *məavo-kas* 'dance' (this may be a loan from Chukotian). Fortescue 2005:182.

Buck 1949:6.75 necklace; 9.14 bend (vb. tr.); 10.12 turn (vb.); 10.13 turn around (vb.); 10.14 wind, wrap (vb.); 10.15 roll (vb.); 10.44 dance (vb.). Dolgopolsky 2008, no. 1401, **malV* 'to incline, to bend'.

883. Proto-Nostratic root **mal-* (~ **māl-*):(vb.) **mal-* ‘to be confused, perplexed, disturbed, bewildered, mistaken’;(n.) **mal-a* ‘confusion, perplexity, bewilderment’

Derivative of:

(vb.) **mal-* ‘to bend, to twist, to turn’;(n.) **mal-a* ‘bend, turn’

- A. Afrasian: Highland East Cushitic: Sidamo *maalal-* ‘to be surprised’; Kambata *maalal-* ‘to be surprised’, *maalal-siis-* ‘to surprise, to startle’, *malat’-* ‘to cheat’. Hudson 1989:331, 332, and 383.
- B. Dravidian: Tamil *malanku* (*malanki-*) ‘to be agitated, turbid, confused; to shake, to move, to tremble (as the eyes), to perish’, *malakkam* ‘confusion of the mind, distress, bewilderment’, *malakku* (*malakki-*) ‘to bewilder, to disturb, to confuse’, *malai* (*-v-*, *-nt-*) ‘to be staggered, doubtful, or confused’, *malai* (*-pp-*, *-tt-*) ‘to be staggered, doubtful, or confused; to be amazed; to afflict, to distress’, *malaippu* ‘confusion of mind, astonishment, amazement’, *malaivu* ‘delusion, confusion of mind, amazement, fright’; Malayalam *malekka* ‘to grow thick or muddy; to be perturbed, to be perplexed’, *maleppu* ‘perplexity, wonder’; Kannada *mallani*, *mallari* ‘bodily agitation, bewilderment, fear, amazement’; Telugu *malayu* ‘to be distressed, to grieve’; Kolami *melg-* (*melekt-*) ‘to shake (intr.)’, *melp-* (*melept-*), *melgip-* (*melgipt-*) ‘to shake (tr.)’, *melagang* ‘to move (intr.)’; Gadba (Salur) *melg-* ‘to stir, to move’; Gondi *melhānā* ‘to shake’, *talla melihānā* ‘to shake the head in trance’, *mellī-* ‘to move’. Burrow—Emeneau 1984:419, no. 4736. Tamil *māl* (*mālv-*, *mānr-*) ‘(vb.) to be confused, perturbed; (n.) illusion, delusion, aberration of mind, dullness, stupor, confusion, desire, love, lust’, *māli* ‘toddy’, *mānrār* ‘those who are confused in mind’, *mānrāl* ‘bewilderment’, *mān* (*mānv-*, *mānr-*) ‘to be doubtful, to be confused’; Malayalam *māl* ‘infatuation, confusion, grief, sickness of mind’, *mālu* ‘toddy’; Telugu *mālugu* ‘(vb.) to be lazy; (n.) laziness’, *mālūbōtu* ‘lazy man, sluggard’; Naiki (of Chanda) *māl* ‘liquor’; Parji *mēl* ‘liquor’; Gadba (Ollari) *māl* ‘liquor’, (Salur) *māl* ‘liquor, toddy’. Burrow—Emeneau 1984:428, no. 4822.
- C. Proto-Indo-European **mel-/mol-/m̥l-* ‘(vb.) to be confused, mistaken, wrong; (n.) wrong, falsehood; (adj.) wrong, false’: Armenian *mel* ‘sin, transgression’, *molim* ‘to become mad’, *molorim* ‘to err, to be confused, to be mistaken; to be mad’, *molar* ‘erring, deceiving’, *moli* ‘mad, furious’; Middle Irish *mell* ‘fault, sin’, *mellaim* ‘to deceive’, *maile* ‘evil’; Old English *āmeallian* ‘to become insipid’; West Frisian *māl* ‘foolish, mad’; Middle Low German *mall* ‘stupid, foolish’; Dutch *mal* ‘foolish, funny, cracked, crazy, mad’; Lithuanian *mēlas* ‘lie, falsehood’; Latvian *meli* ‘lie, falsehood’; (?) Sanskrit *malvā-h* ‘thoughtless, foolish, unwise’; (?) Greek μέλεος ‘idle, useless; unhappy, miserable’. Pokorny 1959:719—720 **mel-* ‘to miss, to fail (to do or achieve something); to deceive, to delude, to

mislead'; Walde 1927—1932.II:291 **mel-*; Mann 1984—1987:752 **melos* (oblique -es-) 'wrong, falsehood; wrong, false'; Watkins 1985:40 **mel-* 'to miss, to deceive'; Mallory—Adams 1997:155 **melos* 'bad', **méles-* 'fault, mistake', **mel-* 'to fail' and 2006:194 **méles-*, 197 **melo-*, **méles-*; Mayrhofer 1956—1980.II:602; Boisacq 1950:623—624; Frisk 1970—1973.II:200; Chantraine 1968—1980.II:681; Hofmann 1966:196 **mel-*; Beekes 2010.II:925; Martirosyan 2008:378 **mel-s-eh₂-* and 381—382; Orël 2003:258 Proto-Germanic **mallaz*; Vercoullie 1898:181; Fraenkel 1962—1965.I:430; Smoczyński 2007.1:385—386.

- D. Yukaghir (Northern / Tundra) *maalijuori-* 'to surprise', *malii-* 'to amaze', *maalaa-* 'to peer with curiosity', *maaličnej* 'strange, funny', *maaluu-* 'amazing', *maalej-* 'amazed'. Nikolaeva 2006:257.
- E. Proto-Eskimo **malukali-* 'to be crazy': Central Alaskan Yupik (Norton Sound Unaliq) *malukkali-* 'to be rabid, insane' (this is probably a borrowing from Inuit); Seward Peninsula Inuit *malukali-* 'to be crazy', *malukaja-* 'to act crazy'; North Alaskan Inuit *malukali-* 'to be crazy', *malukayi-* 'to consider inferior, to be ashamed of', (Nunamiut) *malukaliq* 'madman, rabid animal'; Western Canadian Inuit (Siglit) *malukaliṇayuyq* 'idiot'. Fortescue—Jacobson—Kaplan 1994:187.

Buck 1949:12.74 crooked; 16.68 deceit; 16.76 fault, guilt; 16.77 mistake, error; 17.23 insane, mad, crazy. Different etymology in Dolgopolsky 2008, no. 1402, **mæLV* (= **mæIV* ?) 'to hide'.

884. Proto-Nostratic root **man-* (~ **mən-*):

- (vb.) **man-* 'to suckle, to nurse (a child), to breastfeed';
 (n.) **man-a* 'suckling, young (of humans and animals); breast'

- A. Proto-Afrasian **man-* '(vb.) to suckle, to nurse (a child), to breastfeed; to bring up, to raise; (n.) baby, child; breast': Egyptian *mn^o* 'to suckle, to nurse (a child); to bring up, to raise (of a father who brings up his child)', *mn^ot* 'female nurse, foster-mother', *mn^oy* 'male nurse; tutor', *mnḏ* 'breast'; Coptic (Sahidic) *moone* [**MOONE**], (Bohairic) *moni* [**MONI**] 'nurse', *mnot* [**MNOT**] 'breast'. Erman—Grapow 1921:65, 66 and 1926—1963.2:77—78, 2:92—93; Hannig 1995:338 and 343—344; Faulkner 1962:108 and 110; Gardiner 1957:568 and 569; Vycichl 1983:115 and 117; Černý 1976:85 and 86. Proto-Southern Cushitic **manaš-* 'baby' > Iraqw *na^oay* 'baby'; Burunge *naw* 'baby boy'; Dahalo *mána^oe* 'baby'. Ehret 1980:153.
- B. Proto-Indo-European **men-t-*/**mon-t-*/**mṇ-t-* '(vb.) to suckle, to nurse (a child), to breastfeed; (n.) suckling, young animal; breast': Albanian *mënt* 'to suckle, to breastfeed'; Old High German (pl.) *manzon* 'udders'; Middle Irish *menn* 'young animal, calf'; Welsh *mynnan* 'kid'; Cornish *min* 'a kid, young goat'; Breton *menn* 'young animal'. Pokorny 1959:729 **mend-*, **mond-* (**mṇd-*) '(vb.) to suck, to suckle; (n.) breast'; Walde 1927—

1932.II:232 **mand-*; Gamkrelidze—Ivanov 1984.II:556 and 1995.I:474; Mann 1984—1987:730 **mandos*, *-jos* ‘young animal, foal, calf’; Orël 2003:259 Proto-Germanic **mandjō*.

Buck 1949:2.25 boy; 2.26 girl; 2.27 child; 2.28 infant; 4.40 breast (front of chest); 4.41 breast (of woman); 4.42 udder. Bomhard—Kerns 1994:657, no. 534.

885. Proto-Nostratic root **man-* (~ **mən-*):

(vb.) **man-* ‘to count, to reckon’ (> ‘to consider, to think’ > ‘to recount’ > ‘to say, to speak’);

(n.) **man-a* ‘counting, reckoning’

Note: There may be more than one Proto-Nostratic root involved here: (1) **man-* ‘to count, to reckon’ and (2) **man-* ‘to say, to speak’.

- A. Proto-Afrasian **man-* ‘to count, to reckon; to consider, to think’: Proto-Semitic **man-ay-* ‘to count, to reckon’ > Hebrew *mānāh* [מָנָה] ‘to count, to number, to reckon, to assign’, *mānāh* [מָנָה] ‘part, portion, ration, share’; Aramaic *mənā* ‘to number, to count, to reckon’; Ugaritic *mnt* ‘counting’; Akkadian *manū* ‘to count, to reckon’; Epigraphic South Arabian *mnw* ‘to allot’, *mnyt* ‘fortune’. Murtonen 1989:261; Klein 1987:355. Lowland East Cushitic: Somali *maan-* ‘mind’. West Chadic **man-* ‘to know’ > Ngizim (Kanuri) *mánà* ‘word, speech; intention’ (cf. Schuh 1981:110); Sura *man-* ‘to know’; Bole *mon-* ‘to know’; Buli *man-* ‘to know’. South Bauchi Chadic (Bu: / Zaranda) *man-* ‘to be able, to know’ (cf. Caron 2008:104). Jungraithmayr—Ibrisimow 1994.II:216—217. Central Chadic **man-* / **mun-* (secondary **-u-*) ‘to understand, to analyze’ > Lamel *man-*, *mun-* ‘to understand, to analyze’. Orël—Stolbova 1995:373, no. 1721, **man-* ‘to know, to test’.
- B. (?) Dravidian: Iruḷa *maṇi* ‘to talk, to speak’; Kota *mayṇ-* (*maṇc-*) ‘to talk, to scold, to abuse’; Tuḷu *maṇipuni*, *manipuni* ‘to speak, to utter’ (used chiefly in negative). Burrow—Emeneau 1984:413, no. 4671. Tamil *maṇu* ‘petition, request, prayer, word, submission’; Kannaḍa *manave*, *manuve* ‘petition, request, solicitation’; Telugu *manavi* ‘a humble or respectful representation, request, solicitation, prayer, petition’. Burrow—Emeneau 1984:424, no. 4775.
- C. Proto-Indo-European **men-/mon-/mṇ-* ‘to reckon, to consider, to think’: Hittite (3rd sg. pres.) *me-ma-a-i* (< **me-mn-eA-*) ‘to say, to speak’; Sanskrit *mānyate* ‘to think, to believe, to imagine, to suppose, to conjecture’, *matī-ḥ* ‘thought’, *māntu-ḥ* ‘advice, counsel’, *mānas-* ‘mind, intellect, perception, sense, will, soul, thought’, *māntra-ḥ* ‘thought, prayer, spell, counsel’, *mantrāyate* ‘to speak (RV), to consult with, to advise (MhB)’; Pāli *manutē* ‘to think, to discern’, *manō* ‘mind, thought’, *maññati*

‘to think, to deem, to be sure of’, *manta-* ‘spell, advice’; Oriya *maṇibā* ‘to know, to think, to agree’, *maṇā* ‘understanding, knowledge’; Hindi *mānnā* ‘to respect, to obey’, *man* ‘mind’; Romany *mǎnǎr* ‘to think’; Sinhalese *mana* ‘mind’; Assamese *māt* (< *mántra-h*) ‘voice, utterance, speech’; Bashkarīk *man-* ‘to say’, *mānā-* ‘to read’; Chilis *man-* ‘to say’; Phalūra *man-* ‘to say’; Avestan *man-* ‘to think’, *manah-* ‘thought, spirit, mind’; Old Persian *man-* ‘to think’, *manah-* ‘thinking power, power of will’; Greek *μυμνήσκω* ‘to remember’, *μνᾶομαι* ‘to be mindful of’; Latin *meminī* ‘to remember’, *moneō* ‘to remind’, *mēns* ‘mind’; Old Irish *do-moinethar* ‘to think’, *menme* ‘mind, intelligence’; Gothic *munan* ‘to think, to consider’, *ga-munds* ‘remembrance, memory’, *muns* ‘thought, intention’, *ga-mīnþi* ‘memory’; Old Icelandic *muna* ‘to remember’, *munr* ‘mind’, *minna* ‘to remind of’, *minni* ‘memory’; Old English *manian* ‘to remind, to admonish, to exhort’, *myndgian* ‘to remember, to bear in mind, to intend (intr.); to remind (tr.)’, *ge-mynan* ‘to remember’, *ge-mynde* ‘mindful’, *ge-mynd* ‘memory, remembrance’, *ge-mun* ‘remembering’, *myne* ‘memory, remembrance’; Middle High German *gi-munt* ‘memory, recollection’; Lithuanian *miniù*, *minėti* ‘to mention, to refer, to remember’, *mintis* ‘thought, reflection, idea’; Old Church Slavic *мъно*, *мънѣти* ‘to think’, *па-мѣтъ* ‘memory’; Old Russian *měniti* ‘to speak’. Rix 1998a:391—393 **men-* ‘to form an idea’ and 403 **mneh₂-* ‘to think about’; Pokorny 1959:726—728 **men-* ‘to think’; Walde 1927—1932.II:264—266 **men-*; Mann 1984—1987:756 **menō* ‘to remember, to think, to remind’, 757 **menos*, -*es-* ‘power, craft, ability, skill’, 758 **mentis*, -*us* ‘thought, remembrance’, 778 **mṇ-*, 779 **mṇis*, -*ī* ‘thought, memory’, 780 **mṇō*, -*ī* (**mən-*) ‘to think, to remember’, 781 **mṇt-* ‘mind, mindful; mental, concept, shape’, 795 **monjō*, **monejō* ‘to think, to advise’, 795 **monjos*, -*ī* ‘mind, thought, memory’, 796 **monus* ‘wise, thinking, intelligent, thought’; Watkins 1985:41 **men-* and 2000:54 **men-* ‘to think’; Gamkrelidze—Ivanov 1984.I:176, II:813 **men-/m_en-* > **mṇ-* and 1995.I:142, I:713 **men-/m_en-* > **mṇ-* ‘to think, to remember, to talk’, I:172 **mṇthis* ‘mind’; Mallory—Adams 1997:575 **men-* ‘to think, to consider’; Mayrhofer 1956—1980.II:563—564 **men-*; **mṇti-*, **menti-*, II:564 **mṇ-tú-*, II:573—574, II:577—578, and II:583—584; Boisacq 1950:625—626 **me-mṇ-*; **men-*, **m(e)nā-*; **mṇtī-*; **mṇnēi-*; Chantraine 1968—1980.II:685 **mṇti-* and II:702—703 **mnā-*; Frisk 1970—1973.II:206—207 Greek μέ-μα-μεν < **mé-mṇ-me* and II:238—241 **mnā-*; Hofmann 1966:196—197 **me-mṇ-*; **men-*, **m(e)nā-*, and 202 **menēi-*; Beekes 2010.II:953—954 **mneh₂-*; Ernout—Meillet 1979:395 **men-* and 412; De Vaan 2008:371—372, 372, and 387; Walde—Hofmann 1965—1972.II:65—67 **men-*, II:69—70 **mṇtis*, and II:107 **monéjō*; Orël 2003:259 Proto-Germanic **mana*, 259 **manēnan*, 268 **mendiz*, 268 **menþjan*, 268 **menþjanan*, 275 **mundiz*, 275—276 **mundōjanan*, 276 **mundraz*, 276 **mundrīn*, 276 **munēnan*, 276 **muniz*; Kroonen 2013:375 Proto-Germanic **munan-* ‘to think, to

remember, to intend' and 375 **mundi-* 'memory, mind'; Lehmann 1986: 145 **men-* 'to think' and 260—261 **men-*, **mnā-* (**mne₂-*); **mṇ-ye/o-*; **mṇti-*; **men-e/o-*; Feist 1939:193, 194 **men-*, **mṇtós*, and 366—367 **men-*; De Vries 1977:388, 395, and 396; Onions 1966:577 Old English *ġemynd* < Germanic **ġamundiz*, Proto-Indo-European **men-*, **mon-*, **mn-* 'to revolve in the mind, to think'; Klein 1971:455 **men-* 'to think, to remember'; Kloekhorst 2008b:573—575; Puhvel 1984— .6:126—140 **men-* 'to think, to remember'; Fraenkel 1962—1965.I:26 and I:455—459; Smoczyński 2007.1:401; Derksen 2008:340—341 **mn-eh₁-* and 2015:318 **mn-eh₁-*.

- D. Proto-Uralic **man₃-* (**mon₃-*) 'to consider, to conjecture; to recount, to say, to speak': Finnish *manaa-* 'to warn, to exhort, to admonish, to curse, to bewitch, to execrate, to wish evil to'; Estonian *mana-* 'to abuse, to upbraid, to ruin, to slander, to curse', *mõna-* 'to give to understand, to indicate'; Lapp / Saami *moannâ-/moanâ-*, *moanâdâ-* 'to conjecture, to solve by conjecture', (Southern) *muoně-* 'to appoint, to order, to prescribe; to conjecture'; Hungarian *mond-* (*-d* is a suffix) 'to say, to tell', *monda* 'legend, saga, myth', *mondás* 'saying, expression', *mondogat* 'to keep saying, to repeat'; Cheremis / Mari *mana-* 'to speak, to say, to order'; Yurak Samoyed / Nenets *maan-* 'to say'; Tavgi Samoyed / Nganasan *muno-* 'to say, to command'; Selkup Samoyed *my-* 'to say'; Kamassian *ma-* 'to say'. Collinder 1955:33, 1960:407 **man₃-*, and 1977:53; Rédei 1986—1988:290—291 **mṣn₃-* (**mon₃-*); Décsy 1990:103 **mona* 'to say'; Janhunen 1977b:88 **mā-* ~ **mân-*. Yukaghir (Southern / Kolyma) *mon-* 'to say'; (Northern / Tundra) *mon-* 'to say'. Nikolaeva 2006:274. Note also: Yukaghir (Southern / Kolyma) *möñd'ə*, *meñd'ə* 'news', (Northern / Tundra) *möñd'e-* 'to be awake; to hear (to not be deaf)', *möñčeban-*, *menčeban-* 'to be endowed with the gift of foresight, to be a hypnotizer'. Nikolaeva 2006:264.
- E. Proto-Altaic **mana-* 'to learn, to try': Proto-Tungus **man-dū-* 'to try, to strive' > Evenki *mandūw-* 'to try, to strive'; Lamut / Even *manru-* 'to try, to strive'; Orok *mandu-* 'to try, to strive'. Starostin—Dybo—Mudrak 2003:901 **mana* 'to learn, to try'.

Buck 1949:11.66 account, reckoning; 17.14 think (= be of the opinion); 18.21 speak, talk; 18.22 say. Illič-Svityč 1971—1984.II:42—43, no. 281, **manu-* 'to think'; Bomhard—Kerns 1994:639—641, no. 519; Pudas-Marlow 1974:62, no. 165; Hakola 2000:102—103, no. 438; Greenberg 2002:167, no. 388; Dolgopolsky 2008, no. 1428, **moñV* 'to test, to think' and, no. 1439, **mañ[Vy]V* 'to speak, to call, to invoke magic forces'.

886. Proto-Nostratic root **man-* (~ **mən-*):

(vb.) **man-* ‘to stay, to remain, to abide, to dwell; to be firm, steadfast, established, enduring’;

(n.) **man-a* ‘dwelling, house, home’

- A. Proto-Afrasian **man-* ‘to stay, to remain, to abide, to dwell; to be firm, steadfast, established, enduring’, **man-/min-* ‘dwelling, house, home’: Proto-Semitic **ʔa-man-* ‘to make firm, or secure, to safeguard, to assure’ > Amorite *ʔmn* ‘to be true’; Hebrew *ʔāman* [ʔān] ‘to confirm, to support, to verify, to approve; to be strong, enduring, reliable, steady; to stay faithful to, to have stability, to remain, to continue’, *ʔōmēn* [ʔōn] ‘faith, trust, confidence, fidelity’ (a hapax legomenon in the Bible), *ʔāmēn* [ʔān] ‘(n.) faithfulness, truth; (adv.) Amen!, true!, so be it!’; Aramaic *ʔaman* ‘to believe, to trust’; Syriac *ʔamīn* ‘true, lasting’, *ʔeθʔemen* ‘to be steadfast, to persevere’; Phoenician *ʔmn* ‘support’; Arabic *ʔamina* ‘to be safe, to feel safe; to reassure, to set someone’s mind to rest; to assure, to ensure, to safeguard, to guarantee, to warrant, to bear out, to confirm’, *ʔamuna* ‘to be faithful, reliable, trustworthy’, *ʔamān* ‘security, safety, protection, safeguard, escort’, *ʔamn* ‘safety, peace, security, protection’, *maʔman* ‘place of safety, safe place’, *ʔamīn* ‘reliable, trustworthy, loyal, faithful, upright, honest, safe, secure; superintendent, curator, custodian, guardian, keeper’, *ʔīmān* ‘faith, belief’; Sabaeen *ʔmn* ‘(vb.) to give assurance, to assure; (n.) security, protection’; Harsūsi *ʔāmōn* ‘to believe, to believe in, to trust’, *ʔamān* ‘safe conduct’; Šheri / Jibbāli *ʔūn* (base *ʔmn*) ‘to trust in, to believe in’; Mehri *hāmōn* ‘to trust in someone or something’; Geez / Ethiopic *ʔamna* [አሞኑ] ‘to believe, to trust, to have faith in, to have confidence, to be true, to profess the faith, to confess (sins), to admit’, *ʔamān* [አሞን] ‘truth; true, right, faithful, valid; verily’; Tigrinya *ʔamānā* ‘to believe’; Tigre *ʔamna* ‘to believe, to trust’; Amharic *ammānā* ‘to believe, to testify’; Gurage *amānā* ‘to believe, to trust, to confess, to admit’, *əmnāt* ‘confidence, reliance, belief’; Harari *amāna* ‘to believe’. Murtonen 1989:93; Klein 1987:35; Leslau 1963:26, 1979:49, and 1987:24; Zammit 2002:79–80. Egyptian *mn* ‘to remain, to abide, to dwell; to be firm, established, enduring’; Coptic *mun* [ⲙⲟⲩⲛ] ‘to remain, to continue’. Hannig 1995:333; Faulkner 1962:106; Erman—Grapow 1921:63 and 1926—1963.2:60—62; Gardiner 1957:568; Vycichl 1983:114; Černý 1976:83. Proto-East Cushitic **man-/min-* ‘house’ > Somali *min* ‘bridal house’; Rendille *min* ‘house’; Boni *miṅ* ‘house’; Bayso *min* ‘house’; Elmolo *min* ‘house’; Galla / Oromo *man-a* ‘house’; Konso *man-a* ‘house’; Burji *min-a* ‘house’; Hadiyya *min-e* ‘house’; Kambata *min-e* ‘house’, *min-* ‘to build (a house)’; Gedeo / Darasa *min-e* ‘house’; Sidamo *min-e* ‘house’, *min-* ‘to build (a house)’; Alaba *min-o* ‘house’; Gawwada *man-o* ‘house’; Gidole *man-a* ‘house’; Gollango *man-o* ‘house’. Hudson 1989:81; Sasse 1979:24 and 1982:145. Proto-Southern Cushitic **min-* ‘house’ > Dahalo

mìni ‘house’; Ma’a *mi*, *minda* ‘house’. Ehret 1980:158. West Chadic **man-/min-* ‘house, place’ > Tangale *man* ‘house’; Dera *māna* ‘house’; Pero *mīna* ‘house’; Sha *mun* ‘place’ (secondary *-u-*). West Chadic: Ngizim *mànú* ‘to spend a year’, (verbal noun) *mánù* ‘spending a year’, *mànànú* ‘to spend several years’. East Chadic **man-* ‘place’ > Somray *mana* ‘place’; Ndam *maan* ‘place’; Tumak *man* ‘place’. Orël—Stolbova 1995:374, no. 1723, **man-/min-* ‘house’ and 389, no. 1795, **mun-* ‘to be, to remain’.

- B. Dravidian: Tamil *mannu* (*manni-*) ‘to be permanent, to endure, to stay, to remain long, to persevere, to be steady’, *mannal* ‘permanence, stability, steadiness’; Malayalam *mannuka* ‘to stand fast, to persevere’; Telugu *manu* ‘to live, to exist, to behave, to act, to conduct oneself’, *man(i)ki* ‘existence, living, life, residing, livelihood, abode, dwelling, home, place, locality’, *manukuva* ‘abode, dwelling, place’, *manugaḍa* ‘life, living, livelihood, subsistence’, *manucu*, *manupu* ‘to protect, to maintain, to preserve, to revive’, *manupu* ‘protection, maintenance’, *manuvu* ‘conduct’, *manni* ‘life’, *mannu* ‘to last, to be durable’; Naiki (of Chanda) *man-* ‘to be’; Gadba (Ollari) *man-* (*may-*, *maṭ-*) ‘to be, to stay’, (Salur) *man-* (*mand-*, *manj-*, *mey-*) ‘to be’; Gondi *mandānā* (*matt-*), *man-* ‘to remain, to abide, to be’; Parji *men-* (*mend-*, *mett-*) ‘to be, to stay’; Konḍa *man-* (*mar-*) ‘to be, to stay, to dwell’; Pengo *man-* (*mac-*) ‘to be’; Kui *manba* (*mas-*) ‘to be, to exist, to remain, to abide’; Kuwi *man-* (*macc-*) ‘to be’, *manjali* (*mac-*) ‘to remain’, *man-* (*mac-*) ‘to remain, to exist, to stay’, *mannai* (*macc-*) ‘to be’; Kurux *mannā* (*mañjas*) ‘to become, to come off, to result, to be, to turn out to be, to be in appearance, to act as if, to behave as though, to be abundant, to amount to’; Malto *mene* ‘to be or become’; Brahui *manning* ‘to become, to be’. Burrow—Emeneau 1984:424—425, no. 4778. Tamil *maṇai* ‘house, dwelling, mansion, house-site, a land measure, wife, family, household, domestic life’, *maṇaiyāl*, *maṇaiyōl* ‘wife’, *maṇai* ‘wife, heroine of a pastoral or agricultural tract, female owner or resident of a house’; Malayalam *mana* ‘house’; Kota *mantanm* ‘affairs of a household’, *man devr* ‘household god’; Toda *man* ‘family, household’; Kannaḍa *mane* ‘habitation, abode, house, apartment, room’, *manetana*, *mantana* ‘household, household life’, *manetanasta* ‘householder; a worthy, honorable man’; Koḍagu *mane* ‘house’, *maneka-rē* ‘man of the house’; Tuḷu *manetana* ‘household’, *manē* ‘house, home’. Burrow—Emeneau 1984:424, no. 4776; Krishnamurti 2003:90, 117—118, 279, 496, and 498—499 **man-* (**man-t-*) ‘to be, to live, to stay’, 8 **man-ay* ‘house, place to stay in’.
- C. Proto-Indo-European **men-/mon-/mṇ-* ‘to stay, to remain, to abide, to dwell; to be firm, steadfast, established, enduring’: Sanskrit *man-* ‘to wait, to stay, to hesitate’; Avestan *man-* ‘to remain’; Old Persian *man-* ‘to remain’; Armenian *mnam* ‘to remain’; Greek μένω ‘to stand fast; to stay at home, to stay where one is at; (of things) to be lasting, to remain, to stand, to be stable, to be permanent; to abide’, μί-μν-ω ‘to stay, to stand fast; to

tarry; (of things) to remain; to await', μόνη 'a staying, abiding; permanence; stopping place, station, apartment, quarters, billets; monastery', μόνιμος 'staying in one's place, stable; (of persons) steady, steadfast; (of things) lasting, enduring'; Latin *maneō* 'to stay, to remain; to endure, to last; to abide; to wait for, to await'. Probably also Tocharian A/B *māsk-* (< *mṣ-sk^h-e/o-) 'to be' (cf. Adams 1999:458—459). Rix 1998a:393—394 **men-* 'to stay, to remain, to abide'; Pokorny 1959:729 **men-* 'to remain'; Walde 1927—1932.II:267 **men-*; Mann 1984—1987:756—757 **menō* (**mīmēnō*) 'to remain, to be, to rest', **mṣō*, -*iō* (**mən-*) 'to remain', 796 **monos*, -*us* (**monṣos*) 'remaining, alone, single, individual'; Mayrhofer 1956—1980.II:573; Mallory—Adams 1997:482 **men-* 'to remain, to stay'; Watkins 1985:41 **men-* and 2000:54 **men-* 'to remain'; Boisacq 1950:627 **men-*; Beekes 2010.II:931—932 **men-*; Chantraine 1968—1980.II:686; Frisk 1970—1973.II:208—209 **men-*; Hofmann 1966:197 **men-*; Walde—Hofmann 1965—1972.II:26 **men-*; Ernout—Meillet 1979:383; De Vaan 2008:362 **m(o)n-ē*.

- D. (?) Yukaghir (Northern / Tundra) *med'uo-* (< **menč'*-) 'to enter upon'. Nikolaeva 2006:264.
- E. Altaic: Proto-Tungus **mēne-* 'to settle down, to stay' > Evenki *mēnē-* 'to settle down', *mēnē* 'settled down'; Lamut / Even *mene* 'settled down'; Negidal *menēže-* 'to stay'; Oroch *menēži-* 'to stay'; Udihe *menže-* 'to stay'. Semantically, the Tungus forms are a perfect match with those from the other Nostratic languages cited here. However, the root vowel is a problem. Perhaps, we are dealing with secondary developments within Tungus itself. In any case, the Altaic etymology proposed by Starostin—Dybo—Mudrak (2003:913) is not convincing.

Buck 1949:7.12 house; 9.91 be; 12.16 remain, stay, wait'. Caldwell 1913:601; Möller 1911:165; Illič-Svityč 1971—1984.II:51—52, no. 287, **mAnā* 'to remain in place, to stand firmly'; Dolgopolsky 2008, no. 1419, **manV* 'house, dwelling' and, no. 1420, **māñā* 'to remain, to stay'; Bomhard—Kerns 1994: 641—643, no. 520.

887. Proto-Nostratic root **man-* (~ **mən-*):

- (vb.) **man-* 'to protect, to watch over, to stand guard over, to care for, to take care of, to tend';
- (n.) **man-a* 'protection, care, guardianship; watchman, herdsman, guardian, protector'

- A. Afrasian: Egyptian *mni* (*mīnī*) 'to tend flocks, to act as herdsman', *mniw* (apparently originally *m(i)niw*) 'herdsman'; Coptic (Sahidic) *moone* [MOONE], (Bohairic) *moni* [MONI], *amoni* [AMONI] 'to pasture, to feed', *man-* [MAN-], *mane-* [MANG-] 'herdsman', *man-esow* [MAN-ESCOOW] 'shepherd'. Hannig 1995:337; Faulkner 1962:108; Gardiner 1957:568;

Erman—Grapow 1921:65 and 1926—1963.2:74—75; Vycichl 1983:115—116; Černý 1976:84.

- B. Indo-European: Proto-Germanic **munđō* ‘protection, guardianship’ > Old English *mundian* ‘to protect, to be guardian’, *mundiend* ‘protector’, *mund* ‘protection, guardianship; protector, guardian’, *gemynd* ‘caring for, solicitude’; Old Frisian *mund* ‘protection’, *mundele* ‘ward, minor’; Old Saxon *mundōn* ‘to protect’; Old High German *muntōn* ‘to protect someone’, *munt* ‘protection’; New High German *Mund* (f.) ‘protection’, *Mündel* ‘ward, minor’, *Mündelstand* ‘pupilage’, *Mündelgeld* ‘trust-money’, *mündelsicher* ‘absolutely safe (of investments, etc.)’, *-mund* in: *Vormund* ‘guardian, trustee’, *Vormundschaft* ‘guardianship, trusteeship, tutelage’. Orël 2003:275 Proto-Germanic **munđō* (< **m̥-tā*); Boutkan—Siebinga 2005:267 and 272; Kluge—Mitzka 1967:493 **m̥-tā* and 826; Kluge—Seebold 1989:492 and 769. Note: Not related to words for ‘hand’ (see below, Proto-Nostratic (vb.) **man^v-* ‘to hold, to take’; (n.) **man^v-a* ‘hand, paw’).
- C. Yukaghir (Northern / Tundra) *maanné-* ‘to protect jealously without letting somebody go near somebody else’. Nikolaeva 2006:258 — Nikolaeva notes: “An irregular long vowel in a closed syllable suggests that *-ñə-* is a derivational suffix.”
- D. Altaic: Mongolian *mana-* ‘to keep vigil, to hold night watch, to safeguard, to stand guard over, to make the rounds as guard during the night’, *manay-a(n)* ‘the act of watching or guarding; guard, night sentry, watch, patrol, post’, *manayači* ‘watchman, guard’, *manayul* ‘guard, sentinel, (night) watch’; Khalkha *mana-* ‘to guard, to watch’; Buriat *mana-* ‘to guard, to watch’; Kalmyk *manə-* ‘to guard, to watch’; Ordos *mana-* ‘to guard, to watch’; Dagur *mana-* ‘to guard, to watch’; Shira-Yughur *mana-* ‘to guard, to watch’; Monguor *mana-* ‘to guard, to watch’. Poppe 1960:70; Street 1974:19 **mana-* ‘to stand watch’. Starostin—Dybo—Mudrak (2003:953—954) reconstruct Proto-Altaic **muña* ‘to guard, to graze’ — while the semantics of their proposed etymology are good, there are problems with the phonetics.

Buck 1949:11.24 preserve, keep safe, save.

888. Proto-Nostratic root **man-* (~ **mən-*):
 (vb.) **man-* ‘to swell, to expand, to grow, to increase’;
 (n.) **man-a* ‘multitude, crowd, herd, flock’
 Related to (extended form):
 (vb.) **man-V-g-* ‘to swell, to expand, to grow, to increase’;
 (n.) **man-g-a* ‘great number, large amount; abundance; multitude, crowd’;
 (adj.) ‘many, numerous, copious, abundant; swollen, big, fat, strong’

- A. Afrasian: Egyptian (f.) (reduplicated) *mnmnt* ‘herds, cattle’. Hannig 1995:339; Faulkner 1962:109; Erman—Grapow 1921:65 and 1926—1963.2:81; Gardiner 1957:568.
- B. Elamo-Dravidian: Neo-Elamite *man-da-qa* ‘filled, full’, *man-tak* ‘it was filled’. Dravidian: Tamil *mantai* ‘flock, herd, common pasture of a village, open space in the middle of a village common to the community’; Kannada *mandi*, *mande* ‘flock of sheep or goats, herd of cattle or buffaloes, open place in the jungle or near a village where a flock or herd stands, pen, fold’; Telugu *manda* ‘flock, herd, drove, pack; place where flocks or herds are kept outside a village; hamlet inhabited by herdsmen’; Parji *manda* ‘herd, flock, company, association’; Gondi *manda* ‘herd, flock’; Konda *manda* ‘herd’; Kuwi *manda* ‘herd, flock’. Burrow—Emeneau 1984:415, no. 4700a. Kannada *mandi*, *mande* ‘persons, people’; Tulu *mandi*, *mandè* ‘persons, people’; Telugu *mandi* ‘crowd, collection of persons; retinue, following, infantry’; Pengo *mandanakar*, *madanakar* ‘people belonging to the same side or party’; Kolami *mandī* ‘men’, *mandi* ‘man’. Burrow—Emeneau 1984:415, no. 4700b.
- C. Uralic: Proto-Ugric **mānz* ‘herd’ > (?) Ostyak / Xanty *manəŋ* ‘herd (of reindeer, horses, cows)’; (?) Hungarian *mén* ‘stallion’, *ménes* ‘stud(-farm)’. Rédei 1986—1988:869 **mānz* ‘some kind of animal’. Note: Proto-Finno-Permian **mone* ‘a certain quantity, many’ is probably a loan from Indo-European (cf. Collinder 1955:133 and 1977:144; Rédei 1986—1988:279—280; Joki 1973:286).
- D. Proto-Altaic **mana* ‘crowd, flock, herd’: Proto-Tungus **mani* ‘crowd, flock, herd’ > Oroch *mañi* ‘crowd, flock, herd’; Orok *mandi* ‘crowd, flock, herd’; Nanay / Gold *mandu* ‘crowd, flock, herd’; Evenki *man* ‘crowd, flock, herd’; Negidal *man* ‘crowd, flock, herd’; Ulch *mandu* ‘crowd, flock, herd’; Udihe *mani* ‘crowd, flock, herd’. (?) Proto-Mongolian **mandu-*, **mantu-* ‘big, large’ > Buriat *mandagar*, *mantan*, *mantagar* ‘big, large’; Written Mongolian *manduyur* ‘big, fat, stout’; Khalkha *mandgar*, *mantay* ‘big, large’. Proto-Turkic **bani-*, **boni-* ‘big, large’ > Chuvash *măwnăw* ‘big, large’. Starostin—Dybo—Mudrak 2003:901, **mana* ‘many, big’.

Buck 1949:13.19 multitude, crowd (sb.). Dolgopolsky 2008, no. 1418, **mAnV* ‘herd/flock, gregarious animal(s)’; Hakola 2000:106, no. 454.

889. Proto-Nostratic root **man-* (~ **mən-*):

Extended form:

(vb.) **man-V-g-* ‘to swell, to expand, to grow, to increase’;

(n.) **man-g-a* ‘great number, large amount; abundance; multitude, crowd’;
(adj.) ‘many, numerous, copious, abundant; swollen, big, fat, strong’

Related to:

(vb.) **man-* ‘to swell, to expand, to grow, to increase’;

(n.) **man-a* ‘multitude, crowd, herd, flock’

- A. Afrasian: East Cushitic: Afar *mango-* ‘to be much, many’; Saho *mango* ‘many’, *mang-* ‘to be full, numerous’. Central Cushitic: Awngi / Awiya *ménč* ‘much, many’, *minčy-* ‘to be many’. Appleyard 2006:97.
- B. Proto-Indo-European **men(e)gho-s/*mon(e)gho-s/*m̥gho-s* ‘copious, abundant, many’: Old Irish *menic(c)* ‘frequent, abundant’; Welsh *mynych* ‘frequent’; Cornish *menouch* ‘frequent’; Gothic **manags* ‘sufficient (in size), very large, many’, *managduþs* ‘abundance’, *managei* ‘people, crowd, multitude’, **managnan* ‘to be plentiful, to abound, to increase; to be left over’, **managian* ‘to increase, to make (more) abundant’, **managfalþs* ‘many times more’; Old Icelandic *mangr* ‘many’, *mengi* ‘multitude’; Old English *manig*, *monig* (later *mænig*) ‘many’, *menigo* ‘multitude, crowd, great number’; Old Frisian *man(i)ch*, *monich*, *menich* ‘many’, *menie* ‘crowd’; Old Saxon *manag* ‘much, many’, *menigi* ‘crowd’; Dutch *menig* ‘many’; Old High German *manig*, *menig* ‘much, many’ (New High German *manch*), *managē*, *menigī* ‘crowd’ (New High German *Menge*); Old Church Slavonic *тъногъ* ‘much, great, manifold, many’; Russian *mnógije* [многие] ‘many’, *mnógo* [много] ‘much, plenty of; a lot of, many’. Walde 1927—1932.II:268—269 **men(e)gh-*, **mon(e)gh-*, **m̥gh-*; Pokorny 1959:730 **men(e)gh-*, **mon(e)gh-*, **m̥gh-* ‘copious, abundant, many’; Mann 1984—1987:795 **monoghos* ‘much, many, frequent’; Watkins 1985:41 **menegh-* and 2000:55 **menegh-* ‘copious’; Mallory—Adams 1997:3 **menegh-* ‘abundant’; Orël 2003:259 Proto-Germanic **manaǵa-faldaz*, 259 **manaǵaz*, 259 **manaǵin*; Kroonen 2013:352 Proto-Germanic **managa-* ‘many’; Feist 1939:343—344; Lehmann 1986:243; De Vries 1977:378 and 384; Onions 1966:554 **monogho-*, **menogho-*; Klein 1971:444; Kluge—Mitzka 1967:458 **men(e)gh-*, **mon(e)gh-*, **m̥gh-* and 474; Kluge—Seebold 1989:458 and 473; Boutkan—Siebinga 2005:256—257; Derksen 2008:334.
- C. Altaic: Proto-Tungus **maŋga* ‘strong, hard’ > Evenki *maŋa* ‘strong, hard’; Lamut / Even *maŋ* ‘strong, hard’; Negidal *maŋga* ‘strong, hard’; Manchu *maŋga* ‘hard, difficult; strong, fierce’, *meŋge* ‘hard (of foods), hard to chew’; Jurchen *maŋ-ga* ‘strong, hard’; Ulch *maŋga* ‘strong, hard’; Oroch *maŋga* ‘strong, hard’; Nanay / Gold *maŋga* ‘strong, hard’; Oroch *maŋga*, *maŋasi* ‘strong, hard’; Udihe *maŋga*, *maŋahi* ‘strong, hard’; Solon *mandê*, *mandī* ‘very, heavily’. Starostin—Dybo—Mudrak 2003:903 **maŋga* (~ -o) ‘big, strong’. Tungusic loan in Gilyak / Nivkh: Amur *maŋg-d* ‘strong, important, difficult, valuable’; East Sakhalin *maŋg-d* ‘dear, expensive, hard, violent, intense’; South Sakhalin *ma:ya-nt* ‘strong’. Fortescue 2016: 101—102.

Buck 1949:4.81 strong, mighty, powerful; 13.15 much; many; 15.74 hard. Illič-Svityč 1965:348 **m/o/nA*, **m/o/n/g/A* ‘many’ [‘много’]; Dolgopolsky 2008, no. 1443, **mañVga* (or **maŋga* ?) ‘strong, numerous’; Greenberg 2002:114, no. 260.

890. Proto-Nostratic root **man^v-* (~ **mən^v-*):

(vb.) **man^v-* ‘to lust after, to desire passionately, to copulate with, to have sexual intercourse, to beget’;

(n.) **man^v-a* ‘ardent desire, passion, lust’

Derivative:

(n.) **man^v-a* ‘progenitor, begetter, man, male; penis’

- A. Proto-Afrasian **man-* ‘(vb.) to lust after, to desire passionately, to copulate with, to have sexual intercourse, to beget; (n.) ardent desire, passion, lust’: Proto-Semitic **man-ay-* ‘(vb.) to lust after, to desire passionately, to copulate with, to have sexual intercourse, to beget; (n.) ardent desire, passion, lust’ > Akkadian *menū*, *manū* ‘to love, to become fond of someone’, *mēnu* ‘love’ (?); Arabic *manā* (base *mny*) ‘to desire, to wish for, to ejaculate; to practice onanism, to masturbate’, *minan* ‘semen, sperm’, *munya*, *minya* ‘wish, desire; object of desire’; Šheri / Jibbāli *mútni* (base *mny*) ‘to want, to wish’; Ḥarsūsi *emtōni* (base *mny*) ‘to wish’; Mehri *metōni* (base *mny*) ‘to wish’; Geez / Ethiopic *tamannaya* [ተመነየ] ‘to wish, to desire, to be eager for’, *tamnet* [ተምነት] ‘wish, desire, lust’; Tigrinya (*tä*)*männäyä* ‘to wish, to desire’; Tigre (*tə*)*manna* ‘to wish, to desire’; Amharic (*tä*)*männä* ‘to desire, to wish, to be desirous of, to covet, to aspire to’, *männöt* ‘wish, desire, ambition, aspiration’; Gurage (Ennemor, Gyeto) (*tä*)*mēñä*, (Gogot) *tämeññä*, (Endegeñ) *tämēññä*, (Selti) *tämēñe*, (Wolane) *tämeññe*, (Zway) *tämāñi*, (Eža, Muher) *tämänna*, (Chaha) *tämena*, (Masqan) *tämenna*, (Soddo) *täminna* ‘to wish, *to have sexual intercourse, to be covered (cattle), to be coupled, to conceive (cattle)’, (Chaha) *mənuta*, *tämāññat*, (Eža) *mənnutta*, *täm^wennat*, (Gogot, Soddo, Wolane) *məññot*, (Muher) *məññutta*, (Gyeto) *tämāñāt*, (Ennemor) *tämeñāt*, (Selti) *tämēñāt*, (Endegeñ) *tämāññād* ‘wish, *sexual desire’, (Eža, Muher) *amäññat bädda*, (Chaha) *amäññat bāta* ‘to be covered (cattle), to be coupled, to conceive (cattle)’ (literally, ‘the desire took’); Argobba (*əm*)*meñña* ‘to wish, to desire’; Harari (*tä*)*männi* ‘wish’; Gafat (*tä*)*mēñä* ‘to wish, to have sexual intercourse’. Zammit 2002:389; Leslau 1963:108, 1979:414, and 1987:352—353. Egyptian *Mnw* ‘the god Min’ (an ithyphallic god of generation), *mnmn* ‘to copulate’ (the god Min, with his mother). Hannig 1995:339, 1208, and 2006:3068—3069; Faulkner 1962:108; Gardiner 1957:568; Erman—Grapow 1921:64 and 1926—1963.2:72, 2:81. Central Chadic: Lamel *mun* ‘preferred’; Masa *min-* ‘to want’. West Chadic: Fyer *muni* ‘to love, to like’; Sha *mun* ‘to love, to like’; Pero *meno* ‘to love, to like’. [Orël—Stolbova 1995:384, no. 1772, **min-* ‘to want’ and 389, no. 1796, **mun-* ‘to love’.]

Comment: Militarëv—Kogan (2000:I:302—303, no. 41) reconstruct Proto-Semitic (vb.) **mny* ‘to have sexual desire; to discharge sperm; to exude vaginal secretion’. Although they observe that: “The original meaning

preserved in Arb. is probably ‘to discharge sperm, exude vaginal secretion’, with a shift to ‘have sexual desire’ and further ‘to desire, wish, want’ and ‘love’, such an interpretation appears unwarranted in view of the semantics of the non-Arabic cognates within Semitic. Militarëv—Kogan do not list any non-Semitic cognates.

- B. Dravidian: Tamil *maṇa* ‘to be united, mingled; to come together; to happen, to be fixed, attached; to wed; to copulate with; to live in company with; to embrace’, *maṇappu* ‘copulation, essence, possession of extensive properties’, *maṇam* ‘union (as of lovers), marriage, respectability, dignity, prosperity, influence’, *maṇantavṇ*, *maṇavāḷaṇ*, *maṇavāḷi* ‘bridegroom, husband’; Malayalam *maṇālan*, *maṇavāḷan* ‘bridegroom, husband’, *maṇam* ‘reputation, marriage’, *maṇāṭṭi* ‘bride’; Gondi *marming* ‘marriage’; Telugu *manumu*, *manuvu* ‘marrying a husband, marriage of a woman’; Malto *manyē* ‘to love, to marry’, *manc-naqe* ‘to love each other, to marry each other’. Burrow—Emeneau 1984:413, no. 4667.
- C. Proto-Indo-European **men-/mon-/mṇ-* ‘(vb.) to desire passionately, to yearn for; (n.) ardent desire, passion, lust’: Tocharian B *mañu* ‘desire’, A *mnu* ‘spirit, appreciation, desire’ (< Proto-Tocharian **māñāu-* ‘desire’ < Proto-Indo-European **men-ew-* ‘desire’); Sanskrit *man-* (RV) ‘to hope or wish for’ (also ‘to think’), *mānas-* ‘spirit, passion’ (also ‘mind, intellect, perception, sense’), *manasyú-* (RV) ‘wishing, desiring’, *manā́* (RV) ‘devotion, attachment, zeal, eagerness’, *manīṣita-* (MBh) ‘desired, wished (for); desire, wish’, *manyú-* (RV) ‘high spirit or temper, ardor, zeal, passion’; Greek *μενεαίνω* ‘to desire earnestly or eagerly’, *μένοϛ* ‘spirit, passion’, *μέμονα* (perfect used as present) ‘to desire or wish eagerly, to yearn for, to strive for’, *μενοινῆ* ‘eager desire’, *μενοινάω* ‘to desire eagerly’; Old Irish *menn-* ‘to desire’, *menme* ‘feeling, desire’ (also ‘mind, intelligence’); Welsh *mynnu* ‘wish, will’, *mynnwys* ‘desired’; Cornish *mynnes* ‘will’; Middle Breton *mennat* (Modern Breton *mennout*) ‘to wish, to desire’; Old Icelandic *muna* ‘to like, to long for’, *munaðr* ‘delight’, *munr* ‘love’, *munuð* or *munúð* ‘pleasure, lust’; Norwegian *mun* ‘pleasure, enjoyment’; Old English *myne* ‘desire, love, affection’ (also ‘memory’), *mynle* ‘desire’, *mynelic* ‘desirable’; Old Frisian *minne* ‘love’; Old Saxon *minnea*, *minnia* ‘love’; Dutch (poetical) *minne* ‘love’, *beminnen* ‘to love’; Old High German *minna* ‘love’ (New High German [poetical] *Minne* ‘love’), *minnōn*, *minneōn* ‘to love’. According to Feist (1939:193, under Gothic *ga-minþi*), the Old High German, Dutch, Old Saxon, and Old Frisian forms are from Proto-Indo-European **menjā*. Bomhard 2004a:33—34; Mann 1984—1987:755 **menā* ‘thought, desire’; De Vries 1977:395 and 396; Kluge—Mitzka 1967:480; Kluge—Seebold 1989:480; Boutkan—Siebinga 2005:262—263; Torp 1919:438. Note: Not related to Proto-Indo-European **men-* ‘to think, to remember’.
- D. Uralic: Estonian *mõnu* ‘pleasure, relish, gusto’, *mõnule-* ‘to enjoy oneself, to take pleasure, to feel cozy’, *mõnus* ‘pleasant, pleasurable’.

- E. Chukchi-Kamchatkan: Proto-Chukotian **mænnuk-* ‘to be indulgent towards someone’ > Chukchi *re-mənnu-ŋ-* ‘to smile’ (with **ðæ-* *-ŋ(ə)-*); Koryak *mannuku ləŋ-* ‘to spoil, to be indulgent towards’. Fortescue 2005:173.

Buck 1949:16.61 will, wish (vb.); 16.62 desire (vb.). Bomhard—Kerns 1994:663—664, no. 541; Dolgopolsky 2008, no. 1440, **mAnVɣV* or **mAnV* ‘genitalia; to copulate’.

891. Proto-Nostratic (n.) **man^v-a* ‘progenitor, begetter, man, male; penis’:

Derivative of:

(vb.) **man^v-* ‘to lust after, to desire passionately, to copulate with, to have sexual intercourse, to beget’;

(n.) **man^v-a* ‘ardent desire, passion, lust’

- A. Proto-Afrasian **man-* ‘progenitor, begetter, man, male’: Proto-Highland East Cushitic **man(n)-* ‘man, person’, (pl.) ‘people’ > Burji *lám̐mi* ‘man, person’, (n. coll.) *méena* ‘people’; Gedeo / Darasa *manjo*, *manj-icco* ‘man, person’, *manna* ‘man, person, people’; Kambata *man-cu* ‘man, person’, (pl.) *manna* ‘men, people’; Sidamo *man-co* ‘man, woman, person’, (pl.) *manna* ‘men, people’; Hadiyya *man-co* ‘man, person’, (pl.) *manna* ‘people’. Sasse 1982:133 and 143; Hudson 1989:96 and 112. Proto-East Cushitic **man-t-/*m̐n-t-* ‘woman’ (with fossilized feminine suffix) > Burji *mand-ée* ‘virgin, young unmarried girl, young woman’; Kambata *ment-iccu(-ta)* ‘woman’, (pl.) *meento* ‘women’; Dasenech *minni* (< **m̐n-ti*) ‘woman’; Gedeo / Darasa *manj-icco* ‘woman’; Hadiyya *mento* ‘woman’; Sidamo *man-co* ‘man, woman, person’, (pl.) *meento* ‘women’. Sasse 1982:140; Hudson 1989:170. Bayso *man-to* ‘penis’, *man-tiiti* ‘vagina’; Burji *múnn-aa* ‘vagina’. According to Sasse (1982:133), Highland East Cushitic has metathesized Proto-East Cushitic **nam-/*nim-/*num-* ‘man’ (cf. Saho-Afar *num* ‘man’; Somali *nin* ‘man’, [pl.] *nim-an*; Galla / Oromo *nam-a* ‘man’; Konso *nam-a* ‘man’; Gidole *nam-a* ‘man’ [cf. Sasse 1979:24]). However, in view of the forms for ‘woman’, ‘penis’, and ‘vagina’, which are clearly derivatives from a primary **man-/*m̐n-/*mun-*, as well as related forms in other Afroasian languages, Highland East Cushitic **man(n)-* ‘man, person’ may well be original. West Chadic: Geji *má-nì/ma:nì* ‘man’; Buli *manne/mánè/manì* ‘man’; Tule *ma:ŋə* ‘man’; Wangday *mánè/manì* ‘man’. South Bauchi Chadic (Bu: / Zaranda) *má:ní* (variant *mwá:ní*) (adj.) ‘male’ (cf. Caron 2008:104). Central Chadic: Kotoko-Logone *méni/mééni* ‘man’ (pl. *mááwée* ‘men’). Jungraithmayr—Ibrizimow 1994.II:230—231. Orël—Stolbova 1995:373—374, no. 1722, **man-/*mayan-* ‘man’. Note: Blažek (2020:76) lists Beja / Beḍawye *me(n)sq̣q̣* ‘scrotum’. This may belong here as well.

- B. Dravidian: (?) Tamil *māntar* ‘human beings, male persons’; Kolami *ma:s* ‘man’, *māc* ‘husband’; Naikṛi *mās* ‘man, husband’; Naiki (of Chanda) *mās* ‘husband’; Parji *mañja*, *mañña* ‘man’; Gondī *manja* ‘man, human being’; Kōṇḍa *māsi* ‘husband’; Kuṛux *mēt*, *mēt* ‘adult man, husband’. Burrow—Emeneau 1984:425—426, no. 4791. Tamil *māṇi* ‘penis’; Malayalam *māṇi* ‘penis’; Kannaḍa *māṇi* ‘penis’. Burrow—Emeneau 1984:427, no. 4805.
- C. Proto-Indo-European **menu-s/*monu-s* ‘man, begetter; person’: Sanskrit *mānu-ḥ* ‘man, mankind, father of men’; Avestan *manuš-* ‘man, person’ in *Manuš-čīθra-*; Gothic *manna* ‘man, person’; Old Icelandic *mannr* ‘man, human being’; Norwegian *mann* ‘man’; Swedish *man* ‘man’; Danish *mand* ‘man’; Old English *mann* ‘man, human being’; Old Frisian *mann*, *monn* ‘man’; Old Saxon *mann* ‘man’; Old High German *man(n)* ‘man’ (New High German *Mann*); Old Church Slavic *mōžь* ‘man’; Russian *muž* [муж] ‘husband, man’; Hittite *menu-* ‘man, person; virile, manly’; Luwian *mannu-* ‘virility’, *mannu-/mannaw-* ‘virile, manly’. Pokorny 1959:700 **manu-s* (or **monu-s*) ‘man, mankind’; Mann 1984—1987:731—732 **manus* (**man-*, **manustjos*) ‘man, human being, husband’; Walde 1927—1932.II:266; Mallory—Adams 1997:366—367 **mVnus* ‘man’; Watkins 1985:38 **man-* (also **mon-*) and 2000:51 **man-* (also **mon-*) ‘man’; Gamkrelidze—Ivanov 1984.II:475, II:759 **manu-* and 1995.I:396, I:661 **manu-* ‘person, man’; Mallory—Adams 1997:366 **mVnus* ‘man’; Mayrhofer 1956—1980.II:575—576; Orël 2003:260 Proto-Germanic **manniskaz*, 260 **mannōjanan*, 260 **mannz*; Kroonen 2013:353—354 Proto-Germanic **mannan-* ‘man’ and 354 **manniska-* ‘human’; Feist 1939:344—345; Lehmann 1986:244 **manu-s*, **monu-s*; De Vries 1977:374—375; Falk—Torp 1903—1906.I:495—496 Germanic **manna-*; Torp 1919:410—411; Onions 1966:549—550; Klein 1971:441; Boutkan—Siebinga 2005:249—250 and 266—267; Kluge—Mitzka 1967:459—460; Kluge—Seebold 1989:460; Liberman 2008:149—157; Derksen 2008:330; Preobrazhensky 1951:565—566; Oettinger 2022.
- D. Uralic: Proto-Finno-Ugrian **manʷtʷz* ‘man, male’ > Finnish *mies/miehe-* ‘man (human male)’; Vogul / Mansi *meñici*, *mañši* ‘a Vogul’; Hungarian *magyar* ‘Hungarian’. Collinder 1955:99 and 1977:114; Rédei 1986—1988:866—867 **mañčz*.

Buck 1949:2.1 man (human being); 2.21 man (vs. woman). Bomhard—Kerns 1994:664—665, no. 542; Illič-Svityč 1971—1984.II:58—59, no. 292, **mäna* ‘man, male’; Blažek 2002:177, no. 32; Greenberg 2002:128—129, no. 294; Dolgopolsky 2008, no. 1421, **mañU* ‘man, male’ and, no. 1440, **mañV* or **mañV* ‘genitalia; to copulate’.

892. Proto-Nostratic root **manʷ-* (~ **mənʷ-*):
 (vb.) **manʷ-* ‘to hold, to take’;
 (n.) **manʷ-a* ‘hand, paw’

- A. Proto-Afrasian **man-* ‘to hold, to take’: Proto-Semitic **man-aš-* ‘to hold, to take, to take hold of, to hold back’ > Hebrew *mānaʿ* [מָנַע] ‘to prevent, to withhold, to keep back’; Aramaic *mānaʿ* ‘to keep back, to withhold’; Arabic *manaʿa* ‘to stop, to detain, to keep from entering or passing; to hinder, to prevent; to keep, to restrain, to hold back; to bar, to block, to obstruct; to withdraw, to take away, to deprive; to forbid, to interdict, to prohibit; to decline to accept, to declare impossible or out of the question; to refuse, to deny, to withhold; to stop, to cease; to abstain, to refrain; to ward off, to avert, to keep away; to protect, to guard; to defend’, *manʿ* ‘hindering, impeding, obstruction; prevention, obviation, preclusion; prohibition, interdiction, ban, injunction; stop, closure, discontinuation, embargo; withdrawal, deprivation, dispossession; detention, withholding’; Sabaean *mnʿ* ‘to repel, to prevent, to defend oneself against’; Šḥeri / Jibbāli *mīnaʿ* ‘to hold, to take hold of’, *mūtnaʿ* ‘to refrain from, to hold back’; Ḥarsūsi *mōna* ‘to take, to catch, to hold’, *mátneʿ* ‘to stop’; Mehri *mūna* ‘to catch, to get, to take’, *mátna* ‘to refrain from, to hold back’; Tigre *mānʿa* ‘to withhold, to refuse’; Harari *mannāʿ* ‘one who prevents someone from doing something because of jealousy or animosity’ (Arabic loan). Murtonen 1989:261; Klein 1987:358; Leslau 1963:108; Zammit 2002:388. West Chadic **man-H-* ‘to take’ > Sura *maṇ-* ‘to take’; Mupun *maṇ-* ‘to take’; Gerka *maṇ-* ‘to take’. Orël—Stolbova 1995:374, no. 1725, **manVš-* ‘to hold, to take’. [Ehret 1995:307, no. 589, **man-* ‘to lose, to lack, to be without’ (> Arabic *manaʿa* ‘to refuse, to hinder, to prevent, to repel’) and 307, no. 590, **man-/mun-* or **maṇ-/muṇ-* or **maṇ-/muṇ-* ‘to tie up’ (> Modern South Arabian **mnš* ‘to take, to catch, to hold’).]
- B. Dravidian: Tamil *maṇṇu* (*maṇṇi-*) ‘to do, to make, to perform, to adorn, to beautify, to decorate, to polish, to perfect, to finish’, *maṇṇu-ru* ‘to polish (as a gem)’, *maṇai* ‘to make, to create, to form, to fashion, to shape’; Malayalam *manayuka*, *maniyuka* ‘to fashion, to form earthenware, to make as a potter’. Burrow—Emeneau 1984:414, no. 4685. Semantic development as in Old Icelandic *mynda* ‘to shape, to form’ or Gothic *manwjan* ‘to (make) ready, to prepare’, cited below.
- C. Proto-Indo-European **man-(*mon-)/mṇ-* ‘hand’: Latin *manus* ‘hand’; Umbrian (abl. sg.) *mani* ‘hand’; Oscan (acc. sg.) *manim* ‘hand’; Gothic *manwus* ‘at hand, ready’, *manwjan* ‘to (make) ready, to prepare’, **ga-manwjan* ‘to have prepared, to have ready’, *manwiþa* ‘readiness’, (adv.) *manwuba* ‘ready’; Old Icelandic *mund* ‘hand’, *mynda* ‘to shape, to form’; Old English *mund* ‘hand’; Old High German *munt* ‘hand’; Hittite (3rd sg. pres. act.) *ma-(a-)ni-ya-aḫ-ḫi*, *ma-ni-aḫ-ḫi*, *ma-ni-ya-aḫ-zi*, *ma-ni-i-ya-aḫ-zi*, *ma-ni-aḫ-zi* (< **mṇ-yo-*) ‘to hand out, to hand over, to consign, to accord, to allot, to present, to proffer, to impart, to dedicate, to dispose of’, (dat.-loc. sg.) *ma-a-ni-ya-aḫ-ḫi-ya-at-ti* ‘handout, consignment’, (nom. sg.) *ma-ni-ya-aḫ-ḫa-aš* ‘governance, government, jurisdiction, bailiwick, domain, province, realm’. Pokorny 1959:740—741 **mā-r* (gen. **mā-n-és*,

- *mptós* ‘hand’ (heteroclitic *r/n*-stem); Walde 1927—1932.II:272 **mə-r*, **mə-n-és*, **mptós*; Mann 1984—1987:732 **manyos* (**manos*) ‘hand, strength; hand, at hand, to hand; to lead, to take’; Watkins 1985:38 **man*- and 2000:51 **man*- ‘hand’; Gamkrelidze—Ivanov 1984.II:806—807 **mHr-/n-(t^h)*- and 1995.I:707 **mHr-/n-(t^h)*- ‘hand, power; to put into (someone’s) possession, to govern’; Mallory—Adams 1997:254—255 **méh_{ad}r* (gen. **mh_{an}ós*) ‘hand’; Walde—Hofmann 1965—1972.II:34—35 Latin *manus* ‘hand’ may perhaps be derived from a heteroclitic *r/n* stem: **(a)mər* : **mə-nés*; De Vaan 2008:363—364; Ernout—Meillet 1979:386 **mṛ*-; Orël 2003:275 Proto-Germanic **mundō*; Kroonen 2013:375—376 Proto-Germanic **mundō*- ‘hand’; Lehmann 1986:244—245 (Old Icelandic *mund* ‘hand’ < **mṛ-tós* ‘hand’; **man-u*-; **man-i*-); Feist 1939:345—346; De Vries 1977:395; Kluge—Mitzka 1967:493 **mṛ-tā* (Latin *manus* ‘hand’ < **mən*-); Kluge—Seebold 1989:492; Kloekhorst 2005:553—554; Puhvel 1984— .6:44—52 *mṛ-yo*-.
- D. Yukaghir (Southern / Kolyma) *mid’-/miñ-* (< **menč’-/minč’-*) ‘to take’, *mid’ej-* ‘to grasp’, (Northern / Tundra) *meñ-/med’-* ‘to take’, *menče-* ‘to fetch’, *mennube* ‘handle; place from which something is taken’. Nikolaeva 2006:264.
- E. Proto-Altaic **mān^{ya}* ‘hand, paw’: Proto-Tungus **man^{ya}* ‘paw (of an animal)’ > Evenki *mana*, *maña* ‘paw (of an animal)’; Negidal *maña* ‘paw (of an animal)’; Lamut / Even *māna* ‘paw (of an animal)’; Ulch *maña*, *mañ* ‘paw (of an animal)’; Nanay / Gold *māya* ‘paw (of an animal)’; Oroch *mañaka* ‘paw (of an animal)’; Udihe *mana* ‘paw (of an animal)’. Proto-Turkic **bĀn^y-* ‘palm (of hand), sole (of foot)’ > Turkish *mayā* ‘fleshy part of the palm’; Azerbaijani (dial.) *mayā* ‘flat of a hoof’; Turkmenian (dial.) *paypaq* (< **bĀn^y-mak*) ‘footwear’; Uzbek *paypəq* ‘footwear’; Tatar *maymaq* ‘stable, steadfast (of an animal’s paw, hoof)’, (dial.) *paypaq* ‘footwear’; Kirghiz *baymaq* ‘lower part of shank’, *baypaq* ‘footwear’, *maypıq* ‘flat (of a horse’s hoof, bear’s paw)’; Kazakh *baypaq* ‘footwear’; Tuva *mayiq* ‘sole (of foot)’. Starostin—Dybo—Mudrak 2003:902 **māña* ‘paw, hand’.
- F. Chukchi-Kamchatkan: Proto-Chukotian **mānyə* ‘hand’ > Chukchi *mānyəlyən* ‘hand, arm’, *mānyəkwən* ‘earnings’, *mānyə-kw-at-* ‘to earn’; Kerek *mānyəyə* ‘hand’, *mənə-qal* ‘hand’, *mānyə-kw-at-* ‘to earn’; Koryak *mānyəlyən* (dual *mānyət*) ‘hand’; Alyutor *mānyəlyən* ‘hand’. Fortescue 2005:184.

Buck 1949:4.33 hand; 9.11 do, make; 11.13 take; 11.15 hold; 19.59 hinder, prevent. Greenberg 2002:88—89, no. 194; Dolgopolsky 2008, no. 1437, **mān^yŋ* (= **mānyŋ* ?) ‘to hold, to carry’ and, no. 1438, **mañy[ū]* ‘paw, foot/leg of animals’.

893. Proto-Nostratic root **maq^{wh}-* (~ **māq^{wh}-*):

(vb.) **maq^{wh}-* ‘to twist, to turn; to overturn, to turn upside down, to turn round’;

(n.) **maq^{wh}-a* ‘twist, turn; overturning’

- A. Dravidian: Tamil *makiṭi* ‘to be overturned’; Kota *maki-r-* (*mak(a)rc-*) ‘(tree) is uprooted and falls’; Kannada *magar* (*magurḍ-*), *mogar* ‘to turn round (intr.), to be turned upside down, to return, to turn back, to recede, to retreat, to happen or do again’, *maguru* ‘receding’, *magurcu* ‘to cause the face to go or turn backwards, to turn away (tr.), to turn round, to grind, to return (tr.)’, *magacu*, *magucu*, *magurcu*, *mogacu*, *mogucu* ‘to turn round (intr.), to return; to turn upside down, to turn (as the page of a book), to overthrow; to grind, to whet’; Tuḷu *magupuni*, *magupuni*, *magucuni*, *mogapuni* ‘to turn, to upset (tr.)’, *magupu*, *magpu* ‘a turn’, *magutē* ‘again, a second time’, *magury*, *magary*, *magry* ‘next, following; again, once more’, *magapuni* ‘to draw and turn over (for example, water)’, *mag(a)runi* ‘to fall, to tumble, to feel a reeling sensation’, *magrāvoṇuni* ‘to prostrate oneself’, *makar(i)yuni* ‘to be changed’; Telugu *maguḍu* ‘to turn back, to return’, *maguḍincu*, *maguḍ(u)cu* ‘to turn or bring back, to avert’, *magiḍi*, *maguḍa* ‘again, anew, back, in return’, *magucu* ‘to cause to return, to turn back’, *makkalincu* ‘to turn back; to change, to adjust’; Kolami *maguḍ-* (*maguṭ-*), *magur-*, *maguḷ-*, *magūḷ-*, *magḍ-* ‘to vomit’; Naikri *magur* ‘vomit’; Konda *mak-* ‘to turn over (as a stone), to turn upside down, to dig’; Kuwi *meg-* ‘to fall down or off, (tree) to fall’, *mekh’nai* ‘to outroot’. Burrow—Emeneau 1984:408, no. 4617.
- B. Proto-Kartvelian **mqw-* ‘to overthrow, to overturn’: Georgian *mx-* ‘to overthrow, to overturn’; Mingrelian *xu-*, *xv-* (< **mxu-* < **mqw-*) ‘to overthrow, to overturn’; Laz *xu-* ‘to throw, to splash out’; Svan *nqw-* ‘to overthrow, to fall’. Klimov 1964:149 **nqw-* and 1998:134—135 **mqw-* ‘to overthrow, to overturn’; Fähnrich—Sardshweladse 1995:256—257 **mqw-*; Fähnrich 2007:308 **mqw-*.
- C. Proto-Indo-European (**mek^{wh}-*)/**mok^{wh}-* ‘to twist, to turn, to churn’: Hittite (acc. sg.) *ma-ak-ku-ya-an* ‘churn’; Sanskrit *mācate* ‘to pound, to grind’. Puhvel 1984—.6:20; Kloekhorst 2008b:545 **m(o)k^w-iō- ??*.
- D. Proto-Altaic **mak^{ho}-* ‘to wind, to twist, to bend’: Proto-Tungus **makti-* ‘to turn (ropes); to wrap up (cloth); to bend, to wrap’ > Negidal *makčī-nda-* ‘to wind (ropes)’; Manchu *mači-* ‘when patching a garment, to gather the edges of the patch on the inside while smoothing the outside surface’, *mačika* ‘border or edge of a mat or a net’, *mačika ara-* ‘to weave the rope border of a hunting or fishing net’; Ulch *maqti-la-* ‘to wind (ropes)’, *moqpūli-* ‘to bend, to wrap’; Oroch *muqpuri-* ‘to bend, to wrap’; Nanay / Gold *maχčī-ra-* ‘to wind ropes’; Oroch *makčī-nda-* ‘to wind (ropes)’; Udihe *maktigi* ‘a device for winding ropes’. Proto-Mongolian **makiyi-* ‘to bend, to curve’ > Written Mongolian *makiyi-* ‘to bend, to curve’; Khalkha

maḫiy- ‘to bend, to curve’, *maḫir* ‘bent, curved’; Kalmyk *māki-* ‘to bend, to curve’. Starostin—Dybo—Mudrak 2003:897 **ma[k]ʷo* ‘to wind, to twist, to bend’.

- E. Eskimo: Proto-Inuit **makpiq-* ‘to turn (as the page of a book), to open or fold back’ > Seward Peninsula Inuit *makpiq-* ‘to fold back, to open, to turn over’; North Alaskan Inuit *makpiq-* ‘to open a book, to turn a page’; Western Canadian Inuit *makpiq-* ‘to open a book, to turn a page, to fold back (wound)’, *makpiraat* ‘book’; Eastern Canadian Inuit *mappi(q)-* ‘to open, to raise on one side (window, book, stone)’, *mappitaaq* ‘page of a book’, *mappituraq-* ‘to raise a garment several times’; Greenlandic Inuit *mappir-* ‘to open (chest, door, book, etc.)’, *mappikaar-* ‘to be opened, lifted up (one after another)’, *mappirsakkat* ‘book’. Fortescue—Jacobson—Kaplan 1994:186.

Buck 1949:10.12 turn; 10.13 turn around (vb.); 10.23 fall (vb.).

894. Proto-Nostratic root **mar-* (~ **mər-*):

(vb.) **mar-* ‘to strive against, to oppose, to fight with or against; to argue, to quarrel, to contend, to dispute, to disagree’;

(n.) **mar-a* ‘quarrel, argument, dispute, fight’

- A. Proto-Afrasian **mar-* ‘to oppose, to contend with, to dispute’: Proto-Semitic **mar-ad-* ‘to revolt, to rebel, to assail, to attack’ > Hebrew *māraḏ* [מַרְדֵּךְ] ‘to rebel’, *mereḏ* [מֶרֶד] ‘rebellion, revolt’ (a hapax legomenon in the Bible); Syriac *məraḏ* ‘to rebel, to escape, to resist, to prevail’; Arabic *marada* ‘to be refectory, recalcitrant, rebellious; to revolt, to rebel’; Epigraphic South Arabian *mrd* ‘(warlike) incursion’; Geez / Ethiopic *marrada* [መረደ] ‘to leap, to hasten, to walk fast, to run about, to rush in, to attack, to bother, to annoy’, *mərrād* [ሞረድ], *marād* [መረድ] ‘uproar, rushing, race, assault, attack, battle, persecution, raid’, (with reduplication of the third radical) *mardada* [መርደደ] ‘to hasten’; Tigrinya *märräd* ‘incursion, raid, pillage’; Amharic *märrädä* ‘to hasten, to raid, to pillage’. Murtonen 1989:264; Klein 1987:383; Leslau 1987:357; Zammit 2002:381. Proto-Semitic **mar-ay-* ‘to argue, to rebel against, to contend with’ > Hebrew *mārāh* [מָרָה] ‘to be contentious, refractory, rebellious’; Syriac *mərā* ‘to contend with’; Arabic *marā* (base *mry*) ‘to wrangle, to argue, to dispute (with someone); to resist, to oppose (someone); to contest; to doubt’, *murya*, *mirya* ‘doubt, quarrel, wrangle, argument, dispute’. Klein 1987:383; Murtonen 1989:265; Zammit 2002:381—382.
- B. Dravidian: Tamil *maṛam* ‘valor, bravery, anger, wrath, enmity, hatred, strength, power, victory, war, killing, murder’, *maṛal* ‘hate, enmity, disagreement, fight, war, death’, *maṛavai* ‘anything cruel by nature’, *maṛalu* (*maṛali-*) ‘to oppose, to give fight, to kill’, *maṛavōṇ* ‘warrior’, *maṛavan* ‘inhabitant of desert tract, of hilly tract, one belonging to the

caste of hunters, person of the Marava caste, warrior, hero, commander, military chief; a cruel or wicked person', *maratti* 'woman of the Marava caste, woman of desert tracts, woman of hilly tracts'; Malayalam *maram* 'disagreement, war', *maral* 'death', *maravar* 'Maravar, the Tamil tribe of warriors'; Tuḷu *marava* 'the caste of Maravas'. Burrow—Emeneau 1984:423, no. 4763.

- C. Proto-Indo-European **mer-s-/*mor-s-/*m̥s-* 'to disturb, to offend, to irritate': Gothic **marzjan* 'to offend', **af-marzjan* 'to take offense', **ga-marzjan* 'to cause offense', *marzeins* 'offense, stumbling block'; Old English *mierran* 'to disturb, to confuse; to scatter, to squander, to waste; to upset, to hinder, to obstruct', *mierra* 'deceiver', *mierrelse* 'cause of offense', *mierring* 'hindering, squandering, waste'; Old Frisian *mēria* 'to prevent', *mēre* 'bond, fetter'; Old Saxon *merrian* 'to disturb, to hinder'; Old High German *marren*, *merren* 'to give offense, to prevent, to injure, to mar'. Pokorny 1959:737—738 **mer-*, **mer-s-* 'to disturb, to irritate, to neglect, to forget'; Walde 1927—1932.II:279; Mann 1984—1987:733—734 **mar-* (**marsō*, *-iō*; **marsos*) '(adj.) bad; (vb.) to be bad, to err; (n.) wickedness, error'; Mallory—Adams 1997:209 **mers-* 'to forget' (< **mer-* 'to disturb, to forget'); Rix 1998a:397 **mers-* 'to forget'; Kroonen 2013:356 Proto-Germanic **marzjan-* 'to impede'; Orël 2003:262 Proto-Germanic **marzjanan*; Feist 1939:347—348; Lehmann 1986:246 "Etymology unclear; possibly from PIE **mer-(s-)* 'to disturb, to irritate, to neglect, to forget'..."; Onions 1966:554 West Germanic **marrjan*; Klein 1971:444 **mer-* 'to rub, to consume, to wear away'. Note: The Proto-Indo-European stem **mer-s-/*mor-s-/*m̥s-* 'to disturb, to offend, to irritate' was distinct from **mer-s-/*mor-s-/*m̥s-* 'to forget'.
- D. Proto-Altaic **mara-* (~ *-r̥-*) 'to refuse, to quarrel': Proto-Tungus **mari-* 'to refuse, to resist; to quarrel; to be stubborn' > Manchu *mara-* 'to decline, to reject, to turn down, to refuse', *marandu-*, *maranu-* 'to refuse, to decline together'; Ulch *moriqu* 'to be stubborn'; Nanay / Gold *maria-* 'to quarrel, to be stubborn'; Oroch *mari-* 'to quarrel'; Udihe *malea-* 'to quarrel'. Proto-Mongolian **margu-* 'to quarrel, to resist, to contest' > Written Mongolian *marγu-* 'to argue, to refuse, to decline, to resist'; Khalkha *marga-* 'to quarrel, to resist, to contest'; Buriat *marga-* 'to quarrel, to resist, to contest'; Kalmyk *marγə-* 'to quarrel, to resist, to contest'; Ordos *marguči-* 'to quarrel, to resist, to contest'; Monguor *margāndo* 'quarrel'; Shira-Yughur *margāda* 'quarrel'. Starostin—Dybo—Mudrak 2003:904 **mara* (~ *-r̥-*) 'to refuse, to quarrel'.
- E. Chukchi-Kamchatkan: Chukchi *maraw*, *marak-wəryən* 'battle, fight', *nə-mara-qen* 'pugnacious'; Kerek *majaw-jan* 'warrior, fighter', *maajra(a)t-* 'to fight'. Fortescue (2005:170) reconstructs Proto-Chukchi-Kamchatkan **mar(av)* 'fight'.

- F. Proto-Gilyak / Nivkh **mraŋ* ‘sin, crime’: Amur *mra* ‘crime, case, feud’, *mra-aj-ad* ‘to harm, to commit a crime’; East Sakhalin *mraŋ* ‘crime’; South Sakhalin *mraŋ* ‘sin, mistake’. Fortescue 2016:107.

Buck 1949:20.11 fight (vb.); 20.13 war; 20.41 victory. Bomhard 1996a:208—209.

895. Proto-Nostratic (n.) **mar-a* ‘(young) man, male (human or animal)’:

- A. Proto-Afrasian **mar-* ‘man, male’: Proto-Semitic **marʔ-/mərʔ-* ‘man, male’ > Arabic *marʔ*, *mirʔ*, *murʔ* ‘man’, *maruʔa* ‘to be manly’, *ʔimraʔ* ‘a man, person, human being’; Himyaritic *marī* ‘lord’; Sabaeen *mrʔ* ‘man, person, lord’; Syriac *mārēʔ* ‘lord’; Akkadian *māru*, *merʔu*, *marʔu* ‘son, descendant, offspring; young, offspring of an animal; darling, lover’. Diakonoff 1992:85 *mʔʔ-*; Zammit 2002:380. [Orël—Stolbova 1995:377—378, no. 1740, **mar-/maraʔ-* ‘man’.]
- B. Proto-Dravidian **mar-i* ‘male child, the young of an animal’: Tamil *maṛi* ‘young of sheep, horse, deer, etc.; female of sheep, horse, deer, etc.; sheep, deer’; Malayalam *maṛi* ‘offspring, the young of animals, a young deer’; Kannada *maṛi* ‘the young of any animal (except cattle and buffaloes), a young child; a shoot, sapling’; Telugu *maraka* ‘a kid’; Tuḷu *mari* ‘a young animal’; Kota *mayr* ‘young of animals (except cattle)’; Toda *mary* ‘young of animals (except buffaloes) and birds’; Gondi *mari*, *marri/marr*, *maṛi*, *marri* ‘son’; Pengo *mazi* ‘son’; Konḍa *maṛin* ‘son’, *maṛisi* ‘son’, *mē-mari* ‘husband, man’; Kui *mrienji*, *mrienju* ‘son’; Kuwi *miresi* ‘son’, *mṛiesi* ‘son, nephew’, *mirʔesi* ‘son’; Brahui *mār* ‘son, boy, lad’. Burrow—Emeneau 1984:423, no. 4764; Krishnamurti 2003:7 and 10 **maṭ-i(nṭu)* ‘male child, the young of an animal’.
- C. Kartvelian: Svan *māre* ‘man (male)’.
- D. Proto-Indo-European **mer-yo-* ‘(young) man’: Greek (m.) μεράκιον ‘a boy, lad, stripling’, (f.) μεῖραξ ‘a young girl, lass’; Sanskrit *márya-h* ‘man, (especially) young man, lover, suitor’, *maryaká-h* ‘young stud (said of a bull among cows)’; Avestan *mairya-* ‘young man’; Old Persian *marika-* (contracted from **mariyaka-*) ‘person of lower rank, subject’. Pokorny 1959:738—739 **merjo-* ‘young man’; Walde 1927—1932.II:284 **merjo-*; Mann 1984—1987:760 **merjak-* ‘child, youngster’; Mallory—Adams 1997:656 **mérjos* ‘young man’; Mayrhofer 1956—1980.II:596—597; Boisacq 1950:621 (Sanskrit *márya-h* < **mér-jo-s*); Hofmann 1966:194; Kent 1953:202 **mer-*; Frisk 1970—1973.II:195—196; Chantraine 1968—1980.II:678; Beekes 2010.II:921—922 **mer-io-*; Benveniste 1969.I:246—247 and 1973:199—200.
- E. Proto-Altaic **m̥jara* (~ -rʲ-) ‘male, mature’: Proto-Tungus **miare-* ‘to marry’ > Evenki *mirē-* ‘to marry’; Lamut / Even *mierən-* ‘to marry’; Negidal *miyēn-* ‘to marry’; Ulch *miren-* ‘to marry’; Oroch *mīren-* ‘to

marry'; Nanay / Gold (dial.) *marin-* 'to marry'. Starostin—Dybo—Mudrak 2003:923 **m̥iara* (~ -*í-*) 'male, mature'.

Buck 1949:2.25 boy. Möller 1911:167; Illič-Svityč 1965:373 **marā* 'youth' ['юноша'] and 1971—1984.II:39—41, no. 277, **majra* 'young male'; Bomhard—Kerns 1994:643—644, no. 522; Greenberg 2002:36, no. 63; Brunner 1969:21, no. 20; Dolgopolsky 2008, no. 1469, **mariʔV* 'young man, young male'.

896. Proto-Nostratic root **mar-* (~ **m̥ar-*):

(vb.) **mar-* 'to turn: to overturn, to turn round, to turn over, etc.; to twist, to whirl, to roll; to bend';

(n.) **mar-a* 'the act of turning, turning over, turning round, etc.; rope, coil, string, cord'

Derivative:

(vb.) **mar-* 'to go (round), to walk, to run; to go after, to run or chase after' (> 'to seek, to pursue');

(n.) **mar-a* 'walk, walking, passage; road, track, way'

Note also:

(vb.) **mur-* 'to turn, to twist, to bend';

(n.) **mur-a* 'bend, curve'

A. Proto-Afrasian **mar-* 'to twist, to turn': Proto-East Cushitic **mar-* '(vb.) to twist, to go around; (adj.) round' > Galla / Oromo *mar-* 'coil, rope', (Eastern) *mar-ti* 'useless person who goes from house to house'; Rendille *mar-* 'to be round'; Afar *mar-o* 'round'; Konso *mar-* 'to roll up'. Sasse 1979:24 and 1982:140—141. Galla / Oromo *mars-* 'to encircle'; Burji *mars-* 'to surround, to encircle (tr.)' (loan from Galla / Oromo); Konso *marš-* 'to go in a group to attack someone'. Sasse 1982:141. Proto-Rift **mar-* 'to wring' > Iraqw (reduplicated) *marmar-* 'to wring'; Iraqw *mal-* 'to wring'; Asa *mad-* 'to wash clothes'. Ehret 1980:342. West Chadic: Tangale *mari-* 'to twist, to wring'. Omotic: Bench / Gimira *mar-* 'to plait hair'. Ehret 1995:308, no. 591, **mar-* 'to bind'; Orël—Stolbova 1995:375, no. 1730, **mar-* 'to bind, to roll up'.

B. Dravidian: Tamil *marāṅku* (*marāṅki-*) 'to be bewildered, confused', *marām* 'bewilderment', *maṛi* (-*v-*, -*nt-*) 'to be turned upside down, to return, to recede, to turn back, to retreat, to fall down, to bend, to rise up (as a wave), to be twisted, to go about often, to walk to and fro', *maṛi* (-*pp-*, -*tt-*) 'to turn about, to return, to turn upside down, to upset, to repeat, to double', *maṛi-taral* 'returning, coming back', *maṛivi* 'return', *maṛukkam* 'whirling, unsteadiness, distress, affliction, sorrow, perplexity, relapse of a disease', *maṛuku* (*maṛuki-*) 'to whirl, to go about often, to wander, to be bewildered, to be confused, to be unsteady, to be unsettled, to be distressed', *maṛukali*, *maṛukaḷi*, *makkaḷi* 'to return, to relapse (as a

disease)'; Malayalam *marī* 'a turn, a fresh start, corner, a shift, turning round or inside, deceit', *marīyuka* 'to turn back, to turn over, to be upset, to turn over and over, to tumble head over heels, to roll', *mariccal* 'turning over, returning, tumbling head over heels, rolling, turning topsy-turvy, deceit', *marīvu* 'change, rolling, tumbling, confusion, deceit', *marikka* 'to turn upside down, to turn back', *marippu* 'an upset', *marukuka* 'to flounder, to welter'; Kota *mayr-* (*marc-*) 'to fall (a tree); to pull up by the root', *marṇ-* (*marḍ-*) 'to overturn (intr.), to roll over once and end over end', *marṭ-* (*marṭy-*) 'to overturn by levering'; Toda *marṭy-* (*marṣ-*) 'to fall (tree, wall), to fall out (teeth), to be broken (horn)', *marṭy-* (*marṣc-*) 'to fell (a tree), to pull down, to take (honey) from comb'; Kannada *maral*, *maral*, *malar* 'to be turned or averted (the face), to turn back or backward; to turn, to retreat, to return; to happen or occur again, to do again', *maralcu*, *maraliṣu*, *maralṣu* 'to turn or avert the face, to turn, to cause to retreat, to return'; Koḍagu *mari-* (*mariv-*, *marīṇj-*) 'to roll (intr., in lying position), to overflow, to go up (steps of a house, as a bride does)', *mari-* (*marip-*, *maric-*) 'to roll (tr., in lying position)'; Tuḷu *marañkaṇē*, *marakaṇē* 'on the back, topsy-turvy', *marapuni* 'to fell, to pull down a wall', *maralikke* 'hinge'; Telugu *mara* 'joint, hinge, spring, catch, contrivance', *maralu*, *maralu*, *maḷḷu* 'to turn back, to go or come back, to return', *maralincu*, *maralincu* 'to turn back, to recall, to rescind, to abrogate, to annul, to ward off, to turn, to elude, to evade', *maralucu* 'to turn or bring back, to cause to return', *marala(n)*, *marala* 'again, anew, afresh, back, in return', *maralā-baḍu* 'to turn back, to rebel', *maralā-baṭu* 'turning back, rebelling', *mraggu* 'to be distressed; to fall down', *mraṅgu* 'to decrease, to be abated, to be humbled; to fall down, to perish', *mrandu* 'to die, to be afflicted; to crush; to droop'; Koṇḍa *mar-* (*mart-*) 'to turn (intr.)', *mar-* 'to turn (tr.)'; Pengo *maz-* (*mast-*) 'to turn (intr.), to turn round, to return; to turn into, to be transformed into', *mah-* (*mast-*) 'to turn round, to turn over (tr.); to turn into, to transform'; Kuwī *mar-* 'to creep, to crawl, to lie down flat'. Burrow—Emeneau 1984:422—423, no. 4761.

- C. [Proto-Indo-European **mer-/mor-/m̥r-* 'to twist, to turn, to plait': Greek μέρμις 'cord, string, rope'; Old Icelandic *merðr* 'fish-trap'; Middle Low German *mōren* 'to tie'; Middle Dutch *marren* 'to tie'. Pokorny 1959:733 **mer-* 'to plait, to weave'; Walde 1927—1932.II:272—273 **mer-*; Watkins 1985:42 **mer-* 'to tie'; Mallory—Adams 1997:64 **mer-* 'to braid, to bind'; Boisacq 1950:628; Hofmann 1966:198; Frisk 1970—1973.II:211 **mer-* 'to braid, to plait'; Beekes 2010.II:932 (pre-Greek); Chantraine 1968—1980.II:687 (obscure); De Vries 1977:384 **mer-* 'to braid, to plait, to weave'.] The Indo-European forms may belong with Proto-Nostratic **mur-* (*~mor-*) 'to turn, to twist, to bend' instead, as suggested by Illič-Svityč (1971—1984.II:74—75, no. 309, **muri-* 'to twist').
- D. Proto-Altaic **maro-* (*~rʷ-*) 'to roll, to bend': Proto-Tungus **mari-* 'to bend, to curl; to turn, to return' > Evenki *marīw-* 'to bend, to curl'; Lamut /

Even *marlu-* ‘to bend, to curl’; Manchu *mari-* ‘to return, to go back, to turn around’, *marin* ‘turning around, return, return trip’; Spoken Manchu (Sibo) *mari-* ‘to return’. Proto-Mongolian **mariya-*, **miriya-* ‘to creep up on, to crawl, to stalk’ > Written Mongolian *mariya-*, *miraya-*, *miriya-* ‘to approach furtively, to creep up stealthily, to crawl; to stalk game’; Khalkha *marā-* [мраах] ‘to creep up on stealthily, to stalk game’; Buriat *marā-* ‘to creep up on, to crawl, to stalk’; Kalmyk *merā-* ‘to creep up on, to crawl, to stalk’; Monguor *mara* ‘to creep up on, to crawl, to stalk’. Starostin—Dybo—Mudrak 2003:905 **maro* (~ *-r-*) ‘to roll, to bend’.

Buck 1949:9.14 bend (vb. tr.); 9.19 rope, cord; 10.12 turn (vb.); 10.13 turn around (vb.); 10.14 wind, wrap (vb.); 10.15 roll (vb.). Bomhard—Kerns 1994:653—655, no. 531; Illič-Svityč 1971—1984.II:74—75, no. 309, **muri-* ‘to twist’.

897. Proto-Nostratic root **mar-* (~ **mər-*):

(vb.) **mar-* ‘to go (round), to walk, to run; to go after, to run or chase after’ (> ‘to seek, to pursue’);

(n.) **mar-a* ‘walk, walking, passage; road, track, way’

Derivative of:

(vb.) **mar-* ‘to turn: to overturn, to turn round, to turn over, etc.; to twist, to whirl, to roll; to bend’;

(n.) **mar-a* ‘the act of turning, turning over, turning round, etc.; rope, coil, string, cord’

- A. Proto-Afrasian **mar-* ‘to go, to walk, to run’: Proto-Semitic **mar-ar-* ‘to pass; to go, walk, saunter, or stroll by or past; to come, go, walk, or pass along something; to cross, to traverse; to depart, to go away, to leave; to continue’ > Arabic *marra* ‘to pass; to go, walk, saunter, or stroll by or past; to come, go, walk, or pass along something; to cross, to traverse; to depart, to go away, to leave; to continue’, *marr* ‘passing or going by; passage, transit; transition; crossing; progression, process, lapse, course (of time)’, *mamarr* ‘passing, going by; elapsing; lapse, expiration (of time); transition, crossing; access, approach’; Ḥarsūsi *mer* ‘to continue, to go’, *mārreh* ‘time; once, at once’; Mehri *mər* ‘to pass’; Šheri / Jibbāli *mirr* ‘to pass’; Akkadian *marāru* ‘to leave, to go away’. Zammit 2002:381. Berber: Tuareg *əmmər* ‘to pass by, to pass by a place, to drop by’, *sumər* ‘to make pass by’; Tamazight *amər* ‘to hurry, to go faster, to hasten’, *imər* ‘action of hurrying, hastening, going faster’. Proto-Highland East Cushitic **mar-* ‘to go’ > Burji *mar-* ‘to go (intr.)’, *mara* ‘going, journey’; Sidamo *mar-* ‘to go (intr.)’; Kambata *mar-* ‘to go (intr.)’, *mar-aancata* ‘journey’, *mar-am-* ‘to walk (intr.)’; Hadiyya *mar-* ‘to go (intr.)’; Gedeo / Darasa *mar-* ‘to go (intr.)’, *mar-am-* ‘to turn (around) (intr.)’. Sasse 1982:140—141; Hudson 1989:71. Proto-Southern Cushitic **mar-* ‘to go round’ > K’wadza

malengayo ‘neck ring’; Dahalo *mar-* ‘to go round’, *maradiō-* ‘to take around, to put around’. Ehret 1980:154. Orël—Stolbova 1995:375—376, no. 1731, **mar-* ‘to walk’.

- B. Indo-European (only in Indo-Iranian): Sanskrit *mārga-h* ‘track, path, road’, *mārgati*, *mārgayati* ‘to seek, to look for; to seek after, to strive to attain; to request, to ask, to beg, to solicit anything from anyone’, *mṛgyāti*, *mṛgáyati* ‘to chase, to hunt, to pursue; to seek, to search for or through, to investigate, to examine’; Pāli *magga-* ‘path, road’, *maggati* ‘to hunt for, to seek’; Marathi *māg* ‘road, track’. Walde 1927—1932.II:284; Mann 1984—1987:804 (**mṛg-* ‘to go’); Mayrhofer 1956—1980.II:626. For the semantic development, note Buck’s (1949:764) comments: “Words for ‘seek’ reflect notions such as ‘to go about, to go after, to track, to look for’.”
- C. (?) Yukaghir (Northern / Tundra) *marxi-* ‘to move’. Nikolaeva 2006:259.
- D. Proto-Altaic **m[io]ri-* ‘(vb.) to walk, to go; (n.) road, track’: Proto-Mongolian **mör* ‘road, track’ > Written Mongolian *mör* ‘way, path, trace, trail’, *mör-de-* ‘to trail, to trace, to follow; to investigate, to adhere to (as a schedule or program)’; Khalkha *mör* ‘road, track’; Buriat *mür* ‘road, track’; Kalmyk *mör* ‘road, track’; Ordos *mör* ‘road, track’; Moghol *mür* ‘road, track’; Dagur *mure* ‘road, track’; Shira-Yughur *mör* ‘road, track’; Monguor *mör* ‘road, track’. Proto-Turkic **bar-* ‘to walk, to go (away); to come, to reach’ > Old Turkic (Orkhon, Old Uighur) *bar-* ‘to walk, to go away’; Karakhanide Turkic *bar-* ‘to walk, to go away’; Turkish *var-* ‘to go towards, to approach; to arrive; to reach, to attain; to result, to end in’; Gagauz *var-* ‘to walk, to go (away); to come, to reach’; Azerbaijani *var-* ‘to come, to reach’; Turkmenian *bar-* ‘to walk, to go (away)’; Uzbek *bər-* ‘to walk, to go (away); to come, to reach’; Uighur *ba(r)-* ‘to walk, to go (away)’; Karaim *bar-* ‘to walk, to go (away)’; Tatar *bar-* ‘to walk, to go (away)’; Bashkir *bar-* ‘to walk, to go (away)’; Kirghiz *bar-* ‘to walk, to go (away)’; Kazakh *bar-* ‘to walk, to go (away)’; Noghay *bar-* ‘to walk, to go (away)’; Oyrot (Mountain Altai) *bar-* ‘to walk, to go (away); to come, to reach’; Tuva *bar-* ‘to walk, to go (away)’; Chuvash *pür-* ‘to walk, to go (away)’; Yakut *bar-* ‘to walk, to go (away)’; Dolgan *bar-* ‘to walk, to go (away)’. Starostin—Dybo—Mudrak 2003:930 **m̐iori* ‘(vb.) to walk, to go; (n.) road, track’.
- E. Proto-Gilyak / Nivkh **mar(ev)-* ‘to go up’: Amur *mər-dʷ* ‘to go up (onto shore, into forest, or up hill’, according to Puxta); East Sakhalin *mar-d* / *marev-d* ‘to climb, to rise’; South Sakhalin *mar-nd* / *ma-nd* ‘to approach’, *mar-nd* ‘to go up’. Fortescue 2016:102.

Sumerian *mar* ‘to go to that place; to run, hasten, or rush to or towards’, *mar* ‘path, way’.

Buck 1949:3.79 hunt (vb.); 10.45 walk (vb.); 10.47 go; 10.53 pursue; 11.31 seek.

898. Proto-Nostratic root *mar- (~ *mər-):

(vb.) *mar- ‘to smear, to anoint, to rub (with grease, oil, fat, ointment)’;

(n.) *mar-a ‘grease, oil, fat, ointment, unguent’

- A. Proto-Afrasian *mar- ‘to smear, to anoint, to rub (with grease, fat, ointment)’; Proto-Semitic *mar-ax- ‘to oil, to anoint, to rub’ > Hebrew *mārah* [מָרַח] ‘to rub, to smear’, *merah* [מֵרַח] ‘ointment, plaster, paste, daub’; Aramaic *mārah* ‘to rub’; Akkadian *marāhu* ‘to rub in’; Arabic *maraha* ‘to oil, to anoint, to rub’; Šheri / Jibbāli *mīrax* ‘to smear’. Murtonen 1989:265; Klein 1987:384. Proto-Semitic *mar-ak- ‘to rub clean, to scour, to polish’ > Hebrew *māraḳ* [מָרַק] ‘to scour, to polish, to cleanse’, *mārāḳ* [מָרַק] ‘a scraping, rubbing’; Aramaic *māraḳ* ‘to scour, to polish’; Šheri / Jibbāli *ērqaḥ* (base *mrqh*) ‘to clean up, to tidy, to wipe up’; Ḥarsūsi *amārkeḥ* ‘to tidy up’; Mehri *amārkeḥ* ‘to clear, to wipe, to tidy up’. Klein 1987:386—387; Murtonen 1989:266. Proto-Semitic *mar-at- ‘to rub, to scour’ > Hebrew *māraṭ* [מָרַט] ‘to make smooth, to scour, to polish’; Akkadian *marātu* ‘to rub, to scratch’. Murtonen 1989:265; Klein 1987:384. Arabic *mara’a* ‘to rub over, to anoint’. Egyptian *mrh* ‘to anoint, to rub with fat or oil’, *mrht* ‘oil, grease’. Hannig 1995:349; Faulkner 1962:112; Erman—Grapow 1921:68 and 1926—1963.2:111; Gardiner 1957:569. Berber: Tuareg *amri* ‘to be rubbed with something hard; to rub with something hard’, *samri* ‘to make rub’; Ghadames *amray* ‘to be painful, to suffer’; Tamazight *mray* ‘to rub, to be rubbed, to grate’, *amray* ‘rubbing, friction, grating’; Kabyle *amri* ‘to rub, to scrape (vegetables)’. Proto-Chadic *mar ‘oil’ > Hausa *māi* ‘oil, fat, grease’; Zaar *mūr* ‘oil’; Tera *mor* ‘oil’; Mofu *mal* ‘oil’. Newman 1977:30. [Orël—Stolbova 1995:386, no. 1784, *mori?/*moriḥ- ‘fat, oil’.]
- B. Elamo-Dravidian: Middle Elamite *mi-ir-ri-* ‘to rub or smear oneself with fat or oil’. Dravidian: Parji *mer-* ‘to rub oneself’, *merpip-* (*merpit-*), *mercip-*, (*mercit-*) ‘to rub another with the hand’; Gadba *mar-* ‘to rub (oil, etc.) on oneself’, *marup-* (*marut-*) ‘to rub (oil, etc.) on another’; Gondi *marehtānā* ‘to rub’, *marahṭānā*, *marehtānā* ‘to smear’, *marehtālle* ‘to apply’. Burrow—Emeneau 1984:416, no. 4709.
- C. Proto-Indo-European *(s)mer-/*(s)mor-/*(s)m̥- ‘to smear, to anoint, to rub (with grease, fat, ointment)’; Gothic *smairþr* ‘richness, fatness’; Old Icelandic *smyrja*, *smyrva* ‘to anoint, to rub with ointment’, *smjör* ‘butter, fat’, *smyrsl* ‘ointment, unguent’; Swedish *smörja* ‘to rub with ointment, to anoint, to smear’, *smör* ‘butter, fat’; Old English *smierwan*, *smierian* ‘to anoint’, *smeoru* ‘grease, fat, suet, tallow’; Old Frisian *smere* ‘tallow’; Middle Low German *smeren* ‘to smear’; Dutch *smeer* ‘fat, grease, suet’, *smeren* ‘to smear’; Old High German *smirwen* ‘to smear’ (New High German *schmieren*), *smero* ‘fat, grease, suet’ (New High German *Schmer*); Old Irish *smiur* ‘marrow’; Welsh *mer* ‘marrow’; Tocharian B *šmare* ‘oily, smooth’. Perhaps also Greek μύρον ‘sweet juice extracted from plants,

sweet-oil, unguent, balsam’, *σμύρνα* (Ionic *σμύρνη*, Aeolian *μύρρα*) ‘myrrh (the resinous gum of an Arabian tree, used for embalming the dead; also used for anointing and as a salve)’. Pokorny 1959:970—971 **smeru-* ‘grease, fat’; Walde 1927—1932.II:690—691 **smeru-*; Mann 1984—1987:1223 **smeruos*, **smerus*, **smeruā* ‘grease, drip, marrow’; Watkins 1985:52 **(s)mer-* and 2000:80—81 **(s)mer-* ‘grease, fat’; Szemerényi 1964b:50—53; Mallory—Adams 1997:194 **sméru-* ‘oil, grease’; Boisacq 1950:652 Greek *μύρρα* < Semitic and 886 **smer-*; Hofmann 1966:208—209 Greek *μύρρα* < Semitic and 323; Chantraine 1968—1980.II:723—724, II:724 Greek *μύρρα* < Semitic, and II:1029; Frisk 1970—1973.II:273, II:274 Greek *μύρρα* < Semitic, and II:751—752; Beekes 2010.II:983; Orël 2003:353—354 Proto-Germanic **smerwan* ~ **smerwōn*, 354 **smerwislan*, 354 **smerwjanan*; Kroonen 2013:458 Proto-Germanic **smerwa-* ‘butter, grease’; Lehmann 1986:315 **smer(u)-* ‘fat, grease’; De Vries 1977:520 and 521; Feist 1939:438 **smer-*; Onions 1966:838 Common Germanic **smerwjan*; Klein 1971:692 **smeru-* ‘grease’; Kluge—Mitzka 1967:663 **smeru-* and 665; Kluge—Seebold 1989:643 and 643—644; Vercoullie 1898:265; Van Windekens 1976—1982.I:456 **smero-s*; Adams 1999:668 **smer(w)os*; Wodtko—Irslinger—Schneider 2008:622 **smer-*.

Sumerian *mar* ‘to daub, to anoint’.

Buck 1949:6.94 ointment. Illič-Svityč 1971—1984.II:61—62, no. 296, (?) **meřA* ‘fat; to smear with grease or fat’; Brunner 1969:19, no. 3 and 4; Bomhard—Kerns 1994:660, no. 538; Dolgopolsky 2008, no. 1469a, **maRi?V* (or **maři?V*) ‘animal fat’ and, no. 1485, **meřuqV* ‘to smear’.

899. Proto-Nostratic root **mar-* (~ **mər-*):

(vb.) **mar-* ‘to soil, to stain’;

(n.) **mar-a* ‘spot, stain, dirt’; (adj.) ‘dark, dirty, soiled’

- A. Dravidian: Tamil *maru* ‘stigma, blemish, fault, stain, blot, spot (especially on the moon), sign, symbol, mode, freckle’, *marai* ‘freckle, mole, spot’, *marai* ‘flaw in a precious stone’; Malayalam *maru* ‘spot, freckle, mole, wart’; Toda *mařt* ‘black pigmented spot on the body’; Telugu *maraka* ‘stain, blot, spot’; Gondi *marrō* ‘black mole or wart’, *marror* ‘black mole’. Burrow—Emeneau 1984:424, no. 4767.
- B. Proto-Indo-European **mer-/mor-/m̥r-* ‘(vb.) to soil, to stain; (n.) spot, stain, dirt; (adj.) dark, dirty, soiled’: Greek *μυρόσσω* ‘to soil, to stain, to defile’ (perfect past participle *μεμορυγμένα καπνῶ*), *Μόρυχος* epithet of Dionysius in Sicily (from *μυρόσσω*) because his face was smeared with wine lees at the vintage; Armenian *m̥rayl* (< **m̥rayl-* < **mor-so-*) ‘darkness, fog, dark cloud; dark, gloomy’, *mařaxul* (< **m̥r-so-*) ‘black mist, darkness’; Old Irish *merg-* ‘decay, rust’; Old Icelandic *myrkr* ‘dark,

murky'; Old English *mierce* 'murky, dark, black; evil'; Old Saxon *mirki* 'dark, murky'; Lithuanian *miršinu* 'grimy, dirty'; Russian *marát* [марать] 'to soil, to sully, to stain, to tarnish'; Polish *morus* 'a dirty person, a slob'; Czech *mrva* 'mote, speck; splinter, dung'; Hittite (acc. sg.) *ma-ri-iḫ-ši-in* 'spot, stain, speck, fleck'. Pokorny 1959:734 (**mer-*) **mor-(u-)* '(vb.) to blacken; (n.) dark color, spot of dirt'; Walde 1927—1932.II:279—280 (**mer-*) **mor-*; Mann 1984—1987:759 **merġ-* '(adj.) dark, gloomy, grim; (n.) darkness, stain, grimness', 809 **mīrūā* 'shred, fiber, remains, refuse, embers, dirt, rejected matter'; Boisacq 1950:645 **smer-*; Frisk 1970—1973.II:257; Chantraine 1968—1980.II:713—714; Hofmann 1966:205—206 **mer-*; Beekes 2010.II:969; Orël 2003:268 Proto-Germanic **merkwa-*; Kroonen 2013:366 Proto-Germanic **merkwu-* 'dark'; De Vries 1977:398; Onions 1966:597; Klein 1971:482; Puhvel 1984— .6:72.

- C. (?) Chukchi-Kamchatkan: Proto-Chukotian **mər(kəc)-* 'to be disgusting' (?) > Chukchi *mər-* 'disgusting', *mərkəc-ŷəryən* 'villain, bastard', used as an angry expletive 'damn!'; (Northwestern) *mər(ə)mər-* 'something disgusting, dirt', *mərker-at-* 'to be disgusted by something'; Koryak (*lawcəŋ*) *məjkəcaw* 'bad person'. Fortescue 2005:184.

Buck 1949:15.88 dirty, soiled. Illič-Svityč 1971—1984.II:52, no. 288, **mArA* 'spot; dirty'; Bomhard—Kerns 1994:661, no. 539; Dolgopolsky 2008, no. 1471, **mariqV* 'spot, stain, (?) dirt'.

900. Proto-Nostratic (Eurasian only) (n.) **mar-a* 'marsh, swamp':

- A. [Proto-Indo-European **mar-i-* or **mor-i-* 'any body of water: sea, lake, swamp, marsh': Latin *mare* 'sea'; Old Irish *muir* 'sea'; Gothic *marei* 'sea', *mari-* in *mari-saiws* 'lake'; Old Icelandic *marr* 'sea'; Old English *mere* 'lake, pool, cistern; sea'; Old Saxon *meri* 'sea'; Dutch *meer* 'lake, pool'; Old High German *mari*, *meri* 'sea' (New High German *Meer*); Lithuanian *mārė* 'sea'; Old Prussian *mary* 'lagoon, bay'; Old Church Slavonic *morje* 'sea'; Russian *móre* [mope] 'sea'; Hittite *marmar(r)a-*, ^{GIS}*mammarra-* 'waterlogged woodland, overgrown swamp, wetland, slough, moor, marsh'. Derivative in: Proto-Germanic **mar-isk-* 'marsh' > Old English *mersc*, *merisc* 'marsh'; Middle Low German *mersch*, *marsch* 'marsh'; Middle Dutch *mersch(e)* 'marsh' (Dutch *marsk*); New High German *Marsch* 'fen(land), alluvial land'. Pokorny 1959:748 **mori-*, **mōri-* 'sea'; Walde 1927—1932.II:234—235 **mari*; Mann 1984—1987:732—733 **mari*, *-iə* 'sea'; Watkins 1985:43 **mori-* and 2000:56 **mori-* 'body of water; lake (?)', sea (?); Gamkrelidze—Ivanov 1984.II:943 **mor(i)-* and 1995.I:580 **mor-/mar-* 'sea'; Benveniste 1935:76 **mār-*, **máry-*, **móry-*, **mor-éi-*; Mallory—Adams 1997:503—504 **móri* 'sea'; Ernout—Meillet 1979:387; Walde—Hofmann 1965—1972.II:38—39 **mari*; De Vaan 2008:365; Orël 2003:261 Proto-Germanic **mariskaz*, 261 **mariz*; Kroonen

2013:354 Proto-Germanic **mari-* ‘lake, sea’; Feist 1939:346 **mari* (or **mori* ?) and 347; Lehmann 1986:245 **már-y-* or **mór-y-n-*; De Vries 1977:379—380; Onions 1966:557 West Germanic **marisk-* and 570 **mori-*, **mæri-*; Klein 1971:447 Germanic **mari-* ‘sea’ and 458; Vercoullie 1898:185; Kluge—Mitzka 1967:463—464 and 470 Common Germanic **mari-* ‘sea’; Kluge—Seebold 1989:463 and 470 **mari*; Derksen 2008:325; Fraenkel 1962—1965.I:49—410; Puhvel 1984— .6:79—80.] Note: The Indo-European terms are phonologically ambiguous. They may belong here or with Proto-Nostratic **mor-* ‘any body of water: sea, lake, pool, cistern, reservoir, flood, stream, basin, canal, channel’.

- B. Proto-Altaic **māro* ‘marsh’: Tungus: Evenki *mar*, *mari-kta* ‘moor, swamp’. Proto-Mongolian **mara-* ‘salt-marsh’ > Written Mongolian *mara*, *marayan* ‘salt-marsh’; Khalkha *marā* ‘salt-marsh’; Buriat *marā* ‘salt-marsh’; Kalmyk *marā* ‘salt-marsh’. Starostin—Dybo—Mudrak 2003:904—905 **māro* ‘sand, stony earth, marsh’.
- C. Proto-Eskimo *marrar* ‘marsh, muddy ground, swampy area’: Alutiiq Alaskan Yupik *maraq* ‘swampy area’, (Kenai Peninsula) *marat̪aq*, *maraqcuk* ‘bog’; Central Alaskan Yupik *maraq* ‘marshy, muddy low land’, *marayaq* ‘mud’; Central Siberian Yupik (Chaplinski) *maraq* ‘marshy area’; Seward Peninsula Inuit *marraq* ‘mud’, *marat̪ak* ‘swampy ground’; North Alaskan Inuit *marraq* ‘gravel, sand’; Western Canadian Inuit *marraq* ‘mud’, (Netsilik) *marukluk* ‘swamp’; Eastern Canadian Inuit *marraq* ‘clay’; Greenlandic Inuit (North Greenlandic / Polar Eskimo) *marrak* ‘clay’, *marat̪uk*, *marut̪uk*, *maruyuk*, *maquut̪uk* ‘marshy, swampy place’, *marulluk* ‘mud’. Fortescue—Jacobson—Kaplan 1994:193.

901. Proto-Nostratic (n.) **mar-a* ‘tree, wood’:

- A. Afrasian: Egyptian *mrw* ‘Lebanese cedar’. Hannig 1995:348; Erman—Grapow 1921:67 and 1926—1963.2:108; Faulkner 1962:112; Gardiner 1957:569.
- B. Dravidian: Tamil *maram* ‘tree, wood, timber’; Malayalam *maram* ‘tree, wood, timber’; Kota *marm* ‘tree’; Telugu *m(r)ānu*, *m(r)āku* ‘tree’; Tuḷu *mara* ‘tree’; Kannaḍa *mara* ‘tree’; Koḍagu *mara* ‘tree’; Parji *meri* ‘tree’; Gadba (Ollari) *mar*, *marin* ‘tree’, (Salur) *māren* ‘tree’; Gondi *marā*, *mara*, *maṛa*, *māra*, *māra*, *marnu*, *mānu* ‘tree’; Konda *maran* ‘tree’; Manda *mar* ‘tree’; Kuwi *mānu*, *mānū*, *marnu*, *mānu*, *mara* ‘tree’; Pengo *mar* ‘tree’; Kui *mraṇnu*, *mraṇḍi*, *mānu* ‘tree’. Krishnamurti 2003:107 **mar-am/n* ‘tree’; Burrow—Emeneau 1984:416, no. 4711.
- C. Uralic: Proto-Finno-Ugrian **m[o]r3* ‘tree, wood’ > (?) Lapp / Saami *muorrá* ‘tree, wood, fuel; stake, pole’; (?) Hungarian *mórágy*, *morágy* ‘wood(s), forest’. Rédei 1986—1988:281 **mor3* ‘a kind of tree’; Illič-Svityč 1971—1984.II:45, no. 283, Proto-Uralic **m/a/re* ‘tree’.

Buck 1949:1.41 woods, forest; 1.42 tree; 1.43 wood. Illič-Svityč 1971—1984.II:45, no. 283, **mar*_A ‘tree’; Caldwell 1913:622; Bomhard—Kerns 1994:675, no. 554; Dolgopolsky 2008, no. 1472, **m[a]rwê* ‘tree’.

902. Proto-Nostratic root **mar*^y- (~ **mər*^y-):

(vb.) **mar*^y- ‘to be weakened, to wither away, to decay; to be or become sick, to fall ill; to die (from a fatal disease), to perish’;

(n.) **mar*^y-*a* ‘sickness, illness, fatal disease, malady, ailment; death’

- A. Proto-Afrasian **mar*- ‘(vb.) to be weakened, to wither away, to decay; to be or become sick, to fall ill; to die (from a fatal disease), to perish; (n.) sickness, illness, disease, malady, ailment; death’: Proto-Semitic **mar-at*₁’- ‘(vb.) to be or become sick, to fall ill; (n.) disease, malady, ailment, illness, sickness; (adj.) sick, ill’ > Akkadian *marāšu* ‘to fall ill, to have a disease; (stative) to be diseased’, *maršu* ‘sick, diseased’, *muršu* ‘illness’, (adv.) *maršiš* ‘bitterly, with difficulty, with pain’; Hebrew *māraš* [מָרַשׁ] ‘to be sick’; Aramaic *məra*^o ‘to fall ill, to become sick’; Ugaritic *mrš* ‘to be sick’; Arabic *marīḍa* ‘to be or become sick, to fall ill, to be taken ill’, *marāḍ* ‘disease, malady, ailment, illness, sickness’, *marīḍ* ‘sick, ill, ailing, diseased, unwell, indisposed; sick person, patient’; Sabaean *mrḍ* ‘to be sick’; Ḥarsūsi *mērež* ‘to be unwell, ill’, *merēž* ‘illness’; Šheri / Jibbāli *mīrēž* ‘to be ill’, *mérēž* ‘illness’, *mérīž* ‘ill’; Mehri *mērəž* ‘to be ill’, *mərēž* ‘illness’. Murtonen 1989:265—266; Klein 1987:386; Zammit 2002:381—382. Egyptian *mr* ‘(vb.) to be sick, to suffer pain; (adj.) sick, ill; (n.) sickness, illness’, *mrt* ‘sickness, illness, fatal disease’, *mrw* (adverb) ‘painfully’. Hannig 1995:344 and 345; Faulkner 1963:110—111; Gardiner 1957:569; Erman—Grapow 1921:66 and 1926—1963.2:95, 2:96. Orël—Stolbova 1995:376—377, no. 1736, **mar*- ‘to be ill, to be weak’.

Comment: Militarëv—Kogan (2000.I:303—304, no. 42) reconstruct Proto-Semitic (vb.) **mrš* ~ **mrč* ‘to be sick, ill’. They do not list any non-Semitic cognates.

- B. Dravidian: Tamil *maṛu* ‘blunt’, *maṛuku* (*maṛuki*-) ‘to become blunt, to be dim or obscure’, *maṛuṇku* (*maṛuṇki*-) ‘to be blunt or dull (as an edge or point), to be obscured, to be deprived of luster or glory, to fade, to disappear, to be lost, to become dull in feeling, to lose keenness of intellect, to be dim, to obscure (as the sun or moon in an eclipse or behind a cloud)’, *maṛukku*- (*maṛukki*-) ‘to blunt, to dull, to obscure (as luster or glory), to deprive the intellect of its keenness’, *maṛuṇkal* ‘that which is blunt, dim, or unpolished; blockhead, shameless person’, *maṛuṇki* ‘shameless woman’, *maṛukkam* ‘bluntness, reduced circumstances, dimness, cloudiness, obscurity of the sun in an eclipse, fading (as of color), dullness of intellect (as from age or disease)’, *maṛa* ‘confusion of mind’, *makku* (< **mṛakku* [cf. Telugu *mraggu*, *maggu* below]) (*makki*-) ‘to die, to

perish, to become dull, to decay (as fruits), to mold, to be spoiled (as by dampness)'; Malayalam *maṛunnaṇē āka* 'to grow blunt'; Kannaḍa *maṛa* 'dimness', *maṛal* '(the eyes) to become dim', *maṛgu* 'to grow dim or faint, to disappear or perish', *maṛgisu* 'to cause to disappear, to cause to perish, to destroy'; Tuḷu *margu* 'dead', *margu āṇini* 'to die'; Telugu *mraggu*, *maggu* 'to die, to perish', *m(r)akku* 'to fade, to lose shining or luster, to die'; Kuṛux *maṛxnā* 'to get dirty, soiled; to lose brightness or freshness; to be ashamed; to grow exhausted, to be spent'. Burrow—Emeneau 1984:421, no. 4750. Tamil *māṛku* (*māṛki-*) 'to be bewildered, fascinated; to be spoiled or lost, to grow lazy', *māṛā* 'to be fascinated, to be confused, to be bewildered, to fade, to grow dim'; Malayalam *māṛkuka* 'to languish, to grow faint, to sleep, to die', *māṛkāta* 'unfailing, unremitting', *māṛkal*, *māṛca* 'faintness, dullness, laziness'. Burrow—Emeneau 1984:429, no. 4830.

- C. Proto-Indo-European **mer-/mor-/m̥-* '(vb.) to perish; (n.) death': Hittite (3rd sg. pres.) *mi-ir-zi*, *me-ir-zi* 'to disappear, to vanish'; Sanskrit *márate*, *mriyáte* 'to die, to de cease', *márta-h* 'man, mortal', *mártya-h* 'mortal, man, person', *mṛtá-h* 'dead, deceased', *mṛti-h* 'death', *mṛtyú-h* 'death', *māra-h* 'dying; death'; Armenian *meṛanim* 'to die'; Latin *morior* 'to die; to wither away, to decay', *mors*, *-tis* 'death'; Old Irish *marb* 'dead'; Welsh *marw* 'dead'; Gothic *maurþr* 'murder'; Old Icelandic *morð* 'murder', *myrða* 'to murder'; Old English *morþ* 'murder, homicide; death, destruction; crime; anything horrible', *morþor* 'murder, crime, sin; torment, misery', *for-myrrþran*, *for-myrrþrian* 'to murder'; Old Frisian *morth* 'murder', *morthia* 'to kill, to murder'; Old Saxon *mord* 'murder'; Dutch *moord* 'murder'; Old High German *mord* 'murder' (New High German *Mord*), *murdreo* 'murderer, killer, assassin' (New High German *Mörder*); Lithuanian *mirstu*, *mīrti* 'to die, to pass away', *māras* 'plague, black death'; Old Church Slavonic *мъръ*, *mrěti* 'to die', *моръ* 'plague'. Rix 1998a:395—396 **mer-* 'to pass away, to die'; Pokorny 1959:735 **mer-*, **merə-* 'to die'; Walde 1927—1932.II:276 **mer-*; Mann 1984—1987:732 **mār-* (**mər-*, **marəñiō*) 'to harass, to torture, to kill', 734 **māruos* (**māruos*, **m̥ruos*) 'dead, decayed, broken-down', 759 **mer-* (**mern-*), 759 **merdō*, *-iō* 'to wipe out, to extinguish, to die', 798 **moros*, *-ā*, *-ō(n)* 'plague, horror, bogey, nightmare, death', 798—799 **mōros*, *-ā* 'death, deadness, waste; useless, vain, mad', 799 **mortos* 'dead, killed; death', 804 **m̥rēiō* (**mrēiō*) 'to fade away, to die', 805 **m̥rim-*, **m̥rm-*, **m̥mn-* 'dead thing, corpse, body', 806 **m̥rks-* (**m̥rsk-*, **m̥rsk̥-*) 'to die, to perish; dead, rotten', 806 **m̥rñō*, *-iō* 'to wither, to shrink, to pine, to die off', 806—807 **m̥rō*, *-iō* (**mər-*) 'to die, to kill', 808 **m̥rtis* (**mārt-*) 'death', 808 **m̥rtos* 'dead; mortal, being, creature', 808 **m̥rtiō* (**m̥rtiō*, **m̥rtiūiō*) 'to kill', 809 **m̥rtuos*, 809 **m̥ruos*, *-ios* (**māru-*) 'waste, dead, decayed, rotten', 765 **m̥rjos* (**m̥rjos*) 'dead, deadly, mortal; death'; Watkins 1985:42 **mer-* and 2000:55 **mer-* 'to die'; Gamkrelidze—Ivanov 1984.II:475 **mer-* and

1995.I:396 *mer- ‘to die, to disappear’; Mallory—Adams 1997:150 *mer- ‘to die’, *mrtós ‘dead; mortal’, *mórtos ‘person, mortal’, *mrtís ‘death’, *mrtóm ‘death’, *móros ‘death’; Walde—Hofmann 1965—1972.II:112—113 *mer-; Ernout—Meillet 1979:414—415 *mer-; De Vaan 2008:389—390; Mayrhofer 1956—1980.II:594 *mórto-, II:594—595, II:674 *mrtó-, *mer-; *mrtí-, II:674—675 *mrtí-, and II:696—697 *mer-; Orël 2003:277 Proto-Germanic *murþan, 277 *murþjanan, 277 *murþran, 277 *murþrjanan ~ *murþrōjanan, 277 *murþrjōn; Kroonen 2013:378 Proto-Germanic *murþa- ‘murder’; Feist 1939:351—352 *mer-; Lehmann 1986:249 *mer-; De Vries 1977:392 and 398; Klein 1971:482; Onions 1966:597 *mrt-; Kluge—Mitzka 1967:487—488 *mer-, *mr-; Kluge—Seebold 1989:488 *mer-; Puhvel 1984— .6:148—150 *mer- ‘to die’; Kloekhorst 2008b:577—578 *mér-t/*mr-ént; Smoczyński 2007.1:404—405; Fraenkel 1962—1965.I:457—459; Derksen 2008:308 *mer-, 326, and 2015:321 *mer-, *mr-; Wodtko—Irslinger—Schneider 2008:488—491 *mer-. Note: I have followed Kloekhorst (2008b:577—578) in assigning the meanings ‘to disappear, to vanish’ to the Hittite verb cited above and reinterpreted the meaning of the Proto-Indo-European verb as ‘to perish’ to accommodate the revised meaning of the Hittite form. I have not, however, changed the meaning of the Proto-Indo-European noun, which I have left as ‘death’.

- D. Proto-Gilyak / Nivkh *mraŋi- ‘lazy’: Amur *mraŋi-d* ‘to be lazy’; East Sakhalin *mraŋi-d* ‘to be lazy’. Fortescue 2016:107. Semantic development as in the following Dravidian forms, cited above: Tamil *mārku* (*mārki-*) ‘to be bewildered, fascinated; to be spoiled or lost, to grow lazy’, *mārā* ‘to be fascinated, to be confused, to be bewildered, to fade, to grow dim’; Malayalam *mārku* ‘to languish, to grow faint, to sleep, to die’, *mārka* ‘unfailing, unremitting’, *mārka*, *mārca* ‘faintness, dullness, laziness’.
- E. (?) Proto-Eskimo *mARNUR- ‘to be tired’: Alutiiq Alaskan Yupik *mARNUR-* ‘to be tired’; Central Alaskan Yupik *mARNUR-* ‘to be tired’; Naukan Siberian Yupik *mARNUR-* ‘to be tired’; Central Siberian Yupik *mARNUR-* ‘to be tired’; Seward Peninsula Inuit *murnuq-*, (Qawwaraq) *munruq-* ‘to be tired’; North Alaskan Inuit *minruq-*, *minruqtuq-* ‘to be tired’; Eastern Canadian Inuit *mirnūtuq-* ‘to be very tired’; Greenlandic Inuit *mirnū-* ‘to become tired, to be without strength’. Fortescue—Jacobson—Kaplan 1994:198.

Buck 1949:4.75 die; dead; death; 4.84 sick; sickness. Bomhard—Kerns 1994:647—648, no. 525; Illič-Svityč 1971—1984.II:59—60, no. 293, *m/ā/ra ‘to be ill, to die’; Möller 1911:165—166.

903. Proto-Nostratic (n.) **mar-a* ‘horned animal, game’:

- A. Proto-Afrasian **mar-* ‘a kind of bovid’: Semitic: Arabic *mārīy-at-* ‘white antelope’. Egyptian *mr*, *mry* ‘fighting bull’, (f.) *mr-t* ‘cow’; perhaps also *m* (if from **mVr-*) ‘oryx, antelope’. Hannig 1995:313, 347 and 2006:986, 1102; Erman—Grapow 1926—1963.2:11, 106, and 109; Faulkner 1962: 100, 111, and 112. Cushitic: Rendille *máar* ‘male calf’, *maár* ‘female calf’; Arbore *máar* (coll.) ‘calves’. Dullay **mar-* ‘heifer’ > Harso *maar-akkó* ‘heifer’; Tsamai *mār-e* ‘heifer’. Hadiyya *moora* ‘older calf; ox, bull (for breeding)’. Hudson 1989:294. North Omotic: Gamu *mara* ‘calf’. Chadic: Ngizim *máarà-y-á* ‘kob’ [*Kobus sp.*]; Hausa *máárí-ì* ‘white oryx’ [*Oryx leucoryx*], *máarà-y-áá* ‘western kob’ [*Kobus kob*]; Saya *mááriy-á* ‘antelope’; Warji *mārai* ‘kob’. Orël—Stolbova 1995:375, no. 1728, **mar-* ‘cow, bull’; Militarëv—Kogan 2005.II:205—206, no. 153, Proto-Afrasian **ma/ir-* ‘bull, calf’ — Militarëv—Kogan list additional potential cognates from Semitic (Akkadian and Hebrew). These forms are not included here. Note: A slightly different etymology is given in Militarëv—Nikolaev 2020:210—211, no. 1.20a, Proto-Semitic **mar(ay)* ‘kind of large bovid’. I consider Militarëv—Nikolaev 2020 to represent the latest thinking.
- B. Dravidian: Tamil *marai* ‘sambar, Indian elk; bison, wild cow’; (?) Kannaḍa *mare* ‘a kind of deer’; Telugu *manūbōtu* ‘the male of a species of antelope, gayal, bison’ (*pōtu* ‘male animal’); Gondī *maramām* ‘sambar’. Burrow—Emeneau 1984:418, no. 4724.
- C. Indo-European: Sanskrit *mṛgá-ḥ* ‘a forest animal or wild beast, game of any kind, (esp.) a deer, fawn, gazelle, antelope, stag, musk-deer’. Mayrhofer 1956—1980.II:669—670. Note: Isolated within Indo-European — no sure cognates.

Buck 1949:3.11 animal (also wild beast); 3.15 livestock (cattle in wide sense); 3.20 cattle; 3.22 ox; 3.23 cow. Dolgopolsky 2008, no. 1473a, **mAr[y]V* ‘horned animal’.

904. Proto-Nostratic (n.) **math-a* or **meth-a* ‘middle’; (particle) **math-* or **meth-* ‘in the middle of, with, among’:

- A. Afrasian: Semitic: Arabic *matn* ‘middle of the road’. Egyptian *mtrt* (*mtt*) ‘middle’ in: *m mtt (nt) ib* ‘gladly’, literally, ‘in the middle of the heart’; Coptic *mēte* [ⲙⲏⲧⲉ] ‘middle’, *ntmēte* [Ⲛⲧⲙⲏⲧⲉ] ‘in the midst of’ (= Late Egyptian [m]t̪ mt n ‘in the middle of’). Hannig 1995:376; Vycichl 1983:124; Černý 1976:93.
- B. Proto-Indo-European **meth-* ‘middle; in the middle of, with, among’: Avestan *maṭ* ‘with’; Greek μετά ‘in the midst of, among’ (Mycenaean *me-ta*); Gothic *miþ* ‘with, among’; Old Icelandic *með* ‘with, along with, together with; by, through, with, using; among, between; in; along with’;

Norwegian *med* ‘with’; Swedish *med* ‘with’; Danish *med* ‘with’; Old English *mid*, *mīþ* ‘together with, with, among’; Old Frisian *mith*, *mithi* ‘with’; Old Saxon *midī* ‘with’; Old High German *miti*, *mit* ‘with’ (New High German *mit*); Albanian *mjet* ‘middle’. Pokorny 1959:702—703 **me-*, **me-ta* ‘mid, middle’; Walde 1927—1932.II:236 **me-*; Mann 1984—1987:762 **met-* (**metm-*) ‘by, with, after’; Watkins 1985:39 **me-* and 2000:51 **me-* ‘in the middle of’ (suffixal form **me-ta*); Mallory—Adams 1997:380 *(s)*me-* ‘middle, among’; **me-th_a-*; Boisacq 1950:629—630; Frisk 1970—1973.II:216; Hofmann 1966:198—199 **me-ti* (**me-tu*, etc.); Chantraine 1968—1980.II:689—690; Beekes 2010.II:936—937 **meth₂*; Orël 1998:270 and 2003:268 Proto-Germanic **meþa*; Kroonen 2013:360 Proto-Germanic **medi* ‘with’; Feist 1939:364 **metá*, **metí*; Lehmann 1986:258—259; Falk—Torp 1903—1906.I:505; Torp 1919:423; De Vries 1977:380; Kluge—Mitzka 1967:482 **me-tí*; Kluge—Seebold 1989:482; Boutkan—Siebinga 2005:264—265.

Buck 1949:12.37 middle (adj.); 12.38 center. Bomhard—Kerns 1994:637, no. 517.

905. Proto-Nostratic root **mat’*- (~ **mæt’*-):

(vb.) **mat’*- ‘to stretch, to expand, to lengthen, to draw out, to measure out’;

(n.) **mat’-a* ‘measure, measurement, amount; extent, limit’

Note also:

(vb.) **mad-* ‘to stretch, to expand, to lengthen, to draw out, to measure out’;

(n.) **mad-a* ‘measure, measurement, amount; extent, limit’

- A. Proto-Afrasian **mat’*- ‘to stretch, to expand, to lengthen, to draw out, to measure out’: Proto-Semitic **mat’*- (**mat’-at’*-, **mat’-al’*-, **mat’-an’*-, **mat’-aw’*-) ‘to stretch, to expand, to lengthen, to draw out, to measure out’ > Arabic *maṭṭa* ‘to expand by pulling, to stretch, to draw out’, *maṭṭ* ‘expansion, extension, stretching, distention, lengthening, drawing out’, *maṭāla* ‘to draw out, to lengthen, to extend, to stretch’, *maṭan* ‘stretching, extension’, *maṭā* ‘to stretch oneself and yawn, to lengthen, to draw long’, *maṭw*, *miṭw* ‘anything long, stretched’; Ḥarsūsi *meṭ* ‘to stretch (tr.)’; Mehri *meṭ* ‘to stretch’; Šheri / Jibbāli *miṭṭ* ‘to stretch (like elastic) (tr.)’, *múṭṭuṭ* ‘to stretch oneself, to stretch (intr.)’; Geez / Ethiopic *maṭṭana* [መጠን] ‘to measure, to measure out, to estimate’, *maṭan* [መጠን] ‘measure, measurement, extent, circumference, amount, value, dimension, proportion, worth, quantity, size, duration, moderation’; Gurage (Soddo) *māṭān* ‘amount’, (Chaha) *maṭā* (vb.) ‘to estimate, to evaluate’, *māṭā* (n.) ‘estimate’; Amharic *māṭṭānā* ‘to measure out the right amount, to apportion, to practice moderation’, *māṭān* ‘size, amount, magnitude, norm, proportion, extent, limit (extent), dosage, range’; Tigrinya *māṭānā* ‘amount,

dimension'. Leslau 1979:438 and 1987:372—373. [Orël—Stolbova 1995: 385, no. 1776, **miṭ*- 'to pull'.]

- B. Proto-Kartvelian **mat*'- 'to augment, to increase, to add to': Georgian *mat*'- in *mat*'-*eb-a* 'to augment, to increase, to add to', *met*'-*i* 'more'; Svan *mt*'- in *li-mt*'-*e* 'to add to, to attach'. Fähnrich 2007:280—281 **maṭ*-.
- C. Proto-Indo-European **met*'-/ **mot*'- 'to measure, to measure out, to estimate, to reckon': Greek μέδομαι 'to provide for, to be mindful of', μέδω 'to protect, to rule over'; Latin *meditor* 'to think over, to consider', *modus* 'measure, standard of measure', *medeor* 'to heal, to cure'; Gothic *mitan* 'to measure'; Old Icelandic *meta* 'to reckon, to estimate'; Old English *metan* 'to measure, to mark off, to mete out, to compare'; Old Saxon *metan* 'to measure, to mete out'; Old High German *mezzan* 'to measure, to compare, to compute' (New High German *messen*), *mez* 'measure' (New High German *Meß*-); Hittite (gen. sg.) *mi-te-eš-na-aš* 'measure, weight', (abl. sg.) *mi-id-na-az* 'measure, counsel, ordinance, resolve, device'. Rix 1998a:380 **med*- 'to measure'; Pokorny 1959:705—706 **med*- 'to measure'; Walde 1927—1932.II:259 **med*-; Mann 1984—1987:739 **medimnos* 'measure; measurer', 739—740 **medō* 'to measure, to apportion, to reward, to determine, to fix', 740 **medos*, -*es*- 'measure', 782—783 **modos*, -*es*- 'measure, means'; Watkins 1985:39 **med*- and 2000:52 **med*- 'to take appropriate measures'; Mallory—Adams 1997:374 **med*- 'to measure, to weigh'; Gamkrelidze—Ivanov 1984.II:811 **met*'- and 1995.I:711 **met*'- 'to measure, to weigh'; Boisacq 1950:618—619; Frisk 1970—1973.II:191; Chantraine 1968—1980.II:675 **med*-; Beekes 2010.II:918—919 **med*-; Hofmann 1966:193—194 **mēd*-; Walde—Hofmann 1965—1972.II:55—56; Ernout—Meillet 1979:392—393; De Vaan 2008:368 **med*-; Puhvel 1984— .6:167—168 and 6:168 **med*- 'to measure by bulk or weight'; Orël 2003:268 Proto-Germanic **metan*, 268 **metanan*; Kroonen 2013:367 Proto-Germanic **metan*- 'to measure, to evaluate'; Feist 1939:363—364 **mēd*-; Lehmann 1986:257—258 **med*- 'to measure'; De Vries 1977:385—386; Onions 1966:573 Common Germanic **metan*, Proto-Indo-European base **med*-; Klein 1971:461 **mēd*- 'to measure, to limit, to consider, to advise'; Walshe 1951:147 and 150; Kluge—Mitzka 1967:475—476 **med*-; Kluge—Seebold 1989:474 **med*-.

Buck 1949:9.32 stretch; 12.34 measure (vb.); 17.13 think (= reflect, etc.). Bomhard—Kerns 1994:650—651, no. 527; Dolgopolsky 2008, no. 1498, **mAtVdV* ⇐ **mAdVtV* 'to stretch, to measure' and, no. 1501, **mAtV* 'to increase, to make long/broad'.

906. Proto-Nostratic root **mat*'- (~ **mæt*'-):
 (vb.) **mat*'- 'to be or become wet, moist';
 (n.) **mat*'-*a* 'moisture, wetness; dew, rain'; (adj.) 'wet, moist'

- A. Proto-Afrasian **mat*’- ‘to be or become wet, moist’: Proto-Semitic **mat*’-*ar*- ‘(vb.) to rain; (n.) rain’ > Akkadian *meṭru* ‘rain’; Hebrew *māṭār* [מָטָר] ‘rain’; Ugaritic *mṭr* ‘rain’; Arabic *maṭara* ‘to rain’, *maṭar* ‘rain’; Sabaeen *mṭr* ‘field watered by rain’. Militarëv 2008a:217 and 2012:84 Proto-Semitic **miṭar*’-; Murtonen 1989:257—258; Klein 1987:339—340; Zammit 2002:384. Gurage (Chaha, Gyeto, Ennemor, Endegeñ, Wolane) *məṭāmāṭa*, (Eža, Muher, Masqan, Gogot, Soddo, Wolane) *miṭāmmāṭä*, (Selṭi) *miṭāmāṭä* ‘to be soaked through by rain, to be drenched; to be rotten, to be putrid’. Leslau 1979:438. Highland East Cushitic: Kambata *mat’oo* ‘rainy season’. Hudson 1987: 332. Proto-Southern Cushitic **maḍ*- or **maad*- ‘rain’ > Burunge *madiṇ* ‘rainy season’; Ma’a *máre* ‘rain’. Ehret 1980:153. North Bauchi Chadic **mad*- ‘dew’ > Pa’anci *madā* ‘dew’; Diryanci *madā* ‘dew’; Siryanci *mudī* ‘dew’; Warjanci *mad-ai* ‘dew’; Jimbinanci *amadā* ‘dew’. Skinner 1977:18. [Orël—Stolbova 1995:379, no. 1747, **maṭar*- ‘water’].
- B. Proto-Indo-European **mat*’- ‘to be wet, moist’: Sanskrit *mādati* ‘to be glad, to rejoice, to get drunk’, *māda-h* ‘any exhilarating or intoxicating drink; hilarity, rapture, excitement, inspiration, intoxication; ardent passion for, sexual desire or enjoyment, wantonness, lust, ruttishness, rut (especially of an elephant); pride, arrogance, presumption, conceit of or about; semen’, *mādyā-h* ‘(adj.) intoxicating, exhilarating, gladdening, lovely; (n.) any intoxicating drink, vinous or spiritous liquor, wine, Soma’; Pāli *majjati* ‘to be exalted, intoxicated’, *matta*- ‘intoxicated, proud’, *mada*- ‘intoxication, sexual excess’; Avestan *mada*- ‘intoxicating drink’; Greek *μαδάω* ‘to be moist’; Latin *madeō* ‘to be wet’. Rix 1998a:378 **mad*- ‘to be or become wet’; Pokorny 1959:694—695 **mad*- ‘(vb.) to drip; (adj.) wet’; Walde 1927—1932.II:230—233 **mad*-; Mallory—Adams 1997:638—639 **m(e)h_ad*- ‘to become wet, moist, fat’; Mann 1984—1987:724 **mad*- (**madāijō*, -*ēijō*, -*ijō*) ‘to get wet, to be wet’; Watkins 1985:38 **mad*- and 2000:50 **mad*- ‘wet, moist’; Mayrhofer 1956—1980.II:568; Boisacq 1950:598—599; Hofmann 1966:187 **māḍ*-; Frisk 1970—1973.II:157—158; Chantraine 1968—1980.II:656—657 **madē*-; Beekes 2010.II:889—890 **meh₂d*-; Walde—Hofmann 1965—1972.II:6—8 Latin *madeō* < **madeijō*; De Vaan 2008:358 **mh₂d-eh₁*-; Ernout—Meillet 1979:377; Wodtko—Irslinger—Schneider 2008:455—457 **mad*-.

Buck 1949:1.75 rain (sb.); 4.98 drunk. Dolgopolsky 2008, no. 1496, **matV[?]V* ‘moisture’; Bomhard—Kerns 1994:659, no. 537.

907. Proto-Nostratic root **maw*- (~ **məw*-):

- (vb.) **maw*- ‘to be wet’;
(n.) **maw-a* ‘water, liquid, fluid’

- A. Proto-Afrasian **maw*- ‘(vb.) to be wet; (n.) water, liquid, fluid’: Proto-Semitic **maw/y*- ‘water, liquid, fluid’ > Hebrew (pl.) *mayim* [מַיִם]

‘waters’; Syriac *mayyā* ‘water’; Mandaic *mai* ‘water’; Ugaritic *my* ‘water’; Akkadian *mū* ‘water, liquid, fluid’; Arabic *māʔ* ‘water’; Sabaeen *mwy* ‘water’; Ḥarsūsi *ḥe-myōh* ‘water’; Šheri / Jibbāli *mih* (base *mwh*) ‘water’; Mehri *ḥə-mōh* ‘water’; Geez / Ethiopic *māy* [ጠይ] ‘water, liquid’; Tigrinya *may* ‘water’; Tigre *may* ‘water’; Gurage (Zway) *may*, (Selti, Wolane) *māy* ‘water, sea’; Harari *mī*, *mīy* ‘water’; Amharic *may* ‘miraculous water’ (Geez loan). Murtonen 1989:252; Klein 1987:342; Leslau 1963:102, 1979:441, and 1987:376; Zammit 2002:391. Egyptian *mw* ‘water’, *mwy* ‘to be watery, to flow’, *mwy* ‘urine’; Coptic (Bohairic) *mōw* [ⲙⲟⲱ] ‘water’, *mē* [ⲙⲉ] ‘urine’, (Sahidic) *mow* [ⲙⲟⲱ] ‘water’. Hannig 1995:329—330; Faulkner 1962:105; Gardiner 1957:568; Erman—Grapow 1921:63 and 1926—1963.2:50—53; Černý 1976:78 and 95; Vycichl 1983:107 and 126—127. Diakonoff 1992:23 **mḥw/y* ‘water’; M. Cohen 1947:191—192, no. 485; Orël—Stolbova 1995:368—369, no. 1699, **maʔ*- ‘water’ (“[n]ote parallel forms with sonants **may*- and **maw*- in Sem[itic], Eg[yp]tian and C[entral] Ch[adic]”); Ehret 1995:300, no. 569, *-*m*- (*-*ma*- ?) ‘to be wet’. It is perhaps best to agree with Vycichl (1984:126—127) that “[Egyptian *mw*] has correspondents in the Semitic languages but not in the other Hamitic languages”. This means that the Proto-Afrasian root **maʔ*- ‘water’ reconstructed, for example, by Orël—Stolbova (1995:368—369, no. 1699) on the basis of data from the other Afrasian languages is to be seen as a parallel, though unrelated, form.

- B. Proto-Indo-European **mew(H)*-/ **mow(H)*-/ **mu(H)*- ‘(vb.) to be wet, damp; (n.) water, liquid, fluid’: Hittite (3 sg. pres. act.) *mu-ú-ta-iz-zi* ‘to wet; to wash off, to flush, to rinse’; Sanskrit *mūtra-m* ‘urine’; Greek μυδάω ‘to be damp, clammy (from decay, of a corpse)’, μύδος ‘damp, clammy; dampness, clamminess, decay’, μύρω ‘to flow’; Middle Irish *mún* ‘urine’; Lithuanian *máudau*, *máudžiau*, *máudyti* ‘to bathe, to go for a swim’; Old Church Slavic *myjō*, *myti* ‘to wash’; Russian *mytʹ* [мыть] ‘to wash’; Czech *mýti* ‘to wash’; Serbo-Croatian *mīti* ‘to wash’. Rix 1998a:400 **meuH*- ‘to wash, to rinse’; Pokorny 1959:741—743 **meu*-, **meuə*-, **mū*- ‘damp’; Walde 1927—1932.II:249—252 **meu*-; Watkins 1985:42 **meu*- ‘damp’ (extended form **meus*- in Germanic **meus*-, **mus*-) and 2000:56 **meus*- ‘damp’; Mayrhofer 1956—1980.II:663—664; Boisacq 1950:648 **meud*-; Frisk 1970—1973.II:263; Hofmann 1966:206 **meu-d*- and 209 **meu-r*- from **meu*-; Beekes 2010.II:974; Chantraine 1968—1980.II:717—718 **meu*-, **mū*-; Puhvel 1984— .6:194—195 **mew-H*-, **mew-d*-; Shevelov 1964:377; Fraenkel 1962—1965.I:417; Smoczyński 2007.1:378 **meuH*-; Derksen 2008:338 **muH*- and 2015:307.
- C. Altaic: Proto-Tungus **mū* ‘water’ > Evenki *mū* ‘water’; Lamut / Even *mō* ‘water’; Negidal *mū* ‘water’; Manchu *muke* ‘water; river, stream’; Jurchen *mo* ‘water’; Ulch *mū* ‘water’; Oroch *mū* ‘water’; Nanay / Gold *muke* ‘water’; Oroch *mū* ‘water’; Udihe *mu-de* ‘inundation’; Solon *mū* ‘water’. Starostin—Dybo—Mudrak (2003:935—936 **mūuri* ‘water’) compare the

above forms with possible Mongolian, Japanese, and Korean cognates. However, Dolgopolsky (2008, no. 1382) is probably correct in rejecting this comparison.

Buck 1949:1.31 water; 4.65 urinate; urine; 15.83 wet, damp. Bomhard—Kerns 1994:643, no. 521; Illič-Svityč 1971—1984.II:62—63, no. 298, **mEwA* ‘water, moisture’; Möller 1911:168—169 (Semitic **m-u-*); Dolgopolsky 2008, no. 1382, **mûhi* (or **mûhyi* ?) ‘water, fluid’.

908. Proto-Nostratic root **mel-*:

(vb.) **mel-* ‘to rub’ (> ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’);

(n.) **mel-a* ‘smoothness, softness; weakness’; (adj.) ‘smooth, soft, tender, weak, worn out, tired, weary’

Note also:

(vb.) **mol-* ‘to rub’ (> ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’);

(n.) **mol-a* ‘crumb, piece, morsel; mortar’; (adj.) ‘crushed, ground, worn out or down’

- A. Proto-Afrasian **mel-* ‘to rub, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’: Proto-Semitic **mal-al-* ‘to be or become worn out, weak, tired, weary’ > Hebrew *mālāl* [מָלַל] ‘to languish, to wither, to fade’, *ʔāmēlāl* [אָמַלַל], *ʔumlāl* [אֻמַּלַל] ‘feeble’, *ʔāmal* [אָמַל] (< **ʔa-mal-*) ‘to be weak, to languish’; Phoenician *ʔml* (< **ʔa-mal-*) ‘to languish, to be feeble; to enfeeble’; Arabic *malla* ‘to be or become weary, tired, bored, impatient; to tire, to become tired (of something), to become fed up (with)’, *mall* ‘weary, tired, fed up, bored’, *malūl* ‘tired, wearied, bored; weary, fed-up, disgusted’; Šheri / Jibbālī *mell* ‘to be fed up, to despair of finishing something with someone’, *emlél* ‘to tire, to make someone fed up’, *mellūn* ‘easily, bored’; Mehri *māl* ‘to be fed up with someone, something’, *həmlūl* ‘to make someone fed up, tired’. Klein 1987:35 and 351; Murtonen 1989:93; Tombač 1978:24. Proto-Semitic **mal-al-* ‘to rub, to scrape’ > Hebrew *mālāl* [מָלַל] ‘to rub, to scrape, to rub ears for husking the grain’; (?) Geez / Ethiopic *malala* [መለለ] ‘to plane (a board), to smooth with a plane’; (?) Amharic *mallälä* ‘to plane, to scrape’. Klein 1987:351; Leslau 1987:344. Proto-Semitic **mal-aš-* ‘to rub, to smear’ > Arabic (Daḡina) *malaʿ* ‘to smooth away’; Geez / Ethiopic *malʿa* [መለላ] ‘to anoint, to grease, to smear’. Leslau 1987:342. Proto-Semitic **mal-ac-* ‘to make smooth’ > Arabic *malisa*, *malusa* ‘to be smooth, level, even; to make smooth, to smooth, to level, to even (something); to make slippery’, *malis*

‘smooth, sleek’, *malasa* ‘smooth, bald’; Geez / Ethiopic *malasa* [መለሰ] ‘to gleam, to shine, to glitter, to flash, to sparkle, to be polished; to polish, to smooth, to wipe clean’; Amharic *mälläsä* ‘to purify metal by repeated meltings’; Harari (*a*)*möläsa* ‘to have a delicate and smooth appearance (person), to be smooth (skin) because of care given to it’. Leslau 1963:107 and 1987:345. Proto-Semitic **mal-ac*- ‘to be smooth, slippery’ > Hebrew *mālaš* [מָלַשׁ] ‘to be smooth, slippery’ (a hapax legomenon in the Bible); Arabic *malīša* ‘to glide, to slide, to slip, to escape’, *malīš* ‘smooth, sleek, slippery’. Klein 1987:351. Proto-Semitic **mal-at*- ‘to rub, to smear’ > Hebrew *meleṭ* [מֵלֵט] ‘mortar, cement’ (a hapax legomenon in the Bible); Syriac *malaṭ* ‘to smear, to rub over’, *mālāṭā* ‘mortar’; Arabic *malaṭa* ‘to plaster with mud or mortar (a wall)’, *milāṭ* ‘mortar’ (Aramaic loans). Klein 1987:350. Proto-Semitic **mal-ad*- ‘to be tender’ > Arabic *malida* ‘to be tender’, *ʿamlad* ‘tender, flexible’, *mald* ‘soft and delicate’, *malad* ‘softness, delicacy; youthfulness; freshness of face’. The following Highland East Cushitic forms may belong here as well: Gedeo / Darasa (pl.) *melaalle* ‘female, women’; Sidamo (pl.) *meella* ‘women, wives’. Hudson 1989:170. For the semantics, cf. Tamil *melli* ‘woman’, cited below, and perhaps also Latin *mulier* ‘woman, wife’ (< **m̥l̥-yes-ī*, comparative of *mollis* ‘soft, tender, pliant, supple, flexible, yielding’ [cf. Walde—Hofmann 1965—1972.II:122; however, Ernout—Meillet 1979:418—419 consider Latin *mulier* to be of unknown origin; see also Sihler 1995:309—310, §299a]).

- B. Dravidian: Tamil *mel* ‘soft, tender’, *melku* (*melki*-) ‘to become soft, to become light’, *mella*, *meḷḷa* ‘softly, slowly, gently’, *melli* ‘woman’, *mellikkai* ‘thinness’, *mellitu*, *mellicu* ‘that which is soft or fine; thinness, slenderness’, *melliyar* ‘the weak, the emaciated, the poor; low, mean person; woman (as of a delicate build)’, *mell-eṇal*, *meḷḷ-eṇal* ‘expression signifying being soft, gentle, being dull’, *melivu* ‘weakness, feebleness, languor, fatigue’, *meli* (-*v*-, -*nt*-) ‘to become weak; to become lean, thin; to suffer; to languish; to perish, to become poor, reduced in circumstances; to be softened; to be lowered in pitch (music)’, *meli* (-*pp*-, -*tt*-) ‘to weaken, to make lean, to make thin, to cause suffering, to destroy, to soften (a hard consonant), to lower in pitch’, *meliyavan* ‘weak, powerless man’; Malayalam *mel* ‘slender, tender’, *meliyuka* ‘to grow thin, lean’, *melivu*, *meliccal* ‘thinness, leanness’, *melluka*, *mellika* ‘to be thin, fine’, *mellē* ‘slowly, gently, softly’; Kota *melg*- (*melgy*-) ‘to soften (intr.) by action of water or heat’, *melk*- (*melky*-) ‘to soften (tr.) by action of water or heat’; Toda *mely* ‘slowly, stealthily’; Kannaḍa *mel(u)* ‘soft, tender, pliant, mild, gentle, kind, pleasant, slow’, *melpu* ‘softness, mildness’, *mella*, *mellane*, *melle* ‘gently, softly, slowly’, *mellitu*, *mellittu* ‘that which is soft, mild’; Koḍagu *melle* ‘lightly, slowly’; Tuḷu *mella* ‘slow, soft, gentle’, *melipuni* ‘to knead (as dough), to tread into a well-mixed mass (as earth)’, *melippu* ‘kneading, mixing well into a mass, macerating’, *meliyuni* ‘to become

well-mixed, to be reduced by sickness'; Telugu *melāta*, *melātuka* 'woman', *melamella*, *melamellāgā* 'gently, mildly, quietly, slowly, softly', *mella* 'slowly', *mellāgā* 'slowly, tardily, quietly, gently, mildly, softly, gradually, by degrees', *mellana* 'slowness, tardiness', *mellanan* 'slowly, tardily', *mellani* 'slow, quiet'; Gadba (Salur) *mellaga* 'slowly'; Konda *meleka* 'slowly', *melesa* 'gently, softly'; Kui *mṛērna* 'soft, quiet, gentle'. Burrow—Emeneau 1984:459, no. 5078; Krishnamurti 2003:118 **mel-k*- 'to become soft'.

- C. [Proto-Indo-European **mel-/m̥l-* (secondary *o*-grade form: **mol-*) 'to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary': Hittite (3rd sg. pres.) *ma-al-la-i* 'to crush, to grind', (reduplicated) *me-ma-al* 'meal'; Sanskrit *mṛṇāti*, *mṛṇāti* 'to crush, to grind', *mṛdnāti*, *mārdati*, *mārdate* 'to rub, to stroke, to wipe, to rub into; to press, to squeeze, to crush, to pound', *mṛdū-ḥ* 'soft, delicate, tender, pliant, mild, gentle, weak, feeble', *mṛkṣāti* 'to rub, to curry, to stroke', *mṛjāti*, *mṛjate* 'to wipe, to rub, to cleanse, to polish, to clean, to purify, to embellish, to adorn, to make smooth, to stroke', *mṛṣṭā-ḥ* 'washed, cleansed, polished, clean, pure, smeared, besmeared with', *mlāyati* 'to wither, to fade'; Greek ἀμαλδύνω 'to soften', ἀμαλός 'soft, weak, feeble', μαλακός 'soft', μαλάσσω 'to make soft', μύλη 'mill, handmill', μύλος 'millstone'; Albanian *mjel* 'meal, flour'; Armenian *malem* 'to crush', (reduplicated) *mlmlem* 'to rub'; Umbrian *maletu* 'crushed, ground'; Latin *molō* 'to grind', *mollis* 'soft, tender, pliant, supple, flexible, yielding', *mola* 'millstone', *molīna*, *molīnum* 'a mill'; Old Irish *melim* 'to grind'; Breton *meil* 'mill'; Welsh *melin* 'mill' (< Latin *molīna*); Gothic *malan* 'to grind', *mildīpa* 'mildness, kindness', *ga-malwjan* 'to grind up, to crush', *malma* 'sand', *mulda* 'dust'; Old Icelandic *mala* 'to grind', *meldr* 'grinding; flour', *melr* 'sand-bank, gravel-bank', *mildi* 'kindness, mercy, grace', *mildr* 'mild, gentle, gracious; munificent, liberal', *mola* 'to crush, to break into small pieces', *moli* 'small piece, crumb', *molna* 'to crumble into dust', *mjöl* 'meal, flour', *mylna* 'mill' (< Latin *molīna*), *mølva* (*mølda*) 'to crush, to pound'; Swedish *mala* 'to grind'; Old English *melu* 'meal, flour', *milde* 'gentle, mild; merciful, kind', *mildian* 'to become mild', *milts*, *milds* 'kindness, mercy', *molde* 'earth, soil, dust; ground, country, world', *molsnian* 'to molder, to decay', *mylen* 'mill' (< Latin *molīna*); Old Frisian *mele* 'flour, meal', *milde* 'mild, gentle'; Old Saxon *malan* 'to grind', *melo* 'flour, meal', *mildi* 'mild, soft, gentle'; Old High German *malan* 'to grind, to mill, to crush, to pulverize' (New High German *mahlen*), *melo* 'flour, meal' (New High German *Mehl*), *multi*, *milte* 'mild, soft, mellow, gentle' (New High German *mild*); Lithuanian *malù*, *màlti* 'to grind'; Old Church Slavic *meljo*, *mlēti* 'to grind'; Tocharian A *mal-yw-*, B *mely-* 'to crush, to squeeze, to lay waste', B *mäl-* 'to crush, to repress, to oppress', B *mällarške* 'pressing' (?) or 'pliant' (?), B *mälle* 'ground-down, dull', B *mällalñe* 'crushing'. Rix 1998a:387

meld-* ‘to become weak, soft, mild, gentle, tender’, 388—389 **melh₂-* ‘to rub, to crush, to grind’, 390 **melh₂u-* ‘to rub, to crush, to grind’; Pokorný 1959:716—719 **mel-* ‘to crush, to grind’; Walde 1927—1932.II:284—291 **mel-*; Mann 1984—1987:728 **mālō*, *-iō* (variant of type **mļō*, *-iō* ‘to grind, to mill’), 749 **meldō*, *-iō* ‘to crush, to destroy’, 749 **meldhos* ‘soft, tender’, 750 **meļuos* (meləuos*, **meļuos* ‘soft, effete, silly’, 750 **meļuos*, *-ā* (**meləuo-*) ‘millings, flour’, 751—752 **melk-* (**molk-*, **mļk-*) ‘soft, limp’, 752 **melmos*, *-ā* ‘soft; soft matter, mud, pug, pugging, puddle’, 752 **melō*, *-iō* ‘to grind, to crush’, 753 **meļuos* ‘soft, sweet’, 753 **meməl-* (**mīməl-*, **mel-mel-*), 773 **mlētos* ‘crushed, pulped’, 773 **mļd-* ‘crush, pulp, powder’, 773—774 **mļdos*, *-is*, *-us* (**mļdulos*) ‘soft, pappy, pulpy, powdery, weak, tender’, 774 **mļdsnā* (*-os*, *-om*) ‘powder, dust, fine loam’, 774 **mļdhos* (**mældh-*) ‘young, immature, silly’, 775—776 **mļk-* (variants: **mļks-*, **mļsk-*) ‘soft, mild, silly’, 776 **mļm-* ‘powder; powdery, crumbly; to crumble, to decompose’, 776—777 **mļō*, *-iō* ‘to grind, to crush’, 777 **mļs-*, **mļskō* ‘to crumble, to decay’, 777 **mļtos* (**mļt-*) ‘ground, crushed; powder’, 777—778 **mļuō* ‘to crush, to shatter’, 791—792 **moldis*, *-os*, *-us* ‘soft, sweet, slow, gentle, silly’, 792—793 **molks-* (**molks-*, **molks-*) ‘limp, soft’, 793 **molūiō* ‘to beat, to crush’ (a Germanic variant), 815 **mulīō* ‘to grind, to crush’, 816 **mulos*, *-ā*, *-iōm*, *-is* ‘grinding, milling; grindstone, millstone’; Watkins 1985:40 **mel-* ‘soft’, 40—41 **melə-* (also **mel-*) ‘to crush, to grind’ and 2000:53 **mel-* ‘soft’, 53—54 **melə-* (also **mel-*) ‘to crush, to grind’, with derivatives referring to various ground or crumbling substances (such as flour) and to instruments for grinding or crushing (such as millstones) (oldest form **mel₂-*); Gamkrelidze—Ivanov 1984.II:692—693 **mel-* and 1995.I:190, I:200, I:567—568, I:598—599 **mel-* ‘to crush, to divide; to thresh; to grind; to grate’; Mallory—Adams 1997:247 **melh₂-* ‘to grind’; Puhvel 1984—.6:21—25 and 6:140—141; Mayrhofer 1956—1980.II:670—671, II:672—673, II:676, II:676—677, II:698—699; Boisacq 1950:49, 604, and 649—650; Frisk 1970—1973.I:84, I:85, II:165—166, and II:268—270; Hofmann 1966:14, 188, and 207; Chantraine 1968—1980.I:69, I:70, II:661 Greek μαλακός ‘soft’ < **m^ol₂k-*, and II:721 **mel-*, **mel-₂-*, **mol-₂-*, **m^ol-₂-*; Beekes 2010.I:80—81 and II:896 **mlh₂-k-*; Walde—Hofmann 1965—1972.II:104—106 **mel-* (**melā^x-*); Ernout—Meillet 1979:410—411 Latin *mollis* < **moldwis* and 411 **molə-/melə-/m^olə-*; De Vaan 2008:386 and 286—387; Orël 2003:257 Proto-Germanic **malanan*, 257 **maldriz* ~ **maldran*, 258 **malmaz* ~ **malmōn*, 258—259 **malwjanan*, 266 **meldipō*, 266 **meldjaz*, 266 **meldin*, 267 **melmaz*, 267 **meltanan*, 267 **melwan*, 275 **muldō(n)*, 275 **muljanan*; Kroonen 2013:351 Proto-Germanic **malan-* ‘to grind’, 351 **malta-* ‘soft; gone bad (?)’, 351—352 **altjan-* ‘to make dissolve’, 352 **malwjan-* ‘to crush, to pound’, 362—363 **melda-* ‘pleasant, mild’, 363 **meltan-* ‘to dissolve, to be digested’, 365 **melwa-* ‘meal, flour’, 374—375 **multōjan-* ‘to become soft’, and 375

**mulwēn-* ‘to soften’; Feist 1939:192, 342, 343, 359, and 366; Lehmann 1986:144—145, 242—243, 243, 255, and 260; De Vries 1977:377, 383, 387, 390, 392, 397—398, and 400; Onions 1966:564—565, 576, and 593; Klein 1971:452, 464—465, and 471; Kluge—Mitzka 1967:454 **mel-*, 471, and 478—479; Kluge—Seebold 1989:455, 470, and 479; Fraenkel 1962—1965.I:403—404; Derksen 2008:307 **melH-* and 2015:302—303 **melH-*; Kloekhorst 2008b:547—548; Wodtko—Irslinger—Schneider 2008:482—485 **meld-*.] Note: The Indo-European forms are phonologically ambiguous. They either belong here or with Proto-Nostratic **mol-* ‘to rub’ (> ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’).

- D. Proto-Chukchi-Kamchatkan **māl-* ‘small, fine’: Kerek *nə-mlə-Xi* ‘small’; Koryak *nə-mlə-qen* ‘small’; Alyutor *nə-mliā-qin*, *məs(ə)-* ‘small, fine’; Kamchadal / Itelmen *milīa-cX* ‘baby’ (with diminutive suffix). Fortescue 2005:181. Proto-Chukotian **māla-* ‘supple’ > Chukchi *m(ə)l-at-* ‘to become supple (skin)’, *rə-māla-w-* ‘to make supple (skin), to make strong or agile (person)’, *nə-mliā-qin* ‘flexible, supple’; Kerek *mə-mʔa-u-* ‘to soften skin’; Koryak *jə-mla-w-* ‘to make supple’, *nə-mlə-qin* ‘flexible’; Alyutor *msa-* ‘supple (skin)’. Fortescue 2005:182. Proto-Chukchi-Kamchatkan **mālæ-* ‘to break’: Chukchi *māle-* ‘to break, to be broken’; Kerek *mīa-* ‘to break’, *nə-mīa(a)u-* ‘to pulverize’; Koryak *māle-* ‘to break (tr.)’, *jə-mliā-v-* ‘to pulverize’, *māle-crən* ‘crumb’; Alyutor *mīa-* ‘to break (tr.)’, *tə-mliā-v-* ‘to crush, to shatter’. Fortescue 2005:182.

Buck 1949:4.91 tired, weary; 5.56 grind; 9.31 rub; 15.75 soft; 15.77 smooth. Brunner 1969:20, no. 10; Möller 1911:161—162; Greenberg 2002:84—85, no. 186; Caldwell 1913:603—604; Bomhard—Kerns 1994:637—639, no. 518; Illič-Svityč 1971—1984.II:69—70, no. 302, **moLA* ‘to smash’; Dolgopolsky 2008, no. 1412, **mel[H₁]*V ‘soft’.

909. Proto-Nostratic interrogative pronoun stem **mi-* (~ **me-*) ‘who?, which?, what?’, relative pronoun stem **ma-* (~ **mə-*) ‘who, which, what’:

- A. Proto-Afrasian **ma-* ~ **mi-* interrogative and relative pronoun stem: Proto-Semitic **mā-* ~ **mī-* interrogative and relative pronoun stem > Akkadian (interj.) *mā* ‘what?, why?; indeed, verily’, (interrogative pronoun) *mannu*, *manna*, *manni*, *maʔu*, *man* ‘who?’, (interrogative and adverb) *matī* ‘when?’, (interrogative) *minsu* ‘what is it?, why?’, (interrogative pronoun) *minu* ‘who?’ (West Semitic loan), (interrogative) *mīnu*, *mīnum*, *mīnū*, *mīna*, *mīnam*, *mīni*, *mīnim*, *mīnumma*, *mīnamma*, *mīnammi*, *mīnimma*, *mīnimmi*, *mīn* ‘what?, why?, what for?, what reason?; what, whatever’; Hebrew (interrogative pronoun) *māh* [מָה], *māh* [מַה] ‘what?, how?’, *mān* [מָן] (= *māh*) ‘what?’, (interrogative pronoun) *mī* [מִי] ‘who?’; Syriac *mā(n)*, *mānā* ‘what?’, *man* ‘who?’; Phoenician *mh* ‘what’, *my* ‘who’;

whoever'; Ugaritic *mh* 'what?', *my* 'who?', *mm* 'whatever'; Arabic *mā* (interrogative) 'what?', *mā* (relative) 'that, which, what', (interrogative particle) *matā* 'when?, at what time?', (interrogative pronoun) *man* 'who?, which one?, which ones?', (relative pronoun) *man* 'who, the one who, those who, one who, whoever, whosoever, everyone who, he who', (conjunction) *mahmā* 'whatever, who ever, no matter how much, however much'; Sabaeen (indefinite and interrogative pronoun) *mhn* 'what, what thing?'; Soqotri *mon* 'who?'; Ḥarsūsi *mōn* 'who?'; Šheri / Jibbāli *mun* 'who?'; Mehri *mōn* 'who?'; Geez / Ethiopic *mi* [ሚ] 'what?', *mannu* [ሞኑ] 'who?', *mənt* [ሞንት] 'what?'; Tigre *mə, mi* 'what?', *mān* 'who?'; Tigrinya *mān, mən* 'who?', *mənəw, mənū* 'which?'; Harari *mān* 'who?', *min* 'what?'; Argobba *man* 'who?'; Gafat *man* 'who?'; Amharic *mən* 'what?, which?', *man* 'who?'; Gurage *mə* 'what?', *ma* 'who?', *man* 'who?', *mən* 'what?'. Lipiński 1997:328—331; Klein 1987:321, 340, and 354; Leslau 1963:108, 1979:385, 407, and 1987:321, 348, 352; Zammit 2002:377. Egyptian *m* 'who?, what?'; Coptic *nim* [Ⲣⲏⲙ] (< *in m*) 'who?, what?'. Hannig 1995:313; Faulkner 1962:100; Gardiner 1957:567; Erman—Grapow 1921:59 and 1926—1963.2:4; Vycichl 1983:142; Černý 1976:108. Berber: Tamazight *m-ay* 'who?, what?'; Tuareg *mi* 'who?'; Kabyle *mi* 'when', *məlmī* 'when?' (*si məlmī* 'since when?'). Proto-East Cushitic **maʔ* 'what?' > Kambata *maʔa* 'what?'; Alaba *ma* 'what?'; Gedeo / Darasa *maa* (< **maʔa*) 'what?'; Sidamo *mai* 'what?'; Hadiyya *maha* (< **maḥa* < **maʔ* *waḥa* 'what thing?') 'what?'; Somali *maḥaa* 'what?'; Rendille *maḥ(a)* 'what?'; Bayso *me* (< **maḥ*) 'what?'; Boni *mahaa* 'what?'; Afar *maḥa* 'what?'; Burji *miya* (? < **maʔ+yaa*) 'what?'; Gedeo / Darasa *maacco* 'what?'. Sasse 1982:146; Hudson 1989:166. Proto-East Cushitic **meʔ-* (or **meeʔ-*) 'how many?' > Burji *miʔa* 'how many?'; Sidamo *meʔe* 'how many?'; Kambata *meʔo* 'how many?, how much?'; Dullay *meeʔe* 'how many?'; Gawwada *meeʔe* 'how many?'; Dobase *meeʔe* 'how many?'; Harso *meeʔe* 'how many?'; Tsamay *meek* 'how many?'; Dasenech *miya* 'how many?'; Galla / Oromo *meek'a* 'how many?'; Gidole *meek'* 'how many?'; Konso *meeqaa* 'how many?'; Gedeo / Darasa *meʔe* 'how many?, how much?'; Hadiyya *meʔo* 'how many?, how much?'. Sasse 1982:143; Hudson 1989:83. Burji *máama* 'how?'. Sasse 1982:138. Proto-Highland East Cushitic **mi-ha* 'why?' > Burji *miyaa-ga* 'why?'; Gedeo / Darasa *maya* 'why?'; Hadiyya *mahi-na* 'why?'; Kambata *mii(-ha), mahiiha* 'why?'; Sidamo *mae-ra* 'why?'. Hudson 1989:167. Proto-Southern Cushitic **ma* 'which?' > Iraqw *-ma-* in: *amaga* 'how many?', *ahema* 'who?', *asma* 'why?', *ama* 'when?'; Ma'a *-ma* in: *-hamá* 'which?', *-mo* in: *kimomo* 'how?', (verb enclitic) *-mo* 'how many?'; K'wadza *-ma-* in: *ga'amayo* 'when?'. Ehret 1980:153. Proto-Southern Cushitic **me* 'how many?' > Ma'a *mé* 'how many?'; Dahalo *méék'a* 'how many?'. Ehret 1980:157. Proto-Southern Cushitic *mi* 'what kind of?' > Alagwa *mi* 'what?', *miya* 'who?'; Iraqw *-mi-* in: *amila* 'what?'; K'wadza *-mi* in: *homi*

- ‘what?’, *mi* ‘so that’; Ma’a *mina* ‘what kind of?’. Ehret 1980:158. Proto-Chadic **mi*, **mə* ‘what?’ > Ngizim *t-âm* ‘what?’; Dangla *maa* ‘what?’; Ron *mi* ‘what?’; Margi *mi* ‘what?’; Bachama *munə* ‘what?’; Nancere *me*, *mene* ‘what?’; Zime *mi* ‘what?’. Newman 1977:34. Perhaps also Ongota *mìyá* ‘how much?’. Fleming 2002b:50. Ehret 1995:301, no. 571, **ma*, **mi* ‘what?’; Diakonoff 1988:83, §4.4.2; Militarëv 2015b:132 and 133.
- B. Proto-Kartvelian interrogative pronoun (?) **mi-n-* ‘who?’: Georgian *vin-* ‘who?’; Mingrelian *mi-*, *min-* ‘who?’; Laz *min-* ‘who?’. Fähnrich—Sardshweladse 1995:135 **wi-*; Fähnrich 2007:162—163 **wi-*; Klimov 1964:135 **mi-n-* and 1998:53 **win-* ‘who’. Proto-Kartvelian **ma-* ‘what’: Georgian [*ma-*] ‘what’; Mingrelian *mu-* ‘what’; Laz *mu-* ‘what’; Svan *ma(j)*, *māj* ‘what’. Klimov 1964:124 **ma-* and 1998:112 **ma-* ‘what’; Fähnrich—Sardshweladse 1995:226—227 **ma-*; Fähnrich 2007:276 **ma-*.
- C. Proto-Indo-European **me-/mo-* interrogative and relative pronoun stem: Cornish (conjunction) *ma*, *may* ‘that’; Breton (conjunction) *ma*, *may*, Middle Breton *maz* (from *ma+ez*) ‘that’; Tocharian B *mäksu* (a) interrogative pronoun: ‘which?, who?’, (b) interrogative adjective: ‘which?, what?’, (c) relative pronoun: ‘which, who’, B *mäkte* (a) interrogative pronoun: ‘how?’, (b) comparative: ‘as’, (c) causal: ‘because’, (d) temporal: ‘as, while’, (e) final: ‘so, in order that’, (f) manner: ‘how’, A *mänt*, *mät* ‘how?’; Hittite *maši(ya)-* ‘how much?, how many?’; as many as, as much as’, *ma-a-an*, *ma-an* (adverb and conjunction) ‘how, whether, like, (even) as, if’. J. Friedrich 1952:138; Puhvel 1984— .6:39—43 **me-/mo-* and 6:94—97; Kloekhorst 2008b:552 and 564; Adams 1999:451 and 451—452; Van Windekens 1976—1982.I:285—286 and I:287—288; Lewis—Pedersen 1937:127 and 241—242; Mann 1984—1987:729 **mān* ‘but, so, indeed, yet’.
- D. Proto-Uralic **mi* ~ **mü* (?) interrogative-relative stem: Finnish *mikä* ~ *mi-* ‘which?, what kind?; which’; Lapp / Saami *mi* ~ *mâ-* ‘what, which, what kind; [that] which; which, who, what’; Mordvin *meze* ‘what’; Cheremis / Mari *ma*, *mo* ‘what, which, what kind’; Votyak / Udmurt *ma* ‘what, which, what kind’; Zyrian / Komi *myj* ‘what, which, what kind’; Vogul / Mansi *män* ‘which, what kind’; Ostyak / Xanty *mōgi* ‘which, what’, *mētä* ‘any, which, who’; Hungarian *mi* ‘what, which, what kind’; Tavgi Samoyed / Nganasan *ma* ‘what’; etc. Collinder 1955:34—35, 1965:141 **mi* ~ **my* (?), and 1977:54; Rédei 1986—1988:296 **m3*; Décsy 1990:103 **mi* ‘what; thing’; Janhunen 1977b:91 **mę*.
- E. Proto-Altaic **mV* interrogative stem: Proto-Mongolian **-mu*, **-mi* suffixed interrogative particle > Middle Mongolian *-mu*, *-mi* suffixed interrogative particle. Proto-Turkic **-mi* suffixed interrogative particle > Old Turkic *-mu* suffixed interrogative particle; Karakhanide Turkic *-mu* suffixed interrogative particle; Turkish *-mi/-mü/-mu/-mü* suffixed interrogative particle; Gagauz *-mi* suffixed interrogative particle; Azerbaijani *-mi* suffixed interrogative particle; Turkmenian *-mi* suffixed interrogative

particle; Uzbek *-mi* suffixed interrogative particle; Uighur *-mu* suffixed interrogative particle; Karaim *-mo* suffixed interrogative particle; Tatar *-mi* suffixed interrogative particle; Bashkir *-mī* suffixed interrogative particle; Kirghiz *-bī* suffixed interrogative particle; Kazakh *-ma/-me* suffixed interrogative particle; Noghay *-ma/-me* suffixed interrogative particle; Oyrot (Mountain Altai) *-ba/-be* suffixed interrogative particle; Tuva *-be* suffixed interrogative particle; Chuvash *-im* suffixed interrogative particle. Note also Chuvash *měn*, *měsker* ‘what?’, *miše* ‘how much (in number)?’, *měňšěn* ‘why?’, *měňle* ‘what kind of?’ (cf. Greenberg 2000:230; L. Clark 1998:440). Starostin—Dybo—Mudrak 2003:958 **mV* interrogative root.

- F. Proto-Chukchi-Kamchatkan **mikæ* ‘who?’: Chukchi *mik(ə)-* ‘who?, someone’; Kerek *maki* ‘who?’, Koryak *meki* (Kamen *maki*) (< **mæki*, metathesized form of **mikæ*) ‘who?’, Alyutor *miyya* ‘who?’, *mikin* ‘whose’; (?) Kamchadal / Itelmen *k’e* (pl. *k’nəntx*) ‘who?’. Fortescue 2005:175; Greenberg 2000:231; Mudrak 1989b:102 **mki*, **mkin-* ‘who’. Proto-Chukchi-Kamchatkan **miŋ(kə)* ‘where?’: Chukchi *miŋkə* ‘where?’, *miŋkəri(lə)* ‘to where?’, Kerek *miŋkiil* ‘to where?’, Koryak *miŋkə* ‘where?’, *miŋkəje* ‘to where?’, *meŋqo* ‘from where?’, Alyutor *məʔannu* (Palana *miŋkə*, *meje*) ‘where?’, *maŋkət(əŋ)* ‘to where?’, Kamchadal / Itelmen *maʔ* ‘where?’, *manke* ‘to where?’, *manxʔal* ‘from where?’. Fortescue 2005:177; Mudrak 1989b:101 **ma-* ‘where’, 102 **miŋ* ‘which’. Proto-Chukchi-Kamchatkan **miŋkədi* ‘how?’: Chukchi *miŋkəri* ‘how?, what kind?’, Kerek *miŋkii* ‘how?’, Koryak *miŋkəje* ‘how?, what kind?’, Alyutor *maŋkət* ‘how?’, Kamchadal / Itelmen (Sedanka) *mank* ‘how?’. Fortescue 2005:177. Proto-Chukchi-Kamchatkan **mæŋin* ‘what kind?’: Chukchi *meŋin* used as the suppletive absolutive case form of *mik(ə)-* ‘who?, someone’; Kerek *maŋin ippa* ‘which?’, Koryak *meŋin* ‘what kind of?’, Alyutor *maŋin* ‘what kind of?’, Kamchadal / Itelmen *min* ‘what kind?’. Fortescue 2005:173.
- G. Proto-Eskimo (enclitic) **-mi* ‘what about?’: Alutiiq Alaskan Yupik *+mi* ‘I wonder, how about?’, Central Alaskan Yupik *+mi* ‘how about?, contrast’; Naukan Siberian Yupik *#mi* ‘...or other’ (with question words); Central Siberian Yupik *+mi* ‘how about?, contrast’; Sirenik *+mi* emphatic enclitic; Seward Peninsula Inuit *(+mi)* ‘why (not)?’, North Alaskan Inuit (Uummarmiut) *+mi* ‘what about?’, Greenlandic Inuit *+mi* ‘but, indeed, what about? (contrastive emphasis)’. Fortescue—Jacobson—Kaplan 1994:411.

Sumerian interrogative stem **me-* in: *me-na-àm* ‘when?’, *me-a* ‘where?’, *me-še* ‘where to?’.

Illič-Svityč 1971—1984.II:66—68, no. 300, **mi* ‘what?’; Bomhard—Kerns 1994:645—647, no. 524; Greenberg 2000:229—231, no. 62; Hakola 2000:106,

no. 452; Nafiqoff 2003:53—55 *mi; Assadian—Hakola 2003:85, no. 273; Dolgopolsky 2008, no. 1355, *mi ‘what?’; Fortescue 1998:155.

910. Proto-Nostratic first person singular *mi (~ *me) ‘I, me’, first person plural (inclusive) *ma (~ *mā) ‘we, us’:

Note: In Afrasian and Dravidian, first person singular *mi and first person plural (inclusive) *ma have been mostly lost. For an overview of the personal pronouns in Afrasian, cf. Diakonoff 1988:70—79 and Lipiński 1997:297—311 (emphasis on Semitic); for Elamo-Dravidian, cf. McAlpin 1981:112—117; for Dravidian, cf. Krishnamurti 2003:244—253, Steever 1998a:21—23, and Zvelebil 1977:40—52.

- A. Afrasian: This stem appears only in Chadic as an independent pronoun: Hausa (pl.) *maa* ‘we’, (indirect object pl.) *manà* ‘us, to us, for us’, (pl.) *muu* ‘we, us, our’, (past tense subj. pl.) *mun* ‘we’, (continuous tense subj. pl.) *munà* ‘we’, (indirect object sg.) *mini* ‘me, to me, for me’; Kotoko *mi* ‘we, us’; Mandara *ma* ‘we, us’; Musgu (sg.) *mu* ‘I, me’, (pl.) *mi* ‘we, us’; Bole *mu* ‘we, us’. South Bauchi Chadic (Bu: / Zaranda) *mi* ‘we’ (indep. pron. 1 pl.) (cf. Caron 2008:105). It also serves as the basis of the first singular verbal suffix in part of Highland East Cushitic: cf. the perfect endings in Hadiyya: *-ummo*, Kambata: *-oommi*, and Sidamo: *-ummo*. In Burji and Gedeo / Darasa, on the other hand, the perfect suffixes are *-anni* and *-enne* respectively, which are based upon the first person stem *na.
- B. Proto-Dravidian first plural suffix *-m in: (a) first person plural exclusive *yā-m- (obl. *yā-m-) and (b) first person plural inclusive *ñā-m- (obl. *ñā-m(m)-): (a) Tamil *yām* ‘we’; Kota *a-m* ‘we’; Kannaḍa *ām* ‘we’; Telugu *ēmu* ‘we’; Kolami *a-m* ‘we’; Naikri *ām* ‘we’; Parji *ām* ‘we’; Gadba (Ollari) *ām* ‘we’; Maṇḍa *ām* ‘we’; Kuṛux *ēm* ‘we’; Malto *ém* ‘we’; etc. (cf. Burrow—Emeneau 1984:467—468, no. 5154); (b) Tamil *nām* ‘we’ (inclusive); Malayalam *nām* ‘we’ (inclusive); Kuṛux *nām* ‘we’ (inclusive); Malto *nām* ‘we’ (inclusive); etc. (cf. Burrow—Emeneau 1984:322, no. 3647). It also occurs as the first plural suffix in finite verbs: *-*ṽm* > Tamil *-mu*, *-mi* first plural exclusive suffix, *-amu* first plural inclusive suffix; Kui *-amu*, *-ami* first plural exclusive suffix; Kuwi *-amu*, *-omi* first plural exclusive suffix; Kuṛux *-m* first plural exclusive suffix; Malto *-im*, *-em*, *-om* first plural exclusive suffix; Parji *-am*, *-um*, *-om*, *-m* first plural exclusive suffix; Kolami *-um*, *-am*, *-m* first plural exclusive suffix, *-am* first plural inclusive suffix; etc. Krishnamurti 2003:246—248 and 308—312. Finally, it is found in the alternative forms of the first plural exclusive pronoun in: Telugu (nom. pl.) *mēmu* ‘we’, (obl. pl.) *mamm-*, *mā-* ‘us’; Gondi (dial.) (nom. pl.) *mamm-āṭ*, *mā-ṭ*, *mām-aṭ*, *mamm-oṭ*, *mamo-o*, *mar-at*, *mamm-a*, *mā-m* ‘we’, (obl. pl.) *mā-* ‘us’; Konda (nom. pl.) *māp* ‘we’, (obl. pl.) *mā-* ‘us’; Kui (nom. pl.) *māmu* ‘we’, (obl. pl.) *mā-* ‘us’;

Kuwi (nom. pl.) *māmu* ‘we’, (obl. pl.) *mā-* ‘us’; Pengo (obl. pl.) *mang-*, *mā-* ‘us’. Krishnamurti 2003:247.

- C. Proto-Kartvelian **me-*, **men-* first person personal pronoun stem: Georgian *me-*, *men-*, *mena-* ‘I’; Mingrelian *ma-* ‘I’; Zan *ma*, *man* ‘I’; Svan *mi-* ‘I’. It occurs in Georgian *m-* first person singular verb prefix (objective conjugation) and is also found in Svan as the first person personal formant (objective) *m-* (cf. Tuite 1997:23). Schmidt 1962:123 **me* ‘I’; Klimov 1964:132 **me(n)* and 1998:119 **men* ‘I’; Fähnrich—Sardshweladse 1995:223—224 **m-* first person verb prefix, and 233—234 **me-* ‘I’; Fähnrich 2007:273 **m-* and 284 **me-*.
- D. Proto-Indo-European **me-* used to form the oblique cases of the first person personal pronoun stem: Sanskrit (acc. sg.) *mām*, *mā*, (gen. sg.) *māma*, *me*, (abl. sg.) *mát*, (dat. sg.) *máhya(m)*, (loc. sg.) *máyī*, (inst. sg.) *máyā*, (gen.-dat. sg.) *me*; Greek (acc. sg.) ἐμέ, με, (gen.-abl. sg.) μου, ἐμοῦ, (gen. sg.) ἐμεῖο (μευ), (dat.-loc. sg.) ἐμοί, ἐμίν, (gen.-dat. sg.) μοι; Old Latin (acc.-abl. sg.) *mēd*, (gen. sg.) *meī*, *mīs*, (dat. sg.) *mihī*; Old Irish *mé*, *messe* ‘I’, (acc. sg.) *mé*, *messe*, *-m* ‘me’, (gen. sg.) *mo*, *mu*; Gothic (acc. sg.) *mik*, (gen. sg.) *meina*, (dat. sg.) *mis*, (possessive) *meins*; Lithuanian (acc. sg.) *manė*, (gen. sg.) *manės*, *māno*, (dat. sg.) *mānei*, *mi*, (loc. sg.) *manyjė*, (instr. sg.) *manimi*, (nom. pl.) *mės*, (acc. pl.) *mūs*, (gen. pl.) *mūsū*, (dat. pl.) *mùms*; Old Church Slavic (acc. sg.) *mę*, *mene*, (dat.-loc. sg.) *мѣнѣ*, (dat. sg.) *mi*, (nom. pl.) *my* ‘we’; Hittite *-mi*, *-mu*; *am-mu-uk*, *mi-iš*. Pokorny 1959:702 **me-* ‘me’; Walde 1927—1932.II:236 **me-*; Mann 1984—1987:240 **eme*, **mē*, **mene*, **mnē* ‘me’, 240 **emejos* (**emojos*, **emos*) ‘my; mine’, 738—739 **mē* (**me*, **men*, **mene*, **mone*, **mnē*) ‘me’, 747 **mejios* (**mājios*) ‘my’, 786 **moi* (enclitic) ‘to me’; Watkins 1985:39 **me-* and 2000:51 **me-* oblique form of the personal pronoun of the first person singular; Gamkrelidze—Ivanov 1984.I:254—255 **me*, **[m]eme*, **m-mé* and 1995.I:222 **me*, **[m]eme*, **m-mé*; Brugmann 1904:407—413; Meillet 1964:332—336; Szemerényi 1996:211—220; Fortson 2004:127—129; Beekes 1995:207—209 and 2010.I:416; Meier-Brügger 2003:225—227; Watkins 1998:67; Haudry 1979:61—63; Adrados 1975.II:784—813; Adrados—Bernabé—Mendoza 1995—1998.III:27—68; Schmitt-Brandt 1998:228—231; Buck 1933:216—221; Sihler 1995:369—382; Burrow 1973:263—269; Liebert 1957; Orël 2003:83 Proto-Germanic **meke*, **mez*, **mīna*. Proto-Indo-European (a) **-mi* first person singular non-thematic primary ending, (b) **-m* first person singular non-thematic secondary ending: Sanskrit (1st sg. primary) *-mi*, (1st sg. secondary) *-m*, (1st pl. primary active) *-mas*, (1st pl. primary middle, 1st pl. secondary perfect) *-mahe*, (1st pl. secondary active, 1st pl. secondary perfect) *-ma*, (1st pl. secondary middle) *-mahi*; Hittite (1st sg. primary *mi*-conjugation) *-mi*, (1st sg. secondary) *-n* (< **-m*), (1st pl. active *mi*-conjugation, if the stem ends in *-u-*) *-meni*, *-mani*, (1st pl. preterite *mi*-conjugation, if the stem ends in *-u-*) *-men*; Greek (Homeric) (1st sg. active indicative athematic

primary) -μι, (1st sg. secondary) -ν (< *-m), (1st pl. active indicative) -μεν, (1st sg. middle indicative) -μαι, (1st dual middle indicative) -μεθον, (1st pl. middle indicative) -μεθα (-μεσθα); Latin (1st sg. primary and secondary) -m, (1st pl.) -mus; Gothic (1st pl. present indicative) -m, (1st pl. optative) -ma; the 1st sg. primary ending *-mi is preserved in *im* 'I am'; Old Church Slavic (1st sg. athematic) -mъ, (1st pl.) -mъ. Brugmann 1904:407—413 and 588—596; Meillet 1964:227—235 and 332—335; Beekes 1995:207—209 and 232—237; Gamkrelidze—Ivanov 1995.I:254—260; Szemerényi 1996:211—218, 233—242, and 327—331; Meier-Brügger 2003:178—179; Fortson 2004:84—86; Watkins 1998:60; Clackson 2007:123—125. Note: According to Greenberg (2000:77—78), in Proto-Indo-European, this *-m was added to the nominative singular of the first person independent pronoun: **ʔe-ghō+m*, **ʔe-k'ō+m* 'I': Sanskrit *ahám* 'I'; Avestan *azəm* 'I'; Greek *ἐγώ(v)* 'I'; etc.

- E. Proto-Uralic **mi-nä* first person independent personal pronoun stem 'I' — (a) first person singular: Finnish *minä/mino-* 'I'; Lapp / Saami *mon/mú-* 'I'; Mordvin *mon* 'I'; Cheremis / Mari *mñí, mōj(ō)* 'I'; Votyak / Udmurt *mon* 'I'; Zyrian / Komi *me* (acc. *menō*) 'I'; Ostyak / Xanty *mä, mən-* 'I'; Yurak Samoyed / Nenets *mañ* 'I'; Tavgi Samoyed / Nganasan *mannan* 'I'; Yenisei Samoyed / Enets *mod'i* 'I'; Selkup Samoyed *man, mat* 'I'; Kamassian *man* 'I'; (b) first person plural: Finnish *me* 'we'; Lapp / Saami *mí* 'we'; Mordvin *min* 'we'; Cheremis / Mari *mä, me* 'we'; Votyak / Udmurt *mi* 'we'; Zyrian / Komi *mi* 'we'; Vogul / Mansi *man* 'we'; Ostyak / Xanty *mōj* 'we'; Hungarian *mi* 'we'; Yurak Samoyed / Nenets *maña?* 'we'; Tavgi Samoyed / Nganasan *meen* 'we'; Yenisei Samoyed / Enets *mod'i?* 'we'; Selkup Samoyed *mee, mii* 'we'; Kamassian *mi?* 'we'. Proto-Uralic first person personal/possessive suffix *-*m(V)*: Finnish *pala-m* 'I burn'; Lapp / Saami *buola-m* 'I burn'; Mordvin *vana-n* 'I see'; Cheremis / Mari *wide-m* 'I lead'; Vogul / Mansi *totegu-m* 'I bring'; Ostyak / Xanty *tetə-m* 'I eat'; Hungarian *esze-m* 'I eat'; Kamassian *nereel'e-m* 'I become afraid'; Tavgi Samoyed / Nganasan *mata?a-m* 'I cut'; Yurak Samoyed / Nenets *mada-m* 'I cut'. Collinder 1960:308—310, 1965:134—135, 141 Common Uralic **minä* ~ **myna* 'I', and 1977:53, 54; Abondolo 1998a:24—25; Rédei 1986—1988:294 **mš* 'I' and 294—295 **mš* 'we'; Décsy 1990:103 **me* 'I' and **me* 'we'; Janhunen 1977b:86 **mān*; Zhivlov 2023:154—158. The first person independent pronouns in Yukaghir are: (Southern / Kolyma) (sg.) *mət* 'I', (pl.) *mit* 'we', (Northern / Tundra) (sg.) *met* 'I', (pl.) *mit* 'we'. Nikolaeva 2006:267 and 269—270. In Yukaghir, a suffix -*m* is found as a first person singular subject of the verb in its interrogative form. Nikolaeva 2006:81.
- F. Proto-Altaic **bī* first person singular independent pronoun (if from **mī*) 'I': Proto-Tungus **bi* 'I' > Manchu *bi* 'I'; Evenki *bi* 'I'; Lamut / Even *bi* 'I'; Negidal *bi* 'I'; Ulch *bi* 'I'; Oroch *bi* 'I'; Nanay / Gold *mi* (dial. *bi*) 'I'; Oroch *bi* 'I'; Udihe *bi* 'I'; Solon *bi* 'I'. Proto-Mongolian **bi* 'I' > Written

- Mongolian *bi* ‘I’ (gen. *minu*); Dagur *bī* ‘I’ (gen. *minī*); Monguor *bu* ‘I’ (gen. *munī*); Ordos *bi* ‘I’ (gen. *mini*); Khalkha *bi* ‘I’ (gen. *miniy*); Buriat *bi* ‘I’ (gen. *menī*); Kalmyk *bi* ‘I’ (gen. *minē*); Moghol *bi* ‘I’ (gen. *mini*). Poppe 1955:209—219. Proto-Turkic **be-* ‘I’ > Old Turkic (Orkhon, Yenisei, Old Uighur) *ben* ~ *men* ‘I’; Karakhanide Turkic *men* ‘I’; Turkish *ben* ‘I’; Gagauz *ben* ‘I’; Azerbaijani *mān* ‘I’; Turkmenian *men* ‘I’; Tatar *min* ‘I’; Bashkir *min* ‘I’; Karaim *men* ‘I’; Kazakh *min* ‘I’; Kirghiz *men* ‘I’; Noghay *men* ‘I’; Uzbek *men* ‘I’; Uighur *mān* ‘I’; Yakut *min* ‘I’; Chuvash *e-bā* ‘I’; Dolgan *min* ‘I’. Menges 1968b:119—120; Poppe 1960:116; Street 1974:9 **bi* ‘I’; Starostin—Dybo—Mudrak 2003:341—342 **bī* ‘I’. Starostin—Dybo—Mudrak (2003:342) note: “An alternation **bi* / **mi-ne-* (sing.); **ba* / **mju-n-* (plur.) should be reconstructed”. In Turkic, **-m* occurs as the first person singular personal marker of the subject in the verb and as possessive in the noun (cf. Dolgopolsky 1984:77). Similar suffixes are found in the Tungus languages — first person possessive suffixes: (sg.) **-m*, (pl.) **-m* plus plural marker (exclusive), with variation between *m-*, *b-*, and *w-* in the individual daughter languages (cf. Sinor 1988:726).
- G. Proto-Chukchi-Kamchatkan **mur(i)* ‘we’: Chukchi *mu-ri* ‘we’, *mury-in* ‘our’; Kerek (pl.) *məjəkkū* ‘we’, (dual) *məj* ‘we two’; Koryak (dual) *muji* ‘we two’, (pl.) *muju* ‘we’, *mucy-in* ‘our’; Alyutor (pl.) *muruwwi* ‘we’, (dual) *muriy-* ‘we two’; Kamchadal / Itelmen *muzaʹn* ‘we’, *mizvin* ‘our’. Fortescue 2005:179; Mudrak 1989b:102 **mur*, **murx-* ‘we’. Proto-Chukchi-Kamchatkan suffix **-m* in the first person singular independent personal pronoun **kə-m* ‘I’: Chukchi *yəm* ‘I’ (in predication: *-iyəm* ~ *-eyəm*); Kerek *umŋu* ‘I’; Koryak *yəmmo* ‘I’; Alyutor *yəmmə* (Palana *yəmme*) ‘I’; Kamchadal / Itelmen *kəm(m)a* ‘I’; *kəm(m)an* ‘my’. Fortescue 2005:146—147; Mudrak 1989b:109 **xəm*, **xəmn-* ‘I’.
- H. Proto-Gilyak / Nivkh **mirn* or **mern* ‘we’ (inclusive): Amur first person plural *mer* ‘we’ (inclusive) (West Sakhalin Amur *meř* ‘we’ [inclusive]); North Sakhalin *mir* ‘we’ (inclusive); East Sakhalin *mi(ř)n* ‘we’ (inclusive); South Sakhalin *miřn* ‘we’ (inclusive). Gruzdeva 1998:25—26; Fortescue 2016:105. Proto-Gilyak / Nivkh **mengin* (dual) ‘we two’: Amur *megi* (dual) ‘we two’ (West Sakhalin Amur *mergu*, *megi* [dual] ‘we two’); North Sakhalin *memak* (dual) ‘we two’; East Sakhalin *mej* (dual) ‘we two’; South Sakhalin *mej* (dual) ‘we two’. Gruzdeva 1998:25—26; Fortescue 2016:103. Note: Fortescue considers **mengin* ‘we two’ to be a derivative of **men* / **menj* ‘of two people’ and comitative **-kin*.
- I. Eskimo-Aleut: Eskimo: perhaps preserved in Sirenik *məŋa* ‘I’. In Aleut, **-m(V)* is found in the affixed first person plural forms: (Central) *-mas*, (Eastern and Western) *-man*.
- J. Etruscan *mi* ‘I’, *mini* ‘me’.

Sumerian (Emesal) *ma(-e)*, *me-a*, *me-e* ‘I’. According to earlier theories, the first plural pronominal suffix was *-me-*, but Thomsen (1987:148) points out that *-me-* is used as a dative element only, in the meaning ‘for us’. She considers *-me-* to be a case element rather than a pronominal element. However, both its form and meaning indicate that *-me-* should be included here. The first plural possessive suffix is *-me* ‘our’.

Illič-Svityč 1971—1984.II:52—56, no. 289, **mā* 1st person pl. inclusive personal pronoun: ‘we, us’, II:63—66, no. 299, **mi* 1st person sg. personal pronoun: ‘I, me’; Dolgopolsky 1984:85 **mi* ‘I, me, my’ and 2008, no. 1354, **mi* ‘I’, no. 1354a, (pl.) **mi ʔa* ‘we’; Bomhard—Kerns 1994:661—663, no. 540; Nafiqoff 2003:40—41, 46 **mā* (1st pl. inclusive), **mi* (1st sg.), and 58—62; Greenberg 2000:61—67, §1; Hakola 2000:104, no. 445, and 105, no. 450; Assadian—Hakola 2003:85, no. 274; Fortescue 1998:96—123.

911. Proto-Nostratic root **miʔ-* (~ **meʔ-*):

(vb.) **miʔ-* ‘to cut’;

(n.) **miʔ-a* ‘cutting instrument: knife’ (later also ‘sickle, scythe’)

- A. Afrasian: Egyptian *mʔ* phonetic interpretation of the hieroglyph that represents a sickle, *mʔ* ‘sickle-shaped end of a sacred boat’ (nautical term), (obsolete) *mʔz* ‘knife’. Hannig 1995:313 and 321; Erman—Grapow 1926—1963.2:6 and 2:31; Gardiner 1957:567. Central Chadic: Bachama *má* ‘to cut’; Logone *miiyo* ‘knife’. Jungraithmayr—Ibriszimow 1994.II:97.
- B. Proto-Indo-European **meʔ-* (> **mē-*) ‘to mow, to reap’: Greek ἀμάω ‘to reap’, ἄμητος ‘harvest’; Old English *māwan* ‘to mow’, *māþ* ‘the act of mowing; hay-harvest’; Old Frisian *mēa* ‘to mow’; Middle Low German *mei(g)en* ‘to mow’; Dutch *maaien* ‘to mow’; Old High German *māen* ‘to mow, to cut, to reap’ (New High German *māhen*). Pokorny 1959:703 **mē-* ‘to mow’; Walde 1927—1932.II:259 **mē-*; Mann 1984—1987:747 **mējō* (**mājō*) ‘to mow’; Watkins 1985:39 **mē-* (contracted from **meʔ-*) and 2000:52 **mē-* ‘to cut down grass or grain with a sickle or scythe’ (oldest form **₂meʔ₁-*, contracted to **₂mē-*); Gamkrelidze—Ivanov 1984.II:691 **meH(i)-* and 1995.I:597 **meH(i)-* ‘(vb.) to ripen, to harvest; (n.) time of ripening harvest’; Mallory—Adams 1997:258 **h₂meh₁-* ‘to mow’; Beekes 1969:43 **h₂meh₁-/h₂emh₁-* and 2010.I:84 **h₂meh₁-*; Chantaine 1968—1980.I:72; Frisk 1970—1973.I:88; Orël 2003:269 Proto-Germanic **mēanan*; Kroonen 2013:360 Proto-Germanic **mēan-* ‘to mow’; Onions 1966:594; Klein 1971:479 **mē-*, **mā-* ‘to mow’; Kluge—Mitzka 1967:453—454; Kluge—Seebold 1989:455. Note: According to Puhvel (1984— .3:69—75), Hittite (gen. sg.) *ha-me-eš-ha-aš* ‘spring(-summer)’ does not belong here. He cautiously supports Goetze’s suggestion that it may originally have been a compound: **hant-wešha-* ‘front-spring’, which was shortened to the attested form as follows: **han-wešha-* > **hamwešha-*

> *ham(m)ešha-*. Puhvel notes that a similar construction is found in Italian *primavera* ‘spring’. Though Kloekhorst (2008b:279—281) supports Sturtevant’s proposal that Hittite *ham(m)ešha-* ‘spring’ is related to the forms listed above, the fact remains that spring is not the season during which crops are harvested, the use of the Sumerogram *Ú.BAR₈* ‘harvest’ notwithstanding. Rather, spring is the season during which crops are planted. Thus, it seems prudent to exclude Hittite *ham(m)ešha-* here.

- C. Altaic: Proto-Tungus **mũ-* (< **mũy-*) ‘to cut’ > Evenki *mĩ-* ‘to cut’; Lamut / Even *mĩ-ne-* ‘to cut’; Negidal *mĩ-* ‘to cut’; Manchu *mei-le-* ‘to carve up, to dissect (a carcass), to cut off, to cut out’, *mei-te-* ‘to cut off, to cut in two, to excise’; Ulch *mui-* ‘to cut’; Orok *mĩ-* ‘to cut’; Nanay / Gold *mui-* ‘to cut’; Oroch *mi-* ‘to cut’; Udihe *mi-ne-* ‘to chop (with an axe)’. Starostin—Dybo—Mudrak 2003:949 **mũjV* ‘to cut, to tear’.

Buck 1949:8.32 mow, reap. Bomhard—Kerns 1994:636—637, no. 516; Dolgopolsky 2008, no. 1358, **mUʔæ* (probably **muʔe*) ‘to cut, to reap’ (→ ‘to mow’).

912. Proto-Nostratic root **mig-* (~ **meg-*):

(vb.) **mig-* ‘to give’;

(n.) **mig-a* ‘gift’

- A. Afrasian: Proto-Semitic **mag-an-* ‘to deliver, to offer’ > Akkadian *magannu* ‘gift, present’; Amorite *mgn* ‘to present, to donate’; Hebrew (piel.) *miggēn* [מִגֵּן] ‘to deliver up, to deliver, to give’; Post-Biblical Hebrew *maggān* [מַגָּן] ‘gift, present’; Phoenician *mgn* ‘to deliver, to offer’; Ugaritic *mgn* ‘to beseech (with gifts)’; Jewish Palestinian Aramaic *maggān* ‘(undeserved) gift, grace’; Arabic *maġġān* ‘free, free of charge, gratuitous’ (Aramaic loan). Murtonen 1989:253; Klein 1987:316. The Semitic forms are usually taken to be loans from Sanskrit (cf. Murtonen 1989:253). However, O’Connor (1989:25—32) has persuasively argued against Sanskrit origin.
- B. Proto-Indo-European **megh-* ‘to give’: Sanskrit *mámhate* (< **me-mgh-*) ‘to give, to grant, to bestow’, *maghá-h* ‘gift, reward, bounty, wealth, power’; Avestan *maga-* ‘gift, grace’. Mayrhofer 1956—1980.II:537—538 and II:545—546.
- C. Proto-Uralic **mixe-* ‘to give, to sell’: Finnish *myy-*, *myö-* ‘to sell’, *myymi* ‘gifts of a bride to her parents-in-law’; Livonian *müüm* ‘gifts of a bride to the retinue of the bridegroom’; Lapp / Saami (Kola) *miikka-* ‘to sell’; Mordvin *mije-* ‘to sell’; (?) Votyak / Udmurt *med-* ‘wages, pay, reward for work, payment’; Vogul / Mansi *maj-*, *māj-*, *myyg-* ‘to give’; Ostyak / Xanty *mə-*, *məj-* ‘to give’; Yurak Samoyed / Nenets *mi-/mis-* ‘to give’; Tavgi Samoyed / Nganasan *mij-* ‘to give’; Yenisei Samoyed / Enets *mis-* ‘to give’; Selkup Samoyed *mi-* ‘to deliver, to render, to return’; Kamassian

mi- ‘to give, to deliver’. Collinder 1955:37 and 1977:56; Rédei 1986—1988:275 **miye-*; Décsy 1990:103 **mingä* ‘to give, to sell’; Sammallahti 1988:538 **mexi-* ‘to give, to sell’; Janhunen 1977b:94 **mi-*.

Buck 1949:11.21 give; 11.82 sell. Bomhard—Kerns 1994:636, no. 515; Hakola 2000:111—112, no. 477; Dolgopolsky 2008, no. 1376, **migV* ‘to make a present’.

913. Proto-Nostratic root **miḥ-* (~ **meḥ-*):

(vb.) **miḥ-* ‘to measure, to mark off’;

(n.) **miḥ-a* ‘measure, measurement’

A. Afrasian: Egyptian *mḥ* a linear measure: ‘cubit, forearm’; Coptic *mahe* [ṢḂḂ] ‘ell, cubit’. Erman—Grapow 1921:68 and 1926—1963.2:120; Hannig 1995:353; Gardiner 1957:569; Faulkner 1962:113; Černý 1976:99; Vycichl 1983:129.

B. Proto-Indo-European **miḥh-* [**meḥh-*] (> **mē-*) ‘to measure, to mark off’: Hittite (nom.-acc. sg.) *me-e-ḥu-ur*, *me-e-ḥur*, *me-ḥur* ‘time’; Sanskrit *māti-ḥ* ‘measure, accurate knowledge’, *māti*, *mīmāti* ‘to measure, to mete out, to mark off’; Latin *mētior* ‘to measure’; Gothic *mēl* ‘time’; Old Icelandic *mál* ‘measure; time, high time; meal’; Old English *māþ* ‘measure, degree, proportion’, *māel* ‘measure; (appointed) time, occasion; time for eating, meal’; Old Frisian *mēl* ‘time, mealtime’; Dutch *maal* ‘(n.) meal; (m.) time’; Old High German *māl* ‘time’ (New High German *Mal* ‘time, occasion’, *Mahl* ‘meal’). Rix 1998a:381—382 **meh₁-* ‘to measure’; Pokorny 1959:703—704 **mē-* ‘to measure, to mark off’; Walde 1927—1932.II:237—238 **mē-*; Mann 1984—1987:748 **mēl-* ‘time, period, measure’, 762—763 **mētis* ‘measure, judgment’; Watkins 1985:39 **mē-* and 2000:51 **mē-* ‘to measure’ (contracted from earlier **meḡ₁-*); Gamkrelidze—Ivanov 1984.I:172 **meḥ-* and 1995.I:137, I:148 **meḥ-* ‘to measure’; Mallory—Adams 1997:374 **meh₁tis* ‘measure’; Mayrhofer 1956—1980.II:638; Ernout—Meillet 1979:401 **mēti-*; **mē-*; Walde—Hofmann 1965—1972.II:81—82 **mē-* ‘to measure’; **mē-tis* ‘measure’; De Vaan 2008:377; Orël 2003:269 Proto-Germanic **mēlan* I; Kroonen 2013:362 Proto-Germanic **mēla-* ‘point in time’. 362 **mēla-* ‘measure, amount’, and 367 **mēpi-* ‘measure’; Feist 1939:353 **mē-*; Lehmann 1986:250 **mē-* ‘to measure’; De Vries 1977:376 **mē-*; Onions 1966:565 Common Germanic **mēlaz*, -*am*, from Proto-Indo-European **mē-*; Klein 1971:452 **mē-*; Kluge—Mitzka 1967:454 **mē-* and 456; Kluge—Seebold 1989:455 **mē-* and 457; Puhvel 1984— .6:108—112 **meE₂-* > **mē-*; Kloekhorst 2008b:567—568.

C. (?) Proto-Altaic (**miḥ₁-lva-* >) **mialva-* ‘(vb.) to measure; (n.) a measure’: Proto-Tungus **miali-* ‘(vb.) to measure; (n.) a measure’ > Manchu *miyali-* (Starostin—Dybo—Mudrak 2003:922 write *ḥali-*) ‘to measure’, *miyalin*

(Starostin—Dybo—Mudrak 2003:922 write *malin*) ‘a measure’, *miyalikū* ‘measurer, measure; powder measure (for guns)’; Jurchen *mia-lian-ha* ‘a measure (of weight)’; Nanay / Gold *mialaḡo* ‘a measure (for powder)’. Proto-Mongolian **malu* ‘vessel, basket (for grain)’ > Written Mongolian *malu* ‘large bottle, vase, jar; earthen jar with a narrow opening used for oil’; Kalmyk *mal* ‘vessel, basket (for grain)’. Starostin—Dybo—Mudrak 2003:922 **mjalā* ‘(vb.) to measure; (n.) a measure’.

Buck 1949:12.54 measure (vb.). Bomhard—Kerns 1994:550, no. 408.

914. Proto-Nostratic root **mik’* - (~ **mek’* -):

(vb.) **mik’* - ‘to exceed, to surpass, to be in excess, to grow, to increase, to swell, to expand’;

(n.) **mik’-a* ‘growth, excess, increase, abundance, fullness’; (adj.) ‘large, big, great, much’

Note also:

(vb.) **mak’* - ‘to be great, strong, mighty, powerful’;

(n.) **mak’-a* ‘strength, power’; (adj.) ‘great, strong, powerful; much, many’

- A. Dravidian: Tamil *miku* (*mikuv-*, *mikk-*) ‘to exceed, to surpass, to be in excess, to grow, to increase, to swell, to crowd, to be great, to be excellent, to be superior, to remain, to be left over, to be superfluous, to be arrogant, to be self-conceited’, *miku* (*-pp-*, *-tt-*) ‘to augment, to make large, to excel, to surpass, to increase, to regard with pride’, *miku* ‘great’, *mikuttu* (*mikutti-*) ‘to save, to spare, to leave over’, *mikkatu* ‘that which is abundant or excessive; that which is excellent, superior; that which remains over (as food after a meal); that which oversteps the limits; excess, transgression’, *mikkavar*, *mikkār* ‘great persons, superior persons, majority of persons, most people’, *mikkōṇ* ‘great person’, *mika*, *mikku* ‘very much, abundantly’, *mikka* ‘great, much, superior, excellent’, *mikutam* ‘abundance, profusion, redundancy’, *mikuti* ‘much, abundance, fullness, satiety, crowd, excess, surplus, increase, remainder, excellence, arrogance’, *mikavu* ‘abundance’, *mikal* ‘being plentiful or abundant, greatness, victory’, *mikunta* ‘much, great, excessive, remaining’, *mikai* ‘(vb.) to increase, to swell, to be proud; (n.) abundance, excess, excellent thing, excellence, greatness, that which is unnecessary, that which is superfluous, that which remains or is left over, that which is extra, arrogance, evil deed, fault, defect, error’; Malayalam *mikuka* (*mikk-*) ‘to surpass, to abound, to be foremost’, *mikekka* ‘to exceed, to increase, to thrive, to prosper’, *mikka* ‘the greater part, the chief part’, *mikavu* ‘eminence, plenty, much’, *mikakka*, *mikukka* ‘to increase, to be foremost’; Kota *mik-* (*miky-*) ‘to be left over, to be saved from death’; Toda *mik-* (*miky-*) ‘to be left over, to remain’; Kannaḍa *mikku* ‘(vb.) to grow abundant, to increase, to exceed, to remain over; (n.) excess, state of being more or above or other, remainder, rest’, *migu* (*mikk-*) ‘to grow great, to

grow abundant or excessive, to exceed, to grow more or larger, to superabound, to be left as a remnant, to remain, to go beyond, to surpass', *migate* 'surplus, remnant, rest', *migil(u)*, *migalu* 'greatness, muchness, abundance, excellence, superiority, superabundance, excess, remainder, rest', *mige* '(n.) superabundance, excess; (adv.) so as to abound, abundantly, excessively, much'; Tuḷu *migguni*, *mikkuni* 'to surpass, to exceed, to transgress, to remain, to be left', *mikka* 'left, remaining, other', *migutè*, *migitè* 'surplus, balance, remnant, profits', *migi*, *migilū*, *migu*, *miggi* 'surpassing, excelling', *migiluni* 'to excel, to surpass'; Telugu *migulu* 'to remain, to be over and above, to be left as a remainder or residue, to be saved or laid by, to be left unspent, to survive, to pass, to elapse, to be too late', *mikkilu* 'to increase, to exceed', *migul(u)cu*, *migulu* 'remainder, rest, balance, remnants, leavings, residue, surplus, relic', *migilina* 'remaining, rest', *migula(n)* 'greatly, much, exceedingly', *mikkilivāḍu* 'one who is superior or better, a superior', *mikkili* 'great; greatly, very much, vastly, too much, extremely, more than proper', *mikkaṭamu*, *mikkaṭamu* 'much, excessive, extreme, great, strong, severe'; Naikṛi *migil-* 'to be left over' (Telugu loan). Burrow—Emeneau 1984:430—431, no. 4838.

- B. Proto-Indo-European *mek'- 'big, great, much': Greek μέγας, μεγάλη, μέγα '(adj.) big, great; (adv.) very, much, exceedingly'; Armenian *mec* 'big, great'; Gothic *mikils* 'great'; Old Icelandic *mikill* 'great, tall', *mjök* 'much, greatly; very'; Old English *micel*, *mycel* 'big, much' (Modern English dial. *mickle*, *muckle*); Old Saxon *mikil* 'great, large'; Old High German *Michil*, *mihhil* 'great, large'; Tocharian A *māk*, B *māka* 'much, many; (adv.) very much'; Hittite (nom. sg.) *me-ek-ki-iš* (< *mek'-Hi-) '(adj.) much, many, numerous; (adv.) very', (3rd sg. pres.) *ma-ak-ki-e-eš-zi* (< *mak'-Hi-) 'to become great'. Pokorny 1959:708—709 *meg(h)- 'big'; Walde 1927—1932.II:257—259 *meg(h)-; Mann 1984—1987:744 *meg- (*māg-) 'great, big'; Watkins 1985:39—40 *meg- and 2000:52 *meg- 'great'; Gamkrelidze—Ivanov 1984.II:782 *mek'H- and 1995.I:684 *mek'H- 'large'; Mallory—Adams 1997:344 *megh_a- 'large, great'; Chantraine 1968—1980.II:674—675 *meg₂; Frisk 1970—1973.II:189—190 *meg₂; Hofmann 1966:193 *meg(h)₂; Boisacq 1950:617—618 Greek μέγα < *meg₂; Beekes 2010.II:917—918 *meg-h₂-; Kroonen 2013:361—362 Proto-Germanic *mekila- 'large, great; much'; Orël 2003:265 Proto-Germanic *mekilaz, 265 *mekilīn, 265 *mekiljanan, 265 *mekilōjanan, 265—266 *mekuz; Feist 1939:358—359 *meg- (*megh- in Indo-Iranian); Lehmann 1986:254—255 *meg-₂; De Vries 1977:386—387; Onions 1966:574 and 594 *meg-; Klein 1971:463 *meg(h)-, *māg- and 479; Van Windekens 1976—1982.I:283 *meg(h)-; Adams 1999:446—447; Puhvel 1984—.6:119—124 *meg-A-; Melchert 1994a:76—77; Kloekhorst 2008b:543—544 and 572—573 *megh₂-, *megh₂-(e)i-; Bomhard 2000:45 Hittite *me-ek-ki-iš* < *mek'- (traditional *meg-) + *-gi-; Kimball 1999:282

Hittite *me-ek-ki-iš* < **meġh₂i-* and 407; Sturtevant 1951:33, §60, Indo-Hittite **m₆g-*; Wodtko—Irslinger—Schneider 2008:468—478 **meġ-*. Note: According to Adams (1999:446—447), two separate stems must be reconstructed for Proto-Indo-European: **meġh_a-* and **maġ-*.

- C. [Chukchi-Kamchatkan: Proto-Chukotian **mək-* ‘many’ > Chukchi *nə-mkə-qin* ‘many’, *mək-et-* ‘to increase (intr.)’, *rə-mk-ew-* ‘to increase (tr.)’; Kerek *nə-mkə-Xi* ‘many’, *məkə-ŋ* ‘more’, *mək-at-* ‘to increase’; Koryak *nə-mkə-qin* ‘many’, *mək-at-* ‘to increase (intr.)’, *jəmk-av-* ‘to increase (tr.)’; Alyutor *nə-mkə-qin* ‘many’, *mək-at-* ‘to increase (intr.)’. Fortescue 2005:181.] Either here or with Proto-Nostratic **mak-* (~ **mək-*) ‘great, strong, mighty, powerful’.

Buck 1949:12.55 large, big (great). Bomhard—Kerns 1984:667—668, no. 546; Caldwell 1913:602.

915. Proto-Nostratic (n.) **min-a* ‘(a kind of) fish’:

- A. Afrasian: Berber: North Berber: Sus *amun* ‘a kind of fish’. South Berber: Iulemidden *emān* ‘a kind of fish’; Adghaq *emən* ‘a kind of fish’; Taneslem *əməən* ‘fish’.

Comment: The Afrasian data cited above is taken from Blažek 2013:40, no. 2. I have only included the Berber forms cited by Blažek — in my opinion, the Semitic evidence he cites is too semantically divergent to be included. According to Blažek, Karl-G. Prasse reconstructed Proto-Tuareg **ī-manāhan* in an article published in 1974.

- B. Proto-Dravidian **minH-* > **mīn-* ‘fish’: Tamil *mīn* ‘fish’; Malayalam *mīn* ‘fish’; Kota *mi-n* ‘fish’; Toda *mi-n* ‘fish’; Kannada *mīn* ‘fish’; Kodagu *mi-nī* ‘fish’; Tuḷu *mīnu* ‘fish’; Telugu *mīnu* ‘fish’; Parji *mīni* ‘fish’; Gadba (Ollari) *mīn* ‘fish’; Gondi *mīn* ‘fish’; Konḍa *mīn* ‘fish’; Pengo *min* ‘fish’; Maṇḍa *min* ‘fish’; Kui *mīnu* ‘fish’; Kuwi *mīnu* ‘fish’; Malto *mīnu* ‘fish’. Burrow—Emeneau 1984:436, no. 4885; Krishnamurti 2003:13 **mīn* ‘fish’.
- C. Proto-Indo-European **m₁ḡH-i-* ‘(a kind of) fish’: Greek *μαῖνη* ‘a small sea-fish, which was salted’, *μαῖνις* ‘a sprat’; Old English *myne*, **mynwe* ‘minnow’; Old High German *muniwa* ‘minnow’ (New High German *Münne*); Lithuanian *ménkė* (< **menH-*) ‘cod’; Russian *men’* [мень] (< **m₁ḡn₂*) ‘burbot, eelpout’. Pokorny 1959:731 **m_eni-* ‘name of fish’; Walde 1927—1932.II:267—268 **m_eni-*; Mann 1984—1987:779 **m₁ḡis*, **m₁ḡi₂ə*; Watkins 1985:41 **men-i-* (under **men-*) and 2000:54 **men-i-* ‘a small fish’ (under **men-* ‘small, isolated’); Mallory—Adams 1997:205 **m₁ḡh_x-* ‘minnow; small fish’; Boisacq 1950:600; Chantraine 1968—1980.II:658; Frisk 1970—1973.II:160; Hofmann 1966:187 Greek *μαῖνη* < **m_eni₂ā*; Beekes 2010.II:892 (no etymology); Kroonen 2013:376 Proto-Germanic **muniwōn-* ‘minnow’; Hoad 1986:294; Onions 1966:578; Klein 1971:467;

Skeat 1898:369; Kluge—Mitzka 1967:494 Proto-Germanic *muniwa; Kluge—Seebold 1989:492—493 Pre-German *muniwō; Fraenkel 1962—1965.I:436; Smoczyński 2007.1:388.

- D. (?) Eskimo: Proto-Inuit *mən̄əriaq ‘a kind of trout’ > Western Canadian Inuit (Copper, Netsilik) m̄iñ̄jiriaq (for min̄jiriaq ?) ‘a kind of trout’, (Baker Lake) m̄iñ̄jiriaq ‘fish that goes for bait (?)’; Eastern Canadian Inuit (Iglulik) m̄iñ̄jiriaq ‘jumping one (trout)’, (Labrador) m̄iñ̄jiriaq ‘a small fish’; Greenlandic Inuit (East Greenlandic) m̄iñ̄jiriaq ‘capelin’ (shaman’s word). Fortescue—Jacobson—Kaplan 1994:200.

Dolgopolsky 1998:62, no. 75, *mEn/ni ‘(a kind of) fish’ and 2008, no. 1432, *mVni ‘fish’; Bomhard 1999a:61 *min-H- ‘(a kind of) fish’; Blažek 2002:184, no. 69.

916. Proto-Nostratic root *mir- (~ *mer-):

- (vb.) *mir- ‘to stab, to pierce, to wound, to cause pain’;
(n.) *mir-a ‘wound, pain’

- A. Dravidian: Tamil m̄irai ‘(vb.) to oppress, to harass; to suffer, to be afflicted; (n.) fear, trouble, torment’; Malayalam m̄ira ‘excitement, fear’; Telugu merumu ‘to pierce, to stab’, meramu ‘to cause pain or mortification, to rankle; to pierce, to stab’, meramera ‘rankling, fear, misery’, merameram-anu, merameral-āḍu ‘to rankle’; (?) Malto mer̄gtre ‘to act furiously’. Burrow—Emeneau 1984:435, no. 4875.
- B. Proto-Altaic *m̄iore- ‘to hurt, to damage, to wound’: Proto-Tungus *murdul- ‘to slaughter (a deer); to peel (bark)’ > Evenki murdul- ‘to slaughter (a deer)’, m̄urdune- ‘to peel (bark)’. Proto-Mongolian *mer- ‘a wound; (expression for) a painful sensation’ > Middle Mongolian mer ‘wound’; Written Mongolian mer ‘wound’, mere- ‘to gnaw, to chew’; Khalkha mer ‘(expression for) a painful sensation’, mere- ‘to gnaw at something’; Buriat mere- ‘to gnaw at something’; Kalmyk mer ‘(expression for) a painful sensation’, mer- ‘to gnaw at something’. Proto-Turkic *bert- ‘to break, to damage, to wound’ > Old Turkic (Old Uighur) bert- ‘to break, to damage, to wound’; Karakhanide Turkic bert- ‘to break, to damage, to wound’; Turkish bert- ‘to break, to damage, to wound’; Gagauz bert- ‘to break, to damage, to wound’; Azerbaijani p̄ärt- ‘to break, to damage, to wound’; Turkmenian berti- ‘to break, to damage, to wound’; Tatar birt- ‘to break, to damage, to wound’; Bashkir birt- ‘to break, to damage, to wound’; Kirghiz bertik ‘contortion’; Khakas pirtək ‘mutilation’; Kazakh mertik ‘contortion’; Noghay mertik ‘contortion’; Tuva bertik ‘mutilation’. Starostin—Dybo—Mudrak 2003:929 *m̄iore ‘to hurt, to damage, to wound’.

Buck 1949:4.85 wound (sb.); 11.28 harm, injure, damage (vb.).

917. Proto-Nostratic root **mol-*:

- (vb.) **mol-* ‘to rub’ (> ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’);
- (n.) **mol-a* ‘crumb, piece, morsel; mortar’; (adj.) ‘crushed, ground, worn out or down’

Note also:

- (vb.) **mel-* ‘to rub’ (> ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’);
- (n.) **mel-a* ‘smoothness, softness; weakness’; (adj.) ‘smooth, soft, tender, weak, worn out, tired, weary’

- A. Afrasian: East Chadic: Kwang *móōldō*, *mó:rō* ‘grinding stone’; Sokoro (Lower) *módō* ‘grinding stone’. Jungraithmayr—Ibriszimow 1994.II:173.
- B. [Proto-Indo-European **mol-/m̥-* (secondary *e*-grade form: **mel-*) ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’: Hittite (3rd sg. pres.) *ma-al-la-i* ‘to crush, to grind’, (reduplicated) *me-ma-al* ‘meal’; Sanskrit *mṛṇāti*, *mṛṇāti* ‘to crush, to grind’, *mṛdnāti*, *márdati*, *márdate* ‘to rub, to stroke, to wipe, to rub into; to press, to squeeze, to crush, to pound’, *mṛdú-h* ‘soft, delicate, tender, pliant, mild, gentle, weak, feeble’, *mṛkṣāti* ‘to rub, to curry, to stroke’, *mṛjāti*, *mṛjáte* ‘to wipe, to rub, to cleanse, to polish, to clean, to purify, to embellish, to adorn, to make smooth, to stroke’, *mṛṣṭá-h* ‘washed, cleansed, polished, clean, pure, smeared, besmeared with’, *mláyati* ‘to wither, to fade’; Greek ἀμαλδύνω ‘to soften’, ἀμαλός ‘soft, weak, feeble’, μαλακός ‘soft’, μαλάσσω ‘to make soft’, μύλη ‘mill, handmill’, μύλος ‘millstone’; Albanian *mjel* ‘meal, flour’; Armenian *malem* ‘to crush’, (reduplicated) *mlmlem* ‘to rub’; Umbrian *maletu* ‘crushed, ground’; Latin *molō* ‘to grind’, *mollis* ‘soft, tender, pliant, supple, flexible, yielding’, *mola* ‘millstone’, *molīna*, *molīnum* ‘a mill’; Old Irish *melim* ‘to grind’; Breton *meil* ‘mill’; Welsh *melin* ‘mill’ (< Latin *molīna*); Gothic *malan* ‘to grind’, *mildīpa* ‘mildness, kindness’, *ga-malwjan* ‘to grind up, to crush’, *malma* ‘sand’, *mulda* ‘dust’; Old Icelandic *mala* ‘to grind’, *meldr* ‘grinding; flour’, *melr* ‘sand-bank, gravel-bank’, *mildi* ‘kindness, mercy, grace’, *mildr* ‘mild, gentle, gracious; munificent, liberal’, *mola* ‘to crush, to break into small pieces’, *moli* ‘small piece, crumb’, *molna* ‘to crumble into dust’, *mjöl* ‘meal, flour’, *mylna* ‘mill’ (< Latin *molīna*), *mølva* (*mølda*) ‘to crush, to pound’; Swedish *mala* ‘to grind’; Old English *melu* ‘meal, flour’, *milde* ‘gentle, mild; merciful, kind’, *mildian* ‘to become mild’, *milts*, *milds* ‘kindness, mercy’, *molde* ‘earth, soil, dust; ground, country, world’, *molsnian* ‘to molder, to decay’, *mylen* ‘mill’ (< Latin *molīna*); Old Frisian *mele* ‘flour, meal’, *milde* ‘mild, gentle’; Old Saxon *malan* ‘to grind’, *melo* ‘flour, meal’, *mildi* ‘mild, soft,

gentle'; Old High German *malan* 'to grind, to mill, to crush, to pulverize' (New High German *mahlen*), *melo* 'flour, meal' (New High German *Mehl*), *milti*, *milte* 'mild, soft, mellow, gentle' (New High German *mild*); Lithuanian *malù*, *málti* 'to grind'; Old Church Slavic *meljo*, *mlěti* 'to grind'; Tocharian A *malyw-*, B *mely-* 'to crush, to squeeze, to lay waste', B *mäl-* 'to crush, to repress, to oppress', B *mällarske* 'pressing' (?) or 'pliant' (?), B *mälle* 'ground-down, dull', B *mällalñe* 'crushing'. Rix 1998a:387 **meld-* 'to become weak, soft, mild, gentle, tender', 388—389 **melh₂-* 'to rub, to crush, to grind', 390 **melh₂u-* 'to rub, to crush, to grind'; Pokorny 1959:716—719 **mel-* 'to crush, to grind'; Walde 1927—1932.II:284—291 **mel-*; Mann 1984—1987:728 **mälō*, *-iō* (variant of type **mļō*, *-iō* 'to grind, to mill'), 749 **meldō*, *-iō* 'to crush, to destroy', 749 **meldhos* 'soft, tender', 750 **meļuos* (**meləuos*, **meļuos* 'soft, effete, silly', 750 **meļuos*, *-ā* (**meləuo-*) 'millings, flour', 751—752 **melk-* (**molk-*, **mļk-*) 'soft, limp', 752 **melmos*, *-ā* 'soft; soft matter, mud, pug, pugging, puddle', 752 **melō*, *-iō* 'to grind, to crush', 753 **meļuos* 'soft, sweet', 753 **meməl-* (**mīməl-*, **mel-mel-*), 773 **mlētos* 'crushed, pulped', 773 **mļd-* 'crush, pulp, powder', 773—774 **mļdos*, *-is*, *-us* (**mļdulos*) 'soft, pappy, pulpy, powdery, weak, tender', 774 **mļdsnā* (*-os*, *-om*) 'powder, dust, fine loam', 774 **mļdhos* (**mældh-*) 'young, immature, silly', 775—776 **mļk-* (variants: **mļks-*, **mļsk-*) 'soft, mild, silly', 776 **mļm-* 'powder; powdery, crumbly; to crumble, to decompose', 776—777 **mļō*, *-iō* 'to grind, to crush', 777 **mļs-*, **mļskō* 'to crumble, to decay', 777 **mļtos* (**mļt-*) 'ground, crushed; powder', 777—778 **mļyō* 'to crush, to shatter', 791—792 **moldis*, *-os*, *-us* 'soft, sweet, slow, gentle, silly', 792—793 **molks-* (**molsk-*, **molks-*) 'limp, soft', 793 **molūiō* 'to beat, to crush' (a Germanic variant), 815 **muljō* 'to grind, to crush', 816 **mulos*, *-ā*, *-iom*, *-is* 'grinding, milling; grindstone, millstone'; Watkins 1985:40 **mel-* 'soft', 40—41 **melə-* (also **mel-*) 'to crush, to grind' and 2000:53 **mel-* 'soft', 53—54 **melə-* (also **mel-*) 'to crush, to grind', with derivatives referring to various ground or crumbling substances (such as flour) and to instruments for grinding or crushing (such as millstones) (oldest form **mel₂-*); Gamkrelidze—Ivanov 1984.II:692—693 **mel-* and 1995.I:190, I:200, I:567—568, I:598—599 **mel-* 'to crush, to divide; to thresh; to grind; to grate'; Mallory—Adams 1997:247 **melh₂-* 'to grind'; Puhvel 1984—.6:21—25 and 6:140—141; Mayrhofer 1956—1980.II:670—671, II:672—673, II:676, II:676—677, II:698—699; Boisacq 1950:49, 604, and 649—650; Frisk 1970—1973.I:84, I:85, II:165—166, and II:268—270; Hofmann 1966:14, 188, and 207; Chantraine 1968—1980.I:69, I:70, II:661 Greek μαλακός 'soft' < **m^ol₂k-*, and II:721 **mel-*, **mel-₂-*, **mol-₂-*, **m^ol-₂-*; Beekes 2010.I:80—81 and II:896 **mlh₂-k-*; Walde—Hofmann 1965—1972.II:104—106 **mel-* (**melā^x-*); Ernout—Meillet 1979:410—411 Latin *mollis* < **moldwis* and 411 **molə-/melə-/m^olə-*; De Vaan 2008:386 and 286—387; Orël 2003:257 Proto-Germanic **malanan*, 257

**maldriz* ~ **malđran*, 258 **malmaz* ~ **malmōn*, 258—259 **malwjanan*, 266 **meldipō*, 266 **meldjaz*, 266 **meldin*, 267 **melmaz*, 267 **meltanan*, 267 **melwan*, 275 **muldō(n)*, 275 **muljanan*; Kroonen 2013:351 Proto-Germanic **malan*- ‘to grind’, 351 **malta*- ‘soft; gone bad (?)’, 351—352 **maltjan*- ‘to make dissolve’, 352 **malwjan*- ‘to crush, to pound’, 362—363 **melda*- ‘pleasant, mild’, 363 **meltan*- ‘to dissolve, to be digested’, 365 **melwa*- ‘meal, flour’, 374—375 **multōjan*- ‘to become soft’, and 375 **mulwēn*- ‘to soften’; Feist 1939:192, 342, 343, 359, and 366; Lehmann 1986:144—145, 242—243, 243, 255, and 260; De Vries 1977:377, 383, 387, 390, 392, 397—398, and 400; Onions 1966:564—565, 576, and 593; Klein 1971:452, 464—465, and 471; Kluge—Mitzka 1967:454 **mel*-, 471, and 478—479; Kluge—Seebold 1989:455, 470, and 479; Fraenkel 1962—1965.I:403—404; Derksen 2008:307 **melH*- and 2015:302—303 **melH*-; Kloekhorst 2008b:547—548; Wodtko—Irslinger—Schneider 2008:482—485 **meld*-.] Note: The Indo-European forms are phonologically ambiguous. They either belong here or with Proto-Nostratic **mel*- ‘to rub’ (> ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’).

- C. Proto-Uralic **mol3*- ‘to grind, to crush, to break, to smash’: Lapp / Saami *moallo*/*moalo*- ‘crumb, little bit, piece, morsel’, *moallanâ*- ‘to crumble away, to turn into nothing but crumbs (intr.)’, *mollânâ*-, *smollânâ*- ‘to crumble away’; Lapp / Saami (Northern) *moallo*, *smollo* (attr.) ‘crumbled to pieces, pulverized’; Yurak Samoyed / Nenets *malæ*- ‘to break, to smash’, *malu?* ‘fracture’, *mal’ma* ‘broken pieces, fragments’. Collinder 1955:35 and 1960:407 **mōl3*; Joki 1973:285; Rédei 1986—1988:278—279 **mol3*-; Décsy 1990:103 [**mola*] ‘piece; to break’; Janhunen 1977b:86 **mêl3*-. (?) Yukaghir (Northern / Tundra) *molde*- ‘to rot, to be spoiled (intr.)’, *molyul* ‘pus’, *molyite*- ‘to let rot, to spoil’, *moldend’e* ‘rotten skin from which a chamois ornament is made’. Nikolaeva 2006:272.
- D. Proto-Altaic **mole*- ‘to rub, to crush, to grind, to wear out; to become worn out, weak, tired, weary’: Proto-Tungus **mul*- ‘(vb.) to fall ill; (adj.) weak, tired’ > Evenki *mul*- ‘to fall ill’, *multe* ‘weak, tired’. Proto-Turkic **bül*- ‘to be destroyed, ruined; to destroy’ > Old Kipchak *bül*- ‘to remove, to fire’; Karaim *bül*- ‘to be destroyed, ruined’; Tatar *böl*- ‘to be destroyed, ruined’; Bashkir *böl*- ‘to be destroyed, ruined’; Kazakh *bülin*- ‘to be destroyed, ruined’, *büldir*- ‘to destroy’; Kirghiz *bülün*- ‘to be alarmed’. Starostin—Dybo—Mudrak 2003:941—942 **mole* ‘sick, weak’.
- E. (?) Eskimo: Proto-Yupik **mul̥ɣa*- ‘to be careful or gentle (with)’ > Alutiiq Alaskan Yupik (Kenai Peninsula) *ul̥ɣa(yuy)*-, (Kodiak) *u̯ɣla(yuy)*- ‘to be careful or gentle’; Central Alaskan Yupik *mul̥ɣakə*- ‘to be careful or gentle (with)’, *mul̥ɣaitə*- ‘to be careless or reckless’. Fortescue—Jacobson—Kaplan 1994:203.

Buck 1949:4.91 tired, weary; 5.56 grind; 9.31 rub; 15.75 soft; 15.77 smooth. Brunner 1969:20, no. 10; Caldwell 1913:603—604; Greenberg 2002:84—85, no. 186; Möller 1911:161—162; Illič-Svityč 1971—1984.II:69—70, no. 302, **moLA* ‘to smash’; Bomhard—Kerns 1994:637—639, no. 518; Dolgopolsky 1998:55—56, no. 63, **mol/IV* ‘to pound, to gnaw, to smash to pieces’ and 2008, no. 1404, **molV* (or **molhV* ??) ‘to pound, to gnaw/smash into pieces’.

918. Proto-Nostratic (n.) **mor-a* ‘any body of water: sea, lake, flood, stream, pool, cistern, reservoir, basin, canal, channel’:

- A. Afrasian: Egyptian *mr* ‘any body of water: lake, pool, cistern, reservoir, flood, stream, basin, canal, channel’. Gardiner 1957:569; Erman—Grapow 1921:66 and 1926—1963.2:96, 2:97; Hannig 1995:345; Faulkner 1962:111. [Orël—Stolbova 1995:384, no. 1774, **mīr-* ‘river’; Ehret 1995:310, no. 595, **mur-* ‘to flow’.]
- B. Kartvelian: Mingrelian *mere* ‘lake’. Assuming development from **mori* ‘lake’ (cf. Schmidt 1962:37: “Zan *e* [*< o* under the influence of an *i* in the following syllable]”), as in Old English *mere* ‘lake, pool, cistern; sea’ (< Common Germanic **mari-* < Proto-Indo-European **mar-i-* or **mor-i-* ‘any body of water: sea, lake, swamp, marsh’).
- C. [Proto-Indo-European **mar-i-* or **mor-i-* ‘any body of water: sea, lake, swamp, marsh’: Latin *mare* ‘sea’; Old Irish *muir* ‘sea’; Gothic *marei* ‘sea’, *mari-* in *mari-saiws* ‘lake’; Old Icelandic *marr* ‘sea’; Old English *mere* ‘lake, pool, cistern; sea’; Old Saxon *meri* ‘sea’; Dutch *meer* ‘lake, pool’; Old High German *mari*, *meri* ‘sea’ (New High German *Meer*); Lithuanian *mārė* ‘sea’; Old Prussian *mary* ‘lagoon, bay’; Old Church Slavic *morje* ‘sea’; Russian *móre* [mope] ‘sea’; Hittite *marmar(r)a-*, ^{GIS}*mammarra-* ‘waterlogged woodland, overgrown swamp, wetland, slough, moor, marsh’. Derivative in: Proto-Germanic **mar-isk-* ‘marsh’ > Old English *mersc*, *merisc* ‘marsh’; Middle Low German *mersch*, *marsch* ‘marsh’; Middle Dutch *mersch(e)* ‘marsh’ (Dutch *marsk*); New High German *Marsch* ‘fen(land), alluvial land’. Pokorny 1959:748 **mori-*, **mōri-* ‘sea’; Walde 1927—1932.II:234—235 **mari*; Mann 1984—1987:732—733 **mari*, *-iə* ‘sea’; Watkins 1985:43 **mori-* and 2000:56 **mori-* ‘body of water; lake (?)’, sea (?); Gamkrelidze—Ivanov 1984.II:943 **mor(i)-* and 1995.I:580 **mor-/mar-* ‘sea’; Benveniste 1935:76 **már-*, **máry-*, **móry-*, **mor-éi-*; Mallory—Adams 1997:503—504 **móri* ‘sea’; Ernout—Meillet 1979:387; Walde—Hofmann 1965—1972.II:38—39 **mari*; De Vaan 2008:365; Orël 2003:261 Proto-Germanic **mariskaz*, 261 **mariz*; Kroonen 2013:354 Proto-Germanic **mari-* ‘lake, sea’; Feist 1939:346 **mari* (or **mori* ?) and 347; Lehmann 1986:245 **már-y-* or **mór-y-n-*; De Vries 1977:379—380; Onions 1966:557 West Germanic **marisk-* and 570 **mori-*, **māri-*; Klein 1971:447 Germanic **mari-* ‘sea’ and 458; Vercoullie 1898:185; Kluge—Mitzka 1967:463—464 and 470 Common Germanic

**mari-* ‘sea’; Kluge—Seebold 1989:463 and 470 **mari*; Derksen 2008: 325; Fraenkel 1962—1965.I:409—420; Puhvel 1984— .6:79—80.] Note: The Indo-European terms are phonologically ambiguous. They may belong here or with Proto-Nostratic **mar-* (~ **mār-*) ‘marsh, swamp’.

- D. Proto-Altaic **m̃ūri* ‘any body of water: river, lake, sea’: Proto-Mongolian **mören* ‘river, lake’ > Written Mongolian *mören* ‘large river or lake’; Khalkha *mörön* ‘large river which empties into a lake or sea; lake’; Buriat *müre(n)* ‘river’; Kalmyk *mörñ* ‘river’; Ordos *mörön* ‘river’; Dagur *mure*, *mur* ‘river’; Shira-Yughur *merēn*, *merēm* ‘river’; Dongxiang *moren*, *morān* ‘river’; Monguor *murōn* ‘river’. Poppe 1955:49. Starostin—Dybo—Mudrak (2003:935—936 **m̃ūri* ‘water’) compare the above forms with possible Tungus, Japanese, and Korean cognates. However, Dolgopolsky (2008, no. 1382) is probably correct in rejecting the comparison of the Tungus forms with those cited here.

Buck 1949:1.32 sea; 1.33 lake. Illič-Svityč 1971—1984.II:60—61, no. 294, **mārā* ‘damp; moisture’; Bomhard—Kerns 1994:653, no. 530; Dolgopolsky 1998:25—26, no. 14, **moRE* ‘water body’ and 2008, no. 1461, **moRE* (= **moRi* ?) ‘body of water’.

919. Proto-Nostratic root **mud-* (~ **mod-*):

(vb.) **mud-* ‘to finish, to end, to complete, to accomplish, to achieve, to perish’;

(n.) **mud-a* ‘end, finish, completion, accomplishment, achievement’

- A. Afrasian: Berber: Tuareg *əmdu* ‘to finish, to achieve; to be complete, to be finished, to be whole, etc.’; Ghadames *imda* ‘achievement, totality, all’; Nefusa *semdu* ‘to achieve’; Kabyle *məd* ‘to arrive at a certain result; to grow, to mature’; Zenaga *məd* ‘to be finished, to finish’, *əccəmd* ‘to end, to terminate’, *yumdan* ‘grown old, changed (for the worse)’. Haddadou 2006—2007:124. Note: The alleged Arabic cognates (*madya-t* ‘goal, limit’ and *madan* ‘duration, period, term, goal; reach, range’ — the forms and meanings have been amended to agree with Steingass 1884:977) suggested by Dolgopolsky [2008:1296—1297, no. 1371]) do not belong here. Rather, they should be included under Proto-Nostratic (vb.) **mad-* ‘to stretch, to expand, to lengthen, to draw out, to measure out’, (n.) **mad-a* ‘measure, measurement, amount; extent, limit’.
- B. Dravidian: Tamil *muṭi* (-v-, -nt-) ‘to end, to terminate; to be completed, effected, accomplished; to be destroyed, to perish, to die’, *muṭi* (-pp-, -tt-) ‘to end (tr.), to terminate, to effect, to accomplish, to destroy’, *muṭipu*, *muṭivu* ‘end, finality, completion, conclusion, decision, death, limit’; Malayalam *muṭiyuka* ‘to come to an end’, *muṭikka* ‘to finish, to spend, to destroy’, *muṭippu* ‘destruction’, *muṭivu* ‘end, destruction, extravagance’; Kota *muṛc-* (*muṛc-*) ‘to finish (work)’; Kannaḍa *muḍi* ‘(vb.) to end, to

come to an end, to become extinct; (n.) end, ruin, destruction', *mudipu* 'to end'; (?) Tuḷu *mudusuni* 'to eat up, to consume'; Telegu *mūḍu*, *mūḍu* 'to end (intr.), to terminate, (death) to approach'; Gonḍi *muri* 'termination, end'; Kuwi *muth'nai* 'to complete', *muṭ-* (-t-) 'to complete, to be finished'. Burrow—Emeneau 1984:441, no. 4922.

- C. Proto-Altaic **mude* 'soon, finally': Proto-Tungus **muda-n* 'end, limit, finish' > Evenki *mudan* 'end, limit, finish'; Lamut / Even *mudɔn* 'end, limit, finish'; Negidal *modan* 'end, limit, finish'; Ulch *muda(n)* 'end, limit, finish'; Nanay / Gold *modā* 'end, limit, finish'; Udihe *muda(n)* 'end, limit, finish'; Solon *mudā* 'end, limit, finish'. Tsintsius 1975—1977.I:550. Proto-Mongolian **mödü* 'soon, shortly, later' > Written Mongolian *mödü* 'soon, shortly, later'; Khalkha *möd* 'soon, straightaway'. Starostin—Dybo—Mudrak 2003:946—947 **mude* 'soon, finally'.

Buck 1949:4.75 die; dead; death; 11.27 destroy; 14.16 end (sb., temporal); 14.27 finish (vb.). Illič-Svityč 1971—1984.II:72, no. 306, **muda* 'to end'; Dolgopolsky 2008:1296—1297, no. 1371, **mudV* 'finish; to end'.

920. Proto-Nostratic **muk'*- (~ **mok'*-):

(vb.) **muk'*- 'to strain, to make great efforts';

(n.) **muk'-a* 'straining (as a woman in labor or as when defecating), effort; fatigue, suffering'

- A. Afrasian: Semitic: Akkadian *mukku* 'to weary, to tire, to wane', *mukku* 'weakened, weary'.
- B. Dravidian: Tamil *mukku* (*mukki-*) 'to strain (as a woman in travail), to make great efforts', *mukkal*, *mukku* 'straining (as in travail), great effort'; Malayalam *mukkuka* 'to strain, to grunt, to make an effort (as in travail or when easing nature)', *mukkal*, *mukkam* 'straining, etc.', *mikkuka* 'to press, to strain at stool'; Toda *muk-* (*muky-*) 'to grunt while defecating when constipated, to hesitate'; Kota *muk-* (*muky-*) 'to strain to deliver child, to make a strenuous effort', *muk* 'the act of straining, great effort'; Kannāḍa *mukkiri*, *mukkare* 'to strain, to make violent efforts in pain, etc.'; Tuḷu *mukkuruni* 'to snort, to grunt, to growl', *mukkuru* 'snorting, grunting, growling', *bukku* 'to strain'; Telugu *mukku* 'to strain, to exert with a strain or strenuously, to grunt, to groan, to grumble'; Pengo *mūk-* 'to lift with effort'. Burrow—Emeneau 1964:438, no. 4896(a).
- C. Indo-European: Greek *μῶγος* (< **mok'-*) 'toil, trouble; distress, difficulty', *μωγέω* 'to toil, to suffer; to suffer pain, to be distressed; to labor at', *μωγοσ-τόκος* 'helping women in hard childbirth', *μωγερός* '(of persons) toiling, wretched; (of things) toilsome, grievous', *μῶγος* 'with toil and pain'. Mann 1984—1987:785—786 **moǵ-* (**moǵəl-*, **moǵər-*) 'toil, hardship; hard, difficult'; Boisacq 1950:642; Frisk 1970—1973.II:247—248; Chantraine 1968—1980.II:707—708; Hofmann 1966:204; Beekes 2010.II:960—961

(pre-Greek); Prellwitz 1905:297. Note: Not related to Lithuanian (dialectal) *smagùs* ‘heavy to carry or pull’; Latvian *smags*, *smagrs* ‘heavy, weighty’. Fraenkel 1962—1965.II:837—838.

Buck 1949:9.13 work, labor, toil (vb., intr.); 9.97 difficult. Bomhard—Kerns 1994:672, no. 551.

921. Proto-Nostratic root **mun-* (~ **mon-*):

(vb.) **mun-* ‘to protrude, to stand out; to jut out; to be first, foremost, in front of’;

(n.) **mun-a* ‘topmost or most prominent part, highest or farthest point’

- A. Afrasian: Egyptian *mnw* ‘mountain chain, mountain range’, *mnw* ‘monument, obelisk’, *mn-ty* ‘the two mountains (that is, the two mountain ranges on the east and west sides of the Nile)’. Hannig 1995:338; Faulkner 1962:108; Erman—Grapow 1921:64 and 1926—1963.2:69, 2:71; Gardiner 1957:568.
- B. Dravidian: Tamil *mun* ‘in front, previous, prior; antiquity, eminence’, *munnam* ‘in front’, *muppu* ‘former time, front, antiquity; bodily strength, greatness; before, in front of, formerly’, *muppan* ‘powerful man, leader, master’, *mupr-il* ‘front of a house, space’, *munnar* ‘before, in advance, in front of, in former times’, *munnu* (*munni-*) ‘to meet, to reach, to join, to precede’, *munai* ‘front, face, superiority, eminence, point, sharpened end, edge, cape, headland’, *munnoṛ* ‘predecessors, ancestors, the ancients, chief ministers’, *munātu* ‘that which is in front, that which is earlier’, *munaiñar* ‘commander of an army’, *munti* ‘front, outer edge of cloth, some time before’, *muntu* (*munti-*) ‘(vb.) to come in front, to advance, to meet, to be prior in time or place, to take precedence, to take the lead, to be first, to surpass, to excel, to be old, to be long lasting; (n.) antiquity, priority, beginning’, *muntai* ‘antiquity, the past, former time; ancestor; in front of’; Malayalam *mun*, *munnam* ‘priority in space and time, first, former; before’, *munnamē* ‘before’, *munnar* ‘forepart of animals’, *munnal* ‘presence’, *munnil*, *munne* ‘before’, *munni* ‘cape, headland’, *munneyavan*, *munnevan* ‘the former’, *munti* ‘the edge, skirt of cloth’, *muntuka* ‘to overtake’, *mumpu* ‘the front, presence’, *mumpan* ‘the foremost, principal’, *mumpināl* ‘formerly’, *mumpil* ‘in front’, *mumpē* ‘before’, *muna* ‘a sharp point, sharpness, promontory’, *munakka* ‘to go before’, *munampu* ‘headland, tip’; Kota *mun-*, *mu-* ‘front, fore’, *mon* ‘point’, *mund*, *mind* ‘previous time, state of being before in space’, *mund-* (*mundy-*), *mind-* (*mindy-*) ‘to go in front, to act first’, *muṅga-r* ‘forward, in front, early’; Toda *mun* ‘in front; former’, *mīn* ‘sharp point, top of hill’, *mīnp* ‘sharp end of horn’; Kannaḍa *mun* (*muṇ*), *munnu* ‘that which is before, in front of, preceding in space; that which is preceding in time; that which is towards a place’, *muñcu* ‘(vb.) to be or go before or first, to precede, to outgo, to go beyond, to exceed, to

outdo, to surpass, to excel; (n.) state of preceding or being before in time or position, state of being previous or prior, former time', *muñcita* 'state of being before in time, previous or prior, beforehand', *muñca* 'a man in the front, chief, leader', *muñce* 'in advance, in the first place, previously, formerly, first, beforehand, before, earlier than', *muntu*, *munda*, *mundu* 'the front part or side, front, state of being in front of anything that is behind, state of being advanced in position, that of being first, state of being before or previous, state of being future', *mundu* 'to precede', *mone* 'point, extremity, end; sharpness; state of being before', *munna*, *munnam*, *munnal* 'the front; in front, before, formerly, previously; first, prior to, preceding; following, henceforth', *munne* 'even the front, etc.', *mumbu* 'forepart, front, the direction of the front, state of being previous'; Tulu *mundaṇa* 'priority; first, prior; future', *munderiyuni*, *munderuni*, *mundersuni* 'to advance, to march, to continue, to carry on', *mundè* 'before, in front', *munni* 'tip, lappet', *munè*, *munne*, *moṇè*, *monè* 'point, end, extremity'; Kōḍagu *miñña* 'in front, further', *mumba-ra* 'the fore', *mumbi* 'predominance', *mone* 'sharp point', *mund-* (*mundi-*) 'to go ahead'; Telugu *muni* 'first, former, previous, front', *munimuṅgali* 'the very front', *munucu* 'to go or appear before', *muncu* 'to increase, to excel', *muṅgali* 'front, foremost', *munupaṭi* 'former, previous', *munupu* 'the past, a former period in time; formerly, of old, previously', *munumu* 'the front or vanguard of an army', *munumunu*, *munumunnu* 'first of all, in the very beginning', *munnu* 'former period of time; formerly, first', *mundaṭa(n)* 'in front, before', *mundaṭi* 'first, former, prior; front', *mundara* 'the front, former or past time; in front, before, first; in the last instance, previously, formerly; hereafter, in the future', *mundu* 'the front, state of being first or early; priority, past time, the past; first, front, earlier, prior, previous; (adv.) first, early, to begin with, in former times', *mona* 'point, extremity, tip, in front'; Naikri *mund* 'before'; Parji *munni* 'before', *mundi* 'in front', *munnted* 'first, the one in front', *mundel* 'in front, before', *mona* 'tip, point'; Gadba (Salur) *mundēl*, *mundel* 'the front'; Gondi *munne* 'before, in front, next year', *munne* 'in front of, previously', *munne*, *mune* 'before, in front of', *mūne* 'ahead', *munnevāl* 'leader'; Kōṇḍa *muṅgal*, *mundala* 'in front'; Kuwi *munu* 'point (of needle, etc.)'; Kurux *munddh*, *mund* 'first, ahead of, previous to, before that time, ago', *muñjā* 'the extremity, beginning, head point, end'; Brahui *mōn* 'front', *mōni* 'being in front'; Malto *mundi* 'formerly, in ancient times', *mundoti* 'ancient'. Burrow—Emeneau 1984:452—453, no. 5020(a); Krishnamurti 2003:392 **mun* 'prior, before, front'.

- C. Proto-Indo-European **mon-/mṇ-* (secondary *e*-grade form: **men-*) '(vb.) to protrude, to stand out, to jut out; (n.) highest or farthest point, topmost or most protuberant part': Avestan *mati-* 'mountain top'; Latin *mentum* 'chin', *ēmineō* 'to project, to stand out', *minae* 'the battlements, parapets of a wall', *minor* 'to jut out, to project', *prōmineō* 'to stand out, to jut out, to

project', *mōns*, *-tis* 'mountain'; Welsh *mynydd* 'mountain', *mant* 'jaw'; Cornish *meneth* 'mountain'; Breton *menez* 'mountain'; Old Icelandic *mæna* 'to tower'. Pokorny 1959:726 **men-* 'to project'; Walde 1927—1932.II:263 **men-*; Mann 1984—1987:781—782 **m̥ptos* 'mouth, chin, jaw'; Watkins 1985:41 **men-* and 2000:54 **men-* 'to project'; Mallory—Adams 1997:270 (?) *men-* 'mountain', **men-* 'to project, to stick out'; Gamkrelidze—Ivanov 1984.II:666 **m(e)n-t[h]-*, also fn. 1 **m(e)n-*, and 1995.I:574 **m(e)n-t^h-* 'mountain, heights', also fn. 2 **m(e)n-* 'mountain'; Ernout—Meillet 1979:398, 403—404, and 412—413; Walde—Hofmann 1965—1972.II:72—73 **men-*, II:90, and II:108—109 **men-*; De Vaan 2008:373, 380, and 388; De Vries 1977:400.

Buck 1949:1.22 mountain, hill; 4.209 chin; 12.33 top; 12.35 end; 12.352 point. Bomhard—Kerns 1994:655—656, no. 533; Dolgopolsky 2008, no. 1431, **mu|oñV* (or **mu|oñ[V]TV* ?) 'mountain, hill'.

922. Proto-Nostratic (n.) **mun-a* 'egg, testicle':

Extended form (Dravidian and Indo-European [only in Slavic]):

(n.) **mun-d-a* (~ **mon-d-a*) 'egg, testicle'

- A. Proto-Dravidian **muṇṭ-ay* 'egg, testicle': Tamil *muṭṭai* 'egg, ovum', *muṇṭai* 'egg'; Malayalam *muṭṭa*, *moṭṭa* 'egg'; Kota *moṭ* 'egg'; Toda *muty* 'egg'; Kannada *moṭṭe* 'egg'; Kodagu *muṭṭe* 'egg, testis'; Tulu *moṭṭe* 'egg'. Burrow—Emeneau 1984:442, no. 4939.
- B. Indo-European: Common Slavic **mōdo* (< **mon-d^h-*) 'testicle' > Russian *mudó* [мудо] 'testicle'; Czech *moud* 'testicle'; Polish *mudo* 'testicle' (Russian loan); Bulgarian *mǎdó* 'testicle'. Vasmer 1953—1958.II:169.
- C. Proto-Uralic **muna* 'egg, testicle': Finnish *muna* 'egg, testicle'; Estonian *muna* 'egg'; Lapp / Saami *mânne/mâne-* and *monne/mone-* 'egg'; Mordvin *mona* 'testicle'; Cheremis / Mari (Eastern) *munõ* 'egg'; Vogul / Mansi *mân* 'testicle'; Ostyak / Xanty *moñ*, (Southern) *mân* 'testicle, male sexual organ'; Hungarian *mony* 'egg, testicle, male sexual organ'; Tavgi Samoyed / Nganasan *manu* 'egg'; Yenisei Samoyed / Enets *mona* 'egg'; Selkup Samoyed *maane*, *man* 'male sexual organ'; Kamassian *munuj* 'egg' (derivative). Collinder 1955:36 and 1977:55; Rédei 1986—1988:285—286 **muna*; Décsy 1990:103 **muna* 'egg'; Janhunen 1977b:86 **mânã*; Zhivlov 2023:164 Proto-Uralic **muna* 'egg; testicle', Proto-Finnic **muna*.

Buck 1949:4.48 egg; 4.49 testicle. Illič-Svityč 1965:373 **muñ(d)ₐ* 'egg' ('яйцо') and 1971—1984.II:72—73, no. 307, (?) **muña* 'egg, testicle'; Bomhard—Kerns 1994:671, no. 549; Hakola 2000:108—109, no. 465; Pudas—Marlow 1974:65, no. 180; Dolgopolsky 1998:60, no. 71, **muña(-t/dV)* 'egg' and 2008, no. 1429, **muñV(-t/dV)* 'egg' (→ 'testicle'); Greenberg 2002:60, no. 127.

923. Proto-Nostratic root **muŋ-* (~ **moŋ-*):

- (vb.) **muŋ-* ‘to torment, to torture, to afflict; to cause pain, trouble, distress, suffering, difficulty; to suffer; to be in pain, trouble, distress, suffering, difficulty’;
 (n.) **muŋ-a* ‘suffering, pain, malady, difficulty, distress, affliction, calamity, misery’

- A. Proto-Afrasian **m[u]ŋ-* ‘(vb.) to torment, to torture, to afflict; to cause pain, trouble, distress, suffering, difficulty; to suffer; to be in pain, trouble, distress, suffering, difficulty; (n.) suffering, pain, malady, difficulty, distress, affliction, calamity, misery’: Proto-Semitic **man-aw-* ‘to be afflicted with, to suffer (from)’ > Arabic *manā* ‘to put to the test, to try, to tempt, to afflict; (passive) to be afflicted (with), to be sorely tried (by), to suffer, to sustain, to undergo, to experience; to be afflicted, hit, smitten, stricken’. Egyptian *mn* ‘to be ill, to suffer; to be ill of, to suffer from; to be troubled about’, *mn* ‘sick man’, *mnt* ‘malady, suffering, distress, calamity’, *mnw* ‘pain’. Hannig 1995:335; Faulkner 1962:107; Gardiner 1957:568; Erman—Grapow 1921:64 and 1926—1963.2:66—67.
- B. (?) Proto-Indo-European **monkʰ-/mṛkʰ-* ‘torment, torture’: Old Church Slavic *moka* ‘torment’, *mōčq*, *mōčiti* ‘to torment’; Czech *muka* ‘torture’; Serbo-Croatian *mūka* ‘torment’; Russian *muka* [myka] ‘torment, torture’. Pokorny 1959:730—731 **men(ə)k-* ‘to knead’; Walde 1927—1932.II:268 **menq-* ‘to knead’; Rix 1998a:394—395 **menk-* ‘to press, to squeeze, to knead’; Mann 1984—1987:730—731 **mankos, -us* ‘maimed, defective; defect, flaw’, 755 **menk-* ‘to squeeze; soft, compliant’, 795 **monk-* (?) ‘pressure, constraint’, and 779—780 **mṛk-* ‘soft, pliant; to squeeze’; Derksen 2008:328—329 and 329; Mallory—Adams 1997:450 **menk-* ‘to press’.
- C. Proto-Altaic **mjuŋo* ‘suffering’: Tungus: Evenki *miŋnī-* ‘to have nagging pain (of joints, heart)’. Proto-Mongolian **muŋ* ‘difficulty’ > Written Mongolian *muŋ* ‘difficulty, distress’, *muŋda-* ‘to become insufficient; to come to an end, to be exhausted; to be in trouble or difficult circumstances’, *muŋdani-* ‘to be in a difficult position, to be in need or distress’, *muŋla-* ‘to be in need, wanting’; Khalkha *munla-* ‘to be in need, to be exhausted’. Proto-Turkic **buŋ* ‘suffering’ > Old Turkic (Orkhon) *buŋ* ‘suffering’, (Old Uighur) *muŋ* ‘suffering’; Karakhanide Turkic *muŋ* ‘suffering’; Turkish *bun* ‘suffering’; Gagauz *bun* ‘suffering’; Turkmenian (dialectal) *muŋ-li* ‘sorrowful’; Uzbek *muŋ* ‘suffering’; Uighur *muŋ* ‘suffering’; Tatar *moŋ* ‘suffering’; Bashkir *moŋ* ‘suffering’; Kirghiz *muŋ* ‘suffering’; Noghay *muŋ* ‘suffering’; Oyrot (Mountain Altai) *muŋ* ‘suffering’; Tuva *muŋ* ‘suffering’; Yakut *muŋ* ‘suffering’; Dolgan *muŋ* ‘suffering’. Starostin—Dybo—Mudrak 2003:935 **mjuŋo* ‘suffering’.
- D. (?) Eskimo: Proto-Inuit **məŋik-* ‘to get jammed, squeezed, pinched’ > Seward Peninsula Inuit *miŋiaq-* ‘to get squeezed, jammed, caught’; Eastern

Canadian Inuit *miḡik-* ‘to pinch one’s hand in a door’; Greenlandic Inuit *miḡiy-* ‘to get jammed (finger or toe, by a blow or pressure)’. Fortescue—Jacobson—Kaplan 1994:198.

Buck 1949:16.31 pain, suffering; 16.32 grief, sorrow. Dolgopolsky 2008, no. 1453, **muḡKa|û* (= **muḡka|û* ?) ‘to make great efforts, (?) to be heavy’.

924. Proto-Nostratic root **mur-* (~ **mor-*):

(vb.) **mur-* ‘to crush, to break, to destroy’;

(n.) **mur-a* ‘break, breach, rupture, fracture’; (adj.) ‘crushed, broken, destroyed, ruptured, mutilated; weakened’

- A. Dravidian: Tamil *muri* (-v-, -nt-) ‘to break, to give way (as a branch), to be defeated, to be discomfited, to perish, to cease to exist’, *muri* (-pp-, -tt-) ‘to break (as a stick), to cut, to discontinue’, *muri* ‘piece, half, broken half of coconut, piece of cloth, deed, written bond, receipt, part of village or town, room’, *muriḡcal* ‘breaking, indigence, want’, *muriḡku* (*muriḡki-*) ‘to break’, *muriyal* ‘breaking’, *muriḡvu* ‘breaking, breach, rupture, fracture, enmity, antidote’, *muriḡpu* ‘antidote, estrangement, breach of friendship’; Malayalam *muri* ‘fragment, piece of cloth, room, chamber, apartment, parish, hamlet, a note, bond’, *muriḡka* ‘to break, to cut, to wound, to decide, to settle’, *muriḡcal* ‘breach’, *muriḡpikka* ‘to cause to cut down’, *muriyan* ‘cutting’, *muriyuka* ‘to break through or in pieces, to be wounded, to be decided, to curdle (as milk)’, *muriḡvu* ‘breach, wound’, *muriḡka* ‘to cut up vegetables’; Kannada *muri* (vb.) to bring about a flaw in a thing by bending it, to sever by fracture, to break, to break off (as leaves, fruit, etc.), to crush, to break down, to defeat, to rout, to destroy, to break up, to put an end to, to do away with; to break (intr.), to become weakened in constitution, to lose strength, to be impaired; (n.) fragment, piece, broken or torn off particle, state of being broken, broken off, *muriḡe*, *muriḡyuvike* ‘breaking’, *muriḡvu* ‘crushing, destruction’, *muriḡisu* ‘to cause to break, to cause to crush, to get changed (as large money into smaller)’, *muriḡka*, *muriḡaka* ‘a man who breaks or ruins, a maimed man, an imbecile’, *muriḡkatana* ‘breaking, ruining’, *muriḡuku* ‘fragment, piece (as of bread)’, *muriḡva*, *muriḡava* ‘a maimed, imbecile wretch’; Telugu *muriḡyu* (vb.) to be broken, severed; (n.) piece, crumb, *muriḡugu* ‘to be crushed’. Burrow—Emeneau 1984:451, no. 5008. Tamil *muravu* ‘break, broken condition (as of the mouth of a pot)’, *muri* (-v-, -nt-) ‘to break off, to snap off, to perish, to be ruined, to be scattered, to go wrong, to be defeated, to separate, to leave, to lose one’s position’, *muri* (-pp-, -tt-) ‘to break off (tr.), to snap off, to ruin, to defeat’, *muri* ‘piece, bit broken off, scratch, blemish’, *muriḡpu* ‘breaking, bruising, cracking’, *muriyal* ‘bit, fragment, that which is brittle’, *muriḡvu* ‘breaking, snapping, leaving, separation’, *muriḡku* (*muriḡki-*) (vb.) to destroy, to crush, to ruin, to kill, to break in pieces, to dissolve;

(n.) killing', *murunku* (*murunki-*) 'to perish, to be destroyed, to break', *mūri* 'bit, part'; Malayalam *mūruka* 'to cut, to cut up (a hog, etc.), to reap'; Kota *mury-* (*murc-*) 'to break (stick-like thing) (tr., intr.), to indent (neck in throwing pot)', *mury* 'small piece, crack in iron of tool'; Toda *mūry-* (*mürs-*) 'to break in two (stick) (intr.)', *mūry-* (*mürc-*) 'to break in two (stick) (tr.)'; Kodagu *muri-* (*murip-, murit-*) 'to make a cut'; Tuḷu *muri* 'an incision or a notch', *murku* 'fragment, piece, bit', *mūruni* 'to mince, to cut up (as vegetables)'; Telugu *muri*, *muriya* 'a bit, piece', *muri-konu* 'to cut', *muriyu* 'to break', *mukku* 'piece, bit, fragment, part'; Kolami *murk-* 'to break'; Naikri *mur-* 'to break (intr.)', *murk-* 'to break (tr.)', *murnḍe* 'a quarter (of bread)'; Pengo *mur-* 'to cut (horizontally)'; Kui *mroku inba* 'to snap off, to be broken off', *mrunga* (*mrungi-*) 'to be torn', *mrunga vīpka* 'to break away from a torn part', *mrupka* (< **mrup-p-*, *mrukt-*) '(vb.) to tear, to murder, to kill; (n.) tearing, murder', *mrūva* (*mrūt-*) 'to die'; Kuṛux *murcnā* 'to twist and break', *murcrnā* 'to get broken, not to come off or out entire', *mur^uknā* 'to abscind, to amputate, to cut in two by hacking, to cut in small pieces, to damage by cutting off a part, to mangle, to mutilate'; Malto *murke* 'to cut into bits, to cut across, to cross (a river)', *murkre* 'to be cut to pieces'. Burrow—Emeneau 1984:446—447, no. 4975.

- B. Proto-Indo-European **mor-/m̥-* (secondary *e*-grade form: **mer-*) 'to crush, to destroy; to be or become crushed, to disintegrate': Latin *mortārium* 'mortar'; Old Irish *meirb* 'flabby, weak'; Welsh *merw* 'weak, slack'; Old Icelandic *merja* 'to bruise, to crush', *morna* 'to waste or pine away'; Old English *mearu* 'tender, delicate', *mierran* 'to hinder, to obstruct; to squander, to waste; to err'; Old High German *maro*, *marawēr* 'mellow'; Late Middle High German *mürsen* 'to crush'; Greek *μαραίνω* 'to waste away, to decay, to wither, to die away, to go out (fire)'; Hittite (3rd sg. pres.) *mar-ri-ya-az-zi* 'to be broken, to collapse, to melt'. Rix 1998a:396 **merh₂-* 'to seize forcefully, to squeeze'; Pokorny 1959:735—737 **mer-*, **merā-* 'to rub, to wear out'; Walde 1927—1932.II:276—279 **mer-*; Mann 1984—1987:760 **meruos*, *-is* 'limp, soft, weak', 797 **morjō*, **morejō* 'to crush, to kill, to be crushed, to disintegrate', 807 **m̥sjō*, 807—808 **m̥rsos*, *-uos*, *-ā* (**m̥rksos*, *-ā*) 'broken-down, decayed; decay, mold', 820 **murtjō* 'to break down, to crush'; Watkins 1985:42 **mer-* and 2000:55 **mer-* 'to rub away, to harm'; Mallory—Adams 1997:142 **mer-* 'to crush, to pulverize'; Kloekhorst 2008b:558; Puhvel 1984— .6:62—64; Frisk 1970—1973.II:174; Boisacq 1950:610 **mer(ā^x)-*; Hofmann 1966:190; Chantraine 1968—1980.II:666; Beekes 2010.II:904; Walde—Hofmann 1965—1972.II:112; Ernout—Meillet 1979:415; De Vaan 2008:390; Orël 2003:262 Proto-Germanic **marwaz* ~ **merwaz*, 262 **marzjanan*; De Vries 1977:385 and 393 **mer-*; Onions 1966:554; Klein 1971:444.
- C. Proto-Uralic **mura-* 'to break, to shatter': Finnish *muru* 'crumb, fragment', *murta-* 'to break, to shatter'; Lapp / Saami *moarrâ-/moarâ-* 'to break to pieces'; Ostyak / Xanty *mory-*, (Northern) *mōri-* 'to burst, to

shatter (intr.)', *murəgt-* 'to break (tr.)'; Yurak Samoyed / Nenets *marda-* 'to shatter (tr.)', *mardo-* 'to shatter (intr.)', *marna-* 'to crumble (intr.), to dissolve (intr.)'; Tavgi Samoyed / Nganasan *maru-* 'to shatter'; Yenisei Samoyed / Enets (Baiha) *more-* 'to shatter'; Selkup Samoyed *morru* 'piece, morsel', *morna-* 'to shatter, to beat to pieces', *moorgənnə-* 'to break, to split apart'. Joki 1973:287; Collinder 1955:36 and 1977:55; Rédei 1986—1988:288 **mura* (**murə*); Décsy 1990:103 **mura* 'piece; to break'; Janhunen 1977b:87—88 **mârê-* (? ~ **mâr-*). Yukaghir (Northern / Tundra) *mur-* 'to cut off', *muregej-* 'to burst, to split, to break', *murigii-* 'to cut off in one movement'. Nikolaeva 2006:281.

- D. Eskimo: Proto-Inuit **muriq-* 'to sharpen' > Western Canadian Inuit (Caribou) *muriikuryuaq* 'big smooth one'; Eastern Canadian Inuit (Labrador) *muriq-* 'to grind, to whet', (Tarramiut) *muriq-* 'to be sharp, to sharpen'; Greenlandic Inuit *muriir-* 'to grind', *muriit-* 'to be blunt, to be rounded at end or edge', *muriirsivik* 'whetstone'. Fortescue—Jacobson—Kaplan 1994:203.

Sumerian *mur* 'to crush, to grind'.

Buck 1949:5.56 grind; 9.26 break (vb. tr.). Illič-Svityč 1971—1984.II:75—76, no. 310, **murA* 'to break, to smash'; Bomhard—Kerns 1994:648—650, no. 526; Hakola 2000:109—110, no. 469; Assadian—Hakola 2003:89, no. 286; Dolgopolsky 2008, no. 1463, **murV* 'to break, to crush, to cut'.

925. Proto-Nostratic root **mur-* (~ **mor-*):

(vb.) **mur-* 'to turn, to twist, to bend';

(n.) **mur-a* 'bend, curve'

Note also:

(vb.) **mar-* 'to turn: to overturn, to turn round, to turn over, etc.; to twist, to whirl, to roll; to bend';

(n.) **mar-a* 'the act of turning, turning over, turning round, etc.; rope, coil, string, cord'

- A. Afrasian: Egyptian *mr* 'to bind up, to tie together', *mrw* 'strip (of cloth), bundle (of clothes)', *mrw*, *mrt* 'weavers'; Coptic *mur* [ⲙⲟⲣⲣ] 'to bind, to gird, to tie'. Hannig 1995:347; Erman—Grapow 1921:67 and 1926—1963.2:105; Faulkner 1962:111; Gardiner 1957:569; Vycichl 1983:119; Černý 1976:88.
- B. Dravidian: Tamil *muraṇci* 'a cord'; Tuḷu *murajè* 'rope made of straw'; Gondi *moros*, *maṛos* 'rope prepared from fiber of the paur tree'; Kui *mrāsu* 'rope made from hide'; Kuwi *marcu* 'rope attaching bullock to plow'. Burrow—Emeneau 1984:447, no. 4976. Tamil *muri* '(vb.) to bend, to lack in strength, to be gentle; (n.) bend, curve', *murivu* 'contracting, fold, laziness', (reduplicated) *murimuri* 'to curve, to bend'; Malayalam

murutuka ‘to pluck by twisting’; Toda *müry fury-* (*furs-*) ‘to stretch the body in yawning’; Kannaḍa *muri* ‘(vb.) to bend, to be bent, to grow crooked, to wind, to meander, to stretch oneself with windings of the limbs, to turn around or twist (as the whiskers); (n.) state of being bent, curved, etc.; bend; winding course of a river; ring’, *murike* ‘bending, crooking by straining’, *murige* ‘bending, twisting, a twist’, *muripu* ‘to turn round or whirl the fist’, *murivu* ‘bending or twisting, a bend, winding course of a river; surrounding’, *murucu* ‘to turn round, to twist’, *murudisu* ‘to pluck by twisting’, *muruhu* ‘a bend, curve, winding course of a river, a surrounding place, crookedness of mind, a crooked object; a pervert; turn, repetition’, *murul* ‘crooked’, *murñtu* ‘to become crooked’, *mor(a)ku* ‘to be turning round or be giddy from pride’; Tuḷu *muri* ‘curve, circle, ring, twist, the creases of the hand, windings of a conch, etc.’, *murigè* ‘twist, entanglement’, *murlu* ‘stretching of a limb’; Telugu *murincu* ‘to turn (tr.)’; Gadba *murg-* (*murug-*) ‘to bend down’, *murgēn* ‘bent’; Parji *murg-* ‘to be bent’, *murgal* ‘hunchback’; Gondi *murītānā* ‘to be dislocated’, *mur-jupnī aiānā* ‘to be crooked’, *moorga* ‘humpbacked’. Burrow—Emeneau 1984:447, no. 4977. Tamil *murukku* (*murukki-*) ‘to twist (as a rope), to twirl, to spin (as a potter his wheel)’, *muruku* (*muruki-*) ‘to wriggle, to twist’; Malayalam *murukuka* ‘to be twisted, to be tight’, *murukal* ‘a twist’, *murukkuka* ‘to twist, to twine, to tighten’, *murukkal* ‘writhing, spasms’, *muriccu-kutti* ‘anything twisted’, *muriccu-kuttuka* ‘to wreath, to plait’, *murukku* ‘twining, twisting, writhing, a twisted cake’; Kannaḍa *muruku* ‘to give a different shape (to the face), to twist (it) out of its natural shape, to distort (it), to change the expression’, *murukisu* ‘to cause to appear distorted, to distort or change (as the face or its features)’, *murigu* ‘curve’; Koḍagu *mur-* (*muri-*) ‘to tighten’, *murik-* (*muriki-*) ‘to tighten’, *muriki* ‘string which binds or tightens, rope around center of drum by which its heads are tightened’; Telugu *murakaṭamu* ‘turning’, *murakaṭincu* ‘to turn’; Kuṛux *murkārnā* ‘to sprain oneself’, *murka’ānā* ‘to sprain’; Kolami *murgaḍileng* ‘to twist (a limb)’. Burrow—Emeneau 1984:451, no. 5012.

- C. [Proto-Indo-European **mer-/mor-/m̥r-* ‘to twist, to turn, to plait’: Greek μέρμις ‘cord, string, rope’; Old Icelandic *merðr* ‘fish-trap’; Middle Low German *mōren* ‘to tie’; Middle Dutch *marren* ‘to tie’. Pokorny 1959:733 **mer-* ‘to plait, to weave’; Walde 1927—1932.II:272—273 **mer-*; Watkins 1985:42 **mer-* ‘to tie’; Mallory—Adams 1997:64 **mer-* ‘to braid, to bind’; Boisacq 1950:628; Hofmann 1966:198; Frisk 1970—1973.II:211 **mer-* ‘to braid, to plait’; Beekes 2010.II:932 (pre-Greek); Chantraine 1968—1980.II:687 (obscure); De Vries 1977:384 **mer-* ‘to braid, to plait, to weave’.] The Indo-European forms may belong with Proto-Nostratic **mar-* (~ **mər-*) ‘to turn: to overturn, to turn round, to turn over, etc.’ instead.
- D. Proto-Altaic **mura-* ‘(vb.) to turn, to return; (adj.) round’: Proto-Tungus **murV-* ‘(vb.) to walk around, to return; (adj.) round’ > Evenki *muru-* ‘to

walk around, to return', *murume* 'round'; Lamut / Even *merək-* 'to walk around, to return', *merēti* 'round'; Negidal *meysel* 'round'; Manchu *murgen* 'round'; Ulch *murū-murū* 'round'; Orok *morolime* 'round'; Nanay / Gold *murgi* 'round'; Udihe *mogol'uō* 'round'. Manchu *muri-* 'to twist, to wring, to wring out, to pinch; to be stubborn, obstinate; to wrong (someone); to throw sideways (in wrestling)', *murixan* 'a bend or a turn on a road or a path'; Evenki *morokō* 'river bend'. Proto-Mongolian **murui-* 'slanting, bending, awry; bend, curve' > Written Mongolian *murui-* 'to bend, to be crooked, to turn, to meander', *muruid-* 'to bend, to twist; to become crooked', *murui* 'slanting, bending, awry, gnarled; uneven; bend, curve, curvature, crookedness', *muruiy-a* 'curvature, detour; crookedness', (causative) *muruiy-a-* 'to bend, to curve, to distort; to turn aside, to deflect', *muruitai* 'bent, curved'; Khalkha *muruy-* 'awry, slanting; crooked, curved; divergent, round-about; bend, curve, crookedness, detour'; Buriat *mu'ū* 'slanting, bending, awry; bend, curve'; Kalmyk *mu'ū* 'slanting, bending, awry; bend, curve'; Ordos *mur'wī* 'slanting, bending, awry; bend, curve'; Dagur *morčigui* 'slanting, bending, awry; bend, curve'; Monguor *murī* 'slanting, bending, awry; bend, curve'. Poppe 1960:36 and 130; Street 1974:20 **muru-* 'to twist, to curve', **muru-y* 'bent; bend'; Starostin—Dybo—Mudrak 2003:955—956 **mura* '(vb.) to turn, to return; (adj.) round'.

Buck 1949:9.14 bend (vb. tr.); 9.19 rope, cord; 10.12 turn (vb.); 10.13 turn around (vb.); 10.14 wind, wrap (vb.); 10.15 roll (vb.). Bomhard—Kerns 1994: 653—655, no. 531; Illič-Svityč 1971—1984.II:74—75, no. 309, **muri-* 'to twist'; Dolgopolsky 2008, no. 1462, **murV* 'to twist, to roll, to turn round'.

926. Proto-Nostratic (Eurasian only) (n.) **mur-a* 'mulberry, blackberry':

- A. Proto-Indo-European **mor-* 'blackberry, mulberry': Greek *μόρον*, (Hesychius) *μῶρα· συκάμινα* 'mulberry, blackberry', *μωρέα* 'mulberry-tree'; Armenian *mor* 'blackberry'; Latin *mōrum* 'mulberry, blackberry', *mōrus* 'mulberry-tree'; Middle Irish *merenn* 'mulberry'; Welsh *merwydden* (with *e < o*) 'mulberry'; Old High German *mūrberi*, *mōrberi* 'mulberry' (Middle High German *mülber*, New High German *Maulbeere*); Old English *mōrbēam*, *mūrbēam* 'mulberry-tree', *mōrberie*, *mūrberie* 'mulberry'; Lithuanian *mōras* 'mulberry'. Pokorny 1959:749 **moro-* 'blackberry'; Walde 1927—1932.II:306 **moro-*; Watkins 1985:43 **moro-* and 2000:56 **moro-* 'blackberry, mulberry'; Mallory—Adams 1997:388 **mōrom* 'blackberry'; Gamkrelidze—Ivanov 1984.II:645 **mōro-* and 1995.I:766 **moro-* 'mulberry'; Hofmann 1966:205 **mōrom*; Chantraine 1968—1980.II:713; Boisacq 1950:645; Frisk 1970—1973.II:256; Beekes 2010.II:968; Ernout—Meillet 1979:415 (Latin *mōrum* may be a Greek loan or, rather, a loan from a Mediterranean language); Walde—Hofmann

1965—1972.II:114 **moro-*; Onions 1966:595 **mōr-*; Klein 1971:480; Kluge—Mitzka 1967:468; Kluge—Seebold 1989:468.

- B. Proto-Uralic **mura* ‘Rubus chamaemorus, berry (Rubus)’: Finnish *muura*, *murrain/muuraima-* ‘cloudberry, Rubus chamaemorus’; Ostyak / Xanty (Tremyugan) *mōrəŋk*, (Southern) *murəh* ‘Rubus chamaemorus’; Vogul / Mansi *morah* ‘Rubus chamaemorus’; Tavgi Samoyed / Nganasan *muraʔka* ‘Rubus chamaemorus’; Yenisei Samoyed / Enets (Hatanga) *mođagga*, (Baiha) *moragga* ‘Rubus chamaemorus’; Yurak Samoyed / Nenets *maranga* ‘Rubus chamaemorus’. Rédei 1986—1988:287 **mura*; Collinder 1955:37 and 1977:56; Décsy 1990:103 **mura* ‘Rubus chamaemorus’; Sammallahti 1988:538 **murå* ‘berry (Rubus)’.

Bomhard—Kerns 1994:655, no. 532; Hakola 2000:111, no. 475.

927. Proto-Nostratic root **mur-* (~ **mor-*):

(vb.) **mur-* ‘to make noise, to make sound, to murmur’;

(n.) **mur-a* ‘noise, sound, murmur’

Reduplicated:

(vb.) **mur-mur-* ‘to make noise, to make sound, to murmur’;

(n.) **mur-mur-a* ‘noise, sound, murmur’

- A. Proto-Afrasian **mur-* ‘to make a noise, to murmur’: Semitic: Arabic *marmara* ‘to be or become embittered, to become angry’, *tamarmara* ‘to murmur, to mumble, to grumble’; New Hebrew *mirmēr* [מִרְמֵר] ‘to complain, to grouse, to grumble, to become embittered (aggrieved), to be enraged (infuriated) with, to be embittered against’. Klein 1987:385. East Cushitic: Burji *murmúr-i* ‘wizard, sorcerer (who tells fortunes by inspecting coffee beans)’, *morom-* ‘to argue’; Gedeo / Darasa *morom-* ‘to argue’; Sidamo *moroom-*, *morom-* ‘to argue’; Galla / Oromo *morom-* ‘to murmur, to disagree, to curse’; Somali *murm-* ‘to contradict, to disagree’; Gollango *maram-* ‘to deny’. Sasse 1982:149; Hudson 1989:21.

- B. Dravidian: Tamil *mural* (*muralv-*, *murarri-*) ‘to make sound, to cry, to sing’, *murarru* (*murarri-*) ‘to make sound, to cry’, *muralal* ‘sounding, confused noise, high pitch’, *muralvu* ‘soft sound (as of a lute)’, *muravam* ‘noise, reverberation, drum’, *muraṛkai*, *muraṛci* ‘sound, song’, *muraḷi* ‘flute, nose-flute’, *muracam*, *muracu* ‘drum, tambour, war drum’, *muravu*, *murutu* ‘drum’; Malayalam *muraluka*, *muruluka* ‘to hum, to grunt, to growl’, *muraḷi* ‘flute’, *muracu*, *murajam* ‘a small drum’, *morampuka* ‘to bark (dogs), to hawk (men)’; Kannaḍa *moraḷ* ‘to hum, to grunt, to growl, to buzz, to howl’, *more* ‘(vb.) to hum, to buzz, to sound, to murmur, to creak, to gurgle, to whiz, to be noisy; to cause to sound; (n.) humming, buzzing, sounding, etc.’, *moraha*, *morahu*, *morehu* ‘humming, etc.’, *mure* ‘to hum, to buzz, to sound or play a lute, to sound as a lute does’; Telugu *morayu* ‘to sound, to resound’, *morayika*, *morapamu* ‘sound, noise’; Koḍagu *moraḍ-*

(*moraḍuv-*, *moraṭ-*) ‘to weep’, *more* ‘lamentation’; Tuḷu *muresuni*, *moresuni* ‘to rumble, to rattle (as thunder)’, *murepini*, *murevuni*, *mureluni* ‘to creak (shoes)’, *muriya* ‘cry, weeping, loud noise’, *muriyedpini* ‘to grumble, to murmur’, *muriyeduni*, *mureduni*, *muriyoḍuni*, *moreḍuni* ‘to weep, to lament, to wail’, *muriyāṭu* ‘lamentation, wailing’, *more* ‘cry’, *muriyō* ‘alas!, weeping loudly; cry of lamentation, distress, etc.’; Telugu *morayu* ‘to sound’, *mrōḡu*, *mrōyu*, *mrōvu* ‘to sound’, *mrōḡuḍu*, *mrōṭa* ‘sound’, *morayika*, *morapamu* ‘sound, noise’; Kolami *moray-* (*morayt-*) ‘to produce musical sound (bell, etc.), to make to produce musical sound’, *morp-* (*moropt-*) ‘to play (flute), to ring (bell), to make to produce musical sound’; Naikṛi *moray-* ‘to sound (intr.)’, *morap-* ‘to sound (tr.)’; Parji *mur-* ‘to growl (tiger), to hoot (owl)’, *murip-* (*murit-*) ‘to snore’; Gondī *mōrītānā* ‘to gurgle in the throat while sleeping’, *muri-*, *mūrītānā*, *muḍiyānā*, *mōr-* ‘to snore’; Kui *murū inba* ‘to mutter, to grumble, to growl’; Kuwi *mūrūkīali* ‘to growl’, *murū murū ā-* ‘to grumble, to complain’; Kuṛux *murnnā* ‘to thunder, especially with repeated peals; to utter threats, to threaten’; Malto *mure* ‘to speak, to say yes or no’. Burrow—Emeneau 1984:446, no. 4973. Tamil *muṛaiyiṭu* ‘to complain, to express grievance’, *muṛaiyiṭu* ‘complaint’, *muṛumuṛu*, *moṛumoṛu*, *morumoru* ‘to murmur, to grumble’; Malayalam *muṛumuṛukka* ‘to murmur’, *muṛa* ‘lamentation, wailing’, *muṛa iṭuka* ‘to complain, to find fault’; Kota *murg-* (*murgy-*) ‘to growl’, *morv-* (*mord-*) ‘to mumble’; Toda *murx-* (*murxy-*) ‘to growl’, *murɣ* ‘complaint’, *murk-* (*murky-*) ‘to complain’; Kannaḍa *more* ‘to roar, to cry aloud, to clamor, to howl, to yell’, *more*, *moṛata* ‘roaring, wailing’, *moreyuvike* ‘crying aloud, etc.’, *morey-iḍu* ‘to wail, to lament, to complain’; Koṇḍa *muṛli-* ‘to bark’; Telugu *moṛagu*, *moṛavu* ‘to bark as a dog, to bawl’, *muṛamuramanu*, *muṛamuralāḍu* ‘to be angry, to fret, to frown’, *moṛa*, *moṛra* ‘cry, scream, shriek, howl, wailing, clamor’, *moṛaliḍu* ‘to cry out’; Maṇḍa *murg-* ‘to bark’. Burrow—Emeneau 1984:451—452, no. 5013. Proto-Dravidian (**mury-* >) **muṛ-* ‘to sound, to make a sound, to make (a loud) noise’: Tamil *muṛaṅku* (*muṛaṅki-*) ‘to roar, to thunder, to make a loud noise, to be noised abroad, to make public’, *muṛakku* (*muṛakki-*) ‘(vb.) to sound, to beat a sounding instrument; (n.) sound, noise’, *muṛakkam* ‘loud noise (as of thunder or drums), clamor, roar’, *moṛi* ‘(vb.) to say, to speak; (n.) word, saying, language’, *muṛavu*, *muṛā* ‘drum, large loud-sounding drum’; Malayalam *muṛaṅṅuka* ‘to roar, to reverberate’, *muṛakkuka* ‘to beat or play an instrument, to make to resound’, *muṛakkam* ‘a reverberating, rumbling, roaring sound’, *moṛi* ‘word’, *moṛiyuka* ‘to speak’; Kota *moṛv* ‘a child’s continuous crying’; Kannaḍa *moṛagu* ‘(vb.) to sound (as certain musical instruments), to roar, to thunder, to play certain instruments; (n.) sound of certain musical instruments, roaring, thunder’; Telugu *mrōḡu*, *mrōyu*, *mrōvu* ‘to sound’; Naikṛi *muṛ-* (*muṭṭ-*) ‘to speak’. Burrow—Emeneau 1984:448, no. 4989.

- C. Proto-Indo-European **mur-*, **mor-*; (reduplicated) **mur-mur-*, **mor-mor-* ‘to murmur, to rustle, to grumble’: Sanskrit *múrmura-h* ‘crackling fire’, *Murmurā* the name of a river, *marmara-h* ‘(adj.) rustling, murmuring; (n.) murmur’; Armenian *mṛmṛam*, *mṛmṛim* (< **muṛmuṛ-*) ‘to murmur’; Greek *μυρμύρω*, *μυρμύρω* ‘to roar, to boil (of water)’, *μύρομαι* ‘to shed tears, to weep’; Albanian *murmuroj* ‘to murmur, to mumble’; Latin *murmurō* ‘to murmur, to make a noise, to roar’, *murmur* ‘a murmuring, humming, roaring, rumbling, crashing’; Old Icelandic *murra* ‘to murmur’; Old High German *murmurōn* ‘to murmur’; Lithuanian *murmėti*, *marmėti* ‘to mutter, to rumble; to murmur, to grumble’; Czech *mrmlat* ‘to mutter, to mumble’. Pokorny 1959:748—749 **mormor-*, **murmur-* ‘to murmur’; Walde 1927—1932.II:307—308 **mormor-*, **murmur-*; Mann 1984—1987:798 **mormolos* (**mormoros*) ‘murmur; humming creature, murmur’, 818 **mur-* ‘to murmur, to grunt’, 819 **murm-*, 819—820 **murmulō*, **murmurō*, *-iō* ‘to murmur, to mutter, to grumble, to growl’, 820 **murmuiō*, 820 **murn-*; Mallory—Adams 1997:388 (?) **murmur-* ‘to murmur’; Watkins 1985:43 **mormor-* (also **murmur-*) ‘to murmur’; Mayrhofer 1956—1980.II:596 and II:657; Beekes 2010.II:967 and II:982; Boisacq 1950:644; Hofmann 1966:205 **murmur-*, **mormor-*; Chantraine 1968—1980.II:712; Frisk 1970—1973.II:254—255; Orël 2003:277 Proto-Germanic **murrōjanan*; De Vries 1977:396; Ernout—Meillet 1979:423; Walde—Hofmann 1965—1972.II:130—131 **murmur-* (**mormor-*); De Vaan 2008:395—396; Derksen 2008:335 and 2015:325—326 **mur-mur-*; Fraenkel 1962—1965.I:473; Smoczyński 2007.1:412. Note: According to Orël (1998:278), Albanian *murmuroj* ‘to murmur, to mumble’ is borrowed from Latin.
- D. Uralic: Proto-Finno-Ugrian **mura-* ‘(vb.) to cry, to shout, to sing; (n.) crying, shouting, singing’ > Mordvin *mora-* ‘to sing, to play an instrument’, *moro* ‘a song’; Cheremis / Mari *muro* ‘a song’, *mure-* ‘to sing’; Ostyak / Xanty *mora-* ‘to shout (at the arrival in the village of rowers, bringing an official)’, *morəgt-* ‘to make a big noise (of people)’. Collinder 1955:99 and 1977:115; Rédei 1986—1988:287—288 **mura*.

Sumerian *mur* ‘scream, cry; shouting, yelling; voice’.

Bomhard—Kerns 1994:668—670, no. 547; Caldwell 1913:603 and 622; Hakola 2000:109, no. 467; Assadian—Hakola 2003:88, no. 285; Dolgopolsky 2008, no. 1467, **muΓra* ‘to emit vocal sounds (to shout, to sing)’.

928. Proto-Nostratic root **mus^{v-}* (~ **mos^{v-}*):
 (vb.) **mus^{v-}* ‘to immerse, dip, or plunge in water, to bathe’;
 (n.) **mus^{v-}-a* ‘immersion, dip, plunge, bath’

Extended form (Indo-European and Uralic):

(vb.) **mus^y-V-k-* ‘to immerse, dip, or plunge in water, to bathe’;

(n.) **mus^y-k’-a* ‘immersion, dip, plunge, bath’

- A. Proto-Dravidian **muy-/muc-* > **mi(y)-/muc-* ‘to wash, to bathe’: Toda *mi-y-* (*mi-d-*) ‘to bathe’; Kannaḍa *mī*, *mīyu* (*mīnd-*, *mīd-*) ‘to take a bath, to bathe; to cause to bathe, to wash, to pour over (the body)’; Tuḷu *mīpini* ‘to take a bath, to wash oneself’; Parji *mī-* (*mīñ-*) ‘to bathe’; Gadba (Ollari) (*nīr*) *muy-*, (Salur) *mī-*, *mīy-* ‘to bathe’; Maṇḍa *mī-* ‘to bathe’; Kui *mīva* (*mīt-*) ‘to lave, to bathe or anoint oneself, to be anointed or spattered’, *musa* (*musi-*) ‘to wash the head’; Kuṛux *mūjnā* ‘to wash the face of’; Malto *múnje* ‘to wash one’s face’, *múnjre* ‘to wash one’s face’. Burrow—Emeneau 1984:435, no. 4878.
- B. Proto-Indo-European **mosk’-* (secondary *e*-grade form: **mesk’-*) ‘to immerse in water, to dip or plunge in water’: Sanskrit *májjati* ‘to sink, to dive, to plunge, to perish’; Latin *mergō* ‘to dip, to plunge into liquid, to immerse’; Lithuanian (denominative) *mazgóju*, *mazgóti* ‘to wash, to wash up, to scrub’; Latvian *mazgāju*, *mazgāt* ‘to wash’. Rix 1998a:398 **mesg-* ‘to dip, to plunge into liquid, to immerse, to sink’; Pokorny 1959:745—746 **mezg-* ‘to dip, to plunge’; Walde 1927—1932.II:300—301 **mezg-*; Mann 1984—1987:761 **mesgō* (**mezg-*) ‘to immerse, to soak, to steep; to plunge’, 800 **mosgos* (**mosg-*) ‘steeping, infusion, mash’; Mallory—Adams 1997:160 **mesg-* ‘to dip under water, to dive’; Watkins 1985:42 **mezg-* and 2000:56 **mezg-* ‘to dip, to plunge’; Mayrhofer 1956—1980.II:549; De Vaan 2008:375; Walde—Hofmann 1965—1972.II:76—77 Latin *mergō* < **mezgō*; Ernout—Meillet 1979:399 **mezg-*; Smoczyński 2007.1:384; Fraenkel 1962—1965.I:421.
- C. Proto-Uralic **mus^yki-* (**mos^yki-*) ‘to wash’: Estonian *mõske-* ‘to wash’; Mordvin *muške-* ‘to wash’; Cheremis / Mari *muška-* ‘to wash’; Votyak / Udmurt *myšky-* ‘to wash’; Hungarian *mos-* ‘to wash’; Yurak Samoyed / Nenets *maasa-* ‘to wash’; Yenisei Samoyed / Enets *masua-* ‘to wash’; Selkup Samoyed *musa-* ‘to wash’. Collinder 1955:35, 1965:31, and 1977:54; Joki 1973:286—287; Rédei 1986—1988:289 **muške-* (**moške-*); Décsy 1990:103 **mosjka* ‘to wash’; Sammallahti 1988:538 **moški-* ‘to wash’; Janhunen 1977b:89 **māšī-*; Zhivlov 2023:163 Proto-Uralic **močki-* ‘to wash’, Proto-Finnic **moske-*.

Buck 1949:9.36 wash. Bomhard—Kerns 1994:666—667, no. 544; Illič-Svityč 1965:349 **m/o/ç(k)λ* [‘мыть’] and 1971—1984.II:71—72, no. 304, **muçλ-* ‘to wash’; Dolgopolsky 2008, no. 1361, **muçV(-kV)* ‘to immerse, to wash’; Pudas—Marlow 1974:65, no. 177; Hakola 2000:107, no. 455.

929. Proto-Nostratic root *muy- (~ *moy-):

(vb.) *muy- ‘to return, to give back’;

(n.) *muy-a ‘that which is returned or given back: return, recompense, requital, repayment, etc.’

- A. Dravidian: Tamil *moy* ‘presents given on special occasions as at a wedding’; Kota *moy* ‘contribution paid at a feast (for example, at the opening of a new house, at the joint piercing of ears of all children in a village); the total of such contributions’; Kannaḍa *muy(i)*, *muyu* ‘requital, act of returning like for like, return of good for good, an equivalent returned for anything given, done, or suffered, recompense, return of evil for evil, retaliation, punishment; present given to bride and bridegroom at their marriage by their relations, etc., with the prospect of recompense being made on such an occasion in their own house’; Tuḷu *muyi* ‘gift of money at a wedding’, *muyya* ‘returning’, *muyya-pāḍuni* ‘to return, to give back’, *mujare* ‘allowance, subtraction, payment to be reduced due to adjustment of accounts’; Malto *múje* ‘to liquidate a debt’. Burrow—Emeneau 1984:463, no. 5121.
- B. Proto-Indo-European *moy-/ *mi- (secondary *e*-grade form: *mey-) ‘to exchange, to change’: Sanskrit *mayate* (Vedic *mināti*) ‘to exchange, to barter; to deceive’; Latin *mūnus* (< *moy-no-) ‘office, function, employment, duty’; Old Irish *moín*, *maín*, *máen* ‘treasure, gift’; Welsh *mwyn* ‘worth, value’; Old Icelandic *mein* ‘hurt, harm, injury; disease, sore’, *meina* ‘to harm, to do harm; to hinder, to prevent; to forbid, to prohibit’, *meinn* ‘painful, causing pain’; Old English *mān* ‘wickedness, crime’, *māne* ‘false (oath), wicked’; Old Frisian *men-* ‘false’, *meneth* ‘perjury’; Middle Dutch *mein(e)*, *meen* ‘false’; Old High German *mein* ‘false, deceitful’ (New High German *Mein-* in *Meineid* ‘perjury’); Old Church Slavonic *měna* ‘exchange’; Russian *ména* [мена] ‘exchange, barter’, (dial.) *menít’* [менить] ‘to change, to exchange’; Lithuanian *maĩnas* ‘exchange’, *mainaũ*, *mainýti* ‘to exchange’; Latvian *miju*, *mīt* ‘to exchange’, *maĩna* ‘exchange’; Tocharian A *māsk-*, B *māsk-* (< *mi-sk^he/o-) ‘to exchange’, B *misko* ‘trading, exchanging’. Rix 1998a:383 *mei- ‘to exchange, to barter; to deceive’; Pokorny 1959:710 *mei- ‘to change, to exchange’; Walde 1927—1932.II:240—241 *mei-; Mann 1984—1987:747 *mejō (*meijō, *mījō) ‘to pass, to change’, 767 *mījō, *mij- ‘to move, to pass’, and 788 *moin- (*moinos; *moinejō) ‘mutual, reciprocal, common, general; exchange, reward, return, change’; Watkins 1985:40 *mei- and 2000:52 *mei- ‘to change, to go, to move’; Gamkrelidze—Ivanov 1984.II:754 *mej-, *mej(-n)-, II:885 *mej- and 1995.I:657 *mei- ‘to exchange, to trade’, *mei(-n)- ‘change, exchange’, I:781 *mei- ‘to exchange, to trade’; Mallory—Adams 1997:184 *mei- ‘to exchange’ and 2006:81 *mei- ‘to exchange’, 272, 273, 285; Mayrhofer 1956—1980.II:635—636 *mei-; De Vaan 2008:395; Ernout—Meillet 1979:422 *mei- ‘to change, to exchange’;

- Walde—Hofmann 1965—1972.II:128; Orël 2003:255 Proto-Germanic **mainaz*; De Vries 1977:382; Kluge—Mitzka 1967:472 **mei-*; Kluge—Seebold 1989:471 **mei-*; Boutkan—Siebinga 2005:255—256 *(*h*₂)*moi-*; Derksen 2008:311 **moi-n-*; Van Windekens 1976—1982.I:284; Adams 1999:459 **mei-* ‘to (ex)change’; Smoczyński 2007.1:367—368; Fraenkel 1962—1965.I:395—397. Proto-Indo-European **mey-th-*/**moy-th-*/**mi-th-* ‘to exchange, to change’: Latin *mūtō* ‘to move, to shift (tr.); to change, to alter (intr.)’; Gothic *maidjan* ‘to change, to falsify’, *maipms* ‘gift’; Old Icelandic *meiðmar* (pl.) ‘valuables, treasures’; Old English *mīpan* ‘to hide, to conceal; to avoid, to shun, to refrain from’, *māþm* ‘anything precious; treasure, gift’; Old Saxon *mīthan* ‘to shun, to avoid’, *mēthom* ‘anything precious; treasure, gift’; Dutch *mijden* ‘to avoid’; Old High German *mīdan* ‘to shun, to avoid, to refrain from’ (New High German *meiden*); Old Church Slavic *mitě* ‘alternately’; Latvian *miētus* ‘exchange’; Sanskrit *méthati* ‘to unite, to pair, to couple, to meet (as friend or antagonist), to alternate, to engage in altercation’. Rix 1998a:386—387 **mei₂th-* ‘to change, to exchange, to remove’; Pokorny 1959:710 **mei-* ‘to change, to exchange’; Walde 1927—1932.II:240—241 **mei-*; Mann 1984—1987:746 **meit-* ‘to turn, to change’, 788 **moit-* ‘to turn, to change’, 788—789 **moitm-* ‘change, turn, return, requital’, 789 **moitō*, -*īō* (**moith-*) ‘to turn, to shift, to change, to alternate’; Watkins 1985:40 **mei-* and 2000:52 **mei-* ‘to change, to go, to move’; Mallory—Adams 1997:184—185 **meit-* ‘to exchange’ and 2006:272 **meit-*, 273 **meit-* ‘to exchange’, 285 **meit-*; Mayrhofer 1956—1980.II:682—683; Ernout—Meillet 1979:426 **mei-*; Walde—Hofmann 1965—1972.II:137—138 **mei-t-*; De Vaan 2008:398—399; Orël 2003:254 Proto-Germanic **maidjanan*, 256 **maipmaz*; Feist 1939:340 and 342; Lehmann 1986:241 **mey-* and 242 **mey-t(h)-* ‘to exchange’; De Vries 1977:381 **moit-*; Kluge—Mitzka 1967:471 **meit(h)-*; Kluge—Seebold 1989:471; Derksen 2008:318 **meith₂-*.
- C. (?) Proto-Gilyak / Nivkh **muju-* ‘ill’: Amur *muinə-dv* ‘ill; to become ill’; East Sakhalin *mujuu-d* ‘ill’, *mujvu-d* ‘to be or become ill’. Fortescue 2016:108. Assuming semantic development as in Old Icelandic *mein* ‘hurt, harm, injury; disease, sore’, cited above.

Buck 1949:4.84 sick; sickness; 12.93 change (vb.). Dolgopolsky 2008, no. 1511, **moyV-* ‘to give, to give back, to restore’. Note: The Chadic material cited by Dolgopolsky does not belong here. Rather, it should be included under no. 1513, *mVyV-* ‘to come’ or ‘to go, to pass’ (cf. Orël—Stolbova 1995:380, no. 1752, **may-* ‘to go, to come’).

22.44. PROTO-NOSTRATIC *n

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
n-	n-	n-	n-	n-	n-	n-	n-
-n-	-n-	-n-/- <u>n</u> -	-n-	-n-	-n-	-n-	-n-

930. Proto-Nostratic first person singular personal pronoun *na (~ *nə) ‘I, me’:

Note: On the basis of Dravidian (and possibly Altaic), the original form of this stem may have been *ŋa (~ *ŋə), but this is not certain. Sumerian [Emegir] *ĝá.e* [= /ŋa-/] ‘I’ supports such a reconstruction as well.

- A. Proto-Afrasian *nV first person singular personal pronoun: ‘I, me’:
 Semitic: first person verb suffix: Akkadian *-ni*; Hebrew *-nī* [נִי]; Syriac *-n*; Ugaritic *-n*; Arabic *-nī*; Geez *-ni* [-**ṇ**]; etc. (cf. Moscati 1964:106, §13.14).
 Chadic independent pronoun: Hausa *ni* ‘I, me’; Ngizim *na(a)* ‘I’; Mubi *ni* ‘I’. Ongota *naa-ku/na* ‘for me, to me’, *s-ine* ‘my’ (cf. Fleming 2002b:50).
 Ehret (1995:362 and 363) reconstructs the following first person pronouns for Proto-Afrasian: *ʔan-/*ʔin- or *an-/*in- ‘I’, *ʔann-/*ʔinn- or *ann-/*inn- ‘we’ (= *ʔan-/*ʔin- or *an-/*in- + old Afrasian pl. in *-n). The following first person singular independent personal pronouns are found in the Afrasian daughter languages: Semitic: Arabic *ʔanā* ‘I’; Sabaeen *ʔn* ‘I’; Hebrew *ʔānī* [אֲנִי], *ʔānōxī* [אֲנֹכִי] ‘I’; Syriac *ʔenā* ‘I’; Eblaite *ʔanna* ‘I’; Old Babylonian *anāku* ‘I’; Ugaritic *ān*, *ānk* ‘I’; Geez / Ethiopic *ʔana* [አነ] ‘I’; Tigrinya *ʔanā* ‘I’; Tigre *ʔana* ‘I’; Amharic *əne* ‘I’. Moscati 1964:102, §13.1; Lipiński 1997:298—299; Stempel 1999:82; Zammit 2002:80. Egyptian *īnk* ‘I’; Coptic *anok* [ΑΝΟΚ] ‘I’. Erman—Grapow 1921:15 and 1926—1963.1:101; Hannig 1995:79—80; Faulkner 1962:24; Gardiner 1957:53, §64, and 554; Černý 1976:9; Vycichl 1983:12. Berber: Tuareg *nək* ‘I, me’; Ghadames *nəc*, *nəccan* ‘me’; Mzab *nəc*, *nəcci*, *nəccin* ‘me’; Kabyle *nəkk*, *nəkki*, *nəkkini* ‘me’; Tamazight *nəkk*, *nəç* ‘me’. East Cushitic: Burji *āni* ‘I’; Gedeo / Darasa *ani* ‘I’; Saho-Afar *an-u* ‘I’; Hadiyya *ani* ‘I’; Kambata *ani* ‘I’; Sidamo *ane*, *ani* ‘I’; Bayso *an-i*, *an-a*, *an-ni* ‘I’; Rendille *an(i)* ‘I’; Galla / Oromo *an(i)* ‘I’; Dullay *an-o* ‘I’. Sasse 1982:26; Hudson 1989:83. Central Cushitic: Bilin *ʔan* ‘I’; Xamir *an* ‘I’; Kemant *an* ‘I’; Awngi / Awiya *án/áni* ‘I’. Appleyard 2006:87. Beja / Beḍawye *ʔane* ‘I’. Reinisch 1895:20. Southern Cushitic: Alagwa *an*, *ana* ‘I’; Ma’a *áni* ‘I’; Iraqw *an*, *ani* ‘I’; Burunge *an*, *ana* ‘I’; Dahalo *ʔányi* ‘I’. Ehret 1980:283. Ongota *naa-ku/na* ‘for me, to me’, *s-ine* ‘my’ (cf. Fleming 2002b:50).
 Chadic independent pronoun: Hausa *ni* ‘I, me’; Ngizim *na(a)* ‘I’; Mubi *ni* ‘I’.
- B. Proto-Dravidian first person singular stem *ñā-n- and the first singular suffix *-n in: first person singular *yā-n- (obl. *yā-n-), alternative first

- person singular **ñā-n-* (obl. **ñā-n-*, also **ñā-*): Tamil *yāñ*, *ñāñ* ‘I’; Malayalam *ñāñ* ‘I’; Kota *a-n* ‘I’; Toda *o-n* ‘I’; Kannaḍa *ān*, *nān* ‘I’; Koḍagu *na-ni*, *na-* ‘I’; Tuḷu *yānu*, *yēnu* ‘I’; Telugu *ēnu*, *nēnu* ‘I’; Kolami *a-n* ‘I’; Naikṛi *ān* ‘I’; Parji *ān* ‘I’; Gadba *ān* ‘I’; Gondī *anā*, (emphatic) *annā*, *nannā*, *nanā*, *nana* ‘I’; Konda *nān(u)* ‘I’; Pengo *ān/āneṅ* ‘I’; Maṇḍa *ān* ‘I’; Kui *ānu*, *nānu* ‘I’; Kuwī *nānū* ‘I’; Kuṛux *ēn* ‘I’; Malto *én* ‘I’; Brahui *ī* ‘I’. Burrow—Emeneau 1984:468, no. 5160. It also occurs as the first singular suffix in finite verbs **-ñ̃n* > Old Malayalam *-ēn*, *-an*; Iruḷa *-e/-en*; Kota *-ē(n)*; Toda *-en*, *-in*, *-n*; Old Tamil *-ēñ*, *-añ*; Kannaḍa *-eM*; Telugu *-nu*, *-ni*; Konda *-a*; Kui *-enu*; Kuwī *-ni*; Pengo *-aṅ*; Kolami *-un*, *-n*, *-an*; Naikṛi *-un*, *-n*, *-an*; Parji *-on*, *-en*, *-an*, *-in*, *-n*; Gadba *-an*, *-on*, *-en*, *-n*; Kuṛux *-n*; Malto *-in*, *-en*, *-on*. Krishnamurti 2003:244—245 and 308—312.
- C. Indo-European: Tocharian B first singular (nom.) *ñäs/ñiś* ‘I’, Tocharian A *näs* (nom. m.)/*ñuk* (nom. f.). Initial *ñ-* may be derived from earlier **ñ̃(ā-)* (ultimately < **n-i-* ?). Indo-Europeanists have been at a loss about how to account for the Tocharian forms (cf. Adams 1999:265—266), and most of the explanations offered to date have been makeshift at best. Assuming that Tocharian has preserved an original **n(-i)-*, which has been lost elsewhere within Indo-European, may be a simpler explanation. This is quite speculative, however.
- D. Altaic: In Mongolian, besides **min-*, there is an alternative stem **na-ma-*, which serves as a base for the oblique cases of the first person personal pronoun: Middle Mongolian *namay*, *nadur* ~ *nada*; Dagur *namda*, *nada*; Monguor *ndā*; Moghol *nanda*; Ordos *namādu*, *nada*; Khalkha *nad-*, *namay(g)*; Buriat *namda*, *namā(yi)*; Kalmyk *nan-*, *namā(g)*. Poppe 1955:209—212. Poppe notes that the origin of this stem is not clear, but he mentions the fact that **na-* is identical with Korean *na* ‘I’. Starostin—Dybo—Mudrak 2003:1024 reconstruct Proto-Altaic **ŋa* first person pronoun. They note: “The root serves as oblique stem in Mong[olian], which may have been its original function...”
- E. Proto-Gilyak / Nivkh independent first person singular personal pronoun **n̥i* ‘I’: Amur *n̥i* ‘I’; North Sakhalin *n̥i* ‘I’; East Sakhalin *n̥i* ‘I’; South Sakhalin *n̥i* ‘I’. Gruzdeva 1998:25; Fortescue 2016:114—115.

Sumerian: In Emegir, the first singular (subject) is *ĝá.e* (= /ḡa-/) ‘I’. This may belong here if we assume that the original form contained an initial velar nasal, which was retained in Sumerian, having been replaced by a dental nasal in Nostratic (except perhaps in Dravidian and Altaic).

Greenberg 2000:70.

931. Proto-Nostratic first person plural exclusive personal pronoun **na* (~ **nə*) ‘we, us’:

- A. Proto-Afrasian **na-* ~ **ni-* ~ **nu-* first person plural personal pronoun stem: ‘we’: Proto-Semitic independent 1st pl. personal pronoun **naḥnū* ‘we’ > Hebrew (ʔā)naḥnū [נַחְנֻחַ] ‘we’; Aramaic ʔānaḥnā(n) ‘we’; Old Babylonian *nīnu* ‘we’; Arabic *naḥnu* ‘we’; Mehri *neḥā n-* ‘we’; Šheri / Jibbāli *nhān* ‘we’; Ḥarsūsi *neḥā* ‘we’; Geez / Ethiopic *nəḥna* [ነጻነ] ‘we’; Tigrinya *nəḥna* ‘we’. Moscati 1964:105, §13.10; Lipiński 1997:298—306. Old Egyptian *n* ‘we’ (also *inn*); Coptic *anon* [אַΝΟΝ], *an-* [אַΝ-], *ann-* [אַΝΝ-] ‘we’. Hannig 1995:77 and 387; Erman—Grapow 1921:14, 76 and 1926—1963.1:97, 2:194—195; Gardiner 1957:53, 554, and 572; Faulkner 1962:23 and 124; Vycichl 1983:13; Černý 1976:9. Berber: Tamazight (independent) *nukni* ‘we’, (indirect, after prepositions) *nəx*; Tuareg (independent) *n-əkkā-ni*. Common East Cushitic **na/*ni/*nu* ‘we’ > Burji *náanu* ‘we’, *nín-ka* ‘our’, *nín-si* ‘us’; Gedeo / Darasa (nom. pl.) *noʔo* ‘we’, (acc. pl.) *noʔo(o)* ‘us’, (dat. pl.) *noʔoʔá*, *noʔá* ‘to us’, (poss.) (m.) *noʔo-ka*, (f.) *noʔo-tt’a* ‘our’; Sidamo (nom.-acc. pl.) *ninke* ‘we’, (dat. pl.) *ninke-ra* ‘to us’, (poss.) *-nke* ‘our’; Kambata (nom. pl.) *naʔooti* ‘we’, (acc. pl.) *ne(e)s*, *-nne* ‘us’, (dat. pl.) *nesá* ‘to us’, (poss.) *-nne* ‘our’; Hadiyya (nom. pl.) *neese* ‘we’, (acc. pl.) *ne(e)s* ‘us’, (dat. pl.) *niin* ‘to us’, (poss.) *ni-* ‘our’; Saho *nanu* ‘we’; Galla / Oromo (Wellegga) first plural present suffixes (affirmative) *-na*, (negative) *-nu*, independent (subject) *nuy*, (base) *nu*. Sasse (1982:151) reconstructs Common East Cushitic **na/*ni/*nu* ‘we’, which “is sometimes provided with a suffix *-ni/-nu* in the subject case”; Hudson 1989:161 and 165. Proto-Southern Cushitic **nana*, **nani* ‘we’ > Ma’a *níne* ‘we’; Dahalo *nányi/nyányi* ‘we’. Ehret 1980:184. Central Cushitic: Bilin *yín* ‘we’ (oblique *yíná*). Reinisch 1887:365—366. Omotic: Dizi first plural suffixes (with auxiliary) *-n*, (without auxiliary) *-ño*, (subject) *inu*, (object) *in*, (possessive affix) *ín-*. Bender (2000:196) reconstructs a Proto-Omotic first person plural independent personal pronoun **nu* ‘we’ > Zayse (inclusive/exclusive) *nu/ni* ‘we’; Harro *na* ‘we’; Chara *noone* ‘we’; Bench / Gimira (inclusive/exclusive) *nu/ni* ‘we’; Bworo *nu*, *ni* ‘we’. Proto-Semitic **-nā* 1st pl. personal pronoun suffix, **na-/*ni-* 1st pl. personal pronoun prefix > Hebrew *-nū* [נַחְנֻ], *ni-* [נִ-]; Aramaic *-n(ā)*, *ne-*; Ugaritic *-n*, *n-*; Akkadian *-āni*, *-ānu*; *ni-*; Arabic *-nā*, *na-*; Geez / Ethiopic *-na* [ነ], *nə-* [ነ-]; Tigre *-na*. Moscati 1964:106, §13.14; Stempel 1999:80. The following first person plural suffixed personal pronouns are found in other Afrasian daughter languages: Egyptian *-n* suffix-pronoun (and dependent pronoun): ‘we, us, our’; Coptic *-n* [נ] suffix of 1st person plural. Hannig 1995:387; Faulkner 1962:124; Erman—Grapow 1921:76 and 1926—1963.2:194; Gardiner 1957:39, §34; 45, §43; and 572; Černý 1976:103. Berber: Tuareg *-na*, *-nə*. Cushitic: Beja / Beḍawye *-n*. For Southern Cushitic, Ehret (1980:65) lists the following first person plural conjugational affixes: Burunge *-an*; Iraqw *-an*; Dahalo *-Vnu*.

- B. Proto-Dravidian first person plural (inclusive) **ñā-m-* (obl. **ñā-m(m)-*) ‘we’: Tamil *nām* (obl. *nam(m)-*) ‘we’; Malayalam *nām* (obl. *nam(m)-*) ‘we’; Kannaḍa *nāvu* (obl. *nam-*) ‘we’; Tuḷu *nama* ‘we’; Kolami *ne-nḍ* ‘we’; Naikri *nēnḍ*, *nēm* ‘we’; Kuṛux *nām* ‘we’; Malto *nām* ‘we’; Brahui *nan* ‘we’. Krishnamurti 2003:247—248 **ñām-/ñam-* ‘we (inclusive)’; Burrow—Emeneau 1984:322, no. 3647.
- C. Kartvelian: Svan *nāj* ‘we’ (Tuite 1997:18 writes *næj*).
- D. Proto-Indo-European (personal pronoun of the first person dual and plural) **ne-/no-/n-s-* ‘we, us’: Sanskrit (acc.-dat.-gen. dual) *nau* ‘us’, (acc.-dat.-gen. pl.) *nas*; Latin *nōs* ‘we’; Greek (nom. dual) *vó* ‘we two’; Gothic (acc.-dat. pl.) *uns*, *unsis* ‘us’, (gen. pl.) *unsara*; Old Icelandic (dat.-acc.) *oss* ‘us’; Swedish *oss* ‘us’; Old English (dat.) *ūs* ‘us’; Old Frisian (dat.) *ūs* ‘us’; Old Saxon (dat.) *ūs* ‘us’; Dutch *ons* ‘us’; Old High German (dat.) *uns* ‘us’ (New High German *uns*); Old Church Slavīc (acc. pl.) *nasъ*, *ny*, (acc. dual) *na*, (dat. pl.) *namъ*, *ny*, (gen.-loc. pl.) *nasъ*, (instr. pl.) *namī*; Hittite (nom. and acc.-dat. pl.) *an-za-a-aš* ‘we, us’. Pokorny 1959:758 **ne-*, **nō-*, **nēs-*, **nōs-* ‘we, us’; Walde 1927—1932.II:320—321 **ne-*, **nō-*, **nēs-*, **nōs-*; Mann 1984—1987:853 **nōs-* ‘we, us’, 858—859 **n-s-*; Watkins 1985:44 **nes-* (zero-grade form **n-s-*) and 2000:58 **nes-* oblique cases of the personal pronoun of the first person plural; Gamkrelidze—Ivanov 1984.I:218 **ne-/n-* and 1995.I:222 **ne* ‘we’ (exclusive); Mallory—Adams 1997:454 (dual) **nóh₁*, **n₁h₁u_é* and 454—455 (pl.) **nsmé* ‘us’, (enclitic) **nos*; Brugmann 1904:407—413 (dual) **ne-*, **n-*; (pl.) **nes-*, **n-s-*, **nsmē-*; Szemerényi 1996:211—220 (nom. pl.) **nsmés*; (acc. pl.) **nes/*nos*, **nēs/*nēs*, **nsmē*; (gen. pl.) **nosom/*nōsom*; (abl. pl.) **nśed*, **nśmed*; (dat. pl.) **nśmei*; Cowgill 1965:169—170 (dual) **noH*, **n₁H-wé*; (pl.) **nos*, **n-s-mé*; Burrow 1973:263—269; Fortson 2004:127 **n-s-me-*, **n-s-*, **nes-*; Beekes 1995:207—209 **nsmé*, **n-s*, **nōs* and 2010.II:1029 **neh₃*; Sihler 1995:372—373 (acc. pl.) (tonic) **nsmé*, (enclitic) **nōs*; (gen. pl.) (tonic) **nśóm*, (enclitic) **nōs*; (dat. pl.) (tonic) **nsm-éy*, (enclitic) **nōs*; (abl. pl.) **nsm-ét*; Meillet 1964:335—336 **nō(s)-*, **n(s)-*; **nśme*; Mayrhofer 1956—1980.II:148 **nōs*, **n-s-* and II:181; Boisacq 1950:675 **nō*; Chantraine 1968—1980.II:761; Hofmann 1966:220 **nō*; Frisk 1970—1973.II:330 **nō*; De Vaan 2008:413 **nōs*; Walde—Hofmann 1965—1972.II:175—176 **nōs*; Ernout—Meillet 1979:444—445; Kroonen 2013:xx Proto-Germanic **uns* ‘us’; Orël 2003:435 Proto-Germanic **unseraz*; Lehmann 1986:378 **ne-*, **n-*; **n-s-me-*; Feist 1939:523 **ne-*, **n-*; **n-s-me-*; **ne-/no-*; De Vries 1977:421; Falk—Torp 1903—1906.II:39—40 Germanic **uns* (< **n-s*); Klein 1971:798 **n-s-*, for **nēs*, **nōs* ‘we’; Onions 1966:965 **n-s*, reduced-grade of **nes*; Kluge—Mitzka 1967:805 **n-s*; Kluge—Seebold 1989:751; Sturtevant 1951:104, §170g; Kloekhorst 2008b:115—116 and 1004; Derksen 2008:346 **nōs*.
- E. Gilyak / Nivkh: Amur *n^vəŋ* ‘we’ (exclusive); North Sakhalin *n^vin* ‘we’ (exclusive); East Sakhalin *n^vin* ‘we’ (exclusive); South Sakhalin *n^vin* ‘we’ (exclusive). Fortescue 2016:114—115.

Bomhard—Kerns 1994:683—684, no. 564; Möller 1911:169; Brunner 1969:106, no. 585; Dolgopolsky 1984:90—91 **nV* ‘we’ (exclusive) and 2008, no. 1526, **nV* ‘we’ (exclusive).

932. Proto-Nostratic deictic particle **na* (~ **nə*), **ni* (~ **ne*) ‘this, that’:

- A. Proto-Afrasian **na*/*-*n* demonstrative stem/deictic particle: ‘this, that’: Proto-Semitic **na*/*-*n* demonstrative stem/deictic particle: ‘this, that’ > Hebrew -*n* [ן] deictic element; Arabic (conjunction) ?*an*, ?*anna* ‘that’, -*n*, -*n*- deictic element; Akkadian *annū* ‘this’; Sabaeen -*n* definite article: ‘the’; Šheri / Jibbāli -*n*, -*n*- deictic element. Barth 1913:96—103. Egyptian (demonstrative neuter and pl.) *n*’ ‘this, these’, (demonstrative pronoun) *nw* ‘this, these’; Coptic *n*- [N-], *nen*- [NEN-] plural of definite article, (plural demonstrative pronouns) *nai* [NAI] ‘these’, *nē* [NH] ‘those’, (plural possessive prefix) *na*- [NA-] ‘of those’. Hannig 1995:390 and 396—397; Faulkner 1962:125 and 127; Erman—Grapow 1921:133, 133—134, 135, 137—138 and 1926—1963.2:199, 2:216; Gardiner 1957:572 and 573; Černý 1976:103, 104, and 105. Berber: Kabyle -*nni* ‘this, that; these, those’, -*inna*/-*yinna* ‘that, those’ (a person or thing at a distance but usually within sight). Independent 3rd person personal pronoun: Tuareg *ənta* (m./f. sg.) ‘him, her’; Ghadames (m. sg.) *niṭṭu* ‘him’, (f. sg.) *nittat* ‘her’; Tamazight (m. sg.) *nətta*, *nəttan* ‘him’, (f. sg.) *nəttat* ‘her’, (m. pl.) *nitni* ‘them’, (f. pl.) *nitənti* ‘them’. Note also: Proto-Agaw 3rd singular pronoun base **ηV*- ‘he’ > Bilin *nī* ‘he’; Xamir *ṇāṇ* ‘he’; Quara *nī* ‘he’; Kemant *ni* ‘he’; Awngi / Awiya *ṇi* ‘he’. Appleyard 2006:80—81; Reinisch 1887:279.
- B. Proto-Kartvelian 3rd person suffix (subjective conjugation) *-*n*: Old Georgian -*n*; Mingrelian -*n*; Laz -*n*. Klimov 1964:144—145 *-*n*; Fähnrich 2007:310—311 *-*n*; Fähnrich—Sardshweladse 1995:258 *-*n*.
- C. Proto-Indo-European **ne*-, **no*-; **ṛe-no*-, **ṛo-no*- demonstrative stem: ‘this, that’: Sanskrit *ana*- (instr. *anēna*, *anáyā*) ‘this, these’, *ná* ‘like, as’; Avestan *ana*- ‘this, that, he’; Greek νή, νή used in strong affirmation: ‘yea, verily, aye, yes’, ἔνθ ‘the last day of the month’; Latin (conj.) *enim* ‘indeed, truly, certainly’, *nē*, *nae* ‘yes, verily, truly’; Lithuanian *nė*, *nėgi*, *nėgu* ‘than’, *nei* ‘as, than’, *añs*, *anàs* (f. *anà*) ‘that, that one’; Old Church Slavic *onъ* (*ona*, *ono*) ‘that, he’; Hittite *an-ni-iš* ‘that, yonder’; Armenian *na* ‘that; he, she, it; him, her’, -*n* definite article. Pokorny 1959:319—321 **eno*- (no doubt **e-no*-) : **ono*- : **no*- : *ne*- ‘that’; Walde 1927—1932.II: 336—339 **eno*-; Mann 1984—1987:27 **anos*, -*ā*, -*om* ‘this, that, yon’, 829 **nē* reinforcing particle on some pronouns and adverbs, 843—844 **nə* enclitic reinforcement; Brugmann 1904:401 **eno*-, **ono*-; Mayrhofer 1956—1980.I:32; Burrow 1973:277 Indo-Iranian **ana*-; Chantraine 1968—1980.I:348 and II:733; Boisacq 1950:253 and 655—656 **no*-; Hofmann 1966:82 **eno*-, **ono*- and 210 **no*-; Beekes 2010.II:993 *(*h₁e*)*no*-; Frisk 1970—1973.I:515 and II:286 *(*e*)*no*-; Ernout—Meillet 1979:196; Walde—Hofmann 1965—1972.I:404—405 *(*e*)*no*-; De Vaan

2008:190; Puhvel 1984—.1/2:51—55 **ono-* ‘that, yonder’; Kloekhorst 2008b:173—174; Smoczyński 2007.1:14, 1:418, and 1:419; Derksen 2008:372 **h₂en-o-* and 2015:54 **h₂en-o-*, 331—332 **nei*. Note: This stem may also occur in the third plural verb ending *-*n*. This was later extended by *-*t^h* to form a new third plural ending *-*nt^h*. Later still, this was further extended by a deictic particle *-*i* to form the so-called “primary” third plural ending *-*nt^hi*.

- D. Proto-Uralic **nä* (~ **ne* ~ ? **ni*) ‘this; this one’, **no* ‘those’: Finnish *nämä/nä-* (pl. of *tämä/tä-* ‘this’) ‘these’, *nei/ni-* (pl. of *se* ‘this, that’) ‘these, those’, *nuo* (pl. of *tuo* ‘that, yonder’) ‘those’, *näim* ‘so, like this’, *niin* ‘so, thus’, *noin* ‘like that’; Lapp / Saami *navt*, *na* ‘like this, in the same way as this’, *nábbō* ‘so, then’, *nú*, *nó* ‘like that, in the same way as that, in that way’, (Lule) *nuou* ‘like that (yonder)’; Mordvin *ne* (pl. of *te* ‘this’ and *se* ‘that’) ‘these, those’; Cheremis / Mari *nənə* ‘those’; Zyrian / Komi *na*, *najō* ‘she’, *naja*, *nyje* ‘those’; Selkup Samoyed *na* ‘that’, *nassaj* ‘that much’, *nyy* ‘hither, thither’, *nil’čil’* ‘such’, *naččeety* ‘hither’. Collinder 1955:38 and 1977:57; Rédei 1986—1988:297 **na* ‘this here, that there’, 300—301 **nä* (~ **ne* ~ ? **ni*) ‘this’, and 396—307 **no* ‘those’; Décsy 1990:103 **na*/**nä* ‘this’, **no* ‘those’; Janhunen 1977b:105 **n3(-)*.
- E. Altaic: Proto-Tungus third person possessive suffix *-*n* (cf. Sinor 1988:725) > Evenki -*n* (-*in* after consonants); Lamut / Even -*n* (-*an* after consonants); Udihe -*ni*; etc. Cf. Fuchs—Lopatin—Menges—Sinor 1968.
- F. (?) Chukchi-Kamchatkan: Proto-Chukotian **ɲan* (or **ɲæn*) ‘that (over there)’ > Chukchi *ɲaan-qen* ‘that (visible but distant)’, *ɲan* (deictic particle) ‘over there’, (loc.) *ɲenku/ɲenku* ‘there’, *ɲanqo(re)* ‘to here, this way’ (= *ɲaanqo(re)* ‘from there?’), *ɲenri(lə)* ‘to there (far from the speaker)’; Kerek *ɲaan-in(a)* ‘that’, *ɲannəku* ‘there’, *ɲanci* ‘to there’; Koryak *ɲajen* ‘that’, *ɲanko* ‘there, then’, *ɲakəje* ‘to there’, *ɲanqo* ‘from there, since then’, *ɲano* (deictic) ‘there’; Alyutor *ɲan-in* (Palana *ɲan-en*) ‘that’. Fortescue 2005:193. Note: initial *ɲ-* in these and the following forms instead of the expected *n-* is problematic. Proto-Chukotian **ɲun* ‘over there’ > Chukchi *ɲun-qin* ‘that off to the side from the speaker’, *ɲoonko* ‘there (far off)’, *ɲoon-en-qac* ‘on the far side’, *ɲuunri*, *ɲoonri* ‘to over there’; Koryak *ɲonək* ‘over there’, *ɲunin-* ‘that one (away from the speaker)’; Alyutor *ɲoon* ‘over there’, (Palana) *ɲonk* ‘there, then’, *ɲoonək* ‘there (far away)’, *ɲoontij* ‘to over there’, *ɲonin* ‘that (far) over there’. Fortescue 2005:199; Mudrak 1989b:97 **ɲu-* ‘that’. Proto-Chukchi-Kamchatkan **ɲut* ‘this (here)’: Chukchi *ɲot-qen* ‘this’, *ɲoot* ‘(just) there’, *ɲotə* ‘over there (behind or to the side of the speaker)’, *ɲotən-qən*, *ɲoten-qan* ‘that (behind the speaker but ahead of the addressee)’; Kerek *uccaj*, *uttəX?annu* ‘this’; Koryak *wuccin* ‘this’, *woto(qun)* ‘here you are’, *woto*, *wotənno* ‘this’ (pl. *wotəccu*); Alyutor *wuttin(a)* ‘this’; Kamchadal / Itelmen *nux* ‘here/there you are’, *nuxqene* ‘here’. Fortescue 2005:199—200; according to Fortescue, the forms with initial *u-* in Kerek and *wu-* in Koryak and Alyutor are derived from **ɲu-*. Proto-Chukchi-Kamchatkan

**ɣutku* ‘here’ (locative case of **ɣut*): Chukchi *ɣutku* ‘here’, *ɣotqo(rə)* ‘from here’; Kerek *uttəku* ‘here’; Koryak *wutku* ‘here’, *wotkan* ‘to here’, *wotqo* ‘from here’; Alyutor *ɣutku* (Palana *wutəkku*) ‘here’; Kamchadal / Itelmen *ɣuʔn* ‘here’. Fortescue 2005:200.

Sumerian *na*, *ne* ‘this’; *ane*, *ene* ‘he, she’, *-ani* (*-ni* after vowels) ‘his, her’.

Illič-Svityč 1971—1984.II:93—94, no. 332, **NA* demonstrative pronoun; Bomhard—Kerns 1994:688—689, no. 570; Hakola 2000:119—120, no. 516; Nafiqoff 2003:50—51 **NA*; Fortescue 1998:155.

933. Proto-Nostratic interrogative-relative particle **na-* (~ **nə-*):

- A. Proto-Afrasian **na-* interrogative-relative particle: Semitic: Geez / Ethiopic *-nu* [-ɲ] interrogative particle; Amharic *-nə* interrogative particle; Ancient Harari *-n* in *mist-n* ‘how much?’. East Cushitic: Burji *-na* positive affirmative copula; Sidamo *-ni* interrogative copula; Gedeo / Darasa *-n* positive affirmative copula. Sasse 1982:150. Central Cushitic: Bilin *-n* interrogative particle. Reinisch 1887:279. Proto-Omoti **oon* ‘who?’ > Gemu (nom.-acc.) *oon+i/a* ‘who?’, (pl.) *oon+anta*; Kullo (acc.) *oni+n* ‘whom?’, Welaitta (subject/object) *oon+i/oon+a* ‘who?’. Note also the Mao (Hozo) interrogative stem *na* ‘when?’. Bender 2000:197 and 230. Ongota *na* ‘what?’, *neeni* ‘what?, why?’, *niike* ‘what?’. Fleming 2002b:61.
- B. Proto-Indo-European interrogative particles **ʔan-*, *-*ne*: Latin *an* particle indicating alternative answers, *-nē* interrogative enclitic particle; Gothic *an* interrogative particle indicating uncertainty of speaker. Pokorny 1959:37 **an* demonstrative particle; Walde 1927—1932.I:56 **an*; Watkins 1985:2 **an* demonstrative particle; Mann 1984—1987:21 **an* sentence particle: ‘if, whether’, 829 *-*nē* reinforcing particle in some pronouns and adverbs; Walde—Hofmann 1965—1972.I:44 and II:150 **nē* (ablaut variant **nē*); Ernout—Meillet 1979:30—31 **an* and 433—434; Lehmann 1986:30; Feist 1939:41; Krause 1968:207; De Vaan 2008:40—41 and 403. Lindsay (1894:605) elaborates: “In class. Latin *-nē* is the general interrogative particle, while *nonnē* is limited to questions which expect an affirmative, *num* to those which expect a negative, answer.” Further on (1894:605—606), Lindsay notes: “*-Ne* is probably I[ndo-]Eur[opean] **nē* (Zend *-na* appended to Interrogatives, e.g. *kas-nā* ‘who then?’; cf. O[ld] H[igh] G[erman] *na weist tu na*, ‘nescisne?’)...” Finally (1894:606), Lindsay derives Latin *an* from the pronominal stem found in Lithuanian *añs* ‘that’, Old Church Slavic *onъ* ‘that’. As noted by Lehmann (1986:30): Gothic *an* is “[n]ot related to Gk *ἄν*, a modal ptc; this rather from εἰ *κάν* ← *κεν*, wrongly divided as εἰκ *ἄν*; similarly Hom *οὐκ ἄν* ← **οὐ κᾶν*...” (cf. also Chantraine 1968—1980. I:82).
- C. Proto-Altaic **ɣ[iV]* interrogative pronoun: ‘what?, who?’. Proto-Tungus **ɣū* ‘who?’ > Evenki *ɣī*, *nī* ‘who?’; Lamut / Even *nī*, *ɣī* ‘who?’; Negidal *nī*,

ŋi ‘who?’; Manchu *we* ‘who?’ (*webe* ‘whom?’); Ulch *ŋui*, *ui* ‘who?’; Orok *ŋui* ‘who?’; Nanay / Gold *ui* ‘who?’; Oroch *ñi* ‘who?’; Udihe *nī* ‘who?’; Solon *nīχē* ‘who?’. Proto-Turkic **nē-* ‘what; what?’ > Old Turkic (Orkhon, Old Uighur) *ne* ‘what; what?’; Karakhanide Turkic *ne* ‘what; what?’; Turkish *ne*, *neme* ‘what?; what, whatever, how’, *nere* ‘what place?, what part?’, *nekadar* ‘how much?’; Gagauz *ne* ‘what; what?’; Azerbaijani *nā* ‘what; what?’; Turkmenian *nā*, *nāmā* ‘what; what?’; Uzbek *ne* ‘what; what?’; Uighur *nā* ‘what; what?’; Karaim *ne* ‘what; what?’; Tatar *ni*, *nerse* ‘what; what?’; Bashkir *ni*, *nāmā* ‘what; what?’; Kirghiz *ne*, *neme* ‘what; what?’; Kazakh *ne* ‘what; what?’; Noghay *ne* ‘what; what?’; Oyrot (Mountain Altai) *ne*, *neme* ‘what; what?’; Chuvash *mə^wn* (metathesis from **ne-me*) ‘what; what?’. Starostin—Dybo—Mudrak 2003:1034 **ŋ[iV]* ‘what?, who?’ (interrogative pronoun). Proto-Turkic **nē-* ‘what; what?’ and its derivatives are likely to be archaisms since no other native forms in Turkic begin with *n-* (cf. Johanson 1998a:31). Róna-Tas (1998:74), on the other hand, remarks that “[i]t is unlikely that Old Turkic *ne* ‘what’ reflects a Proto-Turkic form, since it would be the only native Turkic word with initial *n*”. Décsy (1998:117) lists the following Old Turkic forms beginning with *n*: *nā* ‘what; what?’, *nāčā* ‘how many?’, *nāčūk* ‘how?’, *nāčükläti* ‘why?’, *nägü* ‘what sort?’, *nägüdä* ‘due to’, *nägül* ‘how?’, *nägülüg* ‘how?’, *nälük* ‘really?, or what?’, *nāmā* ‘whatever’, *nāmān* ‘wie?, wie!’, *nān* ‘not the least’, *nānčā* ‘according to’, *nāñäyü* ‘special’, *nätäg* ‘just as’.

- D. Chukchi-Kamchatkan: Proto-Chukotian **naqam* ‘however’ > Chukchi *naqam* ‘but, however’; Kerek *jaqam* ‘but, however’; Koryak *naqam* ‘but, however’; Alyutor *naqam* ‘right away, only’; Kamchadal / Itelmen (Sedanka) *jaq* ‘however’. Fortescue 2005:186.
- E. Proto-Gilyak / Nivkh **nar* ‘who’: Amur *aŋ* ‘who’ (according to Fortescue 2016:111, “probably from **narŋa* with focal interrogative affix **-ŋa*”) (West Sakhalin Amur *aŋ(ŋ)a* ‘who’); North Sakhalin *nař* / *narata* ‘who’; East Sakhalin *nař* / *nar* ‘who’, *nařčij* ‘anyone, no one’; South Sakhalin *nat* ‘who’. Gruzdeva 1998:28; Fortescue 2016:111.
- F. Proto-Eskimo **na-* ‘where’: Alutiiq Alaskan Yupik *na-* ‘where’; Central Alaskan Yupik *na-* ‘where’; Naukan Siberian Yupik *na-* ‘where’; Central Siberian Yupik *na-* ‘which’; Sirenik *na-* ‘where’; Seward Peninsula Inuit *na-* ‘where’; North Alaskan Inuit *na-* ‘where’; Western Canadian Inuit *na-* ‘where’; Eastern Canadian Inuit *na-* ‘where’; Greenlandic Inuit (North / Polar Greenlandic) *na-* ‘where’. Fortescue—Jacobson—Kaplan 1994:204. Proto-Eskimo **nallir* ‘which’: Alutiiq Alaskan Yupik *naliq* ‘which (of them)’; Central Alaskan Yupik *naliq* ‘which (of them)’; Naukan Siberian Yupik *naliq* ‘which (of them)’; Central Siberian Yupik *naliq* ‘which (of them)’; Sirenik *nacaX* ‘which’; Seward Peninsula Inuit *nalliq* ‘which’; North Alaskan Inuit *nalli(q)* ‘which’; Western Canadian Inuit *nalliat* ‘which of many’; Eastern Canadian Inuit *nalli(q)* ‘which’; Greenlandic Inuit (North / Polar Greenlandic) *nalliq* ‘which’. Fortescue—Jacobson—Kaplan 1994:204. Proto-Eskimo **nayu* and **na(C)uŋ* ‘where (is it)’:

Central Alaskan Yupik *nauwa*, *nauxa* ‘where’; Naukan Siberian Yupik *naa* ‘where’; Central Siberian Yupik *naayu* ‘where is it?’; Seward Peninsula Inuit *naun* ‘where have you come from?’; North Alaskan Inuit *naun* ‘where’; Western Canadian Inuit *nauk* ‘where’; Eastern Canadian Inuit *nauk* ‘where’; Greenlandic Inuit *naak* ‘where’. Fortescue—Jacobson—Kaplan 1994:204. Proto-Yupik-Sirenik **natə* ‘which (part)’ > Alutiiq Alaskan Yupik *natə* ‘what part’; Central Alaskan Yupik *natə* ‘what part’; Central Siberian Yupik *natə* ‘where’; Sirenik *natəlyuX* ‘which’, *natu* ‘where’. Fortescue—Jacobson—Kaplan 1994:204.

- G. Etruscan relative pronoun *an* (*ana*, *ane*, *anc*, *ancn*, *ananc*) ‘who, which’ (also ‘he, she, this, that’). Bonfante—Bonfante 2002:214. Perhaps also found in *nac* ‘how, as, because, since’.

Sumerian *a-na* ‘what?’. *a-na* can also be used as an indefinite or relative pronoun (cf. Thomsen 1987:75). Note also the indefinite pronoun (animate and inanimate) *na-me* ‘anyone, anything; (with negative verb) no one, nothing’ (cf. Thomsen 1987:78).

Dolgopolsky 2008, no. 1633, **η[U]* (1) ‘thing’, (2) ‘what?’; Greenberg 2000:232—234, §64. Interrogative N.

934. Proto-Nostratic negative/prohibitive particle **na* (~ **nə*), **ni* (~ **ne*), **nu* (~ **no*) ‘no, not’:

- A. Afrasian: Egyptian *n*, *nn*, *ny*, *nw* negative particle: ‘not’; Coptic *n-* [n-] negative particle. Hannig 1995:387—389; Faulkner 1962:125 and 134; Gardiner 1957:572 and 574; Erman—Grapow 1921:76 and 1926—1963.2:195; Vycichl 1983:135; Černý 1976:103. A negative *n* is also found in Omotic (cf. C’ara negative (*n*)*ne*) (cf. Bender 2000:218—219).
- B. Elamo-Dravidian: Royal Achaemenid Elamite *in-* element of negation, Middle Elamite *in-ni* negative particle, *a-ni*, *a-ni-i* prohibitive particle.
- C. Proto-Kartvelian **nu* prohibitive particle: ‘no, not’: Georgian *nu* ‘no, not’; Mingrelian *nu* ‘no, not’; Svan *no* ‘not’ (with indicative). Schmidt 1962:128; Klimov 1964:148—149 **nu* and 1998:144 **nu* prohibitive particle: ‘no, not’; Fähnrich—Sardshweladse 1995:267 **nu-*; Fähnrich 2007:323 **nu-*. Proto-Kartvelian **numa* prohibitive particle: ‘no, not’: Mingrelian *numu*, *nəmə* ‘no, not’; Svan *nōma*, *nōm-* ‘no, not’. Klimov 1998:144 **numa* prohibitive particle: ‘no, not’.
- D. Proto-Indo-European negative particles **nē*, **ney-*, negative prefix **n-*: Sanskrit *ná*, *nā* ‘not’, negative prefix *a-/an-*; Old Persian *na-* ‘not’; Avestan negative prefixes *na-*, *naē-*, *a-/an-* ‘not’; Greek negative prefixes *ἀ-/ἄν-*, *νῆ-*, *νε-*; Latin negative prefixes *nē-*, *in-*, *nē* ‘not’, *nec*, *neque* (adv.) ‘not’, (conj.) ‘and not’; Oscan *nei*, *ni* ‘not’; Umbrian *nei* prohibitive: ‘not’, *neip* negative and prohibitive: ‘not’; Old Irish *ní*, *ní* ‘not’, *ne-ch* ‘someone, anyone, something, anything; nobody, nothing’, negative prefixes *ne-*, *ní-*,

in-/é-/an-; Gothic *ni* ‘not’, *nei* ‘nor’, negative prefix *un-*; Old Icelandic *ne* ‘not’, (adv.) *né* ‘neither, nor’, (adv.) *nei* ‘no’; Norwegian *nei* ‘not’; Old English *ne*, *ni* ‘not’, negative prefix *un-*; Old Frisian *ne*, *ni* ‘not’; Old Saxon *ne*, *ni* ‘not’; Old High German *ne*, *ni* ‘not’; New High German *nicht* ‘not’, *nie* ‘never, at no time’; Lithuanian *nė*, *neĩ* ‘not’; Old Church Slavic *ne* ‘not’; Hittite *na-at-ta* ‘not’; Palaic *ni-i* ‘not’. Pokorny 1959:756–758 **ne*, **nē*, **nei*, **ḡ-* negative particle; Walde 1927–1932.II:319–320 **ně*, **nē*, **nei*, **ḡ-*; Mann 1984–1987:829 **ne*, **ne-* (**nē*, **nə*) ‘not, un-’, 831 **nei* ‘neither, not’, 855 **ḡ-* a negative prefix; Gamkrelidze–Ivanov 1984.I:225 **ne-/ḡ-* and 1995.I:194 **ne-/ḡ-* negation; Watkins 1985:43–44 **ne* and 2000:57 **ne* ‘not’; Mallory–Adams 1997:395 **ne* ‘not’; Mayrhofer 1956–1980.I:13 **nē* and II:120; Burrow 1973:283; Boisacq 1950:1 **ḡ-*, **ḡn-* and 667–668 **ně*; Frisk 1970–1973.I:1 **ḡ-*, **ně* and II:313; Chantraine 1968–1980.I:1–2 and II:732; Hofmann 1966:1 **ḡ-*, **ne* and 217; Beekes 2010.I:1 **n-*; De Vaan 2008:403; Ernout–Meillet 1979:432–433 **ne-*, **ḡ-*; Walde–Hofmann 1965–1972.I:686–687 **ḡ-*, II:150–151 **ně*, **nei*, and II:152 **ne-q^{ue}*; Kroonen 2013:385 Proto-Germanic **ne* ‘not’; Orël 2003:283 Proto-Germanic **ne*; Feist 1939:373, 374, 374–375, 375, and 516 **ḡ-*; Lehmann 1986:265–266 **ne*, **nē*; **ne*, **ḡ-*; De Vries 1977:406; Torp 1919:454; Onions 1966:604, 612, 615, 616, and 956–957 **ḡ-*; Klein 1971:489, 498 **ně*, and 795 **ḡ-*; Kluge–Mitzka 1967:510 and 803 **ḡ-*; Kluge–Seebold 1989:503, 504 **ne*, and 749 **ḡ-*; Smoczyński 2007.1:418 and 1:419; Fraenkel 1962–1965.I:489 and I:491; Derksen 2008:347 **ne* and 2015:331 **ne*.

- E. Proto-Uralic negative particle **ne* ‘not’: Hungarian *ně*, *nēm* ‘not’; Cheremis / Mari *nō*, *ni*: *nō-mat*, *ni-ma-at*, *ni-mat* ‘nothing’, *ni-gū* ‘nobody’; Votyak / Udmurt *ni*: *ni-no-kin* ‘nobody’, *ni-no-ku* ‘never’, *ni-no-mer* ‘nothing’; Zyrian / Komi *nōm*, *nem*, *ńem* ‘nothing’; Vogul / Mansi (Northern) *nee-mäter* ‘nothing’, *neem-hot* ‘nowhere’, *neem-huuńt* ‘never’; Ostyak / Xanty (Northern) *nem-hōjat* ‘nobody’, *nem-huntta* ‘never’, *nematti*, *nəmattə* ‘nothing’. Samoyed negative verb: Tavgi Samoyed / Nganasan *ńi-* (*ńo-*); Yenisei Samoyed / Enets *ńe-*. Collinder 1955:38; Rédei 1986–1988:301. (?) Yukaghir (Southern / Kolyma) *ńə-* negative pronominal marker, *ń-irkin/ń-irkid* ‘no one’, *ńə-qon* ‘nowhere’, *ńə-leme* ‘nothing’, *ń-ol-γodome-* ‘uneven, unequal’. Nikolaeva 2006:294.
- F. Altaic: Turkic: In Chuvash, there is a preposed prohibitive particle *an* ‘no, not’ which is used to negate second and third person imperatives. Greenberg (2000:212–213) notes that, “[i]n Tungus there is a widespread form *ana* found in Oroch, Orok, and Ulch that typically negates adjectives...”
- G. Proto-Eskimo **na-* and **na(a)yya* ‘no’: Alutiiq Alaskan Yupik (Koniag) *naa* ‘no! don’t!’; Naukan Siberian Yupik *naami* ‘no’; Central Siberian Yupik *na(a)*, *nalaa* ‘no’; Sirenik *naayya* ‘no’; North Alaskan Inuit *naayya*, *naakka* ‘no’; Western Canadian Inuit (Siglit) *naaka* ‘no’; Eastern Canadian

Inuit (Iglulik) *naayya* ‘no’; Greenlandic Inuit *naaxxa* ‘no’. Aleut *nanjaa* ‘no’. Fortescue—Jacobson—Kaplan 1994:204.

Sumerian *na* ‘not’, *na-* modal prohibitive prefix (imperfect root), *nu* ‘not’, *nu-* negative prefix. Thomsen 1987:190—199.

Bomhard—Kerns 1994:681—682, no. 562; Greenberg 2000:212—213; Möller 1911:169; Dolgopolsky 2008, no. 1524, **ni* ‘not’.

935. Proto-Nostratic root **naɸ-* (~ **nəɸ-*):

(vb.) **naɸ-* ‘to come, to go, to journey, to travel’;

(n.) **naɸ-a* ‘journey’

A. Proto-Afrasian **naɸ-* ‘to come, to go, to arrive, to journey, to travel’: Proto-Semitic **naɸ-* ‘to come’ > Geez / Ethiopic (suppletive imperative of the verb ‘to come’) *naʿa* [ḡḡ], *naʿā* [ḡḡ], *nəʿā* [ḡḡ] ‘come!, come now!, come up!’, Tigre (imptv.) *nəʿa* ‘come!’, Tigrinya (imptv.) *nəʿa* ‘come!’, Amharic (imptv.) *na* ‘come!’, Gurage (imptv.) *na* ‘come!’. Leslau 1979:445 and 1987:382. Egyptian *nʿi* ‘to come, to go, to arrive, to journey, to travel (by boat), to sail’, *nʿ-t* ‘expedition’, *nʿy-t* ‘mooring-post’, Coptic *na* [na] ‘to go’. Hannig 1995:394; Faulkner 1962:126; Erman—Grapow 1921:77 and 1926—1963.2:206; Gardiner 1957:573; Vycichl 1983:136; Černý 1976:103. West Chadic: Ngizim *nai* (intr.) ‘to come’ (form of ‘come’ used in the subjunctive), (tr.) ‘to bring’ (form of ‘bring’ used in the subjunctive), *ni* (intr.) ‘to come, to go’, (tr.) (with transitivity suffixes *-náa*, *-dù*) ‘to bring, to take’ (subjunctive form; *ni* is neutral with respect to motion), *nná* (intr.) ‘to come’, (tr.) (with transitivity suffixes *-náa*, *-dù*) ‘to bring’ (used in the second subjunctive), *nyà* corresponding to ‘come/bring, go/take’ (imperfective; *nyà* is neutral with respect to motion); Kirfi *no* (perf. ventive *nó-n-kò*) ‘to come’. Central Chadic: Musgu *na* ‘to go’, Masa *nàná* ‘to go’. Stolbova 2005— .I:96, no. 325, **nV* > **nVnV* ‘to come, to go’; Schuh 1981:xxiii (paradigms of the verbs ‘to go’ and ‘to come’), 121—122, 128, 129, and 129—130; Jungraithmayr—Ibriszimow 1994.II:82—83 and II:162—163. Ehret 1995:323, no. 627, **naaɸ-/niiɸ-* ‘to come, to go’.

B. Proto-Indo-European (**neḥ₂-* [**naḥ₂-*]/**noḥ₂-* ‘to travel by boat, to sail’): (nom. sg.) **neḥ₂-u-s* [**naḥ₂-u-s*] ‘ship, boat’, (gen. sg. **neḥ₂-w-os* [**naḥ₂-w-os*]): Old Persian *nāv-* ‘ship’; Sanskrit *náuh* ‘ship, boat’; Greek (Attic) *ναῦς* ‘ship’, (Homeric, Ionic) *νηῦς*; Armenian *nav* ‘ship’ (< Iranian ?); Latin *nāvis* ‘ship’, *nāvigō* ‘to sail, to set sail’; Old Irish *náu* ‘ship’; Old Icelandic *nór* ‘a kind of ship’; Old English *nōwend* ‘shipmaster, sailor’. Pokorny 1959:755—756 **nāus-* ‘ship’; Walde 1927—1932.II:315 **nāu-*; Mann 1984—1987:828 **nāy-* (**nāyus*) ‘boat; boat shape, nave, trough’ (variant **nāyijə*); Watkins 1985:43 **nāu-* ‘boat’ (contracted from **na₂u-*) and 2000:57 **nāu-* ‘boat’ (oldest form **ne₂₂u-*, colored to **na₂₂u-*,

contracted to **nau-* [before consonants] and **nāw-* [before vowels]); Gamkrelidze—Ivanov 1984.II:674 **naHy-* and 1995.I:582 **naHw-* ‘to float, to sail (of boats, ships)’, **naHw-* ‘boat, ship, vessel’, I:724 **nāu-s-* ‘ship, boat’; Mallory—Adams 1997:74 **néh_aus* (gen. **nē_auós*) ‘boat’; Mayrhofer 1956—1980.II:181 **naHú-*, (gen. sg.) **naH-ú-ós*; Burrow 1973:246—247 Sanskrit *naús* ‘ship’ < **naHu-s* (gen. sg. *nāvás* < **naHvás*); Boisacq 1950:658—659; Hofmann 1966:212 **nāus*; Frisk 1970—1973.II:292—293 (nom. sg.) **nāu-s*, (acc. sg.) **nāu- η* , (gen. sg.) **nāu-es*, (acc. pl.) **nāu- η s*; Beekes 2010.II:998 **neh₂u-*; Chantraine 1968—1980.II:737—738 **nāu-s*; De Vaan 2008:402—403; Walde—Hofmann 1965—1972.II:146—149 (nom. sg.) **nāus*, (acc. sg.) **nāu- η* ; **nāu-is*; Ernout—Meillet 1979:431—432 Latin (acc. sg.) *nāvem* < **nāw η* ; Sihler 1995:328 **neH₂u-* ‘boat’; Lindsay 1894:252 **nāu-* ‘ship’; Orël 2003:289 Proto-Germanic **nōwaz*; Kroonen 2013:391 Proto-Germanic **nō-* ‘ship’; De Vries 1977:411 Old Icelandic *nór* < Proto-Norse **nōwa*; Wodtko—Irslinger—Schneider 2008:515—519 **néh₂-u-*, **neh₂- η -*. Note: Terms such as Latin *nāvia* ‘trough’, Welsh *noe* ‘large bowl’, etc. are secondary derivatives. The original meaning was ‘boat’, later applied in several daughter languages to things ‘shaped like a boat’ (as in Bihari *nāw* ‘feeding trough’ [*< nāwā* ‘boat’; cf. *nāw*, *naiyā* ‘boat’]). A relationship between terms for ‘boat’ and ‘trough, vessel, pot, bowl, etc.’ is not uncommon and is found, for example, in Dravidian: cf. Parji *ōḍa* ‘boat, trough’ (cf. Burrow—Emeneau 1984:99, no. 1039); Malayalam *kalam* ‘pot, vessel, ship’ (cf. Burrow—Emeneau 1984:122, no. 1305); Tamil *vaḷḷam* ‘a dish for use in eating or drinking, hour-glass, a measure of capacity, a measure of grain, a boat made of the trunk of a tree, canoe’ (cf. Burrow—Emeneau 1984:480, no. 5315). See also Buck (1949:10.83 boat) for Indo-European terms. For the derivation of terms for ‘boat’ from ‘to come, to go, to journey, to travel, etc.’, cf. Tamil *kaṭattu* (*kaṭatti-*) ‘(vb.) to cause to go, to drive, to transport, to pass (as time); (n.) boat’, extended form of *kaṭa* ‘to pass through, to traverse, to cross, to exceed, to excel, to win, to overcome, to transgress; to go, to proceed, to pass (as time, water, clouds, etc.)’ (cf. Burrow—Emeneau 1984:104, no. 1109). Note also Buck’s (1949:10.36 sail [vb.]) comments: “The verbs for ‘sail’ are partly from the same root that is widespread also in those for ‘float’ and ‘swim’ (cf. 10.34). Others are deriv[atives] of nouns for ‘sail’, ‘ship’, or ‘sea’. Some are words for ‘row’ extended to ‘travel by water, sail’, and some are general words for ‘travel, go’, used for ‘sail’.” Derivation from ‘to travel, to go’ parallels what is found in Egyptian *n’i* ‘to come, to go, to arrive, to journey, to travel (by boat), to sail’, cited above.

Buck 1949:10.36 sail (vb.); 10.81 ship; 10.83 boat. Bomhard—Kerns 1994: 687, no. 568. Different (unlikely) etymology in Dolgopolsky 2008, no. 1572, **nā[h]w[E]* ‘vessel’.

936. Proto-Nostratic root **nab-* (~ **nəb-*):(vb.) **nab-* ‘to burst forth, to gush forth’;(n.) **nab-a* ‘a bursting or gushing forth’

Derivative:

(n.) **nab-a* ‘heavy rain, storm cloud, cloudy sky’

- A. Proto-Afrasian **nab-* ‘to burst forth, to gush forth’: Proto-Semitic **nab-aʕ-* ‘to gush forth, to flow’ > Hebrew *nāḇaʕ* [נָבַע] ‘to flow, to spring, to bubble up’; Biblical Aramaic *nāḇaʕ* ‘to burst forth, to flow, to gush’; Akkadian *nabāʕu* ‘to rise (said of a flood)’; Arabic *nabaʕa* ‘to well, to well up, to gush forth, to flow, to issue’; Sabaean *nbʕ* ‘to cause (water) to flow or gush out’; Geez / Ethiopic *ʔanbəʕa* [አንብዕ] ‘to weep, to shed tears, to cause to weep’, *ʔanbəʕ* [አንብዕ] ‘tear’; Tigre *nābʕa* ‘to shed tears, to weep’, *ʔəmbəʕ*, *ʔənbəʕ* ‘tear’; Tigrinya *nābʕe* ‘to shed tears, to weep’, *nəbʕat* ‘tear’; Harari *əbiʔ* ‘tear’; Amharic *ənba* ‘tear’; Gurage *əmba* ‘tear’; Argobba *əmba* ‘tear’; Gafat *əmbwä* ‘tear’. Leslau 1963:17, 1979:43, and 1987:382; Murtonen 1989:271; Klein 1987:402; Zammit 2002:393—394. Proto-Semitic **nab-at-* ‘to gush forth, to burst forth’ > Arabic *nabaṭa* ‘to well out, to gush out, to spout, to issue, to stream forth (water)’; Geez / Ethiopic *nabaṭa* [ነበጠ] ‘to boil, to boil over’. Leslau 1987:384; Zammit 2002:393—394.
- B. Proto-Indo-European **nebh-/nobh-* ‘to burst out, to burst forth’: Sanskrit *nābhate* ‘to burst, to be torn or rent asunder’; Old Icelandic *næfr* (< Proto-Germanic **nābizō*) ‘bark of the birch’. Walde 1927—1932.II:330 **nebh-*; Pokorny 1959:758 **nebh-* ‘to burst’; Rix 1998a:404 (?) **nebh-* ‘to burst, to spring forth’; De Vries 1977:413; Mayrhofer 1956—1980.II:133—134.

Buck 1949:10.32 flow (vb.). Bomhard—Kerns 1994:684, no. 565.

937. Proto-Nostratic (n.) (Eurasian only) **nab-a* ‘heavy rain, storm cloud, cloudy sky’:

Derivative of:

(vb.) **nab-* ‘to burst forth, to gush forth’;(n.) **nab-a* ‘a bursting or gushing forth’

- A. Proto-Indo-European **nebh-es/os-* ‘heavy rain, storm cloud, cloudy sky’: Sanskrit *nābhas-* ‘mist, clouds, vapor; rainy season’, *nabhasá-h* (adj.) ‘vapore, misty’; (n.) sky, atmosphere; rainy season’; Pāli *nabhas-* ‘cloud, sky’; Avestan *nabah-* ‘cloud’; Hittite (nom.-acc. sg.) *ne-pi-iš* ‘sky, heaven’; Greek *véφος* ‘cloud’, *νεφέλη* ‘cloud’; Latin *nebula* ‘vapor, fog, mist, cloud’, *nebulōsus* ‘misty, foggy’; Old Irish *nem* ‘sky, heaven’; Old Icelandic (poetic) *njól* (< **nebula-*) ‘darkness, night’, *nifl-* (< **nibila-*) ‘mist, fog’ (only in compounds); Old English *nifol* (< **nibila-*) ‘dark, gloomy’; Old Frisian *nevil* ‘mist, fog, haze’; Old Saxon *nebal* ‘mist, fog, haze, darkness’; Dutch *nevel* ‘mist, fog, haze’; Old High German *nebul* ‘mist, fog, haze’ (New High German *Nebel*); Old Church Slavic *nebo* ‘sky,

heaven'; Czech *nebe* 'sky'; Slovak *nebo* 'sky'; Polish *niebo* 'sky'; Polabian *nebû* 'sky'; Russian *nébo* [небо] 'sky, heaven'. Pokorny 1959:315—316 (**enebh-*) **nebh-*, **embh-*, **mbh-* 'wet, water; mist, fog, haze, cloud'; Walde 1927—1932.I:131—132 (**enebh-*) **nebh-*, **embh-*, **mbh-*; Mann 1984—1987:830 **nebhālos*, *-ā* 'mist, cloud', 830 **nebhos*, *-es-* 'sky, cloud, mist'; Watkins 1985:44 **nebh-* and 2000:57 **nebh-* 'cloud' (suffixed form **nebh-(e)lo-*); Gamkrelidze—Ivanov 1984.I:167, I:186, I:218 **neb^[h]es-*, II:667—668 **neb^[h]-* and 1995.I:144, I:159, I:188 **nebh^{es-}* 'sky', I:575—576, I:584 **nebh-* 'sky, fog, cloud'; Mallory—Adams 1997:110 **nébhes-*, **nebh-el-* 'mist, cloud; sky'; Mayrhofer 1956—1980.II:134; Boisacq 1950:666 **nébh-*; Frisk 1970—1973.II:309—310 **nébhos*; Hofmann 1966:216 **nebhos*; Chantraine 1968—1980.II:748 **nebhelā*; Beekes 2010.II:1012 **nebh^{s-}*; Walde—Hofmann 1965—1972.II:151—152 **enebh-*, **onebh-*; Ernout—Meillet 1979:434; De Vaan 2008:404; Klockhorst 2008b:603—604; Kroonen 2013:386 Proto-Germanic **nebala-* 'fog'; Orël 2003:283 Proto-Germanic **nebulō* ~ **nebulaz*; De Vries 1977:409 and 410; Kluge—Mitzka 1967:505 **nebh-*; Kluge—Seebold 1989:500; Vercoullie 1898:201; Derksen 2008:347—348 **nebh^{s-es-}*; Wodtko—Irslinger—Schneider 2008:499—504 **nebh-*.

- B. Proto-Altaic **ñiābo* (~ *-o-*) 'heavy rain, gust of wind': Proto-Tungus **n^vō[be]-kte* 'storm cloud, heavy rain, hail' > Evenki *ñōkta* 'storm cloud, heavy rain', (dial.) *ñēkte*, *ñokta* 'spindrift cloud'; Lamut / Even *ñonto* 'heavy rain'; Negidal *ñekte* 'spindrift cloud'. Proto-Mongolian **nöye-le-* 'to come in gusts' > Written Mongolian *nöyele-* 'to come in gusts'; Khalkha *nōlō-* 'to blow in upward gusts (wind)'. Proto-Turkic **yubug* (~ **yabug*) 'boulders which a torrent carries down, boulders displaced and falling to the bottom of the valley' > Karakhanide Turkic *yuvuy* (~ *yavuy*) 'boulders which a torrent carries down, boulders displaced and falling to the bottom of the valley'. Starostin—Dybo—Mudrak 2003:982 **ñiābo* (~ *-o-*) 'storm, natural disaster'.
- C. Eskimo: Central Siberian Yupik *naafta-* 'to become stormy'.

Buck 1949:1.51 sky, heavens; 1.73 cloud; 1.74 mist (fog, haze); 10.32 flow (vb.).

938. Proto-Nostratic root **nadv-* (~ **nədv-*):

(vb.) **nadv-* 'to press, to crush, to mash';

(n.) **nadv-a* 'anything crushed or mashed'

- A. Proto-Afrasian **nadv-* 'to press, to crush': (?) Semitic: Geez / Ethiopic *nazara*, *nazzara* [𐩦𐩣𐩪] 'to bite, to tear to pieces, to pierce, to crunch, to hit'; Tigrinya *nāzārā*, *nāzālā* 'to tear to pieces, to bite'; Tigre *nāğra* 'to bite off'; Amharic *nāzzārā* 'to strike, to hit', *a-nāzzārā* 'to harass, to pester'; Gafat *tā-nāzzārā* 'to feel pain'. Leslau 1987:411. Egyptian *nd* 'to grind', *nd*, *ndt* 'flour', *ndw* 'miller'; Coptic (Sahidic, Bohairic) *nut* [ⲛⲟⲩⲧ],

(Sahidic) *nat-* [NAT-], (Bohairic) *not-* [NOT-] ‘to grind, to pound’, (Bohairic) *noyt* [NOEIT] ‘meal, flour’. Hannig 1995:447; Faulkner 1962:143; Gardiner 1957:576; Erman—Grapow 1921:90 and 1926—1963.2:369—370; Vycichl 1983:145; Černý 1976:111.

- B. Dravidian: Tamil *naci* (-v-, -nt-) ‘to be crushed, bruised, mashed, crumpled’, *naci* (-pp-, -tt-) ‘to crush, to bruise, to mash, to press, to squeeze, to demolish, to destroy’, *naciyal* ‘anything crushed or mashed’, *nacivu* ‘bruise, contusion, loss, destruction, injury’, *nacukku* (*nacukki*-) ‘(vb.) to press, to squeeze, to crush, to subdue; (n.) bruise’, *nacuñku* (*nacuñki*-) ‘to be mashed, crushed’, *nai* (-v-, -nt-) ‘to be crushed, to be destroyed, to perish’, *nai* (-pp-, -tt-) ‘to crush, to destroy’; (?) Kota *nacak in-* (*id-*) ‘to make noise in cutting through flesh’; Kannaḍa *najugu* ‘to squash, to crush, to bruise (as dry ginger); to be squashed or bruised’, *najju* ‘a squashed state’; Tuḷu *nasiyuni* ‘to submit, to subdue’, *nesipuni* ‘(vb.) to cut up into small bits, to mince; (n.) a bit, a fragment’; Kui *nasa* (*nasi*-) ‘(vb.) to press, to crush; (n.) the act of crushing’, *nahi*, *nahiki* ‘destroyed, ruined, demolished’, *nacc-* ‘to press’. Burrow—Emeneau 1984:314, no. 3574.
- C. Uralic: Proto-Finno-Permian *nätv3-* ‘to knead’ > Cheremis / Mari (Birk) *nöštäla-* ‘to knead by pressing with the arms’, (Kozmodemyansk-Berg) *nüštälä-* ‘to knead (dough) with the hands’; Votyak / Udmurt (Sarapul) *naž-*, (Kazan) *naž-* ‘to knead’. Rédei 1986—1988:706 **näč3-*.

Buck 1949:4.58 bite (vb.); 5.54 knead; 5.55 meal, flour; 5.56 grind; 9.342 press (vb.).

939. Proto-Nostratic root **nadv-* (~ **nədv-*):

- (vb.) **nadv-* ‘to vex, to disturb, to annoy, to irritate, to agitate; to be annoying, irritating, malicious, rude, bad, mean, base’;
 (n.) **nadv-a* ‘vexation, disturbance, annoyance, irritation, trouble’; (adj.) ‘annoying, irritating, malicious, rude, bad, mean, base’

- A. Proto-Afrasian *nadv-* ‘to vex, to disturb, to annoy, to irritate, to agitate; to be annoying, irritating, malicious, rude, bad, mean, base’: Proto-Semitic **nadv-ul-* ‘to be rude, bad, mean, base, low, vile’ > Arabic *naḍula* ‘to be low, base, mean, despicable, debased, depraved’, *naḍl*, *naḍīl* ‘low, base, mean, vile, despicable, debased, depraved; coward’, *naḍāla* ‘depravity’; Šheri / Jibbāli *nḍol* ‘to remain bad, base, worthless’, *enḍél* ‘to humiliate, to disgrace’, *šənḍél* ‘to blame’, *nūḍəl* ‘low, useless, worthless fellow’; Mehri *nəḍūl* ‘to be thoroughly bad, base; to remain bad’, *hənḍūl* ‘to make bad, to disgrace’, *əntəḍūl* ‘to be bad, to be rude and unkind, to be antisocial in one’s behavior’, *nōḍəl* ‘low, useless, worthless person’. Proto-Semitic (reduplicated) **nadv-nadv-* ‘to vex, to disturb, to annoy, to irritate’ > Geez / Ethiopic *naznaza* [ገረገረ] ‘to vex, to torment, to cause pain, to shake, to agitate’, *tanaznaza* ‘to be vexed’; Tigrinya *nāznāzā* ‘to shake’; Tigre

nāznāza ‘to jog’; Amharic *nāzännāzā* ‘to importune, to pester’. Leslau 1987:411. Egyptian *ndyt* ‘baseness’, *ndwyt* ‘wickedness, evil, depravity’. Faulkner 1962:144; Gardiner 1957:577; Erman—Grapow 1926—1963.2: 369 and 2:377. Berber: Ghadames *anzaz* ‘to give someone the evil eye, to single out someone with the intention of doing something bad to him or her’; Tuareg *anzaz* ‘to challenge someone (to cut them down to size, to find a fault with them, etc.); to ebb considerably (water)’. [Ehret 1995:319, no. 617, **naj-* ‘to become low’.]

- B. Dravidian: Tamil *naccu* (*nacci-*) ‘(vb.) to tease, to vex, to trouble, to harass; (n.) trouble, worry’, *nacuvai* ‘one who is always teasing’; Telugu *naccu* ‘(vb.) to tease, to trouble; (n.) troubling’, *naccu-peṭṭu* ‘to annoy, to tease, to fret’. Burrow—Emeneau 1984:318, no. 3577.

Buck 1949:16.72 bad.

940. Proto-Nostratic root **nag-* (~ **nəg-*):

- (vb.) **nag-* ‘to strike, to split, to pierce, to stab’;
(n.) **nag-a* ‘stroke, blow, wound’

- A. Proto-Afrasian **nag-* ‘to strike, to split, to pierce’: Proto-Semitic **nag-al-* ‘to strike, to split, to pierce’ > Arabic *naḡala* ‘to beat, to push; to split, to pierce’, *miḡal* ‘scythe, sickle’; Hebrew *maggāl* [מַגָּל] (base *ngl* [נָגַל]) ‘sickle’; Syriac *maggālā* ‘sickle’; Geez / Ethiopic *nagala* [ነገለ] ‘to be uprooted’; Amharic *nāggālā* ‘to be uprooted’. Murtonen 1989:272; Klein 1987:315; Leslau 1987:392. Proto-Semitic **nag-aḥ-* ‘to strike, to gore’ > Hebrew *nāyaḥ* [נָאָח] ‘to push, to thrust, to gore’; Aramaic *nəyaḥ* ‘to push, to thrust, to gore’; Ugaritic *ngh* ‘to gore’; Gurage (Wolane) *nagä*, (Selti, Zway) *nāgä* ‘to mow grass (with a sickle), to reap cereals’, (?) (Muher, Masqan, Gogot, Soddo) (*tä*)*nagga*, (Wolane) *tānagä* ‘to clash (cattle, objects), to collide’ (either here or with **nag-aḥ-* ‘to strike, to split, to break’, below). Murtonen 1989:271; Klein 1987:403; Leslau 1979:453. Proto-Semitic **nag-aḥ-* ‘to strike, to split, to break’ > Mandaic *nga* ‘to strike, to injure’; Hebrew *nāyaʿ* [נָאָע] ‘to touch; to strike, to injure’, *neyaʿ* [נָעָע] ‘stroke, blow, wound’; Aramaic *nəyaʿ* ‘to touch’; Geez / Ethiopic *nag^wa* [ነገዓ] ‘to make a cracking sound, to crack, to shout, to be broken, to break (intr.)’, *ʾastanāg^wa* [አስተናገዓ] ‘to break to bits, to incite, to provoke, to remove (fat)’, (causative) *ʾanag^wa* [አነገዓ] ‘to break, to dislocate’; Tigrinya *nāg^we* ‘to break (intr.)’; Amharic *nāgg^wa* ‘to snap, to crack, to make a snapping or cracking sound’, *an-nagga* ‘to disjoin, to dismember, to shatter’, *a-nāgg^wa* ‘to break’; (?) Gurage (*tä*)*nagga* ‘to clash (cattle, objects), to collide’ (either here or with **nag-aḥ-* ‘to strike, to gore’, above). Murtonen 1989:272; Klein 1987:404; Leslau 1979:453 and 1987:390. Proto-Semitic **nag-ap-* ‘to strike, to split; to cut off, to split off’ > Hebrew *nāyaḥ* [נָאָח] ‘to strike, to smite’, *neyeḥ* [נָעָח] ‘strike, (fatal) blow, plague’; Aramaic *nəyaḥ* ‘to strike, to push, to injure’; Arabic *naḡafa*

‘to shave or polish an arrow; to cut down (a tree), to pull out; to milk a sheep well’; Sabaeen *ngf* ‘to tear out, to uproot’; Mehri *nəgūf* ‘to throw away, to reject’; Šheri / Jibbāli *ngɔf* ‘to throw away, to reject’; Soqotri *negof* ‘to disperse’; Geez / Ethiopic *nagafa* [ገፋ] ‘to shake, to shake off, to shake out, to knock off, to jolt, to dispel, to brush away, to cut off, to lay away, to throw down, to cast, to trip, to carry away’; Tigre *nāgfa* ‘to shake, to shed’; Tigrinya *nāgāfā* ‘to shake, to shed’. Murtonen 1989:272; Klein 1987:404; Leslau 1987:391. Proto-Semitic **nag-aʒ-* ‘to strike, to smite, to kill, to destroy’ > Sabaeen *ngz* ‘to damage, to destroy; to put an end to (someone’s life), to execute’; Šheri / Jibbāli *ngɔz* ‘to die, to finish’. Proto-Semitic **nag-ar-* ‘to cut down, to cut into’ > Arabic *nağara* ‘to hew, to carve, to plane’. Egyptian *ng, ngʒ* ‘to strike, to smite, to cut off, to cut open, to hew, to slay, to crush’, *ngi* ‘to break open, to break up’, *ngt* ‘breach’. Hannig 1995:438; Faulkner 1962:141; Gardiner 1957:576; Erman—Grapow 1921:88 and 1926—1963.2:348, 2:349. Berber: Tuareg *ənğəs* ‘to butt with a horn or the head’, *anağas* ‘a butt with a horn or the head’, *amānğas* ‘an animal that butts with its horns’; Ghadames *əngəj* ‘to give butts with a horn or the head’; Tashelhiyt / Shilha *ngəs* ‘to butt with the head or horn (a ram)’. Central Chadic: Gude *ngila* ‘knife’; Nzangi *ngəla* ‘knife’; Mafa *ngəl-* ‘to cut’; Daba *nga-* ‘to break’; Logone *ggē-* ‘to break’; Buduma *gai-* ‘to break’. East Chadic: Bidiya *ʔangul* ‘sickle’. Orël—Stolbova 1995:402, no. 1866, **nig-* ‘to break’, 402—403, no. 1867, **nigal-* ‘sickle, sword’, 408, no. 1896, **nVgil-* ‘to cut’, 408, no. 1898, **nVguf-* ‘to cut, to break’, 408—409, no. 1899, **nVgVʕ-* ‘to break, to smite’.

- B. Proto-Indo-European **negh-/nogh-* ‘to strike, to split, to pierce’: Old Irish *ness* ‘wound’; Old Church Slavonic *nožb* ‘knife’, *pro-noziti* ‘to pierce through’. Pokorny 1959:760 **neǵh-* ‘to bore, to stab’; Mallory—Adams 1997:537 **h₁neǵh-es-* ‘±spear’; Walde 1927—1932.II:326—327 **neǵh-*; Derksen 2008:358.

Buck 1949:3.85 wound (sb.); 9.21 strike (hit, beat); 9.23 knife. Bomhard—Kerns 1994:684—685, no. 566.

941. Proto-Nostratic root **naḥ-* (~ **nəḥ-*):

- (vb.) **naḥ-* ‘to tremble, to shake; to fear, to be afraid’;
(n.) **naḥ-a* ‘fear’

- A. Proto-Afrasian **naḥ-* ‘to tremble, to shake; to fear, to be afraid’: Semitic: Geez / Ethiopic (reduplicated) *nāḥnāḥa* [ፍጥፍጥ] ‘to shake, to agitate, to break’; (probably also) Tigrinya (*tä*)*nāḥanḥe* ‘to argue, to quarrel’, *nəḥnəḥ* ‘violent argument, violent quarrel’. Leslau 1987:395. Egyptian *nḥʕ* ‘to shake’ (?), *nḥʕt* ‘palpitations (of the heart)’ (?). Hannig 1995:421; Faulkner 1962:136; Erman—Grapow 1926—1963.2:291. Proto-East Cushitic **naḥ-* ‘to fear’ > Somali *naḥ-* ‘to pity, to be startled’; Galla / Oromo *nah-* ‘to fear,

to take pity on'; Konso *nah-* 'to be tender-hearted'; Gidole *nah-* 'to be afraid, to tremble'; Burji *naʔ-* 'to fear'. Sasse 1979:23 and 1982:150—151; Hudson 1989:19. Southern Cushitic: Iraqw *naaʕ-* 'to fear, to be afraid'. Peust 2008:259.

- B. Proto-Indo-European **neh₂-* [**nah₂-*] > **nā-* 'to fear': Old Irish *nár* (< **nāšros*) 'modest, bashful'; Hittite (1st sg. pres.) *na-aḥ-mi*, (3rd sg. pres.) *na-aḥ-ša-ri-ya-az-zi* 'to fear', (nom. sg.) *na-aḥ-ša-ra-az* 'fear, reverence'. Rix 1998a:405 **neh₂-* 'to be afraid'; Pokorny 1959:754 **nā-* 'to be afraid'; Gamkrelidze—Ivanov 1984.II:804 **naH-* and 1995.I:705 **naH-* 'to fear, to revere (gods), to be ashamed'; Mallory—Adams 1997:198 **neh₂-* 'to be timid'; Vendryès 1959—:N-3; Sturtevant 1951:47, §74, Indo-Hittite **néxt₂*; Kloekhorst 2008b:591—592.

Buck 1949:16.53 fear, fright. Bomhard—Kerns 1994:682, no. 563.

942. Proto-Nostratic (n.) **nak^h-a* '(animal) skin, pelt, hide':

- A. Afrasian: Egyptian *nkn* 'a shield with an animal skin stretched over it'. Hannig 1995:438; Erman—Grapow 1926—1963.2:346.
- B. Indo-European: Greek *νάκη* 'a wooly or hairy skin, a goatskin', *βάκος* 'goatskin, fleece'. Perhaps also Old Prussian *nognan* (if for **noknan*) 'leather'; Old English *næsc* (if from **nak-s-ko-*) 'skin'. Pokorny 1959:754 **nak-* 'skin, hide'; Walde 1927—1932.II:316—317 **nāq-*; Mann 1984—1987:825 **nāk-* 'to cover, to hide'; Mallory—Adams 1997:269 (?) **nák(es)-* 'pelt, hide'; Boisacq 1950:656; Frisk 1970—1973.II:287; Chantraine 1968—1980.II:733; Beekes 2010.II:994 (pre-Greek); Hofmann 1966:211.
- C. Proto-Altaic **nak^{hi}* (~ *-o*) '(animal) skin, hide': Proto-Tungus **naKita* 'bear skin' > Evenki *nakita* 'bear skin'; Lamut / Even *naqḡt* 'bear skin'; Negidal *naḡata* 'bear skin'; Orok *natta* 'bear skin'; Udihe *na'ta* 'bear skin'. Proto-Mongolian **nekey* 'sheepskin' > Written Mongolian *nekei* '(n.) sheepskin with its wool; (adj.) furlined'; Khalkha *neḡiy* [нэхий] 'sheepskin'; Buriat *neḡi* 'fur'; Kalmyk *nekē* 'sheepskin'; Ordos *neḡi* 'sheepskin'; Monguor *nikī*, *nekī* 'sheepskin'. Poppe 1955:146. Starostin—Dybo—Mudrak 2003:961—962 **nak^ʕ* (~ *-o*) 'a kind of skin'.
- D. Chukchi-Kamchatkan: Proto-Chukotian **nəklot-* 'to tan skin' > Chukchi *nəylon* 'warm coat made from winter skin of reindeer'; Koryak *niklʷot-* 'to tan skin'. Fortescue 2005:190.

Buck 1949:4.12 skin; hide. Dolgopolsky 2008, no. 1542, **nāKa* 'fell, skin'.

943. Proto-Nostratic root **nak^{wh}-* (~ **nək^{wh}-*):

- (vb.) **nak^{wh}-* 'to lie down, to go to sleep, to go to bed';
 (n.) **nak^{wh}-a* 'bedtime, evening, nighttime'

- A. Proto-Afrasian **n[a]k^w-* ‘to sleep with, to lie with, to copulate’: Proto-Semitic **na/ya/k-* ‘to have sexual intercourse, to copulate’ > Akkadian *nāku* (*niāku*) ‘to have illicit sexual intercourse, to fornicate’; Arabic *nāka* ‘to have sexual intercourse (with a woman)’; Šheri / Jibbāli *nēk* ‘to sleep with (a woman)’; Mehri *nayūk* ‘to have sexual intercourse with, to sleep with (a woman)’; Ḥarsūsi *neyōk* ‘to sleep with (a woman)’. Egyptian *nk* ‘to lie with, to sleep with, to copulate’, *nk^w* ‘fornicator, adulterer’; Coptic *noyk* [NOEK] ‘adulterer’, (reduplicated) *noknek* [NOKNEK] ‘to have affection for’. Hannig 1995:437; Erman—Grapow 1921:88 and 1926—1963.2:345; Faulkner 1962:141; Gardiner 1957:576; Vycichl 1983:141; Černý 1976:107. Berber: Tuareg *ənki* ‘to perform the movements of the sexual act on (a woman or a female animal)’; Kabyle *ənki* ‘to place oneself in position and make strenuous effort (as a woman in labor)’. North Cushitic: Beja / Beḍawye *nek^{wi}-* ‘to be or become pregnant’, *nā^k^wa* ‘pregnant’, *nā^k^we* ‘pregnancy’. Reinisch 1895:183. Diakonoff 1965:46.
- B. Proto-Indo-European **nek^{wh}-th-/*nok^{wh}-th-* ‘night’: Sanskrit (nom. sg. f.) *nāk* ‘night’ (acc. sg. *nākt-am*); Greek *νύξ* ‘night’; Latin *nox* ‘night’; Old Irish *-nocht* in *innocht* ‘tonight’; Welsh *nos* ‘night’; Cornish *nos* ‘night’; Breton *noz* ‘night’; Gothic *nahts* ‘night’; Old Icelandic *nátt*, *nótt* ‘night’; Faroese *nátt* ‘night’; Norwegian *natt*, *nott* ‘night’; Swedish *natt* ‘night’; Danish *nat* ‘night’; Old English *neah^t*, *niht* ‘night’; Old Frisian *nacht* ‘night’; Old Saxon *naht* ‘night’; Dutch *nacht* ‘night’; Old High German *naht* ‘night’ (New High German *Nacht*); Lithuanian *naktis* ‘night’; Old Church Slavic *nošt^o* ‘night’; Russian *noč’* [ночь] ‘night’; Albanian *natë* ‘night’; Hittite (3rd sg. pres.) *ne-ku-zi* ‘to undress, to go to bed’, (nom. sg.) *ne-ku-uz* ‘bedtime, evening’; Tocharian A *nokti^m*, B *nekcīye* (adv.) ‘last night, at night’. Pokorny 1959:762—763 **nek^u-(t)-*, **nok^u-t-s* ‘night’; Walde 1927—1932.II:337—339 **noqt-*; Mann 1984—1987:833 **nekt-* (?) ‘evening’, 850 **nokterinos* ‘nightly’, 850 **noktīm* ‘by night, at night, yesterday night’, 850 **noktis*, **nokts* ‘night’ (ultimately **noqutis*, **noquts* ?), **noktiom*, **-noktiom* adverb and collective of type **nokt-*, 850—851 **noktiōr* (**noktōr*) ‘by night, the evening before; next night’; Gamkrelidze—Ivanov 1984.I:168 **nek^[h]°-t^[h]-*, I:183 **nok^[h]°t^[h]-s*, I:215—216 **ne/ok^[h]°t^[h]-*, **nek^[h]°-* and 1995.I:145 **nek^h°-th-* ‘night’, I:157 **nok^h°th-s*, I:185, **ne/ok^h°th-*, **nek^h°-*, I:186 **nek^h°-*; Watkins 1985:44 **nek^w-t-* (*o*-grade form: **nok^w-t-*) and 2000:57—58 **nek^w-t-* ‘night’ (*o*-grade form: **nok^w-t-*); Brugmann 1904:115; Mallory—Adams 1997:394 **nek^wt-* ~ **nok^wt-* ‘night’; Mayrhofer 1956—1980.II:121—122; Burrow 1973:75 **nok^wt-*; Huld 1983:96—97; Boisacq 1950:674 **noqt-*, **noqti-*, **noqten-*; Chantraine 1968—1980.II:759—760 **nok^wt-*; Hofmann 1966:219—220 **noqt-* (**noqti-*, **noqtu-*, **noqt(e)r-*); **neq^ut-s* (?); Frisk 1970—1973.II:327—328 **noqt-*; **noq^ut-*, **neq^ut-s*; Beekes 2010.II:1027 **nek^wt-*, **nok^wt-* : **neg^wh-*; Walde—Hofmann 1965—1972.II:181—183 **noq^ut-*; Ernout—Meillet 1979:448; De Vaan 2008:416—417; Morris Jones 1913:138 **noq^uts*; Kroonen 2013:381 Proto-Germanic **naht-*

- ‘night’; Orël 1998:282 and 2003:279—280 Proto-Germanic **naxtz*; Feist 1939:368—369 **nokt-*; Lehmann 1986:262 **nok^w-t-* (gen. **nek^w-t-s*) ‘night’ < **nek^w-t-* ‘to grow dark, to become night’; Falk—Torp 1903—1906.II:5; Torp 1919:450; De Vries 1977:405; Onions 1966:610 **nokt-*; Klein 1971:496 **noqt-*; Boutkan—Siebinga 2005:273—274; Kluge—Mitzka 1967:500 **nokt-*; Kluge—Seebold 1989:497 **nokt-*; Melchert 1994a:61 **nék^wts*; Sturtevant 1951:58—59, §81; Kloekhorst 2008b:602 **neg^{wh}-*; **nog^{wh}-t-s*, **neg^{wh}-t-s*; Puhvel 1984—.7:79—83; Adams 1999:342 **nek^wt-*; Van Windekens 1976—1982.I:319—320 **noqt-* (or **noq^ut-*); Smoczyński 2007.1:415; Derksen 2008: 355 **nok^w-t-* and 2015:327—328 **nok^w-t-*; Fraenkel 1962—1965.I:481—482; Benveniste 1935:10 **n^e/_ok^w-t-*; Wodtko—Irslinger—Schneider 2008:513—515 **neg^u-*.
- C. Proto-Chukchi-Kamchatkan **nəki(nək)* ‘night’: Chukchi *nəki-rit* (pl. *nəkiritti*) ‘night’, *γənnun-nəkite* ‘at midnight’; Koryak *nəkinək* ‘night’, *nəkita* ‘at night’, *γənnun-nəkinək* ‘midnight’; Alyutor *nəkinək* ‘night’, *nəkita* ‘at night’, *γənnun-nəkinək* ‘midnight’; Kamchadal / Itelmen *nkənk* ‘night’. Fortescue 2005:189—190; Mudrak 1989b:104 **nki-nki* ‘night’.

Buck 1949:4.67 have sexual intercourse; 14.42 night. Dolgopolsky 2008, no. 1540, **nukV* (= **nuk[u]* ?) (or **nAk[V?]V* ??) ‘darkness, night’. Note: The Uralic forms cited by Dolgopolsky (Finnish *nukku-* ‘to sleep, to be asleep’, etc.) do not belong here. A better comparison might be with the sparsely attested Proto-Afrasian root **nuk-* ‘to sleep with, to lie with, to copulate’, found, for example, in Burji *nuk-*, *nuuk-* ‘to have sexual intercourse’ and Dullay *nuug-* ‘to have sexual intercourse’. Sasse 1982:153; Hudson 1989:131 and 215.

944. Proto-Nostratic root **nap^h-* (~ **nəp^h-*), **nip^h-* (~ **nep^h-*), **nup^h-* (~ **nop^h-*):
- (vb.) **nap^h-*, **nip^h-*, **nup^h-* ‘to breathe, to blow’;
- (n.) **nap^h-a*, **nip^h-a*, **nup^h-a* ‘breath, life’
- A. Proto-Afrasian **naf-*, **nif-*, **nuf-* ‘(vb.) to breathe, to blow; (n.) breath, life’: Proto-Semitic **nap-as^y-* ‘(vb.) to breathe, to blow; (n.) soul, life, person’ > Hebrew *nəpəš* [נֶפֶשׁ] ‘soul, living being, life, self, person’; Phoenician *npš* ‘soul, self’; Imperial Aramaic *npš* ‘soul, person’; Syriac *nəpəš* ‘breath of life; soul, spirit, living creature’; Ugaritic *npš* ‘soul’; Akkadian *napāšu* ‘to breathe’, *napištu* ‘life’; Arabic *nafusa* ‘to breathe, to inhale, to exhale’, *nafs* ‘soul, life, person’; Sabaeen *nfs* ‘self, soul, life’; Ḥarsūsi *nefesét* ‘soul’; Šheri / Jibbāli *nafs* ‘person, individual’, *nəfsét* ‘soul, individual’; Mehri *nafs* ‘individual, person’; Geez / Ethiopic *nafsa* [ነፍሰ] ‘to blow (wind, spirit)’, *ʾanfasa* [አንፈሰ] ‘to breathe, to exhale, to make breathe, to rest’, *nafs* [ነፍስ] ‘soul, breath, a person, life, self’, *naḥās* [ነፋስ] ‘wind, air, spirit’; Tigre *nāḥsa* ‘to blow (wind)’, *tənāffāsa* ‘to breathe’, *nāḥs* ‘soul’; Tigrinya *nāḥsā* ‘to blow (wind)’, *tənāffāsā* ‘to breathe’, *nāḥsi* ‘soul’, *nāḥas* ‘wind’; Amharic *nāffāsā* ‘to blow (wind)’, *tənāffāsā* ‘to breathe’, *nāḥs* ‘soul, life’, *nāḥas* ‘wind’; Argobba *nāḥs* ‘soul’; Harari *nāḥsi* ‘soul’.

(*at*)*nāfāsa* ‘to take a rest’; Gurage *nāfāsā* ‘to blow (wind)’, *nāfs* ‘soul’, *nāfas* ‘wind’. Murtonen 1989:286—287; Klein 1987:422; Tombäck 1978:218—219; Leslau 1963:118, 1979:452, and 1987:389; Zammit 2002:407. Proto-Semitic **nap-ax-* ‘to breathe, to blow’ > Hebrew *nāṣaḥ* [נָצַח] ‘to breathe, to blow’; Aramaic *nəṣaḥ* ‘to blow’; Ugaritic *mpḥn* (base *nph*) ‘bellows’; Akkadian *napāḥu* ‘to inflame, to blow’; Arabic *nafāḥa* ‘to blow, to puff, to breathe, to blow up, to inflate’; Ḥarsūsi *neṣōx* ‘to blow’, *anṣōx* ‘to inflate’; Šḥeri / Jibbāli *nifx* ‘to blow, to inflate’; Mehri *nefx* ‘to blow, to inflate’; Geez / Ethiopic *naṣḥa* [ነፍሐ], *naṣḥa* [ነፍሐ] ‘to blow, to blow upon, to breathe on, to inflate, to sound (an instrument), to blow (a horn, trumpet)’; Tigre *nāṣḥa* ‘to blow’; Tigrinya *nāṣḥe* ‘to blow’; Harari *nāṣaḥa* ‘to inflate, to blow an instrument, to blow air into something’; Argobba *nāffaha* ‘to blow’; Amharic *nāffa* ‘to blow, to play (the flute), to blow up, to inflate’; Gurage (Chaha) *nāfa* ‘to blow up, to inflate’. Murtonen 1989:285—286; Klein 1987:421; Zammit 2002:406; Leslau 1963:117—118, 1979:450—451, and 1987:388. Proto-Semitic **nap-at-* ‘to blow one’s nose, to sneeze’ > Arabic *nafaṭa* ‘to sneeze’; Ḥarsūsi *entefōt* ‘to blow one’s nose’; Šḥeri / Jibbāli *əntfēt* ‘to blow one’s nose’; Soqotri *nāfōt* ‘to sneeze’; Mehri *nəfūt* ‘to snort’, *əntəfūt* ‘to blow one’s nose’; Geez / Ethiopic *nafaṭa* [ነፍጠ] ‘to blow the nose’; Tigre *nāffātā* ‘to blow the nose’; Tigrinya *nāffātā* ‘to blow the nose’; Amharic *tānāffātā* ‘to blow the nose’, *nəft* ‘mucus’; Harari *ənfiṭ* ‘nasal mucus’; Gurage (*tā*)*nāffātā* ‘to blow the nose’, (Zway) *nəfiṭ* ‘nose’. Leslau 1963:28, 1979:452, and 1987:390. Proto-Semitic **ʔanp-* ‘nose, nostril’ > Akkadian *appu* ‘nose’; Hebrew *ʔaṣ* [אָס] ‘nose, nostril, face’; Ugaritic *āp* ‘nose’; Arabic *ʔanf* ‘nose’; Sabaeen *ʔnf* ‘front’; Šḥeri / Jibbāli *ʔənfi* ‘first, ancient’; Geez / Ethiopic *ʔanf* [አንፍ] ‘nose, nostril’; Tigre *ʔanəf* ‘nose’; Tigrinya *ʔanfi* ‘nose’; Harari *ūf* ‘to blow the nose’; Gafat *āfwā* ‘nose’; Gurage (Chaha) *āfunā* ‘nose’. Murtonen 1989:95—96; Klein 1987:45; Zammit 2002:81; Leslau 1963:19—20, 1979:21, and 1987:28. Egyptian *nf* ‘air, wind, breath’, *nfy* ‘to breathe, to blow at’, *nfwṭ*, *nfwyt* ‘breezes’, *fnḏ* (< **nfd*) ‘nose’; Coptic *nife* [ⲛⲓⲑⲉ] ‘to blow, to breathe’. Hannig 1995:306 and 407; Faulkner 1962:98 and 131; Erman—Grapow 1921:58, 80 and 1926—1963.1:577, 2:250; Gardiner 1957:566; Vycichl 1983:149; Černý 1976:116. Berber: Kabyle *ənṣəs* ‘to breathe’, *nnəfs* ‘breathing, breath; soul’; Tamazight *unfus* ‘respiration, breath, blowing’; Ahaggar *unfas* ‘breath’, *sunṣəs* ‘to breathe’, *asunṣəs* ‘to make breathe’; Tashelhiyt / Shilha *unfus* ‘blowing’, *sunṣəs* ‘to breathe’. Proto-East Cushitic **nass-/ness-* (< **nafs-/nefs-*) ‘to breathe, to rest’ > Elmolo *nas-i* ‘to breathe, to rest’; Somali *nas-ad-* ‘to breathe, to rest’; Rendille *nas-* ‘to breathe, to rest’; Konso *ness-a* ‘soul, breath, noise’; Yaaku *nes-i* ‘breath’; Dullay *nass-ad-* ‘to breathe’, *nass-o* ‘soul, life, spirit, breath’; Gidole *nass-* ‘voice, character’. Sasse 1979:23. Diakonoff 1992:33 **nf* ‘nose’; Ehret 1995:316, no. 611, **naf-/nif-* ‘to exhale’; Orël—Stolbova 1995:395, no. 1828, **naf-* ‘breath’, 395—396, no. 1830, **nafus-* ‘breath’, 402, no. 1865, **nif-* ‘to

smell, to breathe', and 405—406, no. 1882, **nufas-* 'to blow, to breathe'; Militarëv 2012:79 Proto-Afrasian **(ʔa-)na/ɪf-*.

Comment: Militarëv—Kogan reconstruct Proto-Semitic (1) (vb.) **npḥ* 'to blow, to breathe, to inflate' (2000:306—307, no. 45), (2) (vb.) **npš ~ *nps* 'to breathe' (2000.I:307—309, no. 46), and (3) (vb.) **npṭ* 'blow the nose' (2000:309—310, no. 48). They do not list any non-Semitic cognates. For **npḥ*, Militarëv—Kogan note: "Eventually derived from **pḥ/h* 'to breathe, blow, exhale 'smell' (No. 54) by prefixation of **n-*." Instead, I prefer to analyze the Semitic proto-form as **np+h*. For **npš ~ *nps*, Militarëv—Kogan note: "Inseparable from a common Sem. noun **nap(i)š-* 'soul, vitality, life; person, personality, self'..." Finally, I consider similar forms meaning 'throat' (reconstructed as Proto-Semitic **napa/iš ~ *napa/is* by Militarëv—Kogan 2000.I:178, no. 200) to be unrelated.

- B. Proto-Indo-European **np^h-* > (with metathesis) **p^hn-* in: (A) **p^hn-ew-/ *p^hn-ow-/ *p^hn-u-*, (B) **p^hn-es-/ *p^hn-os-*, (C) **p^hn-ek^h-* 'to breathe, to blow': Greek πνέω 'to breathe', πνεῦμα 'breath'; Old Icelandic *fnasa* 'to sneeze, to snort', *fnýsa* 'to sneeze'; Swedish *fnysa* 'to sneeze'; Danish *fnyse* 'to sneeze'; Old English *fnēosan* 'to sneeze', *fnæs* 'breath'; Middle Dutch *fniesen* 'to sneeze'; Old High German *pfnūsen* 'to sneeze'; Swiss German *Pfnüsel* (< **fnūs-*) 'cold (in the head), catarrh'. Rix 1998a:440 (?) **pneu-* 'to breathe, to pant, to puff, to wheeze'; Pokorny 1959:838—839 **pneu-* 'to pant, to breathe'; Walde 1927—1932.II:85 **pneu-*; Mann 1984—1987:967 **pneuō* (**pneusō*), *-iō* 'to snort, to sniff, to sneeze, to pant, to blow', 967 **pnosā* 'blowing, blast, snort, sneeze', 967 **pnūs-* (**pnūsō*, *-iō*; **pnūsmi*) '(vb.) to breathe out, to snort; (n.) snort, breath, nose'; Watkins 1985:52 **pneu-* and 2000:68 **pneu-* 'to breathe' (imitative root); Mallory—Adams 1997:82 **pneu-* 'to snort, to sneeze'; Boisacq 1950:798; Frisk 1970—1973.II:566—567; Hofmann 1966:277; Chantraine 1968—1980.II:920; Beekes 2010.II:1213—1214 **pneu-*; Orël 2003:109 Proto-Germanic **fneusanan ~ *fnūsanan*; Kroonen 2013:149 Proto-Germanic **fneusan-* ~ **fnūsan-* 'to sneeze' (< **pnēus-e-*); Falk—Torp 1903—1906.I:177—178; De Vries 1977:136; Kluge—Mitzka 1967:546; Kluge—Seebold 1989:541.
- C. Uralic: Finno-Ugric: Proto-Ob-Ugric **nopət* 'lifetime' > Vogul / Mansi (Tavda, Pelymka) *nat*, (Lower Konda) *nāt*, (Upper Lozva, Sosva) *not* 'lifetime'; Ostyak / Xanty (Vah, Vasyugan) *nowət*, (Tremyugan, Yugan) *nōpət*, (Demyanka, Konda, Nizyam) *nupət*, (Obdorsk) *nopət* 'lifetime'. Dolgopolsky 2008, no. 1556, Proto-Finno-Ugric **n[o]ptV* > Proto-Ob-Ugric **nopət* 'lifetime'.

Buck 1949:4.51 breathe; breath. Dolgopolsky 2008, no. 1556, **nop[E]* 'to breathe, to blow'; Bomhard—Kerns 1994:679—681, no. 560.

945. Proto-Nostratic (n.) **nat*’-a ‘woman, female relative’:

- A. Afrasian: Proto-Southern Cushitic **nat*’a ‘woman’ > Ma’a *naseta* ‘woman’; Iraqw *natsatsa* ‘smooth’; Dahalo *nát’a* ‘woman’. Ehret 1980: 184.
- B. Dravidian: Tamil *nāttanār*, *nātti*, *nāttūṇ* ‘husband’s sister’; Malayalam *nāttūn* ‘husband’s sister, brother’s wife’; Kota *na-tu-ny* ‘sister-in-law, female cross-cousin’; Kannaḍa *nādani*, *nāḍini*, *nāḍuni* ‘husband’s sister, brother’s wife’; Koṇḍa *nāṇṛa* (< **nattanar*-) ‘wife’s younger sister’; Maṇḍa *nāṇjaṛ* ‘wife’s younger sister’; Kui *nāṇja* ‘younger sister-in-law’; Kuwi *nanjo* ‘sister-in-law’, *nāṇjo* ‘wife’s younger sister’; Kuṛux *nāsgo* ‘elder brother’s wife’. Burrow—Emeneau 1984:322, no. 3644.
- C. Proto-Uralic **nat*z ‘sister-in-law, younger brother of the husband or the wife’: Finnish *nato* ‘the sister of the husband or wife, the wife of the brother, sister-in-law’; Estonian *nato* ‘sister-in-law’; Lapp / Saami (Southern) *nótě* ‘the younger sister of the wife’; Cheremis / Mari *nudō* ‘the younger sister of the husband’s wife’; Yurak Samoyed / Nenets *naado* ‘the younger brother of the wife’, *nee-naado* ‘sister-in-law’ (*nee* = ‘wife’); Kamassian *nado* ‘brother-in-law, the brother of the husband’. Collinder 1955:38 and 1977:56; Rédei 1986—1988:299—300 **nat*z; Décsy 1990:103 **nata* ‘sister-in-law, younger brother of the husband or the wife’; Sammallahiti 1988:539 **nātiw* ‘in-law’; Janhunen 1977b:98 **nāt’ā-* (? **nāt’āj-*).

Bomhard—Kerns 1994:690, no. 572; Illič-Svityč 1971—1984.II:81—82, no. 315, **nat*/o/ ‘female relative’; Dolgopolsky 2008, no. 1570, **naH₂t[*o*]* ‘woman (of ego’s generation) belonging to the opposite exogamous moiety’ (→ ‘sister-in-law’); Hakola 2000:114, no. 491; Pudas-Marlow 1974:67, no. 190.

946. Proto-Nostratic root **nat*’- (~ **nət*’-):

(vb.) **nat*’- ‘to moisten, to wet’;

(n.) **nat*’-a ‘wetness, dampness, moistness’; (adj.) ‘wet, damp, moist’

- A. Proto-Afrasian **nat*’- ‘to drop, to drip, to trickle’: Proto-Semitic **nat*’-ap- ‘to drop, to drip, to trickle’ > Amorite *nṭp* ‘to drip’; Hebrew *nāṭaḡ* [נָטַג] ‘to drop, to drip’; Syriac *nəṭaḡ* ‘to drip’; Arabic *naṭaḡa* ‘to dribble, to trickle, to drip’; Sabaeen *nṭf* ‘to cause (blood) to flow’; Ḥarsūsi *netefēt* ‘drop’; Šḥeri / Jibbāli *nṭḡ* ‘to drip’; Mehri *nəṭāwf* ‘to drip’; Geez / Ethiopic *naṭaḡa* [ጠገ] ‘to strain, to filter, to clarify, to refine, to purify, to clean’; Tigre *nāṭfa* ‘to filter beer’; Amharic *nāṭṭāfä* ‘to filter, to strain’; Gurage *nāṭāfä* ‘to sift beer, to brew beer’. Murtonen 1989:280—281; Klein 1987:413; Leslau 1979:463—464 and 1987:408; Zammit 2002:404. Proto-Semitic **nat*’-ab- ‘to drip, to fall in drops’ > Geez / Ethiopic *naṭba* [ጠብ] ‘to drop, to trickle’; Tigrinya *nāṭābä* ‘to fall in drops’; Tigre *nāṭba* ‘to fall in drops’; Amharic *nāṭṭābä* ‘to drop, to fall drop by drop’.

Leslau 1987:408. Egyptian *ndfd* ‘to be filled with tears, to water (eyes)’ (Semitic loan). Hannig 1995:446; Erman—Grapow 1926—1963.2:368.

- B. Proto-Indo-European **net-/*not-* ‘to wet, to moisten’: Sanskrit (nom. sg. f.) *nadī* ‘river’; Gothic *natjan* ‘to wet, to make wet’; Dutch *nat* ‘wet, moist’, *netten* ‘to wet, to moisten’; Old High German *naz* ‘wet, damp, moist’ (New High German *naß*), *nezzen* ‘to wet, to moisten, to sprinkle’ (New High German *netzen*); Illyrian river names *Néda*, *Nέστος*. Pokorny 1959:759 **ned-* ‘to sound, to bellow’; Mann 1984—1987:825 **nad-* (**nod-*?) ‘wet; water, water-’; Mayrhofer 1956—1980.II:130 **nodo-*; Orël 2003:281 Proto-Germanic **nataz*, 282 **natjanan*; Kroonen 2013:384 Proto-Germanic **nata-* ‘wet’; Vercoullie 1898:199; Lehmann 1986:264; Feist 1939:371; Walshe 1951:158; Kluge—Mitzka 1967:504 and 509; Kluge—Seebold 1989:499 and 503.

Buck 1949:15.83 wet, damp. Bomhard—Kerns 1994:677, no. 556.

947. Proto-Nostratic (n.) **ner-a* ‘the highest, foremost, or most prominent person or thing’:

- A. Dravidian: Tamil *nerri* ‘forehead, front, top, summit’, *neri* ‘temples’; Malayalam *nerri* ‘forehead’, *neruka* ‘crown of the head’; Kota *nec* ‘forehead’; Toda *nity* ‘forehead’; Kannaḍa *netti* ‘forehead, head, crown of the head’; Koḍagu *netti* ‘forehead’; Tuḷu *netti* ‘forehead, crown of the head, front, the peak of a mountain or hill’; Telugu *netti* ‘the head’, *nettamu* ‘high land or elevated ground (such as the crest or terrace of a hill)’; Kolami *netti* ‘forehead’; Naikṛi *netti* ‘forehead’; Gadba (Salur) *nediḍe* ‘scalp’; Gondī *nēc* (*talā*) ‘the crown of the head’; Konḍa *neti* ‘the top of the head’, *neda* ‘vertex’; Kuṛux *miṛl*, *mitil*, *nitil* ‘fontanel’; Malto *nitlu* ‘crown of the head’. Burrow—Emeneau 1984:335—336, no. 3759.
- B. Proto-Indo-European **ner-* ‘(the foremost) man or person, hero’: Sanskrit *nár-* ‘a man, hero (used also of gods), person; mankind, people (mostly plural)’, *nárya-h* ‘manly, strong’; Pāḷi *nara-* ‘man; (pl.) people’; Avestan *nar-* ‘man’; Greek ἀνὴρ ‘a man (as opposed to a woman)’; Albanian *njeri* ‘human being, man’; Latin (Sabinian) *Nērō* a family name; Umbrian (acc. pl.) *nerf* ‘elders, chief citizens’; Oscan *ner* ‘man’; Old Irish *nert* ‘strength’; Welsh *ner* ‘hero’. Pokorny 1959:765 **ner-(t-)* ‘life-force, man’; Walde 1927—1932.II:332—333 **ner-*, **aner-*; Mann 1984—1987:21—22 **anēr* (**anər-*, **anr-*) ‘man, creature’, 837—838 **ner-* ‘man, male’, 838 **nerjos* ‘manly, man’, 838 **nertos* ‘manly; manliness, virtue, strength’; Watkins 1985:44 **ner-* (also **aner-*) and 2000:58 **ner-* ‘man’ (basic sense ‘vigorous, vital, strong’) (oldest form **₂ner-*); Gamkrelidze—Ivanov 1984.II:802 **Hner-*, **Hner-(t[h])-* and 1995.I:703 **Hner-*, **Hner-(th)-* ‘life force, male strength’; Mallory—Adams 1997:366 **hanēr-* ‘man, person’; Mayrhofer 1956—1980.II:138; Ernout—Meillet 1979:438—439 **ner-*; De Vaan 2008:406—407 Proto-Italic **nēr*, **ner-* ‘man’, **ner-o-/ōn-* ‘strong’;

Walde—Hofmann 1965—1972.II:164—165; Frisk 1970—1973.I:107—108 **ner*-; Beekes 1969:45 and 75 **h₂ner*- and 2010.I:103—104 **h₂ner*-; Boisacq 1950:62 **anēr*; Hofmann 1966:18; Chantraine 1968—1980.I:87—88; Wodtko—Irslinger—Schneider 2008:332—335 **h₂né-*, **h₂nr-*; Orël 1998:304; Huld 1994:100—101. Semantic development as in Yurak Samoyed / Nenets *neery* ‘the foremost person’ or Selkup Samoyed *ñarnej* ‘the foremost person’, cited below. The original meaning is best preserved in Umbrian (acc. pl.) *nerf* ‘elders, chief citizens’ (cf. Benveniste 1973: 237—238).

- C. Proto-Uralic **nere* ‘the highest, foremost, or most prominent person or thing: nose, beak, snout, point, promontory, front, etc.’: Mordvin *neř* ‘beak, muzzle, snout; any sort of point’; Cheremis / Mari *ner* ‘nose, beak, muzzle, snout; point; (?) promontory’; Votyak / Udmurt *nyr* ‘nose, beak, muzzle; forward point, point, front’; Yurak Samoyed / Nenets *ner* ‘forward part, earlier part’, *neery* ‘the foremost person’; Tavgi Samoyed / Nganasan *ńara* ‘that which is foremost’, *ńaranu* ‘in front’; Selkup Samoyed *ńarne* ‘forward, to the fore’, *ńarnej* ‘the foremost person’; Kamassian *ńer* ‘point’. Collinder 1955:39 and 1977:57; Rédei 1986—1988:303—304 **nere* (**nēre*); Décsy 1990:103 **nerä* ‘nose, beak, bill’; Janhunen 1977b:110 **ńerǵ*.

Sumerian *ner*, *nir* ‘prince, king, lord (of gods)’, *ner-ĝá-ĝá* ‘ruler, lord, sovereign, prince’, *ner-ĝál* ‘princess; lord, prince’, *nir-ĝál* ‘lord, nobleman, prince’.

Buck 1949:4.205 forehead; 4.23 nose; 12.33 top; 12.352 point. Bomhard—Kerns 1994:678—679, no. 558; Hakola 2000:116, no. 501. Different etymology in Dolgopolsky 2008, no. 1565, **n̄VjāřV* ‘man, male animal’ and Illič-Svityč 1971—1984.II:92—93, no. 331, **NajR_A* ‘man, male’.

948. Proto-Nostratic root **net* ^{y-}:

- (vb.) **net* ^{y-} ‘to turn, to twist together, to tie, to bind, to weave, to entwine’;
(n.) **net* ^{y-a} ‘anything twisted together, woven, entwined: mat, net, web, etc.; weaving, entwining, braiding’

- A. Afrasian: Egyptian *nḏ* ‘string, thread’; Coptic *nat* [NAT] ‘loom, web’. Faulkner 1962:144; Erman—Grapow 1921:91 and 1926—1963.2:376; Hannig 1995:448; Gardiner 1957:577; Vycichl 1983:145; Černý 1976:110.
B. Proto-Dravidian **nec*-/ **ney*- ‘to weave’: Tamil *ney* ‘to weave (as clothes), to string, to link together’, *neyvu* ‘weaving’, *necavu* ‘weaving, act of weaving, texture, intertexture, web’, (?) *nēyavi* ‘curtain’; Malayalam *neyka* ‘to weave, to plait mats’, *neyttu* ‘weaving’, *neypu* ‘large mat for treading out corn in sandy districts’, *neyyal* ‘weaving’; Kota *nec*- (*nec*-) ‘to weave’; Toda *nic*- (*nič*-) ‘to darn’, *nes*- (*nesθ*-), *niθ*- (*niθ*-) ‘to weave’; Kannada *nēy*, *nēyi*, *neyyu*, *nē*, *nēyu* ‘to weave, to entwine’, *neyi*, *nē*, *nēyu* ‘weaving,

a web', *nēyige*, *nēyge*, *nēge* 'weaving, entwining or being entwined', *neysu*, *nēyisu* 'to cause to weave', *nēyikāra*, *negikāra*, *nēkāra* 'weaver'; Kodagu *ne-y-* (*ne-yuv-*, *nejj-*) 'to spin (thread)', *neyv* 'braiding, weaving'; Tuḷu *neyuni* 'to weave (as a spider)', *neyipini*, *nēpini*, *nēyuni* 'to weave, to plait, to braid', *neyigē*, *nēgē* 'texture', *neyigāre* 'weaver'; Telugu *nēyu* 'to weave', *nēyincu* 'to cause to be woven, to get woven', *nēṭa* 'weaving, texture', *nēṭtakāḍu*, *nēṭtari* 'weaver', *nēṭta-purugu* 'spider'; Gondi *nēcc-* 'to weave'; Konḍa *ney-* 'to weave or thatch the roof with leaves'; Kui *nehpa* (*neht-*) 'to build a fence'; Kuwi *neh'nai* 'to interweave'; Kuṛux *essnā* (*issyas*) 'to weave, to entwine into a fabric, to furnish or adorn any article with net-work or plait-work'; Malto *ese* 'to plait, to do mat-work'. Burrow—Emeneau 1984:334, no. 3745; Krishnamurti 2003:8 **nec-/ney-* 'to weave'.

- C. Proto-Indo-European **net-* (secondary *o*-grade form: **not-*) 'to turn, to twist together, to tie, to bind': Latin *nōdus* 'knot'; Old Irish *nascim* 'to bind', *naidm* 'binding, surety'; Gothic *nati* 'net'; Old Icelandic *net* 'net, fishing-net', *nót* 'large net'; Swedish *nät* 'net'; Old English *nett* 'net'; Old Frisian *net*, *nette* 'net'; Old Saxon *netti*, *net* 'net'; Dutch *net* 'net'; Old High German *nezzi* 'net' (New High German *Netz*). Pokorny 1959:758—759 **ned-*, **nēd-* '(vb.) to turn, to twist together; (n.) knot'; Walde 1927—1932.II:328—329 **ned-*; Mann 1984—1987:848 **nōdus*, *-is*, *-jā* 'knot, tie'; Watkins 1985:44 **ned-* and 2000:57 **ned-* 'to bind, to tie'; Mallory—Adams 1997:336 **ned-* 'knot' and 428 **ned-* 'to bind'; Ernout—Meillet 1979:443; Walde—Hofmann 1965—1972.II:172—173 **ned-*; De Vaan 2008:412; Orël 2003:281—282 Proto-Germanic **natjan*; Kroonen 2013:384 Proto-Germanic **natja-* 'net'; Feist 1939:371 **(s)nōd-*, **(s)ned-*; Lehmann 1986:263—264 **ned-* 'to tie, to bind'; De Vries 1977:408 **ned-* and 412; Onions 1966:608 **nāḍ-*; Klein 1971:494 **ned-* 'to twist, to knot'; Boutkan—Siebinga 2005:283; Kluge—Mitzka 1967:508—509 **ned-*; Kluge—Seebold 1989:503.

Buck 1949:6.33 weave; 6.38 thread; 9.192 knot. Bomhard—Kerns 1994:679, no. 559.

949. Proto-Nostratic second person personal pronoun stem **ni* (~ **ne*) and/or **na* (~ **nə*) 'you':

- A. Afrasian: Proto-Omoti **ne* 'you' > Zayse second singular (subject) *né(j)* 'you', bound form *-n*; Bench / Gimira (subject) *nen* 'you', (oblique) *ni*; Yemsa / Janjero *ne* 'you'; etc. Bender (2000:196) reconstructs a Proto-Omoti second person singular independent personal pronoun **ne* 'you'. Bender (2000:197) implies, however, that there may have been a reversal of the Afrasian **n* (first person) ~ **t* (second person) pattern to **t* (first person) ~ **n* (second person) in Omoti. But note the patterning in Elamite (below).

B. Elamo-Dravidian: Elamite: The possessive pronouns of the second series, or the possessive pronouns proper in Royal Achaemenid Elamite were: (1st person sg.) *-ta*, (2nd person sg.) *-ni*, (3rd person sg.) *-e* (cf. Khačikjan 1998:26—27). Middle Elamite second person singular personal pronoun (nom. sg.) *ni* ~ *nu* ‘you, thou’ (Old Elamite *nī*), (pl.) *num*, *numi* ‘you’. The Proto-Dravidian second person personal pronouns, singular and plural, may be reconstructed as follows:

- (a) Singular **nīn-*: Tamil *nī* ‘you’; Malayalam *nī* ‘you’ (obl. *nin(n)-*); Kota *nī* ‘you’; Toda *nī* ‘you’; Kannaḍa *nīm*, *nīn(u)* ‘you’; Koḍagu *nī-nī/nī* ‘you’; Telugu *nīvu* ‘you’; Kolami *nī-v* ‘you’; Naikṛī *nīv* ‘you’; Koṇḍa *nīn* ‘you’; Kuwī *nīnū* ‘you’; Kuṛux *nīn* ‘you’; Malto *nín* ‘you’; Brahui *nī* ‘you’;
- (b) Plural **nīm-*: Tamil *nīm*, *nīr*, *nīyir*, *nīvir*, *nīnkaḷ* ‘you’; Malayalam *nīnnaḷ* ‘you’; Kota *nī-m* ‘you’; Toda *nīm* ‘you’; Kannaḍa *nīm*, *nīvu*, *nīngaḷ* ‘you’; Koḍagu *nīnga* ‘you’; Kolami *nī-r* ‘you’; Naikṛī *nīr* ‘you’; Kuṛux *nīm* ‘you’; Malto *nīm* ‘you’; Brahui *num* ‘you’.

Krishnamurti 2003:249—252 (sg.) **nīn-*, (pl.) **nīm-*; Burrow—Emeneau 1984:327, no. 3684, and 328, no. 3688. McAlpin (1981:114—115) reconstructs the Proto-Elamo-Dravidian second person independent personal pronoun singular as **nī* ‘you, thou’ and the second person possessive clitic as **-nī*. For the second person personal pronoun plural, he reconstructs Proto-Elamo-Dravidian **nīm*.

C. Uralic: Greenberg (2000:76—77) notes that there is some evidence for a second person personal pronoun *n-* in Uralic, especially in Ob-Ugric. However, as he rightly points out, this evidence is extremely controversial and has been variously explained by specialists. As noted by Marcantonio (2002:226): “...the Possessive endings of the 2nd Singular in Vogul and Ostyak differ, yet again, from those of Hungarian and other U[ralic] languages; in fact, Vogul and Ostyak have the ending *-(V)n* and not *-t* as reconstructed for P[roto]-U[ralic]. Compare Hun[garian] *ház-a-d* vs Finn[ish] *talo-si* ‘your house’ vs Vog[ul] *ula-n* ‘bow-your’ (Keresztes 1998: 411). Several connections have been proposed for *-(V)n* (compare for example Sinor 1988: 733; Hajdú 1966: 132-3). Among these connections, one may consider that of the formant *-n-* in P[roto]-Samoyed. As Janhunen puts it (1998: 471):

From the Proto-Uralic point of view, one of the most interesting features is that the second-person singular predicative ending seems to have been *-n* in proto-Samoyedic, as opposed to **-t* in most sub-branches of Finno-Ugric.

According to Collinder (1965a: 134), there might have been two words to indicate ‘you’: **-t* and **-n*; ...”

- D. Altaic: Starostin—Dybo—Mudrak (2003:959) reconstruct Proto-Altaic **na* ‘thou’ on the basis of: (a) Proto-Turkic **-ŋ* an ending of the second person > Old Turkic (Orkhon, Old Uighur) *-ŋ*; Karakhanide Turkic *-ŋ*; Turkish *-n*; Gagauz *-n*; Azerbaijani *-n*; Turkmenian *-ŋ*; Uzbek *-ŋ*; Uighur *-ŋ*; Karaim *-n, -y*; Tatar *-ŋ*; Bashkir *-ŋ*; Kirghiz *-ŋ*; Kazakh *-ŋ*; Noghay *-ŋ*; Oyrot (Mountain Altai) *-ŋ*; Yakut *-ŋ*; Tuva *-ŋ*; Chuvash *-n*; (b) Proto-Japanese **na* ‘thou’ > Old Japanese *na* ‘thou’; (c) Proto-Korean **nə* ‘thou’ > Middle Korean *nə* ‘thou’ (for Modern Korean, cf. Sohn 1999:207). They note: “Velarization in Turkic is not quite clear and probably secondary (perhaps a fusion with the attributive **-kʼi*). The root is widely used only in the Kor[ean]-J[apanese] area, and its original function (to judge from the O[ld] J[apanese] opposition of *si* and *na*) was probably limited to the oblique stem of the suppletive 2nd p[erson] paradigm.”

Greenberg 2000:76—77.

950. Proto-Nostratic root **nikh-* (~ **nekh-*):
 (vb.) **nikh-* ‘to strike, to hit’;
 (n.) **nikh-a* ‘injury, harm, damage, wound, murder, destruction; suffering, pain’
- A. Proto-Afrasian **n[i]k-* ‘to strike, to hit’: Proto-Semitic **nak-ay-* ‘to strike, to smite’ > Akkadian *nakū* ‘to strike, to smite’ (?); Hebrew *nāḫāh* [נָחַח] ‘to beat, to strike’; Syriac *nəḫā* ‘to harm, to injure, to wound’; Arabic *nakā* ‘to cause damage, to harm, to hurt, to injure’; Sabaeen *nky* ‘(vb.) to injure; (n.) injury’; Šheri / Jibbāli *enké* ‘to hurt, to hit on a sore spot’; Geez / Ethiopic *nakaya* [ከላ] ‘to injure, to hurt, to damage, to harm’; Tigrinya *näkkäyā* ‘to diminish’; Tigre *nāka* ‘to remove, to clear away’. Murtonen 1989:281—282; Klein 1987:415—416; Leslau 1987:397—398. Proto-Semitic **nak-aʔ-* ‘to injure, to harm, to damage’ > Hebrew *nāḫāʔ* [נָחַא] ‘to beat, to strike’, *nāḫēʔ* ‘smitten, afflicted’; Arabic *nakaʔa* ‘to scrape the scab off a wound, to hurt, to wound, to kill’; Tigre *nākʔa* ‘to damage, to hurt’; Tigrinya *nākʔe* ‘to touch’; Amharic *nākka* ‘to touch, to hurt’; Argobba *nākka* ‘to touch, to hurt’; Harari *nākaʔa* ‘to touch, to harm’; Gurage (Zway) *nākā* ‘to touch’. Murtonen 1989:281; Klein 1987:415; Leslau 1963:118 and 1979:455. Proto-Semitic **nak-aʕ-* ‘to injure, to harm, to damage’ > Geez / Ethiopic *nakʕa* [ከሐ] ‘to injure, to harm, to damage’. Leslau 1987:396. Egyptian *nkn* ‘harm, injury, damage’. Hannig 1995:438; Faulkner 1962:141; Erman—Grapow 1921:88 and 1926—1963.2:346—347; Gardiner 1957:576. Berber: Tamazight *nəγ* ‘to kill’, *tinyi* ‘evil, pain, suffering’, *imənyi* ‘dispute, combat, quarrel, battle’; Kabyle *nəγ* ‘to kill, to slay’; Siwa *əny* ‘to kill’; Tuareg *əny* ‘to kill’; Ghadames *əny* ‘to kill’; Nefusa *əny* ‘to kill, to put an end to’; Mzab ‘to kill, to assassinate’, *anuyi* ‘dispute, battle, combat, fight’, *amənyi* ‘fight, scuffle, brawl’; Zenaga *əni*

- ‘to kill’, *aməni* ‘killer, assassin’. Orël—Stolbova 1995:409, no. 1902, **nVkvVl-* ‘to be evil’.
- B. Dravidian: Tamil *neku* (*nekuv-*, *nekk-*) ‘to suffer, to be distressed’; Kota *neg-* (*negy-*) ‘to suffer from a reverse of fortune’; Kannaḍa *negaru* ‘to suffer in sickbed’; Tuḷu *neggi*, *negi* ‘shyness, shame’, *nigaru*, *negaru* ‘to linger as a sick person’. Burrow—Emeneau 1984:333, no. 3733.
- C. Proto-Indo-European **nekh-*/**ṇkh-* (secondary *o*-grade form: **nokh-*) ‘to slay, to smite’: Sanskrit *náśyati* ‘to be lost, to perish, to disappear’; Greek *νέκυς*, *νεκρός* ‘a dead body, a corpse’; Latin *necō* ‘to kill, to slay’, *noxa* ‘harm, injury, damage’, *noceō* ‘to hurt, to injure, to harm’, *nex* ‘violent death, murder’; Old Irish *éc* (< **ṇkh-u-*) ‘death’; Tocharian A *nāk-*, *nak-*, *ñak-*, B *nāk-*, *nek-* ‘to lose, to destroy, to perish, to vanish’. Rix 1998a:407 **nek-* ‘to perish, to disappear, to be lost’; Pokorny 1959:762 **nek-* ‘corpse, mortal destruction’; Walde 1927—1932.II:326 **nek-*; Mann 1984—1987:833—834 **nek-* ‘(vb.) to destroy, to perish, to vanish; (adj.) perishing, destructive; (n.) destruction, disappearance’, **nokeiō* ‘to injure, to kill’; Watkins 1985:44 **nek-* and 2000:57 **nek-* ‘death’; Mallory—Adams 1997:150 **nékus* ‘death; dead’; Mayrhofer 1956—1980.II:145—146 **nek-*; Boisacq 1950:661 **anek-*; Hofmann 1966:213—214 **nek-*; Chantraine 1968—1980.II:741; Beekes 2010.II:1003—1004 **nek-(u-)*; Frisk 1970—1973.II:299—300 **nek-s*; De Vaan 2008:407—408 **nek-s* (f.) ‘death’ and 411; Walde—Hofmann 1965—1972.II:153—156 **enek-*; Ernout—Meillet 1979:439—440 **nek-*; Van Windekens 1976—1982.I:313 **nek-*; Adams 1999:335 **nek-* ‘to kill, to destroy; to perish, to die’.
- D. Uralic: Proto-Finno-Ugrian **nikkä-* ‘to push’ > Lapp / Saami *nākketâ-* ‘to stick, to put’, (Southern) ‘to push’; Vogul / Mansi *nāāk-* ‘to push’; Ostyak / Xanty *nək-* ‘to push lightly’, *nəkəm-* ‘to push, to push against’. Collinder 1955:101, 1960:412 **nikkä-*, and 1977:116; Rédei 1986—1988:304—305 **nikkä-*.
- E. Proto-Altaic **nikhu-* ‘to knead, to mash, to strike’: Proto-Tungus **nʷ[i]Ki-* ‘to gnaw, to crunch; to destroy, to demolish’ > Evenki *ńeki-* ‘to gnaw, to crunch’; Manchu *niqča-* ‘to shatter, to disintegrate; to be at a disadvantage, to suffer loss’; Nanay / Gold *ńikike-* ‘to swallow’. Proto-Mongolian **niku-* ‘to grind, to rub, to knead’ > Written Mongolian *niqu-*, *nuqu-* ‘to rub, to massage; to mash, to press, to knead; to crumple, to finish off, to dispose of completely, to kill’; Khalkha *nuḡa-* ‘to knead, to mash, to rub; to rumple, to crumple; to kill, to finish off, to dispose of’; Buriat *ńuḡa-* ‘to grind, to rub, to knead’; Kalmyk *nuḡa-* ‘to grind, to rub, to knead’; Ordos *nuḡu-* ‘to grind, to rub, to knead’; Moghol *nuqu-* ‘to grind, to rub, to knead’; Dagur *nogu-* ‘to grind, to rub, to knead’; Monguor *nugu-* ‘to grind, to rub, to knead’. Proto-Turkic **yik-* ‘to crush, to grind; to overthrow’ > Old Turkic (Old Uighur) *yiq-* ‘to crush, to grind; to overthrow’; Karakhanide Turkic *yiq-* ‘to crush, to grind; to overthrow’; Turkish *yık-* ‘to pull down, to demolish, to ruin, to overthrow’, *yıkıcı* ‘destructive’; Azerbaijani *yix-* ‘to crush, to grind; to overthrow’; Gagauz *yiq-* ‘to crush, to grind; to

overthrow'; Turkmenian *yiq-* 'to crush, to grind; to overthrow'; Uzbek *yiq-* 'to crush, to grind; to overthrow'; Uighur *yiq-* 'to crush, to grind; to overthrow'; Karaim *yiq-, yix-* 'to crush, to grind; to overthrow'; Tatar *yiq-* 'to crush, to grind; to overthrow'; Bashkir *yiq-* 'to crush, to grind; to overthrow'; Kirghiz *žiq-* 'to crush, to grind; to overthrow'; Kazakh *žiq-* 'to crush, to grind; to overthrow'; Noghay *yiq-* 'to crush, to grind; to overthrow'; Oirat (Mountain Altai) *yiq-, d'iq-* 'to crush, to grind; to overthrow'; Chuvash (dial.) *śex-* 'to crush, to grind; to overthrow'. Starostin—Dybo—Mudrak 2003:977 **nīk*^u 'to grind, to crunch; to knead'; Poppe 1960:39; Street 1974:21 **ñik-* 'to knead, to mash, to strike'.

Buck 1949:4.76 kill; 9.21 strike, hit, beat; 10.67 push, shove (vb.); 11.27 destroy; 11.28 harm, injure, damage (vb.); 16.31 pain, suffering. Brunner 1969:35, no. 138; Bomhard—Kerns 1994:677—678, no. 557.

951. Proto-Nostratic root **nitʰh-* (~ **netʰh-*):

(vb.) **nitʰh-* 'to lift (up), to raise; to carry, to take; to rise, to arise';

(n.) **nitʰh-a* 'the act of lifting, raising, carrying'

- A. Afrasian: Proto-Semitic **natʰh-aʔ-* 'to rise, to arise; to lift, to raise, to carry, to take' > Hebrew *nāšāʔ* [נָשָׂא] 'to lift, to carry, to take'; Biblical Aramaic *nāšā* 'to lift, to carry, to take'; Ugaritic *nšā* 'to lift, to raise'; Akkadian *našū* 'to lift, to raise, to carry, to bear, to bring, to transport, to take'; Arabic *našaʔa* 'to rise, to arise, to grow, to develop'; Sabaeen *nšʔ* 'to undertake a project (especially a military action), to take, to take away'; Geez / Ethiopic *našʔa* [ነሰአ], *našʔa* [ነሰአ] 'to take, to partake, to receive, to accept, to capture, to occupy, to grasp, to seize, to catch, to pick up, to take up, to raise, to lift, to set up, to carry off, to take away, to fetch, to take as wife'; Tigre *nāsʔa* 'to take, to lift'; Tigrinya *nāsʔe* 'to take, to lift'; Harari *nāsaʔa* 'to take, to take away, to marry'; Gurage *nāssa* 'to take, to carry, to lift'; Amharic *nāssa* 'to deprive of, to take away, to hold back', *anāssa* 'to lift up, to raise, to pick up (from the floor), to clear away (the dishes), to move (the table), to remove (take off)'. Murtonen 1989:291—292; Leslau 1963:119, 1979:461, and 1987:404; Zammit 2002:401; Klein 1987:427—428. According to Leslau (1987:404), Beja / Beḍawye *nesāʔ-* 'to get up, to rise' is a Semitic loan.
- B. Dravidian: Konda *niṇ-* 'to rise up from a sitting position, to wake up (from sleep)', *nik-* 'to lift up, to raise, to rouse from sleep'; Pengo *niṇ(g)-* (*niṇt-*) 'to rise, to get up', *nik-* 'to raise'; Kui *ninga* (*ningi-*) 'to rise, to arise, to stand up', *nipka-* (< *nik-p-*; *nikt-*) 'to raise, to cause to stand up'; Kuwi *ningali* 'to arise', *nikhali* 'to arouse', *ninginai* 'to rise', *nik-* 'to lift up, to raise'. Burrow—Emeneau 1984:324, no. 3665. Tuḷu *negiyuni* 'to rise, to come up', *negipuni* 'to leap, to jump, to spring up', *negapuni* 'to overflow'; Kannaḍa *nege, nese* 'to rise, to ascend, to go upward', *negapu, negavu* 'to lift up, to hold uplifted', *neggu* 'to lift'; Koraga *negi* 'to lift';

Telugu *negayu* ‘to fly, to go up, to rise up, to jump’; Kolami *negay-* (*negayt-*) ‘to fly’; Naikri *negay-* ‘to fly, to rise’. Burrow—Emeneau 1984: 333, no. 3730.

- C. Proto-Indo-European **nekh-* (secondary *o*-grade form: **nokh-*) ‘to bear, to carry, to convey’: Greek (reduplicated) ἐν-εγκ-εῖν ‘to bear, to convey’; Lithuanian *nešiù, nešiaũ, nèšti* ‘to carry, to bear’; Old Church Slavic *nesò, nesti* ‘to carry, to bear’, *nošò, nositi* ‘to carry, to bear’. Pokorny 1959:316—318 **enek-*, **nek-*, **enk-*, **ñk-* ‘to reach’; Walde 1927—1932.I:128—129 **enek-*, **nek-*, **enk-*, **ñk-*; Rix 1998a:222—223 **h₁nek-* ‘to carry, to bear, to bring, to convey, to take’; Mann 1984—1987:834 **nek-* ‘to take, to bring, to carry’; Watkins 1985:44 **nek-* and 2000:57 **nek-* ‘to reach, to attain’; Mallory—Adams 1997:35 **h₁enek-* ‘to attain’; Boisacq 1950:251—252 **nek-*; Hofmann 1966:82 **enek-*; Frisk 1970—1973.I:512—513; Chantraine 1968—1980.I:346 **ǵ₁n-ek-*, **ǵ₁en-k-*; Beekes 1969:45 **h₁nek-/h₁enk-*, 131—132 **en-enk-* (**h₁en-h₁enk-*), and 2010.I:423—424 **h₁nek-*; Fraenkel 1962—1965.I:497—498; Smoczyński 2007.I:423; Derksen 2008:350 **h₁nek-* and 2015:334 **h₁nek-*. Note: Different from Proto-Indo-European **h₂hinkh-* (> **h₂henkh-*) ‘to reach, to come to, to arrive at’ found in: Hittite (3rd sg. pres. act.) *hi-in-ik-zi* ‘to present, to deliver, to offer, to allot’; Sanskrit *ásnóti* ‘to reach, to come to, to arrive at, to get, to obtain; to master; to offer’; Latin *nancior* ‘to get, to gain, to obtain’, *nanciscor* ‘to get, to gain, to receive, to meet’; Tocharian A *ents-*, B *enk-* ‘to seize, to take’; etc.

Buck 1949:10.11 move (vb.); 10.61 carry (bear). Bomhard—Kerns 1994:375—376, no. 208; Möller 1911:67—68.

952. Proto-Nostratic root **nus^y-* (~ **nos^y-*):

(vb.) **nus^y-* ‘to be small, minute, soft, weak, delicate’;

(n.) **nus^y-a* ‘smallness, insufficiency, decrease, diminishment’; (adj.) ‘small, minute, soft, weak, delicate’

Derivatives:

(n.) **nus^y-a* ‘woman, female; any female connected by marriage: wife, bride, sister-in-law, daughter-in-law’

(vb.) **nus^y-* ‘to be weakened, debilitated, sick; to ache, to suffer, to be in pain’;

(n.) **nus^y-a* ‘weakness, sickness, disease, malady, ache, pain, affliction’

- A. Proto-Afrasian **n[u]s^y-* ‘to be small, minute, soft, weak, delicate’: Proto-Semitic **ʔa-nas^y-* ‘to be small, little, weak’ > Akkadian *enēšu* ‘to become weak’, *enšu* ‘weak, powerless, lean’, *enšūtu* ‘weakness’; Hebrew *ʔānaš* [ʔnʃ] ‘to be weak, to be sick’; Ugaritic (f.) *ānšt* ‘intimate friend’; Arabic *ʔanisa*, *ʔanusa* ‘to be companionable, sociable, nice, friendly, genial’, *ʔanīs* ‘close, intimate; close friend; friendly, kind, affable, civil, polite, courteous’, *ʔinsāna* ‘woman’, *ʔānisa* ‘young lady, miss’; Soqotri *ʔenes* ‘to

be small'; Geez / Ethiopic (with metathesis) *nəʔsa* [ገሥሰ] 'to be small, to be little, to be young, to be diminished, to be penniless', *nəʔus* [ገሥሰ] 'small, little, lesser, younger, minor, low (voice)', (f.) *naʔās* [ገሥሰ] 'small, minor, young, young girl', *nāʔs* [ፍሥሰ] 'smallness, littleness, youth, misery'; Tigrinya *nāʔasä* 'to be small, to be little'; Tigre *nāʔaša* 'to be small, to be little'; Amharic *annäsä* 'to be less, to be insufficient, to diminish, to decrease, to be too little, to be small, to shrink, to flag (of strength)'; Harari *anäsa* 'to be little, to be less, to decrease'; Argobba *hannäsa* 'to be small, to be little'; Gurage *anäsä* 'to be small, to be little, to be less'. Murtonen 1989:96; Klein 1987:42; Leslau 1963:29, 1979:73, and 1987:381—382. Proto-Semitic **nasʷ-ar-* 'to wear down, to reduce in size, to diminish, to weaken' > Akkadian *našāru* 'to deduct, to remove, to reduce in size, to diminish in strength, to weaken, to subtract'; Arabic *nasara* 'to loosen and tear away, to tear off'.

- B. Proto-Dravidian **nō(y)-/*noc(c)-*, **nū(y)-/*nuc(c)-* 'small, minute, soft, weak, delicate': Tamil *no* 'small, tiny, minute, thin, slender', *novvu* (*novvi-*) 'to become thin, slender, minute', *noci* 'to be thin, slender, minute', *nocivu* 'slenderness, fineness', *noy* 'grits, groats, smallness, softness, lightness', *noyṭal* 'minuteness', *noyṭu* 'that which is thin, poor, light', *noyppam* 'delicateness, tenderness, skill, ability', *noymai*, *noyvu* 'lightness, softness, minuteness', *noyya* 'small, minute, soft, weak, poor', *nucuppu* 'waist of a woman', *noyyeṇal* expression signifying lightness, thinness, insignificance; Malayalam *noccu* 'minute, light', *nuṣu* 'small, minute, young', *noy(i)* 'grits, groats, anything minute'; Kota *noca-k*, *onca-k* 'a little'; Kannaḍa *nusi* 'state of being crushed, strengthless; powder, dust'; Tuḷu *noccu*, *noccē* 'minute, light, paltry', *nuggu* 'small, little', *nuggeḷu* 'smallness'; Telugu *nusi* 'small, little, slight; the dust into which wood is reduced by insects', *nusūgu* 'to slight, to scorn', *nūgu* 'down, downiness, hairiness'; Kolami *nuyung* 'smooth'; Kui *nūsu* 'soft, smooth, fleecy'. Burrow—Emeneau 1984:337, no. 3779. Possibly here also: Kannaḍa *nusi* 'a minute insect that destroys wood, any cloth, and paper or that destroys grain; eye-fly, gnat'; Telugu *nusuma* 'eye-fly, gnat, midge'; Gondi *nusme* 'mosquito', *nūsī* 'flour-weevil, weevil', *nusi* 'crop rust'. Burrow—Emeneau 1984:329—330, no. 3699.

Buck 1949:4.82 weak; 12.56 small, little; 15.75 soft.

953. Proto-Nostratic (n.) **nusʷ-a* 'woman, female; any female connected by marriage: wife, bride, sister-in-law, daughter-in-law':

Derivative of:

(vb.) **nusʷ-* 'to be small, minute, soft, weak, delicate';

(n.) **nusʷ-a* 'smallness, insufficiency, decrease, diminishment'; (adj.) 'small, minute, soft, weak, delicate'

Semantic development as in Naikri *koraḷ* ‘daughter-in-law, bride’ and Telugu *kōḍalu* ‘daughter-in-law’, both from the same stem found in Tamil *kuṛa* ‘young, tender’, Kannaḍa *koḍa* ‘tenderness, tender age, youth’, Tuḷu *korē* ‘weak, small’, etc. (cf. Burrow—Emeneau 1984:193—194, no. 2149).

- A. Proto-Afrasian **nusʷ*- ‘woman, female’: Proto-Semitic (pl.) (**nəsʷ*-w- >) **nīsʷ*-w- ‘women’ > Hebrew (pl.) *nāšīm* [נָשִׁים] ‘women’; Aramaic (pl.) *neššē* ‘women’; Arabic (pl.) *niswa*, *niswān*, *nisāʔ* ‘women’, *niswī*, *nisāʔī* ‘female, feminine, womanly’. Murtonen 1989:96; Klein 1987:429; Zammit 2002:400. West Chadic: Fyer *nusi* ‘woman’; Sha *nisi* ‘female’. Central Chadic: Tera *nušu* ‘woman’; Guduf *nósl* ‘woman’; Ngweshe *násè* ‘woman’; Dghwede *níšē* ‘woman’. Jungraithmayr—Ibriszimow 1994.II: 346—347. Orël—Stolbova 1995:406, no. 1887, **nūs*- ‘woman’.
- B. Proto-Indo-European *(s)*nuso*-s ‘daughter-in-law’: Sanskrit *snuṣā* ‘son’s wife, daughter-in-law’; Armenian *nu* ‘daughter-in-law’; Greek *νύος* ‘daughter-in-law; any female connected by marriage; wife, bride’; Albanian *nuse* ‘bride, (rarely) daughter-in-law’; Latin *nurus* ‘daughter-in-law; a young married woman’; Crimean Gothic *schuos* (misprint for **schnos*) ‘betrothed’; Old Icelandic *snor*, *snor* ‘daughter-in-law’; Old English *snoru* ‘daughter-in-law’; Old Frisian *snore* ‘daughter-in-law’; Middle Dutch *snoer*, *snorre* ‘daughter-in-law’; Old High German *snur*, *snor*, *snura*, *snuora* ‘daughter-in-law’ (New High German *Schnur*); Serbian Church Slavic *snъxa* ‘daughter-in-law’; Russian *snoxá* [снoхa] ‘daughter-in-law’; Slovenian *snáha* ‘daughter-in-law’; Polish *sneszka* ‘daughter-in-law’. Pokorny 1959:978 **snusós* ‘daughter-in-law’; Walde 1927—1932.II:701—702 **snusós*; Mann 1984—1987:1238 **snusos*, -ā, -jə, -us ‘daughter-in-law’; Mallory—Adams 1997:148 **snusós* ‘son’s wife, brother’s wife’; Gamkrelidze—Ivanov 1984.II:761, II:763, II:771 **snuso*- and 1995.I:663, I:664, I:665, I:673 **snuso*- ‘daughter-in-law, sister-in-law’; Frisk 1970—1973.II:328 **snusó*-s; Chantraine 1968—1980.II:760 **snuso*-; Boisacq 1950:674—675 **snusó*-s; Hofmann 1966:220 **snusós*; Beekes 2010.II:1028 **snuso*-; Huld 1983:100; Walde—Hofmann 1965—1972.II:190 **snusós*; Ernout—Meillet 1979:452; De Vaan 2008:420 **snusó*- (f.) ‘daughter-in-law’; Orël 1998:302 and 2003:359 Proto-Germanic **snuzō(n)*; Kroonen 2013:463 Proto-Germanic **snuzō*- ‘daughter-in-law’; De Vries 1977:528; Feist 1939:414—415 **snusós*; Lehmann 1939:298—299 **snusós*; Kluge—Mitzka 1967:673 **snusós*; Kluge—Seebold 1989:649—650 **snusó*-; Derksen 2008:458 **snus-ó*-; Szemerényi 1977c:68; Wodtko—Irslinger—Schneider 2008:625—626 **snus-ó*-. Notes: (1) Not related to **snew*- ‘to bind’ (as, for example, Buck 1949:2.64). (2) Some rather striking Indo-European loans are found in the indigenous languages of the Caucasus: Northwest Caucasian: Kabardian, Adyghe, Bžedux *nasa* ‘(father’s) brother’s wife, daughter-in-law’; Ubykh *násá:γ* ‘(father’s) brother’s wife, daughter-in-law’; South Caucasian / Kartvelian: Mingrelian *nisa*, *nosa* ‘daughter-in-law’; Laz *nusa*, *nisa*

‘daughter-in-law’; Northeast Caucasian: Avar, Batsbi, Chechen, Ingush *nus* ‘daughter-in-law’; Andi *nusa* ‘daughter-in-law’; Ghodberi *nuse-j* ‘daughter-in-law’; Tindi *nus(a)* ‘daughter-in-law’; Karta *nusa* ‘daughter-in-law’; etc. (cf. Tuite—Schulze 1998:363—383, especially pp. 363—366, for a full list).

(?) Sumerian (reduplicated) *nunus*, *nu-nus*, *nu-nu-us* ‘wife, woman’.

Buck 1949:2.22 woman; 2.64 daughter-in-law. Dolgopolsky 1998:89—90, no. 113, **n/ñu/üśV* or **n/ñu/üsyV* ‘woman’ (general term) and 2008, no. 1567, **ñūs[y]V* ‘woman (general term), woman of the opposite exogamous moiety’.

954. Proto-Nostratic root **nusʷ-* (~ **nosʷ-*):

- (vb.) **nusʷ-* ‘to be weakened, debilitated, sick; to ache, to suffer, to be in pain’;
 - (n.) **nusʷ-a* ‘weakness, sickness, disease, malady, ache, pain, affliction’
- Derivative of:
- (vb.) **nusʷ-* ‘to be small, minute, soft, weak, delicate’;
 - (n.) **nusʷ-a* ‘smallness, insufficiency, decrease, diminishment’; (adj.) ‘small, minute, soft, weak, delicate’

- A. Proto-Dravidian **nō(y)-*/**noc(c)-* ‘to be weakened, debilitated, sick; to ache, to suffer, to be in pain’: Tamil *nō* ‘to feel pain, to ache, to suffer, to be grieved, to be distressed in mind, to be injured, to be spoiled’, *nōy* ‘to be ill, diseased, debilitated; to wither’, *noci* ‘to be in pain, to suffer’; Malayalam *nōka* ‘to pain, to smart, to be in labor’, *noyi*, *nōyi* ‘weakness, pain’, *nōvu* ‘pain, ache, grief, sorrow’, *nōvuka* ‘to suffer pain’; Kota *no-v* ‘disease, pain’; Toda *nu-* ‘sickness’; Kannada *nō* (*nond-*), *noyyu*, *nōyu*, *noy* ‘to suffer pain, to ache, to feel pain, to grieve’, *nōta* ‘ache, pain’, *nōvu* ‘affliction’; Koḍagu *no-* (*novv-*, *nond-*) ‘to pain (intr.)’; Telugu *noccu* (*novv-/nōv-/nō-*) ‘to ache, to pain, to smart, to be grieved’, *noncu* ‘to pain, to wound, to hurt’, *nogulu*, *novulu* ‘to grieve, to sorrow, to feel pain, to be spoiled, to be ruined’, *novvi*, *novvu*, *nōvi*, *nōvu* ‘pain, disease’, *nōyu* ‘to ache’; Tuḷu *nōpuni*, *nōpini*, *nōyipini* ‘to ache, to pain’, *nōvu* ‘pain, ache, distress’; Parji *noy-* (*noñ-*) ‘to be painful, to hurt, to ache’; Gadba (Ollari) *noy-* ‘to be painful’; Gondi *noiyānā* ‘to hurt, to pain, to ache’, *nō-* ‘to pain (intr.)’; Konda *nō-* ‘to pain, to ache (as limbs after hard work, etc.)’; Pengo *nō-* ‘to hurt, to be painful’, *nōc-* (*nōcc-*) ‘to be ill, to have fever’; Maṇḍa *nū-* ‘to hurt, to pain’, *nūmer* ‘disease, fever’; Kui *nōva* (*nōt-*) ‘to be painful, to hurt’; Kuwi *nō-* ‘to pain, to ache’, *nōmeri* ‘fever, sickness, illness’, *nōhi* ‘pain’; Kuṛux *nuñjnā* (*nuñcas*, *nuñjcas*) ‘to smart, to pain’, *nunje* ‘(vb.) to pain; (n.) pain’, *nunjuwre* ‘to be hurt’. Burrow—Emeneau 1984:339, no. 3793; Krishnamurti 2003:191 **nōy-* ‘to pain’.
- B. Proto-Indo-European **nos-* (secondary *e*-grade form: **nes-*) ‘to be or become sick, ill; to cause to be or become sick, to make sick’: Greek

νοσέω ‘to be ill, to ail’, νόσος (Homeric νοῦσος < *νοσφος) ‘sickness, disease, malady’; Tocharian A *nesset* ‘spell’, B *nässait* (~ *niset*) ‘spell’ (used only in combination with *yām-* as ‘cast a spell [over], to put someone under a spell, to bewitch’). Boisacq 1950:672; Frisk 1970—1973.II:323—324; Hofmann 1966:219; Prellwitz 1905:315—316; Chantraine 1968—1980.II:757; Beekes 2010.II:1023—1024; Adams 2013:358.

Buck 1949:4.82 weak; 4.84 sick; sickness; 16.31 pain, suffering. Bomhard—Kerns 1994:685—686, no. 567.

955. Proto-Nostratic (adv.) **nuw-* ‘now, at present, currently’:

- A. Afrasian: Egyptian *nw* ‘time, hour’; Coptic *naw* [Ⲣⲏⲱ] ‘time, hour’. Hannig 1995:297—298; Faulkner 1962:127; Erman—Grapow 1921:78 and 1926—1963.2:219, 220; Gardiner 1957:573; Vycichl 1983:147; Černý 1976:114.
- B. Proto-Indo-European (adv.) **nu* ‘now’: Sanskrit *nú*, *nū* ‘now’; Avestan *nū* ‘now’; Old Persian *nūram* ‘now’; Greek *νῦ*, *νῶ*, *νῦν* ‘now’; Latin *nunc* ‘now’; Old Irish verb prefix *nu-/no-*; Gothic *nu* ‘now’; Old Icelandic *nú* ‘now’; Faroese *nú* ‘now’; Norwegian *no* ‘now’; Danish *nu* ‘now’; Old English *nū* ‘now’; Old Frisian *nū* ‘now’; Old Saxon *nū* ‘now’; Dutch *nu* ‘now’; Old High German *nū* ‘now’ (New High German *nun*); Lithuanian *nū* ‘now’; Old Church Slavic *nyně* ‘now’; Tocharian A *nu*, B *no* ‘however, but; (al)though, then’; Hittite *nu* ‘and, but’; Palaic *nu-ú* ‘now’. Pokorny 1959:770 **nū* ‘now’; Walde 1927—1932.II:340 **nū*; Mann 1984—1987:854—855 **nū*, **nūn*, **nūnai* ‘so, now, well, then’; Watkins 1985:45 **nu-* and 2000:59 **nu-* ‘now’; Gamkrelidze—Ivanov 1984.I:359 **nu/*no* and 1995.I:313 **nu/*no*; Mayrhofer 1956—1980.II:175; Mallory—Adams 1997:397 **nu* ‘now’; Hofmann 1966:219; Boisacq 1950:673 **nu-*, **nū-*; Chantraine 1968—1980.II:758; Beekes 2010.II:1025 **nu*, **nuH*; Frisk 1970—1973.II:325; Ernout—Meillet 1979:450 **nū*; Walde—Hofmann 1965—1972.II:187—188 **nū*; De Vaan 2008:418; Kroonen 2013:392 Proto-Germanic **nū* ‘now’; Orël 2003:289 Proto-Germanic **nu*; Lehmann 1986:269 **nū*, **nū-no-*; Feist 1939:380; De Vries 1977:412; Falk—Torp 1903—1906.II:17; Torp 1919:460; Onions 1966:616; Klein 1971:502 **nū*; Boutkan—Siebinga 2005:292; Kluge—Mitzka 1967:516 West Germanic **nū*; Kluge—Seebold 1989:509 **nu*; Fraenkel 1962—1965.I:509—510; Smoczyński 2007.1:429; Derksen 2008:360 **nū*, **nu* and 2015:338 **nu-*; Van Windekens 1976—1982.I:320 **nu-*, **nū-*; Adams 1999:347 **nū-*; Kloekhorst 2008b:607—608.
- C. Uralic: Proto-Finno-Permian **nü-kz* (**ni-kz*) ‘now’ > Finnish *nyky-* ‘present, current’ in: *nykyaika* ‘modern times’, *nykyhetki* ‘the present’, *nykyinen* ‘present, current’; *nyt*, (dialectal) *ny*, *nyy* ‘now’; Estonian *nüüd*, (dialectal) *nüü* ‘now, at present; by now’; Mordvin (Erza) *ńej*, (Moksha) *ńi*

‘now’; Votyak / Udmurt (Sarapul) *ni* ‘already’; Zyrian / Komi (Udora) *n̄in*, *n̄in*, (Permyak) *n̄i* ‘already’. Rédei 1986—1988:707 **nik₃* (**n̄ik₃*).

- D. (?) Proto-Gilyak / Nivkh **nav* ‘now’: Amur *naʃ* ‘now’; East Sakhalin *naʃ* ‘now, beginning’; South Sakhalin *naʃ* ‘now’. Fortescue 2016:111.

Buck 1949:14.18 now. Bomhard—Kerns 1994:681, no. 561; Illič-Svityč 1971—1984.II:97, no. 335, **N̄uq̄λ* ‘now’; Dolgopolsky 2008, no. 1537, **n̄üH₁[æ] ⇝ *n̄üw[æ]* ‘now’ and, no. 1541, **n̄ükV ⇝ *n̄ukE* ‘now’.

22.45. PROTO-NOSTRATIC *nʏ

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
nʏ-	n-	ñ-		n-	nʏ-	nʏ-	
-nʏ-	-n-	-ñ-		-n-	-nʏ-	-nʏ-	

956. Proto-Nostratic root *nʏaʕ- (~ *nʏəʕ-):

Extended form:

(vb.) *nʏaʕ-V-r- ‘to appear, to arise, to sprout, to come into being; to grow (up), to mature’;

(n.) *nʏaʕ-r-a ‘shoot, sprout, seedling’

Derivative:

(n.) *nʏaʕ-r-a ‘young man, boy, youth’

- A. Proto-Dravidian *ñāḷ- ‘(vb.) to appear, to arise, to sprout, to come into being; to grow (up), to mature; (n.) seedling, sprout, shoot’: Tamil *ñāḷu* (*ñāḷi-*) ‘to appear, to arise’, *nāḷu* (*nāḷi-*) ‘to sprout, to shoot forth, to come into being, to be born, to appear, to arise’, *nāḷu* ‘seedlings reared for transplantation, shoot, sprout’, *nāḷṛu* ‘seedlings reared for transplantation’, *nāḷṛam* ‘origin, appearance’; Malayalam *nāḷuka* ‘to grow up’, *ñāḷu* ‘young plant fit for transplanting’; Kota *na-t* ‘seedlings raised for transplanting (paddy, tea, coffee, blue gum)’; Kannaḍa *nāḷu* ‘to sprout’, *nāḷgi* ‘a sprout’; Koḍagu *nē-r-* (*nē-ruv-*, *nē-nd-*) ‘(person or thing) to rise up or come into view, (plant) to become tall’; Tuḷu *nēji* ‘nursling, young plant of rice, etc.’; Telugu *nāḷu* ‘young sprouts or plants which are to be transplanted’; Gondi *nēr* ‘rice-seedling’; Koṇḍa *nēḷ-* ‘(a plant) to rise from the seed’, *nāḷu* ‘seedlings for transplantation’; Pengo *nēz-* (*nēst-*) ‘to sprout’; Maṇḍa *nēy-* ‘to sprout’; Kui *nēja* (*nēji-*) ‘(vb.) to sprout up out of the ground, to germinate, to shoot up; (n.) a sproutling’; Kuwi *ney-* ‘to sprout’. Burrow—Emeneau 1984:253, no. 2919.
- B. Proto-Uralic *nʏär₃ ‘sprout, sprig, twig’: Hungarian *nyír/nyire-* ‘sprout, reed, stalk (of reeds); twig, birch’; (?) Cheremis / Mari *nörgö* ‘sprout, twig, young tree (one year old)’; Votyak / Udmurt *ňör* ‘sprig, switch, twig’; Vogul / Mansi *ňir*, *ňar* ‘reed, switch, twig’; Ostyak / Xanty *ňar* ‘thicket grown up on the site of an earlier fire; copse, thicket’, (Yugan) *ňari* ‘willow, twig’ (?), (Southern) *ňarə* ‘rowlock-cord of twisted willow’; Selkup Samoyed *njārḥ* ‘willow-tree’, (?) *ňarga* ‘willow-copse’; Yurak Samoyed / Nenets *neeru* ‘reed; willow; switch, twig’, *nierka* ‘willow-tree’; Taigi *nerge* ‘willow-tree’; Kamassian *narga* ‘willow-tree’; Tavgi Samoyed / Nganasan *nerki* ‘willow-tree’. Collinder 1955:43, 1960:408 **ňerk₃* (or **ňörk₃*), and 1977:61; Rédei 1986—1988:331 **ňər₃* (**ňər₃*, **ňər₃k₃*); Décsy 1990:104 **njārä* ‘twig, switch’; Janhunen 1977b:108 **ňer-*.

Buck 1949:12.53 grow (= increase in size). Illič-Svityč 1971—1984.II:83—85, no. 318, **ḥaṣra* ‘young, new-born’; Dolgopolsky 2008, no. 1625, **ḥaṣṣE* ‘young, new-born’; Bomhard—Kerns 1994:692—694, no. 575.

957. Proto-Nostratic (n.) **nʷaṣ-r-a* ‘young man, boy, youth’:

Derivative of:

(vb.) **nʷaṣ-V-r-* ‘to appear, to arise, to sprout, to come into being; to grow (up), to mature’;

(n.) **nʷaṣ-r-a* ‘shoot, sprout, seedling’

A. Afrasian: Proto-Semitic **naṣar-* ‘young man, boy, youth’ > Hebrew *naʿar* [נַעַר] ‘boy, lad, youth’, *nōʿar* [נֹעַר] ‘youth, early life’; Ugaritic *nʿr* ‘boy, servant’; Phoenician *nʿr* ‘youth, boyhood’, *nʿr* ‘young man, youth’. Murtonen 1989:285; Klein 1987:421; Tomback 1978:217. Egyptian *nʿrn* /*naʿaruna*/ ‘young soldiers’ (= Canaanite **naʿrōn(a)* ‘group of young men’). Albright 1934:49; Hannig 1995:395; Erman—Grapow 1921:77 and 1926—1963.2:209.

B. Proto-Altaic **nʷiari* ‘man, young man’: Proto-Tungus **nʷ(i)ari* ‘man, person, young man’ > Evenki *nirawī* ‘young man’; Lamut / Even *ḥari* ‘man, young man’; Negidal *ḥēyawī* ‘young man’; Manchu *niyalma* ‘man, person; another person, someone else, others’ (Starostin—Dybo—Mudrak write *ḥalma*); Spoken Manchu (Sibo) *nanə* ‘person, human being’; Jurchen *nerma* ‘man, person’; Ulch *ḥī* ‘man’; Oroch *nari* ‘man’; Nanay / Gold *nai* ‘man, person’, (dial.) *niʿa* ‘man’; Oroch *ḥā, ḥī* ‘man’; Udihe *nī* ‘man’. Proto-Mongolian **žer-me-* ‘young man’ > Khalkha (Bayat) *žermegei* ‘young man’; Buriat *žerbeger* ‘shapely, handsome (of a man)’. Proto-Turkic **yerʷ-ne* ‘son-in-law, sister’s husband’ > Karakhanide Turkic *yezne* ‘son-in-law, sister’s husband’; Azerbaijani *yezñä* ‘son-in-law, sister’s husband’; Turkmenian (dial.) *yezne* ‘son-in-law, sister’s husband’; Uzbek *žeznā, žezdä* ‘son-in-law, sister’s husband’; Tatar *žizne, žizni* ‘son-in-law, sister’s husband’; Kirghiz *žezde* ‘son-in-law, sister’s husband’; Kazakh *žezde* ‘son-in-law, sister’s husband’; Noghay *yezde* ‘son-in-law, sister’s husband’; Sary-Uighur *yezde* ‘son-in-law, sister’s husband’; Oyrot (Mountain Altai) *yeste, d’este* ‘son-in-law, sister’s husband’; Tuva *česte* ‘son-in-law, sister’s husband’. Starostin—Dybo—Mudrak 2003:1013—1014 **ḥiari* ‘man, young man’.

Buck 1949:14.14 young. Illič-Svityč 1971—1984.II:83—85, no. 318, **ḥaṣra* ‘young, new-born’; Dolgopolsky 2008, no. 1625, **ḥaṣṣE* ‘young, new-born’; Bomhard—Kerns 1994:692—694, no. 575.

958. Proto-Nostratic root **nʷam-* (~ **nʷəm-*):

(vb.) **nʷam-* ‘to press, to squeeze’;

(n.) **nʷam-a* ‘pressing, squeezing’

- A. Proto-Dravidian **ñam-* ‘to press, to squeeze, to crush, to pinch’: Tamil *ñemi* ‘to break, to give way (as under weight)’, *ñemiṭu* (*ñemiṭi-*) ‘to crush, to press out with the hands, to rub’, *ñemir* ‘to be crushed, compressed; to be pressed out (as pulp); to break, to snap off’, *ñemuṅku* (*ñemuṅki-*) ‘to yield to pressure, to be pressed in, to be squeezed (as ripe fruit), to be compact, to be in close contact’, *ñemukku* (*ñemukki-*) ‘to press hard’, *ñemukkam* ‘yielding to pressure’, *namuku* (*namuki-*) ‘to yield under pressure’, *nimiṭṭu* (*nimiṭṭi-*) ‘to pinch (as in punishment), to rub or crush between the hands’, *nimiṇṭu* (*nimiṇṭi-*) ‘to crush, to squeeze between the hands (as grain), to pinch, to nip off’; Malayalam *ñamuṇṭuka* ‘to yield to pressure, to sink, to bulge’, *ñeviṇṭuka* ‘to bruise between the fingers, to squeeze’; Kodagu *ñavṇḍ-* (*ñavṇḍi-*) ‘to squeeze’; Tulu *nauṇṭuni* ‘to pinch’, *nauntu* ‘squeezing, pinching, crushing’, *naumpuni* ‘to entangle’; Kuwi *nabgali* ‘to press down’. Burrow—Emeneau 1984:254, no. 2926.
- B. Uralic: Proto-Finno-Ugrian **nʷam3-* (or **nʷom3-*) ‘to press (together), to squeeze’ > Hungarian *nyom-* ‘to press’, *nyom* ‘footprint’, *nyomás* ‘pressure, pressing, pushing’; (?) Cheremis / Mari *numurge-*, *numurge-* ‘to condense, to concentrate, to compress, to draw together; to contract, to condense, to tighten (intr.)’; (?) Zyrian / Komi *namyrt-* ‘to compress, to squeeze, to press; to take, to seize’, *namral-* ‘to squeeze out, to press’, *naml'av-* ‘to knead’. Collinder 1955:103, 1960:414 **nom3*, and 1977:117; Rédei 1986—1988:330 **nym3*. Yukaghir (Southern / Kolyma) *namʷə-* ‘to champ’. Nikolaeva 2006:287.
- C. Proto-Altaic **nʷjame-* ‘to crush, to destroy; to cripple, to maim; to be crushed, destroyed, weakened’: Proto-Tungus **nʷim-/nʷum-* ‘to be weakened, exhausted, sick’ > Evenki *numu* ‘weakness, sickness’; Lamut / Even *numʷr* ‘shame’, *num-* ‘to be weakened, exhausted, sick’; Negidal *nomu-* ‘to be weakened, exhausted, sick’; Manchu *nime-* ‘to ache, to be painful, to suffer, to be ill’, *nimeku* ‘sickness, illness; pain; defect, weakness’; Spoken Manchu (Sibo) *nimə-* ‘to be weakened, exhausted, sick’; Ulch *ñimeremdi*, *ñumeremži* ‘shameless’, *ñumursi-* ‘to be sorry, sad’; Nanay / Gold *ñimoriži*, *ñomorj* ‘awkward’. Mongolian: Written Mongolian *žemdeg* ‘crippled, handicapped, maimed’, *žemdeg bolyaqu* ‘to mutilate, to maim, to cripple’, *žemdegle-* ‘to cripple’; Khalkha *zemdeg* ‘crippled, handicapped, maimed’; Dagur *d'emden* ‘crippled, handicapped, maimed’; Shira-Yughur *žemteg* ‘crippled, handicapped, maimed’. Proto-Turkic **yem-ür-* ‘to crush, to destroy’ > Old Turkic (Old Uighur) *yemir-* ‘to crush, to destroy; to curse, to reproach’; Karakhanide Turkic *yemür-* ‘to crush, to destroy’; Azerbaijani *yümür-* ‘to crush, to destroy’; Turkmenian *yemir-* ‘to crush, to destroy’; Uighur *yimir-* ‘to crush, to destroy’; Karaim *yemir-* ‘to crush, to destroy’; Tatar *žimer-* ‘to crush, to destroy’; Bashkir *yemer-* ‘to crush, to destroy’; Kirghiz *žemir-* ‘to crush, to destroy’; Noghay *yemir-* ‘to crush, to destroy’; Oyrot (Mountain Altai) *yemir-*, *d'emir-* ‘to crush, to destroy’; Tuva *čemir-* ‘to crush, to destroy’; Chuvash *śəʷməʷr-*

‘to crush, to destroy; to curse, to reproach’. Décsy 1998:108 *jimir* ‘to smash’; Clauson 1972:937 *jāmir*. Starostin—Dybo—Mudrak 2003:1011—1012 **njame* ‘to curse, to harm’.

Buck 1949:4.82 weak; 4.84 sick; sickness; 11.27 destroy. Bomhard—Kerns 1994:692, no. 574; Illič-Svityč 1971—1984.II:85, no. 319, **nam* ‘to squeeze, to seize’; Pudas-Marlow 1974:136, no. 603; Dolgopolsky 2008, no. 1602, **nam[o]* ‘to squeeze, to seize’.

959. Proto-Nostratic (n.) **nʷaph-a* ‘offspring, descendant, young one’:

- A. Proto-Afrasian **n[a]f*- ‘offspring, descendant, young one’: Semitic: Akkadian *nīplu* ‘offshoot’, *nīpru* ‘offspring’. Egyptian *nīrw* (pl.) ‘young men (of army), recruits’ (also *hwnw nīrw*), (f.) *nīr-t* ‘maiden, young woman, teenager’. Hannig 1995:409; Faulkner 1962:132; Erman—Grapow 1921:81 and 1926—1963.2:258; Gardiner 1957:574. Chadic: Pero *neepe* ‘first-born child’.
- B. Proto-Indo-European **nep^h-(ō)th-* ‘descendant, offspring, grandson’: Sanskrit *nāpāt-* ‘descendant, offspring, grandson’ (RV also *nāptṛ-*, in weak cases only), (f.) *naptī-ḥ* ‘female descendant, granddaughter’; Pāli *nattar-* ‘grandson’; Avestan (nom.) *napā*, (obl.) *napāt-* ‘grandson’, *naptya-* ‘descendant, offspring’; Old Persian (nom.) *napā*, (obl.) *napāt-* ‘grandson’; Albanian *nip* ‘nephew, grandson’; Greek (Homeric) *νέποδες* ‘young ones, children’ (according to Mallory—Adams 1997:239, “the erroneous δ was backformed from *νέπως, the regular nominative, when the stem-final consonant was no longer certain”); Latin (nom. sg.) *nepōs* (< **nepōtis*) ‘grandson, nephew’ (gen. sg. *nepōtis*), (f.) *neptis* ‘grand-daughter’; Old Irish *nī(a)e*, *nia* ‘sister’s son’, (f.) *necht* ‘niece’; Middle Welsh *nei* ‘nephew’ (Modern Welsh *nai*); Old Cornish *noi* ‘nephew’; Middle Breton *ni* ‘nephew’; Old Icelandic *nefi* ‘nephew’, (f.) *nipt* ‘female relative, sister’; Old English *nefa* ‘nephew, grandson, stepson’, (f.) *nift* ‘granddaughter, stepdaughter, niece’; Old Frisian *neva* ‘nephew’, (f.) *nift* ‘niece’; Old Saxon *nevo* ‘nephew’; Dutch *neef* ‘nephew’, (f.) *nicht* ‘niece’ (Middle Dutch *nifte*, *nichte*); Old High German *nevo* ‘nephew’ (New High German *Neffe*), (f.) *nift* ‘niece’ (New High German *Nichte* [< Middle Low German *nichte*]); Old Lithuanian *nepōtis*, *nepuotis* ‘grandson’, (f.) *neptė* ‘granddaughter’; Russian Church Slavic *netijb* ‘nephew’, (f.) *nestera* ‘niece’; Old Russian *netii* ‘nephew’; Old Polish *nieć* ‘cousin’, *nieściora* ‘niece’; Czech *net*, *neter* ‘niece’; Serbo-Croatian *nèstera* ‘niece’. Pokorny 1959:764 **nepōt-* ‘grandson, nephew’, (f.) **nepṭī-* ‘granddaughter, niece’; **nepṭios* ‘descendant’; Walde 1927—1932.II:329—330 **nepōt-*, (f.) **nepṭī-*; Mann 1984—1987:835—836 **nepis*, *nepō(n)* ‘nephew, grandson’, 836 **nepōts* (**nepāts*) ‘nephew, grandson’, 836 **nepteris* (**neptris*) ‘niece, granddaughter’, 838 **neptis* ‘niece, granddaughter’; Watkins 1985:44

**nepōt-* and 2000:58 **nepōt-* ‘grandson, nephew’ (f. **neptī-*); Mallory—Adams 1997:239—240 **nepōts* ‘grandson; (?) sister’s son’ (gen. **népotos*) (Mallory—Adams note: “Efforts to etymologize **ne-pot-* as ‘powerless’ [< **ne-* ‘not’ + **potis* ‘independent, dominating’, i.e., young unmarried male of extended family] are pointless as the correct segmentation revealed by the feminine forms is **nep-ot-* in which *-ot-* is the same nominal suffix found in Germanic **mēnōþ-* ‘month’ [from ‘moon’] or Hit[tite] *sīw-att-* ‘day’ [from ‘daytime, sky’]”); Gamkrelidze—Ivanov 1984.II:768, fn. 1, **nep[h]ōt[h]-* and 1995.I:669, fn. 51, **nep^hōt^h-* ‘grandson’; Mayrhofer 1956—1980.II:132—133; Boisacq 1950:664—665; Chantraine 1968—1980.II:747; Frisk 1970—1973.II:307—308; Huld 1984:99; Hofmann 1966:215; Beekes 2010.II:1010; Walde—Hofmann 1965—1972.II:161—162 **nepōt-*, (f.) **neptī-*; De Vaan 2008:405—406; Ernout—Meillet 1979:437—438; Orël 1998:300 and 2003:283 **nefōd(z)*, 283—284 **neftiz*; Kroonen 2013:386 Proto-Germanic **nefan-* ‘nephew, cousin’, and 387 **neftī-* ‘niece, cousin’; De Vries 1977:406 and 410; Onions 1966:607 Common Germanic **neþon* and 609 Common Germanic **nīptiz*; Klein 1971:493 and 496; Kluge—Mitzka 1967:506 **népōt* and 510 **neptī-*; Kluge—Seebold 1989:500—501 **nepōt-* and 503 **neptiā-*; Vercoullie 1898:200; Derksen 2008:350—351; Smoczyński 2007.1:420 **nep-ōt-s*; Fraenkel 1962—1965.I:494 **nepōt-*, (f.) **neptī-*; Derksen 2008:349—350 **h₂nep-t-ter-eh₂*, 350—351 *(*h₂*)*nep-t-i-o-*, and 2015:332 *(*h₂*)*nep-t-ih₂*; *(*h₂*)*nep-ōt*, *(*h₂*)*nep-(o)t*; Wodtko—Irslinger—Schneider 2008:520—524 **népōt-*, **népot-*, **nept-*.

- C. Proto-Uralic **nʷepl̥z* ‘reindeer calf’: Lapp / Saami (Southern) *njāblo-* ‘to give birth to a calf’, (Lule) *njāb’loo* ‘weak, feeble (said of a reindeer calf in its first weeks of life; also said of dogs and children)’; Yurak Samoyed / Nenets (Obdorsk) *naabl’uuj* ‘hide of the reindeer calf in autumn (when the fur begins to thicken in anticipation of the colder weather)’. Rédei 1986—1988:316 **nepl̥z*; Décsy 1990:104 **njepl̥ä* ‘reindeer calf’.
- D. Proto-Altaic **nʷabl̥u(-ǰV)* (< **nʷap^h-l̥u-* ?) ‘young (of plants, animals), child’: Proto-Tungus **nʷab[l̥]ǰa-* ‘young, boy, child’ > Ulch *nawǰa(n)* ‘young, boy, child’; Orok *naoǰoqqa(n)* ‘young, boy, child’; Nanay / Gold *naonǰoā* ‘young, boy, child’; Udihe *na’ula* ‘young, boy, child’. Proto-Mongolian **ǰulǰa-gan* ‘young (of plants, animals)’ > Written Mongolian *ǰulǰaya(n)* ‘fledgling, nestling, squab; young of an animal (except cattle), young of a plant’; Khalkha *zulǰgan*, *zulǰaga* ‘fledgling, nestling; the young of animals (except cattle); tree sprout or shoot’; Buriat *zulǰaga* ‘young (of plants, animals)’; Kalmyk *zulǰiyən* ‘young (of plants, animals)’; Ordos *ǰulǰaga* ‘young (of plants, animals)’; Dagur *ǰilǰig*, *ǰilǰag* ‘young (of plants, animals)’; Dongxiang *ǰunǰuya* ‘young (of plants, animals)’; Shira-Yughur *ǰilǰagan* ‘young (of plants, animals)’; Monguor *ǰiǰiga* ‘young of certain animals; bud, sprout’. Starostin—Dybo—Mudrak 2003:1002 **nabl̥u(-ǰu)* ‘young, child’.

- E. Etruscan *neftís*, *nefš*, *nefiś* ‘nephew, grandson’ (borrowed from Latin *nepōs* ‘grandson, nephew’).

Buck 1949:2.48 grandson; 2.49 granddaughter; 2.53 nephew; 2.54 niece.
Bomhard—Kerns 1994:691—692, no. 573.

960. Proto-Nostratic root **nʷukʰ-* (~ **nʷokʰ-*):

(vb.) **nʷukʰ-* ‘to shake, to tremble’;

(n.) **nʷukʰ-a* ‘shaking, trembling’

- A. Afrasian: Proto-Semitic (reduplicated) **nak-nak-* ‘to shake’ > Arabic *naknaka* ‘to press a debtor hard; to do a thing well’; Geez / Ethiopic *naknaka* [ከከከ] ‘to shake, to agitate, to hit hard, to stimulate, to excite, to trouble’; Tigrinya *näknäkä* ‘to shake’; Tigre *näknäka* ‘to shake’; Amharic *näkännäkä* ‘to shake’. Leslau 1987:396—397.
- B. Proto-Dravidian **ñukk-* ‘to shake’ (> North Dravidian **nukk-*): Kuṛux *nuknā* ‘to shake, to cause to oscillate, especially up and down’, *nukrū* ‘shaky, tottering’, *nuktaʹānā* ‘to cause another to shake something’; Malto *nuke* ‘to shake’, *nukre* ‘to swing, to rock, to be shaken’. Burrow—Emeneau 1984:329, no. 3696.
- C. Uralic: Finno-Ugrian: Vogul / Mansi (Middle Konda) *ńowt-* ‘to swing, to rock, to sway’; Ostyak / Xanty (Vah, Vasyugan, Tremyugan) *ńoγa-*, (Yugan) *ńowa-*, (Kazym) *ńoχα-* ‘to move (intr.)’.

Buck 1949:10.26 shake (vb. tr.). Illič-Svityč 1965:369 **ńuka* [‘тормошить’] ‘to pull’ and 1971—1984.II:91, no. 328, **ńüka* ‘to tremble, to shake’; Dolgopolsky 2008, no. 1584, **ńukV-* ‘to shake, to swing, to tremble’.

22.46. PROTO-NOSTRATIC *1

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
l-	l-	l-	l-	l-	l-	l-	
-l-	-l-	-l-	-l-	-l-	-l-	-l-	-l-

961. Proto-Nostratic root **lab-* (~ **l̥ab-*):

(vb.) **lab-* ‘to take hold of, to grasp’;

(n.) **lab-a* ‘taking, grasping’

Possible derivative:

(vb.) **lab-* ‘to eat greedily, to lap (up), to suck milk’;

(n.) **lab-a* ‘eating, sucking’

- A. Afroasian: Proto-Semitic **lab-ak-* ‘to take hold of, to grasp’ > Aramaic *l̥əḇaḥ* ‘to lay hold of, to hold fast’; Arabic *labaka* ‘to mix (which is done by touching), to mingle, to intermix; to confuse, to mix up, to muddle, to jumble’, *labika* ‘to get confused, to be thrown into disorder, to be disarranged, to become disorganized’; Geez / Ethiopic *labaka* [ለበከ] ‘to touch, to reach’; Tigre *lābbākā* ‘to rub in’. Leslau 1987:305.
- B. Proto-Indo-European **labʰ-* ‘(vb.) to take, to seize, to take into one’s possession, to gain, to obtain; (n.) gain’: Sanskrit *lābhate*, *lāmbhate*, *rābhate* ‘to take, to seize, to catch; to gain possession of, to obtain, to receive, to get’, *lābha-ḥ* ‘obtaining, getting, attaining, acquisition, gain, profit; capture, conquest’; Greek *λάφυρα* ‘spoils (taken in war)’, *ἀμφιλαφής* ‘taking in on all sides, wide-spreading’; Old Prussian *labs* ‘good’; Lithuanian *lōbis* ‘possessions, riches’, *lobstù*, *lōbti* ‘to get rich’, *lābas* ‘goods; good’. Pokorny 1959:652 **labh-* ‘to seize’; Walde 1927—1932.II:385 **labh-*; Mallory—Adams 1997:564 **la(m)bh-* ‘to seize, to take into one’s possession’; Mann 1984—1987:656 **labh-* (**labhos*) ‘acceptable’, 656 **lābhos*, *-ios*, *-us* ‘gain, gainful, gained, profitable’; Hofmann 1966:174—175 *(*s*)**lābh-*; Frisk 1970—1973.II:91; Boisacq 1950:561 *(*s*)**lābh-*; Beekes 2010.I:838 (pre-Greek); Chantraine 1968—1980.II:623 **labh-*; Smoczyński 2007.1:331; Fraenkel 1962—1965.I:327; Mayrhofer 1956—1980.III:42—43.

Buck 1949:5.17 mix; 11.14 seize, grasp, take hold of; 11.15 hold; 15.71 touch. Bomhard—Kerns 1994:703—704, no. 588; Illič-Svityč 1971—1984.II:29, no. 262, **Labl* ‘to seize, to acquire’; Dolgopolsky 2008, no. 1255, **LabV* ‘to grasp, to get, to obtain’.

962. Proto-Nostratic root **lab-* (~ **lāb-*):(vb.) **lab-* ‘to eat greedily, to lap (up), to suck milk’;(n.) **lab-a* ‘eating, sucking’

Possibly related to or derived from:

(vb.) **lab-* ‘to take hold of, to grasp’;(n.) **lab-a* ‘taking, grasping’

Assuming semantic development from ‘to grasp with the teeth’ > ‘to eat greedily’ as in Proto-Tungus **laba-da-*, cited below.

- A. Proto-Afrasian **lab-* ‘to eat much, to suck milk’: Proto-Semitic **lab-an-* ‘to eat much, to suck milk’ > Arabic *labana* ‘to eat much, to suck milk’, *laban* ‘milk’, *labān* ‘breast’, *libān* ‘sucking, nursing’. Proto-Semitic **lab-ay-* ‘to eat much’ > Arabic (inf.) *laby* ‘to eat much’. Zammit 2002: 364—365. Highland East Cushitic: Kambata *laaba* ‘udder’. Hudson 1989: 330. [Ehret 1995:397, no. 808, **lib-* ‘to lap’.]
- B. Proto-Altaic **labV-* (~ *-p-*) ‘to eat greedily’: Proto-Tungus **lebge-* ‘to eat greedily’ > Negidal *lebge-* ‘to eat greedily’; Ulch *legbe-* ‘to eat greedily’; Nanay / Gold *legbeči-* ‘to eat greedily’; Udihe *legbe-* ‘to eat greedily’. Proto-Mongolian **labsi-* ‘to eat greedily’ > Mongolian *labsi-* ‘to eat greedily, to champ’; Khalkha *lawši-* ‘to eat greedily’. Starostin—Dybo—Mudrak 2003:869 **lebV-* (~ *-p-*) ‘to eat greedily’ (Starostin—Dybo—Mudrak also note Proto-Tungus **labada-* ‘to grasp with the teeth’). As opposed to Starostin—Dybo—Mudrak, I would reconstruct Proto-Altaic **labV-* and assume vowel assimilation in Tungus. The original vowel was preserved in Proto-Tungus **laba-da-* ‘to grasp with the teeth’ (cf. Solon *lawā-dā-* ‘to grasp with the teeth’).

Buck 1949:4.41 breast (of woman); 4.42 udder; 5.11 eat; 5.16 suck (vb.).

963. Proto-Nostratic root **lag-* (~ **lāg-*):(vb.) **lag-* ‘to put, place, lay, or set down’;(n.) **lag-a* ‘the act of putting, placing, laying, or setting down’

- A. Proto-Afrasian **lag-* ‘to put, place, lay, or set down’: Egyptian *ḡg* (< **lg*) ‘to plant, to cause to grow or sprout’. Hannig 1995:16; Erman—Grapow 1926—1963.1:22. Central Chadic: Bachama *laga* ‘to plant’. Carnochan 1975:465. Semantic development as in Kartvelian. Perhaps also: Highland East Cushitic: Sidamo *lagaaw-* ‘to descend, to go down’. Hudson 1989: 382.
- B. Proto-Kartvelian **lag-/lg-* ‘to put, to plant’, (past ptc.) **na-rg-* (< **na-lg-*) ‘planted’: Georgian *lag-* ‘to put, to place, to set, to lay’, *rg-* ‘to plant’, *narg-* ‘planted’; Mingrelian *rg-* ‘to plant’, *norg-* ‘seedling, sapling’; Laz *rg-* ‘to plant’; Svan *laž-/lǰ-*: *li-lǰ-eni* ‘to plant something; to attach, to

fasten'. Klimov 1964:118—119 **lag-/lg-* and 1998:106 **lag-* 'to plant' (according to Klimov, "[t]he variant *rg-* derives from the zero grade of the stem *lg-*"), 138 **na-rg-* 'planted', 155 **rg-* 'to plant'; Fährnich—Sardshweladse 1995:280—281 **rg-*; Schmidt 1962:129; Gamkrelidze—Ivanov 1984.II:877 **lag-/lg-* and 1995.I:774 **lag-/lg-* 'to put, to lay; to plant'; Fährnich 1994:234 and 2007:342 **rg-*. Fährnich 2007:263 gives Proto-Kartvelian **lag-* 'place, region': Georgian *a-lag-i* 'place, region'; Svan *lag-a* 'route, way, direction'.

- C. Proto-Indo-European **leg^h-/log^h-* 'to put, place, lay, or set down; to lie down': Greek (Hesychius) *λέχομαι* 'to lie down', *λέχος* 'couch, bed', *λόχος* 'ambush; place of ambush, place of lying in wait; the act of lying in wait; the men that form the ambush; any armed band, a body of troops; any body of people, a union'; Latin *lectus* 'couch, bed'; Old Irish *lige* 'bed', *la(i)gid* 'to lie'; Gothic *ligan* 'to lie, to lie down', *lagjan* 'to lay, to lay down, to set, to place', *ligrs* 'bed, couch'; Old Icelandic *liggja* 'to lie', *leggja* 'to lay, to place, to put'; Old English *lecgan* 'to lay, to put', *licgan* 'to lie, to lie down'; Old Frisian *lidz(i)a* 'to lie, to lie down', *ledza* 'to lay, to put'; Old Saxon *liggian* 'to lie, to lie down', *leggian* 'to lay, to put'; Dutch *leggen* 'to lay, to put', *liggen* 'to lie, to lie down'; Old High German *liggen* 'to lie, to lie down' (New High German *liegen*), *lecken*, *leggen* 'to lay, to put' (New High German *legen*); Old Church Slavic *ležō*, *ležati* 'to lie, to recline', *lēgō*, *lešti* 'to lie down' (*lēgō* contains a nasal infix [cf. Shevelov 1964:115 and 317]); Tocharian A *lake*, B *leke* 'couch, bed', B *lyäk-* 'to lie down'; Hittite (3rd sg. pres. act.) *la-a-ki* 'to cause to incline, to cause to fall, to overturn', (3rd sg. pres. mid.) *la-ga-a-ri* 'to incline, to fall, to lie'. Rix 1998a:357—358 **leg^h-* 'to lie, to lie down'; Walde 1927—1932.II:424—425 **leg^h-*; Pokorny 1959:658—659 **leg^h-* 'to lie down'; Mann 1984—1987:669 **leg^hō* 'to lay, to lie', 669 **leg^hos* 'resting-place, place, site'; Watkins 1985:35 **leg^h-* and 2000:47 **leg^h-* 'to lie, to lay'; Gamkrelidze—Ivanov 1984.I:216, II:877 **leg^h-* and 1995.I:186, I:774 **leg^h-* 'to lie (down)'; Mallory—Adams 1997:352 **leg^h-* 'to lie'; Boisacq 1950:574—575 **leg^h-*; Frisk 1970—1973.II:110—112 Greek *λόχος* < **log^ho-*; Chantraine 1968—1980.II:634—635 Greek *λόχος* < **log^ho-*; Beekes 2010.I:852—853 **leg^h-*; Hofmann 1966:178—179; De Vaan 2008:332; Ernout—Meillet 1979:348 **leg^h-*; Walde—Hofmann 1965—1972.I:777—779 **leg^h-*; Orël 2003:231 Proto-Germanic **laǵjanan*, 240 **leǵjanan*, 240 **leǵran*; Kroonen 2013:322 Proto-Germanic **lagjan-* 'to put'; Feist 1939:319 and 330—331; Lehmann 1986:233 **leg^h-* 'to lie down' ("originally athematic and punctual, as in Gk *λέκτο* aor *he lay down*, but later thematic in all IE dialects"); De Vries 1977:349 and 355; Onions 1966:519 and 527 **leg^h-*, **log^h-*, **lēg^h-*; Klein 1971:414 and 421 **leg^h-* 'to lie'; Vercoullie 1898:167; Kluge—Mitzka 1967:431 and 441 **leg^h-*; Kluge—Seebold 1989:434 and 442 **leg^h-*; Van Windekens 1976—1982.I:254 **leg^h-*, **log^h-* and I:271 **leg^h-*; Adams 1999:559 **lōg^ho-* and

556 **leg^h-*; Puhvel 1984— .5:33—37 **leg^h-* ‘to lie down’; Kloekhorst 2008b:514—515; Derksen 2008:270—271 **leg^h-*, 271—272, and 272; Wodtko—Irslinger—Schneider 2008:450—451 **leg^h-*.

Buck 1949:12.12 put (place, set, lay); 12.14 lie. Bomhard—Kerns 1994:703, no. 587; Dolgopolsky 2008, no. 1265, **lĒga* ‘to lie, to lie down; to lay, to put’; Illič-Svityč 1971—1984.II:35—36, no. 271, **Laga* ‘to lie’.

964. Proto-Nostratic root **lah-* (~ **lāh-*):

(vb.) **lah-* ‘to shine, to blaze, to burn’;

(n.) **lah-a* ‘shining, blazing, burning’

- A. Afrasian: Proto-Semitic **lah-ab-* ‘to shine, to blaze, to burn’ > Arabic *lahiba* ‘to flame, to burn, to blaze; to kindle, to light, to set on fire, to ignite, to inflame (something); to excite, to stir up, to provoke; to be aflame, to be ablaze; to catch fire, to flare up, to be inflamed’, *lahab* ‘flame, blaze, flare’, *ʔilhāb* ‘kindling, lighting, ignition, inflammation’, *multahib* ‘burning, flaming, blazing, aflame, ablaze; inflamed; heated, excited, glowing, aglow’; Ḥarsūsi *láhab* ‘flame’; Mehri *lāhēb* ‘hot wind’; Šheri / Jibbāli *lēheb* ‘flame’; Hebrew *lahab* [לָהַב] ‘flame’; Aramaic *lahəḇā* ‘flame’; Geez / Ethiopic *lahaba* [ላህበ], *lāhba* [ላህበ] ‘to burn, to blaze, to flame, to be warm, to perspire’; Tigre *lāhaba* ‘to perspire’; Tigrinya *lahbāt* ‘perspiration’; Amharic *labā* ‘to be warm, to perspire’. Leslau 1987:308; Zammit 2002:373. Proto-Semitic **lah-ak-* ‘to be bright, to shine brightly’ > Arabic *lahaka*, *lahika* ‘to be very white, to shine brightly’, *lahak*, *lahik* ‘entirely white’. [Orël—Stolbova 1995:363 **lihab-* ‘to burn’. Note: The Egyptian form cited by Orël—Stolbova is a borrowing from Semitic.]
- B. Proto-Indo-European **leh-ph-* [*lah-ph-*] (> **lāp^h-*) ‘to light, to burn’: Greek *λάμπω* (< **lḥ-n-ph-*) ‘to give light, to shine, to beam; to be bright, brilliant, radiant’, *λαμπρός* ‘bright, brilliant, radiant’; Old Irish *lassaid* ‘to burn’, *lassar* ‘flame’; Welsh *llachar* ‘shining, gleaming, flashing; Lithuanian *lópė* ‘light’; Latvian *lāpa* ‘torch’ Old Prussian *lopis* ‘flame’; Hittite (3rd sg. pres. act.) *la-ap-zi* ‘to catch fire, to flare up, to flash’, (nom. sg.) *la-ap-pi-(ya)-aš* ‘fever’; Luwian *lappiya-* ‘heat’ (?). Rix 1998a:361 **leh₂p-* ‘to light up’; Pokorny 1959:652—653 **lā[i]p-* ‘to light, to burn’; Walde 1927—1932.II:383 **lāp-* : **lāp-*; Watkins 1985:35 **lāp-* and 2000:47 **lap-* ‘to light, to burn’ (nasalized form **la-m-p-*); Mallory—Adams 1997:513 **lap-* ‘to shine’ and 2006:328, 329 **lap-* ‘to shine’; Boisacq 1950:554 **lāmp-*; Hoffmann 1966:172 **lā[i]p-*, **lāip-*, **lāp-*; Chantraine 1968—1980.II:617 **lāp-* or **lōp-*; Frisk 1970—1973.II:79—80 **lāp-* or **lōp-*; Prellwitz 1905:259 **lāp-*; Beekes 2010.I:829—830 **leh₂p-*; Matasović 2009:235 **leh₂p-*; Puhvel 1984— .5:58—60 **leA-p-*; Kloekhorst 2008b:519—520 **leh₂p-*/**lh₂p-*; Derksen 2015:293 **leh₂p-*; Fraenkel 1962—1965.I:386; Smoczyński 2007.1:362 **leh₂p-*.

Buck 1949:1.82 flame (sb.); 1.85 burn (vb.); 1.86 light (vb.), kindle; 15.56 shine; 15.57 bright. Dolgopolsky 2008, no. 1316, **LahPV* ‘flame; to glow’.

965. Proto-Nostratic root **lah-* (~ **lāh-*):

(vb.) **lah-* ‘to make flow, to pour, to moisten, to wet’;

(n.) **lah-a* ‘flowing, pouring; moistness, wetness’

- A. Proto-Afrasian **lah-* ‘to make flow, to moisten, to wet’: Proto-Semitic **lah-ah-* ‘to make flow, to moisten, to wet’ > Arabic (?a)*lahha* ‘to rain continuously’; Hebrew *lah* [לָה] ‘moist, fresh, new’ (base *lhh* [לָהָה] ‘to be moist, to be fresh’); Aramaic *lahlah* ‘to moisten’; Palmyrene *lh* ‘moisture’; Ugaritic *lht* ‘freshness, vigor’ (?); Geez / Ethiopic *lahha* [ለሐ], *lahaha* [ለሐሐ] ‘to be humid, to be soft, to be smooth’, *ʔalhəha* [አለሐሐ] ‘to moisten, to cool off, to soften’, *lāhləha* [ለለሐሐ] ‘to be humid, damp’, *ləhluh* [ለለሐሐ] ‘humid, wet’. Murtonen 1989:247; Klein 1987:297 and 298; Leslau 1987:310.
- B. Proto-Indo-European **leh-* [**lah-*] (extended form **leh-w/u-* [**lah-w/u-*]) ‘to pour, to pour out (liquids)’: Hittite *lah-* in: (nom. sg.) *la-ah-ni-iš* ‘flask, flagon, frequently of metal (silver, gold, copper)’ (acc. pl. *la-ha-an-ni-uš*), (1st sg. pret.) *la-a-hu-un* ‘to pour, to pour out (liquids)’, (2nd sg. impvt.) *la-a-ah* ‘pour!’; *lah(h)u-* in: (3rd sg. pres.) *la(-a)-hu(-u)-wa(-a)i*, *la-a-hu-u-wa-a-iz[-zi]*, *la-hu-uz-zi* ‘to pour (liquids, fluids; containers of these); to cast (objects from metal); to flow fast, to stream, to flood (intr.)’, (reduplicated ptc.) *la-al-hu-u-wa-an-ti-it* ‘poured’, (reduplicated 3rd sg. pres.) *li-la-hu-i*, *le-el-hu-wa-i*, *li-il-hu-wa-i* ‘to pour’, (reduplicated acc. sg.) *le-el-hu-u-un-da-in* ‘a vessel’; Luwian (1st sg. pret.) *la-hu-ni-i-ha* ‘to pour’ (?); Greek ληνός (Doric λᾶνός) ‘anything shaped like a tub or a trough: a wine-vat, a trough (for watering cattle), a watering place’ (< **lā-no-s* < **leh-no-s* [**lah-no-s*]). Puhvel 1984— .5:6—8 and 5:16—25 **leA₁-w-*; Kloekhorst 2008b:511—513; Rix 1998a:360 **leh₂-* ‘to pour’; Chantraine 1968—1980.II:637 etymology unknown; Boisacq 1950:578—579 etymology unclear; Hofmann 1966:180 etymology unexplained; Beekes 2010.I:857 etymology unexplained; Frisk 1970—1973.II:117 etymology unexplained. These forms are not related to Greek λούω ‘to wash, to bathe’, Latin *lavō* ‘to wash, to bathe’, etc., which must be derived from Proto-Indo-European **lewh*-/**lowh*- ‘to wash, to bathe’ (cf. Winter 1965a:108; Bomhard—Kerns 1994:699, no. 581).

Sumerian *lah* ‘to wash, to clean’, *lah* ‘laundry, wash’.

Buck 1949:9.35 pour; 9.36 wash; 15.83 wet, damp; 15.87 clean. Bomhard—Kerns 1994:700, no. 582.

966. Proto-Nostratic root **laḥ-* (~ **ləḥ-*):(vb.) **laḥ-* ‘to strike, to fight’;(n.) **laḥ-a* ‘fight, battle, slaughter’

- A. Proto-Afrasian **lVḥ-* ‘(vb.) to strike, to fight; (n.) fight, battle, slaughter’: Proto-Semitic **laḥ-am-* ‘(vb.) to strike, to fight; (n.) fight, battle, slaughter’ > Arabic *laḥima* ‘to join in battle, to engage in mutual massacre, to kill one another, to slaughter’, *malḥama* ‘bloody fight, slaughter, massacre, fierce battle’, *ʔiltiḥām* ‘grapple, struggle, fight, close combat’; Sabaean *lḥm* ‘fight, brawl’; Hebrew *lāḥam* [לָחַם] ‘to fight, to do battle’, *milḥāmāh* [מִלְחָמָה] ‘battle, war’; Imperial Aramaic *mlḥm* ‘battle, war’; Ugaritic *mlḥmt* ‘battle, war’. Murtonen 1989:247; Klein 1987:298 and 349. (?) Central Chadic **lim-* (< **liHVm-*) ‘war’ > Lamang *lamo* ‘war’; Daba *lim* ‘war’. Orël—Stolbova 1995:363, no. 1672, **liḥum-* ‘to kill, to fight’.
- B. Elamo-Dravidian: Neo-Elamite *la-h-li/u-* ‘to knock, to smash, to hammer’.
- C. Kartvelian: Georgian *lax-* in: *ga-lax-av-*, *ga-lax-e-* ‘to beat (up), to hit, to strike’, *laxvar-i* ‘spear’ (Old Georgian *laxuar-i*). Lange 1987:29.
- D. Proto-Indo-European **leḥh-* [**laḥh-*] ‘warfare, military campaign’, **leḥh-wo-s* [**laḥh-wo-s*] ‘men under arms (as opposed to their leaders): warriors, soldiers, troops’: Hittite (loc. sg.) *la-aḥ-ḥi* ‘warfare, military campaign’, (3 sg. pres. act.) *la-aḥ-ḥi-ya-iz-zi* ‘to go to war, to wage war, to (go on) campaign; to make war on, to attack, to confront, to take on; to brave’, (nom. sg.) *la-aḥ-ḥi-ya-la-aš* ‘fighter, warrior; infantry’, (acc. pl.) *la-aḥ-ḥé-mu-uš* ‘military action, raid, maneuver’; Luwian (acc. sg.) *lalḥiyan* in *kuwalanallin-tar lalḥiyan* ‘military campaign’; Lycian (3 sg. pres. act.) *laḥadi* ‘to strike, to attack’; Greek (Homeric) *λαῶς* (Ionic *ληός*; Attic *λεώς*) ‘(in the warlike language of the Iliad) the people or men of the army, troops, soldiers; also a land-army (as opposed to a fleet); the common men (as opposed to their leaders)’; Phrygian *λαῤαγται* ‘military leader’ (Greek loan); Old Irish *láech* ‘warrior’ (formerly thought to have been borrowed from Latin *lāicus* ‘layman’ [itself a loan from Greek *λαϊκός* ‘layman’]). Mann 1984—1987:667 **lāuō-*, *-iō* ‘to chase, to catch, to capture, to seize, to hold’, 667 **lāuōs* (**lāu-*) ‘seizure’; Gamkrelidze—Ivanov 1984.II:740 **laH(u)o-* and 1995.I:644 **laH(w)o-* ‘people, folk; army; campaign’; Mallory—Adams 1997:31 **leh₂uós* ‘people (under arms)’, **leh₂-* ‘±military action’, **leh₂uós* ‘±army’; Sturtevant 1942:35, §36b, Indo-Hittite **laxo-* ‘war’ and 1951:47, §74, Indo-Hittite **lex-* ‘war’, **lexwos* ‘army’; Puhvel 1984— .5:1—6; Kloekhorst 2008b:510—511; Benveniste 1969.II:89—95 and 1973:371—376; Matasović 2009:234—235 **leh₂-*; Chantraine 1968—1980.II:619—620; Frisk 1970—1973.III:144; Boisacq 1950:556 **lāu-o-s*; Prellwitz 1905:259 **lāu-o-s*; Hofmann 1966:173; Beekes 2010.I:832—833 (pre-Greek).

Sumerian *lah* ‘to beat, to strike, to hit; to pummel’, *lah₄* ‘to push, to shove’.

Buck 1949:20.12 battle; 20.13 war. Dolgopolsky 2008, no. 1338, **L[a]χV* ‘to strike, to fight’.

967. Proto-Nostratic root **lak^h*- (onomatopoeic):

(vb.) **lak^h*- ‘to lick, to lap up’;

(n.) **lak^h-a* ‘licking’

- A. Afrasian: Chadic: Daffo-Butura *loḵ* ‘to lick’; Bokos *lok* ‘to lick’; Sha *lig*, *lik* ‘to lick’; Pa’a *lɪkən* ‘to lick’; Boghom *ṇalak* ‘to lick’; Sumray *la* ‘to lick’; Ndam *ləgnya* ‘to lick’; Tumak *lag* ‘to lick’. Jungraithmayr—Ibriszimow 1994.I:111 **lkɔ* and II:224—225.
- B. Proto-Dravidian **nakk-* (< **lakk-*) ‘to lick, to lap’: Tamil *nakku* (*nakki-*) ‘(vb.) to lick, to lap; (n.) licking’, *nakkal* ‘food taken by licking’, *nakki* ‘a destitute person, as one who licks scrapings’; Malayalam *nakkuka* ‘to lick’, *nakki* ‘to lick, a beggar’; Kota *nak-* (*naky-*) ‘to lick’; Toda *nok-* (*noky-*) ‘to lick’; Kannaḍa *nakku*, *nekku* ‘to lick’, *nekkisu* ‘to cause to lick’; Koḍagu *nakk-* (*nakki-*) ‘to lick’, *nakk* ‘licking’; Tuḷu *nakkuni*, *nekkuni* ‘to lick, to lap’, *nakkāvuni* ‘to cause to lick’, *nakkele* ‘a man who licks, especially the plate on which food has been served; a greedy man’ (f. *nakkeldi*); Telugu *nāku* ‘to lick’; Kolami *na-k-* (*na-kt-*) ‘to lick’; Naikri *nāk-* ‘to lick’; Parji *nēk-* ‘to lick’; Gadba *nāk-* ‘to lick’; Gondi *nākānā*, *nākīnā*, *nāk-* ‘to lick’; Konda *nāk-* (*nākt-*) ‘to lick’; Pengo *nāk-* ‘to lick’; Maṇḍa *nēk-* ‘to lick’; Kui *nāka* (*nāki-*) ‘to lick, to lap’; Kuwi *nākali*, *nāk-* ‘to lick, to lap’. Burrow—Emeneau 1984:314, no. 3570; Krishnamurti 2003:108 **nakk-* ‘to lick’.
- C. Proto-Indo-European **lak^h*- ‘to lick, to lap up’: Armenian *lakem* (*-k-* < **-kk-*) ‘to lick’; Lithuanian *lakù*, *lakti* ‘to lap up, to swill’; Latvian *lakt* ‘to lap up, to swill’; Old Church Slavonic *ločq*, *lokati* ‘to lick, to lap’. Pokorny 1959:653 **lak-* ‘to lick with a clicking sound’; Walde 1927—1932.II:380 **laq-*; Mann 1984—1987:660 **lak-* ‘to lap up, to gulp, to gobble’; Mallory—Adams 1997:352 **lak-* ‘to lick’; Derksen 2008:283—284 **lak-*; Fraenkel 1962—1965.I:337—338; Smoczyński 2007.1:335.
- D. Uralic: Proto-Finno-Ugrian **lakka-* ‘to lick, to lap up’: Finnish *latkia*, *lakkia*, *litkiä* ‘to lick, to lap (up)’; Karelian *lakki-* ‘to lick’; Estonian *laku-* ‘to lick, to lap’; Zyrian / Komi *lak-* ‘to lap’. Hakola 2000:94—95, no. 399.

Buck 1949:4.59 lick (vb.). Illič-Svityč 1971—1984.II:15, no. 247, **laḵa* (onomatopoeic) ‘to lick, to lap’; Bomhard—Kerns 1994:704, no. 589.

968. Proto-Nostratic **lak^h*- (~ **lɔk^h*-):

(vb.) **lak^h*- ‘to go on foot, to travel on foot’;

(n.) **lak^h-a* ‘leg, foot’

- A. Proto-Afrasian **lak-* (~ **lik-* ~ **luk-*) ‘leg, foot’: Berber: Tuareg *alkəm* ‘to follow, to pursue, to accompany on a trip, to follow on foot’; Tamazight *alkəm* ‘to reach, to arrive at, to reunite with, to overtake’; Tashelhiyt / Shilha *alkəm* ‘to arrive at, to reunite with, to reach’. Proto-East Cushitic **lak-/lik-/luk-* ‘leg, foot’ > Saho *lak* ‘leg, foot’; Somali *lug* ‘leg, foot’; Arbore *luk-a* ‘leg, foot’; Sidamo *lekk-a* ‘leg, foot’; Bayso *luk-i* ‘leg, foot’; Galla / Oromo *luk-a* ‘thigh’; Burji *lukk-a* ‘leg’; Gedeo / Darasa *lekka-* ‘leg, foot’; Hadiyya *lokko* ‘leg, foot’; Kambata *lokka-ta* ‘leg, foot’; Elmolo *luk* ‘leg, foot’; Gidole *lukk-et* ‘leg, foot’; Alaba *lokk-a* ‘leg, foot’; Tsamay *luk-te* ‘leg, foot’; Gawwada *lux-ti* ‘leg, foot’. Sasse 1979:12 and 1982:136; Hudson 1989:66. Orël—Stolbova 1995:367—368 **IVk-/IVk-* ‘leg’.
- B. Elamo-Dravidian: Royal Achaemenid Elamite *la-gi-* ‘to go across, to travel across’, *lag-gi-ma-na* ‘for their journey’, *la-ki-* ‘to travel, to journey’.
- C. Proto-Indo-European **lakh-* ‘leg, foot’: Greek (adv.) *λάξ* ‘with the foot’, *λακτίζω* ‘to kick with the heel or foot’; Latin *lacertus* ‘upper arm’; Old Icelandic *leggr* (< Proto-Germanic **laǵjaz*) ‘leg, hollow bone (of arms and legs)’, *lær* ‘the leg above the knee, thigh’; Swedish *lägg* ‘calf (of the leg)’, *lår* ‘thigh’; Danish *legg*, *læg* ‘calf (of the leg)’, *laar* ‘thigh’; Norwegian *legg* ‘calf (of the leg)’, *laar*, *lær* ‘thigh, leg (of a fowl)’; Old English *lēow* ‘thigh, ham’; Middle English *leg* ‘leg’ (Scandinavian loan). Walde 1927—1932.II:420—421 **leq-* (: **ləq-*), **lēq-* : **ləq-*; Pokorny 1959:673 **lek-* (: **lək-*), **lēk-* : **lək-* ‘limb of the body’; Mallory—Adams 1997:323 **lek-* ‘to jump, to scuttle along, to bulge (of muscles)’; Frisk 1970—1973.II:82—83; Boisacq 1950:555—556; Mann 1984—1987:660 **lak-* ‘to kick’, 660 **laks-* (?) ‘jump; lumping horse’; Chantraine 1968—1980.II:619; Hofmann 1966:173; Beekes 2010.I:831—832; De Vaan 2008:321 no semantically convincing connections; Ernout—Meillet 1979:336 (Latin *lacertus* is only compared with Old Irish *laghairt* — no other known connection); Walde—Hofmann 1965—1972.I:743—744; Orël 2003:231—232 Proto-Germanic **laǵwaz* ~ **laxwaz*; Kroonen 2013:321—322 Proto-Germanic **lagja-* ‘leg’; De Vries 1977:349—350; Falk—Torp 1903—1906.I:437 and 450; Torp 1919:370; Onions 1966:522; Klein 1971:416.
- D. Proto-Gilyak / Nivkh **lay-* ‘to visit’: Amur *lay-dv* ‘to go visit’; East Sakhalin *layə-nd* ‘to visit’, *lax-t vi-d* ‘to go on a journey’ (*vi-d*, *vivi-t* ‘to go’); South Sakhalin *layə-nd* ‘to travel’. Forescue 2016:92.

Buck 1949:4.35 leg. Bomhard—Kerns 1994:700—701, no. 583; Illič-Svityč 1971—1984.II:22—23, no. 255, **l/a/Ḳa* ‘leg’; Dolgopolsky 2008, no. 1282a, **LaḲa* (= **laḲa* ?) ‘leg’.

969. Proto-Nostratic root **lak-* (~ **lək-*):
 (vb.) **lak-* ‘to gather, to collect’;
 (n.) **lak-a* ‘collection’; (adj.) ‘gathered, collected, picked, chosen’

- A. Proto-Afrasian **lak*- ‘to gather, to collect’: Proto-Semitic **lak*-*at*- ‘to gather, to pick up’ > Akkadian *lakātu* ‘to collect, to gather’; Hebrew *lākaṭ* [לָכַט] ‘to gather up, to pick up’, *leḳeṭ* [לֶקֶט] ‘gleanings; the poor person’s share of the crop’; Aramaic *lakaṭ* ‘to pick up, to gather’; Ugaritic /l-ḳ-z/ ‘to gather’; Arabic *laḳaṭa* ‘to gather, to collect, to pick up from the ground, to glean (something)’, *laḳaṭ* ‘that which is picked up or gathered, leftovers, gleanings’; Sabaean *stlkṭ* ‘to be abducted’ (?) (reflexive of the causative?); Šheri / Jibbāli *lkəṭ* ‘to pluck, to pick off, to pick up’; Mehri *əwḳáwṭ* ‘to pick up one thing, something small’. Murtonen 1989:250; Klein 1987:305; Zammit 2002:370—371. Proto-Semitic **lak*-*am*- ‘to pick, to pick up, to gather, to collect’ > Geez / Ethiopic *laḳama* [ለቀመ] ‘to pick, to choose, to separate’; Tigre *lākma* ‘to gather, to pluck’; Tigrinya *lākāmā* ‘to pick, to pluck, to glean’; Amharic *lākkāmā* ‘to collect, to gather (wood), to pick (fruit), to pick up’; Argobba *lākkāmā* ‘to collect, to gather, to pick, to pick up’; Gurage *lākāmā* ‘to pick, to pick up’; Harari *lākāmā* ‘to pick up’. Leslau 1963:101, 1979:382, and 1987:317. Proto-Semitic **lak*-*ap*- ‘to grasp, to take (hold of), to pick off’ > Arabic *laḳifa* ‘to seize quickly, to grab, to snatch (something); to catch (something); to snatch up, to take over; to seize, to rob, to usurp’; Šheri / Jibbāli *lkəf* ‘to grasp in the fist, to get hold of’; Mehri *līkəf* ‘to take, to get hold of; to pick off (scab, resin)’; Ḥarsūsi *lēkef* ‘to grasp in the fist, to get hold of’. Proto-Semitic **lak*-*in*- ‘to gather’ > Arabic *laḳina* ‘to gather, to infer, to teach’.
- B. Proto-Indo-European **lek*-/**lok*- ‘to pick, to gather, to collect’: Greek *λέγω* ‘to pick, to gather, to speak’, *λογάς*, -άδος ‘gathered, picked, chosen’, *λογία* ‘a collection for the poor’, *λόγος* ‘word, speech, discourse, conversation’, *λόγιος* ‘learned, erudite’; Latin *legō* ‘to collect, to gather together, to pick; to choose, to select, to pick out; to read, to peruse’, *lectus* ‘chosen, selected’; Albanian *mb-ledh* ‘to collect, to add’. Rix 1998a:386 **leg-* ‘to gather, to collect’; Pokorny 1959:658 **leg-* ‘to gather, to collect’; Walde 1927—1932.II:422 **leg-*; Mann 1984—1987:670 **legō*, -*īō* ‘to gather, to pick, to pick out, to read’; Watkins 1985:35 **leg-* and 2000:47 ‘to collect’, with derivatives meaning ‘to speak’; Mallory—Adams 1997:242 **legē/o-* ‘to gather’ (> Greek *λέγω* ‘to gather’); Gamkrelidze—Ivanov 1984.II:941 **lek*-/**loḱ*- and 1995.I:834 **lek*-/**loḱ*- ‘to collect, to gather, to select’; Meyer 1891:265; Huld 1984:145 and 156; Orël 1998:251; Boisacq 1950:563—564 **leg-*; Frisk 1970—1973.II:94—96; Chantraine 1968—1980.II:625—626; Hofmann 1966:175 **leg-*; Prellwitz 1905:263; Beekes 2010.I:841—842 **leg-*; Ernout—Meillet 1979:348—350; Walde—Hofmann 1965—1972.I:780 **leg-*; De Vaan 2008:332—333 **leg-e/o-*.
- C. Proto-Uralic **luki*- ‘to read, to count’, **luka* ‘number, figure, count’ (Indo-European loan, see below) > Finnish *luke-* ‘to read, to count’, *luku* ‘number, figure; account, consideration, chapter’; Estonian *lugu* ‘story, tale’, *luge-* ‘to read, to recite, to count’; Lapp / Saami *lokkā-/logā-* ‘to read,

to count; to bring tidings, news of; to tell, to say, to give one's opinion', *lokko* 'number, account, consideration', *lokke* 'ten (at cards); (as last part of compounds) ten altogether'; Cheremis / Mari *lu* 'ten', *lōda-*, *luda-* 'to read, to count'; Votyak / Udmurt *lyd* 'number'; Zyrian / Komi *lyd* 'number'; Vogul / Mansi *low* 'ten', *lowint-* 'to count'; Mordvin *lovo-* 'to count'. Collinder 1955:131 and 1977:142—143; Joki 1973:278—279; Rédei 1986—1988:253 **luke*; Sammallahti 1988:545 **luki-* 'to count'; Zhivlov 2023:122, 164, and 165 Proto-Uralic **luki-* 'to count', **luka* 'a count, ten'. As noted by Gamkrelidze—Ivanov (1995.I:834), Proto-Uralic **luki-* "can be considered an early borrowing from Indo-European (Jokl 1921:111—12, Collinder 1955:131). Borrowing can be assumed on the basis of the semantics of the Finno-Ugric word, which reflects a derived cultural meaning of the Indo-European word ('count', not 'gather')."

Buck 1949:12.21 collect, gather; 18.21 speak, talk. Bomhard 1984b:279, no. 303; Bomhard—Kerns 1994:697—698, no. 578; Greenberg 2002:38, no. 70; Hakola 2000:98, no. 419; Dolgopolsky 2008, no. 1275, **lukê* 'to gather'.

970. Proto-Nostratic root **lak'-* (~ **lək'-*), **lik'-* (~ **lek'-*), **luk'-* (~ **lok'-*) (onomatopoeic):

(vb.) **lak'-*, **lik'-*, **luk'-* 'to lick';

(n.) **lak'-a*, **lik'-a*, **luk'-a* 'licking'

- A. Proto-Afrasian **lak'-* ~ **lik'-* ~ **luk'-* 'to lick, to lap, to gulp down, to swallow': Proto-Semitic **lak'-am-* 'to gulp down, to swallow' > Arabic *laḵima* 'to eat, to devour, to gobble, to swallow up', *luḵma* 'bite; bit, mouthful; little piece, morsel'; Mehri *alōḵām* 'to put into someone's mouth', *lātḵām* 'to swallow', *əwḵāmēt* 'mouthful'; Šḥeri / Jibbāli *elōḵum* 'to put something into someone's mouth', *ləḵmēt* 'mouthful'; Soqotri *əlḵam* 'to swallow'; Ḥarsūsi *alēḵem* 'to make someone swallow something', *lātḵem* 'to swallow; to put in the mouth', *elḵemēt* 'piece, mouthful'; Geez / Ethiopic *laḵama* [ለፋመ] 'to chew on food that is hard and makes noise when it is eaten'; Tigrinya *lāḵāmā* 'to eat roasted grain'; Tigre *lāḵma* 'to eat'. Leslau 1987:317; Zammit 2002:371. Proto-Semitic **lak'-ak'-* 'to lick, to lap' > Arabic *laḵḵa* 'to lick, to lap'; Hebrew *lāḵaḵ* [לָחַח] 'to lick, to lap'. Murtonen 1989:250; Klein 1987:306. Coptic *lōḡ* [ⲗⲟⲩ] 'to lick' (Semitic loan). Vycichl 1983:102. Berber: Tuareg *əlləγ* 'to lick'; Siwa *əlləγ* 'to lick'; Nefusa *əlləγ* 'to lick, to lap'; Ghadames *əlləγ* 'to lick'; Wargla *əlləγ* 'to lick'; Mzab *əlləγ* 'to lick, to lap'; Tamazight *əlləγ* 'to lick, to lap'; Tashelhiyt / Shilha *əlləγ* 'to lick'; Riff *əllay*, *əḡḡəγ* 'to lick'; Kabyle *əlləγ* 'to lick, to lap'; Chaoia *əlləγ* 'to lick, to lap'; Zenaga *əlli*, *əllay* 'to lick'. Proto-East Cushitic **lik'-*/**luk'-* 'to swallow, to lap' > Somali *luq-* 'to swallow', *luqum* 'neck'; Konso *loq-* 'to swallow'; Gedeo / Darasa *lik'in-s-* 'to swallow'; Galla / Oromo *lik'im-s-* (< **lik'm-*/**luk'm-*)

- ‘to swallow’, *luk’um-a* ‘esophagus’, *lukk’uum-un*, *-aa* ‘larynx’; Hadiyya *lik’icc’-*, *lic’ikk’-* ‘to swallow’, *loom-ee-* (< **luk’m-*) ‘Adam’s apple’; Gidole *lok’-* ‘to swallow’. Sasse 1979:49 and 1982:132; Hudson 1989:147; Heine 1978:67. Proto-Southern Cushitic **lak’-* ‘gullet’ > Dahalo *lak’a* ‘area under the chin’. Ehret 1980:328. Orël—Stolbova 1995:363, no. 1673, **liḳam-/liḳim-* ‘to eat, to swallow’ (derived from **lVḳ-* ‘to lick’), 368, no. 1697, **lVḳ-* ‘to lick’; Ehret 1995:403, no. 822, **lak’-* ‘to lap up’.
- B. Proto-Kartvelian **lok’-* ‘to lick’: Georgian *lok’-* ‘to lick’; Mingrelian *lok’-*, *lont’k’-* ‘to lick’; Laz *lok’-*, *losk’-* ‘to lick’; Svan *lōk’-*, *lāk’-* ‘to lick’. Klimov 1964:121—122 **loḳ-* and 1998:110 **loḳ-* ‘to lick’; Fähnrich—Sardshweladse 1995:221 **loḳ-*; Fähnrich 1994:233 and 2007:270 **loḳ-*.
- C. Proto-Indo-European **lik’-* ‘to lick’: Latin *ligula* (also *lingula*) ‘little tongue’, *lingō* (with *n*-infix) ‘to lick’; Old Irish *ligim* ‘to lick’. Proto-West Germanic **likkōjan* ‘to lick’ > Old English *liccian* ‘to lick’ (Middle English *licken*); Old North Frisian *leccōn* ‘to lick’; Old Saxon *liccōn*, *leccōn* ‘to lick’; Dutch *likken* ‘to lick’; Old High German *leckōn*, *lecchōn* ‘to lick’ (New High German *lecken*). Assuming here that these forms are not derivatives of Proto-Indo-European **leygh-/loygh-/ligh-* ‘to lick’. Proto-Indo-European appears to have had several variant forms for ‘to lick’, as seen by Mann (1984—1987:671 **leiḡ-* ‘to lick’, 672 **leiḡhō*, *-jō* ‘to lick’, and 690—691 **liḡō*, *-jō* [**liḡājō*, **linḡ-*] ‘to lick’). Ernout—Meillet 1979:360; Walde—Hofmann 1965—1972.I:800—801 and I:806; De Vaan 2008:343; Orël 2003:245—246 Proto-Germanic **likkōjanan*; Kroonen 2013:337 Proto-Germanic **likkōn-* ‘to lick’; Onions 1966:526; Klein 1971:420; Vercoullie 1898:172; Kluge—Mitzka 1967:430; Kluge—Seebold 1989:433.

Buck 1949:4.59 lick (vb.). Bomhard—Kerns 1994:704—705, no. 590; Illič-Svityč 1971—1984.II:15, no. 247, **laḳa* (onomatopoeic) ‘to lick, to lap’; Dolgopolsky 2008, no. 1284, **laḳ[U]* ‘to lick, to lap’.

971. Proto-Nostratic root **lam-* (~ **lām-*):

- (vb.) **lam-* ‘to bend down, to stoop down, to sink down, to lie down, to duck down; to be or become bent down, curved down; to be low’;
 (n.) **lam-a* ‘lowland, low-lying ground, any piece of land’; (adj.) ‘low’
 Extended form:
 (vb.) **lam-V-d-* ‘to bend down, to stoop down, to sink down, to lie down, to duck down; to be or become bent down, curved down; to be low’;
 (n.) **lam-d-a* ‘lowland, low-lying ground, any piece of land’; (adj.) ‘low’

- A. Proto-Afrasian **lam-* ‘to bend down, to stoop down, to sink down, to lie down, to duck down; to be or become bent down, curved down; to be low’:
 Semitic: Arabic *lamada* ‘to submit, to be obsequious’, *lamdān* ‘submissive, obsequious’. Berber: Tuareg *alməγ* ‘to be immersed, to be dyed by

immersion', *səlməγ* 'to immerse, to dye by immersion'; Ghadames *əmməγ* 'to immerse, to clean underground wells'; Tawlemmet *əmməγ* 'to be soaked', *səmməγ* 'to soak'; Tamazight *əmməγ* 'to get wet, to be soaked with water'; Kabyle *əmməγ* 'to pounce on, to chase someone'. Central Cushitic: Bilin *lām y-* 'to lie down, to bend down'. Appleyard 2006:93; Reinisch 1887:256 (*lum y-*).

- B. Proto-Indo-European **lendh-/londh-/l̥ndh-* (< **lem-dh-/lom-dh-/l̥m-dh-*) 'low-lying ground, lowland, any piece of land': Old Irish *land* 'open place'; Middle Welsh *llan* 'enclosure, yard'; Breton *lann* 'heath'; Cornish *lan* 'piece of land'; Gothic *land* 'land, country'; Old Icelandic *land* 'land (as opposed to sea), country'; Old English *land* 'earth, land, soil'; Old Frisian *lond, land* 'land'; Old Saxon *land* 'land'; Old High German *lant* 'land' (New High German *Land*); Old Prussian (acc. sg.) *lindan* 'valley'; Russian *ljadá* [ляда] 'overgrown field'; Czech *lada* 'fallow land'. Pokorny 1959:675 **lendh-* 'free land, heath'; Walde 1927—1932.II:438—439 **lendh-*; Mann 1984—1987:677 **lendhos, -ā, -om* 'fallow, fallow land'; Mallory—Adams 1997: 200 **lendh-* ~ **londh-* 'open land, waste'; Watkins 1985:36 **lendh-* and 2000:48 **lendh-* 'open land'; Orël 2003:235 Proto-Germanic **landan*, 235 **landjanan*, 235 **landōn*; Kroonen 2013:326 Proto-Germanic **landa-* 'land'; Feist 1939:321—322; Lehmann 1986:226—227 **lendh-*; De Vries 1977:345; Onions 1966:513 **londh-*, **lendh-*; Klein 1971:409 **lendh-*; Boutkan—Siebinga 2005:233—234 Proto-Germanic **landa-*; Kluge—Mitzka 1967:421 Proto-Germanic **landā-*; Kluge—Seebold 1989:426—427 Proto-Germanic **landa-*; Preobrazhensky 1951:496—497. The unextended stem may be preserved in Balto-Slavic: Lithuanian *lomà* 'hollow, valley, plot, lump'; Latvian *lāma* 'hollow, pool'; Russian (dial.) *lam* [лам] '(Pskov) meadow covered with small trees and bushes that is occasionally flooded; (Novgorod) wasteland'; Polish (obsolete) *lam* 'quarry, bend'; Slovenian *lam* 'pit; (dial.) quarry'; Serbo-Croatian *lām* (dial.) 'knee-joint, underground passage'. Derksen 2008:268 Balto-Slavic **lōm-*; Fraenkel 1962—1965.I:385. The extended verb stem may be preserved in: Sanskrit *rādhyati* (< **l̥ndh-*) 'to be subject to, to be subdued or overthrown, to succumb'; Lithuanian *lendù, l̥sti* 'to creep, to crawl; to be troublesome'. Rix 1998a:370—371 **lendh-* 'to be reduced, lowered; to be brought down'; Mayrhofer 1956—1980.III:40 "etymology unsure"; Smoczyński 2007.1:359 **lendh-/l̥ndh-*; Derksen 2015:289 **l(e)ndh-*; Fraenkel 1962—1965.I:377.
- C. Proto-Uralic **l̥nti* 'low; low-lying ground, lowland': Finnish *lansi/lante-* 'low; low-lying ground, lowland'; Lapp / Saami *luow'de-* 'to lie down flat (especially of a stubborn or tired draught-reindeer)'; Mordvin *lańd'a* 'to stoop, to duck down'; Votyak / Udmurt *lud* 'field, arable land'; Zyrian / Komi *lud* 'meadow, meadow bearing a light growth of timber, small wood-meadow, small field, meadow-land'; Selkup Samoyed *lamdi* 'low'; Yurak Samoyed / Nenets *lamtu* 'low'; Yenisei Samoyed / Enets *loddu* 'low'.

Collinder 1955:31 and 1977:50; Janhunen 1977b:81 **lāmtz-*; Rédei 1986—1988:235—236 **lamte*; Décsy 1990:102 **lamta* ‘deep, low; lowlands’; Zhivlov 2023:161 Proto-Uralic **lęti* ‘lowland’, Proto-Finnic **lante-*.

(?) Sumerian *la-am-ma* ‘underworld’. (Sumerian loan in Akkadian *lammu* ‘underworld’.)

Buck 1949:1.21 earth, land; 12.32 low. Illič-Svityč 1971—1984.II:30—31, no. 264, **Lamd/i/* ‘low; depression’; Bomhard—Kerns 1994:702—703, no. 586; Dolgopolsky 2008, no. 1303, **lam[V]dV* ‘low’. Note: The Altaic forms included by Dolgopolsky do not belong here (cf. Starostin—Dybo—Mudrak 2003:1011 **ńjama* ‘low, level; side of the mountain’).

972. Proto-Nostratic root **lam-* (~ **lām-*) ~ (?) **ʕam-* (~ **ʕām-*):

(vb.) **lam-* ‘to break down or apart (tr.), to crush; to soften, to weaken; to be or become soft, weak, mild, tender, broken, crushed’;

(n.) **lam-a* ‘softness, weakness’; (adj.) ‘soft, weak, flexible; broken, crushed’

A. Proto-Afrasian **lam-* ‘to be soft, weak’, (reduplicated) **lam-lam-*: Semitic: Geez / Ethiopic *lamaša* [ḌḌḌ], *lamda* [ḌḌḌ] ‘to be smooth, soft, polished, plain, bare, bald’, *lamuš* [ḌḌḌ] ‘smooth, slippery, soft, polished, bald, hard, rough’; also (reduplicated) *lamlama* [ḌḌḌ] ‘to be verdant, to bud, to become soft; to be smooth, mild, tender, flexible, fresh’; Tigre *lämša* ‘to be smooth, moist’, (reduplicated) *lämläma* ‘to become green, to sprout’; Tigrinya *lämäšä* ‘to become soft’, (reduplicated) *lämlämä* ‘to become green, to sprout’; Amharic *lämut* ‘smooth, polished’, (reduplicated) *lämallämä* ‘to become verdant, to send out shoots’; Gafat *lämläm^wä* ‘tender’. Leslau 1987:315 and 316. Notes: (1) According to Leslau (1987:316), Arabic *malīš* ‘smooth’ has undergone metathesis from **lmš*. (2) Leslau (1987:315) notes that (reduplicated) **lam-lam-* also occurs in Cushitic: Quara *läläm* (from **lmlm*) ‘to be verdant, green, fresh’ (cf. Reinisch 1885:94); Xamir (reduplicated) *lilem* ‘to be green’ (cf. Reinisch 1884:74). (3) According to Illič-Svityč (1971—1984. II:21—22, no. 254), the Ethiopian Semitic forms are loans from Cushitic. Here, Illič-Svityč cites Leslau 1956. However, Leslau (1956:211) says nothing whatsoever about the Ethiopian Semitic forms being loanwords from Cushitic — nor does Reinisch (1884 and 1885). Berber: Tuareg *ilmaḍ* ‘to be soft, weak, tender, flexible’; Kabyle *lmumi* ‘to be softened through kneading, to be well kneaded’, *aləmḍi* ‘tender (vegetable)’. Haddadou 2006—2007:114, no. 436.

B. Proto-Indo-European **lem-* ‘(vb.) to break, to beat; (adj.) broken, injured, crippled, lame’: Proto-Germanic **lamjan-* ‘to beat, to strike, to cripple’ > Old Icelandic *lemja* ‘to thrash, to flog, to beat; to beat down, to suppress; (reflexive) to be severely injured’, *lemstr* ‘lameness, infirmity’, *lami*

‘lame, maimed’; Faroese *lemja* ‘to paralyze, to beat, to hit’; Swedish *lam* ‘lame, paralyzed’; Norwegian *lam* ‘paralyzed’; Old English *lemian* ‘to subdue, to tame, to break (horse); to disable, to cripple’, *lama* ‘crippled, lame, paralyzed, weak (man)’; Old Frisian *lemma*, *lamma* ‘to make lame, to cripple’, *lemithe* ‘paralysis, mutilation’; Old Saxon *lemmian* ‘to paralyze’, *lamo* ‘lame’; Middle Dutch *lemmen* ‘to make lame, to paralyze’, *lam*, *laem* ‘lame’; Old High German *lemjan* ‘to paralyze, to make lame, to cripple’ (New High German *lähmen*), *lam* ‘lame, crippled, paralyzed’ (New High German *lahm*). Celtic: Middle Irish *laime* ‘axe’. Baltic: Lithuanian *laminti* ‘to cripple, to press, to cram, to break, to crush, to tame’, *limti* ‘to bend, to stoop; (dial.) to break’; Latvian *limt* ‘to slip, to collapse’; Old Prussian *limtwei*, *limtwey*, *lembtwey* ‘(tr.) to break’. Proto-Slavic (inf.) **lomiti* ‘to break’ > Old Church Slavonic *lomljo*, *lomiti* ‘to break’; Russian *lomít’* [ломить] ‘to break’; Czech *lomiti* ‘to break’; Slovene *lómiti* ‘to break’; Bulgarian *lomjá* ‘to break’. Pokorny 1959:674 **lem-* ‘to break; broken, soft, weak’; Walde 1927—1932.II:433—434 **lem-*; Watkins 1985:36 **lem-* and 2000:48 **lem-* ‘to break in pieces; broken, soft’; Mallory—Adams 1997:81 **h₃lem-* ‘to break’; Rix 2001:412 **lemH-* ‘to break’; Mann 1984—1987:677 **lemō*, *-jō*, **lemo-* (**lēm-*, **lom-*, **lōm-*) ‘to break, to snap, to cut, to cut off’, 708 **lomejō*, *-ājō* ‘(tr.) to cut, to break’, 708 **lomos*, *-jos* ‘broken; break; breach, fragment’, 708 **lōmos*, *-ā*, *-ō(n)*, *-jos* ‘broken; fraction, part’; Orël 2003:234 **lamaz* ~ **lamōn* ‘lame’, 234 **lamipō* ‘lameness’, and 234—235 **lamjanan* ‘to thrash, to flog, to lame’; Kroonen 2013:326 Proto-Germanic **lamjan-* ‘to beat (up), to cripple’; Falk—Torp 1910—1911.I:621; Hellquist 1922:395; De Vries 1977:345 and 352; Torp 1919:361; Onions 1966:513 Common Germanic **lamon* originally ‘weak in the limbs’; Klein 1971:408 **lem-* ‘to break’; Boutkan—Siebinga 2005:232; Walshe 1951:133; Kluge—Mitzka 1967:419; Kluge—Seebold 1989:425 **lem-*; Derksen 2008:284—285 Proto-Balto-Slavic **lomʔ-* and 2015:272, 278—279; Fraenkel 1962—1965.I:338; Smoczyński 2007.I:344—345. Note: The putative Greek and Celtic cognates (except for Middle Irish *laime* ‘axe’ cited above) mentioned by Pokorny (1959:674) and others are uncertain.

- C. Uralic: Proto-Finno-Permian **lama* ‘weakness; weak’ > Finnish *lama* ‘to be paralyzed, depressed’, *lamaannus* ‘depression, paralysis, stagnation’, *lamaantus* ‘to be paralyzed’; Estonian *lamama* ‘to lie, to recline’. *lame* ‘flat, plain, level, even’, *lammutama* ‘to demolish, to pull down, to break up’; Lapp / Saami (Norwegian) *labme*, *-ām-* ‘weakness of birds in the molting season’, *labmo*, *-ām-* ‘to become incapable of flying (of a bird in the molting season); to lose one’s vigor, to become tired out (by work)’; (?) Zyrian / Komi *ʋam-* ‘to mash, to crush, to press; to squeeze, to squash’. Rédei 1986—1988:684. Notes: (1) Rédei mentions that the meaning in Finnish has been influenced by Swedish *lam* ‘lame, paralyzed’. (2) The Zyrian / Komi forms cited by Rédei, if they belong

here, point to Proto-Uralic initial *l̥- (cf. Collinder 1965:81 for sound correspondences).

Buck 1949:4.82 weak; 15.75 soft. Illič-Svityč 1971—1984.II:21—22, no. 254, *l'ama 'to knead, to mash, to soften'; Dolgopolsky 2008:1264—1265, no. 1350, *[']lam[X]V 'to be weak/soft; to make soft, to knead'.

973. Proto-Nostratic root *lap^h- (~ *l̥ap^h-):

(vb.) *lap^h- 'to stretch out, to flatten'

(n.) *lap^h-a 'flat surface'; (adj.) 'flat, broad; even, level'

- A. Proto-Afrasian *lap^h- 'to stretch out, to flatten': Berber: Tuareg *ɛlfəs* 'to be flat', *sɛlfəs* 'to flatten', *taləfast* 'a small object flattened into a circular or elongated shape'. Haddadou 2006—2007:111—112, no. 427. Highland East Cushitic: Burji *laaf*- 'to be loose, soft, smooth', *laafaa* 'lazy, smooth, soft, tired, weak', *laaf-is*- 'to soften'; Kambata *laaf*- 'to be soft, smooth', *laafa* 'soft, smooth', *laaf-is*- 'to soften', *lafacce* 'soft, smooth', *lafat*- 'to be soft, smooth (of hide, leather)', *lafat-is*- 'to soften (hide, etc.)'. Hudson 1989:138; Sasse 1982:130 — Sasse mentions that the Burji forms may be loans from Galla / Oromo *laaf*- 'to become soft'. Note also Galla / Oromo *laffa* 'soft, weak, easy, loose, slack'.
- B. Proto-Uralic *lapa 'flat surface': Finnish *lapa* 'shoulder (of an animal), shoulder blade', *lapaluu* 'shoulder blade', (?) *lapio* 'spade, shovel'; Estonian *laba* 'blade; flat (side)'; Lapp / Saami (Norwegian) *lappe*, -*āb*-, -*āv*- 'broad, flat termination of something, when it is an angle to the other (longer) part of the thing; used especially of the sole of the foot'; Vogul / Mansi *lop* in *kaatlop* 'hand's breadth' (*kaat* 'hand'); (?) Yurak Samoyed / Nenets *labe* 'oar'; (?) Tavgi Samoyed / Nganasan *labaj* 'oar'; (?) Yenisei Samoyed / Enets *loba* 'oar'; (?) Selkup Samoyed / Ostyak Samoyed *laba* 'oar'. Collinder 1960:407 **lapa* and 1977:50—51; Rédei 1986—1988:236 **lapa*; Janhunen 1977:81 **lāp̄z*. Proto-Uralic **lapta* 'flat': Finnish *lattea* 'flat, plain, level'; Cheremis / Mari (Uržum) *lapte* 'flat, level, shallow'; Yurak Samoyed / Nenets *lapta* 'flat, level, low'; Yenisei Samoyed / Enets *lota* 'flat, even place'; Motor *lapta* 'low'. Collinder 1960:407 **lapta* and 1977:51; Rédei 1986—1988:238 **lapta*; Janhunen 1977:81 **lāptā*. Proto-Uralic **lappz* 'flat; flat surface': Finnish *lappea*, *lappia* 'flat, flat and broad; flat side'; Estonian *lapp* 'flat', *lape* 'flat'; Lapp / Saami (Norwegian) *lap'pād* (adv.) 'past (at the side, never over or under), without hitting, a miss'; Cheremis / Mari *lap* 'low'; Votyak / Udmurt *lap* 'low, short in growth/stature'; Ostyak / Xanty (Tremjugan) *lāpsək* 'flat'; Hungarian *lap* '(flat) surface; flat; plate, sheet, leaf', *lapos* 'flat, plain, even', *lapít* 'to make flat, to flatten; to lie low', *lapul* 'to become flat; to lurk, to skulk, to lie low'; Yurak Samoyed / Nenets *lapcā*- 'to duck, to bend down, to stoop, to humble oneself'. Rédei 1986—1988:237 **lappz*.

Yukaghir (Kolyma) *laptəŋa*: ‘northern shoveler’, (Yakut dialect) *laptəŋa* ‘northern shoveler’, *liipə* ‘spade made of poplar for shoveling up snow while putting up traps’. Nikolaeva 2006:234 and 243.

- C. Proto-Altaic **lap^{hi}* ‘flat, broad’: Proto-Tungus **lapta-* ‘flat, level’ > Evenki *napta-/lapta-* ‘flat, level’, *lāpčā* ‘fish fins’; Lamut / Even *napča*, *napča* ‘fish fins’. Tsintsius 1975—1977.I:494 and 584. Proto-Mongolian **labta-* ‘to be flat, level, low’ > Written Mongolian *nabtar* ‘low; hanging down, suspended; tattered; rags, tattered garment’, *nabtaɣar* ‘low, short; slanting, sloping’, *nabtai-* ‘to hang, to hang down, to droop; to flatten out; to become low or slanting; to hover (of clouds); to fly slowly and low (of a bird)’; Khalkha *navɣar* ‘low, short, squat’; Buriat *nabtar* ‘low’; Dagur *lartagar* ‘low’. Sanžeev—Orlovskaya—Ševernina 2015—2018.II:183. Starostin—Dybo—Mudrak 2003:867—868 **lapⁱ*.

Buck 1949:12.32 low; 12.71 flat; 15.77 smooth. Illič-Svityč 1971—1984.II: 23—25, no. 256, **lap^a* ‘flat’; Dolgopolsky 2008:1243—1244, no. 1323, **laPTV* ‘flat, low’. Note: There are far too many uncertainties regarding the material cited from Indo-European by Illič-Svityč. Consequently, the Indo-European material is not included here. Early borrowings from a non-Indo-European language may ultimately be the source of at least some of the forms involved.

974. Proto-Nostratic root **las^{y-}* (~ **ləs^{y-}*), **lis^{y-}* (~ **les^{y-}*), **lus^{y-}* (~ **los^{y-}*) (?) (onomatopoeic):
 (vb.) **las^{y-}*, **lis^{y-}*, **lus^{y-}* ‘to lick, to lap (up)’;
 (n.) **las^{y-a}*, **lis^{y-a}*, **lus^{y-a}* ‘tongue; lip’
- A. Proto-Afrasian **las^{y-}* ‘to lick, to lap (up)’, **lis^{y-}* (or **les^{y-}*) ‘tongue’: Proto-Semitic **las^{y-}-ān-* ~ **lis^{y-}-ān-* ‘tongue’ > Akkadian *lišānu* ‘tongue’ (pl. *lišānātu*); Hebrew *lāšōn* [לִשׁוֹן] ‘tongue’; Aramaic *liššān*, *liššānā* ‘tongue’; Syriac *leššānā* ‘tongue’; Phoenician *lšn* ‘tongue’; Ugaritic *lšn* ‘tongue’; Mandaic *lišana* ‘tongue’; Arabic *lisān* ‘tongue, language’; Mehri *əwšēn/ləšōn* ‘tongue’; Soqotri *léšin* ‘tongue’; Šheri / Jibbālī *elšén* ‘tongue’; Ḥarsūsi *lēšen* ‘tongue, language’; Geez / Ethiopic *læssān* [ለሰን] ‘tongue, language’; Tigre *nəssal* (also *lasan*) ‘tongue’; Tigrinya *lasan* ‘tongue’; Amharic *læssan* ‘tongue, language’ (cf. *læssanā nəgus* ‘Amharic [literally, the language of the king]’). Murtonen 1989:250—251; Klein 1987:306; Leslau 1987:318; Zammit 2002:368. Proto-Semitic **las^{y-}* ‘to lick, to lap (up)’ (**las^{y-}-ab-*, **las^{y-}-ad-*, **las^{y-}-am-*, **las^{y-}-aw-*, **las^{y-}-as^{y-}*, **las^{y-}-ah-*) > Arabic *lasaba* ‘to lick; to bite’, *lasada* ‘to suck, to suck out the udder; to lick out’, *lasama* ‘to taste’, *lasā* (base *lsw*) ‘to eat greedily’, *lassa* ‘to eat; to lick out’; Geez / Ethiopic *lašha* [ለሰሐ] ‘to smack the lips, to chew saliva making noise’. Leslau 1987:318. Egyptian *ns* /ls/ ‘tongue’, *nsb* /lsb/ ‘to lick, to lap up’; Coptic *las* [λας] ‘tongue, language’, *lapsi* [λαπσι] (<

**lasb-* ‘to bite, to seize’. Hannig 1995:430 and 432; Faulkner 1962:139; Gardiner 1957:575; Erman—Grapow 1921:86, 87 and 1926—1963.2:320, 2:334; Vycichl 1983:98 and 99; Černý 1976:74. Berber: Tuareg *iləs* ‘tongue, speech, language’; Siwa *iləs* ‘tongue, speech’; Nefusa *iləs* ‘tongue’; Ghadames *iləs* ‘tongue’; Tamazight *iləs* ‘tongue, language’; Riff *ils*, *irs* ‘tongue’; Kabyle *iləs* ‘tongue, language’; Chaouia *ils* ‘tongue’. Chadic: Hausa *lààsáá* ‘to lick, to lick up’ (this may be an Arabic loan [cf. Jungraithmayr—Ibriszimow 1994.I:111]). Omotic: Kaffa *milaso* ‘tongue’ (prefix *mi-*) (loan from Ethiopian Semitic [cf. Tigrinya *mālḥas* ‘tongue’; Amharic *məlas* ‘tongue’; Gafat *məlasä* ‘tongue’]). Orël—Stolbova 1995:361, no. 1666, **les-* ‘tongue’; Ehret 1995:406, no. 827, **lis-* ‘to lick’ (Proto-Semitic **lisn-* ~ **lasn-* ‘tongue’).

Comment: Militarëv—Kogan (2000.I:164—165, no. 181) reconstruct Proto-Semitic (n.) **liš(š)ān-* ~ **lis(s)ān-* ‘tongue; language’ and Proto-Afrasian (n.) **lis-* ‘tongue’. They note: “Judging from Afras. data (below) the original form should be **lis-*, with suffixed **-ān*.”

- B. Proto-Kartvelian **lašk-* ‘lip’: Georgian *laš-* ‘lip (of animal), mouth’; Mingrelian *lečkv-* (< **lešk-*) ‘lip’; Laz *lešk-* ‘lip’. Klimov 1964:120 **laš-* and 1998:107 **laš-* ‘lip’; Schmidt 1962:120; Fähnrich—Sardshweladse 1995:216—217 **laš-*; Fähnrich 1994:222 and 2007:265 **laš-*. Proto-Kartvelian **lšk-wn-* ‘to lick, to lap (up)’: Old Georgian *lošn-*, *lušn-* ‘to lick’; Modern Georgian *lošn-* ‘to kiss (rudely)’, (reduplicated) *lošloš-* ‘to eat (greedily)’; Mingrelian *riskon-*, *rəskon-* ‘to gorge, to nibble’. Klimov 1964:122 **lšwṇ-* and 1998:111 **lš-wn-* ‘to eat (rudely)’.
- C. (?) Indo-European: Sanskrit *rasáyati* (also *rasati*, *rasyati*) (if from **les-/los-*) ‘to taste, to relish’, *rása-h* ‘taste, flavor (as the principal quality of fluids); any object of taste, condiment; the tongue’, *rasanā* ‘the tongue as organ of taste’, *rasā* ‘the tongue’. Mayrhofer 1956—1980.III:48.

Buck 1949:4.25 lip; 4.26 tongue; 4.59 lick (vb.). Dolgopolsky 2008, no. 1332, **Lṽšṽ* ‘to lick’ ([in descendant languages] → ‘to taste; tongue’; Illič-Svityč 1971—1984.II:36—37, no. 273, **LašA* (onomatopoeic) ‘to lick, to lap’.

975. Proto-Nostratic (n.) **lat^h-a* ‘skin’:

- A. Proto-Afrasian **lat-* ‘skin’: Egyptian (reduplicated) *ntnt* /*ltlt*/, *ntt* /*ltt*/ ‘skin’ (medical term). Erman—Grapow 1926—1963.2:356 and 2:357; Hannig 1995:442. West Chadic: Zaar *lèdè*, *là:t* ‘skin’. Jungraithmayr—Ibriszimow 1994.II:296—297. Orël—Stolbova 1995:359, no. 1655, **lat-* ‘skin’.
- B. Proto-Indo-European **leth-ro-* ‘skin, hide, leather’: Old Irish *lethar* ‘skin, hide, leather’; Welsh *lledr* ‘skin, hide, leather’; Breton *lezh* ‘skin, hide, leather’; Old Icelandic *leðr* ‘skin, leather’; Faroese *leður* ‘leather’; Norwegian *læder* ‘leather’; Swedish *läder* ‘leather’; Danish *læder* ‘leather’;

Old English *leper* ‘leather’; Old Frisian *lether* ‘leather’; Old Saxon *leðar* ‘leather’; Dutch *leder*, *leer* ‘leather’; Old High German *ledar* ‘leather’ (New High German *Leder*). Pokorny 1959:681 **letro-* ‘leather’ (?); Walde 1927—1932.II:428 **letro-* (?); Mann 1984—1987:681 **letros*, *-ā* ‘piece, strip, skin’; Watkins 1985:36 **letro-* and 2000:48 **letro-* ‘leather’; Mallory—Adams 1997:269 **letrom* ‘leather’; Kroonen 2013:332 Proto-Germanic **lepra-* ‘leather’; Orël 2003:241 Proto-Germanic **lebran*; De Vries 1977:349; Falk—Torp 1903—1906.I:480 **letro-*; Torp 1919:369; Onions 1966:521 Common Germanic **lepram*; Klein 1971:415; Kluge—Mitzka 1967:430 **letro-*; Kluge—Seebold 1989:433; Vercoullie 1898:166.

Buck 1949:4.12 skin, hide; 6.29 leather. Dolgopolsky 2008, no. 1334, **L[a]tV* ‘skin/leather, bark’.

976. Proto-Nostratic root **law-* (~ **ləw-*):

(vb.) **law-* ‘to bend, to twist, to turn’;

(n.) **law-a* ‘bend, twist, turn’

- A. Proto-Afrasian **law-* ‘to bend, to twist, to turn’: Proto-Semitic **law-ay-* ‘to bend, to twist, to turn’ > Akkadian *lawū* ‘to move in a circle, to encircle, to wrap, to wrap up, to surround’; Hebrew *liwyāh* [לִיּוּיָה] ‘wreath, garland’, *liwyāθān* [לִיּוּיָתָן] ‘serpent, dragon’; Phoenician *lwy* ‘to writhe, to crouch’; Arabic *lawā* (base *lwy*) ‘to turn, to crook, to curve (something); to bend, to flex, to bend up, to bend down, to bend back or over; to twist, to contort, to wrench, to wrap (something); to distort, to pervert (something); to turn (the head), to turn away, to avert (the face); to turn around, to turn (to someone, something), to face (someone, something)’; Ḥarsūsi *lewō* ‘to bend, to wrap up’; Šḥeri / Jibbālī *lē* (base *lwy*) ‘to turn (a corner), to catch hold of’; Mehri *ləwū* ‘to bend’; Geez / Ethiopic *lawaya* [ለወየ] ‘to twist, to wind, to wrap around, to err’; Tigre *lāwla* (reduplicated base *lwlw*) ‘to wind around’, *lāwäyā* ‘crooked’; Tigrinya *lāwäyā* ‘to twist’. Murtonen 1989:246; Klein 1987:296; Leslau 1987:322; Zammit 2002:375. Proto-Semitic **law-ady-* ‘to twist, to turn’ > Hebrew *lūz* [לִז] (base *lwz* [לִז]) ‘to turn aside, to depart’, *nālōz* [נָלִז] ‘devious, crooked’; Arabic *lāda* (base *lwd*) ‘to turn aside’; Geez / Ethiopic *loza* [ለዐዘ] (base *lwz*) ‘to twist, to wrap around, to deviate from the road’. Klein 1987:296; Leslau 1987:322; Murtonen 1989:245; Zammit 2002:374—375. Proto-Semitic **law-ak-* ‘to soften, to distort, to curve’ > Arabic *lāka* (base *lwḵ*) ‘to soften, to distort, to curve’. Proto-Semitic **law-atv-* ‘to wrap, to twist, to turn’ > Hebrew *lūš* [לִש] (base *lwš* [לִש]) ‘to knead’; Aramaic *lūš* (base *lwš*) ‘to knead’; Mandaic *luš* ‘to knead’; Akkadian *lāšu* ‘to knead’; Arabic *lātā* (base *lwt*) ‘to wrap the turban around one’s head; to go around; to soak in water or fat; to take refuge with; to stick always at home’; Geez / Ethiopic *losa* [ለዐሰ], *loša* [ለዐሠ] ‘to knead, to mingle, to mix’; Tigre *lōša* ‘to intermingle’; Tigrinya

läwwäsä ‘to knead’; Amharic *läwwäsä* ‘to knead’; Argobba *lewäsa* ‘to knead’; Gafat *liwwäsä* ‘to knead’; Gurage *lawäsä* ‘to knead dough, to mix, to intermingle’. Klein 1987:297; Murtonen 1989:246; Leslau 1979:384 and 1987:321. Proto-Semitic **law-ag-* ‘to turn’ > Arabic *lāġa* (base *lwġ*) ‘to turn about in the mouth; to deviate, to turn aside from the road, to swerve’. Proto-Semitic **law-aġ-* ‘to turn about, to roll around’ > Arabic *lāġa* (base *lwġ*) ‘to roll about in the mouth and throw out’. Proto-Semitic **law-ak-* ‘to turn about’ > Arabic *lāka* (base *lwk*) ‘to turn about in the mouth and chew’. Proto-Semitic **law-at-* ‘to wrap up tightly’ > Hebrew *lūt* [לִּוֵּת] ‘to cover, to wrap up, to envelop’; Akkadian *lātu* ‘to confine, to keep in check (with a bridle), to curb, to control’, *lītu* ‘hostage’; Arabic *lāta* (base *lwt*) ‘to be in one’s mind; to bring together; to coat with clay, to plaster (a wall); to be a sodomite, pederast; to prevent, to hinder, to turn from’, *lūtī* ‘sodomite, pederast’. Murtonen 1989:245; Klein 1987:296; Von Soden 1965—1981.I:540 and I:558. Proto-Semitic **law-aw-* ‘to turn, to twist, to wrap’ > Geez / Ethiopic *lawawa* [ለወወ] ‘to wrap around, to twist, to be evil, to be impudent, to be of a threatening appearance, to observe fixedly’. Leslau 1987:321. Egyptian *iwšš* (< /wšš/), **iwšm* (< /wšm/) ‘to knead’; Coptic *wōšm* [ⲱⲩⲥⲙ] ‘(vb.) to knead, to mix; (n.) dough’. Faulkner 1962:14 *iwšš* ‘gruel’; Erman—Grapow 1921:9 and 1926—1963.I:58; Hannig 1995:37; Vycichl 1983:240; Černý 1976:221. Egyptian **rwrw* /lwlw/ ‘to wander about’; Coptic *lele* [λελε] ‘to wander about’. Vycichl 1983:97; Černý 1976:72. Berber: Kabyle *lawəh* ‘to wander, to roam’; Tashelhiyt / Shilha *lulli* ‘to wander about, to turn’. West Chadic **lawya-* ‘to bend’ > Hausa *lauyà* ‘to bend to make round; to turn (steering wheel)’. Orël—Stolbova 1995:359, no. 1658, **lawVy-* ‘to twist, to bend’.

- B. Proto-Indo-European **lew-/low-/lu-* ‘to bend, to twist, to turn, to wind’ (extended forms: **lew-k’-/low-k’-/lu-k’-* and **lew-t’-/low-t’-/lu-t’-*): Greek *λυγίζω* ‘to bend, to twist, to writhe’; Latin *luctor*, *luctō* ‘to wrestle’; Gothic *galūkan* ‘to lock up’; Old Icelandic *lykna* ‘to bend the knees’, *lykja* ‘to shut in, to enclose’, *lykkja* ‘loop, coil (of rope)’, *lykkjótr* ‘looped, curved’, *ljúka*, *lúka* ‘to shut’, *lúta* ‘to lout, to bow down’, *lútr* ‘louting, bent down, stooping’, *lok* ‘bolt (of a door), lock’; Old English *lūcan* ‘to close, to shut up, to confine’, *loc* ‘lock, bolt, bar’, *lūtan* ‘to bow, to bend, to turn, to prostrate oneself’; Old Frisian *lūka* ‘to close’; Old Saxon *bi-lūkan* ‘to close up’; Dutch *luik* ‘shutter, trapdoor’; Old High German *lūhhan* ‘to close’, *bi-lūhhan* ‘to close up’. Rix 1998a:372 **leud-* ‘to be bent down, bowed down’ and 374 **leug-* ‘to bend’; Pokorny 1959:634 **leud-* ‘to be bent down, bowed down’, 685 **leug-* ‘to bend’; Walde 1927—1932.II:413—414 **leug-* and II:415—416 **leud-*; Mann 1984—1987:716 **lūd-* (?) ‘to lay low, to reduce’, 717 **lūg-* ‘to bend, to twist’, 718 **lūg-* ‘to bend, to twist’; Watkins 1985:37 **leud-* ‘small’, 37 **leug-* ‘to bend, to turn, to wind’ and 2000:49 **leud-* ‘small’; Chantraine 1968—1980.II:648—649; Beekes 2010.I:874—875 **leug-*; Hofmann 1966:184;

Boisacq 1950:589—590 **lug-*; Frisk 1970—1973.II:141; Ernout—Meillet 1979:368; Walde—Hofmann 1965—1972.I:826—827 **lug-*; De Vaan 2008:350 **lug-to-* ‘bent’; Orël 2003:252 Proto-Germanic **lūkanan*, 252 **lūtanan*; Kroonen 2013:334 Proto-Germanic **leukan-* ~ **lūkan-* ‘to close; to pull’; De Vries 1977:364, 368, 369, and 370; Feist 1939:189—190 **leug-*; Lehmann 1986:143; Onions 1966:534; Klein 1971:427; Boutkan—Siebinga 2005:246—247.

Buck 1949:5.54 knead; 9.14 bend (vb. tr.); 10.12 turn (vb.); 10.13 turn around (vb.); 10.14 wind, wrap (vb.); 10.15 roll (vb.). Bomhard—Kerns 1994:701, no. 584.

977. Proto-Nostratic root **law-* (~ **ləw-*):

(vb.) **law-* ‘to shine’;

(n.) **law-a* ‘light, glow’; (adj.) ‘shining, gleaming, glowing, bright’

- A. Proto-Afrasian **law-* ‘to shine, to gleam, to glow, to glimmer’: Proto-Semitic **law-aḥ-* ‘to shine, to gleam, to glimmer’ > Ugaritic *lh* (base *lwh*) ‘to shine, to gleam, to glimmer’ (Aistleitner 1967:169); Arabic *lāḥa* (base *lwh*) ‘to shine, to gleam, to flash, to glimmer, to sparkle; to appear, to show, to come into sight’; Šheri / Jibbāli *lāḥ* (base *lwh*) ‘to appear fleetingly’. Egyptian *nwh* /*lwh*/ ‘to be burnt, to become warm, to heat up, to become scorched’; (?) Coptic *lōbš* [ⲗⲠⲃⲩ] ‘to be hot, to glow’. Hannig 1995:399; Faulkner 1962:128; Erman—Grapow 1921:78 and 1926—1963.2:224; Vycichl 1983:95 (Vycichl derives *lōbš* [ⲗⲠⲃⲩ] from Egyptian *ḥbh* /*lhb*/ ‘to burn, to scorch’); Černý 1976:70 (Černý derives *lōbš* [ⲗⲠⲃⲩ] from Egyptian *nwh* /*lwh*/ ‘to be burnt, to become warm’).
- B. Proto-Indo-European **lew-kh-* / **low-kh-* / **lu-kh-* ‘to shine, to be bright’: Sanskrit *rócate* ‘to shine, to be bright’; Greek λευκός ‘bright, white’, λείσσω ‘to gaze, to look at, to see’; Latin *lūceō* ‘to shine’, *lūx* ‘light’, *lūmen* ‘light’; Welsh *llug* ‘light’; Gothic *liuhab* ‘light’; Old English *lēoht* ‘light’, *līeg* ‘flame, lightning’, *līexan* ‘to shine, to glitter’, *liehtan* ‘to shine’, *lēohtian* ‘to become light, to shine’; Old Frisian *liācht* ‘light’; Old Saxon *lioht* ‘light’; Old High German *lioht*, *lioth*, *lihot*, *liaht*, *lich*, *leoht*, *liecht* ‘light’ (New High German *Licht*, *Leuchte*), *liechten*, *liohtan* ‘to shine’ (New High German *leuchten*); Armenian *loys* ‘light’; Tocharian A *lyok-*, *lyk-*, B *luk-*, *lyuk-*, *lauk-*, *lyauk-* ‘to shine’; Old Church Slavic *luča* ‘gleam’, *lučb* ‘ray of light’; Luwian (nom. sg.) *lu-u-ḫa-aš* ‘light’; Hittite (3rd sg. pres.) *lu-uk-ki-iz-zi* ‘to set fire to’, (3rd sg. pres.) *lu-uk-zi* ‘to grow bright’. Rix 1998a:376—377 **leuk-* ‘to grow bright’; Pokorny 1959:687—690 **leuk-* ‘(vb.) to shine; (n.) light’; Walde 1927—1932.II:408—412 **leuq-*; Mann 1984—1987:683—684 **leuketos*, *-om*, *-os* (**leukāt-*, **leukāt-*) ‘light, bright, brightness’, 684 **leukjō* (**leukejō*, **louk-*) ‘to shine, to appear, to look, to see, to become clear’, 684 **leukm-* (**lukm-*) ‘brilliance’, 684

leukos*, -ā (louk-*) ‘light, white; light, brilliance’, 684—685 **leuks-*, 712 **louk-*, 712 **loukn-*, **loukən-*, 713 **louksnos*, -ā, 713 **louk-*, 718 **luk-* ‘light, shine’, 719 **lūk-*, 719 **lūkəros*, -ios, 719 **lūkətos* (**lūketo-*, **lūkito-*) ‘light, bright; gleam’, 719 **lūkin-*, 719 **lūknt-*, 719—720 **luks-*, 720 **lūkstros*, -is ‘bright; brightness’, 720 **lūktis*, -os (**lūkst-*) ‘light, shining, shine’, 720 **luksn-*; Watkins 1985:37 **leuk-* and 2000:49 **leuk-* ‘light, brightness’; Gamkrelidze—Ivanov 1984.II:883 **l(e)uk[h]*- and 1995.I:779 **l(e)ukh-* ‘to shine’; Mallory—Adams 1997:352 **lóuk(es)-* ‘light’ and 513 **leuk-* ‘to shine’; Boisacq 1950:571—573 **leuq-/louq-/luq-* and 574 **leuq-*; Hofmann 1966:178 **leuq-*; Frisk 1970—1973.II: 108—109 and II:110; Chantraine 1968—1980.II:632—633 **leuq-/louq-*; Beekes 2010.I:851 **leuk-* and I:851—852 **leuk-*; De Vaan 2008:355—356; Ernout—Meillet 1979:372—374 **leuk-*; Walde—Hofmann 1965—1972.I:823—824; Orël 2003:242 Proto-Germanic **leuxmōn*, 242 **leuxsaz*, 242 **leuxsjanan*, 242 **leuxsnaz*, 242—243 **leuxtān*, 243 **leuxtjanan*; Kroonen 2013:333 Proto-Germanic **leuhanda-* ‘light’, 333 **leuhman-* ‘beam of light’, 333 **leuhna-* ‘lightning’, and 334 **leuhsa-* ‘light, bright’; Feist 1939:334—335 **leuk-*; Lehmann 1986:236 **leuk-*, **leuk-*; Onions 1966:527 **leuk-/louk-/lūk-*; Klein 1971:421 **leuq-*; Boutkan—Siebinga 2005:238; Kluge—Mitzka 1967:437 and 439 **leuk-*; Kluge—Seebold 1989:440 and 441 **leuk-*; Mayrhofer 1956—1980.III:56—57; Kloekhorst 2008b:530—533; Puhvel 1984— .5:103—108 **lewk-*; Adams 1999:556 **leuk-*; Van Windekens 1976—1982.I:169 **leuq-/louq-/luq-* and I:274 **leuqo-s*.

Buck 1949:15.56 shine. Bomhard—Kerns 1994:698—699, no. 580.

978. Proto-Nostratic root **law-* (~ **ləw-*):

(vb.) **law-* ‘to separate, to divide, to part, to sever, to detach’;

(n.) **law-a* ‘part cut off, separation, division’

- A. Proto-Afrasian **laaw-* ‘to separate, to divide, to part, to sever, to detach’: Semitic: Geez / Ethiopic *loka* [ሎቀ] (base *lwḳ*) ‘to let go, to release, to let loose’. Leslau 1987:321. Egyptian *iwd* (*i-* < **lu-*) ‘to separate’, *iwdt* ‘separation’, *r iwd* ‘between’; Coptic *ute-*, *utō-* [ΟΥΤΕ-, ΟΥΤΩ-] ‘between, among’. Hannig 1995:38; Faulkner 1962:14; Gardiner 1957:552; Erman—Grapow 1921:9 and 1926—1963.1:58—59; Černý 1976:218; Vycichl 1983:238. Proto-Southern Cushitic **laaw-* ‘to pick, to pluck’ > Iraqw *lot-* ‘to milk’, *lotusmo* ‘milker’; Burunge *lomid-* ‘to milk’; Alagwa *lomit-* ‘to milk’; Dahalo *laaw-*, *loom-* ‘to pick, to pluck’. Ehret 1980:204. [Ehret 1995:407, no. 830, **laaw-* ‘to take hold of’.]
- B. Kartvelian: Svan (Lower Bal) *lawxi* ‘shovel’, (Upper Bal) *lāxīr* ‘spade, shovel’.

- C. Proto-Indo-European **lew(H)-/*low(H)-/*lu(H)-* (> **lū-*) ‘to separate, to divide, to part, to sever, to detach’: [Sanskrit *lū-* (3rd sg. pres. act. *lunāti*, [Vedic] *lunoti*) ‘to cut, to sever, to divide, to pluck, to reap, to gather; to cut off, to destroy, to annihilate’, *lāva-h* ‘act of cutting, reaping (of grain), mowing, plucking, or gathering’, *lāva-h* ‘cutting, cutting off, plucking, reaping, gathering; cutting to pieces, destroying, killing’, *lavī-h* ‘cutting, sharp, edge (as a tool or instrument); an iron instrument for cutting or clearing’, *lūna-h* ‘cut, cut off, severed, lopped, clipped, reaped, plucked; nibbled off, knocked out; stung; pierced, wounded; destroyed, annihilated’, *lūnaka-h* ‘a cut, wound, anything cut or broken; sort, species, difference’, *lavitra-m* ‘sickle’]; Greek *λύω* ‘to loosen, to unbind, to unfasten, to untie’, *λύη* ‘dissolution’, *λυτός* ‘that may be unloosened, released, untied’, *λύτρον* ‘a ransom, a price paid’; Latin *luō* ‘to loosen’, *solvo* (< **se-luō*) ‘to loosen’; Old Irish *as-loa* (< **eks-luwo-*) ‘to escape’; Gothic (acc. sg.) *lun* ‘ransom’, *us-luneins* ‘salvation’; Old Icelandic *lé* (< Proto-Germanic **lewan*) ‘scythe’, *ljár* ‘scythe’; Faroese *liggi* ‘sickle’; Norwegian *ljaa* ‘sickle’; Swedish *lie* ‘sickle’; Danish *lja* ‘sickle’; Old English *ā-hynnān* ‘to deliver, to let go, to release, to loosen’; Tocharian B *lu-* ‘to send’; Luwian (3rd sg. pret.) *la-wa-ar-ri-it-ta* ‘to despoil, to strip’ (Kloekhorst [2008:521] rejects the comparison of this form with Hittite *duwarni-* ‘to break’). Rix 1998a:374—375 **leuH-* ‘to cut off, to loosen’; Pokorny 1959:681—682 **leu-* ‘to cut apart, to divide, to loosen’; Walde 1927—1932.II:407—408 **leu-* (also **leuāx-* and **lēu-* : **ləu-* [: **lū-*]); Mann 1984—1987:683 **leuḡō* ‘to loosen, to crumble, to shred’, 687 **lēuis, -os, -ā* ‘cutting, felling, injury, slaughter’, 711—712 **louḡ-* ‘to break, to loosen, to release; loose, free, broken, fragmentary’, 714 **loupejō* ‘to strip, to plunder’, 714 **loupos* ‘stripping, plunder; stripper; stripped thing, peel, leaf’, 717—718 **lūḡ-* ‘to break, to tear’, 718 **lūḡ-* ‘to jerk, to pull’, 718 **lūjō* ‘to slacken’, 720 **lūp-* ‘to peel’, 722 **luuō* ‘to strike, to destroy’; Watkins 1985:36—37 **leu-* and 2000:48—49 **leu-* ‘to loosen, to cut, to divide’; Mallory—Adams 1997:481 **leuh_x-* ‘to release, to cut off’; Mayrhofer 1956—1980.III:106—107; Boisacq 1950:593 **lēu-* : **ləu-* : **lū-* ‘to cut off, to detach, to untie’; Frisk 1970—1973.II:149—150; Hofmann 1966:185 **lēu-*, **ləu-*, **lū-*; Beekes 2010.I:881—882 **lh₁u-*; Chantraine 1968—1980.II:652—653; Ernout—Meillet 1979:370; Walde—Hofmann 1965—1972.I:834—835 **lēu-*, **ləu-*, **lū-*; De Vaan 2008:353; Orël 2003:243 Proto-Germanic **lewōn*; Feist 1939:338 **leu-*; Lehmann 1986:238 **lew-* ‘to cut off, to release’; De Vries 1977:349 **leu-*; Falk—Torp 1903—1906.I:465; Torp 1919:384; Adams 1999:555—556 **lew(h_x)-* ‘to cut off, to separate’; Van Windekens 1976—1982.I:268—269 **leu-*; Kloekhorst 2008b:521. Proto-Indo-European **lew-s-/*low-s-/*lu-s-* ‘to lose, to loosen; to untie, to undo; to release, to set free’: Gothic *ga-lausan* ‘to rescue’, *lausan* ‘to free, to rescue, to deliver’, **us-lausan* ‘to empty’, **us-lauseins* ‘salvation’, *laus* ‘free from, empty’, **fra-liusan* ‘to lose’, **fra-lusnan* ‘to be lost, to perish’,

fra-lusts ‘lost’; Old Icelandic *leysa* ‘to lose, to loosen, to untie, to undo; to dissolve, to break up; to absolve; to free, to set free, to release; to discharge, to pay’, *losa* ‘to loosen, to make loose; to perform, to do; to get loose, to get away’, *losna* ‘to become loose, to get free; to dissolve, to break up; to get away’, *lauss* ‘loose; free, unimpeded, unencumbered; disengaged (free) from; void, not binding; vacant; empty; -less’; Swedish *lös* ‘loose, movable, detached’; Danish *løs* ‘loose, untied’; Old English *lēas* ‘devoid of, without’, *for-lēosan* ‘to lose, to destroy’, *losian* ‘to be lost; to escape (from); to perish’, *līesan* ‘to release, to deliver; to redeem’; Old Frisian *lās* ‘free from, without, deprived of’, *lēsa* ‘to be free (from)’, *lēsene* ‘ransom’, *for-liasa* ‘to lose’; Middle Dutch *loos* ‘free from’; Old Saxon *lōs* ‘free from, empty of, -less’, *lōsian* ‘to release’, *far-liosan* ‘to lose’; Old High German *lōs* ‘free from, empty of; -less’ (New High German *los*), *lōsen* ‘to release’ (New High German *lösen*), *fir-liosan* ‘to lose’ (New High German *verlieren*). Pokorny 1959:681—682 **leu-* ‘to cut apart, to divide, to loosen’; Walde 1927—1932.II:407—408 **leu-* (also **leuā*^x- and **lēu-* : **ləu-* [: **lū-*]), **leu-s-*; Mann 1984—1987:686 **leusō* (**leus-*) ‘to release, to let, to free, to lose; to depart, to die’, 714 **lousos* ‘loose, free, freed, robbed, deprived’, 721—722 **lusō* ‘to loosen’; Watkins 1985:36—37 **leu-* (Germanic **leusan*) and 2000:48—49 **leu-* ‘to loosen, to cut, to divide’ (extended Germanic root **leus-*); Mallory—Adams 1997:481 **leus-*; Orël 2003:243 Proto-Germanic **leusanan*, 251 **lusan*, 251 **lusnōjanan*, 251 **lusōjanan*, 251 **lustiz*; Kroonen 2013:329 Proto-Germanic **lausaz* ‘empty, idle’; Feist 1939:163—164 **leu-*, 325, and 326; Lehmann 1986:123—124 **lew-* ‘to separate, to free’ and 229; Falk—Torp 1903—1906.1487—488 Germanic **lausaz*; De Vries 1977:348, 354, and 366—367; Klein 1971:429 and 430 **leus-*; Onions 1966:536 Common Germanic **lausaz* < **laus-*, **leus-*, **lus-* and 537 **leus-*, extension of **lou-*, **leu-*, **lu-*; Barnhart 1995:443; Boutkan—Siebinga 2005:227—228 **lew-* and 234; Kluge—Mitzke 1967:446, 447, and 815; Kluge—Seebold 1989:448 and 760. Note: Some of the forms listed here may belong under Proto-Nostratic **laxw-* (~ **ləxw-*) ‘to strike, to hit, to beat’ (see below) instead. Clearly, there has been contamination between these stems in the Indo-European daughter languages, and, consequently, it is difficult to sort out the ultimate origin of individual reflexes.

Buck 1949:8.22 dig; 8.23 spade; 8.24 shovel; 8.33 sickle; scythe; 11.33 lose; 12.23 separate (vb.).

979. Proto-Nostratic root **law-* (~ **ləw-*):
 (vb.) **law-* ‘to moisten, to water; to wash, to clean’;
 (n.) **law-a* ‘the act of bathing, washing’

- A. Proto-Afrasian **law-* ‘to moisten, to water; to wash, to clean’: Egyptian *iwh* (< /lwh/) ‘to moisten, to water (field plots), to inject (a liquid)’, *iwhw* (< /lwhw/) ‘inundation’. Hannig 1995:36; Faulkner 1962:14; Erman—Grapow 1921:9 and 1926—1963.1:57; Gardiner 1957:552. Berber: Tuareg *lallawət* ‘to wash, to be washed’; Nefusa *llil*, *ilil* ‘ocean, sea’, *sslil* ‘to rinse’; Tamazight *lil* ‘to be rinsed’, *slil* ‘to rinse’; Tashelhiyt / Shilha *slil* ‘to rinse’; Riff *slil*, *srir* ‘to rinse’; Kabyle *lil* ‘to be rinsed’, *slil* ‘to rinse’; Chaouia *slil* ‘to rinse, to gargle’; Zenaga *il* ‘sea’.
- B. Proto-Indo-European **lewḥh-/lowḥh-* ‘to wash, to bathe’: Greek λούω (Homeric λόω, λοέω) ‘to wash, to bathe’, λουτρόν (Homeric λοετρόν) ‘a bath’; Mycenaean *re-wo-to-ro-ko-wo* (= /λεφοτροχοφο/) ‘bath-pourers’, *re-wo-te-re-jo* (= /λεφοτρειος/) ‘for bathing’; Latin *lavō* ‘to wash, to bathe’; Gaulish *lautreo* ‘a bath, a bathing-place’; Old Irish *lúaith* ‘ashes’, *loathar*, *lóthor* ‘basin’; Armenian *loganem* (< **lowH-ye/o-*) ‘to bathe’; Old Icelandic *lauðr* ‘lather, froth, foam of the sea’, *laug* ‘bath’, *leyðra* ‘to wash, to clean’; Old English *lēaþor* ‘lather, soap’, *līeþran* ‘to lather, to smear’, *lēag* ‘lye, ashes and water for washing’; Middle Dutch *lōghe* ‘lye’ (Dutch *loog*); Old High German *louga* ‘lye’ (New High German *Lauge*). Rix 1998a:375—376 **leuḥ₃-* ‘to wash’; Pokorny 1959:692 **lou-*, **louə-* ‘to wash’; Walde 1927—1932.II:441 **lou-*; Mann 1984—1987:688 **laughō* (**laughnō*) ‘to wash, to bathe’, 688 **ləuənos*, *-ā* ‘wash, washing; washtub’, 688—689 **ləuō*; **lōuō*, *-iō* ‘to wash, to bathe, to soak, to swill’, 710—711 **lōtos* ‘washed; wash, washing-bowl, basin’, 714—715 **louētēr-*, **loutro-*, **lōuētēr-*, **ləuətro-* ‘ablution, bath, bathtub’, 715 **lōutos*, *-us* ‘trough, washbasin, bath’; Watkins 1985:37 **leu(ə)-* and 2000:49 **leu(ə)-* ‘to wash’ (oldest form **leu(ə₃)-*); Mallory—Adams 1997:108 **leuḥ₃-* ‘to wash, to bathe’; Gamkrelidze—Ivanov 1984.I:171 **loH^o > *loHu-* and 1995.I:147 **loH^o > *loHw-*; Boisacq 1950:587—588 **lou-*; Chantraine 1968—1980.II:647 **low-ə₁-*; Beekes 2010.I:872—873 **leuḥ₃-*; Frisk 1970—1973.II:138—139 **louə-*; Hofmann 1966:183; Vilborg 1960:50; Walde—Hofmann 1965—1972.I:773—775; Ernout—Meillet 1979:344—346; De Vaan 2008:330—331; Orël 2003:238 Proto-Germanic **lauzō*, 239—240 **laupran*; Kroonen 2013:329 Proto-Germanic **laupra-* ‘lather’; De Vries 1977:346, 347, and 353; Onions 1966:517 and 542 **lou-* ‘to wash’; Klein 1971:412 and 434; Hoad 1986:259—260 **lou-* and 274; Kluge—Mitzka 1967:427 **lou-*; Kluge—Seebold 1989:431 **leuə-*. The Mycenaean forms confirm that the original Proto-Indo-European stem was **lewḥh-/lowḥh-* (cf. Winter 1965a:108); thus, the comparison with Hittite *la-a-hu-wa-i* ‘to pour, to pour out (liquids)’ should be abandoned.

Sumerian *luh* ‘to wash, to clean’, *luh(-luh)* ‘to be washed, cleaned’.

Buck 1949:9.36 wash; 15.87 clean. Bomhard—Kerns 1994:699, no. 581.

980. Proto-Nostratic root **lax^w-* (~ **lax^w-*):(vb.) **lax^w-* ‘to strike, to hit, to beat’;(n.) **lax^w-a* ‘the act of striking, hitting, beating; stroke, hit, blow’

- A. Proto-Afrasian **lax^w-* ‘to strike, to hit, to beat’: Proto-Semitic **lax-* (**lax-ab-*, **lax-ap-*, **lax-am-*) ‘to strike, to hit, to beat’: Arabic *laḥaba* ‘to lie with; to box on the ear, to beat, to slap’; Sabaeen *lx[b]*, *l[xb]n* ‘slaps, contentions’. Arabic *laḥafa* ‘to beat violently; to enlarge the mark of an animal (by branding)’. Arabic *laḥama* ‘to strike, to hit on the face’, *laḥām* ‘a slap’; Sabaeen *lxm* ‘brawl’; Geez / Ethiopic *laḥma* [ላሕመ], *laḥama* [ላሕመ] ‘to be tender, soft; to be reduced to powder, to be pulverized; to be flexible, supple; to be feeble, infirm; to be moist’; Tigrinya *lāḥamä* ‘to be pulverized; to be soft, tender’; Amharic *lamä* ‘to be pulverized; to be tender’; Argobba *lähim* ‘soft’; Harari *lēḥama* ‘to become soft (skin, cloth), to be tender (meat), to be easy (test)’; Gurage *lāmä* ‘to be soft, to be smooth’. Leslau 1963:99, 1979:379, and 1987:311. Arabic *laḥz* ‘sharp knife’. Egyptian *rḥs* /ḥs/ ‘to slaughter’. Hannig 1995:476; Faulkner 1962:152; Gardiner 1957:578; Erman—Grapow 1921:96 and 1926—1963.2:448. Berber: Tuareg *allay* ‘iron javelin’, *tallayin* ‘wooden javelin’, *aləy* ‘leg (from the knee to the ankle)’; Tamazight *iləy* ‘calf (of leg)’; Tashelhiyt / Shilha *aləy* ‘main branch of a tree’; Kabyle *illəy* ‘branch cut short, leaf stem; earring’; Chaouia *iləy* ‘branch cut off, earring with a pendant’. The following East Cushitic forms may belong here as well: Harso *lax-ko* ‘arrow (poison)’; Burji *law-ée* ‘arrow for bleeding’; Galla / Oromo *law-aa* ‘arrow’; Konso *law-itta*, *law-a* ‘arrow’; Yaaku *lax* ‘arrow’; Rendille *lahaw* ‘children’s arrow’; Gollango *laah-ko* ‘arrow (poison)’; Gawwada *laax-e* ‘arrow’. Sasse 1979:20—21 Proto-East Cushitic (?) **lawx-* ‘arrow’ and 1982:133—134; Hudson 1989:209. For the semantics, cf. Old Icelandic *ljósta* ‘to strike, to smite; to strike, to hit (with a spear or arrow)’, *ljóstr* ‘salmon spear’, cited below.
- B. Proto-Indo-European **leḥh^w-* [**laḥh^w-*] (> **lāw-*), (**ləḥh^w-* >) **luḥh^w-* (> **lū-*) ‘to hit, to strike, to beat’: [Sanskrit *lū-* (3rd sg. pres. act. *lunāti*, [Vedic] *lunoti*) ‘to cut, to sever, to divide, to pluck, to reap, to gather; to cut off, to destroy, to annihilate’, *lāva-h* ‘act of cutting, reaping (of grain), mowing, plucking, or gathering’, *lāva-h* ‘cutting, cutting off, plucking, reaping, gathering; cutting to pieces, destroying, killing’, *lavī-h* ‘cutting, sharp, edge (as a tool or instrument); an iron instrument for cutting or clearing’, *lūna-h* ‘cut, cut off, severed, lopped, clipped, reaped, plucked; nibbled off, knocked out; stung; pierced, wounded; destroyed, annihilated’, *lūnaka-h* ‘a cut, wound, anything cut or broken; sort, species, difference’, *lavitra-m* ‘sickle’]; Old Icelandic *ljósta* (< **lew-s-*) ‘to strike, to smite; to strike, to hit (with a spear or arrow)’, *ljóstr* ‘salmon spear’, *lost* ‘blow, stroke’, *lýja* ‘to beat, to hammer; to forge iron; to wear out, to exhaust; (reflexive) to be worn, exhausted’, *lúi* ‘weariness’, *lúinn* ‘worn, bruised’;

worn out, exhausted'; Norwegian (dial.) *lua* 'to unwind'; Old Irish *loss* 'the point or end of anything, tail'; Welsh *llost* 'spear, lance, javelin, tail' (< **lustā*). Mann 1984—1987:687 **lēuis*, -*os*, -*ā* 'cutting, felling, injury, slaughter'; Mayrhofer 1956—1980.III:106—107; Orël 2003:245 Proto-Germanic **lēwan*, 245 **lēwjanan*; Kroonen 2013:335 Proto-Germanic **lewan*- 'scythe'; De Vries 1977:360, 361, 367, 368, and 369; Lewis—Pedersen 1937:21. Note: Some of the forms listed here may belong under Proto-Nostratic **law*- (~ **law*-) 'to separate, to divide, to part, to sever, to detach' (see above) instead. Clearly, there has been contamination between these stems in the Indo-European daughter languages, and, consequently, it is difficult to sort out the ultimate origin of individual reflexes.

- C. Chukchi-Kamchatkan: Proto-Chukotian **law*- 'to defeat' > Chukchi *law*- 'to defeat'; Kerek *luu*- 'to defeat', *ina-lw-aat*- 'to win (something from someone)'; Koryak *law*- 'to defeat, to tame'; Alyutor *law*- 'to defeat, to tame'. Fortescue 2005:168.

Buck 1949:9.21 strike (hit, beat); 11.33 destroy; 20.25 arrow; 20.26 spear; 20.42 defeat (sb.).

981. Proto-Nostratic root **li*²- (~ **le*²-):

(vb.) **li*²- 'to come into being, to arise, to grow, to become';

(n.) **li*²-*a* 'being, becoming'

- A. Afrasian: Proto-Highland East Cushitic **le*²- 'to grow (up)' > Burji *le*- 'to sprout'; Hadiyya *li*²- 'to grow (up)'; Kambata *le*²- 'to grow (up)'; Sidamo *le*²- 'to ripen (of coffee, berries)'. Hudson 1989:74. Southern Cushitic: Ma'a *li*- 'to grow (of plants)'. Ehret 1980:205.
- B. Uralic: Proto-Finno-Ugrian **le*- 'to be, to become, to live' > Finnish *lie*- 'to be' (only in the potential mood); Veps *le*-, *li*- 'to be'; Vote *lee*- 'to be, to become'; Lapp / Saami *læ*- 'to be'; Cheremis / Mari *liä*-, *li(j)a*- 'to be, to become, to be possible'; Votyak / Udmurt *lu*- 'to be'; Zyrian / Komi *lo*- 'to become, to be'; Hungarian *lë*- ~ *lëv*- 'to become, to be; shall be, will be'. Collinder 1955:32, 1960:407 **le*(*γä*-), and 1977:51; Rédei 1986—1988: 243—244 **le*-. Yukaghir (Southern / Kolyma) *l'ə*- 'to be, to exist', (Northern / Tundra) *l'e*- 'to be, to exist'. Nikolaeva 2006:237.
- C. Proto-Eskimo postbase **li*- 'to become (more)': Alutiiq Alaskan Yupik #+*li*-, +(y/r)*i*- 'to become'; Central Alaskan Yupik #+*li*-, +(r)*i*- 'to become or cause to make more and more'; Naukan Siberian Yupik +*li*- in *anli*- 'to grow bigger'; Central Siberian Yupik #+*li*-, +(r)*i*- 'to become'; Seward Peninsula Inuit #+*li*- 'to become'; Greenlandic #(+) *li*- 'to become, to make become'; North Alaskan Inuit #*li*-, *γli*-, *kli*- 'to become, to make become'; Western Canadian Inuit #(y) *li*- 'to become'; Eastern Canadian Inuit #*li*- 'to become, to make become'. Fortescue—Jacobson—Kaplan 1994:405.

- D. Proto-Chukchi-Kamchatkan *li- ‘to become’: Alyutor *li-* ‘to become, to change to, to turn to’; Kamchadal / Itelmen *le-kas* ‘to become’. Fortescue 2005:158—159.

Buck 1949:9.92 become. Fortescue 1998:142.

982. Proto-Nostratic (n.) *lip^h-a ‘fat, fatty tissue’:

- A. Afrasian: Proto-Semitic *lip(-V?)- ‘fatty, fleshy tissue’ > Akkadian (Old Babylonian) *lipū* (*lipiu*, *līpu*, *lēpu*) ‘adipose, tissue; (rendered) fat, tallow; bone marrow (used in medicine), pith (of a plant)’; Hebrew *liqlūf* [לִקְלוֹף] ‘glutinous substance, pus’ (regarding the semantics of the Hebrew form, Militarev—Kogan note: “A reduplicated stem with a plausible semantic shift from ‘fat’.”); (?) Mandaic *lupata* ‘an inner organ of the body (?); joints, ligaments of the body (?)’ (meaning uncertain); (?) Arabic *laḥiʿal-* ‘a piece of meat without bone’. Militarev—Kogan (2005.I:163, no. 180), Proto-Semitic (n.) *la/ipV?- ‘fatty, fleshy tissue’. Note: According to Militarev (2011:84, no. 48), the Common West and South Semitic word for ‘liver’ is to be reconstructed as *kad(i)d- (“No Afras. parallels”).
- B. Proto-Indo-European (n.) *lip^h-o-s ‘fat’: Greek λίπος ‘fat’, λιπαρός ‘fatty, oily, greasy’; Sanskrit *lip-* (*limpāti*) ‘to smear, to besmear, to anoint, to daub, to plaster, to paint; to spread over, to cover; to stain, to soil, to pollute, to defile, to contaminate’, *rip-* ‘to smear, to adhere to’, *rip-rá-h* ‘dirt, impurity’, (secondary full-grade in) *répas-* ‘spot, stain, fault’; Lithuanian *limpù*, *lipti* ‘to stick, to adhere’, *lipùs* ‘sticky’, *lipnùs* ‘sticky, glutinous, viscid, viscous’; Old Church Slavonic *prilьnō*, *prilьnōti* ‘to stick’, (secondary full grade in) *prilěpljō*, *prilěpiti* ‘to stick’, *lēpъ* ‘glue’; Russian *l’nut’* [лѣнуть] ‘to stick to, to adhere to, to cling to’; Czech *lnouti* ‘to stick to’; Old Polish *lnąć* ‘to stick, to adhere’. Pokorny 1959:670—671 *leip- ‘to smear fat’; Walde 1927—1932.II:403—404 *leip-; Mann 1984—1987:695 *lip̄aros ‘oily, sticky; liver’, 695 *lip̄ō, -iō, (*limp-) ‘to smear, to stick, to glue; to be sticky’, 695—696 *lipos (*lips, *lipis) ‘sticky, greasy; stickiness, grease’; Rix 2001:408—409 *leip- ‘to stick fast, to stay stuck’; Watkins 1985:36 *leip- (Germanic *librō) and 2000:48 *leip- ‘to stick, to adhere; fat’ (Germanic *librō), zero-grade form *lip-; Wodtko—Irslinger—Schneider 2008:453—454 *leip- (? Germanic *librō- [+ n]); Mayrhofer 1956—1980.III:60—61; Boisacq 1950:583—584; Frisk 1970-1973. II:126—127; Hofmann 1966:181—182; Beekes 2010.I:864 *leip- ‘to stick’; Chantraine 1968—1980.II:642; Derksen 2008:273 and 297, 2015:288. The following probably belong here as well: Proto-Indo-European *lip^h-ró- ‘liver’: Proto-Germanic *librō- ‘liver’ > Old Icelandic *lifr* ‘liver’; Old Swedish *liver*, *lifr* ‘liver’; Danish *lever* ‘liver’; Norwegian *lever* ‘liver’; Old English *lifer* ‘liver’; Old Frisian *livere* ‘liver’; Dutch *lever* ‘liver’; Old High German *libara*, *lebara*, *lebera* ‘liver’ (New High

German *Leber*). Kroonen 2013:336 Proto-Germanic **librō-* ‘liver’; Orël 2003:245 Proto-Germanic **lib(a)rō*; De Vries 1977:355; Falk—Torp 1910—1911.I:639 Proto-Indo-European **lip-*; Klein 1971:426; Onions 1966:532 Germanic **librō-* (“having no certain cognates”); Holthausen 1963:202; Barnhart 1995:438 Proto-Germanic **librŋ* ‘fattened up’, “an adjective left after loss of the original noun for liver”; Walshe 1951:136; Kluge—Mitzka 1967:429 Proto-Indo-European root **lip-*, **leip-*; Kluge—Seebold 1989:432—433 Germanic **librō-*. Notes: (1) Not related to or derived from **yek^{wh}-r/n-* ‘liver’ (traditional reconstruction **jek^u-*) (cf. Orël 2003:245; Walshe 1951:136). (2) No doubt related to Armenian *leard* ‘liver’ (cf. Martirosyan 2009:306—307; Beekes 2003b:162).

Buck 1949:4.45 liver.

983. Proto-Nostratic root **lip’-* (~ **lep’-*):

(vb.) **lip’-* ‘to form, to fashion, to mold’;

(n.) **lip’-a* ‘form, mold’

- A. Afrasian: Semitic: Geez / Ethiopic *labḥa* [ለብሐ] ‘to make earthenware, to work iron’, *labḥ* [ለብሐ] ‘clay, earthenware’, (denominative) *labḥawa* [ለብሐወ] ‘to make earthenware’, *labḥā* [ለብሐ] ‘earthenware’; Amharic *läbəh* ‘clay, brick’ (from Geez). Leslau 1987:305.
- B. Kartvelian: Mingrelian *lip’-* ‘to fashion, to model; to slap someone in the face’. Klimov (1998:109—110 **lip-* ‘to fashion, to model; to slip’) compares Georgian *lip’-* ‘to become slippery’, but it seems unlikely that the Georgian and Mingrelian forms are related — this etymology is not included in Fähnrich—Sardshweladse 1995 or Fähnrich 2007.
- C. (?) Indo-European: Old Icelandic *lipr* ‘handy, skilled, adroit’ (Modern Icelandic *lipur*), *lipr-leiki* ‘adroitness’. This word is frequent in modern usage but seems not to occur in writers before the 15th century and may be borrowed.

Buck 1949:9.41 craft, trade; 9.72 mold (clay, etc.); 9.73 clay. Dolgopolsky 2008, no. 1322, **LiP[h]a* ‘to stick, to stick to; sticky, glue; to make earthenware’.

22.47. PROTO-NOSTRATIC *r

Proto-Nostratic	Proto-Afrasian	Proto-Dravid.	Proto-Kartvel.	Eurasianic			
				Proto-IE	Proto-Uralic	Proto-Altaic	Proto-Eskimo
r-	r-		r-	r-	r-		
-r-	-r-	-r-/r-	-r-	-r-	-r-	-r-	-R-

984. Proto-Nostratic root **raʔ-* (~ **rəʔ-*):

(vb.) **raʔ-* ‘to see, to perceive’;

(n.) **raʔ-a* ‘sight, observation, perception’; (adj.) ‘seeing, perceiving’

Extended form:

(vb.) **raʔ-V-y-* ‘to see, to perceive’;

(n.) **raʔ-y-a* ‘sight, observation, perception’; (adj.) ‘seeing, perceiving’

A. Proto-Afrasian **raʔ-V-y-* ‘to see, to perceive’: Proto-Semitic **raʔ-ay-* ‘to see, to perceive’ > Hebrew *rāʔāh* [רָאָה] ‘to see, to perceive, to look at, to observe, to watch, to consider, to discern, to reflect, to gaze at, to behold’; Jewish Aramaic *rēwā* ‘appearance’; Phoenician *rʔy* ‘eyesight’; Arabic *raʔā* ‘to see, to behold, to perceive, to notice, to observe, to discern, to look (at), to regard, to consider, to deem, to think’; Sabaeen *rʔy* ‘to experience, to see’; Šheri / Jibbāli *riʔ* ‘opinion’; Mehri *rāy* ‘opinion’; Geez / Ethiopic *rəʔya* [ርእየ] ‘to see, to observe, to look, to look at, to look on, to regard, to contemplate, to consider, to watch, to have a vision, to take notice of, to notice, to behold, to perceive, to explore’; Tigre *rāʔa* ‘to see’; Tigrinya *rāʔayä* ‘to see’; Harari *riʔa* ‘to see’; Gurage (Zway) *ərī* ‘to see, to look’; Amharic *raʔay* ‘vision’ (from Geez / Ethiopic). Murtonen 1989:390—391; Klein 1987:600; Leslau 1963:132, 1979:83, and 1987:458—459; Militarev 2012:95 Proto-Semitic **rʔy*; Zammīt 2002:187. Egyptian **iry* (< **riy*) ‘to see’ (imptv. *ir ṯm* ‘pay attention!’), *ir-t* ‘eye, sight’; Coptic *ya* [ϣⲓⲁ] ‘eye’. Hannig 1995:87—88; Faulkner 1962:25; Gardiner 1957:554; Erman—Grapow 1921:16 and 1926—1963.1:106—108, 1:108; Vycichl 1983:60; Černý 1976:44—45. North Cushitic: Beja / Beḍawye *ʔerh-* ‘to see’. Reinisch 1895:29. Orël—Stolbova 1995:447, no. 2104, **reʔ-* ‘to see’.

B. Proto-Indo-European **reʔi-C-/roʔi-C-/rəʔi-C-* > (with syncope of *i*) **reʔ-C-/roʔ-C-/rəʔ-C-* > (with loss of the laryngeal) **rē-C-/rō-C-/rə-C-*; **reʔy-V-/roʔy-V-/rəʔy-V-* > (with metathesis) **reyʔ-V-/royʔ-V-/rəyʔ-V-* > (with loss of the laryngeal) **rey-V-/roy-V-/riy-V-* ‘to contemplate, to consider, to ponder, to reckon’: Latin *reor*, *rērī* ‘to reckon, to think, to be of the opinion, to suppose, to judge’, *ratīō* ‘reckoning, account, computation, calculation’, *rītus* ‘religious custom, ceremony, rite’; Old Irish *rīm* ‘number’; Welsh *rhif* ‘number’; Gothic *raþjō* ‘number, account’, *ga-raþjan* ‘to count’, *rōdjan* ‘to speak’, *ga-rēdan* ‘to reflect upon’, *raidjan* ‘to determine, to fix, to order, to appoint’; Old Icelandic *ráð*

‘counsel, advice’, *ráða* ‘to advise, to counsel’, *rím* ‘computation’, *ræða* ‘(vb.) to speak, to speak about; (n.) speech, talk’; Old English *ræd* ‘advice’, *rīm* ‘number’, *rīman* ‘to count, to calculate’; Old Frisian *rēd* ‘advice’, *rēda* ‘to advise’; Old Saxon *rād* ‘advice’, *rādan* ‘to advise’; Dutch *raden* ‘to advise, to guess’; Old High German *radia*, *redea* ‘account, speech’ (New High German *Rede*), *rāt* ‘counsel, advice’ (New High German *Rat*), *rāten* ‘to advise’ (New High German *raten*), *redōn*, *rediōn* ‘to speak’ (New High German *reden*). Rix 1998a:451 **reh₁-* ‘to count, to reckon’; Pokorny 1959:59—61 **rē-*, **rə-*; **(a)rī-*, **rēi-*; **rē-dh-*, **rō-dh-*, **rə-dh-*, **rēi-dh-*; Walde 1927—1932.I:73—75 **rē-*, **rə-*; **(a)rēi-*, **(a)rī-*; **rē-dh-*, **rə-dh-*; Mann 1984—1987:1068—1069 **rējō* ‘to be mindful, to think, to ponder, to observe, to watch, to regard’, 1081 **rīmos*, *-om* ‘count, reckoning’; Watkins 1985:3 **ar-* (also **arə-*) ‘to fit together’, variant or separate root **rē-* (< **reə-*) and 2000:70—71 **rē(i)-* ‘to reason, to count’ (oldest form **₂re₂i(i)-*, contracted to **₂rē(i)-*, with zero-grade extended form **₂rē₂i-* and methatesized zero-grade **₂ri₂-*, the latter contracted to **₂rī-*); Mallory—Adams 1997:472 **reh₁-* ‘to put in order’; Walde—Hofmann 1965—1972.II:419—420, II:429, and II:437 **rei-*; Ernout—Meillet 1979:570 (no certain parallels elsewhere in Indo-European for Latin *reor*) and 574; De Vaan 2008:519—520 and 524; Kroonen 2013:405—406 Proto-Germanic **raþjōn-* ‘account’, 408 **rēdan-* ‘to decide’, **rīma-* ‘number, calculation’, and 415 **rōdjan-* ‘to speak’; Orël 2003:295 Proto-Germanic **raidīniz*, 295 **raidjanan*, 298 **raþjanan* ~ **raþōjanan*, 298 **raþjō(n)*, 303—304 **rēdan* ~ **rēdaz*, 304 **rēdanan*, 304 **rēdaz*, 304 **rēdjan*, 305 **rīman*, 306 **rōdjanan*; Feist 1939:199 **rē(i)dh-* (< **rē(i)-*), 393 **rējdh-*, and 394 **rē-*; Lehmann 1986:148 **rēdh-* (< **rē-*), 280—281 **rēy-dh-*, 281—282 **ar-*, **rē-*, **rə-*, **rī-*; De Vries 1977:430—431 **rē-*, **rə-*, 431, 446 **rei-*, **rī-*, and 457; Boutkan—Siebinga 2005:314; Onions 1966:743 Common Germanic **ræðan*; Klein 1971:619; Kluge—Mitzka 1967:584 **rē-*, **rə-* and 589; Kluge—Seebold 1989:583 and 587.

Buck 1949:17.13 think (= reflect, etc.); 17.14 think (= be of the opinion); 18.21 speak, talk. Bomhard—Kerns 1994:708—709, no. 595; Dolgopolsky 2008, no. 1955, **rVʔi* ‘to see’.

985. Proto-Nostratic root **rag-* (~ **rəg-*):

(vb.) **rag-* ‘to stir, to move, to shake’;

(n.) **rag-a* ‘trembling, quaking, shaking, rocking; movement; collapse (from shaking)’

- A. Proto-Afrasian **rag-* ‘to stir, to move, to shake’: Proto-Semitic **rag-ap-* ‘to stir, to shake; to shake off, to make fall; to fall down’ > Aramaic *rəṣaṣ* ‘to stir, to shake’; Arabic *raḡafa* ‘to agitate, to convulse, to shake; to tremble, to quake, to be shaken’; Mehri *hərgūf* ‘to shiver, to shiver with

fever', *rátgəf* 'to shake, to quiver (in fear)'; Šheri / Jibbāli *ergəf* 'to shiver'; Ḥarsūsi *argəf* 'to shake (with fever)'; Geez / Ethiopic *ragafa* [፪፩፪] 'to fall to the ground (fruit, leaves)'; Tigrinya *rägäfä* 'to fall down (fruit, leaves)'; Gurage *rägäfä* 'to fall down (fruit, leaves)', *arägäfä* 'to shake to make fall down, to make fall down'; Harari *rägäfa* 'to fall to the ground (fruit, leaves)', *arägäfa* 'to make fall down (fruit, leaves), to remove'; Amharic *räggäfä* 'to fall to the ground (fruit, leaves)'; Argobba (*ar*)*raggäfa* 'to shake'. Zammit 2002:189—190; Leslau 1963:133, 1979:523, and 1987:464—465. Proto-Semitic **rag-a3-* 'to shake, to quake, to tremble' > Arabic *rağaza* (inf. *rağz*) 'to thunder, to roar, to surge (sea); to get angry', *rağaza* (inf. *tārağğuz*) 'to roll; to grow angry', *rağaz* 'trembling disease of a camel'; Hebrew *rāyaz* [רַיַז] 'to be agitated, to quake, to quiver; to be excited, perturbed'; Aramaic *rəyaz* 'to tremble, to rage'; Phoenician *rgz* 'to disturb'. Murtonen 1989:393; Klein 1987:605. Proto-Semitic **rag-ag-* 'to quiver, to shake' > Arabic *rağğa* 'to convulse, to shake, to rock, to tremble', *rağğ* 'shaking, rocking, convulsion', *rağğāğ* 'trembling, quaking, shaking, rocking'; Mehri *rəg* 'to be loose (as, for example, a tooth)', *rättəg* '(ground) to quiver, to shake'; Šheri / Jibbāli *regg* 'to be or become loose; to become unpopular; (water) to run under the topsoil; (man, animal) to run under the cover of the bushes, undergrowth', *róttəg* 'to be loose; to change for the worse; (ground) to shake, to quiver'; Ḥarsūsi *reg* 'to be loose'. Zammit 2002:189. Proto-Semitic **rag-ad-* 'to tremble' > Arabic *rağada* 'to tremble'. Proto-Semitic (reduplicated) **rag-rag-* 'to tremble, to quake, to sway' > Arabic *rağrağa* 'to tremble, to quake, to sway'. Proto-Semitic **rag-ac-* 'to thunder; to shake' > Arabic *rağasa* (inf. *rağs*) 'to roar, to thunder', *rağasa* (inf. *ʔirtirağ*) 'to be shaken, to shake', *rağğās* 'roaring, surging (sea); thundering'. [Ehret 1995:446, no. 935, **rig-/rag-* 'to move; to walk (intr.)'; Orël—Stolbova 1995:444, no. 2087, **rag-/rug-* 'to tremble'.]

- B. Proto-Indo-European **regʰ-/rogʰ-* 'to stir, to move': Old Irish *ráig* 'outburst'; Swedish *ragla* 'to toss, to sway'; Middle High German *regen* 'to stir, to move, to rouse' (New High German *regen*), *rege* 'movement' (New High German [adj.] *rege* 'astir, in motion, animated; lively, alert, quick, nimble, brisk, active, busy, bustling, industrious'). Assuming here that New High German *ragen* 'to tower up, to project' and *regen* 'to move, to stir, to rouse, to animate' have different origins. [Rix 1998a:450 **regʰ-* 'to tower up; to be erect, raised'; Walde 1927—1932.II:361 **req-* 'pole, post, stake'; Kluge—Mitzka 1967:590; Kluge—Seebold 1989:588.]
- C. Uralic: Proto-Ugric **rykk3-* 'to fall, to fall down' > Ostyak / Xanty (Tremyugan) *rây-* 'to collapse, to fall down (landslide); to fall or tumble down (trees)'; Vogul / Mansi (Northern) *rây-*, *râyät-* 'to fall (down), to drop'; Hungarian *rokkant* '(adj.) disabled, invalid; (n.) disabled person, invalid', *rokkantság* 'disability, infirmity', *megrokkant-* 'to become disabled'. Rédei 1986—1988:883—884 **rykk3-*.

Buck 1949:10.23 fall (vb.); 10.26 shake (vb. tr.). Bomhard 1996a:212, no. 610.

986. Proto-Nostratic root **rak^h-* (~ **rək^h-*):

(vb.) **rak^h-* ‘to twist, to turn, to bend; to tie, to bind, to fasten’;

(n.) **rak^h-a* ‘twist, turn, bend; tie, bond, cord’

Derivative:

(vb.) **rak^h-* ‘to put, join, fit, or fasten (together); to assemble, to prepare, to construct’;

(n.) **rak^h-a* ‘the act of putting, joining, fitting, or fastening (together); the act of assembling, preparing, constructing’

A. Proto-Afrasian **rak-* ‘to twist, to turn, to bend’: Proto-Semitic **rak-as-* ‘to twist, to turn, to bend; to tie, to bind, to fasten’ > Akkadian *rakāsu* ‘to bind’; Hebrew *rāḥas* [רָחַס] ‘to bind, to fasten, to button up’; Ugaritic *rks* ‘to bind’; Arabic *rakasa* ‘to overturn, to turn topsy-turvy’, *raks* ‘turning, topsy-turvy’. Murtonen 1989:400; Klein 1987:618; Zammit 2002:199. Proto-Semitic **rak-aš-* ‘to bend, to bow’ > Arabic *raka’a* ‘to bend the body, to bow (especially in prayer); to kneel down, to drop to one’s knees’, *rak’a* ‘bending of the torso from an upright position, followed by two prostrations (in Moslem prayer ritual)’; Šheri / Jibbāli *réka’* ‘to hop, to hobble; to bow in prayer’, *rótka’* ‘to kneel to pray; to run here and there sniffing’, *rək’āt* ‘prostration (in prayer)’; Mehri *rūka* ‘to hobble, to hop’, *rekāt* ‘prostration (in prayer)’; Harsūsi *rōka* ‘to hobble’, *rek’āt* ‘prostration (in prayer)’. Zammit 2002:200. Syriac *rəḥaš* ‘to bind, to tie’. Egyptian (reduplicated) *rkrk* ‘to creep’, *rkrk*, *rrk* ‘snake’. Erman—Grapow 1926—1963.2:440; Faulkner 1962:153; Hannig 1995:479. Proto-Southern Cushitic **rak-* ‘to turn (tr.)’ > Ma’a *-re* ‘to return (something)’; Alagwa *rankus-* ‘to bend around; to bow; to curve (tr.)’. Ehret 1980:219. Ehret 1995:447, no. 938, **ruk-* ‘to bend (intr.)’.

B. Elamo-Dravidian: Royal Achaemenid Elamite *rāk-qa-qa* ‘tied’ (?).

C. Proto-Indo-European **rek^h-*/**rok^h-* ‘(vb.) to tie, to bind; (n.) rope, cord’: Sanskrit *raśanā* ‘rope, cord, strap, rein, bridle, girdle’, *raśmih-* ‘string, rope, cord, rein, bridle, leash, goad, whip’; Pāli *rasanā* ‘woman’s girdle’, *rasmi-* ‘rein’; Sinhalese *rasan* ‘girdle’, *rāhān-a*, *rān-a* ‘cord, rein, line’; Punjabi (f.) *rassī* ‘rope’. Pokorny 1959:863 **reḱ-* ‘to bind’ (?); Walde 1927—1932.II:362 **reḱ-*; Mayrhofer 1956—1980.III:47.

Buck 1949:3.85 snake; 9.19 rope, cord; 10.41 creep, crawl. Brunner 1969:36, no. 140; Bomhard—Kerns 1994:707, no. 592.

987. Proto-Nostratic root **rak^h-* (~ **rək^h-*):

(vb.) **rak^h-* ‘to put, join, fit, or fasten (together); to assemble, to prepare, to construct’;

(n.) **rak^h-a* ‘the act of putting, joining, fitting, or fastening (together); the act of assembling, preparing, constructing’

Derivative of:

(vb.) **rak^h-* ‘to twist, to turn, to bend; to tie, to bind, to fasten’;

(n.) **rak^h-a* ‘twist, turn, bend; tie, bond, cord’

A. Afroasiatic: Proto-Semitic **rak-ab-* ‘to put, join, fit, or fasten (together); to assemble, to prepare, to construct’ > Arabic *rakiba* ‘to make (someone) ride; to put, to place, to fasten, to mount (something on), to insert, to set (something in); to build in (a machine part); to assemble (for example, the parts of an apparatus); to set up (a machine); to install, to lay (an electric line and the like); to assemble, to put together, to fit together (something); to make, to prepare (something out of several components or ingredients); to construct, to build’, *tarkīb* ‘fitting in, insertion, setting; building in; fastening, mounting; assembling, assembly; final assembly, installation; composition; making, preparation (out of several components or ingredients); construction, building; structure; constitution, build, physique’, *murakkab* ‘mounted, fastened, fixed (on); fitted, inserted, set (in); built-in; assembled; made up, composed, consisting (of); compound, composite; complex; bound, not free’; Hebrew *rāḥaḇ* [רָחַב] (Qal) ‘to mount (an animal or a vehicle), to ride’, (Hif.) ‘to cause to ride; to put on; to join, to combine; to graft upon’. Murtonen 1989:399; Klein 1987:617. Probably also: Ethiopic / Geez *rakaba* [ረከበ] ‘to find, to get, to acquire, to obtain, to attain, to receive, to gain, to reach, to take possession, to possess, to overtake, to apprehend, to invent, to find out, to discover, to perceive, to suppose; (with indirect object suffixes) to come upon, to fall upon, to befall, to occur, to come to pass, to happen, to be becoming to, to be proper’, *rukeb* [ሩከብ] ‘joining together’, *rukābe* [ሩከቢ] ‘joining together, intercourse’, *rakb* [ረከብ] ‘congregation, meeting, council, assembly’; Tigrinya *rākābā* ‘to obtain, to find’; Tigre *rākba* ‘to find, to obtain; to own, to have; to seize, to catch, to meet; to become rich; to copulate’; Harari *rāxāba* ‘to obtain’; Gurage *rākābā* ‘to find, to meet’; Amharic (as) *rākkābā* ‘to hand over’; Argobba (as) *rekkāba* ‘to hand over’. Leslau 1963:134, 1979:524, and 1987:469; Zammit 2002:199.

B. Proto-Indo-European **rek^h-*/**rok^h-* ‘to put together, to put in order, to arrange, to prepare, to construct’: Sanskrit *racáyati* ‘to produce, to fashion, to form, to make, to construct, to complete, to cause, to effect’, *racana-h* ‘the act of making, forming, arranging, preparing, composing’; Nepali *racnu* ‘to make’; Hindi *racnā* ‘to be made, to be formed’; Gothic *rahnjan* ‘to reckon, to calculate’; Lithuanian *rākas* ‘time, limit, end’; Old Church Slavonic *rokъ* ‘time’; Serbo-Croatian *rôk* ‘period, time’; Russian *rok* [рок]

‘fate’. Pokorny 1959:863 **rēk-* ‘to arrange’; Walde 1927—1932.II:362 **req-*, **rēq-*; Rix 1998a:457—458 **rek-* ‘to arrange, to fix, to determine’; Mann 1984—1987:1069 **rek-* ‘to formulate, to arrange, to fix’, 1088 **rok-* ‘formulation, pronouncement, determination, fixture’; Mayrhofer 1956—1980.III:33; Lehmann 1986:280; Feist 1939:392 **rēg-* (along with **rēk-*); Derksen 2008:438; Smoczyński 20017.1:498; Fraenkel 1962—1965.II:693—694.

- C. Uralic: Proto-Finno-Ugrian **rakk3-* ‘to put together, to put in order, to arrange’ > Finnish *rakenta-* ‘to build, to construct, to erect, to build up’, *rakennus* ‘building, edifice, structure, construction’, *rakenne* ‘structure, construction’; Lapp / Saami (North) *raakkâdi-* ‘to make, to prepare; to form, to establish, to found, to build, to construct’ (Finnish loan); (?) Hungarian *rak-* ‘to put; to arrange; to construct, to build’. Collinder 1955:110 and 1977:124; Rédei 1986—1988:419 **rakk3-*.

Buck 1949:9.11 do, make; 9.44 build; 12.12 put (place, set, lay). Illič-Svityč 1965:368 **ra/k/λ* ‘to build’ [‘строить’]; Bomhard—Kerns 1994:712—713, no. 600; Dolgopolsky 2008, no. 1987, **raḲaXV* (= **raḲahU* ?) ‘to arrange, to put in order’.

988. Proto-Nostratic root **rak’-* (~ **rək’-*):

(vb.) **rak’-* ‘to stretch, to extend, to draw out’;

(n.) **rak’-a* ‘the act of stretching, extending, drawing out; stretch, extension’;

(adj.) ‘stretched, extended, drawn out’

- A. Proto-Afrasian **rak’-* ‘to stretch, to extend, to draw out’: Proto-Semitic **rak’-ak’-* ‘to stretch out, to be or become thin’ > Akkadian *raḳāku* ‘to be thin’; Hebrew *raḳ* [רַק] ‘thin’; Syriac *raḳḳīkā* ‘thin’; Arabic *raḳḳa* ‘to be or become thin, delicate, fine; to flatten, to roll out; to make thin, fine, tender’; Šheri / Jibbāli *reḳḳ* ‘to be shallow; to be delicate, transparent’, *rəḳīḳ* ‘shallow; delicate’, *erḳéḳ* ‘to make something thin’, *ertéḳéḳ* ‘to become thin, smooth’; Mehri *rəḳāyḳ* ‘fine, delicate’; Ḥarsūsi *reḳéḳ* ‘fine, transparent, soft (cloth)’; Geez / Ethiopic *raḳḳa* [ፈፈ], *raḳaḳa* [ፈፈፈ] ‘to be subtle, soft, thin, slight’; Tigre *räḳḳa* ‘to be thin, delicate’; Tigrinya *räḳäḳä* ‘to be thin, delicate’; Amharic *räḳḳäḳä* ‘to be fine, thin’. Murtonen 1989:404—405; Klein 1987:628 and 629; Leslau 1987:473. Proto-Semitic **rak’-af-* ‘to stretch out, to flatten, to spread out’ > Hebrew *rāḳa’* [רַקַּא] ‘to stretch, to flatten, to beat out (metal), to spread out’; Syriac *rəḳa’* ‘to press down, to make firm, to spread out’; Phoenician *mrḳ’* ‘platter of gold’; Arabic *raḳa’a* ‘to spread out a patch, to patch, to mend, to repair’; Šheri / Jibbāli *rēḳa’* ‘to patch’; Mehri *rūḳa* ‘to patch; to bang holes in a stone to make a quern, grinding-stone’; Ḥarsūsi *reḳat* ‘bundle of cloth, rags’. Murtonen 1989:405; Klein 1987:629. Proto-Semitic **rak’-ap-* ‘to

make flat, to flatten' > Šheri / Jibbāli *erkaḥḥ* 'to make flat, to flatten'. [Orël—Stolbova 1995:462—453, no. 2138, **rūk*- 'to be thin'.]

- B. Proto-Indo-European **rek*-'/**rok*-'/**rk*-' 'to stretch out, to draw out, to extend': Sanskrit *ṛjū*-h 'straight, upright, right', *ṛjyati* 'to stretch, to stretch out, to hasten'; Avestan *rāzayeiti* 'to arrange', *rāšta*- 'straight, right, true', *arazu*- 'straight'; Old Persian *rāsta*- 'straight, right, true', *aršta*- 'upright'; Greek ὀρέγω 'to reach out, to stretch'; Latin *regō* 'to guide, to direct, to lead', *rēctus* 'straight'; Umbrian (adv.) *rehte* 'right, in a satisfactory manner'; Old Irish *rigid* 'to stretch out', *recht* 'law', *rog(a)id* 'to extend'; Welsh *rhaith* 'law'; Breton *reiz* 'law, order, arrangement'; Gothic *raihts* 'right', **uf-rakjan* 'to reach out, to extend; to stretch (the skin)'; Old Icelandic *réttir* 'straight; erect, upright; right, just', *rekja* 'to spread out, to unwind, to unfold'; Old English *reht*, *riht* 'straight, erect', *reccan* 'to stretch, to extend, to give', *racian* 'to rule, to direct', *rihtan* 'to direct; to put upright, to restore; to make straight; to correct, to reform; to rule, to govern', (adv.) *rihte* 'straight (on)'; Old Frisian *riucht* 'straight, erect', *riuchta* 'to direct, to rule, to lead'; Old Saxon *reht* 'straight, direct; erect, upright; right, proper, correct', *rihtian* 'to direct, to rule, to lead'; Old High German *reht* 'straight, direct; erect, upright; right, proper, correct' (New High German *recht*), (adv.) *rehto* 'rightly' (New High German [adv.] *recht*), *rechen*, *recchen* 'to stretch out; to explain' (New High German *rechen*), *rihten*, *richten*, *rihtin*, *rihtan*, *rithen* 'to straighten out, to adjust, to make right, to put in order, to settle' (New High German *richten*). Rix 1998a:270—271 **h₃reg-* 'to straighten out, to spread, to stretch'; Pokorny 1959:854—855 **reg-* 'straight'; Walde 1927—1932.II:362—365 **reg-*; Mann 1984—1987:1066 **rēgō* 'to spread, to reach, to extend, to rule', 1066 **rēgst-* (**rogst-*) 'stretch, extent', 1070 **rēktos*, -is, -us 'true, right, straight; truth, rightness, straightness', 1085 **rogeiō*; Watkins 1985:54 **reg-* and 2000:70 **reg-* 'to move in a straight line', with derivatives meaning 'to direct in a straight line, to lead, to rule' (oldest form **ṛ₃reg-*); Gamkrelidze—Ivanov 1984.II:751—752 **reḱ*- (see also fn. 2) and 1995.I:654 **reḱ*- 'to direct, to correct, to straighten, to even out' (see also fn. 23); Mallory—Adams 1997:187 **h₃reg-* 'to move in a straight line; to extend, to stretch' and 329—330; Mayrhofer 1956—1980.I:121; Burrow 1973:182; Boisacq 1950:710—711 **oreg-*; Frisk 1970—1973.II:412—413; Szemerényi 1964b:226—238; Beekes 1969:37—38 **h₃reg-* and 2010.II:1099 **h₃reg-*; Chantraine 1968—1980.II:817 **ṛ₃r-eg-*; Hofmann 1966:237 **reg-*; Ernout—Meillet 1979:566 and 567—569; Walde—Hofmann 1965—1972.I:424 and I:426—427 **reg-*; De Vaan 2008:517—518; Kroonen 2013:403 Proto-Germanic **raka*- 'straight', 403 **rakjan*- 'to stretch', and 408 **rehta*- 'straight'; Orël 2003:296 Proto-Germanic **rakaz*, 296—297 **rakjanan*, 300—301 **rextaz*, 301 **rextinō* ~ **rextunō*, 301 **rextin*, 301 **rextjan*, 301 **rextjanan*, 301 **rextuz* ~ **rextan*; Feist 1939:393 **reg-*, 397—398 **reg-*, and 513; Lehmann 1986:281 **reg-*, **reḱ-*

to/u- and 284—285 *reġ-; De Vries 1977:440 and 442; Onions 1966:767—768 *reg-; Klein 1971:639 *reġ-; Boutkan—Siebinga 2005:321—322; Kluge—Mitzka 1967:588—589 *reġ-, 589, 598—599; Kluge—Seebold 1989:586 *reġ-, 587, and 599; Matasović 2009:308 *h₃reġ-o-.

Buck 1949:9.32 stretch; 12.65 thin (in dimension); 12.73 straight. Bomhard—Kerns 1994:706, no. 591.

989. Proto-Nostratic root *rak'- (~ *rək'-):

(vb.) *rak'- 'to observe, to watch, to regard attentively; to supervise, to control';

(n.) *rak'-a 'observation, watchfulness, care, protection'

- A. Proto-Afrasian *rak'- 'to observe, to watch, to regard attentively; to supervise, to control': Proto-Semitic *rak'-ab- 'to observe, to watch, to regard attentively; to supervise, to control' > Arabic *raḵaba* 'to observe, to watch, to regard attentively; to control, to supervise', *riḵba* 'observation, control, attention, caution, wariness, vigilance, watchfulness', *raḵaba* 'slave'; Sabaeen *rḵb* 'serfs'. Zammit 2002:197—198. Proto-Southern Cushitic *raak'- 'to graze' > Iraqw *daqi* 'herd'; Burunge *raqama'u* 'pasture'. Ehret 1980:329. Semantic development as in Latin *pāscō* 'to feed, to lead to pasture; to keep, to support, to give as pasture; to graze on; to feast on, to delight in', *pāscuum* 'a pasture' < Proto-Indo-European *p^hā- < *p^heh₂- [*p^hah₂-] 'to protect, to feed, to tend' (cf. Rix 1998a:415 *p^heh₂- 'to watch over, to care for; to graze'; Pokorny 1959:787 *pā- : *pā- 'to protect, to feed'; Mann 1984—1987:898 *pā- 'to feed, to guard', 890 *pāiō 'to feed, to guard', 906 *pāskō 'to feed, to tend, to protect', 907—908 *pāt- 'to protect, to foster, to feed').
- B. Proto-Kartvelian *rek'- 'to drive (cattle)': Georgian *rek*- 'to drive (cattle)'; Svan *rek*-'/*rk*': *li-rk*-'āli 'to drive cattle to grass'. Schmidt 1962:129; Fähnrich—Sardshweladse 1995:282 *rek-; Fähnrich 2007:344 *rek-.
- C. Proto-Indo-European *rek'-/*rok'- (lengthened-grade: *rēk'-/*rōk'-) 'to observe, to watch, to watch out for, to care for': Greek ἀρήγω 'to help, to aid, to support', ἀρωγή 'help, aid, support'; Old Icelandic *rækja* 'to reckon, to heed, to take care of', *rækta* 'to take care of, to regard, to keep'; Old English *rēcan, *reccan* 'to care for, to reckon'; Old Saxon *rōkjan* 'to care for, to concern oneself about'; Old High German *ruohhen* 'to care for, trouble oneself about', *ruohha*, *ruah(c)ha* 'worry, anxiety, care, trouble, concern'; Lithuanian *regiù*, *regėti* 'to see, to perceive, to discern'. Rix 1998a:253—254 *h₂reh₁g- 'to concern oneself about; to help'; Pokorny 1959:854 *reg- 'to see' (?); Walde 1927—1932.II:366 *reg-; Mann 1984—1987:1065 *rēgō, -iō (*regs- ?) 'to see, to observe', 1084—1085 *rōgos, -ā (or *rōgē-) 'care, attention'; Boisacq 1950:76—77; Frisk 1970—1973.I:137; Hofmann

1966:23; Chantraine 1968—1980.I:107; Beekes 1969:34 (Beekes rejects the comparison of Greek ἀρήγω with Old Saxon *rōkjan* ‘to take care of’, etc.) and 2010.I:129 **h₃reh₁g-*; Kroonen 2013:415 Proto-Germanic **rōkjan-* ‘to heed’; Orël 2003:301 Proto-Germanic **rekōn* I, 307 **rōkaz*, 307 **rōkjanan*, 307 **rōkjaz*; De Vries 1977:457; Klein 1971:621; Onions 1966:746 Common Germanic **rōkjan*; Fraenkel 1962—1965.II:712—713; Smoczyński 20017.1:506.

Buck 1949:1064 lead (vb.); 10.65 drive (vb. tr.); 15.51 see. Bomhard—Kerns 1994:711 —712, no. 599.

990. Proto-Nostratic root **raq’-* (~ **rəq’-*):

(vb.) **raq’-* ‘to move quickly, to move back and forth’;

(n.) **raq’-a* ‘any rapid motion: shaking, trembling, jumping, dancing, etc.’

A. Afrasian: Proto-Semitic **rak’-ac’-* ‘to move back and forth, to move to and fro, to undulate, to dance’ > Arabic *raḳaṣa* ‘to dance, to prance, to gallop (horse), to skip, to move to and fro, to undulate; to dance with joy; to make (someone) dance or skip; to make gallop (horse); to set (something) in a swinging motion; to make (the heart) tremble; to provoke loud laughter’, *raḳṣ* ‘dance, gallop’; Ḥarsūsi *reḳōṣ* ‘to dance’; Mehri *rəḳāwṣ* ‘to jog up and down, to catch one’s finger’; Šheri / Jibbāli *erḳōṣ* and *rōḳōṣ* ‘to catch one’s/someone’s finger; (animal) to trample (fodder) into a filthy mash; (animal with sharp claws) to trample on or over someone’. Proto-Semitic **rak’-at’-* ‘to dance’ > Ḥarsūsi *rátkeṭ* ‘to dance with hopping steps’; Mehri *arōḳəṭ* ‘to do a hopping dance’, *rátkeṭ* ‘(goats) to jog about as if dancing’. Proto-Semitic **rak’-ad-* ‘to move quickly, to jump, to leap, to skip, to hop, to dance’ > Arabic *raḳada* ‘to run with leaps and bounds’, *raḳadān* ‘leaping, jumping (said of lambs)’; Šheri / Jibbāli *erḳōd* ‘to dance’; Hebrew *rāḳaḏ* [רָקַד] ‘to skip about, to dance’; Aramaic *rəḳaḏ* ‘to dance’; Akkadian *raḳādu* ‘to hop, to skip, to dance’; Ugaritic *mrḳdm* ‘dancers’. Murtonen 1989:405; Klein 1987:628.

B. Proto-Kartvelian **req’-/rq’-* ‘to shake, to move back and forth, to undulate’: Georgian *rq’-* ‘to oscillate, to shake’; Mingrelian *ra²-* ‘to shake’; Svan *req’-/rq’-* (*rəq’-*) ‘to shake, to tremble; to fall, to overthrow, to topple’. Schmidt 1962:130; Fähnrich—Sardshweladse 1995:285 **req’-/rq’-*; Fähnrich 2007:347—348 **req’-/rq’-*; Klimov 1998:157 **req’-* : **rq’-* ‘to oscillate, to shake’.

Buck 1949:10.43 jump, leap (vb.); 10.44 dance (vb.). Dolgopolsky 2008, no. 1997, **riqalæ* ‘to shake’ (intr.), ‘to be shaky’.

991. Proto-Nostratic root **rath-* (~ **rəth-*):(vb.) **rath-* ‘to turn, to roll; to run’;(n.) **rath-a* ‘turning, rolling; running’

- A. Proto-Afrasian **rat-* ‘to turn, to roll; to run’: Semitic: Arabic *rataʿa* ‘to go away, to depart; to gallop with short steps’, *rataka* ‘to run with short steps, to trot’. Proto-Southern Cushitic **rat-* ‘to continue onward’ > Ma’a *iritimé/iritimé* ‘crossing, ford’; Dahalo *rat-* ‘to walk about’, *ratfið-* ‘to continue (something)’. Ehret 1980:219.
- B. Proto-Indo-European **reth-/roth-* ‘to turn, to roll; to run’: Sanskrit *rátha-h* (< **ratH-á-* ‘wheeled’ [cf. Burrow 1973:72]) ‘chariot, especially a two-wheeled war-chariot; wagon, cart’; Avestan *raθa-* ‘wagon, chariot’; Umbrian *amb-retuto* ‘to walk around’; Latin *rota* ‘wheel’, *rotundus* ‘round, circular’; Old Irish *roth* ‘wheel’, *rethid* ‘to run, to flow’, *riuth* ‘running’; Welsh *rhod* ‘wheel’, *rhedaf* ‘to run’; Old English *raðe*, *ræd* ‘quick, swift’; Old Frisian *reth* ‘wheel’; Old Saxon *rath* ‘wheel’; Old High German *rado*, *rato* ‘quickly’, *rad* ‘wheel’ (New High German *Rad*); Lithuanian *rātas* ‘wheel’, *rātai* ‘cart, vehicle’, *ratėlis* ‘spinning wheel’, *ritù*, *risti* ‘to roll’. Rix 1998a:459 **ret-* ‘to run’, **rót-o-* ‘wheel’ (in Old Irish *roth*), (coll.) **rot-eh₂-* (in Latin *rota*), (adj.) **rot-h₂-ó-* (in Sanskrit *rátha-h*); Pokorny 1959:866 **ret(h)-* ‘to run; to turn, to roll’, **roto-* ‘wheel’; Walde 1927—1932.II:368 **reth-*; Mann 1984—1987:1073 **ret-* ‘to run, to roll, to go’, 1090—1091 **rot-* ‘quick; rush’, 1091 **rot-*, **rotos* (**rothos*) ‘wheel; vehicle’; Watkins 1985:54 **ret-* and 2000:71 **ret-* ‘to run, to roll’; Mallory—Adams 1997:640—641 *róth₂o/eh_a-* ‘wheel’; Gamkrelidze—Ivanov 1984.II:719 **ret[h]-*, **rot[h]o-* and 1995.I:622—623 **reth-* ‘to run, to ride; to roll’, **rotho-* ‘wheel’; Walde—Hofmann 1965—1972.II:443—444; Ernout—Meillet 1979:577—578; De Vaan 2008:527; Kroonen 2013:405 Proto-Germanic **raþa-* ‘wheel’; Orël 2003:298 Proto-Germanic **raþan*; Kluge—Mitzka 1967:577; Kluge—Seebold 1989:576—577 **ret-*; Boutkan—Siebinga 2005:318; Mayrhofer 1956—1980.III:38—39; Fraenkel 1962—1965.II:703; Smoczyński 20017.1:501; Derksen 2015:376 **Hrót-o-*, **Hrót-eh₂-*; Matasović 2009:310 **(H)reth₂-* and 314—315 **(H)roth₂o-*; Wodtko—Irslinger—Schneider 2008:575—580 **ret-* (Sanskrit *rátha-h* < **rot-h₂-ó-*).

Buck 1949:10.46 run (vb.); 10.75 chariot, wagon, cart; 10.76 wheel. Bomhard 1996a:207—208, no. 605.

992. Proto-Nostratic root **raw-* (~ **rəw-*):

Extended form:

(vb.) **raw-V-h-* ‘to be spacious, wide’;(n.) **raw-h-a* ‘space, room’; (adj.) ‘spacious, wide’

- A. Afrasian: Proto-Semitic **raw-aḥ-* ‘to be spacious, wide’ > Hebrew *rāwāḥ* [רָוַח] ‘to be spacious, wide’; Aramaic *rəwāḥ* ‘to be wide’; Arabic *rawiḥa* ‘to be spacious, wide’, *ʔarwāḥ* ‘spacious, wide’; Sabaeen *rwḥ* ‘to widen, to enlarge’. Murtonen 1989:395—396; Klein 1987:610; Zammit 2002:202—203.
- B. Proto-Indo-European **rewḥh-/rowḥh-/ruḥh-* > **rū-* ‘(n.) open space; (adj.) wide, spacious’: Avestan *ravah-* ‘space’; Latin *rūs* ‘the country (as opposed to the city)’; Middle Irish (f.) *róe, rói* ‘field, open land’; Gothic **rūm* ‘room, space’; Old Icelandic *rúm* ‘room, space’, *rúmr* ‘roomy, ample, spacious, broad’, *rýma* ‘to make more roomy, to clear the way’; Swedish *rum* ‘space’; Old English *rūm* ‘(adj.) spacious, wide (road); open (country); extended (period of time); unrestricted, lax; liberal, bountiful; noble, magnificent; (n.) space; space of time; sufficient space, room; sufficient or fitting time, opportunity’, *rýman* ‘to clear (road), to make clear (space)’, *rýmet(t)* ‘space, extent; sufficient space, room; extension of landed property; benefit’; Old Frisian *rūm* ‘room, space’; Old Saxon *rūm* ‘room, space’; Old High German *rūm* ‘room, space’ (New High German *Raum*); Tocharian A/B *ru-* ‘to open’. Rix 1998a:462 **reuh₁-* ‘to open’; Pokorny 1959:874 **reuə-* : **rū-* ‘to open’; Walde 1927—1932.II:356—357 **reuos*; Mann 1984—1987:1079 **reuos (-es-)* ‘open, plain, flat; space, surface’, 1100 **rūm-* ‘spacious; space’, 1103 **rūs* ‘space, place’; Watkins 1985:55 **reuə-* and 2000:71 **reuə-* ‘(vb.) to open; (n.) space’; Mallory—Adams 1997:534 **réuh_x-es-* ‘open space’, **réuh_x-* ‘to (be) open’; Ernout—Meillet 1979:583 **rewos*; Walde—Hofmann 1965—1972.II:454 **reu-*; De Vaan 2008:531; Orël 2003:309 Proto-Germanic **rūman* ~ **rūmaz*, 309 **rūmaz*, 309 **rūmjanan*; Kroonen 2013:418 Proto-Germanic **rūma-* ‘roomy, spacious’; Feist 1939:400; Lehmann 1986:387 **reuə-*, **rū-*; De Vries 1977:453 and 455; Klein 1971:642; Onions 1966:773 Common Germanic **rūmaz* ‘spacious’; Kluge—Mitzka 1967:587 **reu-*; Kluge—Seebold 1989:585 **reu-*; Adams 1999:536—537 **reu(h_x-)*; Van Windekens 1976—1982.I:409 **rū-* (**reu-* is also possible).

Buck 1949:7.21 room (in a house); 19.13 country (vs. town). Bomhard—Kerns 1994:708, no. 594; Dolgopolsky 2008, no. 2004, **rVwXV* ‘broad’; Illič-Svityč 1965:373 **rAwḥa* ‘wide’ [‘широкий’].

993. Proto-Nostratic root **rek’-*:

- (vb.) **rek’-* ‘to sprinkle, to spray, to wet, to moisten’;
 (n.) **rek’-a* ‘sprinkling, spray, rain’

- A. Proto-Afrasian **rek’-* ‘to sprinkle, to spray, to wet, to moisten’: Proto-Semitic **rak’-* (**rak’-aḥ-*, **rak’-ay-*) ‘to sprinkle, to spray’ > Geez / Ethiopic *raḫḫa* [ፈጥፈጥ] ‘to sprinkle, to spray’, *raḫaya* [ፈጥየ] ‘to sprinkle, to asperse, to sprinkle with holy water to drive out demons, to cleanse with

holy water'; Tigrinya *rākāyā* 'to sprinkle, to sprinkle with holy water (on a place or a person)'; Amharic *rāččä* 'to sprinkle holy water'; Gurage *reččä* 'to spray water, to sprinkle water'; Argobba *rāčča* 'to sprinkle water'. Leslau 1979:521 and 1987:472 and 473. Proto-Semitic **ra/ya/k-* 'to pour out, to empty' > Hebrew *rīk* [רִיק] (base *ryk* [רִיק]) 'to empty out, to pour out', *rēk* [רֵק] 'empty, void'; Aramaic *rīk* 'to empty, to pour'; Akkadian *rāku* 'to be empty, void', *rēku* 'empty'; Arabic *rāka* (base *ryk*) 'to flow out, to pour forth; to pour out, to shed, to spill', *rīk* 'saliva, spittle'. Murtonen 1989:399; Klein 1987:616—617. West Chadic: Dera *reke* 'to moisten'. Orël—Stolbova 1995:447, no. 2107, **rek-* 'to pour, to soak'.

- B. Proto-Indo-European **rek-/rok-* 'to wet, to moisten' (**rek-nó-s* 'rain', apparently deglottalized to **rek-nó-s* in Germanic **reg-na-z* 'rain'): Gothic *rign* 'rain', *rignjan* 'to rain'; Old Icelandic *regn* 'rain', *regna*, *rigna* 'to rain', *raki* 'dampness, wetness', *rakr* 'damp, wet'; Swedish *regn* 'rain', *regna* 'to rain'; Danish *regne* 'to rain'; Old English *regn*, *rēn* 'rain', *regnian* 'to rain'; Old Frisian *rein* 'rain', *reinia* 'to rain'; Old Saxon *regan*, *regin* 'rain'; Dutch *regen* 'rain'; Old High German *regan* 'rain' (New High German *Regen*), *reganōn* 'to rain' (New High German *regnen*). Perhaps also: Latin *rigō* 'to wet, to moisten, to bedew'; Albanian *rredh* 'to flow, to pour'. Rix 1998a:450 **reg-* 'to flow, to pour; to drop, to drip'; Pokorny 1959:857 **reg-*, **rek-* (**rek-* ?) 'wet, moist; rain'; Walde 1927—1932.II:365—366 **reg-*, **req-*; Watkins 1985:54 **reg-* and 2000:70 **reg-* 'moist'; Gamkrelidze—Ivanov 1984.II:680 **rek-* and 1995.I:587 **rek-* 'to make wet, to irrigate'; Mallory—Adams 1997:639 **reg-* ~ **rekno-* 'moist; to make wet'; Walde—Hofmann 1965—1972.II:435; Ernout—Meillet 1979:573—574 (without etymology); De Vaan 2008:523; Kroonen 2013:408 Proto-Germanic **regna-* 'rain'; Orël 2003:300 Proto-Germanic **regnan* ~ **regnaz*, 300 **regnjanan*; Feist 1939:397; Lehmann 1986:284; De Vries 1977:432 and 437; Onions 1966:737; Klein 1971:615; Kluge—Mitzka 1967:590; Kluge—Seebold 1989:588.

Buck 1949:1.75 rain; 15.83 wet, damp. Bomhard 1996a:207, no. 604.

994. Proto-Nostratic root **riy-* (~ **rey-*):

- (vb.) **riy-* 'to prosper, to thrive, to flourish, to increase, to grow';
(n.) **riy-a* 'increase, growth, prosperity, wealth'

- A. Proto-Afrasian **riy-* 'to increase, to grow': Semitic: Arabic *rā'a* (base *ry'* [رَيع]) 'to increase, to grow, to flourish, to thrive; to augment (something)', *ray'* 'yield; returns, proceeds, income (accruing from an estate), interest; profit, share, royalty; prime, choicest part'. West Chadic: Tangale *riy* 'to multiply'. Orël—Stolbova 1995:451, no. 2126, **riy-* 'to grow'.
- B. Proto-Indo-European **riy-C-/rey-C-* > (**rī-C-/rē-C-*; (**riy-V-/rey-V-* (also **rēy-* in Indo-Iranian) 'wealth, prosperity, riches': Sanskrit *rāṅh*

‘property, possessions, goods, wealth, riches’ (gen.-abl. sg. *rāyáh*), *rāti* ‘to grant, to give, to bestow’, *rayí-h* ‘generous, favorable, gracious’; Avestan *raēvant-* ‘rich, wealthy’, *rā-* ‘to grant, to concede, to vouchsafe’; Latin *rēs* ‘thing, object, matter, affair, circumstance’ (gen. sg. *reī*); Umbrian *ri* ‘thing, ceremony, account’. Pokorny 1959:860 **rei-* : **rēi-* ‘possession, thing’; Walde 1927—1932.II:343 **rē(i)-*; Mann 1984—1987:1069 **rējos*; **rēis* ‘factual, apposite, substantive; fact, matter, substance’; Mallory—Adams 1997:637—638 **réh₁is* (gen. **reh₁iós*) ‘possessions’; Watkins 1985:53 **rē-* and 2000:70 **rē-* ‘to bestow, to grant’ (contracted from earlier **re₂-*), suffixed form **re₂-i-* ‘goods, wealth, property’; Walde—Hofmann 1965—1972.II:430—431 **rēj-*; Ernout—Meillet 1979:571; De Vaan 2008:520—521; Schmalstieg 1980:57—59; Gamkrelidze—Ivanov 1984.II:747 **reH(i)-* and 1995.I:650 **reH(i)-* ‘possessions, property’; Mayrhofer 1956—1980.III:45—46.

Buck 1949:11.41 property; 11.42 wealth, riches. Bomhard—Kerns 1994:709—710, no. 596. Different etymology in Dolgopolsky 2008, no. 1978, **rVH₂i* (= **rVh|ʕ|hi* ?) ‘thing’.

995. Proto-Nostratic root **rom-*:

(vb.) **rom-* ‘to stop, to rest, to relax’;

(n.) **rom-a* ‘rest, quietude, calmness, tranquility, relaxation’; (adj.) ‘quiet, tranquil, still, gentle, silent, relaxed’

- A. Afrasian: Proto-Semitic **ram-aʔ-* ‘to stop, to rest, to relax; to become relaxed, slack’ > Akkadian *ramū* ‘to become slack, loose’; Hebrew *ramīyyāh* [רַמִּיָּיָה] ‘laxness, slackness’; Arabic *ramaʔa* ‘to stop, to stay, to remain, to abide’. Proto-Semitic **ram-am-* ‘to be quiet, to be at rest’ > Arabic (*ʔa*)*ramma* ‘to be quiet’; Geez / Ethiopic *ʔarmama* [አርሙሙ] ‘to keep silence, to keep silent, to be tranquil, to be quiet, to remain quiet, to be at rest, to make silent, to reduce to silence, to astound’, *ramum* [ርሙሞ] ‘silent, quiet; one who keeps silence’, *marmam* ‘silent’; Tigrinya (*ʔa*)*rmāmā* ‘to be silent, to be taciturn’; Amharic (*a*)*rāmmāmā* ‘to be silent’. Leslau 1987:471. Proto-Semitic **ram-ak-* ‘to stop, to remain, to abide’ > Arabic *ramaka* ‘to stop, to remain, to abide’.
- B. Dravidian: Gondi *romānā*, *rom-* ‘to rest’, *rōmānā* ‘to rest after labor’, *roma* ‘rest, repose’; Konḍa *rōmb-* ‘to rest, to take rest’; Pengo *jōm-* ‘to stop, to rest, to cease’; Kui *jāmba* (*jāmbi-*) ‘to rest, to cease, to subside’; Kuwi *jōmali*, *jōminai*, *jōm-* ‘to rest’, (?) *rēmb-* ‘to rest’. Burrow—Emeneau 1984:469, no. 5178.
- C. Proto-Indo-European **rom-/r̥m̥-* (secondary *e*-grade form: **rem-*) ‘to stop, to rest, to relax’: Greek (with prefixed ἡ-) ἡρεμος, ἡρεμαῖος ‘still, quiet, gentle’, ἡρεμέω ‘to keep quiet, to be at rest’, ἡρέμησις ‘quietude’, ἐπεμίζω ‘to make still or quiet’; Sanskrit *rāmate* ‘to stop, to stay, to rest, to

abide'; Avestan *rāman-* 'quiet'; Gothic *rimis* 'rest, quiet, tranquility, calm'; Lithuanian *rāmas* (n.) 'quiet', *ramūs* (adj.) 'quiet, calm', (inf.) *rimti* 'to be calm'. Rix 1998a:224—225 **h₁rem-* 'to be still, quiet'; Pokorny 1959:864 **rem-*, **remə-* 'to rest'; Walde 1927—1932.II:371—372 **rem-*; Mann 1984—1987:1062 **rāmejō* 'to quieten, to appease, to pacify; to acquiesce, to subside, to rest' (radical: **ram-*), 1062 **rāmos*, *-ā* (**ram-*) 'restful, quiet, tame, alone; rest, quietude, solitude', 1083 **rmtos*, *-is* 'restful, resting, quiet; rest'; Boisacq 1950:328—329 **rem-*; Hofmann 1966:109; Frisk 1970—1973.I:642—643; Chantraine 1968—1980.I:416; Beekes 2010.I:525 **h₁remH-*; Mayrhofer 1956—1980.III:43—44; Orël 2003:302 Proto-Germanic **remez*; Kroonen 2013:409 Proto-Germanic **rēmiz-* 'quiet, tranquility'; Feist 1939:398; Lehmann 1986:285 **rem-* 'to rest, to support'; Fraenkel 1962—1965.II:695—696.

Buck 1949:12.16 remain, stay, wait; 12.19 quiet (adj.). Möller 1911:210; Brunner 1969:20, no. 16; Bomhard—Kerns 1994:711, no. 598; Dolgopolsky 2008, no. 1988, **[ʾ]rômV* 'quiet; to rest'.

996. Proto-Nostratic root **row-*:

- (vb.) **row-* 'to cut, tear, or break apart';
(n.) **row-a* 'cut, tear'

- A. Afrasian: Egyptian (f.) *rwīt* 'interruption'. Hannig 1995:461; Faulkner 1962:148.
- B. Proto-Indo-European **row-/rũ-* (secondary *e*-grade form: **rew-*) 'to cut, tear, or break apart': Sanskrit *ravate* 'to break or dash to pieces', (causative) *ropayati* 'to cause acute or violent pain', *ru-h* 'cutting, dividing', *rúpyati* 'to suffer violent or racking pain'; Latin *ruō* 'to fall down, to collapse (intr.); to hurl down (tr.)', *rumpō* 'to break, to shatter, to burst open' (past ptc. *ruptum*), *rūtrum* 'spade, shovel', *rūdus* 'broken fragments of stone used for plastering'; Middle Irish *riam* 'spade'; Gothic *raupjan* 'to pluck, to pick', *riurs* 'destructible, perishable', *riurjan* 'to destroy', *riurei* 'destruction'; Old Icelandic *reyfa* 'to rob', *ryja* 'to pluck wool off sheep', *rupla* 'to plunder, to take by force', *rupl* 'plunder, booty', *riúfa* 'to break a hole in, to break'; Old English *rēofan* 'to break, to tear', *rēaf* 'spoil, booty', *rēafian* 'to rob, to plunder, to seize; to ravage, to destroy', *rīepan* 'to spoil, to plunder'; Old Saxon *rōpian* 'to pluck, to pull out'; Old High German *roufen*, *ropfōn* 'to pluck, to pull out' (New High German *raufen*, *rupfen*), *roub* 'robbery' (New High German *Raub*); Lithuanian *rausiù*, *raūsti* 'to dig', *ráuju*, *ráuti* 'to pull up; to tear up by the roots, to uproot', (inf.) *ravėti* 'to weed'; Old Church Slavic *ryjō*, *ryti* 'to dig', *rvō*, *rvati* 'to grab, to snatch', *rovъ* 'ditch, grave'; Czech *rov* 'tomb'. Rix 1998a:461 **reyH-* 'to tear or rip open' and 462 **reup-* 'to tear, to break'; Pokorny 1959:868—871 **reu-*, **reua-*, **rũ-* 'to rip up, to pull

out, to root out'; Walde 1927—1932.II:351—356 **reu-*; Mann 1984—1987:1076—1977 **reupō* (**rup-*) 'to tear, to break, to burst, to plunder', 1077 **reus-* 'to pull, to tear, to snatch, to dash, to rout, to rob, to stir; pulling', 1077 **reusk-* (**reuskō*, **rousk-*, **rusk-*), 1077 **reusrjo-* 'to perish, to fail, to collapse, to break; perishable', 1078 **reutlos*, -*om* (**reutro-*), 1078 **reyō*, -*īō* 'to seize, to pluck, to snatch', 1094 **roupejō* 'to tear, to seize, to rack, to crunch', 1094 **roupos* 'seizure', 1095—1096 **roujō* 'to dig up', 1096 **royos*, -*ā*, -*īā* 'digging, ditch, bed, channel, hollow', 1096 **rub-* 'to snatch, to seize', 1099—1100 **rūjō* 'to pluck, to tear, to drag, to uproot', 1100—1101 **rumb-* 'to cut', 1101 **rump-* 'to burst', 1101—1102 **rūp-* 'to break, to crumble; rough, course, hard', 1102 **ruptós*, 1102 **rūs-* 'to fall, to fail, to crumble, to decay; feeble, weak, poor', 1104 **rūt-* 'dug; digging', 1104 **rujō*; Watkins 1985:55 **reu-* (also **reuə-*) and 2000:71 **reuə-* 'to smash, to knock down, to tear out, to dig up, to uproot'; Mallory—Adams 1997:567 **reu(h_x)-* 'to tear out, to pluck'; Ernout—Meillet 1979:581—582 and 582—583; Walde—Hofmann 1965—1972.II:447—448 **rēus-*, **rūs-*, II:451 **reub-*, and II:453—454 **ru(ū)ō* or **reyō*; De Vaan 2008:530; Orël 2003:299 Proto-Germanic **raupjanan*, 303 **reufanan*, 303 **reuriz*, 303 **reurjanan*; Kroonen 2013:406—407 Proto-Germanic **raupjan-* 'to tear (off)' and 410 **reufan-* 'to break (off)'; Feist 1939:395 **reup-* and 400; Lehmann 1986:282 **rew-* and 286 **rew-*; De Vries 1977:442, 454, and 455 **reu-*; Klein 1971:620; Onions 1966:743—744 and 744; Kluge—Mitzka 1967:585 **reup-* (< **reu-*), 586 **reup-*, and 616; Kluge—Seebold 1989:584 and 619; Mayrhofer 1956—1980.III:63 and III:68—69; Smoczyński 2001.1:504 **rou-éje-*; Fraenkel 1962—1965.II:708 and II:708—709.

- C. Uralic: Proto-Finno-Ugrian **row3-* 'to cut, to carve' > Hungarian *ró-/rov-* 'to carve, to engrave, to cut (runes, etc.)', (dial.) 'to cleave (a log with an axe)'; Cheremis / Mari *roe-*, *rue-* 'to cut (with an axe, etc.), to hew, to chop'; Ostyak / Xanty *rogōm-* 'to cut out, etc.'. Collinder 1955:111 and 1977:125; Rédei 1986—1988:425 **rok3-* (**roγ3-*, **row3-*); Illič-Svityč 1965:362 Proto-Uralic **rowa-*.

Buck 1949:8.22 dig; 9.22 cut (vb.); 9.26 break (vb. tr.); 9.28 tear (vb. tr.); 9.81 carve. Illič-Svityč 1965:362 **rowa-* 'to dig' ['рыть']; Bomhard—Kerns 1994:713—714, no. 601; Dolgopolsky 2008, no. 2001, **rowV* (or **rowHV* ?) 'to dig, to scratch, to carve'.

997. Proto-Nostratic root **rum-* (~ **rom-*):

- (vb.) **rum-* 'to grow or become dark; to darken';
(n.) **rum-a* 'darkness, night; twilight, dusk'; (adj.) 'dark'

- A. Afrasian: East Chadic: Jegu *ráámân* 'black'; Mubi *rám*. Jungraithmayr—Ibriszimow 1994.I:13 and II:28—29.

- B. Proto-Kartvelian **rum-* ‘to grow or become dark; to darken’: Georgian *rum-* ‘to grow or become dark; to darken’, *m-rum-e* ‘dark’; Mingrelian *rum-* ‘to grow or become dark; to darken’. Klimov 1964:157 **rum-* and 1998:160 **rum-* ‘to get dark’; Fähnrich—Sardshweladse 1995:288 **rum-*; Fähnrich 2007:352—353 **rum-*.
- C. Proto-Indo-European **romH-/r̥m̥H-* (secondary *e*-grade form: **remH-*) ‘dark, dark-colored’: Sanskrit *rāmá-h* ‘dark, dark-colored, black’, *rāmī* ‘darkness, night’, *rātrī* (< **r̥m̥H-*) ‘night, darkness or stillness of night’; Old English *romēi* ‘sooty’; Middle High German *rām*, *rōm* ‘dirt, soot’ (New High German *Rahm* ‘soot’), *rāmec*, *rāmig* ‘dirty, sooty’ (New High German *rahmig* ‘sooty’). Mayrhofer 1956—1980.III:54—55; Orël 2003: 304 Proto-Germanic **rēmaz*; Kluge—Mitzka 1967:579; Kluge—Seebold 1989:579.
- D. Uralic: Proto-Finno-Ugrian **r[ü]mke* ‘dark’ > Lapp / Saami *râw’ke-* ‘to wink (the eyes)’, (Lule) *râm’kâ-*, *râw’kâ-* ‘to wink’, *râm’ko* ‘closed (only of the eyes)’, *râm’kotâ-* ‘to wink’; Cheremis / Mari (West) *rəm* ‘twilight, dusk’, (East) *rümbalge* ‘twilight, dusk’; Votyak / Udmurt *žomyt* ‘twilight, dusk’; Zyrian / Komi *rōmyd* ‘twilight, dusk’; Ostyak / Xanty *rimək* ‘dusk, twilight; dark; darkness’, *riməkəl-* ‘to become dusk, to get dark’. Collinder 1955:110, 1960:413 **remke*, 1977:124; Rédei 1986—1988:747 **räm̃*.

Buck 1949:1.62 darkness; 14.42 night; 15.63 dark (of color). Dolgopolsky 1992:321, no. 38, **rumE* ‘dark; to close the eyes’ and 2008, no. 1990, **r[ü]HmV* (or **r[ü]gmV*?) ‘dark’; Bomhard 1996a:213—214, no. 611.

APPENDIX:
LANGUAGE CONTACT

In Chapter 13 of this book, I propose that “[t]he unified Nostratic parent language may be dated to between 15,000 to 12,000 BCE, that is, at the end of the last Ice Age — it was located in the Fertile Crescent just south of the Caucasus...” In our joint monograph, *The Nostratic Macrofamily: A Study in Distant Linguistic Relationship*, John C. Kerns proposed the exact same location (“the Fertile Crescent just south of the Caucasus” [Bomhard—Kerns 1994:155]). In his 1998 book, *The Nostratic Hypothesis and Linguistic Paleontology*, Aaron Dolgopolsky also places the homeland in the same general area (cf. Dolgopolsky 1998:26). As can be seen, Kerns, Dolgopolsky, and I are essentially in agreement about the location of the homeland of the speakers of the Nostratic parent language. If the scenario we are proposing is correct, we would expect to find evidence of prehistoric contact between Nostratic and non-Nostratic neighboring languages. A good place to look for such evidence would be the Northwest and Northeast Caucasian languages. Not only are languages of these families still extant, there are good reasons to believe that, in ancient times, they covered a considerably wider geographic area than they do at present. For example, the Hurrian language (along with the closely-related Urartian), which was located in the northeastern Zagros-Taurus corner of the “hilly flanks” of Mesopotamia, may have belonged to the Northeast Caucasian language family (cf. Diakonoff—Starostin 1996). Likewise, Hattic, which was located in central Anatolia, has been claimed by some to be an ancient Northwest Caucasian language (cf. Diakonoff 1990:63; Chirikba 1996a). We may note in passing that, according to Nikolayev—Starostin (1994), the Northwest and Northeast Caucasian language families are related. Together, they form a larger North Caucasian super-family — the same conclusion is reached by Chirikba 2016.

A comparison of the vocabularies of the North Caucasian languages and the Nostratic languages shows that there is indeed evidence of very ancient contact between North Caucasian and Nostratic. The evidence that I have gathered is listed in this Appendix (the Circassian material is from Kuipers 1975; the Abkhaz material is from Chirikba 1996b; the Proto-North Caucasian material is from Nikolayev—Starostin 1994). The evidence presented here is especially significant in that it independently corroborates the Proto-Nostratic reconstructions I have proposed as opposed to those of Illič-Svityč and Dolgopolsky.

1. Proto-Nostratic root **baʕ-* (~ **bəʕ-*):
(vb.) **baʕ-* ‘to pour’;
(n.) **baʕ-a* ‘torrent, outpour’

Proto-North Caucasian **bVHV* ‘big, many’ (cf. Nikolayev—Starostin 1994: 316—317).

Proto-Circassian **ba* ‘much’ (cf. Kuipers 1975:11).

3. Proto-Nostratic (n.) **baba* ‘father’ (nursery word):

Proto-North Caucasian **babajV* ‘father, grandfather’ (a nursery word) (cf. Nikolayev—Starostin 1994:286; Chirikba 1996b:13).

26. Proto-Nostratic root (Eurasianic only) **ban-* (~ **bən-*):

(vb.) **ban-* ‘to cut, to strike’;

(n.) **ban-a* ‘cut, wound’

Proto-Circassian **ban(a)* ‘to fight’ (cf. Kuipers 1975:12).

31. Proto-Nostratic **bar-* (~ **bər-*):

(vb.) **bar-* ‘to be thick, bushy, shaggy; to be coarse, rough, harsh’

(n.) **bar-a* ‘roughness, coarseness, harshness; thickness, shagginess’; (adj.) ‘rough, harsh, coarse; thick, shaggy, bushy’

Derivative of:

(vb.) **bar-* ‘to swell, to puff up, to expand’;

(n.) **bar-a* ‘swelling, bulge, increase’

Proto-North Caucasian **barḳwǎ* ‘rough skin’: (cf. Starostin—Nikolayev 1994:288).

44. Proto-Nostratic root **bay-* (~ **bəy-*):

(vb.) **bay-* ‘to apportion, to divide into shares, to distribute, to allot, to share’;

(n.) **bay-a* ‘portion, share’

Proto-Circassian **bayə* ‘rich’ (cf. Kuipers 1975:12). Note: This may be a loan from Turkic.

52. Proto-Nostratic (n.) **bin-a*, **ban-a* ‘younger relative: (m.) younger brother, younger son; (f.) younger sister, younger daughter’:

Proto-Circassian **bənə* ‘(children of) family’ (cf. Kuipers 1975:12).

53. Proto-Nostratic root **bir-* (~ **ber-*):

(vb.) **bir-* ‘to swell, to rise, to grow’;

(n.) **bir-a* ‘largeness, greatness, height, tallness’

Extended form:

(vb.) **bir-V-g-* ‘to be high’;

(n.) **bir-g-a* ‘height, high place’; (adj.) ‘high, tall, lofty’

Proto-North Caucasian **bīrčV* (~ *-ē-*, *-ī-*) ‘rich, honorable’ (cf. Nikolayev—Starostin 1994:305).

61. Proto-Nostratic (n.) **borʷ-a* ‘a dark color’; (adj.) ‘dark, dark-colored’:

Proto-North Caucasian **būrV* (~ *-ō-*) ‘grey, brown’ (cf. Nikolayev—Starostin 1994:313—314). Note: This may be a borrowing.

63. Proto-Nostratic (n.) **bud-a* ‘lowest part or region (of anything)’:

Proto-North Caucasian **bVdV* ‘side’ (cf. Starostin—Nikolayev 1994:315—316).

69. Proto-Nostratic (n.) **bul-a* (~ **bol-a*) ‘penis, testicle(s)’:

Derivative of:

(vb.) **bul-* ‘to swell, to expand, to spread out, to overflow; to puff up, to inflate’;

(n.) **bul-a* ‘large quantity or amount; expansion, spread, inflation; puff, blow’

Proto-North Caucasian **bilV* (~ *-l-*) ‘penis’ (cf. Nikolayev—Starostin 1994:307).

129. Proto-Nostratic root **phir-* (~ **pher-*):

(vb.) **phir-* ‘to bring forth, to bear fruit’;

(n.) **phir-a* ‘birth, issue, offspring, descendant, fruit’

Proto-North Caucasian **pīrqwǎ* ‘a kind of fruit’ (cf. Nikolayev—Starostin 1994:873—874).

130. Proto-Nostratic root **phir-* (~ **pher-*):

(vb.) **phir-* ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated; to flutter, to fly, to flee’;

(n.) **phir-a* ‘flying, flight, fleeing’

Proto-North Caucasian **pirV* ‘(vb.) to fly; (n.) flight’ (cf. Nikolayev—Starostin 1994:874—875; Chirikba 1996b:21—22).

133. Proto-Nostratic root **phitʷ-* (~ **phetʷ-*):

(vb.) **phitʷ-* ‘to give birth to’;

(n.) **phitʷ-a* ‘genitals (male or female); birth, origin’

Proto-North Caucasian **pūti/*būti* ‘genitals (mostly female)’ (cf. Nikolayev—Starostin 1994:876—877).

148. Proto-Nostratic root **phuw-* (~ **phow-*):

(vb.) **phuw-* ‘to puff, to blow, to exhale; to puff up, to inflate’;

(n.) **phuw-a* ‘a puff, the act of blowing, breath’

Proto-North Caucasian **pūHV* ‘(vb.) to blow; (n.) blowing’ (onomatopoeic root) (cf. Nikolayev—Starostin 1994:875).

154. Proto-Nostratic (n.) **da-* ‘mother, sister’; (reduplicated) (n.) **da-da-* ‘mother, sister’ (nursery words):

Proto-North Caucasian **dājV/*dādājV* ‘father; mother’ (a common North Caucasian nursery word) (cf. Nikolayev—Starostin 1994:397—398; Chirikba 1996b:29—30).

166. Proto-Nostratic root (?) **daw-* (~ **dəw-*):
 (vb.) **daw-* ‘to sound, to resound, to make a noise’;
 (n.) **daw-a* ‘sound, noise’

Proto-North Caucasian **dwǎnʔV* ‘a kind of musical instrument’ (cf. Nikolayev—Starostin 1994:406—407).

192. Proto-Nostratic (n.) **dur-a* ‘goat, sheep, ram’ (perhaps originally ‘horned animal’):

Proto-North Caucasian **dVrǵwV* ‘he-goat’ (cf. Nikolayev—Starostin 1994:403).

193. Proto-Nostratic root **duw-* (~ **dow-*):
 (vb.) **duw-* ‘to blow about, to fly about, to scatter; to be blown, strewn, or scattered about’;
 (n.) **duw-a* ‘anything blown, sprinkled, scattered, or strewn about: smoke, steam, vapor; rain, shower, drizzle, raindrops; dust’; (adj.) ‘blown about, sprinkled, scattered, strewn’

Proto-North Caucasian **dwiHV* ‘wind’ (cf. Nikolayev—Starostin 1994:407).

194. Proto-Nostratic demonstrative stems:
 Proximate: **thā-* (~ **thə-*) ‘this’;
 Intermediate: **thi-* (~ **the-*) ‘that’;
 Distant: **thu-* (~ **tho-*) ‘that yonder’

Proto-North Caucasian **tV* ‘that’ (demonstrative pronoun) (cf. Nikolayev—Starostin 1994:990—991).

243. Proto-Nostratic root **t’aw-* (~ **t’əw-*):
 (vb.) **t’aw-* ‘to hit, to strike’;
 (n.) **t’aw-a* ‘stroke, blow, injury, harm, damage’

Proto-Circassian **t’awə* ‘to bump (one’s head)’ (cf. Kuipers 1975:18).

253. Proto-Nostratic root **t'uɽw-* (\sim **t'oɽw-*):
 (vb.) **t'uɽw-* 'to separate, divide, or split into two parts; to cut in half';
 (n.) **t'uɽw-a* 'separation or division into two; two halves'
 (used as the base for the numeral 'two' in Indo-European and Altaic)

Proto-Northwest Caucasian **tqo* 'two' (cf. Colarusso 1981.I:538 **t'q'ù-* and 1992:45 **t'q'o*; Kuipers 1975:19 Proto-Circassian **Tq'o(a)*). Note: Nikolayev—Starostin (1994:924) reconstruct Proto-North Caucasian **qHwā* 'two', West Caucasian **tqL:wA* 'two'. However, they note: "The PWC form has a prefixed dental; this may be an innovation, but may also reflect the common NC state (**tqHwā* with simplification of the initial cluster in PEC)."

264. Proto-Nostratic indefinite pronoun stem **dʲi-* (\sim **dʲe-*) 'this one, that one':

Proto-North Caucasian **ʒi* 'self, oneself' (cf. Nikolayev—Starostin 1994:1102—1103).

278. Proto-Nostratic root **t'yal-* (\sim **t'yəl-*) and/or **t'yil-* (\sim **t'yel-*):
 (vb.) **t'yal-* and/or **t'yil-* 'to overshadow, to cover over, to make dark';
 (n.) **t'yal-a* and/or **t'yil-a* 'shade, shadow; covering; darkness'

Proto-North Caucasian **čɽɽwV* 'looming, haze; fumes' (cf. Nikolayev—Starostin 1994:379).

303. Proto-Nostratic root **sʲuw-* (\sim **sʲow-*):
 (vb.) **sʲuw-* 'to be proper, fitting, suitable, appropriate, good, well, fine, beautiful';
 (n.) **sʲuw-a* 'propriety, suitability, appropriateness'; (adj.) 'proper, fitting, suitable, appropriate'

Proto-Circassian **s'o(a)* 'good', **s'oəs'a* 'beneficent, benefit, good deed', **s'oəč'a* 'gratitude' (cf. Kuipers 1975:32—33).

338. Proto-Nostratic 3rd person pronoun stem **si-* (\sim **se-*) 'he, she, it; him, her; they, them'; 3rd person possessive suffix **-si* (\sim **-se*) 'his, her, its; their':

Proto-North Caucasian **sāj* interrogative pronoun: 'what?' — originally used only as an oblique base (Nikolayev—Starostin 1994:958).

342. Proto-Nostratic (n.) **ʒagw-a* 'a small tree, a bush or shrub':

Proto-North Caucasian **ʒāgV* 'a kind of shrub' (cf. Nikolayev—Starostin 1994:1105).

351. Proto-Nostratic (n.) *č'am-a 'reed, grass':

Proto-North Caucasian *čămhV 'a kind of plant' (cf. Nikolayev—Starostin 1994:383).

352. Proto-Nostratic root *č'ik'- (~ *č'ek'-):

(vb.) *č'ik'- 'to be small';

(n.) *č'ik'-a 'small things'; (adj.) 'small'

Proto-North Caucasian *čăkũ / *čăkũ 'young (of animals), boy'; West Caucasian *čəkwə 'young boy, youngster; small' (cf. Nikolayev—Starostin 1994:382—383).

354. Proto-Nostratic demonstrative pronoun stem *ša- (~ *šə-) 'this, that':

Proto-North Caucasian *šī interrogative pronoun stem: 'who?, what?'; West Caucasian *šə (~ *š:-) 'how?' (cf. Nikolayev—Starostin 1994:986).

357. Proto-Nostratic root *šaw- (~ *šəw-):

(vb.) *šaw- 'to sigh, to pant, to gasp, to breathe deeply';

(n.) *šaw-a 'breath, sigh'

Related to:

(vb.) *šaw- 'to sleep, to rest';

(n.) *šaw-a 'sleep, slumber, rest'

Proto-North Caucasian *šīHwV '(n.) breath; (v.) to breathe' (cf. Nikolayev—Starostin 1994:961—962). Note also: Proto-North Caucasian *šīHw̃V 'whistle; reed-pipe' (cf. Nikolayev—Starostin 1994:984).

362. Proto-Nostratic root *gaʔ- (~ *gəʔ-):

(vb.) *gaʔ- 'to go, to leave, to depart; to leave behind, to abandon, to forsake';

(n.) *gaʔ-a 'abandonment, lack, want, need, deprivation, loss, deficit'; (adj.) 'abandoned, forsaken, left behind; wanting, lacking, deprived of'

Proto-Circassian *ga 'bad, insufficient, lacking' (cf. Kuipers 1975:50; Chirikba 1996b:35 *gə).

370. Proto-Nostratic root *gal- (~ *gəl-):

(vb.) *gal- 'to dig, scoop, or hollow out' (> 'to plow');

(n.) *gal-a 'the act of digging, scooping, or hollowing out'

Derivative of:

(vb.) *gal- 'to cut, break, tear, or pluck off; to separate';

(n.) *gal-a 'cut, break, tear, separation'

Proto-North Caucasian **gāl(V)gV* ‘stick’ (derivative of **gālV* [~ **-l-*] ‘stick’) (cf. Nikolayev—Starostin 1994:429 and 429—430).

377. Proto-Nostratic root **gam-* (∼ **gəm-*):
 (vb.) *gam-* ‘to bend, to be bent’;
 (n.) *gam-a* ‘a bent or curved object: hook; wrist, ankle; etc.’

Proto-North Caucasian **gāmčwV* ‘canine tooth, fang’ (cf. Nikolayev—Starostin 1994:430).

391. Proto-Nostratic pronominal base of unclear deictic function **gi-* (∼ **ge-*):

Proto-North Caucasian **gV* ‘that (below the speaker)’ (cf. Nikolayev—Starostin 1994:442—443).

398. Proto-Nostratic root **gir-* (∼ **ger-*):
 (vb.) **gir-* ‘to gird, to enclose’;
 (n.) **gir-a* ‘enclosure fence, wall’

Proto-North Caucasian **gīrgwV* ‘circle, round’ (cf. Nikolayev—Starostin 1994:438—439).

425. Proto-Nostratic root **k^ham-* (∼ **k^həm-*) or **q^ham-* (∼ **q^həm-*):
 (vb.) **k^ham-* or **q^ham-* ‘to seize, to grasp, to grip, to clutch’;
 (n.) **k^ham-a* or **q^ham-a* ‘grip, hold, hand(ful); bond, fetter’

Proto-North Caucasian **qēmtV* ‘palm of the hand, handful’ (cf. Nikolayev—Starostin 1994:888).

444. Proto-Nostratic root **k^hat^h-* (∼ **k^hət^h-*):
 (vb.) **k^hat^h-* ‘to plait, to weave, to twist’;
 (n.) **k^hat^h-a* ‘that which is plaited, woven, twisted: mat, net, knot’
 Derivative:
 (n.) **k^hat^h-a* ‘rag’

(?) Proto-Circassian **k^hat^hə* ‘sheep-shed’ (cf. Kuipers 1975:49). Assuming semantic development as in Old Church Slavic *kotъcb* ‘pen, coop’.

452. Proto-Nostratic root **k^hay-*:
 (vb.) **k^hay-* ‘to scoop out’;
 (n.) **k^hay-a* ‘spoon, ladle’
 Extended form:
 (vb.) **k^hay-V-w-* ‘to dig’;
 (n.) **k^hay-w-a* ‘cave, pit, hollow’

Proto-Circassian **kʰəya* or **kʰayə* ‘tub’ (cf. Kuipers 1975:49).

471. Proto-Nostratic root **kʰakʰ*- (onomatopoeic):

(vb.) **kʰakʰ*- ‘to cackle, to chatter’;

(n.) **kʰakʰ-a* ‘crackling sound’

Derivative:

(n.) **kʰakʰ-a* (onomatopoeic bird name) ‘partridge’

Proto-Circassian **kʰaka* ‘to chirp’ (cf. Kuipers 1975:52; Chirikba 1996b:45).

475. Proto-Nostratic root **kʰal-* (~ **kʰəl-*):

(vb.) **kʰal-* ‘to take away, to remove, to deprive of; to decrease, to diminish, to reduce; to be or become reduced or diminished’;

(n.) **kʰal-a* ‘littleness, small quantity, scarcity; few things; lack, want, poverty, deficiency, insufficiency’; (adj.) ‘little, scanty, sparse, meager, insufficient, lacking, short of, wanting, needy’

Proto-North Caucasian **kʰāl̥kʰV* ‘a small thing’ (cf. Nikolayev—Starostin 1994: 721; Chirikba 1996b:46).

486. Proto-Nostratic (n.) **kʰaŋ-a* ‘knot, knob, joint’:

Derivative of:

(vb.) **kʰaŋ-* ‘to bend, twist, turn, or tie together’;

(n.) **kʰaŋ-a* ‘wreath, rope, cord, fiber, tie, band, string’

Proto-Circassian **kanə* ‘knuckle-bone (used in bone game)’ (cf. Kuipers 1975:52).

492. Proto-Nostratic (n.) **kʰar-a* ‘blackness, darkness, obscurity; dark cloud, rainy weather; dirt, grime’; (adj.) ‘dark, dark-colored; dirty, soiled’:

Proto-North Caucasian **kʰārV* ‘black; coal’ (cf. Nikolayev—Starostin 1994: 719—720).

493. Proto-Nostratic root **kʰar-* (~ **kʰər-*):

(vb.) **kʰar-* ‘to twist, to turn, to bend, to wind; to tie (together), to bind’;

(n.) **kʰar-a* ‘that which is tied or bound together: bunch, bundle’; (adj.) ‘bent, curved, crooked; tied, bound’

Possible derivative:

(n.) **kʰar-a* ‘protuberance, lump, hump, breast’

(?) Proto-Circassian **kʰərə* ‘thick, dense (of wool, beard, etc.), long (of hair), high (of grass)’ (cf. Kuipers 1975:52). Assuming semantic development from ‘closely or firmly twisted together’.

503. Proto-Nostratic root **k'ir-* (\sim **k'er-*) or **k'ur-* (\sim **k'or-*):
 (vb.) **k'ir-* or **k'ur-* ‘to cut, to cut into, to incise, to engrave, to notch; to cut off, to sever, to nip off, to clip; to cut in two, to split’;
 (n.) **k'ir-a* or **k'ur-a* ‘cut, slit, notch; chip, piece cut off’

Proto-North-Caucasian **kirV* ‘knife, axe’ (cf. Nikolayev—Starostin 1994: 725—726).

520. Proto-Nostratic root **g^wan-* (\sim **g^wən-*):
 (vb.) **g^wan-* ‘to hit, to strike, to slay, to kill, to wound, to harm, to injure’;
 (n.) **g^wan-a* ‘strike, harm, injury’

Proto-North Caucasian **gwanṼ* (\sim *-ō-*) ‘supply (of meat)’, perhaps originally ‘portion of meat (of a slaughtered animal)’ as in Avar-Andi (cf. Nikolayev—Starostin 1994:443—444).

522. Proto-Nostratic root **g^war-* (\sim **g^wər-*):
 (vb.) **g^war-* ‘to turn, to twist, to wind, to wrap, to roll’;
 (n.) **g^war-a* ‘any round or circular object’; (adj.) ‘rolling, round, bent, twisted, turned’

Proto-North Caucasian **gwērV* ‘circle; round; to roll’ (cf. Nikolayev—Starostin 1994:447—448). Note also: Proto-North Caucasian **gwṼrV* ‘enclosure’ (cf. Nikolayev—Starostin 1994:452; Chirikba 1996b:38).

526. Proto-Nostratic root **k^{wh}al-* (\sim **k^{wh}əl-*):
 (vb.) **k^{wh}al-* ‘to revolve, to go around, to roll’;
 (n.) **k^{wh}al-a* ‘circle, circuit’

Proto-North Caucasian **kwēl^oV* ‘thread’ (cf. Nikolayev—Starostin 1994:705).

535. Proto-Nostratic (n.) **k^{wh}ar-a* ‘vessel, pot’:

Proto-North Caucasian **kwərV* ‘a kind of vessel’ (cf. Nikolayev—Starostin 1994:706).

541. Proto-Nostratic relative pronoun stem **k^{wh}i-* (\sim **k^{wh}e-*); interrogative pronoun stem **k^{wh}a-* (\sim **k^{wh}ə-*):

Proto-North Caucasian **kwi* interrogative pronoun: ‘who?’ (cf. Nikolayev—Starostin 1994:709—710).

558. Proto-Nostratic root **k^was-* (\sim **k^wəs-*):
 (vb.) **k^was-* ‘to strike fire, to put out (fire)’;
 (n.) **k^was-a* ‘spark, fire’

Proto-Circassian **k'asa* ‘to go out (as fire, light); to escape, to run away, to desert, to elope’ (cf. Kuipers 1975:60; Chirikba 1996b:50 *k'ášə*).

562. Proto-Nostratic root **k'wed-*:

(vb.) **k'wed-* ‘to destroy, to damage, to ruin; to decay, to rot, to spoil’;

(n.) **k'wed-a* ‘death, destruction, damage, ruin, decay’

Note also:

(vb.) **k'wad-* ‘to strike, to beat, to smash, to pound’;

(n.) **k'wad-a* ‘knock, stroke, thrust’

Proto-Circassian **k'ad(a)* ‘to disappear, to get lost, to perish’ (cf. Kuipers 1975:60).

591. Proto-Nostratic (n.) **q'alv-a* ‘sexual organs, genitals, private parts (male or female)’:

Proto-North Caucasian **qVlē* (~ **q-*, **-i*) ‘child’ (cf. Nikolayev—Starostin 1994:929; Chirikba 1996b:63 **q'altá-sə*). For the semantics, cf. Svan [*q'l-*] in *q'law* ‘child (male)’, alongside Georgian *q'l-e* (< **q'al-e* or **q'ol-e*) ‘penis’; Mingrelian *ʔol-e* (< **q'ol-a-i*) ‘penis’; Laz *q'ol-e*, *k'ol-e* ‘penis’.

598. Proto-Nostratic root **Gwal-* (~ **Gwəl-*):

(vb.) **Gwal-* ‘to curve, to bend, to roll; to be round’;

(n.) **Gwal-a* ‘round object: circle, globe, sphere, ball, etc.’

Derivative:

(n.) **Gwal-a* ‘head, skull’

Proto-North Caucasian **Gwālĥē* ‘udder; breast’ (cf. Nikolayev—Starostin 1994:465).

603. Proto-Nostratic root **q'wal-* (~ **q'wəl-*):

(vb.) **q'wal-* ‘to throw, to hurl’;

(n.) **q'wal-a* ‘sling, club; throwing, hurling’

Proto-North Caucasian **q̇w[ä]tʔV̌* ‘arm, bosom, armpit’ (cf. Nikolayev—Starostin 1994:933—934). Semantics as in: Proto-Kartvelian **q'wil-* ‘shoulder bone, shoulder blade; arm’: Georgian *q'vl-iv-i* ‘shoulder blade’; Mingrelian *ʔvil-e* ‘bone, arm’; Laz *q'vil-i*, *ʔil-i* ‘bone’. Klimov 1964:211—212 **q̇wl-iw-* and 1998:242 **q̇wl-iw-*; Schmidt 1962:141; Fähnrich—Sardshweladse 1995:415 **q̇wil-*; Fähnrich 2007:516 **q̇wil-*.

607. Proto-Nostratic root (Eurasian only) **q'watʰh-* (~ **q'wəʰh-*):

(vb.) **q'watʰh-* ‘to say, to speak, to call’;

(n.) **q'watʰh-a* ‘call, invocation, invitation, summons’

Proto-Circassian **q'at^ha* ‘to tell, to report; to announce, to make known’ (cf. Kuipers 1975:73).

615. Proto-Nostratic root **t^hay-* (~ **t^hay-*):
 (vb.) **t^hay-* ‘to grow old, to turn gray (hair)’;
 (n.) **t^hay-a* ‘old age, gray hair’

Proto-North Caucasian **lājV* ‘time, day’ (cf. Nikolayev—Starostin 1994:766).

623. Proto-Nostratic root **t^lil-* (~ **t^lel-*):
 (vb.) **t^lil-* ‘to be bent, curved, round’;
 (n.) **t^lil-a* ‘bent, curved, round thing or object’; (adj.) ‘bent, curved, round’

Proto-North Caucasian **l[ɣ̃]/lī* ‘ear (of corn)’ (cf. Nikolayev—Starostin 1994:779).

627. Proto-Nostratic demonstrative stems (originally deictic particles):
 Proximate: **ɣi-* (~ **ɣe-*) ‘this’;
 Intermediate: **ɣu-* (~ **ɣo-*) ‘that’;
 Distant: **ɣa-* (~ **ɣə-*) ‘that yonder, that over there’

Proto-North Caucasian **ɣi* ‘this’ (a common Proto-North Caucasian demonstrative stem, in the majority of languages used for near deixis) (cf. Nikolayev—Starostin 1994:214—215), **ɣə* ‘that’ (this demonstrative stem is mostly used for far deixis) (cf. Nikolayev—Starostin 1994:218—219), **ɣu* (~ **hu*) ‘that’ (cf. Nikolayev—Starostin 1994:222).

Proto-Abkhaz demonstrative pronoun: **a* ‘this’ (used only in compounds) (cf. Chirikba 1996b:1).

629. Proto-Nostratic (n.) **ab(b)a* ~ **ap^h(p^h)a* ‘father, forefather’ (nursery word):

Proto-North Caucasian **əbV(jV)* ‘father’ (a nursery word) (cf. Nikolayev—Starostin 1994:217; Chirikba 1996b:1 **abá*).

634. Proto-Nostratic root **ak^h-* (~ **ək^h-*):
 (vb.) **ak^h-* ‘to eat’;
 (n.) **ak^h-a* ‘food, meal; fodder, feed, morsel’

(?) Proto-North Caucasian **ikwVn* ‘to eat’ (cf. Nikolayev—Starostin 1994:207).

649. Proto-Nostratic (n.) **an^va* ‘mother, aunt’ (nursery word):
 Note also:
 (n.) **en^va* ‘mother, elder sister’

Proto-North Caucasian **ʔānV(j)V* ‘mother’ (cf. Nikolayev—Starostin 1994: 201—202; Chirikba 1996b:9).

665. Proto-Nostratic root **ʔay-* (~ **ʔəy-*):
 (vb.) **ʔay-* ‘to go, to proceed’;
 (n.) **ʔay-a* ‘journey’
 Note also:
 (vb.) **ʔiy-* ‘to come, to go’;
 (n.) **ʔiy-a* ‘approach, arrival; path, way’

Proto-Abkhaz **jə* ‘to come, to go’ (cf. Chirikba 1996b:126).

678. Proto-Nostratic (n.) **ʔer-a* ‘earth, ground’:

Proto-North Caucasian **ʔārV* ‘plain’ (cf. Nikolayev—Starostin 1994:202).

683. Proto-Nostratic root **ʔil-* (~ **ʔel-*):
 (vb.) **ʔil-* ‘to see, to know’;
 (n.) **ʔil-a* ‘eye’

Proto-North Caucasian **ʔiL̥V* ‘to look’ (cf. Nikolayev—Starostin 1994:209).

719. Proto-Nostratic root **hag-* (~ **həg-*):
 (vb.) **hag-* ‘to be pressed or weighed down; to be oppressed; to be vexed, distressed, disheartened, afflicted, troubled’;
 (n.) **hag-a* ‘trouble, affliction, oppression, distress, grief, sadness’

Proto-North Caucasian **=HäGwVn* ‘to tremble, to be afraid’ (cf. Nikolayev—Starostin 1994:553—554).

740. Proto-Nostratic root **har-* (~ **hər-*):
 (vb.) **har-* ‘to scratch, to scrape’ (> ‘to plow’);
 (n.) **har-a* ‘scraping, scratching’

Proto-North Caucasian **=HarxVr* (~ *-ə-*, *-λ-*) ‘to sweep’ (cf. Nikolayev—Starostin 1994:548). Note also: Proto-North Caucasian **HěrxwA* / **HěwxwA* ‘to comb, to scratch, to scrape’ (cf. Nikolayev—Starostin 1994:562).

747. Proto-Nostratic root **haw-* (~ **həw-*):
 (vb.) **haw-* ‘to swell, to increase’;
 (n.) **haw-a* ‘swelling, increase, growth; great number or amount’

Proto-North Caucasian **HāwayV* ‘to swell’ (cf. Nikolayev—Starostin 1994: 549—550).

773. Proto-Nostratic root **ʕath-* (\sim **ʕəth-*):

(vb.) **ʕath-* ‘to move, to proceed, to advance (in years)’;

(n.) **ʕath-a* ‘maturity, old age; advance’; (adj.) ‘mature, old; advanced’

Proto-North Caucasian **=ətV* ‘to move, to go, to come’ (cf. Nikolayev—Starostin 1994:423).

800. Proto-Nostratic root **ɣil-* (\sim **ɣel-*):

(vb.) **ɣil-* ‘to bear, to give birth, to beget (of humans)’;

(n.) **ɣil-a* ‘child, youth, young person’; (adj.) ‘young, immature’

Proto-North Caucasian **HVλU* ‘to bear, to give birth; to create’ (cf. Nikolayev—Starostin 1994:614 **HVλU* ‘to bear, to give birth; to create’).

808. Proto-Nostratic 1st person personal pronoun stem **wa-* (\sim **wə-*) ‘I, me; we us’:

Nakh **waj* ‘we (incl.)’ (listed under Proto-North Caucasian **μō* ‘thou’) (cf. Nikolayev—Starostin 1994:1014—1015).

818. Proto-Nostratic root **wal-* (\sim **wəl-*):

(vb.) **wal-* ‘to flow, to wet, to moisten’;

(n.) **wal-a* ‘flow, trickle; wetness, moisture, dampness’; (adj.) ‘wet, damp’

Proto-Circassian **wala* ‘cloud’ (cf. Kuipers 1975:96). Assuming semantic development as in Old English *weolcen*, *wolc*, *wolcen* ‘cloud’; Old Frisian *wolken*, *wulken* ‘cloud’; Old Saxon *wolkan* ‘cloud’; Dutch *wolk* ‘cloud’; Old High German *wolchan*, *wolkan* ‘cloud’ (New High German *Wolke*).

821. Proto-Nostratic root **walʷ-* (\sim **wəlʷ-*):

(vb.) **walʷ-* ‘to turn, to roll, to revolve’;

(n.) **walʷ-a* ‘circle, circumference; turn, rotation’; (adj.) ‘round’

Proto-Circassian **wala* ‘to totter, to reel; to wave, to undulate’ (cf. Kuipers 1975:86).

824. Proto-Nostratic root **wan-* (\sim **wən-*):

(vb.) **wan-* ‘to stay, to remain’;

(n.) **wan-a* ‘abode, dwelling’

Proto-Circassian **wəna* ‘house’ (cf. Kuipers 1975:86).

830. Proto-Nostratic root **war-* (\sim **wər-*):
 (vb.) **war-* ‘to look, to watch out for, to observe, to care for’;
 (n.) **war-a* ‘watch, vigil, guardianship, care; watchman, guard, keeper, warder’

Proto-North Caucasian **ʔwerV* ‘look, sight’ (cf. Nikolayev—Starostin 1994: 248—249).

833. Proto-Nostratic root **war-* (\sim **wər-*):
 (vb.) **war-* ‘to raise, to elevate, to grow, to increase’;
 (n.) **war-a* ‘uppermost, highest, or topmost part’

Proto-North Caucasian **wārte* ‘top’ (cf. Nikolayev—Starostin 1994:1039).
 Note: This may be an Iranian or Indo-Iranian loan.

Proto-Circassian **warq:ə* ‘nobleman’ (cf. Kuipers 1975:87).

838. Proto-Nostratic root **waš-* (\sim **wəš-*):
 (vb.) **waš-* ‘to add (to), to augment, to increase, to heap up’;
 (n.) **waš-a* ‘augmentation, increase, addition, increment’; (adj.) ‘increased, augmented, heaped up, filled, full’

Proto-Circassian **wəša* ‘to stuff, to fill’ (cf. Kuipers 1975:85).

846. Proto-Nostratic root **welʷ-*:
 (vb.) **welʷ-* ‘to be open, to be vacant’;
 (n.) **welʷ-a* ‘open space, open land, field, meadow’

Proto-North Caucasian **wɪlʒwV* ‘mountain pasture’ (cf. Nikolayev—Starostin 1994:1055—1056).

852. Proto-Nostratic (n.) **wir-a* ‘a kind of tree: aspen, alder, poplar, or the like’:

Proto-North Caucasian **ʔwərxi* ‘a kind of foliage tree’ (cf. Nikolayev—Starostin 1994:230—231).

861. Proto-Nostratic indefinite pronoun stem **ma-* (\sim **mə-*), **mi-* (\sim **me-*), **mu-* (\sim **mo-*) ‘one, someone, somebody, anyone, anybody; other, another’:

Note: This may originally have been a demonstrative stem, with three degrees of distance:

Proximate: **ma-* (\sim **mə-*) ‘this’;

Intermediate: **mi-* (\sim **me-*) ‘that’;

Distant: **mu-* (\sim **mo-*) ‘that yonder’

Proto-North Caucasian **mV* demonstrative pronoun (cf. Nikolayev—Starostin 1994:842—843).

Proto-Circassian **mə* ‘this’ (cf. Kuipers 1975:87). Proto-Circassian **maw* ‘thither, that’ (cf. Kuipers 1975:88).

862. Proto-Nostratic (nursery word) (n.) **ma(a)* ‘mother, mommy’, (reduplicated) **mam(m)a*, **mem[e]* ‘mother; (mother’s) breast, milk’; used as a verb, the meaning was probably ‘to suckle, to nurse; to suck (the breast)’ (as noted by Watkins 2000:50: “[a] linguistic near-universal found in many of the world’s languages, often in reduplicated form”; see also Jakobson 1971[1960]):

Proto-North Caucasian **māmV* ‘teat, nipple; pimple’ (cf. Nikolayev—Starostin 1994:806—807).

863. Proto-Nostratic negative/prohibitive particle **ma(?)*- (~ **mə(?)*-) ‘no, not’:

Proto-North Caucasian **ma* (~ *-ə*) prohibitive particle (cf. Nikolayev—Starostin 1994:797).

Proto-Circassian **mə* negative prefix (cf. Kuipers 1975:87).

875. Proto-Nostratic (n.) **mal-a* ‘hill, mountain’:

Proto-North Caucasian *malšwV* ‘slope; muzzle, face’ (cf. Nikolayev—Starostin 1994:894—795).

891. Proto-Nostratic (n.) **man^v-a* ‘progenitor, begetter, man, male; penis’:

Derivative of:

(vb.) **man^v-* ‘to lust after, to desire passionately, to copulate with, to have sexual intercourse, to beget’;

(n.) **man^v-a* ‘ardent desire, passion, lust’

Proto-North Caucasian **mV̄nxV* ‘male, man’ (cf. Nikolayev—Starostin 1994:840).

Proto-Circassian **mana* ‘penis’ (cf. Kuipers 1975:89).

895. Proto-Nostratic (n.) **mar-a* ‘(young) man, male (human or animal)’:

Proto-North Caucasian **mōrLV* ‘male’ (cf. Nikolayev—Starostin 1994:830—831). According to Nikolayev—Starostin, “an important social term, not borrowed (as sometimes supposed) from Indo-Aryan.”

905. Proto-Nostratic root **mat’*- (~ **mæt’*-):
 (vb.) **mat’*- ‘to stretch, to expand, to lengthen, to draw out, to measure out’;
 (n.) **mat’-a* ‘measure, measurement, amount; extent, limit’

 Proto-North Caucasian **mĩłwi* (~ *-ē*) ‘growth, excrescence’ (cf. Nikolayev—Starostin 1994:823).
909. Proto-Nostratic interrogative pronoun stem **mi-* (~ **me-*) ‘who?, which?, what?’, relative pronoun stem **ma-* (~ **mǝ-*) ‘who, which, what’:
 Proto-North Caucasian **mV* interrogative stem (cf. Nikolayev—Starostin 1994:843).
916. Proto-Nostratic root **mir-* (~ **mer-*):
 (vb.) **mir-* ‘to stab, to pierce, to wound, to cause pain’;
 (n.) **mir-a* ‘wound, pain’

 Proto-North Caucasian **mirć(w)Ē* ‘knife, sickle’ (cf. Nikolayev—Starostin 1994:822—823).
926. Proto-Nostratic (Eurasian only) (n.) **mur-a* ‘mulberry, blackberry’:

 Proto-North Caucasian **mer(?)V* ‘a kind of berry’ (cf. Nikolayev—Starostin 1994:804—805).
930. Proto-Nostratic first person singular personal pronoun **na* (~ **nǝ*) ‘I, me’:

 Note: On the basis of Dravidian (and possibly Altaic), the original form of this stem may have been **ŋa* (~ **ŋǝ*), but this is not certain. Sumerian [Emegir] *ĝá.e* [= /ŋa-/] ‘I’ supports such a reconstruction as well.
931. Proto-Nostratic first person plural exclusive personal pronoun **na* (~ **nǝ*) ‘we, us’:

 Proto-North Caucasian **nĩ* ‘I’ (possibly originally a collective plural pronoun: cf. Proto-Dargwa **nu-s:a* ‘we’ [exclusive], **nu-x:a* ‘we’ [inclusive]) (cf. Nikolayev—Starostin 1994:855).
932. Proto-Nostratic deictic particle **na* (~ **nǝ*), **ni* (~ **ne*) ‘this, that’:

 Proto-North Caucasian **nV* ‘this, that’ (a demonstrative stem) (cf. Nikolayev—Starostin 1994:858).

953. Proto-Nostratic (n.) **nusʷ-a* ‘woman, female; any female connected by marriage: wife, bride, sister-in-law, daughter-in-law’:

Derivative of:

(vb.) **nusʷ-* ‘to be small, minute, soft, weak, delicate’;

(n.) **nusʷ-a* ‘smallness, insufficiency, decrease, diminishment’; (adj.) ‘small, minute, soft, weak, delicate’

Proto-North Caucasian **nūsA* (~ -ō-) ‘daughter-in-law’ (cf. Nikolayev—Starostin 1994:856—857). Note: According to Tuite—Schulze (1998), the North Caucasian terms are loans from Indo-European; cf. Proto-Indo-European **(s)nuso-s* ‘daughter-in-law’.

Proto-Circassian **nəsa* ‘(father’s) brother’s wife, daughter-in-law’ (cf. Kuipers 1975:89).

997. Proto-Nostratic root **rum-* (~ **rom-*):

(vb.) **rum-* ‘to grow or become dark; to darken’;

(n.) **rum-a* ‘darkness, night; twilight, dusk’; (adj.) ‘dark’

Proto-North Caucasian **rVmǣ* ‘night, evening’ (cf. Nikolayev—Starostin 1994:955—956).

I strongly suspect that most, if not all, of the Northwest Caucasian (Abkhaz and Circassian) evidence cited in this Appendix dates from the period when the speakers of Proto-Indo-European were in contact with speakers of Proto-Northwest Caucasian, as discussed in Chapter 13, §13.2, and Chapter 21 of this book and does not go back to the period of contact between Proto-Nostratic and Proto-North Caucasian. This is indicated, for example, by forms such as Proto-Circassian **qʷatʰa* ‘to tell, to report; to announce, to make known’ (no. 607 above), which was clearly borrowed from Proto-Indo-European after it had lost the earlier palatalized alveolars but before it had lost the postvelars (see Chapter 4, Appendix, for details on the prehistoric development of the Proto-Indo-European phonological system). The matches between Proto-North Caucasian and Proto-Nostratic, on the other hand, go back much further in time. Though not all of the matches are perfect, as a group, they are extremely suggestive.

Besides the Northwest and Northeast Caucasian languages, another place to look for possible evidence of language contact is Sumerian. The Sumerian evidence is abundant and is included in the individual Nostratic etymologies. As noted at the end of Chapter 15, “... the evidence seems to indicate that Sumerian ... is distantly related to Nostratic.” Thus, the Sumerian situation is a bit different from that involving the Northwest and Northeast Caucasian languages, which points to contact rather than relationship, though ultimate relationship should not be ruled out at an even deeper time depth. The investigation of deeper relationship, however, lies beyond the scope of this book.

A Comprehensive

Introduction to Nostratic

Comparative Linguistics

*With Special Reference
To Indo-European*

VOLUME 4

Allan R. Bomhard



FIFTH EDITION
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	<i>*Gal-a</i>	570
agreeable, to be	<i>*mak'-</i>	874
ailment	<i>*mar^y-a</i>	902
aim	<i>*p^har-a</i>	270
alder	<i>*wir-a</i>	852
alike	<i>*sam-a</i>	334
alive	<i>*ɖil-a</i>	681
alive, to be	<i>*ɖil-</i>	681
	<i>*hay-</i>	749
	<i>*hay-V-w-</i>	749
allot, to	<i>*bay-</i>	44
	<i>*xal-</i>	787
allotment	<i>*xal-a</i>	787
alone	<i>*k^hay-a</i>	449
	<i>*k^hay-w-a</i>	449
	<i>*ɖoy-a</i>	696
	<i>*xol-a</i>	793
alone, to be	<i>*ɖoy-</i>	696
	<i>*xol-</i>	793
aloneness	<i>*ɖoy-a</i>	696
along with	<i>*da- (~ *də-)</i>	153
	<i>*k^ham-</i>	427
also	<i>*k^whay-</i>	538
	<i>*ɖaph-</i>	653
	<i>*wa- (~ *wə-)</i>	809
among	<i>*math- or *met^h-</i>	904
amount	<i>*mad-a</i>	865
	<i>*mat'-a</i>	905
and	<i>*har^y-</i>	741
	<i>*wa- (~ *wə-)</i>	809
anger	<i>*q^hat^h-a</i>	587
angle	<i>*k'un-a</i>	516
animal, horned	<i>*mar-a</i>	903
animal, wild	<i>*guw-a</i>	412
	<i>*guw-r-a</i>	412
animals, to hunt wild	<i>*guw-</i>	412
	<i>*guw-V-r-</i>	412
ankle	<i>*gam-a</i>	377

English Meaning	Proto-Nostratic	Number
announce, to	* <i>bak^h</i> -	16
announcement	* <i>bak^h-a</i>	16
annoy, to	* <i>nady-</i>	939
annoyance	* <i>nady-a</i>	939
annoying	* <i>nady-a</i>	939
annoying, to be	* <i>nady-</i>	939
anoint (with greast, oil, fat, ointment), to	* <i>mar-</i>	898
another [indefinite pronoun stem]	* <i>ma-</i> (~ * <i>mə-</i>)	861
	* <i>mi-</i> (~ * <i>me-</i>)	861
	* <i>mu-</i> (~ * <i>mo-</i>)	861
anus	* <i>k'uŋ-a</i>	517
anybody [indefinite pronoun stem]	* <i>ma-</i> (~ * <i>mə-</i>)	861
	* <i>mi-</i> (~ * <i>me-</i>)	861
	* <i>mu-</i> (~ * <i>mo-</i>)	861
anyone [indefinite pronoun stem]	* <i>ma-</i> (~ * <i>mə-</i>)	861
	* <i>mi-</i> (~ * <i>me-</i>)	861
	* <i>mu-</i> (~ * <i>mo-</i>)	861
apart from, to be	* <i>xol-</i>	793
appear, to	* <i>wil^y</i> -	850
	* <i>n^yaʃ-V-r-</i>	956
appearance	* <i>sam-a</i>	334
	* <i>k'al-a</i>	478
	* <i>wil^y-a</i>	850
apportion, to	* <i>bay-</i>	44
	* <i>xal-</i>	787
approach	* <i>t^yhar-a</i>	270
	* <i>ʔiy-a</i>	688
approach, to	* <i>ʔan^y</i> -	647
approach something slowly, to	* <i>hak^h</i> -	703
appropriate	* <i>t'ak^h-a</i>	230
	* <i>s^yuw-a</i>	303
appropriate, to be	* <i>t'ak^h</i> -	230
	* <i>s^yuw-</i>	303
appropriateness	* <i>t'ak^h-a</i>	230
	* <i>s^yuw-a</i>	303
aquatic bird	* <i>gaŋ-a</i>	379
	* <i>haŋ-a</i>	734
ardent desire	* <i>man^y-a</i>	890
argue, to	* <i>mar-</i>	894
argument	* <i>mar-a</i>	894
arid	* <i>t^har-a</i>	208
	* <i>s^yaw-a</i>	290
arid, to be	* <i>s^yaw-</i>	290

English Meaning	Proto-Nostratic	Number
arise, to	* <i>buw-</i>	89
	* <i>niŋ^h-</i>	951
	* <i>n^vaʃ-V-r-</i>	956
	* <i>liʔ-</i>	981
arm	* <i>d^var-a</i>	262
	* <i>gab-a</i>	365
	* <i>har-a</i>	738
armful	* <i>hap^h-a</i>	735
armpit	* <i>Git'-a</i>	581
arrange in order, to	* <i>woy-V-k^h-</i>	856
arrangement	* <i>woy-k^h-a</i>	856
arrival	* <i>d^viʔ-a</i>	265
	* <i>ɥ^har-a</i>	270
	* <i>ʔiy-a</i>	688
arrive at, to	* <i>d^viʔ-</i>	265
	* <i>ɥ^har-</i>	270
	* <i>sag-</i> or * <i>šag-</i>	329
	* <i>hin-V-k^h-</i>	752
arrow	* <i>ʃam-a</i>	767
as	* <i>k^whay-</i>	538
	* <i>wa-</i> (~ * <i>wə-</i>)	809
ascend, to	* <i>k^hily-</i>	454
	* <i>k'ul-</i>	510
	* <i>ʃal-</i>	763
	* <i>ʃar-V-g-</i>	772
	* <i>xaŋ-</i>	790
ascent	* <i>sal-a</i>	333
ash(es)	* <i>t^huk^h-a</i>	222
	* <i>t^her-a</i>	616
ashes	* <i>k^wam-a</i>	550
	* <i>has-a</i>	742
ashes, (hot or smoldering)	* <i>k^hum-a</i>	464
ask, to	* <i>p^hir-</i>	145
ask for, to	* <i>t'el-</i>	247
aspen	* <i>wir-a</i>	852
assemblage	* <i>k^ham-a</i>	427
assemble, to	* <i>rak^h-</i>	987
assembling, the act of	* <i>rak^h-a</i>	987
assert, to	* <i>bak^h-</i>	16
assertion	* <i>bak^h-a</i>	16
associate	* <i>ʔar-a</i>	656
associated	* <i>ʔar-a</i>	656
associated or related person or thing	* <i>ʔar-a</i>	656

English Meaning	Proto-Nostratic	Number
astonishment, exclamation of	* <i>hay</i>	715
asunder, to part	* <i>ʔar-</i>	654
at a distance	* <i>t'aw-a</i>	242
at present (= now, currently)	* <i>nuw-</i>	955
at rest	* <i>k'war-a</i>	554
attach, to	* <i>baʕ-</i>	2
attached, to be firmly or strongly	* <i>t'yar-</i>	280
attack	* <i>wel-a</i>	845
attain, to	* <i>sag-</i> or * <i>ʕag-</i>	329
attain an end or a goal, to	* <i>ʔ^har-</i>	270
attainment	* <i>dʕiʔ-a</i>	265
	* <i>ʔ^har-a</i>	270
	* <i>sag-a</i> or * <i>ʕag-a</i>	329
attention	* <i>guw-a</i>	411
	* <i>ʕen-a</i>	774
attention, to pay	* <i>guw-</i>	411
	* <i>ʕen-</i>	774
auger	* <i>bur-a</i>	80
augment, to	* <i>waʕ-</i>	838
augmentation	* <i>waʕ-a</i>	838
augmented	* <i>waʕ-a</i>	838
aunt	* <i>ʔan^ya</i>	649
aware of, to be or become	* <i>baw-</i>	43
	* <i>guw-</i>	411
awareness	* <i>baw-a</i>	43
	* <i>guw-a</i>	411
axe	* <i>t^hikh-a</i>	216
	* <i>sak^h-a</i>	331
	* <i>ʕ'ir-a</i>	353
	* <i>gad-a</i>	367
	* <i>gar-a</i>	382
	* <i>t^har-a</i>	613
	* <i>haʒ-a</i>	751
	* <i>wed-a</i>	844

B

babe	* <i>baaba</i>	4
babble	* <i>wat^h-a</i>	840
back (= dorsum; dorsal part of the body)	* <i>dub-a</i>	180
	* <i>ʕar-a</i>	771
back of the head	* <i>k'ap^h-a</i>	489
bad	* <i>t'yaw-a</i>	285

English Meaning	Proto-Nostratic	Number
	<i>*nad^y-a</i>	939
(bad)	<i>*dar-a</i>	1663
bad, to be	<i>*ʔak^h-</i>	635
	<i>*nad^y-</i>	939
bad thing	<i>*t^yaw-a</i>	285
baffle, to	<i>*dul-</i>	183
baffled, to be	<i>*dul-</i>	183
bake, to	<i>*ʔep^h-</i>	677
(bake, to)	<i>*p^hek^{wh}-</i>	124
baked	<i>*t^yab-a</i>	227
(baked)	<i>*p^hek^{wh}-a</i>	124
baking	<i>*k^yal-a</i>	476
baking, the act of	<i>*ʔep^h-a</i>	677
bald	<i>*k^yal^y-a</i>	480
bald spot	<i>*k^yal^y-a</i>	480
ball	<i>*G^wal-a</i>	598
band (= cord)	<i>*s^yir-a</i>	297
	<i>*k^had-a</i>	418
	<i>*k^yac^h-a</i>	469
	<i>*k^yad-a</i>	470
	<i>*k^yaŋ-a</i>	485
bandage	<i>*baʕ-a</i>	2
	<i>*yaʔ-a</i>	802
bank (= shore)	<i>*k^har-a</i>	437
barb	<i>*t^ʃhak^{wh}-a</i>	610
bare	<i>*k^yal^y-a</i>	480
bark (= outside covering of trees)	<i>*t^yor^y-a</i>	251
	<i>*k^har-a</i>	435
	<i>*k^ywoy-a</i>	565
barren	<i>*bar-a</i>	42
barren, to be or become	<i>*bar-</i>	42
barren land	<i>*bar-a</i>	42
base (= vile)	<i>*p^hul-a</i>	135
	<i>*nad^y-a</i>	939
Base, to be (= to be vile)	<i>*nad^y-</i>	939
basin	<i>*mor-a</i>	918
bath	<i>*mus^y-a</i>	928
	<i>*mus^y-k'-a</i>	928
bathe, to	<i>*mus^y-</i>	928
	<i>*mus^y-V-k'-</i>	928
bathing, the act of	<i>*law-h-a</i>	979
battle	<i>*bur-a</i>	79
	<i>*Gal-a</i>	570

English Meaning	Proto-Nostratic	Number
	* <i>q^hat^h-a</i>	587
	* <i>wel-a</i>	845
	* <i>laḥ-a</i>	966
be, to (= to exist)	* <i>ʔil-</i>	681
beam forth, to	* <i>hal-</i>	705
bear, to (= to endure)	* <i>t^hal^y-</i>	199
bear, to (= to give birth)	* <i>ʔum-</i>	699
	* <i>ʔil-</i>	800
bear children, to	* <i>bar-</i>	32
bear fruit, to	* <i>p^hir-</i>	129
beast, wild	* <i>guw-a</i>	412
	* <i>guw-r-a</i>	412
beat, to	* <i>t^hap^h-</i>	203
	* <i>t^hap^h-</i>	238
	* <i>t^huk'-</i>	254
	* <i>d^yab-</i>	258
	* <i>p^yum-</i>	275
	* <i>t^yad-</i>	276
	* <i>c^haḥ-</i>	316
	* <i>k'an-</i>	484
	* <i>k^wad-</i>	545
	* <i>k^waḥ-</i>	547
	* <i>q^hat^h-</i>	587
	* <i>ʕak^h-</i>	762
	* <i>lax^w-</i>	980
beaten	* <i>k^waḥ-a</i>	547
beating	* <i>c^haḥ-a</i>	316
beating, the act of	* <i>c^haḥ-a</i>	316
	* <i>ʕak^h-a</i>	762
	* <i>lax^w-a</i>	980
beautiful, to be	* <i>s^yuw-</i>	303
beauty	* <i>bah-a</i>	13
become, to	* <i>buw-</i>	89
	* <i>liʔ-</i>	981
becoming (= coming into being)	* <i>liʔ-a</i>	981
bed	* <i>k^hay-a</i>	450
bed, to go to	* <i>nak^{wh}-</i>	943
bedtime	* <i>nak^{wh}-a</i>	943
bee	* <i>bay-a</i>	45
	* <i>k^han^y-a ~ *k^hin^y-a ~ *k^hun^y-a</i>	429
beg, to	* <i>t^hel-</i>	247
beget, to	* <i>k'an-</i>	481
	* <i>man^y-</i>	890

English Meaning	Proto-Nostratic	Number
beget (of humans), to	* <i>γil-</i>	800
begetter	* <i>man^v-a</i>	891
begin, to	* <i>hal-</i>	707
beginning	* <i>hal-a</i>	707
begotten	* <i>k'an-a</i>	481
behind (= hindquarters)	* <i>ɕar-a</i>	771
being	* <i>liʔ-a</i>	981
being, to come into	* <i>buw-</i>	89
	* <i>k'al-</i>	478
	* <i>n^vaɕ-V-r-</i>	956
	* <i>liʔ-</i>	981
belly	* <i>k^whur-a</i>	543
	* <i>wat^y-a</i>	841
belt	* <i>yaʔ-a</i>	802
beneath, that which is	* <i>hal-a</i>	726
bend	* <i>dar-a</i>	162
	* <i>k'um-a</i>	514
	* <i>k'un-a</i>	516
	* <i>han-a</i>	732
	* <i>wan-a</i>	827
	* <i>mal-a</i>	882
	* <i>mur-a</i>	925
	* <i>law-a</i>	976
	* <i>rak^h-a</i>	986
bend, to	* <i>dar-</i>	162
	* <i>t^hak^h-</i>	196
	* <i>ɕ^hok^h-</i>	350
	* <i>gam-</i>	377
	* <i>gaŋ-</i>	380
	* <i>k'ar-</i>	493
	* <i>k'um-</i>	514
	* <i>k'un-</i>	516
	* <i>Gub-</i>	582
	* <i>G^wal-</i>	598
	* <i>han-</i>	732
	* <i>wan-</i>	827
	* <i>mal-</i>	882
	* <i>mar-</i>	896
	* <i>mur-</i>	925
	* <i>law-</i>	976
	* <i>rak^h-</i>	986
bend back, to	* <i>gaŋ-</i>	380
bend down, to	* <i>c'ar-</i>	321

English Meaning	Proto-Nostratic	Number
	<i>*lam-</i>	971
	<i>*lam-V-d-</i>	971
bend forward, to	<i>*gaŋ-</i>	380
bend round, to	<i>*k'aw-</i>	496
bend the body, to	<i>*k'um-</i>	514
bend the head, to	<i>*k'um-</i>	514
bend to the side, to	<i>*gaŋ-</i>	380
bend together, to	<i>*tʰakʰ-</i>	196
	<i>*k'aŋ-</i>	485
	<i>*k'un-</i>	516
bending, the act of	<i>*ɕʰokʰ-a</i>	350
	<i>*k'um-a</i>	514
bends, that which	<i>*dar-a</i>	162
beneficent	<i>*bar-a</i>	36
beneficent, to be	<i>*bar-</i>	36
bent	<i>*dar-a</i>	162
	<i>*kʰon-k'-a, *kʰok'-a</i>	459
	<i>*k'ar-a</i>	493
	<i>*k'aw-a</i>	496
	<i>*ɕʰar-a</i>	522
	<i>*tʃ'il-a</i>	623
	<i>*wan-a</i>	827
bent, that which is	<i>*k'un-a</i>	516
	<i>*Gub-a</i>	582
bent, to be	<i>*tʰakʰ-</i>	196
	<i>*gam-</i>	377
	<i>*kʰon-V-k'-, *kʰok'-</i>	459
	<i>*tʃ'il-</i>	623
bent down, to be or become	<i>*lam-</i>	971
	<i>*lam-V-d-</i>	971
bent object	<i>*gam-a</i>	377
	<i>*k'um-a</i>	515
bent thing or object	<i>*tʃ'il-a</i>	623
beseech, to	<i>*pʰir-</i>	145
	<i>*t'el-</i>	247
besides	<i>*ʔapʰ-</i>	653
bestow upon, to	<i>*gib-</i>	392
bewilder, to	<i>*dul-</i>	183
bewildered, to be	<i>*dul-</i>	183
	<i>*mal-</i>	883
bewilderment	<i>*mal-a</i>	883
beyond	<i>*ɕal-</i>	763
big	<i>*bir-a</i>	53

English Meaning	Proto-Nostratic	Number
	<i>*gad-a</i>	366
	<i>*maʔ-a</i>	864
	<i>*mah-a</i>	870
	<i>*man-g-a</i>	889
	<i>*mik'-a</i>	914
big, to be or become	<i>*gad-</i>	366
big toe	<i>*p^hal-a</i>	101
bigness	<i>*gad-a</i>	366
	<i>*mah-a</i>	870
billy-goat	<i>*daq^h-a</i>	161
bind, to	<i>*baʕ-</i>	2
	<i>*t'an-</i>	237
	<i>*sak'w-</i>	332
	<i>*k^had-</i>	418
	<i>*k'ar-</i>	493
	<i>*k^whir-</i>	542
	<i>*yaʔ-</i>	802
	<i>*net'y-</i>	948
	<i>*rak^h-</i>	986
bind (together), to	<i>*ban-V-d-</i>	27
	<i>*bin-</i>	51
bind together, to	<i>*bag-</i>	12
	<i>*s^yir-</i>	297
	<i>*c'ur-</i>	326
	<i>*k'un-</i>	516
	<i>*tɕ'im-</i>	624
bind two things together, to	<i>*k^holv-</i>	458
binding	<i>*c'ur-a</i>	326
	<i>*ʕor^y-a</i>	779
	<i>*yaʔ-a</i>	802
bird, a kind of	<i>*c'ir^y-a</i>	325
bird, a kind of small	<i>*bul^v-a</i>	75
birth	<i>*p^hir-a</i>	129
	<i>*p^hit'y-a</i>	133
	<i>*c^han-a</i>	348
	<i>*k'al-a</i>	478
	<i>*k'an-a</i>	481
birth, to give	<i>*bar-</i>	32
	<i>*s^yaw- or *s^yew-</i>	291
	<i>*ʔum-</i>	699
	<i>*ɣil-</i>	800
birth to, to give	<i>*p^hit'y-</i>	133
bit (= piece; fragment)	<i>*dum-a</i>	185

English Meaning	Proto-Nostratic	Number
	* <i>dun^y-a</i>	190
	* <i>gad-a</i>	367
	* <i>k^has-a</i>	443
bite	* <i>bal-a</i>	22
	* <i>k'ab-a</i>	467
	* <i>gat^y-a</i>	577
	* <i>q'am-a</i>	592
	* <i>t̪'ar-a</i>	609
bite, to	* <i>bal-</i>	22
	* <i>bur-</i>	82
	* <i>k'ab-</i>	467
	* <i>gat^y-</i>	577
	* <i>q'am-</i>	592
	* <i>t̪'ar-</i>	609
	* <i>t̪'ar-V-s-</i>	609
	* <i>ɖit'-</i>	687
biting	* <i>gat^y-a</i>	577
bitter	* <i>ʒem-a</i>	346
	* <i>k^har-a</i>	440
	* <i>gat^y-a</i>	577
	* <i>ham-a</i>	713
bitter, anything that is	* <i>ʒem-a</i>	334
bitter, that which is	* <i>t^yam-a</i>	279
bitter, to be	* <i>t^yam-</i>	279
	* <i>ham-</i>	729
bitter foodstuff, any	* <i>ham-a</i>	729
bitterness	* <i>k^har-a</i>	440
black	* <i>dar-a</i>	164
	* <i>k^har-a</i>	441
	* <i>k^hum-a</i>	464
	* <i>ham-a</i>	708
blackberry	* <i>mur-a</i>	927
blacken, to	* <i>k^hum-</i>	464
blackness	* <i>k^har-a</i>	441
	* <i>k'ar-a</i>	492
	* <i>ham-a</i>	708
black object	* <i>ham-a</i>	708
blade (= knife-edge)	* <i>wah-a</i>	812
blade of grass	* <i>k^hal^y-a</i>	423
blaze	* <i>bud-a</i>	62
	* <i>war-a</i>	834
blaze, to	* <i>t^huk^h-</i>	222
	* <i>d^yak^{wh}-</i>	259

English Meaning	Proto-Nostratic	Number
	* <i>walʷ-</i>	822
	* <i>war-</i>	834
	* <i>lah-</i>	964
blazing	* <i>lah-a</i>	964
blemish	* <i>darʷ-a</i>	165
	* <i>gal-a</i>	375
blend	* <i>kʰatʰ-a</i>	495
blighted	* <i>cʰaw-a</i>	323
	* <i>cʰaw-lʷ-a</i>	323
blighted, that which is	* <i>cʰaw-a</i>	323
	* <i>cʰaw-lʷ-a</i>	323
blind	* <i>bal-a</i>	20
blind, to be or become	* <i>bal-</i>	20
blindness	* <i>bal-a</i>	20
blister	* <i>bug-a</i>	65
	* <i>pʰulʷ-a</i>	136
	* <i>darʷ-a</i>	165
blister, to	* <i>bug-</i>	65
blood	* <i>kʰur-a</i>	465
bloom	* <i>buw-a</i>	89
	* <i>xan-a</i>	789
bloom, to	* <i>bul-V-γ-</i>	70
	* <i>xan-</i>	789
blossom	* <i>buw-a</i>	89
	* <i>xan-a</i>	789
blossom, to	* <i>bul-V-γ-</i>	70
blossoming	* <i>bul-γ-a</i>	70
blotch	* <i>darʷ-a</i>	165
blow (= hit; stroke)	* <i>baḥ-a</i>	15
	* <i>tʰapʰ-a</i>	203
	* <i>tʰapʰ-a</i>	238
	* <i>tʰaw-a</i>	243
	* <i>tʰukʰ-a</i>	254
	* <i>dʷab-a</i>	258
	* <i>lʷʰal-a</i>	268
	* <i>cʰal-a</i>	317
	* <i>kʰud-a</i>	507
	* <i>qʰal-a</i>	584
	* <i>nag-a</i>	940
	* <i>laxʷ-a</i>	980
blow (= blast of air)	* <i>bul-a</i>	68
blow, to	* <i>bar-</i>	30
	* <i>bur-</i>	81

English Meaning	Proto-Nostratic	Number
	<i>*p^has^y-</i>	117
	<i>*p^huš-</i>	139
	<i>*p^huw-</i>	148
	<i>*žim-</i> or <i>*žim-</i>	312
	<i>*ʔup^h-</i>	700
	<i>*nap^h-, *nip^h-, *nup^h-</i>	944
blow about, to	<i>*bur-</i>	81
	<i>*p^ʷul^y-</i>	151
	<i>*duw-</i>	193
blowing	<i>*žim-a</i> or <i>*žim-a</i>	312
blowing, the act of	<i>*p^huw-a</i>	148
blown about	<i>*duw-a</i>	193
blown about, anything	<i>*duw-a</i>	193
blown about, to be	<i>*duw-</i>	193
(blubber)	<i>*p^hul^y-a</i>	137
blur	<i>*bul-a</i>	72
boar, wild	<i>*s^yaw-a</i>	292
board (= plank; panel)	<i>*č^ʷir-a</i>	353
body	<i>*k^whur-a</i>	543
body of water, any	<i>*mor-a</i>	918
boil (= blister)	<i>*bug-a</i>	65
boil, to	<i>*ʔep^h-</i>	677
boiling	<i>*wal-a</i>	819
boisterous, to be	<i>*gal-</i>	373
bond	<i>*baš-a</i>	2
	<i>*ban-d-a</i>	27
	<i>*bin-a</i>	51
	<i>*k^ham-a</i> or <i>*q^ham-a</i>	425
	<i>*t^ʃ'im-a</i>	624
	<i>*yaʔ-a</i>	802
	<i>*rak^h-a</i>	986
bone	<i>*k^ʷos-a</i>	506
bone of leg or arm	<i>*bar-a</i>	40
bore, to	<i>*bur-</i>	80
	<i>*dur-</i>	191
borer	<i>*bur-a</i>	80
born	<i>*k^ʷan-a</i>	481
born, to be	<i>*s^yaw- or *s^yew-</i>	291
	<i>*č^han-</i>	348
	<i>*k^ʷal-</i>	478
bosom	<i>*k^ʷan-a</i>	551
	<i>*ʃub-a</i>	780
bottom of anything	<i>*ʔul-a</i>	697

English Meaning	Proto-Nostratic	Number
bound (= tied)	* <i>k'ar-a</i>	493
bound together	* <i>tɬ'im-a</i>	624
bound together, collection of things	* <i>bag-a</i>	12
bound together, that which is	* <i>c'ur-a</i>	326
	* <i>k'ar-a</i>	493
bound together, to be or become	* <i>t'yar-</i>	280
bovine, wild	* <i>ɥ^hom-a</i>	274
bow down, to	* <i>k'um-</i>	514
bowels	* <i>wat'y-a</i>	841
bowing, the act of	* <i>k'um-a</i>	514
bowl	* <i>k^haph-a</i>	432
boy	* <i>n^ɥaɣ-r-a</i>	957
braid, to	* <i>haw-</i>	748
braiding	* <i>net'y-a</i>	948
braiding, the act of	* <i>haw-a</i>	748
brain	* <i>ɭay-a</i>	666
branch	* <i>t'or^y-a</i>	251
brave, to be	* <i>xam-</i>	788
	* <i>xam-V-d-</i>	788
breach	* <i>bad-a</i>	5
	* <i>ɥ^hal-m-a</i>	269
	* <i>mur-a</i>	924
breadth	* <i>p^har-a</i>	108
	* <i>t^hal^y-a</i>	199
	* <i>t^han^y-a</i>	201
	* <i>war-a</i>	832
break	* <i>bak'-a</i>	17
	* <i>bitɬ^h-a</i>	60
	* <i>p^hač^h-a</i>	90
	* <i>p^has^y-a</i>	118
	* <i>p^hin-a</i>	144
	* <i>t'aḥ-a</i>	229
	* <i>gal-a</i>	369
	* <i>k^has-a</i>	443
	* <i>mur-a</i>	924
break, to	* <i>bitɬ^h-</i>	60
	* <i>p^has^y-</i>	118
	* <i>p^hin-</i>	144
	* <i>dar-</i>	163
	* <i>t^har-</i>	206
	* <i>t'aḥ-</i>	229
	* <i>ɣak^h-</i>	762
	* <i>mur-</i>	924

English Meaning	Proto-Nostratic	Number
break (apart), to	* <i>p^har-</i>	107
break apart, to	* <i>p^hač^h-</i>	90
	* <i>p'ut'-</i>	152
	* <i>c^hal-</i>	317
	* <i>lam-</i> ~ (?) * <i>lvam-</i>	972
	* <i>row-</i>	996
break down, to	* <i>lam-</i> ~ (?) * <i>lvam-</i>	972
break into pieces, to	* <i>gīn-</i>	396
break into small pieces, to	* <i>k'ep'-</i>	500
break off, to	* <i>bīr-</i>	55
	* <i>p'ut'-</i>	152
	* <i>c^hal-</i>	317
	* <i>gal-</i>	369
	* <i>k^has-</i>	443
break open, to	* <i>bak'-</i>	17
	* <i>bit^h-</i>	60
	* <i>p^hač^h-</i>	90
	* <i>t^hal-</i>	611
breaking, the act of	* <i>ʕak^h-a</i>	762
breaking into small pieces, the act of	* <i>k'ep'-a</i>	500
breaking off, the act of	* <i>bīr-a</i>	55
breast	* <i>dīy-a</i>	178
	* <i>ʒuʒ-a</i>	314
	* <i>k'ar-a</i>	494
	* <i>k'wan-a</i>	551
	* <i>ʕim-a</i>	778
	* <i>ʕub-a</i>	780
	* <i>mal-a</i>	879
	* <i>man-a</i>	884
breast, (mother's)	* <i>mam(m)a</i> , * <i>mema</i>	862
breastfeed, to	* <i>man-</i>	884
breath	* <i>p^huš-a</i>	139
	* <i>p^huw-a</i>	148
	* <i>ʕaw-a</i>	357
	* <i>ʔup^h-a</i>	700
	* <i>ʕan-a</i>	768
	* <i>nap^h-a</i> , * <i>nip^h-a</i> , * <i>nup^h-a</i>	944
breathe, to	* <i>ʕan-</i>	768
	* <i>nap^h-</i> , * <i>nip^h-</i> , * <i>nup^h-</i>	944
breathe deeply, to	* <i>ʕaw-</i>	357
breathe out, to	* <i>p^has^y-</i>	117
	* <i>p^huš-</i>	139
bride	* <i>nus^y-a</i>	953

English Meaning	Proto-Nostratic	Number
bright	* <i>bah-a</i>	13
	* <i>hal-a</i>	705
	* <i>walʸ-a</i>	822
	* <i>wilʸ-a</i>	850
	* <i>law-a</i>	977
bright, shining object, any	* <i>q'al-a</i> or * <i>q'el-a</i>	590
bright, to be	* <i>bal-</i>	23
	* <i>bar-</i>	35
	* <i>dilʸ-</i>	175
	* <i>dul-</i>	182
	* <i>t'ay-</i> or * <i>t'iy-</i>	245
	* <i>dʷakʷh-</i>	259
	* <i>walʸ-</i>	822
bright, to be or become	* <i>q'al-</i> or * <i>q'el-</i>	590
bright, to become	* <i>dilʸ-</i>	175
	* <i>wilʸ-</i>	850
bright, to make	* <i>q'al-</i> or * <i>q'el-</i>	590
brighten up, to	* <i>hal-</i>	705
brightness	* <i>bah-a</i>	13
	* <i>bal-a</i>	23
	* <i>bar-a</i>	35
	* <i>t'ay-a</i> or * <i>t'iy-a</i>	245
	* <i>hal-a</i>	705
	* <i>walʸ-a</i>	822
	* <i>wilʸ-a</i>	850
brilliance	* <i>bah-a</i>	13
	* <i>Gil-a</i>	580
brilliant	* <i>Gil-a</i>	580
bring, to	* <i>day-</i>	171
	* <i>t'oxʷ-</i>	252
	* <i>wad-</i>	811
bring forth, to	* <i>bad-</i>	10
	* <i>pʰir-</i>	129
	* <i>sʷaw-</i> or * <i>sʷew-</i>	291
	* <i>ɕʰan-</i>	348
bring into action, to	* <i>bad-</i>	10
bring into being, to	* <i>bad-</i>	10
bring to an end, to	* <i>kʷʰal-</i>	528
bring together, to	* <i>k'atʰ-</i>	95
	* <i>Gam-</i>	571
bringing, the act of	* <i>wad-a</i>	811
bringing forth	* <i>ɕʰan-a</i>	348
bristle	* <i>bar-a</i>	29

English Meaning	Proto-Nostratic	Number
bristle (up), to	* <i>bar-</i>	29
(broad)	* <i>t^hal^y-a</i>	199
broad	* <i>p^hal-a</i>	97
	* <i>p^har-a</i>	108
	* <i>t^han^y-a</i>	201
	* <i>ʔut'-a</i>	701
	* <i>war-a</i>	832
	* <i>lap^h-a</i>	973
broad, that which is	* <i>p^hal-a</i>	97
broken	* <i>mur-a</i>	924
	* <i>lam-a</i> ~ (?) * <i>l^yam-a</i>	972
broken, to be or become	* <i>lam-</i> ~ (?) * <i>l^yam-</i>	972
broken-off piece or part	* <i>p'ut'-a</i>	152
brought forth, that which is	* <i>č^han-a</i>	348
brow	* <i>q'aw-a</i>	595
bruise, to	* <i>č^hañ-</i>	316
bubble	* <i>bul-bul-a</i> (> * <i>bum-bul-a</i>)	71
bubble up, to	* <i>bul-bul-</i> (> * <i>bum-bul-</i>)	71
buck (= male of small, hoofed animals)	* <i>buk'-a</i> (~ * <i>bok'-a</i>)	67
	* <i>k^hab-a</i>	415
bud	* <i>ʃag-a</i>	761
bud, to	* <i>ʃag-</i>	761
build, to	* <i>t'am-</i>	235
	* <i>k'ad-</i>	470
building	* <i>t'am-a</i>	235
bulbous	* <i>p'ul-a</i>	150
bulge	* <i>bar-a</i>	28
	* <i>p^huš-a</i>	139
	* <i>p'ul-a</i>	150
	* <i>t^haw-a</i>	212
bulky	* <i>k'w^yur^y-a</i>	566
bulky, to be	* <i>k'w^yur^y-</i>	566
bull	* <i>l^yh^{ar}^y-a</i>	271
bullock	* <i>l^yh^{ar}^y-a</i>	271
	* <i>k'w^yow-a</i>	564
bunch	* <i>bag-a</i>	12
	* <i>k'ar-a</i>	493
bundle	* <i>bag-a</i>	12
	* <i>k'ar-a</i>	493
	* <i>k^wh^{ir}-a</i>	542
burden	* <i>t'an-a</i>	236
	* <i>ʔan-a</i>	645
	* <i>wig-a</i>	849

English Meaning	Proto-Nostratic	Number
burn	* <i>p^hal^y-a</i>	103
burn, to	* <i>p^hal^y-</i>	103
	* <i>p^haḥ-</i>	140
	* <i>p^haḥ-V-w-</i>	140
	* <i>daG-</i>	157
	* <i>dul-</i>	182
	* <i>t^hep^h-</i>	214
	* <i>t^huk^h-</i>	222
	* <i>s^yax^w-</i>	293
	* <i>gub-</i>	403
	* <i>k^hum-</i>	464
	* <i>k' al-</i>	476
	* <i>k' w at' -</i>	560
	* <i>t^her-</i>	616
	* <i>ʔak^{wh}-</i>	639
	* <i>ʔeŋ-</i>	676
	* <i>ʔeŋ-V-k' -</i>	676
	* <i>ʔep^h-</i>	677
	* <i>hag-</i>	702
	* <i>has-</i>	742
	* <i>ʕal-</i>	764
	* <i>wal-</i>	819
	* <i>war-</i>	834
	* <i>lah-</i>	964
burn brightly, to	* <i>t' ay-</i> or * <i>t' iy-</i>	245
burn slowly, to	* <i>k' w am-</i>	550
burned	* <i>t^her-a</i>	616
burning	* <i>k' w at' -a</i>	560
	* <i>lah-a</i>	964
burning sensation	* <i>p^hal^y-a</i>	103
burnt wood	* <i>t^her-a</i>	616
burst forth, to	* <i>bi t^h-</i>	60
	* <i>nab-</i>	936
bursting forth	* <i>nab-a</i>	936
bush	* <i>ʒag^w-a</i>	330
bush, a kind of	* <i>d^yan-w-a</i>	261
bushy	* <i>bar-a</i>	31
bushy, to be	* <i>bar-</i>	31
but	* <i>wa-</i> (~ * <i>wə-</i>)	809
buttocks	* <i>k' uŋ-a</i>	517
buy, to	* <i>k^hap' -</i>	433
buzzing insect	* <i>bur^y-a</i>	87
buzzing sound, to make a	* <i>bur^y-</i>	87

English Meaning	Proto-Nostratic	Number
by me	* <i>ʔiya</i>	689
by oneself, to be	* <i>ʔoy-</i>	696
	* <i>xol-</i>	793
C		
cackle, to	* <i>k^hat^h-</i>	447
	* <i>k'ak'-</i>	471
cackling	* <i>k^hat^h-a</i>	447
calamity	* <i>mun-a</i>	923
calculation	* <i>xal-a</i>	787
calf	* <i>p^har-a</i>	112
	* <i>p^hur-a</i>	138
	* <i>ʕig-a</i>	777
call	* <i>ʒaḥ-a</i>	343
	* <i>k'ar-a</i>	491
	* <i>q'wal-a</i>	601
	* <i>q'war-a</i> or * <i>q'wur-a</i>	605
	* <i>q'wat^{yh}-a</i>	607
call, to	* <i>q'wat^{yh}-</i>	607
	* <i>waf-</i>	810
call (out), to	* <i>ʒaḥ-</i>	343
	* <i>q'wal-</i>	601
call (out to), to	* <i>k'ar-</i>	491
call out, to	* <i>k^hal-</i>	420
	* <i>q'war-</i> or * <i>q'wur-</i>	605
	* <i>wal-</i>	816
calm	* <i>t'um-a</i>	256
calm, to	* <i>t'um-</i>	256
calm, to be or become	* <i>q'wad-</i>	600
calmness	* <i>t'um-a</i>	256
	* <i>rom-a</i>	995
canal	* <i>gar-a</i>	574
	* <i>mor-a</i>	918
capture, to	* <i>p^hid-</i>	126
care	* <i>p^hin^y-a</i>	128
	* <i>k^hal-a</i>	421
	* <i>war-a</i>	830
	* <i>man-a</i>	887
	* <i>rak'-a</i>	989
care about, to	* <i>mal-</i>	877
care for, to (= to like)	* <i>p^har-</i>	106
	* <i>man-</i>	887

English Meaning	Proto-Nostratic	Number
care for, to (= to take care of)	*war-	830
carpenter	*t'am-a	235
carry, to	*wad-	811
	*wig-	849
	*nit ^h -	951
carrying, the act of	*wad-a	811
	*nit ^h -a	951
cart (= conveyance)	*wig-a	849
carve, to	*bar-	37
	*haz-	751
carving	*bar-a	37
	*xat'-a	792
carving tool	*ʔak ^h -a	636
cast, to (= to throw; to toss)	*day-	169
	*sih-	340
cast about	*sih-a	340
cast-out things	*gud-a	404
casting about, the act of	*sih-a	340
cattle	*bak'-a	19
cattle, herd of	*bak'-a	19
caustic (= pungent)	*k ^h ar-a	440
cave	*k ^h ay-w-a	452
cavity	*k'um-a	515
	*hal ^v -a	728
caw, to	*k ^h at ^h -	447
cawing	*k ^h at ^h -a	447
cease to function, to	*ʒaw-	345
cereal, a kind of	*hay-a	714
cessation	*ʒaw-a	345
chaff	*p ^h at'-a	123
chamois	*ʔar-a	657
change, to	*s ^y en ^v -	294
channel	*mor-a	918
char, to	*k ^h um-	464
charcoal	*k ^h um-a	464
	*t ^h er-a	616
charitable, to be	*bar-	36
charred	*t ^h er-a	616
chase after, to	*mar-	897
chase away, to	*gus-	410
chatter	*x ^w at'-a	796
	*wat ^h -a	840
chatter, to	*k'ak'-	471

English Meaning	Proto-Nostratic	Number
	<i>*x^wat'-</i>	796
cheat, to	<i>*mak^h-</i>	872
cheek	<i>*gen-a</i>	389
	<i>*k'an-a</i>	482
cheep, to	<i>*c'ir^y-</i>	325
cheerful, to be	<i>*mak'-</i>	874
chew, to	<i>*k'ep'-</i>	500
	<i>*q'am-</i>	592
	<i>*ʔit'-</i>	687
chewing (the cud)	<i>*k'ep'-a</i>	500
chief (= principal; main; leading)	<i>*p^har-a</i>	109
chief (= ruler)	<i>*t^hir-a</i>	619
	<i>*hak'-a</i>	723
	<i>*har-a</i>	739
chieftain	<i>*t^hir-a</i>	619
	<i>*hak'-a</i>	723
child	<i>*baaba</i>	4
	<i>*bar-a</i>	32
	<i>*p^hil^y-a</i>	127
	<i>*s^yaw-a</i> or <i>*s^yew-a</i>	291
	<i>*k'an-a</i>	481
	<i>*γil-a</i>	800
	<i>*yaw-a</i>	805
	<i>*mag-a</i>	869
children, to bear	<i>*bar-</i>	32
chill	<i>*k'ul^y-a</i>	511
chin	<i>*gat^y-a</i>	578
chip	<i>*bar-a</i>	37
	<i>*t^yak^h-a</i>	277
	<i>*c^hal-a</i>	318
	<i>*k'ir-a</i> or <i>*k'ur-a</i>	503
chip, to	<i>*t^yak^h-</i>	277
chirp, to	<i>*c'ir^y-</i>	325
chisel	<i>*t^hik^h-a</i>	216
	<i>*ʔak^h-a</i>	636
	<i>*haʒ-a</i>	751
choke, to	<i>*han-V-g-</i>	733
chop, to	<i>*t^yak^h-</i>	277
chop into small pieces, to	<i>*k'ep'-</i>	500
chopping into small pieces, the act of	<i>*k'ep'-a</i>	500
chosen	<i>*lak'-a</i>	969
cinder	<i>*has-a</i>	742
circle	<i>*c'ur-a</i>	326

English Meaning	Proto-Nostratic	Number
	<i>*k^har-a</i>	436
	<i>*k^whal-a</i>	526
	<i>*G^wal-a</i>	598
	<i>*wal^y-a</i>	821
circuit	<i>*k^whal-a</i>	526
circular object, any	<i>*G^war-a</i>	522
circumference	<i>*wal^y-a</i>	821
cistern	<i>*mor-a</i>	918
clamor	<i>*gal-a</i>	373
	<i>*waʃ-a</i>	810
clamor, to	<i>*gal-</i>	373
clap of thunder	<i>*Gad-a</i>	567
	<i>*Gad-Gad-a</i>	567
clarification	<i>*k^hal-a</i>	422
clarify, to	<i>*C'ar- or *č'ar-</i>	322
clarity	<i>*C'ar-a or *č'ar-a</i>	322
	<i>*gal-a</i>	372
clasp	<i>*k^hon-k'-a, *k^hok'-a</i>	459
clatter, loud	<i>*Gad-a</i>	567
	<i>*Gad-Gad-a</i>	567
claw	<i>*t^yip^h-a</i>	287
clay	<i>*diq^h-a</i>	177
clean, to	<i>*hal-</i>	725
	<i>*law-V-ḥ-</i>	979
clean(ed)	<i>*hal-a</i>	725
cleaned, that which is	<i>*ʔal-a</i>	640
cleaning, the act of	<i>*ʔal-a</i>	640
	<i>*hal-a</i>	725
cleanse, to	<i>*ʔal-</i>	640
clear	<i>*C'ar-a or *č'ar-a</i>	322
	<i>*gal-a</i>	372
	<i>*hal-a</i>	705
	<i>*wil^y-a</i>	850
clear, to be or become	<i>*C'ar- or *č'ar-</i>	322
	<i>*gal-</i>	372
clear, to make	<i>*C'ar- or *č'ar-</i>	322
	<i>*k^hal-</i>	422
clearness	<i>*hal-a</i>	705
cleave, to	<i>*bad-</i>	5
	<i>*bak'-</i>	17
	<i>*p^hal-</i>	95
	<i>*p^has^y-</i>	118
	<i>*p^hil^y-</i>	143

English Meaning	Proto-Nostratic	Number
	<i>*dun^y-</i>	190
	<i>*c^hal-</i>	317
climb on, to	<i>*ʔor^y-V-g-</i>	693
	<i>*ʕar-V-g-</i>	772
climbing	<i>*ʕar-g-a</i>	772
cling to, to	<i>*p^hid-</i>	126
clip, to	<i>*k^hir- or *k^hur-</i>	503
clipping	<i>*k^has-a</i>	443
close	<i>*t^han-a</i>	236
close, to	<i>*c^huk^h-</i>	319
	<i>*k^hap^h-</i>	490
closeness	<i>*t^han-a</i>	236
closure	<i>*c^huk^h-a</i>	319
cloth	<i>*k^hat^h-a</i>	445
clothe, to	<i>*k^had-</i>	417
cloud	<i>*p^hul^y-a</i>	151
	<i>*dum-a</i>	187
	<i>(*dum-k^hw-a >) *dun-k^hw-a</i>	188
cloud, (dark)	<i>*t^huq^hw-a</i>	257
cloud, storm	<i>*nab-a</i>	937
cloud over, to	<i>*dum-</i>	177
cloudy	<i>*dum-a</i>	177
	<i>(*dum-k^hw-a >) *dun-k^hw-a</i>	178
	<i>*hag-a</i>	720
cloudy, to be	<i>*t^huq^hw-</i>	257
cloudy sky	<i>*nab-a</i>	937
cloudy weather	<i>*hag-a</i>	720
club (= weapon)	<i>*k^han-a</i>	484
	<i>*k^hwah-a</i>	547
	<i>*q^hwal-a</i>	603
clump	<i>*k^hum-a</i>	513
clutch, to	<i>*p^hid-</i>	126
	<i>*k^ham- or *q^ham-</i>	425
coarse	<i>*bar-a</i>	31
	<i>*t^har-a</i>	280
	<i>*k^har-a</i>	439
coarse, that which is	<i>*t^har-a</i>	280
coarse, to be	<i>*bar-</i>	31
	<i>*t^har-</i>	280
coarseness	<i>*bar-a</i>	31
	<i>*k^har-a</i>	439
coil (= loop; cord)	<i>*c^hur-a</i>	326
	<i>*mar-a</i>	896

English Meaning	Proto-Nostratic	Number
cold (= chill; chilly)	* <i>k^hir-a</i>	456
	* <i>k'ul^y-a</i>	511
	* <i>k'war-a</i>	553
	* <i>q'in-a</i>	597
cold, to be	* <i>k^hir-</i>	456
	* <i>k'war-</i>	553
cold, to be or become	* <i>k'ul^y-</i>	511
	* <i>q'in-</i>	597
coldness	* <i>k'ul^y-a</i>	511
	* <i>k'war-a</i>	553
collapse	* <i>p^hul-a</i>	135
collapse (from shaking)	* <i>rag-a</i>	985
collapse, to	* <i>p^hul-</i>	135
collect, to	* <i>gid-</i> or * <i>gid-</i>	393
	* <i>k^ham-</i>	427
	* <i>k'er-</i>	502
	* <i>ʔas-</i>	658
	* <i>wot^h-</i>	854
	* <i>lak'-</i>	969
collect (with the hands or arms), to	* <i>hap^h-</i>	735
collected	* <i>lak'-a</i>	969
collected, that which has been	* <i>hap^h-a</i>	735
collecting, the act of	* <i>ʔas-a</i>	658
collection	* <i>gid-a</i> or * <i>gid-a</i>	393
	* <i>k^ham-a</i>	427
	* <i>k'er-a</i>	502
	* <i>gam-a</i>	571
	* <i>lak'-a</i>	969
collection of things bound together	* <i>bag-a</i>	12
comb	* <i>t^har-a</i>	209
	* <i>war-a</i>	831
comb, to	* <i>t^hiʃ-V-r-</i>	617
	* <i>war-</i>	831
combination of two things, any	* <i>k^hol^y-a</i>	458
combine two things together, to	* <i>k^hol^y-</i>	458
come, to	* <i>buw-</i>	88
	* <i>gal-</i>	568
	* <i>ʔiy-</i>	688
	* <i>naʃ-</i>	935
come (close to), to	* <i>ʔan^y-</i>	647
come into being, to	* <i>buw-</i>	89
	* <i>k'al-</i>	478
	* <i>n^yaʃ-V-r-</i>	956

English Meaning	Proto-Nostratic	Number
	<i>*liʔ-</i>	981
come into view, to	<i>*wilʔ-</i>	850
come to, to	<i>*dʔiʔ-</i>	265
	<i>*tʰar-</i>	270
	<i>*hin-V-kʰ-</i>	752
come to an end, to	<i>*kʷhal-</i>	528
come together, to	<i>*kʰatʰ-</i>	495
	<i>*gam-</i>	571
coming	<i>*buw-a</i>	88
coming, the act of	<i>*gal-a</i>	568
command	<i>*hakʰ-</i>	723
command, to	<i>*hakʰ-</i>	723
commerce	<i>*wos-a</i>	853
common, to be	<i>*ʔekʰ-</i>	672
compact	<i>*tʰikʰ-a</i>	217
companion	<i>*ʔar-a</i>	656
complete, to	<i>*kʷhal-</i>	528
	<i>*mud-</i>	919
completion	<i>*kʷhal-a</i>	528
	<i>*mud-a</i>	919
comprehension	<i>*kʰanʷ-a</i>	487
compression	<i>*kʰum-a</i>	513
compulsion	<i>*gid-a</i> or <i>*gid-a</i>	393
conceal, to	<i>*pʰal-</i>	102
	<i>*qʰam-</i>	585
	<i>*hag-</i>	720
concept	<i>*ʕeŋ-a</i>	775
condemnation	<i>*sadʷ-a</i>	328
condyle (of the lower jaw, the shoulder, the elbow, the hip, etc.)	<i>*ʔom-a</i>	690
confine, to	<i>*hakʰ-</i>	704
confuse, to	<i>*bul-</i>	72
	<i>*dul-</i>	183
confused, to be	<i>*dal-</i>	159
	<i>*dig-</i>	174
	<i>*dul-</i>	183
	<i>*makʰ-</i>	872
	<i>*mal-</i>	883
confusion	<i>*bul-a</i>	72
	<i>*dig-a</i>	174
	<i>*dul-a</i>	183
	<i>*kʰal-a</i>	477
	<i>*makʰ-a</i>	872

English Meaning	Proto-Nostratic	Number
	<i>*mal-a</i>	883
conglomeration	<i>*k'at^h-a</i>	495
connection	<i>*tɬ'im-a</i>	611
conquest	<i>*wel-a</i>	845
consider, to	<i>*day-</i>	170
	<i>*t'yij-</i>	286
	<i>*saḥ-</i> or <i>*šaḥ-</i>	330
	<i>*ʕeŋ-</i>	775
	<i>*man-</i>	885
consideration	<i>*day-a</i>	170
	<i>*t'yij-a</i>	286
	<i>*saḥ-a</i> or <i>*šaḥ-a</i>	330
constrict, to	<i>*han-V-g-</i>	733
constricted	<i>*han-g-a</i>	733
construct, to	<i>*k'ad-</i>	470
	<i>*rak^h-</i>	987
construct (something) in a skillful manner, to	<i>*t'am-</i>	235
constructed in a skillful manner, that which is	<i>*t'am-a</i>	235
constructing, the act of	<i>*rak^h-a</i>	987
constructing (something) in a skillful manner, the act of	<i>*t'am-a</i>	235
consume, to	<i>*ʔit'-</i>	687
container	<i>*k^haph-a</i>	432
contend, to	<i>*mar-</i>	894
control, to	<i>*rak'-</i>	989
convey, to	<i>*day-</i>	171
	<i>*wig-</i>	849
conveyance (= cart; vehicle)	<i>*wig-a</i>	849
(cook, to)	<i>*p^{hekwh}-</i>	124
cook, to	<i>*t'ab-</i>	227
	<i>*gub-</i>	403
	<i>*k'al-</i>	476
	<i>*ʔep^h-</i>	677
(cooked)	<i>*p^{hekwh}-a</i>	124
cooked	<i>*t'ab-a</i>	227
cooking	<i>*k'al-a</i>	476
cooking, that which is used for	<i>*gub-a</i>	403
cooking, the act of	<i>*gub-a</i>	403
	<i>*ʔep^h-a</i>	677
copious	<i>*man-g-a</i>	889
copulate (with), to	<i>*ʔor^y-V-g-</i>	693

English Meaning	Proto-Nostratic	Number
copulate with, to	* <i>man</i> ^v -	890
copulation	* <i>ʔor</i> ^v - <i>g-a</i>	693
cord	* <i>p^hir-a</i>	131
	* <i>s^vir-a</i>	298
	* <i>ʒal-a</i>	344
	* <i>gur-a</i>	409
	* <i>k' aŋ-a</i>	485
	* <i>mar-a</i>	896
	* <i>rak^h-a</i>	986
cord-like object, any	* <i>s^vir-a</i>	298
core	* <i>k^har-a</i>	442
corner	* <i>gaŋ-a</i>	380
	* <i>gol-a</i>	401
correct	* <i>woy-k^h-a</i>	856
correctness	* <i>woy-k^h-a</i>	856
cot	* <i>k^hay-a</i>	450
count, to	* <i>xal-</i>	787
	* <i>man-</i>	885
counting	* <i>man-a</i>	885
country, (open)	* <i>q' an-a</i>	593
couple	* <i>k^hol^v-a</i>	458
couple, to	* <i>k^hol^v-</i>	458
course	* <i>gir</i> ^v - <i>a</i> or * <i>Gir</i> ^v - <i>a</i>	400
course, winding	* <i>dar-a</i>	162
cover	* <i>bur-a</i>	83
	* <i>c^huk^h-a</i>	319
cover, to	* <i>bur-</i>	83
	* <i>p^hal-</i>	102
	* <i>p^har</i> ^v -	115
	* <i>t' aq' -</i>	239
	* <i>c^huk^h-</i>	319
	* <i>k^had-</i>	417
	* <i>k' ap^h-</i>	490
	* <i>q^ham-</i>	585
	* <i>γam-</i>	799
cover over, to	* <i>dum-</i>	187
	* <i>t^hum-</i>	224
	* <i>t' yal-</i> and/or * <i>t' yil-</i>	278
	* <i>hag-</i>	720
cover up, to	* <i>p^hač' -</i>	91
covering	* <i>bur-a</i>	83
	* <i>p^hač' -a</i>	91
	* <i>p^hal-a</i>	102

English Meaning	Proto-Nostratic	Number
	<i>*p^harʷ-a</i>	115
	<i>*t'aq'-a</i>	239
	<i>*t'yal-a</i> and/or <i>*t'yil-a</i>	278
	<i>*k^had-a</i>	418
	<i>*k'ap^h-a</i>	490
	<i>*q^ham-a</i>	585
cow	<i>*k'w^ow-a</i>	564
	<i>*ʔaḥ-a</i>	632
crack (= break; fracture; rift)	<i>*bad-a</i>	5
	<i>*bak'-a</i>	17
	<i>*p^hač^h-a</i>	90
	<i>*p^hal-a</i>	95
	<i>*p^hily-a</i>	143
	<i>*t^yal-m-a</i>	269
	<i>*č^hal-a</i>	317
	<i>*t^ʃal-a</i>	611
	<i>*haŋ-a</i>	711
crackling sound	<i>*k'ak'-a</i>	471
craft (= work; trade)	<i>*t'am-a</i>	235
	<i>*k^whir-a</i>	542
craftsman	<i>*t'am-a</i>	235
cram, to	<i>*t^hur-</i>	226
cram together, to	<i>*hak'-</i>	704
crammed	<i>*k'w^aḥ-a</i>	547
cramming	<i>*ʒag-a</i>	305
crane (= large wading bird)	<i>*k'or-a</i> or <i>*k'ar-a</i>	505
(craziness)	<i>*dul-a</i>	183
(crazy, to be)	<i>*dul-</i>	183
(crazy, to drive someone)	<i>*dul-</i>	183
creak, to	<i>*q^harʷ-</i>	586
create, to	<i>*t^hikh-</i>	216
	<i>*k'an-</i>	481
	<i>*k^whey-</i>	540
create something, tool used to	<i>*t^hikh-a</i>	216
creating something, the act of	<i>*t^hikh-a</i>	216
creation	<i>*bad-a</i>	10
	<i>*k^whey-a</i>	540
crevice	<i>*haŋ-a</i>	711
croak, to	<i>*q^harʷ-</i>	586
crooked	<i>*dar-a</i>	162
	<i>*k^hon-k'-a, *k^hok'-a</i>	459
	<i>*k'ar-a</i>	493
	<i>*wan-a</i>	827

English Meaning	Proto-Nostratic	Number
crooked, that which is	* <i>k'un-a</i>	516
crooked, to be	* <i>k^hon-V-k'-</i> , * <i>k^hok'-</i>	459
crossing	* <i>p^har-a</i>	114
crowd	* <i>k^hum-a</i>	462
	* <i>gam-a</i>	571
	* <i>man-a</i>	888
	* <i>man-g-a</i>	889
crown of head	* <i>k^hir-a</i>	455
crumb	* <i>mol-a</i>	917
crumb(s)	* <i>č^hec^h-a</i>	349
crush, to	* <i>bit'y-</i>	59
	* <i>bul-</i>	74
	* <i>diq^h-</i>	177
	* <i>t'aḥ-</i>	229
	* <i>č^haḥ-</i>	316
	* <i>č^hec^h-</i>	349
	* <i>k'war-</i>	555
	* <i>gar-</i>	573
	* <i>q'am-</i>	592
	* <i>hur-</i>	759
	* <i>wal-</i>	820
	* <i>was^y-</i>	837
	* <i>mel-</i>	908
	* <i>mol-</i>	917
	* <i>mur-</i>	924
	* <i>nad^y-</i>	938
	* <i>lam- ~ (?) *l^yam-</i>	972
crush into pieces, to	* <i>gīn-</i>	397
crushed	* <i>gar-a</i>	573
	* <i>mol-a</i>	917
	* <i>mur-a</i>	924
	* <i>lam-a ~ (?) *l^yam-a</i>	972
crushed, anything	* <i>nad^y-a</i>	938
crushed, that which is	* <i>č^hec^h-a</i>	349
crushed, to be or become	* <i>lam- ~ (?) *l^yam-</i>	972
crushing	* <i>č^haḥ-a</i>	316
crushing, the act of	* <i>č^haḥ-a</i>	316
	* <i>č^hec^h-a</i>	349
	* <i>gīn-a</i>	397
	* <i>gar-a</i>	573
	* <i>was^y-a</i>	837
crust	* <i>k'woy-a</i>	565
cry	* <i>ḡaḥ-a</i>	343

English Meaning	Proto-Nostratic	Number
	<i>*k'ar-a</i>	491
	<i>*gar-a</i>	572
	<i>*gar-gar-a</i>	572
	<i>*q'wal-a</i>	601
	<i>*q'war-a</i> or <i>*q'wur-a</i>	605
	<i>*waf-a</i>	810
	<i>*wal-a</i>	816
	<i>*wat^h-a</i>	840
cry, to	<i>*k^hat^h-</i>	447
cry (out), to	<i>*ʒa^h-</i>	343
	<i>*k'ar-</i>	491
	<i>*q'wal-</i>	601
cry out, to	<i>*gal-</i>	373
	<i>*q'war-</i> or <i>*q'wur-</i>	605
	<i>*waf-</i>	810
	<i>*wal-</i>	816
crying	<i>*k^hat^h-a</i>	447
cudgel	<i>*k'an-a</i>	484
	<i>*k'wah-a</i>	547
cuff (= stroke; blow)	<i>*k'an-a</i>	484
	<i>*k'ud-a</i>	507
cup	<i>*k^haph-a</i>	432
current (= stream)	<i>*d^ʷaw-a</i>	263
	<i>*ʒar-a</i> or <i>*ʒar-a</i>	308
	<i>*hap^h-a</i>	736
currently (= now; at present)	<i>*nuw-</i>	955
curvature	<i>*k'un-a</i>	516
curve	<i>*dar-a</i>	162
	<i>*k^har-a</i>	436
	<i>*k'um-a</i>	514
	<i>*k'un-a</i>	516
	<i>*han-a</i>	732
	<i>*wan-a</i>	827
	<i>*mur-a</i>	925
curve, to	<i>*k'um-</i>	514
	<i>*G^wal-</i>	598
	<i>*han-</i>	732
curve round, to	<i>*k'aw-</i>	496
curved	<i>*dar-a</i>	162
	<i>*k^har-a</i>	436
	<i>*k^hon-k'-a</i> , <i>*k^hok'-a</i>	459
	<i>*k'ar-a</i>	493
	<i>*k'aw-a</i>	496

English Meaning	Proto-Nostratic	Number
	* <i>tɬ'il-a</i>	623
	* <i>wan-a</i>	837
curved, that which is	* <i>k'un-a</i>	516
	* <i>Gub-a</i>	582
curved, to be	* <i>k^hon-V-k'-</i> , * <i>k^hok'-</i>	459
	* <i>tɬ'il-</i>	623
curved down, to be or become	* <i>lam-</i>	971
	* <i>lam-V-d-</i>	971
curved object	* <i>gam-a</i>	377
	* <i>k'um-a</i>	515
curved thing or object	* <i>tɬ'il-a</i>	623
custody	* <i>k^hal-a</i>	421
cut	* <i>baḥ-a</i>	15
	* <i>ban-a</i>	26
	* <i>dum-a</i>	185
	* <i>t^har-a</i>	206
	* <i>t'ar-a</i>	240
	* <i>t'yar-a</i>	283
	* <i>c^hal-a</i>	317
	* <i>gad-a</i>	367
	* <i>gal-a</i>	369
	* <i>gar-a</i>	382
	* <i>k^har-a</i>	434
	* <i>k^has-a</i>	443
	* <i>k'ir-a</i> or * <i>k'ur-a</i>	503
	* <i>k^{wh}ar-a</i>	533
	* <i>q^hal-a</i>	584
	* <i>tɬ^har-a</i>	613
	* <i>tɬ^hut'-a</i>	621
	* <i>wan-a</i>	823
	* <i>wed-a</i>	844
	* <i>row-a</i>	996
cut, that which is	* <i>č'ir-a</i>	353
	* <i>haʒ-a</i>	751
cut, to	* <i>baḥ-</i>	15
	* <i>ban-</i>	26
	* <i>dal-</i>	158
	* <i>t'ar-</i>	240
	* <i>t'yar-</i>	283
	* <i>c^hal-</i>	317
	* <i>sak^h-</i>	331
	* <i>č'ir-</i>	353
	* <i>gad-</i>	367

English Meaning	Proto-Nostratic	Number
	*gal-	369
	*gar-	382
	*k ^h ar-	434
	*k'ir- or *k'ur-	503
	*k ^w har-	532
	*k'wat'-	561
	*q ^h al-	584
	*q'wal-	602
	*t ^h ar-	613
	*t ^h ut'-	621
	*waŋ-	828
	*miʔ-	911
cut a groove, to	*k ^w har-	533
cut apart, to	*p'ut'-	152
	*row-	996
cut in half, to	*t'uʔw-	253
cut in two, to	*k'ir- or *k'ur-	503
cut into, to	*bar-	37
	*č'ir-	353
	*k ^h ar-	434
	*k'ir- or *k'ur-	503
	*t ^h ar-	613
	*t ^h ar-V-t'-	614
	*haʒ-	751
	*xat'-	792
cut into, that which is	*č'ir-a	353
cut into small pieces, to	*t'yak ^h -	277
	*k'ep'-	500
cut (off), to	*dum-	175
	*gad-a	355
cut (off, apart), to	*ʔar-	654
cut off, that which is	*č'ir-a	353
cut off, to	*baħ-	15
	*bir-	55
	*p'ut'-	152
	*dun ^y -	190
	*č'ir-	353
	*gal-	370
	*k ^h ar-	434
	*k ^h as-	443
	*k'ir- or *k'ur-	503
cut-off piece or part	*p'ut'-a	152
cut open, to	*t ^h al-	611

English Meaning	Proto-Nostratic	Number
cut short, to	* <i>k^whar-</i>	534
cut through, to	* <i>č'ir-</i>	353
cuts, that which	* <i>č'ir-a</i>	353
	* <i>gad-a</i>	367
	* <i>gar-a</i>	382
	* <i>t^har-a</i>	613
	* <i>haz-a</i>	751
cutter	* <i>ʔak^h-a</i>	636
cutting	* <i>k^has-a</i>	443
cutting instrument	* <i>k^wat'-a</i>	561
	* <i>miʔ-a</i>	911
cutting into small pieces, the act of	* <i>k^hep'-a</i>	500
cutting off, the act of	* <i>bir-a</i>	55
cuttings	* <i>bar-a</i>	37

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dagger	* <i>sak^h-a</i>	331
	* <i>way-a</i>	828
damage	* <i>t^haw-a</i>	243
	* <i>t^har-a</i>	283
	* <i>k^wed-a</i>	562
	* <i>q^hal-a</i>	584
	* <i>nik^h-a</i>	950
damage, to	* <i>k^wed-</i>	562
damp	* <i>wal-a</i>	818
	* <i>nat'-a</i>	946
dampness	* <i>wal-a</i>	818
	* <i>nat'-a</i>	946
dancing	* <i>raq'-a</i>	990
dangle, to	* <i>dul^y-</i>	184
	* <i>t^huy-V-k^h-</i>	620
dark	* <i>bal-a</i>	20
	* <i>bor^y-a</i>	61
	* <i>dar-a</i>	164
	* <i>dum-a</i>	187
	(* <i>dum-k^w-a</i> >) * <i>dun-k^w-a</i>	188
	* <i>t^hum-a</i>	224
	* <i>k^har-a</i>	441
	* <i>k^har-a</i>	492
	* <i>hag-a</i>	720
	* <i>mar-a</i>	899
	* <i>rum-a</i>	997

English Meaning	Proto-Nostratic	Number
dark, that which is	* <i>bul-a</i>	73
dark, to be	* <i>t'uq'w-</i>	257
dark, to be or become	* <i>bal-</i>	20
	* <i>dar-</i>	164
	* <i>γam-</i>	799
dark, to become	* <i>dum-</i>	187
	* <i>t^hum-</i>	224
	* <i>rum-</i>	997
dark, to grow	* <i>rum-</i>	997
dark, to make	* <i>dum-</i>	187
	* <i>t'yal-</i> and/or * <i>t'yil-</i>	278
dark cloud	* <i>k'ar-a</i>	492
dark-colored	* <i>bor^y-a</i>	61
	* <i>k'ar-a</i>	492
dark-colored, that which is	* <i>bul-a</i>	68
dark color	* <i>bor^y-a</i>	73
dark spot	* <i>dar-a</i>	164
darken, to	* <i>dum-</i>	187
	* <i>rum-</i>	997
darkness	* <i>bal-a</i>	20
	* <i>dar-a</i>	164
	* <i>dum-a</i>	187
	(* <i>dum-k'w-a</i> >) * <i>dun-k'w-a</i>	188
	* <i>t^hum-a</i>	224
	* <i>t'uq'w-a</i>	257
	* <i>t'yal-a</i> and/or * <i>t'yil-a</i>	278
	* <i>k^har-a</i>	441
	* <i>k'ar-a</i>	492
	* <i>hag-a</i>	720
	* <i>γam-a</i>	799
	* <i>rum-a</i>	997
daughter-in-law	* <i>k'el-a</i>	498
	* <i>nus^y-a</i>	953
day	* <i>dag-a</i>	157
daylight	* <i>dil^y-a</i>	175
(deadly) disease	* <i>daw-a</i>	168
deal, to (= to trade; to exchange)	* <i>wos-</i>	853
death	* <i>daw-a</i>	168
	* <i>ʒaʔ-a</i>	341
	* <i>k'wed-a</i>	562
	* <i>q'wal-a</i>	602
	* <i>hul-a</i>	757
	* <i>wed-a</i>	844

English Meaning	Proto-Nostratic	Number
	<i>*mar^y-a</i>	902
deathly sick, to become	<i>*daw-</i>	168
debilitated	<i>*ʔeb-a</i>	670
debilitated, to be	<i>*nus^y-</i>	954
debilitated, to become	<i>*ʔeb-</i>	670
decay	<i>*bul-a</i>	74
	<i>*t^hah-a</i>	195
	<i>*k^wed-a</i>	562
	<i>*was^y-a</i>	837
decay, to	<i>*bad-</i>	9
	<i>*k^rer-</i>	501
	<i>*k^wed-</i>	562
	<i>*was^y-</i>	837
	<i>*mar^y-</i>	902
decayed	<i>*k^rer-a</i>	501
deceive, to	<i>*mak^h-</i>	872
deceived, to be	<i>*mak^h-</i>	872
deception	<i>*mak^h-a</i>	872
declaration	<i>*bak^h-a</i>	16
declare, to	<i>*bak^h-</i>	16
decline (= decay)	<i>*bul-a</i>	74
decomposition	<i>*was^y-a</i>	837
decrease	<i>*ʔek^r-a</i>	672
	<i>*nus^y-a</i>	953
decrease, to	<i>*k^ral-</i>	475
	<i>*k^whar-</i>	534
	<i>*ʔek^r-</i>	672
decree	<i>*hak^r-a</i>	723
decrepit	<i>*ʒaw-a</i>	345
deed	<i>*daw-a</i>	167
	<i>*day-a</i>	169
	<i>*t^hikh-a</i>	216
	<i>*k^whey-a</i>	540
deep	<i>*ʕam-a</i>	765
deep place	<i>*ʕam-a</i>	765
deer	<i>*ʔil-a (~ *ʔel-a)</i>	682
defeat	<i>*wel-a</i>	845
deficiency	<i>*k^ral-a</i>	475
	<i>*ʔek^r-a</i>	672
	<i>*hiw-a, *hiy-a</i>	753
deficit	<i>*gaʔ-a</i>	362
deliberation	<i>*ʕeŋ-a</i>	775
delicate	<i>*nus^y-a</i>	952

English Meaning	Proto-Nostratic	Number
delicate, to be	* <i>nus^v</i> -	952
delight	* <i>p^har-a</i>	106
delighted with, to be	* <i>p^har-</i>	106
deluge	* <i>ʔib-a</i>	680
	* <i>h^haw-a</i>	746
	* <i>wel^v-a</i>	847
dense	* <i>t'an-a</i>	236
	* <i>k'an-a</i>	483
density	* <i>t'an-a</i>	236
	* <i>k'an-a</i>	483
depart, to	* <i>gaʔ-</i>	362
	* <i>ʔor-</i>	801
	* <i>ʔor-V-b-</i>	801
	* <i>wal-</i>	817
departing	* <i>bar-a</i>	41
departure	* <i>ʔor-a</i>	801
	* <i>ʔor-b-a</i>	801
	* <i>wal-a</i>	817
deprivation	* <i>bad-a</i>	8
	* <i>gaʔ-a</i>	362
deprive of, to	* <i>k'al-</i>	475
deprived of	* <i>gaʔ-a</i>	362
depth	* <i>t'al-a</i>	232
deride, to	* <i>ʒak'-</i>	307
descendant	* <i>p^has^v-a</i>	119
	* <i>p^hir-a</i>	129
	* <i>ʔum-a</i>	699
	* <i>n^vap^h-a</i>	959
desire	* <i>t'el-a</i>	247
	* <i>haw-a</i>	713
	* <i>win-a</i> or * <i>wiŋ-a</i>	851
desire, ardent	* <i>man^v-a</i>	890
desire, to	* <i>haw-</i>	713
	* <i>win-</i> or * <i>wiŋ-</i>	834
desire passionately, to	* <i>man^v-</i>	890
desolate	* <i>bar^v-a</i>	42
desolate, to be or become	* <i>bar^v-</i>	42
desolated area	* <i>bad-a</i>	6
destroy, to	* <i>c^haḥ-</i>	316
	* <i>k'^wed-</i>	562
	* <i>hal-</i>	723
	* <i>hul-</i>	757
	* <i>mur-</i>	924

English Meaning	Proto-Nostratic	Number
destroyed	* <i>mur-a</i>	924
destruction	* <i>gup^h-a</i>	407
	* <i>k^wed-a</i>	562
	* <i>q^wal-a</i>	602
	* <i>hal-a</i>	724
	* <i>hul-a</i>	757
	* <i>nik^h-a</i>	950
detach, to	* <i>law-</i>	978
detention	* <i>k^hal-a</i>	421
deteriorate, to	* <i>s^yen^y-</i>	294
devoted to, to be	* <i>mal-</i>	877
dew	* <i>t^yal^y-a</i>	234
	* <i>mat^y'-a</i>	906
die, to	* <i>daw-</i>	168
	* <i>ʒaʔ-</i>	341
die (from a fatal disease), to	* <i>mar^y-</i>	902
die out, to	* <i>gup^h-</i>	407
difference	* <i>ʔaŋ-a</i>	650
different	* <i>t^yhⁱn-a</i>	272
	* <i>ʔaŋ-a</i>	650
difficulty	* <i>k^yac^h-a</i>	468
	* <i>wal-a</i>	820
	* <i>muŋ-a</i>	923
difficulty, to be in	* <i>muŋ-</i>	923
difficulty, to cause	* <i>muŋ-</i>	923
dig, that which is used to	* <i>gar-a</i>	574
	* <i>ʔak^h-a</i>	636
dig, to	* <i>k^hay-V-w-</i>	452
	* <i>k^whar-</i>	533
	* <i>gar-</i>	574
	* <i>ʔak^h-</i>	636
dig out, to	* <i>gal-</i>	370
	* <i>gar-</i>	574
dig up, to	* <i>gar-</i>	574
	* <i>wur^y-</i>	859
digging	* <i>k^whar-a</i>	533
	* <i>ʔak^h-a</i>	636
digging out, the act of	* <i>gal-a</i>	370
diligence	* <i>q^had-a</i>	583
diminish, to	* <i>t^hah-</i>	195
	* <i>k^yal-</i>	475
	* <i>k^whar-</i>	545
	* <i>ʔek^y'-</i>	672

English Meaning	Proto-Nostratic	Number
diminished, to be or become	* <i>k'al-</i>	475
diminishment	* <i>ʔek'-a</i>	672
	* <i>nus^y-a</i>	952
dip (= plunge; immersion)	* <i>mus^y-a</i>	928
	* <i>mus^y-k'-a</i>	928
dip, to	* <i>ʕam-</i>	765
dip in water, to	* <i>mus^y-</i>	928
	* <i>mus^y-V-k'-</i>	928
dip into, to	* <i>t'al-</i>	232
direct, to	* <i>hak'-</i>	723
direction	* <i>q^had-a</i>	583
	* <i>hak'-a</i>	723
dirt	* <i>t'uq^w-a</i>	257
	* <i>k'ar-a</i>	492
	* <i>mar-a</i>	899
dirty	* <i>k'ar-a</i>	492
	* <i>mar-a</i>	899
dirty, to be	* <i>t'uq^w-</i>	257
disagree, to	* <i>mar-</i>	894
disclose, to	* <i>k^hal-</i>	422
discourse	* <i>t'il-a</i>	250
disease	* <i>gal-a</i>	374
	* <i>nus^y-a</i>	954
disease, (deadly)	* <i>daw-a</i>	168
disheartened, to be	* <i>hag-</i>	719
disjoined	* <i>ʔar-a</i>	654
dispersed	* <i>t^har-a</i>	205
dispute	* <i>bur-a</i>	78
	* <i>mar-a</i>	894
dispute, to	* <i>mar-</i>	894
dissipate, to	* <i>bad-</i>	6
dissipation	* <i>bad-a</i>	6
	* <i>t^hah-a</i>	195
dissolve, to	* <i>gar-</i>	573
dissolved	* <i>gar-a</i>	573
distance	* <i>t'aw-a</i>	242
	* <i>ʔut'-a</i>	701
distance, at a	* <i>t'aw-a</i>	242
distant	* <i>k^whal-</i>	529
distinction	* <i>mag-a</i>	867
distress	* <i>bad-a</i>	7
	* <i>k'al-a</i>	477
	* <i>hag-a</i>	719

English Meaning	Proto-Nostratic	Number
	* <i>wal-a</i>	820
	* <i>muŋ-a</i>	923
distress, to be in	* <i>muŋ-</i>	923
distress, to cause	* <i>muŋ-</i>	923
distressed, to be	* <i>hag-</i>	719
distribute, to	* <i>bay-</i>	444
disturb, to	* <i>dal-</i>	159
	* <i>dul-</i>	183
	* <i>Gal-</i>	570
	* <i>nady-</i>	939
disturbance	* <i>dal-a</i>	159
	* <i>dul-a</i>	183
	* <i>dul^y-a</i>	184
	* <i>gal-a</i>	373
	* <i>k'al-a</i>	477
	* <i>Gal-a</i>	570
	* <i>nady-a</i>	939
disturbed, to be	* <i>dal-</i>	159
	* <i>dul-</i>	183
	* <i>Gal-</i>	570
	* <i>mal-</i>	883
ditch	* <i>Gar-a</i>	574
	* <i>ʔak^h-a</i>	636
	* <i>wur^y-a</i>	859
dive into, to	* <i>t'al-</i>	232
dive into water (bird), to	* <i>haŋ-</i>	734
divide, to	* <i>bad-</i>	5
	* <i>p^har-</i>	107
	* <i>sih-</i>	359
	* <i>k^has-</i>	443
	* <i>ʔaŋ-</i>	650
	* <i>xal-</i>	787
	* <i>law-</i>	978
divide into shares, to	* <i>bay-</i>	44
divide into two parts, to	* <i>t'u^{ʔw}-</i>	253
division	* <i>t'a^h-a</i>	229
	* <i>sih-a</i>	359
	* <i>k^has-a</i>	443
	* <i>xal-a</i>	787
	* <i>law-a</i>	978
division into two	* <i>t'u^{ʔw}-a</i>	253
do, to	* <i>daw-</i>	167
	* <i>k^ham-</i>	426

English Meaning	Proto-Nostratic	Number
	<i>*k^whey-</i>	540
do something slowly, to	<i>*hak^h-</i>	703
do together, to	<i>*gam-</i>	571
do well, to	<i>*c'al-</i> or <i>*č'al-</i>	320
dog	<i>*k^huwan-a</i> or <i>*k^hun-a</i>	466
	<i>*k^whal-a</i>	531
	<i>*k^whal-p'-a</i>	531
dove (= pigeon)	<i>*bul^y-a</i>	75
down	<i>*c'ar-</i>	321
	<i>*k^hat^h-</i>	446
downpour	<i>*bal-a</i>	21
	<i>*zar-a</i> or <i>*žar-a</i>	308
drag	<i>*t^har-a</i>	204
drag, to	<i>*t^har-</i>	204
	<i>*ɖir^y-</i>	686
dragged along, something	<i>*t^har-a</i>	204
dragging	<i>*wal-a</i>	815
dragging, (the act of)	<i>*ɖir^y-</i>	686
draw, to	<i>*t^har-</i>	204
	<i>*ɖir^y-</i>	686
draw near to, to	<i>*ɖan^y-</i>	648
draw (out), to	<i>*mal-</i>	879
draw out, to	<i>*mad-</i>	865
	<i>*mat'-</i>	905
	<i>*rak'-</i>	988
drawing, (the act of)	<i>*ɖir^y-</i>	686
drawing, the act of	<i>*rak'-a</i>	988
drawn out	<i>*rak'-a</i>	988
dried mucus	<i>*p^hak^h-a</i>	93
dried up	<i>*t^har-a</i>	208
drill, to	<i>*dur-</i>	191
drink (= beverage)	<i>*t^har-a</i>	210
	<i>*saw-a</i>	356
drink, to	<i>*t^har-</i>	210
	<i>*saw-</i>	356
	<i>*ɕun^y-</i>	782
drinking, the act of	<i>*t^har-a</i>	210
drip	<i>*zil-a</i> or <i>*žil-a</i>	310
	<i>*k^waly-a</i>	549
drip, to	<i>*ban-</i>	24
	<i>*t'aly-</i>	234
	<i>*k^waly-</i>	549
drive, to	<i>*zag-</i>	304

English Meaning	Proto-Nostratic	Number
drive away, to	* <i>gus-</i>	410
drive together, to	* <i>gid-</i> or * <i>gid-</i>	393
drizzle	* <i>duw-a</i>	193
	* <i>t'alʷ-a</i>	234
	* <i>ʒar-a</i> or * <i>žar-a</i>	308
drop (of water, rain, dew, etc.)	* <i>ban-a</i>	24
	* <i>ʒil-a</i> or * <i>žil-a</i>	310
drop, (rain)	* <i>t'alʷ-a</i>	234
drop down, to	* <i>kʰatʰ-</i>	446
dropping	* <i>ʒil-a</i> or * <i>žil-a</i>	310
drops, to fall in	* <i>t'alʷ-</i>	234
drunk	* <i>tʰar-a</i>	210
dry	* <i>tʰar-a</i>	208
	* <i>c'aw-a</i>	323
	* <i>c'aw-lʷ-a</i>	323
dry, that which is	* <i>c'aw-a</i>	323
	* <i>c'aw-lʷ-a</i>	323
dry, to be	* <i>sʷaw-</i>	290
dry, to be or become	* <i>c'aw-</i>	323
	* <i>c'aw-V-lʷ-</i>	323
dry place	* <i>sʷaw-a</i>	290
dry up, to	* <i>tʰar-</i>	208
	* <i>wasʷ-</i>	837
dryness	* <i>tʰar-a</i>	208
	* <i>sʷaw-a</i>	290
duck (= aquatic bird)	* <i>gaŋ-a</i>	379
duck down, to	* <i>lam-</i>	971
	* <i>lam-V-d-</i>	971
dug (out), that which is	* <i>gar-a</i>	574
dug, that which is	* <i>ʔakʰ-a</i>	636
dullness	* <i>ʔʰum-a</i>	275
(dumb, to be)	* <i>dul-</i>	183
dusk	* <i>rum-a</i>	997
dust	* <i>duw-a</i>	193
	* <i>tʰorʷ-a</i>	220
	* <i>t'uq'w-a</i>	257
dusty, to be	* <i>t'uq'w-</i>	257
dwell, to	* <i>q'wad-</i>	600
	* <i>man-</i>	886
dwelling	* <i>buw-a</i>	88
	* <i>kʰay-a</i>	450
	* <i>q'wad-a</i>	600
	* <i>ʔil-a</i>	681

English Meaning	Proto-Nostratic	Number
	* <i>wan-a</i>	824
	* <i>man-a</i>	886
E		
eagle	* <i>hur-a</i> (and/or * <i>her-a</i> ?)	758
ear	* <i>dʷan-a</i>	260
	* <i>kʰul-a</i>	460
	* <i>qʷarʷ-a</i> or * <i>qʷurʷ-a</i>	606
earth	* <i>diqʰ-a</i>	177
	* <i>tʰorʷ-a</i>	220
	* <i>ʔer-a</i>	678
	* <i>ʔul-a</i>	697
	* <i>hakʷ-a</i>	722
	* <i>mag-a</i>	868
eat, to	* <i>bal-</i>	22
	* <i>bur-</i>	82
	* <i>pʰah-</i>	92
	* <i>qʷam-</i>	592
	* <i>ʔakh-</i>	634
	* <i>ʔitʷ-</i>	687
	* <i>ham-</i>	710
	* <i>ʕunʷ-</i>	782
eat greedily, to	* <i>lab-</i>	962
eaten, that which is	* <i>ʔitʷ-a</i>	687
eating	* <i>lab-a</i>	962
eating, the act of	* <i>ʔitʷ-a</i>	687
edge	* <i>sʷub-a</i>	301
	* <i>ʒag-a</i>	306
	* <i>gaŋ-a</i>	380
	* <i>gol-a</i>	401
	* <i>kʰar-a</i>	437
	* <i>qʷar-a</i>	604
effort	* <i>mukʷ-a</i>	920
effort, to make an	* <i>woy-</i>	855
efforts, to make great	* <i>mukʷ-</i>	920
egg	* <i>ʔow-ħ-a</i>	695
	* <i>mun-a</i>	922
	* <i>mun-d-a</i>	922
eject, to	* <i>wam-</i>	823
elder sister	* <i>ʔenʷa</i>	675
eldest	* <i>wan-a</i>	826
elevate, to	* <i>kʷul-</i>	510

English Meaning	Proto-Nostratic	Number
	* <i>war-</i>	833
elevated	* <i>dim-a</i>	176
	* <i>sal-a</i>	333
elevated, to be	* <i>ʕal-</i>	763
elevated place	* <i>dim-a</i>	176
elevation	* <i>hon-a</i>	756
else	* <i>hal-</i>	706
emaciated, to be or become	* <i>c'aw-</i>	323
	* <i>c'aw-V-lʸ-</i>	323
ember	* <i>has-a</i>	742
embers	* <i>k^hum-a</i>	464
	* <i>k'wam-a</i>	550
embers, (burning)	* <i>dʷak^{wh}-a</i>	259
embers, glowing	* <i>k'al-a</i>	476
embrace	* <i>hap^h-a</i>	735
eminent	* <i>mag-a</i>	867
eminent, to be	* <i>t^hir-</i>	619
	* <i>mag-</i>	867
emptiness	* <i>ʕhal-a</i>	347
empty	* <i>ʕhal-a</i>	347
empty, to	* <i>ʕhal-</i>	347
encircle, to	* <i>c'ur-</i>	326
encircles, that which	* <i>c'ur-a</i>	326
enclose, to	* <i>c'ur-</i>	326
	* <i>gīr-</i>	398
enclosed space	* <i>gul-a</i> (~ * <i>gol-a</i>)	405
encloses, that which	* <i>c'ur-a</i>	326
enclosure	* <i>c'ur-a</i>	326
	* <i>gīr-a</i>	398
end	* <i>t^hal-a</i>	198
	* <i>tʷar-a</i>	270
	* <i>sʷub-a</i>	301
	* <i>ʒaw-a</i>	345
	* <i>k^{wh}al-a</i>	528
	* <i>k'wad-a</i>	546
	* <i>hul-a</i>	757
	* <i>mud-a</i>	919
end, to	* <i>k^{wh}al-</i>	528
	* <i>mud-</i>	919
endurance	* <i>t^halʸ-a</i>	199
endure, to	* <i>bad-</i>	7
	* <i>t^halʸ-</i>	199
	* <i>t^hanʸ-</i>	201

English Meaning	Proto-Nostratic	Number
endure, to cause to	* <i>bad-</i>	7
enduring, to be	* <i>man-</i>	886
energy	* <i>wak'-a</i>	813
energy, to act with	* <i>woy-</i>	855
engrave, to	* <i>k'ir-</i> or * <i>k'ur-</i>	503
	* <i>xat'-</i>	792
engraved line	* <i>xat'-a</i>	792
engraving	* <i>bar-a</i>	37
	* <i>xat'-a</i>	792
enjoy, to	* <i>bir^y-</i>	57
enlarge, to	* <i>dar^y-</i>	165
enough	* <i>t^hir-a</i>	218
enough, to have	* <i>t^hir-</i>	218
	* <i>t^hir-V-p^h-</i>	219
enough, to have more than	* <i>t^hir-</i>	218
entreat, to	* <i>p^hir-</i>	145
entreaty	* <i>p^hir-a</i>	145
entwine, to	* <i>net^y-</i>	948
entwined, anything	* <i>net^y-a</i>	948
entwining	* <i>net^y-a</i>	948
enumerate, to	* <i>t'il-</i>	249
	* <i>xal-</i>	787
Equid	* <i>p^har-a</i>	111
erect, to be or become	* <i>gar^y-</i>	386
escape	* <i>her-a</i> and/or * <i>hor-a</i>	717
	* <i>wal-a</i>	817
escape, to	* <i>her-</i> and/or * <i>hor-</i>	717
escaped	* <i>her-a</i> and/or * <i>hor-a</i>	717
essence	* <i>k^har-a</i>	442
establish, to	* <i>daw-</i>	167
established	* <i>ʔas^y-a</i>	659
established, to be	* <i>man-</i>	886
established, to be firmly	* <i>dag-</i>	156
esteemed, highly	* <i>mag-a</i>	867
esteemed, to be highly	* <i>t^hir-</i>	619
	* <i>mag-</i>	867
even	* <i>lap^h-a</i>	973
evening	* <i>γam-a</i>	799
	* <i>nak^{wh}-a</i>	943
evident	* <i>c'ar-a</i> or * <i>č'ar-a</i>	322
	* <i>gal-a</i>	372
evident, to be or become	* <i>c'ar-</i> or * <i>č'ar-</i>	322
	* <i>gal-</i>	372

English Meaning	Proto-Nostratic	Number
evil	*t'yaw-a	285
	*ʔak ^h -a	635
evil, to be	*ʔak ^h -	635
exalted	*ʔad-a	630
	*mag-a	867
exalted, to be	*ʔad-	630
	*ʕal-	763
	*mag-	867
examination	*bak'-a	18
	*day-a	170
	*saḥ-a or *šaḥ-a	330
examine, to	*bak'-	18
	*day-	170
	*saḥ- or *šaḥ-	330
excavation	*k ^w har-a	533
exceed, to	*dviʔ-	265
	*c'al- or *č'al-	320
	*maḥ-	870
	*mik'-	914
excellence	*mag-a	867
	*maḥ-a	870
excess	*t ^h ir-ph-a	219
	*gar ^y -a	385
	*mik'-a	914
excess, to be in	*mik'-	914
excite, to	*wak'-	813
exhale, to	*p ^h uw-	148
exhausted	*dal ^v -a	160
	*t ^h an ^y -a	202
	*ʔeb-a	670
	*xal-a	786
exhausted (from straining, laboring), to become	*k'ac ^h -	468
exhausted, to be or become	*was ^y -	836
exhausted, to become	*ʔeb-	670
exhausted, to grow	*t ^h an ^y -	202
exhaustion	*dal ^v -a	160
	*t ^h an ^y -a	202
	*ʔeb-a	670
	*xal-a	786
	*was ^y -a	836
exist, to	*ʔil-	681
existence	*k'al-a	478

English Meaning	Proto-Nostratic	Number
existing	* <i>ʔil-a</i>	681
expand, to	* <i>bar-</i>	28
	* <i>bul-</i>	68
	* <i>bun-</i>	76
	* <i>bun-V-g-</i>	76
	* <i>t^har-</i>	205
	* <i>k^haw-</i>	448
	* <i>war-</i>	832
	* <i>mad-</i>	865
	* <i>man-</i>	888
	* <i>man-V-g-</i>	889
	* <i>mat'-</i>	905
	* <i>mik'-</i>	914
expanse	* <i>p^hal-a</i>	97
	* <i>t^har-a</i>	205
	* <i>hak'-a</i>	722
expansion	* <i>bul-a</i>	68
	* <i>k^haw-a</i>	448
experience	* <i>bad-a</i>	7
	* <i>hin-k^h-a</i>	752
experience, to	* <i>bad-</i>	7
explain, to	* <i>k^hal-</i>	422
explanation	* <i>k^hal-a</i>	422
expression	* <i>yan-a</i>	804
extend, to	* <i>p^hal-</i>	97
	* <i>p^hat^h-</i>	121
	* <i>t^hal^y-</i>	199
	* <i>t^han^y-</i>	201
	* <i>t^har-</i>	205
	* <i>t'al-</i>	233
	* <i>c'al-</i> or * <i>č'al-</i>	320
	* <i>hak'-</i>	722
	* <i>war-</i>	832
	* <i>rak'-</i>	988
extended	* <i>p^har-a</i>	108
	* <i>t^hal^y-a</i>	199
	* <i>t^han^y-a</i>	201
	* <i>rak'-a</i>	988
extending, the act of	* <i>rak'-a</i>	988
extension	* <i>p^har-a</i>	108
	* <i>t^han^y-a</i>	201
	* <i>rak'-a</i>	988
extent	* <i>mad-a</i>	865

English Meaning	Proto-Nostratic	Number
	* <i>mat</i> '-a	905
exterior	* <i>ɹut</i> '-a	701
extinction	* <i>ʒaw</i> -a	345
extinguish, to	* <i>gup^h</i> -	407
extinguished, to be	* <i>gup^h</i> -	407
extra	* <i>ɹap^h</i> -a	653
extra, that which is	* <i>ɹap^h</i> -a	653
extra, to be	* <i>ɹap^h</i> -	653
eye	* <i>k'an^y</i> -a	487
	* <i>tʰil</i> -a or (?) * <i>tʰidɫ</i> -a	618
	* <i>ɹil</i> -a	683
	* <i>ʃuk^{wh}</i> -a	781
eyebrow	* <i>bur</i> -a	86
eyelash	* <i>bur</i> -a	86

F

face	* <i>p^haŋ</i> -a	105
fade, to	* <i>tʰum</i> -	275
	* <i>ʒaʔ</i> -	341
	* <i>wal</i> -	820
	* <i>was^y</i> -	837
faint, to grow	* <i>dow</i> -, * <i>doy</i> -	179
falcon	* <i>hur</i> -a (and/or * <i>her</i> -a ?)	758
fall	* <i>bad</i> -a	9
	* <i>p^hul</i> -a	135
fall, to	* <i>p^hul</i> -	135
fall down, to	* <i>bad</i> -	9
	* <i>p^hul</i> -	135
	* <i>c'ar</i> -	321
	* <i>k^hat^h</i> -	446
fall ill, to	* <i>mar^y</i> -	902
fall in drops, to	* <i>t'al^y</i> -	234
fall into, to	* <i>t'al</i> -	232
fallen	* <i>p^hul</i> -a	135
falling down, the act of	* <i>c'ar</i> -a	321
fallow land	* <i>bar</i> -a	42
fame	* <i>k^hul</i> -a	460
far away	* <i>t'aw</i> -a	242
	* <i>k^{wh}al</i> -	529
far off	* <i>k^{wh}al</i> -	529
fart	* <i>p^has^y</i> -a	117
fart, to	* <i>p^has^y</i> -	117

English Meaning	Proto-Nostratic	Number
farthest point	* <i>mun-a</i>	921
fashion, to (= to make; to create)	* <i>thikh-</i>	216
	* <i>k^whey-</i>	540
	* <i>lip'-</i>	983
fashion something, tool used to	* <i>thikh^h-a</i>	216
fashioning something, the act of	* <i>thikh^h-a</i>	216
fast, to make (= to join or fit together)	* <i>dab-</i>	155
fasten, to	* <i>baɣ-</i>	2
	* <i>bin-</i>	51
	* <i>sak^{'w}-</i>	332
	* <i>ʒal-</i>	344
	* <i>k[']ad-</i>	470
	* <i>k^whir-</i>	542
	* <i>rakh-</i>	987
fasten (together), to	* <i>ban-V-d-</i>	27
	* <i>dab-</i>	155
	* <i>rakh-</i>	987
fasten together, to	* <i>thakh-</i>	196
	* <i>k[']ač^h-</i>	469
fasten two things together, to	* <i>k^holv-</i>	458
fastening	* <i>baɣ-a</i>	2
	* <i>dab-a</i>	155
	* <i>sak^{'w}-a</i>	332
	* <i>k^had-a</i>	418
	* <i>k[']ač^h-a</i>	469
	* <i>k[']ad-a</i>	470
fastening (together), the act of	* <i>rakh^h-a</i>	987
fat (= large)	* <i>bun-g-a</i>	76
	* <i>thaw-a</i>	212
	* <i>k[']an-a</i>	483
	* <i>hay-t'-a</i>	750
	* <i>man-g-a</i>	889
	* <i>lip^h-a</i>	982
(fat [= grease])	* <i>p^hul^y-a</i>	137
fat (= grease)	* <i>mar-a</i>	898
fat (= lard)	* <i>s^yil-a</i>	295
fat, that which is	* <i>p^hul^y-a</i>	137
fat, to be	* <i>hay-V-t'-</i>	750
fatal disease	* <i>mar^y-a</i>	902
father	* <i>baba</i>	3
	* <i>ʔab(b)a ~ *ʔap^h(p^h)a</i>	629
	* <i>ʔat^ht^ha</i>	660
	* <i>ʔay(y)a</i>	668

English Meaning	Proto-Nostratic	Number
fatigue	* <i>dow-a</i> , * <i>doy-a</i>	179
	* <i>t^han^y-a</i>	202
	* <i>t^yhum-a</i>	275
	* <i>xal-a</i>	786
	* <i>was^y-a</i>	836
	* <i>muk'-a</i>	920
fatigued, to be or become	* <i>was^y-</i>	836
fatigued (from straining, laboring), to become	* <i>k'ac^h-</i>	468
fat(ness)	* <i>p^hu[?]-a</i>	134
fatness	* <i>k'an-a</i>	483
fatten, to	* <i>p^hu[?]-</i>	134
fatty tissue	* <i>lip^h-a</i>	982
fault	* <i>gal-a</i>	375
favor	* <i>han-a</i>	731
favor, to show	* <i>han-</i>	731
favorably disposed towards, to be	* <i>mal-</i>	877
fear	* <i>p^hel-a</i>	125
	* <i>p^hir-a</i>	132
	* <i>s^yur-a</i>	302
	* <i>na^h-a</i>	941
fear, to	* <i>p^hir-</i>	132
	* <i>s^yur-</i>	302
	* <i>na^h-</i>	941
fearful, to be	* <i>p^hel-</i>	125
feathers	* <i>bur-a</i>	85
feathers, (fine, soft)	* <i>bur-a</i>	84
feed (= food; meal; fodder)	* <i>ʔak^h-a</i>	634
feed, to	* <i>k'al-</i>	473
feed (on), to	* <i>ʕun^y-</i>	782
feeding	* <i>p^hin^y-a</i>	128
feel, to (= to touch; to handle)	* <i>gas^y-</i>	387
feel affection for, to	* <i>p^har-</i>	106
feeling (= sense; perception)	* <i>san-a</i> or * <i>šan-a</i> , * <i>sin-a</i> or * <i>šin-a</i> , * <i>sun-a</i> or * <i>šun-a</i>	335
female	* <i>nus^y-a</i>	953
female connected by marriage, any	* <i>nus^y-a</i>	953
female in-law	* <i>k^hal-a</i>	419
	* <i>k'el-a</i>	498
female relative	* <i>ʔay(y)a</i>	667
	* <i>nat'-a</i>	945
female relative, (older)	* <i>ʔaŋ(ŋ)a</i>	651

English Meaning	Proto-Nostratic	Number
female relative, older	*ʔak ^h k ^h a	638
	*ʔema	674
fence	*gīr-a	398
fetter (= bond)	*k ^h am-a or *q ^h am-a	425
few things	*k'al-a	475
fiber (= string; cord)	*k'ay-a	485
field	*q'an-a	593
	*hak'-a	722
	*wel ^y -a	846
fierce, to be	*xam-	788
	*xam-V-d-	788
fiery, to be (= to be furious, spirited, wild)	*ʔek ^h -	671
fight	*bur-a	79
	*gal-a	570
	*q ^h at ^h -a	587
	*wel-a	845
	*mar-a	894
	*laḥ-a	966
fight, to	*bur-	79
	*q ^h at ^h -	587
	*wel-	845
	*laḥ-	966
fight against, to	*mar-	894
fight with, to	*mar-	894
fill, to	*p ^h al-	99
	*t'an-	236
	*mal-	859
fill (up), to	*gam-	366
filled	*k'wah-a	534
	*waš-a	821
	*mal-a	876
fine, to be (= to be good, well)	*s ^y uw-	303
finger nail	*t'yip ^h -a	287
finish (= completion)	*k ^{wh} al-a	528
	*mud-a	919
finish, to	*k ^{wh} al-	528
	*mud-	919
fire	*bud-a	62
	*p ^h aḥ-a	140
	*p ^h aḥ-w-a	140
	*dul-a	182
	*d ^y ak ^{wh} -a	259
	*g ^w ir-a	523

English Meaning	Proto-Nostratic	Number
	<i>*k'was-a</i>	558
	<i>*ʔak^{wh}-a</i>	639
	<i>*ʔeŋ-a</i>	676
	<i>*ʔeŋ-k'-a</i>	676
	<i>*ʕal-a</i>	764
fire, to be on	<i>*hag-</i>	702
fire, to light a	<i>*ʕal-</i>	764
fire, to make a	<i>*ʕal-</i>	764
fire to, to set	<i>*wal-</i>	819
firewood	<i>*t^her-a</i>	616
firm (= solid)	<i>*t^hik'-a</i>	217
	<i>*t'yar-a</i>	280
	<i>*k^har-a</i>	438
	<i>*ʕur-a</i>	783
firm, to be	<i>*ʕur-</i>	783
	<i>*man-</i>	886
firm grip	<i>*d'var-a</i>	262
firmly attached, to be	<i>*t'yar-</i>	280
firmly established, to be	<i>*dag-</i>	156
firmness	<i>*t^hik'-a</i>	217
	<i>*t'yar-a</i>	280
	<i>*k^har-a</i>	438
	<i>*ʕur-a</i>	783
first	<i>*p^har-a</i>	109
	<i>*wan-a</i>	826
first-born	<i>*wan-a</i>	826
first person personal pronoun stem (stative)	<i>*k^ha-</i>	413
first, to be	<i>*mun-</i>	921
fish	<i>*dig-a</i>	173
fish, (a kind of)	<i>*min-a</i>	915
fish, large	<i>*k^{wh}al-a</i>	530
fissure	<i>*t^yhal-m-a</i>	269
fist	<i>*k'om-a</i>	504
fit (= appropriate)	<i>*t'ak^h-a</i>	230
fit, to be	<i>*t'ak^h-</i>	230
fit (together), to	<i>*rak^h-</i>	987
fit together, to	<i>*dab-</i>	155
fit two things together, to	<i>*k^hol^y-</i>	458
fitness	<i>*t'ak^h-a</i>	230
fitting (= joining)	<i>*dab-a</i>	155
fitting (= proper)	<i>*s^yuw-a</i>	303
fitting, to be	<i>*s^yuw-</i>	303

English Meaning	Proto-Nostratic	Number
fitting (together), the act of	* <i>rak^h-a</i>	987
flame	* <i>p^hah^h-a</i>	140
	* <i>p^hah^h-w-a</i>	140
	* <i>d^ʷak^{w^h}-a</i>	259
	* <i>war-a</i>	834
flank (= side)	* <i>gaŋ-a</i>	380
flash, to	* <i>bar-</i>	35
flat	* <i>p^hal-a</i>	97
	* <i>t^hal^y-a</i>	199
	* <i>lap^h-a</i>	973
flat, that which is	* <i>p^hal-a</i>	97
flat of hand	* <i>p^hal-a</i>	98
flat surface	* <i>lap^h-a</i>	973
flatten, to	* <i>lap^h-</i>	973
flee, to	* <i>p^har-</i>	110
	* <i>p^hir-</i>	130
	* <i>her-</i> and/or * <i>hor-</i>	717
fleeing	* <i>p^har-a</i>	110
	* <i>p^hir-a</i>	130
flexible	* <i>lam-a</i> ~ (?) * <i>l^ʷam-a</i>	972
flight	* <i>p^har-a</i>	110
	* <i>p^hir-a</i>	130
	* <i>her-a</i> and/or * <i>hor-a</i>	717
	* <i>wal-a</i>	817
flock	* <i>man-a</i>	888
float, to	* <i>wuy-</i> or * <i>Huy-</i>	860
floating	* <i>wuy-a</i> or * <i>Huy-a</i>	860
flood	* <i>bun-a</i>	77
	* <i>ʔib-a</i>	680
	* <i>wel^y-a</i>	847
	* <i>mor-a</i>	918
flood, to	* <i>wel^y-</i>	847
flourish, to	* <i>riy-</i>	994
	* <i>xan-</i>	789
flow	* <i>bal-a</i>	21
	* <i>bun-a</i>	77
	* <i>dun-a</i>	189
	* <i>d^ʷaw-a</i>	263
	* <i>s^yor-a</i>	300
	* <i>gir^y-a</i> or * <i>Gir^y-a</i>	400
	* <i>k^ʷal^y-a</i>	549
	* <i>wal-a</i>	818
flow, to	* <i>bun-</i>	77

English Meaning	Proto-Nostratic	Number
	* <i>dʷaw-</i>	263
	* <i>tʷor-</i>	288
	* <i>ʒil-</i> or * <i>ʒil-</i>	310
	* <i>gɪrʷ-</i> or * <i>gɪrʷ-</i>	400
	* <i>kʷalʷ-</i>	549
	* <i>Gal-</i>	569
	* <i>hapʰ-</i>	736
	* <i>wal-</i>	818
	* <i>waʒ-</i>	843
flow, to make to	* <i>laħ-</i>	965
flow forth, to	* <i>sʷor-</i>	300
	* <i>ʒar-</i> or * <i>ʒar-</i>	308
	* <i>ʒil-</i> or * <i>ʒil-</i>	310
	* <i>sig-</i>	339
	* <i>welʷ-</i>	847
flow (out), to	* <i>dun-</i>	189
flow out, to	* <i>ʒar-</i> or * <i>ʒar-</i>	308
flowing	* <i>dʷaw-a</i>	263
	* <i>tʷor-a</i>	288
	* <i>ʒil-a</i> or * <i>ʒil-a</i>	310
	* <i>sig-a</i>	339
	* <i>ʔor-a</i>	691
	* <i>laħ-a</i>	965
fluid	* <i>maw-a</i>	907
flutter, to	* <i>pʰar-</i>	110
	* <i>pʰatʰ-</i>	120
	* <i>pʰir-</i>	130
flux	* <i>gɪrʷ-a</i> or * <i>gɪrʷ-a</i>	400
fly (= midge; gnat; housefly)	* <i>bir-a</i>	56
fly, to	* <i>pʰar-</i>	110
	* <i>pʰir-</i>	130
fly about, to (= to blow about)	* <i>duw-</i>	193
flying	* <i>pʰar-a</i>	110
	* <i>pʰir-a</i>	130
fodder	* <i>ʔakʰ-a</i>	634
fog	* <i>pʷulʷ-a</i>	151
	* <i>dum-a</i>	187
fold (= bend)	* <i>kʷun-a</i>	516
fold together, to	* <i>kʷačʰ-</i>	469
	* <i>kʷun-</i>	516
folded, that which is	* <i>kʷun-a</i>	516
fond of, to be	* <i>pʰar-</i>	106

English Meaning	Proto-Nostratic	Number
food	* <i>bur-a</i>	82
	* <i>p^haḥ-a</i>	92
	* <i>t̪'ar-s-a</i>	622
	* <i>ʔak^h-a</i>	634
	* <i>ʔit'-a</i>	687
	* <i>ʕun^y-a</i>	782
foolish	* <i>ʔeb-a</i>	670
foolishness	* <i>ʔeb-a</i>	670
foot	* <i>p^hat'-a</i>	122
	* <i>k^hab-a</i>	416
	* <i>lak^h-a</i>	968
for	* <i>ʔan^y-</i>	647
force	* <i>t^hal^y-a</i>	200
	* <i>t^hur-a</i>	226
	* <i>ʒag-a</i>	304
	* <i>gid-a</i> or * <i>gid-a</i>	393
force, to	* <i>t^hal^y-</i>	200
force together, to	* <i>gid-</i> or * <i>gid-</i>	393
forefather	* <i>ʔab(b)a ~ *ʔap^h(p^h)a</i>	629
forehead	* <i>p^haŋ-a</i>	105
	* <i>q'aw-a</i>	595
foremost	* <i>p^har-a</i>	109
foremost (person or thing)	* <i>xaŋ-t^h-a</i>	791
foremost, that which is	* <i>xaŋ-a</i>	790
foremost, to be	* <i>mun-</i>	921
foremost person	* <i>ner-a</i>	947
foremost thing	* <i>ner-a</i>	947
form	* <i>sam-a</i>	334
	* <i>lip'-a</i>	983
form, to	* <i>t^hikh-</i>	216
	* <i>k^whey-</i>	540
	* <i>lip'-</i>	983
form something, tool used to	* <i>t^hikh^h-a</i>	216
forming something, the act of	* <i>t^hikh^h-a</i>	216
forsake, to	* <i>gaʔ-</i>	362
forsaken	* <i>gaʔ-a</i>	362
forth from, to go	* <i>gus-</i>	410
forth from, to make to go	* <i>gus-</i>	410
fortitude	* <i>k^har-a</i>	438
fowl, wild	* <i>gar^y-a</i>	576
	* <i>gar^y-gar^y-a</i>	576
fracture	* <i>mur-a</i>	924
fragment	* <i>dum-a</i>	185

English Meaning	Proto-Nostratic	Number
	* <i>dun^y-a</i>	190
	* <i>c^hal-a</i>	318
	* <i>gad-a</i>	367
	* <i>k^has-a</i>	443
fragrance	* <i>ʕut'-a</i>	784
free-born	* <i>har-a</i>	739
freed	* <i>her-a</i> and/or * <i>hor-a</i>	717
freed (from)	* <i>c^hal-a</i>	347
freedom	* <i>c^hal-a</i>	347
freeze, to	* <i>gil-</i>	395
	* <i>k^hir-</i>	456
	* <i>k'ul^y-</i>	511
	* <i>q'in-</i>	597
fresh, to be	* <i>ʔax-</i>	633
friend	* <i>ʔar-a</i>	656
fright	* <i>p^hel-a</i>	125
frighten, to	* <i>s^yur-</i>	302
frightened, to be	* <i>p^hel-</i>	125
	* <i>hat'-</i>	744
frightened, to be or become	* <i>s^yur-</i>	302
front	* <i>gab-a</i>	363
	* <i>xaŋ-t^h-a</i>	791
front of anything, the	* <i>hal-a</i>	707
front part	* <i>p^haŋ-a</i>	195
	* <i>s^yub-a</i>	301
	* <i>gab-a</i>	363
	* <i>xaŋ-t^h-a</i>	791
frost	* <i>k^hir-a</i>	456
	* <i>k'ul^y-a</i>	511
	* <i>q'in-a</i>	597
fruit	* <i>bir^y-a</i>	57
	* <i>p^hir-a</i>	127
	* <i>c^han-a</i>	348
fruit, to bear	* <i>p^hir-</i>	129
fulfillment	* <i>k^whal-a</i>	528
full	* <i>t^haw-a</i>	212
	* <i>t^hir-a</i>	218
	* <i>waš-a</i>	838
	* <i>maḥ-a</i>	870
	* <i>mal-a</i>	876
full, to be or become	* <i>mal-</i>	876
fullness	* <i>buw-a</i>	89
	* <i>p^hal-a</i>	99

English Meaning	Proto-Nostratic	Number
	<i>*p^{hu}?-a</i>	134
	<i>*t^{hi}r-a</i>	218
	<i>*haph^h-a</i>	735
	<i>*mah-a</i>	870
	<i>*mal-a</i>	876
	<i>*mik'-a</i>	914
fur	<i>*bur-a</i>	84
furious, to be	<i>*ʔek^h-</i>	671
furnace	<i>*gub-a</i>	403
furrow	<i>*Gar-a</i>	574
	<i>*ʔir^y-</i>	686
fury	<i>*q^hat^h-a</i>	587
	<i>*ʔek^h-a</i>	671
G		
gain	<i>*hin-k^h-a</i>	752
gain, to	<i>*hin-V-k^h-</i>	752
game (= wild animals)	<i>*guw-a</i>	412
	<i>*guw-r-a</i>	412
	<i>*mar-a</i>	903
gap	<i>*t^{yh}al-m-a</i>	269
gape	<i>*haŋ-a</i>	711
gape, to	<i>*haŋ-</i>	711
gash	<i>*dal-a</i>	158
	<i>*waŋ-a</i>	828
gash, to	<i>*dal-</i>	158
gasp, to	<i>*saw-</i>	357
gather, to	<i>*k'er-</i>	502
	<i>*ʔas-</i>	658
	<i>*lak'-</i>	969
gather (together), to	<i>*gid- or *gid-</i>	393
gather together, to	<i>*k^ham-</i>	427
	<i>*k'at^h-</i>	495
	<i>*Gam-</i>	571
gather (with the hands or arms), to	<i>*hap^h-</i>	735
gathered	<i>*lak'-a</i>	969
gathered, that which as been	<i>*hap^h-a</i>	735
gathering	<i>*k^ham-a</i>	427
	<i>*k'at^h-a</i>	495
	<i>*k'er-a</i>	502
	<i>*Gam-a</i>	571
gathering, the act of	<i>*ʔas-a</i>	658

English Meaning	Proto-Nostratic	Number
gazelle	*ʔar-a	657
genitals (male or female)	*p ^{hit} ʔy-a	133
	*qʼalʔy-a	591
genitals, male	*p ^{has} y-a	119
gentle	*rom-a	995
get, to	*sag- or *šag-	329
	*kʼan-	481
get rid of, to	*č ^{hal} -	347
gift	*tʼox ^w -a	252
	*gib-a	392
	*mig-a	912
gimlet (= borer)	*bur-a	80
gird, to	*gir-	398
	*yaʔ-	802
girdle	*yaʔ-a	802
give, to	*tʼox ^w -	252
	*gib-	392
	*mig-	912
give back, to	*muy-	929
give birth, to	*bar-	32
	*sʔaw- or *sʔew-	291
	*ʔum-	699
	*γil-	800
give birth to, to	*p ^{hit} ʔy-	133
give off smoke, vapor, steam, to	*pʼulʔy-	151
given back, that which is	*muy-a	929
giving	*tʼox ^w -a	252
gleam	*bal-a	23
gleam, to	*tʼay- or *tʼiy-	245
gleaming	*Gil-a	580
	*law-a	977
glide, to	*ʒil- or *žil-	311
	*gil-	394
gliding	*gil-a	394
gliding, the act of	*ʒil-a or *žil-a	311
glisten, to	*Gil-	580
	*ʔel-	673
glistening	*Gil-a	580
glitter	*bal-a	23
	*walʔy-a	822
glitter, to	*daG-	157
	*tʼay- or *tʼiy-	245
	*qʼal- or *qʼel-	590

English Meaning	Proto-Nostratic	Number
	* <i>ʔel-</i>	673
globe	* <i>G^wal-a</i>	598
glorious	* <i>mag-a</i>	867
glorious, to be	* <i>tʃ^hir-</i>	619
	* <i>mag-</i>	867
glory	* <i>mag-a</i>	867
glow	* <i>law-a</i>	977
glow, to	* <i>t'ay-</i> or * <i>t'iy-</i>	245
glowing	* <i>k^hum-a</i>	464
	* <i>law-a</i>	977
glowing, to be	* <i>k'^wam-</i>	550
glowing embers	* <i>k'al-a</i>	476
glued	* <i>tʃ'im-a</i>	624
gnat	* <i>bir-a</i>	56
	* <i>k'ug-n-a</i> (~ * <i>k'og-n-a</i>)	509
gnaw, to	* <i>tʃ'ar-</i>	622
	* <i>tʃ'ar-V-s-</i>	622
go, to	* <i>buw-</i>	88
	* <i>p^har-</i>	114
	* <i>t'aw-</i>	242
	* <i>gaʔ-</i>	362
	* <i>gir^y-</i> or * <i>gir^y-</i>	400
	* <i>k^whal-</i>	525
	* <i>k'^wal-</i>	548
	* <i>Gal-</i>	568
	* <i>ʔay-</i>	665
	* <i>ʔiy-</i>	688
	* <i>wal-</i>	817
	* <i>naʕ-</i>	935
go across, to	* <i>p^har-</i>	114
go after, to (= to follow)	* <i>k'^wal-</i>	548
go after, to (= to pursue)	* <i>mar-</i>	897
go around, to	* <i>k^whal-</i>	525
go (away), to	* <i>bar-</i>	41
go away, to	* <i>t'aw-</i>	242
	* <i>k'^wal-</i>	548
	* <i>ʔor-</i>	801
	* <i>ʔor-V-b-</i>	801
	* <i>wal-</i>	817
go behind, to (= to follow)	* <i>k'^wal-</i>	548
go forth, to	* <i>p^har-</i>	114
go forth from, to	* <i>gus-</i>	410
go on foot, to	* <i>lak^h-</i>	968

English Meaning	Proto-Nostratic	Number
go out, to	* <i>p^har-</i>	114
go outside of, to	* <i>gus-</i>	410
go over, to	* <i>p^har-</i>	114
go (round), to	* <i>mar-</i>	897
go up, to	* <i>sal-</i>	333
go, to let	* <i>t'aw-</i>	242
	* <i>č^hal-</i>	347
goal	* <i>ɥ^har-a</i>	270
goat	* <i>bag-a</i>	11
	* <i>dur-a</i>	192
	* <i>ɽar-a</i>	657
goat, (young)	* <i>ɬ^haḥ-a</i>	609
goat, young	* <i>gad-a</i>	368
goes round and round, that which	* <i>k^whal-a</i>	527
going	* <i>buw-a</i>	88
	* <i>p^har-a</i>	114
going (away)	* <i>bar-a</i>	41
going, the act of	* <i>gal-a</i>	568
good	* <i>bar-a</i>	36
	* <i>mal-a</i>	877
good, to be	* <i>s^yuw-</i>	303
good, to do	* <i>bar-</i>	36
goodness	* <i>bar-a</i>	36
	* <i>mal-a</i>	877
goose	* <i>gaŋ-a</i>	379
goose, wild	* <i>Gar^y-a</i>	576
	* <i>Gar^y-Gar^y-a</i>	576
gossip	* <i>war-a</i> and/or * <i>wir-a</i>	835
gouge	* <i>ɽak^h-a</i>	636
gouge, to	* <i>dal-</i>	158
gracious, to be	* <i>han-</i>	731
graciousness	* <i>han-a</i>	731
gradually (= slowly)	* <i>hak^h-</i>	703
gradually, to do or approach something	* <i>hak^h-</i>	703
gradualness	* <i>hak^h-a</i>	703
grain (= seed)	* <i>bar-a</i>	34
	* <i>yiw-a</i> (~ * <i>yew-a</i>)	806
grain, a kind of	* <i>hay-a</i>	714
grain, (unripe or blighted)	* <i>p^hat'-a</i>	123
grandeur	* <i>mag-a</i>	867
grasp	* <i>bar-a</i>	33
	* <i>p^hid-a</i>	126
	* <i>k'ab-a</i>	467

English Meaning	Proto-Nostratic	Number
	<i>*ʔam-a</i>	642
	<i>*ʕap'-a</i>	770
grasp, to	<i>*bar-</i>	33
	<i>*tʰekʰ-</i>	213
	<i>*gab-</i>	365
	<i>*gar-</i>	381
	<i>*gat'-</i>	388
	<i>*kʰam-</i> or <i>*qʰam-</i>	425
	<i>*k'aw-</i>	497
	<i>*k'um-</i>	513
	<i>*ʔam-</i>	642
	<i>*ʕap'-</i>	770
	<i>*wotʰ-</i>	854
	<i>*lab-</i>	961
grasp with the hand, to	<i>*kʰaph-</i>	431
grasped	<i>*ʔam-a</i>	642
grasping	<i>*lab-a</i>	961
grasping, the act of	<i>*tʰekʰ-a</i>	213
	<i>*wotʰ-a</i>	854
grass	<i>*ɕ'am-a</i>	351
grate, to	<i>*Gar-</i>	573
grated	<i>*Gar-a</i>	573
grating, the act of	<i>*Gar-a</i>	573
gray	<i>*pʰarʷ-a</i>	116
gray hair	<i>*tʃʰay-a</i>	615
gray, (hair) to turn	<i>*pʰarʷ-</i>	116
	<i>*tʃʰay-</i>	615
(grease)	<i>*pʰulʷ-a</i>	137
grease	<i>*mar-a</i>	898
great	<i>*bir-a</i>	53
	<i>*gad-a</i>	366
	<i>*haɮʷ-a</i>	727
	<i>*maʔ-a</i>	864
	<i>*mah-a</i>	870
	<i>*mak'-a</i>	873
	<i>*mik'-a</i>	914
great, to be	<i>*mah-</i>	870
	<i>*mak'-</i>	873
great, to be or become	<i>*gad-</i>	366
great amount	<i>*haw-a</i>	747
great importance, to be of	<i>*mag-</i>	867
great influence, to be of	<i>*mag-</i>	867
great number	<i>*haw-a</i>	747

English Meaning	Proto-Nostratic	Number
	<i>*man-g-a</i>	888
great power, to be of	<i>*mag-</i>	867
great quantity	<i>*gar^y-a</i>	385
greatness	<i>*bir-a</i>	53
	<i>*gad-a</i>	366
	<i>*mah-a</i>	870
grief	<i>*hag-a</i>	715
grief, exclamation of	<i>*hay</i>	715
grime	<i>*k'ar-a</i>	492
grind, to	<i>*bul-</i>	74
	<i>*t'ah-</i>	229
	<i>*c^hah-</i>	316
	<i>*gin-</i>	397
	<i>*k'war-</i>	555
	<i>*Gar-</i>	573
	<i>*q'am-</i>	582
	<i>*hur-</i>	759
	<i>*mol-</i>	917
grinding	<i>*c^hah-a</i>	316
grinding, the act of	<i>*c^hah-a</i>	316
	<i>*gin-a</i>	397
	<i>*Gar-a</i>	573
	<i>*was^y-a</i>	837
grinding pestle	<i>*k'war-a</i>	555
grinding stone	<i>*k'war-a</i>	555
grip	<i>*k^ham-a</i> or <i>*q^ham-a</i>	425
	<i>*k'ab-a</i>	467
grip, firm	<i>*d^yar-a</i>	262
grip, to	<i>*k^ham-</i> or <i>*q^ham-</i>	425
groan	<i>*k'um-a</i>	512
	<i>*k'was-a</i>	559
	<i>*Gar-a</i>	572
	<i>*Gar-Gar-a</i>	572
groan, to	<i>*k'um-</i>	512
	<i>*k'was-</i>	559
	<i>*Gar-</i>	572
	<i>*Gar-Gar-</i>	572
groove	<i>*k^{wh}ar-a</i>	533
ground (= pulverized)	<i>*mol-a</i>	917
ground (= pulverized), anything	<i>*t'ah-a</i>	229
	<i>*Gar-a</i>	573
ground (= land)	<i>*per-a</i>	678
	<i>*pul-a</i>	697

English Meaning	Proto-Nostratic	Number
ground (= land), elevated	* <i>t'id-a</i>	248
group of two	* <i>yor-a</i>	807
grow, to	* <i>bir-</i>	53
	* <i>buw-</i>	89
	* <i>č^han-</i>	348
	* <i>gar^y-</i>	385
	* <i>k^haw-</i>	448
	* <i>hal^y-</i>	727
	* <i>hon-</i>	756
	* <i>ɬag-</i>	761
	* <i>war-</i>	833
	* <i>man-</i>	888
	* <i>man-V-g-</i>	889
	* <i>mik'-</i>	914
	* <i>liʔ-</i>	981
	* <i>riy-</i>	994
grow faint, to	* <i>dow-, *doy-</i>	179
grow old, to	* <i>p^har^y-</i>	116
	* <i>t^han^y-</i>	202
	* <i>s^yen^y-</i>	294
	* <i>t^hay-</i>	615
	* <i>wat^h-</i>	839
grow thin, to	* <i>t^hah-</i>	195
grow (up), to	* <i>n^yaɬ-V-r-</i>	956
grow weak, to	* <i>dow-, *doy-</i>	179
grow weary, to	* <i>dow-, *doy-</i>	179
growl, to	* <i>gur-</i>	408
growling noise or sound	* <i>gur-a</i>	408
grown	* <i>hal^y-a</i>	727
grown, that which is	* <i>č^han-a</i>	348
growth	* <i>bul-γ-a</i>	70
	* <i>bun-a</i>	76
	* <i>buw-a</i>	89
	* <i>ɬ^yiq^y-a</i>	273
	* <i>gar^y-a</i>	385
	* <i>k^haw-a</i>	448
	* <i>haw-a</i>	747
	* <i>mik'-a</i>	914
	* <i>riy-a</i>	994
grub (= maggot; larva)	* <i>k^whur-a</i>	544
grumble	* <i>k'um-a</i>	512
grumble, to	* <i>gar-</i>	572
	* <i>gar-gar-</i>	572

English Meaning	Proto-Nostratic	Number
guard	* <i>war-a</i>	830
guard, to	* <i>k^hal-</i>	421
guardian	* <i>man-a</i>	887
guardianship	* <i>war-a</i>	830
	* <i>man-a</i>	887
guidance	* <i>hak'-a</i>	722
guide (= leader)	* <i>day-a</i>	171
guide, to	* <i>hak'-</i>	723
gully	* <i>Gal-a</i>	569
gulp down, to	* <i>x^wely-</i>	797
gurgle, to	* <i>gur-</i>	408
gurgling noise or sound	* <i>gur-a</i>	408
gush	* <i>s^yor-a</i>	300
	* <i>k'waly-a</i>	549
gush forth, to	* <i>s^yor-</i>	300
	* <i>zar-</i> or * <i>žar-</i>	308
	* <i>k'waly-</i>	549
	* <i>nab-</i>	936
gushing forth	* <i>nab-a</i>	936
gut	* <i>gur-a</i>	409
gutter (= ditch)	* <i>Gar-a</i>	574

H

habitation	* <i>ʔil-a</i>	681
hair	* <i>t^hhiŋ-r-a</i>	617
hair, (body)	* <i>bur-a</i>	84
hair, (young, fine, or soft)	* <i>wun-d-a</i> (~ * <i>won-d-a</i>)	857
half	* <i>ʔar-a</i>	654
half-witted	* <i>ʔeb-a</i>	670
hammer	* <i>t^yad-a</i>	276
hammer, to	* <i>t^yad-</i>	276
hand	* <i>p^haŋ-a</i>	104
	* <i>p^haŋ-k^{wh}-a</i>	104
	* <i>d^yar-a</i>	262
	* <i>gab-a</i>	365
	* <i>gar-a</i>	381
	* <i>gas^y-a</i>	387
	* <i>gat'-a</i>	388
	* <i>k^haph-a</i>	431
	* <i>k'aw-a</i>	497
	* <i>k'om-a</i>	504
	* <i>har-a</i>	738

English Meaning	Proto-Nostratic	Number
	<i>*man^v-a</i>	892
hand, flat of	<i>*p^hal-a</i>	98
hand(ful)	<i>*k^ham-a</i> or <i>*q^ham-a</i>	425
	<i>*ʔam-a</i>	642
handful	<i>*k'er-a</i>	502
	<i>*hap^h-a</i>	735
handful, to take a	<i>*k'er-</i>	502
handle	<i>*p^han-a</i>	104
	<i>*p^han-k^{wh}-a</i>	104
handle, to	<i>*p^han-</i>	104
	<i>*p^han-V-k^{wh}-</i>	104
	<i>*gas^v-</i>	387
hang, to	<i>*dul^v-</i>	184
	<i>*t^hun-V-k^h-</i>	620
hang up, to	<i>*t^hun-V-k^h-</i>	620
hanging	<i>*dul^v-a</i>	184
happen, to	<i>*bad-</i>	7
happening	<i>*bad-a</i>	7
happiness	<i>*mak'-a</i>	874
happy, to be	<i>*p^har-</i>	106
	<i>*mak'-</i>	874
harass, to	<i>*dal^v-</i>	160
hard	<i>*t'yar-a</i>	281
	<i>*k^har-a</i>	438
	<i>*ʕur-a</i>	784
hard, that which is	<i>*t'yar-a</i>	281
hard, to be	<i>*t'yar-</i>	281
	<i>*ʕur-</i>	784
hard work	<i>*q^had-a</i>	583
hardness	<i>*t^hik'-a</i>	217
	<i>*k^har-a</i>	438
	<i>*ʕur-a</i>	784
harm	<i>*dar-a</i>	163
	<i>*t'aw-a</i>	243
	<i>*d^vab-a</i>	258
	<i>*g^wan-a</i>	520
	<i>*t^har-a</i>	612
	<i>*ʔak^h-a</i>	635
	<i>*wan-a</i>	828
	<i>*nik^h-a</i>	950
harm, to	<i>*dar-</i>	163
	<i>*d^vab-</i>	258
	<i>*g^wan-</i>	520

English Meaning	Proto-Nostratic	Number
	*ʔak ^h -	635
harm, to cause	*tʃ ^h ar-	612
harmful	*dar-a	163
harnessed	*tʃ ^h 'im-a	624
harsh (= coarse; rough)	*bar-a	31
harsh (= pungent)	*k ^h ar-a	440
harsh (of sounds)	*k ^h at ^h -a	447
harsh, to be	*bar-	31
harsh screech, to make a	*k ^h at ^h -	447
harsh sound, to make a	*k ^h at ^h -	447
harshness (= coarseness; roughness)	*bar-a	31
harshness (= pungency)	*k ^h ar-a	440
haste	*p ^h at ^h -a	120
hasten, to	*p ^h ar-	109
	*p ^h at'-	122
	*p ^h ir-	130
	*gír ^y - or *Gír ^y -	400
hasten in advance, to	*p ^h ar-	109
hasty	*ʔor-a	691
hatch eggs, to	*ʔow-V- ^h -	695
hatchet	*haz-a	751
haulm	*k ^h al ^y -a	423
hawk	*hur-a (and/or *her-a ?)	758
hawk-like bird	*hur-a (and/or *her-a ?)	758
haze (= mist)	*p ^h ul ^y -a	151
he	*sī- (~ *se-)	338
he-goat	*buk'-a (~ *bok'-a)	67
	*k ^h ab-a	415
head	*p ^h an ^y -a	105
	*t ^h al-a	198
	*k ^h ir-a	455
	*q ^h 'aw-a	595
	*G ^w al-a	599
headman	*hak'-a	723
health	*s ^y ol-a	299
	*hal ^y -a	727
healthy	*hal ^y -a	727
heap	*t ^h ul-a	223
	*gid-a or *Gid-a	393
	*k ^h aw-a	448
	*k ^h um-a	462
	*k ^h 'um-a	513
heap up, to	*k ^h um-	462

English Meaning	Proto-Nostratic	Number
	* <i>waš-</i>	838
heaped up	* <i>waš-a</i>	838
hear, to	* <i>dʷan-</i>	260
	* <i>sadʷ-</i>	328
	* <i>kʰul-</i>	460
	* <i>qʷarʷ-</i> or * <i>qʷurʷ-</i>	606
hearing	* <i>dʷan-a</i>	260
	* <i>sadʷ-a</i>	328
heart	* <i>kʰar-a</i>	442
heat	* <i>pʰekʷh-a</i>	124
	* <i>dul-a</i>	182
	* <i>tʰepʰ-a</i>	214
	* <i>tʰab-a</i>	227
	* <i>tʰay-a</i> or * <i>tʰiy-a</i>	245
	* <i>sʷaxʷ-a</i>	293
	* <i>kʰay-a</i>	451
	* <i>kʰum-a</i>	464
	* <i>gʷir-a</i>	523
	* <i>kʷam-a</i>	550
	* <i>kʷatʰ-a</i>	560
	* <i>ʔakʷh-a</i>	639
	* <i>ʔeŋ-a</i>	676
	* <i>ʔeŋ-kʰ-a</i>	676
	* <i>has-a</i>	742
	* <i>wal-a</i>	819
	* <i>war-a</i>	834
heat of sun	* <i>ʔeŋ-a</i>	676
	* <i>ʔeŋ-kʰ-a</i>	676
	* <i>hag-a</i>	702
heat, to	* <i>pʰekʷh-</i>	124
	* <i>pʰaḥ-</i>	140
	* <i>pʰaḥ-V-w-</i>	140
	* <i>kʰay-</i>	451
heat up, to	* <i>dul-</i>	182
	* <i>tʰab-</i>	227
	* <i>sʷaxʷ-</i>	293
	* <i>ʔeŋ-</i>	676
	* <i>ʔeŋ-V-kʰ-</i>	676
	* <i>wal-</i>	819
heated	* <i>tʰher-a</i>	616
heaviness	* <i>kʷurʷ-a</i>	566
heavy	* <i>kʷurʷ-a</i>	566
heavy, to be	* <i>kʷurʷ-</i>	566

English Meaning	Proto-Nostratic	Number
heavy rain	* <i>nab-a</i>	937
heed	* <i>guw-a</i>	411
heed, to	* <i>guw-</i>	411
heifer	* <i>p^har-a</i>	112
	* <i>p^hur-a</i>	138
height	* <i>bir-a</i>	53
	* <i>bir-g-a</i>	53
	* <i>t'al-a</i>	233
	* <i>sal-a</i>	333
	* <i>k^haw-a</i>	448
	* <i>k^hilʷ-a</i>	454
	* <i>hon-a</i>	756
held	* <i>ʔam-a</i>	642
her [oblique]	* <i>si-</i> (~ * <i>se-</i>)	338
her [possessive]	* <i>-si</i> (~ * <i>-se</i>)	338
herd	* <i>man-a</i>	888
herd of cattle	* <i>bak'-a</i>	19
herd of small animals	* <i>ʕuw-a</i> (~ * <i>ʕow-a</i>)	785
herdsman	* <i>man-a</i>	888
hero	* <i>p^har-a</i>	109
hide (= animal skin)	* <i>p^hač'-a</i>	91
	* <i>p^hal-a</i>	141
	* <i>k^har-a</i>	435
	* <i>k'woy-a</i>	565
	* <i>nak^h-a</i>	942
hide, to (= to cover; to conceal)	* <i>p^hal-</i>	102
	* <i>t^hum-</i>	224
	* <i>k^halʷ-</i>	424
	* <i>hag-</i>	740
	* <i>ʕam-</i>	799
high	* <i>bir-g-a</i>	53
	* <i>t'al-a</i>	233
	* <i>sal-a</i>	333
	* <i>k^hilʷ-a</i>	454
high, to be	* <i>bir-V-g-</i>	53
	* <i>ʕal-</i>	763
high, to make	* <i>k'ul-</i>	510
	* <i>ʕam-</i>	766
	* <i>ʕam-V-d-</i>	766
high place	* <i>bir-g-a</i>	53
high rank	* <i>t^hir-a</i>	619
higher in rank, to be	* <i>har-</i>	739
higher in status, to be	* <i>har-</i>	739

English Meaning	Proto-Nostratic	Number
highest part	* <i>war-a</i>	833
highest person	* <i>ner-a</i>	947
highest point	* <i>gub-a</i>	402
	* <i>k'ul-a</i>	510
	* <i>ʕal-a</i>	763
	* <i>ʕam-a</i>	766
	* <i>ʕam-d-a</i>	766
	* <i>mun-a</i>	921
highest thing	* <i>ner-a</i>	947
highly esteemed	* <i>mag-a</i>	867
hill	* <i>tʰul-a</i>	223
	* <i>t'id-a</i>	248
	* <i>kʰily-a</i>	454
	* <i>mal-a</i>	875
him	* <i>si-</i> (~ * <i>se-</i>)	338
hind part	* <i>dub-a</i>	180
	* <i>k'wad-a</i>	546
hinder, to	* <i>t'ad-</i>	228
hindquarters	* <i>ʕar-a</i>	771
hindrance	* <i>t'ad-a</i>	228
his	* <i>-si</i> (~ * <i>-se</i>)	338
hit	* <i>tʰaph-a</i>	203
	* <i>k'wah-a</i>	547
	* <i>lax^w-a</i>	980
hit, to	* <i>tʰaph-</i>	203
	* <i>t'aw-</i>	243
	* <i>dʷab-</i>	258
	* <i>g^wan-</i>	520
	* <i>k'wah-</i>	547
	* <i>q'wal-</i>	602
	* <i>nikʰ-</i>	950
	* <i>lax^w-</i>	980
hitting, the act of	* <i>lax^w-a</i>	980
(hoar)frost	* <i>tʰow-a</i>	221
hoarse, to be	* <i>qʰarʷ-</i>	586
hold	* <i>bar-a</i>	33
	* <i>pʰid-a</i>	126
	* <i>kʰal-a</i>	421
	* <i>kʰam-a</i> or * <i>qʰam-a</i>	425
	* <i>k'ab-a</i>	467
	* <i>ʔam-a</i>	642
	* <i>ʕap'-a</i>	770
hold, to	* <i>pʰid-</i>	126

English Meaning	Proto-Nostratic	Number
	* <i>k'aw-</i>	497
	* <i>man^v-</i>	892
hold (closely or tightly), to	* <i>ʔam-</i>	642
hold back, to	* <i>k^hal-</i>	421
hold firmly, to	* <i>d^var-</i>	262
hole	* <i>bit^h-a</i>	60
	* <i>p^hut^h-a</i>	147
	* <i>dur-a</i>	191
	* <i>t^vhal-m-a</i>	269
	* <i>k^whar-a</i>	533
	* <i>ʔak^h-a</i>	636
	* <i>haŋ-a</i>	711
	* <i>hal^v-a</i>	712
hole, to make a	* <i>dur-</i>	191
hollow (= cave)	* <i>k^hay-w-a</i>	452
	* <i>k'um-a</i>	515
	* <i>k^whar-a</i>	533
	* <i>hal^v-a</i>	728
hollow out, to	* <i>gal-</i>	370
	* <i>k^whar-</i>	533
	* <i>xat'-</i>	792
hollowing out, the act of	* <i>gal-a</i>	370
home	* <i>man-a</i>	886
honey	* <i>bay-a</i>	45
	* <i>k^han^v-a ~ *k^hin^v-a ~ *k^hun^v-a</i>	429
	* <i>mad-w-a</i>	866
	* <i>mal-a</i>	878
honor	* <i>mag-a</i>	867
hoof	* <i>k^hab-a</i>	416
hook	* <i>t^hak^h-a</i>	196
	* <i>gam-a</i>	377
	* <i>k^hon-k'-a, *k^hok'-a</i>	459
	* <i>t^huŋ-k^h-a</i>	620
hook together, to	* <i>t^hak^h-</i>	196
hook up, to	* <i>t^huŋ-V-k^h-</i>	620
hooked, that which is	* <i>k'un-a</i>	516
horn	* <i>k^hir-a</i>	455
horned animal	* <i>mar-a</i>	903
horse	* <i>p^har-a</i>	111
hot	* <i>p^hek^wh-a</i>	124
	* <i>t'ab-a</i>	227
	* <i>k^hum-a</i>	464
hot (of taste) (= spicy)	* <i>k^har-a</i>	440

English Meaning	Proto-Nostratic	Number
hot, to be	*s ^y am-	289
	*k ^{'w} am-	550
	*ʔak ^{wh} -	639
	*ʔep ^h -	677
	*has-	742
hot, to be or become	*s ^y ax ^w -	293
	*k ^h ay-	451
	*k ^h um-	464
	*g ^w ir-	523
hot, to make	*s ^y ax ^w -	293
house	*p ^h ar-a, (?) *p ^h ur-a	113
	*q ^{'w} ad-a	600
	*ʔil-a	681
	*man-a	886
howl	*gar-a	572
	*gar-gar-a	572
	*waʃ-a	810
	*wal-a	816
howl, to	*gar-	572
	*gar-gar-	572
hubbub	*q ^{'w} al-a	601
	*wal-a	816
hump	*bun-a	76
	*p ^{'ul} -a	150
	*t ^h aw-a	212
	*k ^{'ar} -a	494
	*k ^{'um} -a	515
hunch (= hump)	*gub-a	582
(hunger)	*bad-a	8
hunger	*wal-a	820
hunt wild animals, to	*guw-	412
	*guw-V-r-	412
hurl, to	*q ^{'w} al-	603
	*ʃam-	767
hurling	*q ^{'w} al-a	603
hurry	*p ^h at ^h -a	120
hurry, to	*g ^{ir} ^y - or *g ^{ir} ^y -	400
hurry, to be in a	*p ^h ar-	110
	*p ^h ir-	130
hurt, to	*q ^{'w} al-	602
	*ʔak ^h -	635
husband	*ʔar-a	655
husband's sister	*k ^{'el} -a	498

English Meaning	Proto-Nostratic	Number
husk	* <i>p^hat'-a</i>	123
I		
I	* <i>ʔa-</i> (~ * <i>ʔə-</i>), * <i>ʔi-</i> (~ * <i>ʔe-</i>)	626
	* <i>wa-</i> (~ * <i>wə-</i>)	808
	* <i>mi</i> (~ * <i>me</i>)	910
	* <i>na</i> (~ * <i>nə</i>)	930
ibex	* <i>ʔar-a</i>	657
ice	* <i>gīl-a</i>	395
idea	* <i>t^yiŋ-a</i>	286
	* <i>saḥ-a</i> or * <i>šaḥ-a</i>	330
	* <i>ʕeŋ-a</i>	775
ignite, to	* <i>ʕal-</i>	764
ignoble, to be	* <i>ʔek'-</i>	672
ill, to be	* <i>gal-</i>	374
ill, to become	* <i>daw-</i>	168
ill, to fall	* <i>mar^y-</i>	902
illness	* <i>gal-a</i>	374
	* <i>mar^y-a</i>	902
illustrious	* <i>mag-a</i>	867
illustrious, to be	* <i>t^hir-</i>	619
	* <i>mag-</i>	867
immature	* <i>γil-a</i>	800
immerse in water, to	* <i>mus^y-</i>	928
	* <i>mus^y-V-k'-</i>	928
immerse into, to	* <i>t'al-</i>	232
immersion	* <i>t'al-a</i>	232
	* <i>mus^y-a</i>	928
	* <i>mus^y-k'-a</i>	928
impediment	* <i>t'ad-a</i>	228
in addition to	* <i>bi</i>	50
	* <i>da-</i> (~ * <i>də-</i>)	153
in front of, to be	* <i>mun-</i>	921
in the middle of	* <i>mat^h-</i> or * <i>met^h-</i>	904
in-law, (elder) male	* <i>t'ay-a</i>	234
in-law, female	* <i>k^hal-a</i>	419
	* <i>k'el-a</i>	498
incise, to	* <i>k'ir-</i> or * <i>k'ur-</i>	503
	* <i>wur^y-</i>	859
incision	* <i>t^har-a</i>	206
	* <i>k^har-a</i>	434
	* <i>t^har-t'-a</i>	614

English Meaning	Proto-Nostratic	Number
	<i>*haʒ-a</i>	751
	<i>*xat'-a</i>	792
incisions, to make	<i>*tʰar-V-t'-</i>	614
increase	<i>*bar-a</i>	28
	<i>*bul-γ-a</i>	70
	<i>*garʸ-a</i>	385
	<i>*haw-a</i>	747
	<i>*waš-a</i>	838
	<i>*mik'-a</i>	914
	<i>*riy-a</i>	994
increase, to	<i>*bun-V-g-</i>	76
	<i>*garʸ-</i>	385
	<i>*kʰaw-</i>	448
	<i>*haw-</i>	747
	<i>*war-</i>	833
	<i>*waš-</i>	838
	<i>*mah-</i>	870
	<i>*mal-</i>	876
	<i>*man-</i>	888
	<i>*man-V-g-</i>	889
	<i>*mik'-</i>	914
	<i>*riy-</i>	994
increase (in number), to	<i>*maʔ-</i>	864
increased	<i>*waš-a</i>	838
increment	<i>*waš-a</i>	838
indefinite pronoun stem	<i>*ma- (~ *mə-),</i>	
	<i>*mi- (~ *me-),</i>	
	<i>*mu- (~ *mo-)</i>	861
infant	<i>*pʰilʸ-a</i>	127
inferior	<i>*kʰatʰ-a</i>	446
inflammation	<i>*darʸ-a</i>	165
inflate, to	<i>*bul-</i>	68
	<i>*bun-</i>	76
	<i>*pʰuš-</i>	139
	<i>*pʰuw-</i>	148
	<i>*kʰaw-</i>	448
inflation	<i>*bul-a</i>	68
	<i>*kʰaw-a</i>	448
initiate, to	<i>*bad-</i>	10
initiation	<i>*bad-a</i>	10
injure, to	<i>*dar-</i>	163
	<i>*dʷab-</i>	258
	<i>*gʷan-</i>	520

English Meaning	Proto-Nostratic	Number
injury	* <i>q^hal-</i>	584
	* <i>t^har-</i>	612
	* <i>dar-a</i>	163
	* <i>t^har-a</i>	206
	* <i>t'aw-a</i>	243
	* <i>d^vab-a</i>	258
	* <i>gar-a</i>	382
	* <i>g^wan-a</i>	520
	* <i>q^hal-a</i>	584
	* <i>t^har-a</i>	612
inquiry (insane, to be) (insane, to drive someone) insane, to become (insanity)	* <i>wan-a</i>	828
	* <i>nik^h-a</i>	950
	* <i>saḥ-a</i> or * <i>šaḥ-a</i>	330
	* <i>dul-</i>	183
	* <i>dul-</i>	183
	* <i>ʔeb-</i>	670
	* <i>dul-a</i>	183
	* <i>bar-a</i>	39
	* <i>k^{wh}ur-a</i>	544
	* <i>bur^y-a</i>	87
insect, buzzing inside of anything inside, the instigate, to instrument, sharp insufficiency	* <i>wat^y-a</i>	841
	* <i>k^war-b-a</i>	556
	* <i>bad-</i>	10
	* <i>p^yal-a</i>	267
	* <i>k'al-a</i>	475
	* <i>nus^y-a</i>	952
	* <i>k'al-a</i>	475
	* <i>ʔek'-</i>	672
	* <i>ʕeŋ-a</i>	775
	* <i>k^war-b-a</i>	556
insufficient insufficient, to be intention interior interior of anything interrogative pronoun stem	* <i>wat^y-a</i>	841
	* <i>k^{wh}a-</i> (~ * <i>k^{wh}ə-</i>)	541
	* <i>ʔay-</i> , * <i>ʔya-</i>	664
	* <i>mi-</i> (~ * <i>me-</i>)	909
	* <i>na-</i> (~ * <i>nə-</i>)	933
	* <i>t^har-a</i>	210
	* <i>wel^y-a</i>	847
	* <i>saḥ-a</i> or * <i>šaḥ-a</i>	330
	* <i>k^hal-a</i>	422
	* <i>q^wat^y^h-a</i>	607
invitation invocation	* <i>k'ar-a</i>	491
	* <i>q^wat^y^h-a</i>	607
	* <i>k^war-b-a</i>	556
inward part		

English Meaning	Proto-Nostratic	Number
irritate, to	* <i>nady-</i>	939
irritating	* <i>nady-a</i>	939
irritating, to be	* <i>nady-</i>	939
irritation	* <i>nady-a</i>	939
issue (= offspring)	* <i>p^hir-a</i>	129
issue (from), to	* <i>zar-</i> or * <i>žar-</i>	308
it	* <i>si-</i> (~ * <i>se-</i>)	338
itch	* <i>gar-b-a</i>	384
its	* <i>-si</i> (~ * <i>-se</i>)	338

J

jab	* <i>t^hak^{wh}-a</i>	610
jab, to	* <i>zer-</i> or * <i>žer-</i>	309
jar	* <i>k^haph-a</i>	432
javelin	* <i>zer-a</i> or * <i>žer-a</i>	309
jaw	* <i>gen-a</i>	389
	* <i>k'an-a</i>	482
	* <i>k'aph-a</i> and/or * <i>k'eph-a</i>	488
	* <i>gat'y-a</i>	578
	* <i>q'ab-a</i>	589
jawbone	* <i>k'aph-a</i> and/or * <i>k'eph-a</i>	488
join, to	* <i>gid-</i> or * <i>gid-</i>	393
join (together), to	* <i>rak^h-</i>	987
join together, to	* <i>dab-</i>	155
	* <i>dar-</i>	162
	* <i>t^hak^h-</i>	196
	* <i>k'ac^h-</i>	469
	* <i>k'at^h-</i>	495
	* <i>gam-</i>	571
	* <i>t^h'im-</i>	624
join two things together, to	* <i>k^holv-</i>	458
joined together	* <i>dar-a</i>	162
	* <i>t^h'im-a</i>	624
joined together, to be or become	* <i>t'yar-</i>	280
joining	* <i>dab-a</i>	155
joining (together), the act of	* <i>rak^h-a</i>	987
joint	* <i>k'an-a</i>	485
	* <i>k'en^v-a</i>	499
joke, to	* <i>zak'-</i>	307
journey	* <i>p^har-a</i>	114
	* <i>ʔay-a</i>	665
	* <i>naʕ-a</i>	935

English Meaning	Proto-Nostratic	Number
journey, to	* <i>naʕ-</i>	935
joy	* <i>p^har-a</i>	106
	* <i>mak'-a</i>	884
judge, to	* <i>sady-</i>	328
judgment	* <i>day-a</i>	170
	* <i>sady-a</i>	328
judgment, sound	* <i>hak^h-a</i>	721
juice	* <i>saw-a</i>	356
jumping	* <i>raq'-a</i>	990
jut out, to	* <i>gar^y-</i>	386
	* <i>mun-</i>	921

K

keen, to be	* <i>hak^h-</i>	721
keeper	* <i>war-a</i>	830
kid	* <i>gad-a</i>	368
kill, to	* <i>g^wan-</i>	520
	* <i>q[']wal-</i>	602
	* <i>hal-</i>	724
killing	* <i>d^vab-a</i>	258
	* <i>q^hat^h-a</i>	587
	* <i>q[']wal-a</i>	602
	* <i>hal-a</i>	724
kind (= benevolent)	* <i>bar-a</i>	36
kind, to be	* <i>bar-</i>	36
kindle, to	* <i>bud-</i>	62
	* <i>ʕal-</i>	764
kindness	* <i>bar-a</i>	36
kinsman	* <i>ʔar-a</i>	656
kite (= hawk-like bird)	* <i>hur-a</i> (and/or * <i>her-a</i> ?)	758
knead (clay), to	* <i>diq^h-</i>	177
knee	* <i>b[e]r-a</i>	48
knife	* <i>sak^h-a</i>	331
	* <i>ʕ[']ir-a</i>	353
	* <i>ʕar-a</i>	355
	* <i>k^whar-a</i>	532
	* <i>k[']wat'-a</i>	561
	* <i>ʕ^har-a</i>	613
	* <i>wah-a</i>	812
	* <i>way-a</i>	828
	* <i>miʔ-a</i>	911
knob	* <i>k[']aŋ-a</i>	486

English Meaning	Proto-Nostratic	Number
	<i>*k'um-a</i>	515
knock	<i>*t'uk'-a</i>	254
	<i>*k'an-a</i>	484
	<i>*k'ud-a</i>	507
	<i>*k'wad-a</i>	545
knock, to	<i>*t^hap^h-</i>	203
	<i>*t'uk'-</i>	254
	<i>*t^{vh}um-</i>	275
knot	<i>*k^hat^h-a</i>	444
	<i>*k'ac^h-a</i>	469
	<i>*k'aŋ-a</i>	486
	<i>*k'en^v-a</i>	499
know, to	<i>*ʔil-</i>	683
	<i>*ʕey-</i>	776
knowledge	<i>*baw-a</i>	43
known	<i>*ʕey-a</i>	776
known, to make	<i>*c'ar- or *č'ar-</i>	322
	<i>*k^hal-</i>	422
	<i>*war- and/or *wir-</i>	835

L

labor	<i>*daw-a</i>	167
	<i>*k^ham-a</i>	426
labor, to	<i>*k^ham-</i>	426
	<i>*k'ac^h-</i>	468
lack	<i>*bad-a</i>	8
	<i>*gaʔ-a</i>	362
	<i>*k'al-a</i>	475
	<i>*ʔek'-a</i>	672
	<i>*hiw-a, *hiy-a</i>	753
lack, to	<i>*hiw-, *hiy-</i>	753
lacking	<i>*gaʔ-a</i>	362
	<i>*k'al-a</i>	475
lacking, to be	<i>*ʔek'-</i>	672
ladle	<i>*k^hay-a</i>	452
lake	<i>*mor-a</i>	918
lament, to	<i>*k'um-</i>	512
lamentation	<i>*k'ar-a</i>	491
	<i>*k'um-a</i>	512
	<i>*wal-a</i>	816
land (= countryside)	<i>*q'an-a</i>	593
land (= earth; ground)	<i>*ʔul-a</i>	697

English Meaning	Proto-Nostratic	Number
	<i>*mag-a</i>	868
land, any piece of	<i>*lam-a</i>	971
	<i>*lam-d-a</i>	971
language	<i>*t'il-a</i>	250
	<i>*k^hil-a</i>	453
lap (up), to	<i>*lab-</i>	962
	<i>*las^y-, *lis^y-, *lus^y-</i>	974
lap up, to	<i>*lak^h-</i>	948
lard	<i>*s^yil-a</i>	295
large	<i>*bir-a</i>	53
	<i>*hal^y-a</i>	727
	<i>*maʔ-a</i>	864
	<i>*mik'-a</i>	914
large amount	<i>*k^hum-a</i>	462
	<i>*man-g-a</i>	889
large fish	<i>*k^whal-a</i>	530
large quantity	<i>*g^wan-a</i>	521
	<i>*maʔ-a</i>	864
large quantity or amount	<i>*bul-a</i>	68
largeness	<i>*bir-a</i>	53
lax	<i>*dow-a, *doy-a</i>	179
laxity	<i>*dow-a, *doy-a</i>	179
lay, to	<i>*k^hay-</i>	450
lay down, to	<i>*lag-</i>	963
lay waste, to	<i>*hal-</i>	724
	<i>*hul-</i>	757
laying down, the act of	<i>*lag-a</i>	963
lead, to	<i>*wad-</i>	811
leader	<i>*p^har-a</i>	109
	<i>*day-a</i>	171
	<i>*hak'-a</i>	723
leading, the act of	<i>*wad-a</i>	811
leaf	<i>*t'or^y-a</i>	251
leak	<i>*dun-a</i>	189
leak, to	<i>*dun-</i>	189
	<i>*k^waly-</i>	549
leak out, to	<i>*zar- or *žar-</i>	308
lean (= emaciated)	<i>*c'aw-a</i>	323
	<i>*c'aw-l^y-a</i>	323
lean, to be or become	<i>*c'aw-</i>	323
	<i>*c'aw-V-l^y-</i>	323
lean down, to (= to bend down)	<i>*c'ar-</i>	321
lean, that which is	<i>*c'aw-a</i>	323

English Meaning	Proto-Nostratic	Number
	<i>*c'aw-lʷ-a</i>	323
learning	<i>*kʰal-a</i>	422
leather	<i>*k'woy-a</i>	565
leave, to	<i>*t'aw-</i>	242
	<i>*cʰal-</i>	347
	<i>*gaʔ-</i>	362
	<i>*γor-</i>	801
	<i>*γor-V-b-</i>	801
leave behind, to	<i>*cʰal-</i>	347
	<i>*gaʔ-</i>	362
leaving	<i>*bar-a</i>	41
	<i>*γor-a</i>	801
	<i>*γor-b-a</i>	801
left behind	<i>*gaʔ-a</i>	362
leg	<i>*lakʰ-a</i>	968
leisure	<i>*cʰal-a</i>	347
leisure, at	<i>*cʰal-a</i>	347
length	<i>*tʰanʷ-a</i>	201
	<i>*t'al-a</i>	233
	<i>*ʔut'-a</i>	701
	<i>*war-a</i>	832
lengthen, to	<i>*ʔut'-</i>	701
	<i>*mad-</i>	865
	<i>*mat'-</i>	905
lessen, to	<i>*tʰah-</i>	195
	<i>*kʷhar-</i>	534
let go, to	<i>*t'aw-</i>	242
	<i>*cʰal-</i>	347
level	<i>*pʰal-a</i>	97
	<i>*lapʰ-a</i>	973
level, that which is	<i>*pʰal-a</i>	97
liberated	<i>*her-a</i> and/or <i>*hor-a</i>	717
lick, to	<i>*t'al-</i>	231
	<i>*lakʰ-</i>	967
	<i>*lak'-, *lik'-, *luk'-</i>	970
	<i>*lasʷ-, *lisʷ-, *lusʷ-</i>	974
licking	<i>*t'al-a</i>	231
	<i>*lakʰ-a</i>	967
	<i>*lak'-a, *lik'-a, *luk'-a</i>	970
lie, to (= to be placed)	<i>*kʰay-</i>	450
lie down, to (= to recline)	<i>*bad-</i>	9
	<i>*nakʷh-</i>	943
	<i>*lam-</i>	971

English Meaning	Proto-Nostratic	Number
life	* <i>lam-V-d-</i>	971
	* <i>hay-a</i>	749
	* <i>hay-w-a</i>	749
	* <i>ʕan-a</i>	768
lift, to	* <i>nap^h-a, *nip^h-a, *nup^h-a</i>	944
	* <i>t^hul-</i>	223
	* <i>k'ul-</i>	510
	* <i>ʕam-</i>	766
lift (up), to	* <i>ʕam-V-d-</i>	766
	* <i>xan-</i>	790
	* <i>nit^h-</i>	951
	* <i>sal-</i>	333
lift up, to	* <i>k^hily-</i>	454
	* <i>ʕar-V-g-</i>	772
	* <i>nit^h-a</i>	951
	* <i>bah-a</i>	13
lifting, the act of	* <i>bar-a</i>	35
	* <i>bud-a</i>	62
	* <i>t'ay-a</i> or * <i>t'iy-a</i>	245
	* <i>ʔel-a</i>	673
light (= luminosity)	* <i>wal^y-a</i>	822
	* <i>wil^y-a</i>	850
	* <i>law-a</i>	977
	* <i>hal-</i>	690
light up, to	* <i>ʕal-</i>	764
light a fire, to (= to ignite, to kindle)	* <i>bar-a</i>	35
lightning	* <i>wa-</i> (~ * <i>wə-</i>)	809
like (= as)	* <i>mal-</i>	877
like, to	* <i>sam-</i>	377
like, to be (= to resemble)	* <i>sam-a</i>	377
likeness	* <i>mad-a</i>	865
limit	* <i>mat'-a</i>	905
lip	* <i>las^y-a, *lis^y-a, *lus^y-a</i>	974
liquid	* <i>ʕuw-a</i>	361
	* <i>ʕuw-l-a</i>	361
	* <i>maw-a</i>	907
list, to (= to enumerate)	* <i>t'il-</i>	249
listen, to	* <i>dʷan-</i>	260
	* <i>sad^y-</i>	328
	* <i>k^hul-</i>	460
little	* <i>k'al-a</i>	475
littleness	* <i>k'al-a</i>	475
live, to	* <i>ʔil-</i>	681

English Meaning	Proto-Nostratic	Number
	* <i>hay-</i>	749
	* <i>hay-V-w-</i>	749
	* <i>ʕan-</i>	768
living	* <i>ʔil-a</i>	681
load	* <i>t'an-a</i>	236
	* <i>ʔan-a</i>	645
	* <i>wig-a</i>	849
load tightly together, to	* <i>t'an-</i>	236
load up and go, to	* <i>ʔan-</i>	645
location	* <i>ʔin-a</i> (~ * <i>ʔen-a</i>)	684
lofty	* <i>bir-g-a</i>	53
loneliness	* <i>k^hay-a</i>	449
	* <i>k^hay-w-a</i>	449
	* <i>xol-a</i>	793
lonely	* <i>xol-a</i>	793
long	* <i>t'al-a</i>	233
	* <i>ʔut'-a</i>	701
long for, to	* <i>haw-</i>	713
long-lasting	* <i>t^han^y-a</i>	201
long-lasting, to be	* <i>t^han^y-</i>	201
look, to	* <i>war-</i>	830
look at, to	* <i>bak'-</i>	18
	* <i>day-</i>	170
	* <i>gal-</i>	372
look for, to	* <i>bak'-</i>	18
look over, to	* <i>bak'-</i>	18
looking at or over	* <i>bak'-</i>	18
loop	* <i>c'ur-a</i>	326
	* <i>sak'^w-a</i>	332
lord	* <i>p^har-a</i>	109
	* <i>ʔad-a</i>	630
lose one's mind, to	* <i>ʔeb-</i>	670
lose one's way, to	* <i>ʔeb-</i>	670
loss	* <i>gaʔ-a</i>	362
	* <i>gup^h-a</i>	407
	* <i>ʔek'-a</i>	672
loud clatter	* <i>Gad-a</i>	567
	* <i>Gad-Gad-a</i>	567
loud noise	* <i>Gad-a</i>	567
	* <i>Gad-Gad-a</i>	567
	* <i>x^wir-a</i>	798
loud noise, to make a	* <i>Gad-</i>	567
	* <i>Gad-Gad-</i>	567

English Meaning	Proto-Nostratic	Number
	* <i>x^wir-</i>	798
loud rumble	* <i>Gad-a</i>	567
	* <i>Gad-Gad-a</i>	567
loud sound, to make a	* <i>Gad-</i>	567
	* <i>Gad-Gad-</i>	567
love	* <i>p^har-a</i>	106
low	* <i>p^hul-a</i>	135
	* <i>lam-a</i>	971
	* <i>lam-d-a</i>	971
low, to be	* <i>lam-</i>	971
	* <i>lam-V-d-</i>	971
lower	* <i>k^hat^h-a</i>	446
	* <i>hal-a</i>	726
lower part	* <i>k^hat^h-a</i>	446
	* <i>hal-a</i>	726
lower place	* <i>k^hat^h-a</i>	446
lower thing	* <i>k^hat^h-a</i>	446
lower, to	* <i>hal-</i>	726
lowest part of anything	* <i>ʔul-a</i>	697
lowest part or region (of anything)	* <i>bud-a</i>	63
lowland	* <i>lam-a</i>	971
	* <i>lam-d-a</i>	971
lowly, to be	* <i>ʔek'-</i>	672
low-lying ground	* <i>lam-a</i>	971
	* <i>lam-d-a</i>	971
lump	* <i>bun-a</i>	76
	* <i>p^ʔul-a</i>	150
	* <i>t^haw-a</i>	212
	* <i>k^ʔar-a</i>	494
	* <i>k^ʔum-a</i>	513
	* <i>k^ʔum-a</i>	515
lust	* <i>man^v-a</i>	890
lust after, to	* <i>man^v-</i>	890
luster	* <i>ʔel-a</i>	673
	* <i>wal^v-a</i>	822
lying down	* <i>bad-a</i>	9

M

maceration	* <i>t^hah-a</i>	195
mad	* <i>ʔeb-a</i>	670
(mad, to be)	* <i>dul-</i>	183
(mad, to drive someone)	* <i>dul-</i>	183

English Meaning	Proto-Nostratic	Number
mad, to go	*ʔeb-	670
made in a skillful manner, that which is	*t'am-a	235
(madness)	*dul-a	183
madness	*ʔeb-a	670
maggot	*k ^{wh} ur-a	544
magnificence	*mag-a	867
make, to	*daw-	167
	*t ^h ikh-	216
	*k ^h am-	426
	*k ^{wh} ey-	540
make an effort, to	*woy-	855
make clear, to	*c'ar- or *č'ar-	322
	*k ^h al-	422
make fast, to	*dab-	155
make fun of, to	*ʒak'-	307
make known, to	*c'ar- or *č'ar-	322
	*k ^h al-	422
	*war- and/or *wir-	835
make (something) in a skillful manner, to	*t'am-	235
make something, tool used to	*t ^h ikh-a	216
making (something) in a skillful manner, the act of	*t'am-a	225
make sport, to	*ʒak'-	307
making something, the act of	*t ^h ikh-a	216
malady	*mar ^y -a	902
	*muŋ-a	923
	*nus ^y -a	954
male	*k ^h um-a	463
	*ʔar-a	655
	*war-a	827
	*man ^y -a	891
male (human or animal)	*g[e]n-d-a	390
	*xam-a	788
	*xam-d-a	788
	*mar-a	895
male animal	*war-a	827
male genitals	*p ^h as ^y -a	119
male in-law, (elder)	*t'ay-a	244
male relative	*ʔay(y)a	668
male relative, (elder)	*t'ay-a	244
male relative, older	*ʔak ^h k ^h a	637

English Meaning	Proto-Nostratic	Number
	<i>*ʔat^ht^ha</i>	660
male relative, (older)	<i>*ʔaŋ(ŋ)a</i>	652
male of certain animals	<i>*daq^h-a</i>	161
male sheep	<i>*k^hab-a</i>	415
malevolent	<i>*dar-a</i>	163
malicious	<i>*nad^y-a</i>	939
malicious, to be	<i>*nad^y-</i>	939
mallet	<i>*k'an-a</i>	484
man	<i>*k^hum-a</i>	463
	<i>*ʔar-a</i>	655
	<i>*war-a</i>	827
	<i>*man^y-a</i>	891
man, (young)	<i>*mar-a</i>	895
man, old	<i>*p'ap'-a</i>	149
manifest	<i>*wil^y-a</i>	850
manifest, to	<i>*wil^y-</i>	850
manifestation	<i>*wil^y-a</i>	850
manly, to be	<i>*xam-</i>	788
	<i>*xam-V-d-</i>	788
manner	<i>*har-a</i>	737
manslaughter	<i>*q'wal-a</i>	602
many	<i>*baž-a</i>	46
	<i>*p^hal-a</i>	99
	<i>*ʔap^h-a</i>	653
	<i>*maʔ-a</i>	864
	<i>*mak'-a</i>	873
	<i>*mal-a</i>	876
	<i>*man-g-a</i>	889
many, to be	<i>*baž-</i>	46
	<i>*maʔ-</i>	864
marsh	<i>*mar-a</i>	900
mark off, to	<i>*miḥ-</i>	913
mash, to	<i>*nad^y-</i>	938
mashed, anything	<i>*nad^y-a</i>	938
mass	<i>*k'um-a</i>	513
massacre	<i>*wel-a</i>	845
massive	<i>*t^hik'-a</i>	217
massiveness	<i>*t^hik'-a</i>	217
master	<i>*p^har-a</i>	109
	<i>*ʔad-a</i>	630
	<i>*har-a</i>	739
mastery	<i>*ḥin-k^h-a</i>	752
mat	<i>*k^hat^h-a</i>	444

English Meaning	Proto-Nostratic	Number
	<i>*net^y-a</i>	948
mature	<i>*p^har^y-a</i>	116
	<i>*ʕat^h-a</i>	773
mature, to	<i>*bul-V-γ-</i>	70
	<i>*p^har^y-</i>	116
	<i>*n^yaʕ-V-r-</i>	956
maturity	<i>*bul-γ-a</i>	70
	<i>*p^har^y-a</i>	116
	<i>*ʕat^h-a</i>	773
me	<i>*ʔa- (~ *ʔə-), *ʔi- (~ *ʔe-)</i>	626
	<i>*wa- (~ *wə-)</i>	808
	<i>*mi (~ *me)</i>	910
	<i>*na (~ *nə)</i>	930
mead	<i>*mad-w-a</i>	866
meadow	<i>*wel^y-a</i>	846
meager	<i>*k^ʾal-a</i>	475
meal (= food; repast)	<i>*ʔak^h-a</i>	634
	<i>*ʕun^y-a</i>	782
mean (= nasty)	<i>*p^hul-a</i>	135
	<i>*nad^y-a</i>	939
mean, to be (= to be nasty)	<i>*nad^y-</i>	939
measure	<i>*mad-a</i>	865
	<i>*mat^ʾ-a</i>	905
	<i>*miḥ-a</i>	913
measure, to	<i>*miḥ-</i>	913
measure out, to	<i>*mad-</i>	865
	<i>*mat^ʾ-</i>	905
measurement	<i>*xal-a</i>	787
	<i>*mad-a</i>	865
	<i>*mat^ʾ-a</i>	905
	<i>*miḥ-a</i>	913
melt, to	<i>*Gar-</i>	573
melted	<i>*Gar-a</i>	573
memory	<i>*gun-a</i>	406
mentally sharp, to be	<i>*hak^h-</i>	721
metal	<i>*hay-a</i>	716
method	<i>*har-a</i>	737
midday heat	<i>*hag-a</i>	702
middle	<i>*k^ʾwar-b-a</i>	556
	<i>*mat^h-a or *met^h-a</i>	904
midge	<i>*bir-a</i>	56
might	<i>*gad-a</i>	366
	<i>*wak^ʾ-a</i>	813

English Meaning	Proto-Nostratic	Number
	<i>*mag-a</i>	867
mighty	<i>*gad-a</i>	366
	<i>*ʔab-a</i>	628
	<i>*ʔad-a</i>	630
mighty, to be	<i>*ʔad-</i>	630
	<i>*mak'-</i>	873
mighty, to be or become	<i>*gad-</i>	366
mild, to be or become	<i>*lam- ~ (?) *lʷam-</i>	972
milk	<i>*mam(m)a, *mema</i>	862
	<i>*mal-a</i>	879
mincing, the act of	<i>*k'ep'-a</i>	500
mind	<i>*san-a</i> or <i>*šan-a,</i> <i>*sin-a</i> or <i>*šin-a,</i> <i>*sun-a</i> or <i>*šun-a</i>	335
	<i>*gun-a</i>	406
minute (= small; tiny)	<i>*nusʷ-a</i>	952
minute, to be (= to be small)	<i>*nusʷ-</i>	952
misery	<i>*muŋ-a</i>	923
misfortune, exclamation of	<i>*hay</i>	715
mist	<i>*p'ulʷ-a</i>	151
	<i>*hag-a</i>	720
mistaken, to be	<i>*mal-</i>	883
misty	<i>*hag-a</i>	720
mix, to	<i>*bul-</i>	72
	<i>*k'al-</i>	477
mix together, to	<i>*k'atʰ-</i>	495
mix up, to	<i>*bul-</i>	72
mixed colors, that which has	<i>*bul-a</i>	73
mixture	<i>*bul-a</i>	72
	<i>*k'atʰ-a</i>	495
moan	<i>*k'um-a</i>	512
	<i>*k'was-a</i>	559
moan, to	<i>*k'um-</i>	512
	<i>*k'was-</i>	559
mock, to	<i>*zak'-</i>	307
mockery	<i>*zak'-a</i>	307
moist	<i>*suw-a</i>	361
	<i>*suw-l-a</i>	361
	<i>*mat'-a</i>	906
	<i>*nat'-a</i>	946
moist, to be	<i>*mat'-</i>	906
moisten, to	<i>*t'alʷ-</i>	234
	<i>*wal-</i>	818

English Meaning	Proto-Nostratic	Number
	*wet'-	848
	*nat'-	946
	*lah-	965
	*law-V-ĥ-	979
	*rek'-	993
moistness	*nat'-a	946
	*lah-a	965
moisture	*suw-a	361
	*suw-l-a	361
	*wal-a	818
	*mat'-a	906
mold (= form; shape)	*lip'-a	983
mold, to (= to form; to fashion)	*lip'-	983
mold (clay), to	*diq ^h -	177
moment	*ʔam-a	643
mommy	*ma(a)	862
more	*ʔap ^h -a	653
more, that which is	*ʔap ^h -a	653
more, to be	*ʔap ^h -	653
moreover	*ʔap ^h -	653
morning	*dil ^y -a	175
morsel	*bal-a	22
	*ʔak ^h -a	634
	*mol-a	917
morsel bitten (of food)	*tʃ'ar-s-a	622
mortar (= pestle)	*hur-a	759
	*mol-a	917
mosquito	*bir-a	56
	*k'ug-n-a (~ *k'og-n-a)	509
most prominent (person or thing)	*xaj-t ^h -a	791
most prominent, that which is	*xaj-a	790
most prominent part	*mun-a	921
most prominent person	*ner-a	947
most prominent thing	*ner-a	947
mother	*da	154
	*da-da-	154
	*ʔam(m)a	644
	*ʔan ^y a	649
	*ʔay(y)a	667
	*ʔema	674
	*ʔen ^y a	675
	*ma(a)	862
	*mam(m)a, *mema	862

English Meaning	Proto-Nostratic	Number
motion	* <i>q^had-a</i>	583
motion, any rapid	* <i>ʔor-a</i>	691
	* <i>raq'-a</i>	990
motion, to be in	* <i>q^had-</i>	583
motion, to put into	* <i>q^had-</i>	583
mound	* <i>t^hul-a</i>	223
mount, to	* <i>ʔor^y-V-g-</i>	692
	* <i>ʕar-V-g-</i>	772
mountain	* <i>t'id-a</i>	248
	* <i>ʕal-a</i>	763
	* <i>mal-a</i>	858
mountain-goat	* <i>ʔar-a</i>	675
mounting	* <i>ʔor^y-g-a</i>	692
	* <i>ʕar-g-a</i>	772
mourning (= weeping; grieving)	* <i>k'um-a</i>	512
mouth	* <i>ham-a</i>	710
	* <i>haŋ-a</i>	711
mouth, to take into the (= to eat)	* <i>ham-</i>	710
move, to	* <i>gir^y-</i> or * <i>gir^y-</i>	400
	* <i>k'al-</i>	477
	* <i>q^had-</i>	583
	* <i>ʕat^h-</i>	773
	* <i>rag-</i>	985
move about, to	* <i>k^whal-</i>	525
move away from, to	* <i>ʔot'-</i>	694
move back and forth, to	* <i>raq'-</i>	990
move hastily, to	* <i>ʔor-</i>	691
move out of the way, to	* <i>ʔot'-</i>	694
move quickly, to	* <i>p^hat'-</i>	122
	* <i>ʔek^h-</i>	671
	* <i>ʔor-</i>	691
	* <i>hap^h-</i>	736
	* <i>raq'-</i>	990
move rapidly, to	* <i>p^hat^h-</i>	120
	* <i>k^what^h-</i>	537
	* <i>ʔor-</i>	691
move swiftly, to	* <i>p^har-</i>	110
	* <i>p^hir-</i>	130
	* <i>gir^y-</i> or * <i>gir^y-</i>	400
move to or toward, to	* <i>ʔot'-</i>	694
movement	* <i>gir^y-a</i> or * <i>gir^y-a</i>	400
	* <i>q^had-a</i>	583
	* <i>rag-a</i>	985

English Meaning	Proto-Nostratic	Number
movement, rapid	* <i>k^{wh}at^h-a</i>	537
	* <i>ʔek^h-a</i>	671
movement, violent	* <i>ʔek^h-a</i>	671
movement away from	* <i>ʔot'-a</i>	694
movement to or toward	* <i>ʔot'-a</i>	694
much	* <i>baž-a</i>	46
	* <i>p^hal-a</i>	99
	* <i>k'an-a</i>	483
	* <i>mak'-a</i>	873
	* <i>mik'-a</i>	914
much, to be	* <i>baž-</i>	46
mucus, dried	* <i>p^hak^h-a</i>	93
mud	* <i>diq^h-a</i>	177
mulberry	* <i>mur-a</i>	926
mule	* <i>p^har-a</i>	111
multitude	* <i>k^hum-a</i>	462
	* <i>gam-a</i>	571
	* <i>man-a</i>	888
	* <i>man-g-a</i>	889
	* <i>k'was-a</i>	559
mumble	* <i>k'was-</i>	559
mumble, to	* <i>k'ep'-</i>	500
munch, to	* <i>q'wal-a</i>	602
	* <i>wed-a</i>	844
	* <i>nik^h-a</i>	950
	* <i>k'was-a</i>	559
	* <i>gar-a</i>	572
murder	* <i>gar-gar-a</i>	572
	* <i>mur-a</i>	927
	* <i>mur-mur-a</i>	927
	* <i>k'was-</i>	559
	* <i>mur-</i>	927
murmur	* <i>mur-mur-</i>	927
	* <i>bir-a</i>	54
	* <i>mur-a</i>	924
	* <i>gar-</i>	572
	* <i>gar-gar-</i>	572
murmur, to	* <i>ʔiya</i>	689
musical instrument		
mutilated		
mutter, to		
my		

N

name	* <i>žah-a</i>	343
nape of the neck	* <i>k'ap^h-a</i>	489

English Meaning	Proto-Nostratic	Number
narrow	* <i>han-g-a</i>	733
narrow, to make	* <i>han-V-g-</i>	733
near	* <i>gid-a</i> or * <i>gid-a</i>	381
near to, to draw	* <i>ʔan^y-</i>	647
nearness	* <i>ʔan^y-a</i>	647
neck	* <i>q^har^y-a</i>	586
	* <i>q^hel-a</i>	596
	* <i>q^hwur-a</i>	608
	* <i>x^wel^y-a</i>	797
	* <i>mak^h-a</i>	871
need	* <i>bad-a</i>	8
	* <i>gaʔ-a</i>	362
	* <i>ʔek'-a</i>	672
	* <i>hiw-a</i> , * <i>hiy-a</i>	753
needs fulfilled, to have all	* <i>t^hir-</i>	218
	* <i>t^hir-V-p^h-</i>	219
need, to stand in	* <i>hiw-</i> , * <i>hiy-</i>	753
needy	* <i>k'al-a</i>	475
negative/prohibitive particle	* <i>ʔe</i>	669
	* <i>ma(ʔ)-</i> (~ * <i>mə(ʔ)-</i>)	863
	* <i>na</i> (~ * <i>nə</i>), * <i>ni</i> (~ * <i>ne</i>),	
	* <i>nu</i> (~ * <i>no</i>)	934
nerve	* <i>s^yir-a</i>	297
net	* <i>k^hat^h-a</i>	444
	* <i>net^y-a</i>	948
news	* <i>war-a</i> and/or * <i>wir-a</i>	835
next	* <i>mal-a</i>	887
nick (= incision; notch)	* <i>haʒ-a</i>	751
night	* <i>rum-a</i>	997
nighttime	* <i>nak^{wh}-a</i>	943
nip, to	* <i>t^yip^h-</i>	287
nip off, to	* <i>k'ir-</i> or * <i>k'ur-</i>	503
nipple	* <i>diy-a</i>	178
	* <i>ʒuʒ-a</i>	314
	* <i>ʕim-a</i>	778
no	* <i>ʔe</i>	669
	* <i>ma(ʔ)-</i> (~ * <i>mə(ʔ)-</i>)	863
	* <i>na</i> (~ * <i>nə</i>), * <i>ni</i> (~ * <i>ne</i>),	
	* <i>nu</i> (~ * <i>no</i>)	934
nobility	* <i>mag-a</i>	867
noble	* <i>har-a</i>	739
nobleman	* <i>har-a</i>	739
noise	* <i>baḥ-a</i>	14

English Meaning	Proto-Nostratic	Number
	* <i>bar-a</i>	38
	* <i>bug-r-a</i>	66
	* <i>daw-a</i>	166
	* <i>gal-a</i>	373
	* <i>k^hal-a</i>	420
	* <i>k^haŋ-a</i>	430
	* <i>k^hil-a</i>	453
	* <i>q^wal-a</i>	601
	* <i>waf-a</i>	810
	* <i>wal-a</i>	816
	* <i>mur-a</i>	927
	* <i>mur-mur-a</i>	927
noise, (rustling or rumbling)	* <i>t^yar-a</i>	284
noise, loud	* <i>gad-a</i>	567
	* <i>gad-gad-a</i>	567
	* <i>x^wir-a</i>	798
noise, to make	* <i>baħ-</i>	14
	* <i>mur-</i>	927
	* <i>mur-mur-</i>	927
noise, to make a	* <i>bug-V-r-</i>	66
	* <i>daw-</i>	166
	* <i>t^yar-</i>	284
	* <i>k^hal-</i>	420
	* <i>k^haŋ-</i>	430
	* <i>k^hil-</i>	453
noise, to make a loud	* <i>gad-</i>	567
	* <i>gad-gad-</i>	567
	* <i>x^wir-</i>	798
noise, to utter a	* <i>bar-</i>	38
noisy, to be	* <i>gal-</i>	373
nose	* <i>san-a</i> or * <i>šan-a</i> , * <i>sin-a</i> or * <i>šin-a</i> , * <i>sun-a</i> or * <i>šun-a</i>	335
not	* <i>ʔe</i>	669
	* <i>ma(ʔ)-</i> (~ * <i>mə(ʔ)-</i>)	863
	* <i>na</i> (~ * <i>nə</i>), * <i>ni</i> (~ * <i>ne</i>), * <i>nu</i> (~ * <i>no</i>)	934
notch	* <i>dal-a</i>	158
	* <i>k^hir-a</i> or * <i>k^hur-a</i>	503
	* <i>ħaʒ-a</i>	751
notch, to	* <i>dal-</i>	158
	* <i>k^hir-</i> or * <i>k^hur-</i>	503
	* <i>ħaʒ-</i>	751

English Meaning	Proto-Nostratic	Number
nothing	*ʔal-a	641
notice	*gun-a	406
	*guw-a	399
notice, to	*baw-	39
	*gun-	394
	*guw-	411
	*ʕen-	774
	*ʕuk ^{wh} -	781
noticeable, that which is	*xanʔ-a	790
notion	*ʕenʔ-a	774
nourish, to	*p ^h inʔ-	128
	*k'al-	473
nourishing	*p ^h inʔ-a	128
nourishment	*p ^h aḥ-a	92
	*p ^h inʔ-a	128
	*k'al-a	473
	*ʕl'ar-s-a	622
	*ʔit'-a	687
now (= at present, currently)	*ʔam-a	643
	*nuw-	955
number	*xal-a	787
numerous	*ʔaph-a	653
	*mal-a	876
	*man-g-a	889
numerous, to be	*baʒ-	46
nurse, to (= to suckle)	*k'wan-	551
	*mam-, *mem-	862
	*mal-	879
nurse (a child), to	*man-	884
nurture, to	*p ^h inʔ-	128
nutriment	*k'al-a	473

O

observation	*ʕuk ^{wh} -a	781
observe, to	*ʕuk ^{wh} -	781
obscure	*bal-a	20
obscure, to	*dum-	187
	*hag-	720
obscure, to be or become	*bal-	20
obscurity	*bal-a	20
	*k'ar-a	492
observation	*bak'-a	18

English Meaning	Proto-Nostratic	Number
	* <i>guw-a</i>	411
	* <i>k'an^v-a</i>	487
	* <i>ʕuk^{wh}-a</i>	781
	* <i>raʔ-a</i>	984
	* <i>raʔ-y-a</i>	984
	* <i>rak'-a</i>	989
observe, to	* <i>bak'-</i>	18
	* <i>baw-</i>	43
	* <i>guw-</i>	411
	* <i>k'an^v-</i>	487
	* <i>ʕuk^{wh}-</i>	781
	* <i>war-</i>	830
	* <i>rak'-</i>	989
observes, that which	* <i>k'an^v-a</i>	487
observing, the act of	* <i>k'an^v-a</i>	487
obstacle	* <i>t'ad-a</i>	228
obstruct, to	* <i>t'ad-</i>	228
obstruction	* <i>t'ad-a</i>	228
obtain, to	* <i>sag-</i> or * <i>ʕag-</i>	329
obtained	* <i>ʔam-a</i>	642
obvious, to be or become	* <i>gal-</i>	372
occur, to	* <i>bad-</i>	7
odor	* <i>ʕut'-a</i>	784
odor, to give off a strong	* <i>dʷip^h-</i>	266
offer, to	* <i>hin-V-k^h-</i>	752
offering	* <i>hin-k^h-a</i>	752
offspring	* <i>p^has^v-a</i>	119
	* <i>p^hir-a</i>	129
	* <i>k'an-a</i>	481
	* <i>ʔum-a</i>	699
	* <i>n^vap^h-a</i>	959
(oil)	* <i>p^hul^v-a</i>	137
oil	* <i>mar-a</i>	898
ointment	* <i>mar-a</i>	898
old	* <i>bul-a</i>	74
	* <i>t^han^v-a</i>	202
	* <i>s^ven^v-a</i>	294
	* <i>ʒaw-a</i>	345
	* <i>gīr^v-a</i>	399
	* <i>k'er-a</i>	501
	* <i>ʕat^h-a</i>	773
	* <i>wat^h-a</i>	839
old, to be or become	* <i>gīr^v-</i>	399

English Meaning	Proto-Nostratic	Number
old, to become	* <i>bul-</i>	74
	* <i>k'er-</i>	501
old, to grow	* <i>p^har^y-</i>	116
	* <i>t^han^y-</i>	202
	* <i>s^yen^y-</i>	294
	* <i>t^ʃ^hay-</i>	615
	* <i>wat^h-</i>	839
old age	* <i>t^han^y-a</i>	202
	* <i>s^yen^y-a</i>	294
	* <i>gīr^y-a</i>	399
	* <i>k'er-a</i>	501
	* <i>t^ʃ^hay-a</i>	615
	* <i>ʃat^h-a</i>	773
old man	* <i>p'ap'-a</i>	149
old person	* <i>s^yen^y-a</i>	294
	* <i>gīr^y-a</i>	399
	* <i>k'er-a</i>	501
old woman	* <i>p'ap'-a</i>	149
(older) female relative	* <i>ʔaŋ(ŋ)a</i>	651
(older) male relative	* <i>ʔaŋ(ŋ)a</i>	652
older female relative	* <i>ʔak^hk^ha</i>	637
	* <i>ʔema</i>	674
older male relative	* <i>ʔak^hk^ha</i>	638
	* <i>ʔat^ht^ha</i>	660
older relative (male or female)	* <i>ʔat'y^a</i>	661
on	* <i>ʔan^y-</i>	648
	* <i>ʃal-</i>	763
on fire, to be	* <i>hag-</i>	702
on top of	* <i>ʃal-</i>	763
	* <i>xaŋ-</i>	790
Onager	* <i>p^har-a</i>	111
one	* <i>ʔoy-a</i>	696
one [indefinite pronoun stem]	* <i>ma-</i> (~ * <i>mə-</i>), * <i>mi-</i> (~ * <i>me-</i>), * <i>mu-</i> (~ * <i>mo-</i>)	861
one who makes or constructs something in a skillful manner	* <i>t'am-a</i>	235
ooze, to	* <i>k'waly-</i>	549
open	* <i>p^hal-a</i>	97
	* <i>p^hat^h-a</i>	121
open, that which is	* <i>p^hal-a</i>	97
open, to	* <i>ban-</i>	25
	* <i>p^hat^h-</i>	121

English Meaning	Proto-Nostratic	Number
	<i>*haŋ-</i>	711
open, to be	<i>*p^hat^h-</i>	121
	<i>*wel^y-</i>	846
open, to burst	<i>*p^hat^h-</i>	121
open land	<i>*bar-a</i>	42
	<i>*wel^y-a</i>	846
open space	<i>*p^hal-a</i>	97
	<i>*p^hat^h-a</i>	121
	<i>*wel^y-a</i>	846
open surface	<i>*p^hal-a</i>	97
open the mouth, to	<i>*haŋ-</i>	711
opening	<i>*bad-a</i>	5
	<i>*ban-a</i>	25
	<i>*p^hač^h-a</i>	90
	<i>*p^hat^h-a</i>	121
	<i>*p^hut^h-a</i>	147
	<i>*dur-a</i>	191
	<i>*t^yhal-m-a</i>	269
	<i>*haŋ-a</i>	711
oppose, to	<i>*ʔet^h-</i>	679
	<i>*mar-</i>	894
opposite side	<i>*t^yhiŋ-a</i>	272
opposite, that which is	<i>*ʔet^h-a</i>	679
oppress, to	<i>*bad-</i>	7
	<i>*dal^y-</i>	160
	<i>*hak'-</i>	704
oppressed	<i>*dal^y-a</i>	160
oppressed, to be	<i>*hag-</i>	719
oppression	<i>*bad-a</i>	7
	<i>*hak'-a</i>	704
	<i>*hag-a</i>	719
or	<i>*ʔaw-, *ʔwa- (~ *ʔwə-)</i>	662
	<i>*har^y-</i>	741
order	<i>*woy-k^h-a</i>	856
order, to arrange in	<i>*woy-V-k^h-</i>	856
order, to put in	<i>*woy-V-k^h-</i>	856
ordinary, to be	<i>*ʔek'-</i>	672
ore	<i>*hay-a</i>	716
organ of hearing (= ear)	<i>*d^yan-a</i>	260
origin	<i>*p^hit^y-a</i>	133
originate, to	<i>*bad-</i>	10
origination	<i>*bad-a</i>	10
other	<i>*t^yhiŋ-a</i>	272

English Meaning	Proto-Nostratic	Number
	* <i>hal-a</i>	706
	* <i>mal-a</i>	881
other [indefinite pronoun stem]	* <i>ma-</i> (~ * <i>mə-</i>), * <i>mi-</i> (~ * <i>me-</i>), * <i>mu-</i> (~ * <i>mo-</i>)	861
other side	* <i>tʰin-a</i>	272
	* <i>hal-a</i>	706
otherwise	* <i>hal-</i>	706
outcry	* <i>qʷal-a</i>	601
outdoor area	* <i>ʔutʰ-a</i>	701
outer covering	* <i>kʷoy-a</i>	565
outgrowth	* <i>darʸ-a</i>	165
	* <i>ʃag-a</i>	761
outpour	* <i>baʃ-a</i>	1
	* <i>bal-a</i>	21
outside of, to go	* <i>gus-</i>	410
outside, to make to go	* <i>gus-</i>	410
outsider	* <i>gus-a</i>	410
outstrip, to	* <i>pʰar-</i>	109
oven	* <i>ʔepʰ-a</i>	677
over (= above)	* <i>ʔanʸ-</i>	648
	* <i>ʃal-</i>	763
	* <i>xan-</i>	790
over (= above), that which is	* <i>ʔapʰ-a</i>	653
over, to be (= to be above)	* <i>ʔapʰ-</i>	653
	* <i>har-</i>	739
overflow	* <i>ʔib-a</i>	680
overflow, to	* <i>bal-</i>	21
	* <i>bul-</i>	68
	* <i>bun-</i>	77
	* <i>kʷaly-</i>	549
	* <i>ʔib-</i>	680
	* <i>haw-</i>	746
overshadow, to	* <i>tʰal-</i> and/or * <i>tʰil-</i>	278
	* <i>hag-</i>	720
overtake, to	* <i>pʰar-</i>	109
overturn, to	* <i>maqʷh-</i>	893
	* <i>mar-</i>	896
overturned	* <i>hapʰ-a</i>	712
overturning	* <i>hapʰ-a</i>	712
	* <i>maqʷh-a</i>	893
ox	* <i>tʰarʸ-a</i>	271
	* <i>kʷow-a</i>	564

English Meaning	Proto-Nostratic	Number
P		
pacify, to	* <i>t'um-</i>	256
pack	* <i>bag-a</i>	12
pack tightly together, to	* <i>t'an-</i>	236
pack together, to	* <i>hak'-</i>	704
packed tightly together	* <i>t'an-a</i>	236
pain	* <i>p^hal^y-a</i>	103
	* <i>t^hal^y-a</i>	199
	* <i>gal-a</i>	374
	* <i>k'ac^h-a</i>	468
	* <i>hak'-a</i>	704
	* <i>wal-a</i>	820
	* <i>mir-a</i>	916
	* <i>muŋ-a</i>	923
	* <i>nik^h-a</i>	950
	* <i>nus^y-a</i>	954
pain, to be in	* <i>gal-</i>	374
	* <i>muŋ-</i>	923
	* <i>nus^y-</i>	954
pain, to cause	* <i>mir-</i>	916
	* <i>muŋ-</i>	923
painful, to be	* <i>p^hal^y-</i>	103
pair	* <i>k^hol^y-a</i>	458
	* <i>yor-a</i>	807
pair, to	* <i>k^hol^y-</i>	458
palm (= flat of the hand)	* <i>p^hal-a</i>	98
palpitate, to	* <i>p^hat^h-</i>	120
pan (= vessel used for cooking)	* <i>gub-a</i>	403
pant, to	* <i>saw-</i>	357
parched	* <i>t^her-a</i>	616
part	* <i>p^har-a</i>	107
	* <i>p^has^y-a</i>	118
	* <i>dun^y-a</i>	190
	* <i>c^hal-a</i>	318
	* <i>sih-a</i>	359
	* <i>ʔar-a</i>	654
part, to	* <i>law-</i>	978
part asunder, to	* <i>ʔar-</i>	654
part cut off	* <i>law-a</i>	978
parted (= separated; severed; disjoined)	* <i>ʔar-a</i>	654
partridge (onomatopoeic bird name)	* <i>k'ak'-a</i>	471
pass, to	* <i>p^har-</i>	114

English Meaning	Proto-Nostratic	Number
pass (of time), to	* <i>wath-</i>	839
pass across, to	* <i>p^har-</i>	114
pass over, to	* <i>p^har-</i>	114
passage	* <i>p^har-a</i>	114
	* <i>q^had-a</i>	583
	* <i>mar-a</i>	897
passion	* <i>man^y-a</i>	890
path	* <i>q^had-a</i>	583
	* <i>ʔiy-a</i>	688
paw	* <i>man^y-a</i>	892
pay attention, to	* <i>guw-</i>	411
	* <i>ʕen-</i>	774
pay-back	* <i>k^hap'-a</i>	433
pay back, to	* <i>k^hap'-</i>	433
payment	* <i>k^whar-a</i>	536
	* <i>k^whey-a</i>	539
peace	* <i>t'um-a</i>	256
	* <i>ʔan^y-a</i>	646
peace, to be at	* <i>ʔan^y-</i>	646
peaceful	* <i>t'um-a</i>	256
	* <i>ʔan^y-a</i>	646
peak (= pinnacle)	* <i>gab-a</i>	364
	* <i>gar^y-a</i>	386
	* <i>k^hir-a</i>	455
	* <i>q'^war-a</i>	604
	* <i>ʕal-a</i>	763
peep, to	* <i>c'ir^y-</i>	325
peer at, to	* <i>gal-</i>	372
peg	* <i>t^hak^h-a</i>	196
	* <i>t'ul^y-a</i>	255
	* <i>t^huŋ-k^h-a</i>	620
pelt (= animal skin)	* <i>nak^h-a</i>	942
penis	* <i>bir^y-a</i>	58
	* <i>bul-a</i> (~ * <i>bol-a</i>)	69
	* <i>p^has^y-a</i>	119
	* <i>k^hum-a</i>	463
	* <i>man^y-a</i>	891
perceive, to	* <i>san-</i> or * <i>šan-</i> , * <i>sin-</i> or * <i>šin-</i> , * <i>sun-</i> or * <i>šun-</i>	335
	* <i>gun-</i>	406
	* <i>k'an^y-</i>	487
	* <i>ʕuk^{wh}-</i>	781

English Meaning	Proto-Nostratic	Number
	<i>*raʔ-</i>	984
	<i>*raʔ-V-y-</i>	984
perceived, that which is	<i>*san-a</i> or <i>*šan-a</i> , <i>*sin-a</i> or <i>*šin-a</i> , <i>*sun-a</i> or <i>*šun-a</i>	335
perceives, that which	<i>*san-a</i> or <i>*šan-a</i> , <i>*sin-a</i> or <i>*šin-a</i> , <i>*sun-a</i> or <i>*šun-a</i>	335
	<i>*k'anʷ-a</i>	487
perceiving	<i>*raʔ-a</i>	984
	<i>*raʔ-y-a</i>	984
perceiving, the act of perception	<i>*k'anʷ-a</i>	487
	<i>*san-a</i> or <i>*šan-a</i> , <i>*sin-a</i> or <i>*šin-a</i> , <i>*sun-a</i> or <i>*šun-a</i>	335
	<i>*gun-a</i>	406
	<i>*k'anʷ-a</i>	487
	<i>*ʕuk^{wh}-a</i>	781
	<i>*raʔ-a</i>	984
	<i>*raʔ-y-a</i>	984
period (of time)	<i>*wan-a</i>	825
perish, to	<i>*bad-</i>	9
	<i>*gup^h-</i>	407
	<i>*marʷ-</i>	902
	<i>*mud-</i>	919
perish, to cause to	<i>*hul-</i>	757
perplex, to	<i>*dul-</i>	183
perplexed, to be	<i>*dig-</i>	174
	<i>*dul-</i>	183
	<i>*mak^h-</i>	872
	<i>*mal-</i>	883
perplexity	<i>*dig-a</i>	174
	<i>*dul-a</i>	183
	<i>*mal-a</i>	883
perturbation (= disturbance)	<i>*k'al-a</i>	477
	<i>*gal-a</i>	570
pestle	<i>*hur-a</i>	759
pestle, grinding	<i>*k'war-a</i>	555
(pick)axe	<i>*gad-a</i>	367
	<i>*gar-a</i>	382
pick, to	<i>*k'er-</i>	502
	<i>*hac'-</i>	718
pick up, to	<i>*k'ul-</i>	510

English Meaning	Proto-Nostratic	Number
picked	* <i>hac</i> '- <i>a</i>	718
	* <i>lak</i> '- <i>a</i>	969
picking, the act of	* <i>hac</i> '- <i>a</i>	718
piece	* <i>c^hal</i> - <i>a</i>	318
	* <i>gad</i> - <i>a</i>	367
	* <i>k^has</i> - <i>a</i>	443
	* <i>mol</i> - <i>a</i>	917
piece broken off	* <i>bit^h</i> - <i>a</i>	60
piece cut off	* <i>dum</i> - <i>a</i>	185
	* <i>dun^y</i> - <i>a</i>	190
	* <i>k</i> ' <i>ir</i> - <i>a</i> or * <i>k</i> ' <i>ur</i> - <i>a</i>	503
	* <i>k^{wh}ar</i> - <i>a</i>	532
pierce, to	* <i>bur</i> -	80
	* <i>dal</i> -	158
	* <i>t^har</i> -	206
	* <i>zer</i> - or * <i>žer</i> -	309
	* <i>c^hag</i> -	315
	* <i>t^hak^{wh}</i> -	610
	* <i>xat</i> '-	792
	* <i>mir</i> -	916
	* <i>nag</i> -	940
piercing (of sounds)	* <i>k^hat^h</i> - <i>a</i>	447
pigeon	* <i>bul^y</i> - <i>a</i>	75
pile	* <i>k^haw</i> - <i>a</i>	448
pile up, to	* <i>t^hul</i> -	223
	* <i>k^hum</i> -	462
pimple	* <i>p^hul^y</i> - <i>a</i>	136
pinch	* <i>bit</i> ' <i>y</i> - <i>a</i>	59
pinch, to	* <i>t</i> ' <i>yip^h</i> -	287
pinion (= wing)	* <i>bur</i> - <i>a</i>	85
pit	* <i>k^hay-w</i> - <i>a</i>	452
	* <i>k^{wh}ar</i> - <i>a</i>	533
	* <i>wur^y</i> - <i>a</i>	859
place	* <i>dag</i> - <i>a</i>	156
	* <i>ʔas^y</i> - <i>a</i>	659
	* <i>ʔin</i> - <i>a</i> (~ * <i>ʔen</i> - <i>a</i>)	684
place, to	* <i>dag</i> -	156
	* <i>daw</i> -	167
	* <i>day</i> -	169
	* <i>k^hay</i> -	450
	* <i>ʔas^y</i> -	659
place down, to	* <i>lag</i> -	963
place, to put in	* <i>dag</i> -	156

English Meaning	Proto-Nostratic	Number
placed	* <i>ʔasʷ-a</i>	659
placed, to be	* <i>kʰay-</i>	450
placing down, the act of	* <i>lag-a</i>	963
plain (= evident)	* <i>gal-a</i>	372
plain, to be	* <i>ʔek'-</i>	672
plait, to	* <i>t'an-</i>	237
	* <i>kʰatʰ-</i>	444
	* <i>haw-</i>	748
plaited, anything	* <i>t'an-a</i>	237
plaited, that which is	* <i>kʰatʰ-a</i>	444
plaiting, the act of	* <i>haw-a</i>	748
plane, to	* <i>tʰar-</i>	209
plank	* <i>č'ir-a</i>	353
play (a musical instrument), to	* <i>bir-</i>	54
play (a wind instrument), to	* <i>ʒim-</i> or * <i>ʒim-</i>	312
play about, to	* <i>ʒak'-</i>	307
playing (a musical instrument)	* <i>bir-a</i>	54
playing (a wind instrument)	* <i>ʒim-a</i> or * <i>ʒim-a</i>	312
pleasant	* <i>mal-a</i>	877
pleasant, to be	* <i>mak'-</i>	874
pleasantness	* <i>mal-a</i>	877
pleased, to be	* <i>pʰar-</i>	106
pleasing	* <i>mal-a</i>	877
pleasure	* <i>mak'-a</i>	874
plenty	* <i>tʰir-pʰ-a</i>	218
	* <i>gam-a</i>	378
	* <i>hapʰ-a</i>	735
	* <i>maʔ-a</i>	864
plenty, to have	* <i>tʰir-</i>	218
	* <i>tʰir-V-pʰ-</i>	219
pluck, to	* <i>pʰid-</i>	142
	* <i>t'ar-V-pʰ-</i>	241
	* <i>č'ilʷ-</i>	324
	* <i>k'er-</i>	502
	* <i>hac'-</i>	718
pluck off, to	* <i>pʰid-</i>	142
	* <i>gal-</i>	369
	* <i>k'alʷ-</i>	479
pluck out, to	* <i>pʰid-</i>	142
	* <i>k'alʷ-</i>	479
plucked	* <i>hac'-a</i>	718
plucking	* <i>t'ar-pʰ-a</i>	241
plucking, the act of	* <i>pʰid-a</i>	142

English Meaning	Proto-Nostratic	Number
	<i>*hac'-a</i>	718
plug	<i>*ʒag-a</i>	304
plum	<i>*bir^y-q'-a</i>	57
plunder	<i>*s^yil^y-a</i>	296
plunge	<i>*mus^y-a</i>	909
	<i>*mus^y-k'-a</i>	909
plunge, to	<i>*ʕam-</i>	749
plunge in water, to	<i>*mus^y-</i>	928
	<i>*mus^y-V-k'-</i>	928
plunge into, to	<i>*t'al-</i>	232
point (= tip)	<i>*bar-a</i>	29
	<i>*dud-a</i>	181
	<i>*ʒuʒ-a</i>	314
	<i>*gar^y-a</i>	386
	<i>*q'^war-a</i>	604
point of time	<i>*ʔam-a</i>	643
point out, to	<i>*k^hal-</i>	422
	<i>*war-</i> and/or <i>*wir-</i>	835
pointed	<i>*ʔad^y-a</i>	631
pole	<i>*gar^y-a</i>	575
polish, to	<i>*mel-</i>	908
	<i>*mol-</i>	917
pool	<i>*mor-a</i>	918
poplar tree	<i>*t'^yar-a</i>	282
	<i>*wir-a</i>	852
portion	<i>*bay-a</i>	44
	<i>*p^har-a</i>	107
	<i>*p^has^y-a</i>	118
	<i>*sih-a</i>	359
	<i>*xal-a</i>	787
	<i>*wan-a</i>	825
possessions	<i>*hap^h-a</i>	735
post-positional intensifying and conjoining particle	<i>*k^{wh}a- (~ *k^{wh}ə-)</i>	524
pot (= container)	<i>*gal-a</i>	371
	<i>*gub-a</i>	403
	<i>*k'ud-a (~ *k'od-a)</i>	508
	<i>*k^{wh}ar-a</i>	535
pound, to	<i>*dar-</i>	163
	<i>*t^hap^h-</i>	203
	<i>*t'a^h-</i>	229
	<i>*t'ap^h-</i>	238
	<i>*t'uk'-</i>	254

English Meaning	Proto-Nostratic	Number
	* <i>ʔ^hum-</i>	275
	* <i>t^yad-</i>	276
	* <i>c^haḥ-</i>	316
	* <i>gīn-</i>	397
	* <i>k'an-</i>	484
	* <i>k'^wad-</i>	545
	* <i>k'^waḥ-</i>	547
	* <i>hur-</i>	759
	* <i>was^y-</i>	837
pound (earth), to	* <i>dīq^h-</i>	177
pounded	* <i>k'^waḥ-a</i>	547
pounding	* <i>c^haḥ-a</i>	316
pounding, the act of	* <i>c^haḥ-a</i>	316
	* <i>gīn-a</i>	397
	* <i>was^y-a</i>	837
pour, to	* <i>baʕ-</i>	1
	* <i>ban-</i>	24
	* <i>laḥ-</i>	965
pour out, to	* <i>ʔib-</i>	680
pour over, to	* <i>bal-</i>	21
	* <i>ʔib-</i>	680
pouring	* <i>ʔor-a</i>	691
	* <i>laḥ-a</i>	965
poverty	* <i>k'al-a</i>	475
power (= strength; ability)	* <i>gal-a</i>	376
	* <i>ʔab-a</i>	628
	* <i>ḥaʔ^y-a</i>	727
	* <i>wak'-a</i>	813
	* <i>wal-a</i>	814
	* <i>woy-a</i>	855
	* <i>mag-a</i>	867
	* <i>mak'-a</i>	873
powerful	* <i>ʔad-a</i>	630
	* <i>ḥaʔ^y-a</i>	727
	* <i>mag-a</i>	867
	* <i>mak'-a</i>	873
powerful, to be	* <i>gal-</i>	376
	* <i>ʔad-</i>	630
	* <i>mak'-</i>	873
pray, to	* <i>p^hir-</i>	145
prayer	* <i>p^hir-a</i>	145
precede, to	* <i>p^har-</i>	109
prepare, to	* <i>har-</i>	737

English Meaning	Proto-Nostratic	Number
	<i>*rak^h-</i>	987
preparing, the act of	<i>*rak^h-a</i>	987
presence	<i>*k'al-a</i>	478
present (= gift)	<i>*t'ox^w-a</i>	252
	<i>*hin-k^h-a</i>	752
present, to	<i>*hin-V-k^h-</i>	752
press, to	<i>*t^hal^y-</i>	200
	<i>*ʒag-</i>	305
	<i>*čheč^h-</i>	349
	<i>*wal-</i>	820
	<i>*nad^y-</i>	938
	<i>*n^vam-</i>	958
press between the fingers, to	<i>*bit^y-</i>	59
press forward, to	<i>*p^har-</i>	109
press (in), to	<i>*t^ʃ'uk^h-</i>	625
press in, to	<i>*t^hur-</i>	226
	<i>*k'^wa^h-</i>	547
press together, to	<i>*t^hik'-</i>	217
	<i>*c'ur-</i>	326
	<i>*gid-</i> or <i>*gid-</i>	393
	<i>*k'um-</i>	513
	<i>*t^ʃ'im-</i>	624
	<i>*hak'-</i>	704
press with the hand, to	<i>*k^hap^h-</i>	431
pressed, that which is	<i>*čheč^h-a</i>	349
pressed close together	<i>*gid-a</i> or <i>*gid-a</i>	393
pressed down, to be	<i>*hag-</i>	719
pressed tightly together	<i>*t'an-a</i>	236
pressed together	<i>*k'^wa^h-a</i>	547
	<i>*t^ʃ'im-a</i>	624
pressing	<i>*ʒag-a</i>	293
	<i>*n^vam-a</i>	939
pressing, the act of	<i>*čheč^h-a</i>	349
pressure	<i>*bit^y-a</i>	59
	<i>*t^hal^y-a</i>	200
	<i>*t^hik'-a</i>	217
	<i>*t^hur-a</i>	226
	<i>*k'um-a</i>	513
prick	<i>*c^hag-a</i>	315
prick, to	<i>*bit^ʃ-</i>	60
	<i>*dal-</i>	158
	<i>*c^hag-</i>	315
	<i>*t^ʃak^{wh}-</i>	610

English Meaning	Proto-Nostratic	Number
	<i>*xat'-</i>	792
prickly (= pointed; sharp)	<i>*ʔady-a</i>	631
private parts (male or female)	<i>*q'alʷ-a</i>	591
proceed, to	<i>*buw-</i>	88
	<i>*ʔay-</i>	665
	<i>*ʕatʰ-</i>	773
proclaim, to	<i>*bakʰ-</i>	16
proclamation	<i>*bakʰ-a</i>	16
	<i>*k'ar-a</i>	491
procure, to	<i>*kʷʰar-</i>	536
procurement	<i>*kʷʰar-a</i>	536
produce	<i>*k'an-a</i>	469
produce, to	<i>*ɕʰan-</i>	348
	<i>*k'an-</i>	481
produce young, to	<i>*yaw-</i>	805
produced	<i>*k'an-a</i>	481
produced, that which is	<i>*ɕʰan-a</i>	348
progenitor (= begetter; man; male)	<i>*manʷ-</i>	891
project, to (= to stick out; to protrude)	<i>*garʷ-</i>	386
prominence	<i>*did-a</i>	172
prominent, that which is most	<i>*xanʷ-a</i>	790
prominent (person or thing), the most	<i>*xanʷ-tʰ-a</i>	791
prong	<i>*tʰakʷʰ-a</i>	610
pronominal base of uncertain deictic function	<i>*gi- (~ *ge-)</i>	391
proper	<i>*t'akʰ-a</i>	230
	<i>*sʷuw-a</i>	303
proper, to be	<i>*t'akʰ-</i>	230
	<i>*sʷuw-</i>	303
property	<i>*hapʰ-a</i>	735
propriety	<i>*t'akʰ-a</i>	230
	<i>*sʷuw-a</i>	303
prosper, to	<i>*riʷ-</i>	994
prosperity	<i>*bul-γ-a</i>	70
	<i>*buw-a</i>	89
	<i>*c'al-a</i> or <i>*č'al-a</i>	320
	<i>*gʷan-a</i>	521
	<i>*riʷ-a</i>	994
protect, to	<i>*pʰinʷ-</i>	128
	<i>*t'aq'-</i>	239
	<i>*man-</i>	887
protector	<i>*man-a</i>	887
protection	<i>*pʰinʷ-a</i>	128

English Meaning	Proto-Nostratic	Number
	<i>*k^had-a</i>	417
	<i>*k^hal-a</i>	421
	<i>*man-a</i>	887
	<i>*rak'-a</i>	989
protrude, to	<i>*gar^y-</i>	386
	<i>*mun-</i>	921
protuberance	<i>*did-a</i>	172
	<i>*t^haw-a</i>	212
	<i>*k'ar-a</i>	494
	<i>*ʕag-a</i>	761
protuberance, rounded	<i>*bun-a</i>	76
proximity	<i>*ʔan^y-a</i>	647
puff	<i>*bul-a</i>	68
	<i>*bul-bul-a</i> (> <i>*bum-bul-a</i>)	71
	<i>*p^huš-a</i>	139
	<i>*p^huw-a</i>	148
puff of air	<i>*ʔup^h-a</i>	700
puff, to	<i>*p^huw-</i>	148
puff up, to	<i>*bar-</i>	28
	<i>*bul-</i>	68
	<i>*bun-</i>	76
	<i>*p^huš-</i>	139
	<i>*p^huw-</i>	148
puffed up	<i>*šiw-a</i>	360
pull	<i>*t^har-a</i>	205
pull, to	<i>*bir-</i>	55
	<i>*p^hid-</i>	142
	<i>*t^har-</i>	205
	<i>*ʔir^y-</i>	686
pull apart, to	<i>*p'ut'-</i>	152
pull off, to	<i>*bir-</i>	55
	<i>*p^hid-</i>	142
	<i>*k'al^y-</i>	479
	<i>*x^wal-</i>	794
pull (out), to	<i>*wal-</i>	815
pull out, to	<i>*p^hid-</i>	142
	<i>*k'al^y-</i>	479
	<i>*x^wal-</i>	794
pulled along, something	<i>*t^har-a</i>	205
pulled-off piece or part	<i>*p'ut'-a</i>	152
pulling	<i>*wal-a</i>	815
pulling, (the act of)	<i>*ʔir^y-</i>	686
pulling, the act of	<i>*p^hid-a</i>	142

English Meaning	Proto-Nostratic	Number
pulling off, the act of	* <i>bir-a</i>	55
	* <i>x^wal-a</i>	794
pulling out, the act of	* <i>x^wal-a</i>	794
pulverized, anything	* <i>t'ah-a</i>	229
pungency	* <i>k^har-a</i>	440
pungent	* <i>ʒem-a</i>	346
	* <i>k^har-a</i>	440
pungent, anything that is	* <i>ʒem-a</i>	346
pungent smell	* <i>dʷip^h-a</i>	266
punishment	* <i>sad^y-a</i>	328
puppy	* <i>k^huwan-a</i> or * <i>k^hun-a</i>	466
pure	* <i>hal-a</i>	705
purify, to	* <i>ʔal-</i>	640
purity	* <i>hal-a</i>	705
pursue, to	* <i>mar-</i>	897
purulent, to be	* <i>k^wiy-</i>	563
pus	* <i>k^wiy-a</i>	563
push	* <i>t^hal^y-a</i>	200
	* <i>ʒag-a</i>	304
	* <i>tʃ'uk^h-a</i>	625
push, to	* <i>t^hak'-</i>	197
	* <i>t^hal^y-</i>	200
	* <i>ʒag-</i>	304
	* <i>tʃ'uk^h-</i>	625
push in, to	* <i>t^hur-</i>	226
	* <i>k^wah-</i>	547
pushed together	* <i>k^wah-a</i>	547
pustule	* <i>bug-a</i>	65
put (= placed; set; established)	* <i>ʔas^y-a</i>	659
put, to	* <i>dag-</i>	156
	* <i>daw-</i>	167
	* <i>day-</i>	169
	* <i>k^hay-</i>	450
	* <i>ʔas^y-</i>	659
put down, to	* <i>lag-</i>	963
put in order, to	* <i>woy-V-k^h-</i>	856
put in place, to	* <i>dag-</i>	156
put in place, to be	* <i>dag-</i>	156
put into motion, to	* <i>q^had-</i>	583
put out (fire), to	* <i>k^was-</i>	558
put (together), to	* <i>rak^h-</i>	987
put together, to	* <i>k^wac^h-</i>	469
	* <i>gam-</i>	571

English Meaning	Proto-Nostratic	Number
	* <i>har-</i>	737
putting down, the act of	* <i>lag-a</i>	963
putting (together), the act of	* <i>rak^h-a</i>	987
putrid	* <i>q'ar^y-a</i>	594
putrid, to be	* <i>k'wi^y-</i>	563
putrid thing	* <i>q'ar^y-a</i>	594
puzzled, to be	* <i>dig-</i>	174

Q

quaking	* <i>rag-a</i>	985
quarrel	* <i>bur-a</i>	79
	* <i>gal-a</i>	570
	* <i>q^hat^h-a</i>	587
	* <i>mar-a</i>	894
quarrel, to	* <i>bur-</i>	79
	* <i>mar-</i>	894
quick	* <i>ʔor-a</i>	691
quiet	* <i>t'um-a</i>	256
	* <i>k'war-a</i>	554
	* <i>ʔan^y-a</i>	646
	* <i>rom-a</i>	995
quiet, to	* <i>t'um-</i>	256
quiet, to be	* <i>ʔan^y-</i>	646
quiet, to become	* <i>ham-</i>	730
quietness	* <i>t'um-a</i>	256
quietude	* <i>k'war-a</i>	554
	* <i>rom-a</i>	995
quiver, to	* <i>p^hat^h-</i>	120

R

radiance	* <i>hal-a</i>	705
	* <i>wil^y-a</i>	850
radiant	* <i>bah-a</i>	13
	* <i>hal-a</i>	705
radiate, to (= to shine; to glitter; to glisten)	* <i>ʔel-</i>	673
	* <i>hal-</i>	705
rag	* <i>k^hat^h-a</i>	444
rage	* <i>bur-a</i>	81
	* <i>ʔek^h-a</i>	658
rage, to	* <i>bur-</i>	75
	* <i>ʔek^h-</i>	671

English Meaning	Proto-Nostratic	Number
raging, to be	*ʔek ^h -	671
rain	*duw-a	193
	*ʒar-a or *žar-a	308
	*k ^w ar ^y -a	557
	*mat'-a	906
	*rek'-a	993
rain, to	*sig-	339
	*haw-	746
raindrop	*t'al ^y -a	234
	*ʒil-a or *žil-a	310
raindrops	*duw-a	193
rain, heavy	*nab-a	937
rain, torrential	*haw-a	746
raining	*sig-a	339
rainy weather	*k'ar-a	492
raise, to	*t ^h ul-	223
	*k'ul-	510
	*ʕam-	766
	*ʕam-V-d-	766
	*ʕar-V-g-	772
	*xan-	790
	*war-	833
	*nit ^h -	951
raise one's hand, to	*Ger-	579
raise up, to	*sal-	333
raised	*did-a	172
	*dim-a	176
	*sal-a	333
	*k ^h il ^y -a	454
raised place	*dim-a	176
raising, the act of	*nit ^h -a	951
raising one's hand, the act of	*Ger-a	579
rake	*t ^h ar-a	207
	*gar-a	383
raking	*t ^h ar-a	207
ram (= male sheep)	*daq ^h -a	161
	*dur-a	192
	*k ^h ab-a	415
	*ʔar-a	657
rapid	*ʔor-a	691
rapid motion, any	*p ^h ar-a	111
	*ʔor-a	691
	*raq'-a	990

English Meaning	Proto-Nostratic	Number
rapid movement	* <i>k^{wh}at^h-a</i>	537
	* <i>ʔek^h-a</i>	671
rasping sound, to make	* <i>q^har^y-</i>	586
ravine	* <i>gal-a</i>	569
reach, to	* <i>dviʔ-</i>	265
	* <i>t^yhar-</i>	270
	* <i>sag-</i> or * <i>šag-</i>	329
	* <i>hin-V-k^h-</i>	752
ready, to make	* <i>har-</i>	737
rear	* <i>ʕar-a</i>	771
reckon, to	* <i>man-</i>	885
reckoning	* <i>man-a</i>	885
recognition	* <i>k'an^y-a</i>	487
	* <i>ʕey-a</i>	776
recognize, to	* <i>ʕey-</i>	776
recognized	* <i>ʕey-a</i>	776
recollection	* <i>gun-a</i>	406
recompense	* <i>k^hap'-a</i>	433
	* <i>muy-a</i>	929
recount, to	* <i>t'il-</i>	249
	* <i>man-</i>	885
rectitude	* <i>woy-k^h-a</i>	856
red-hot, to be	* <i>k'wam-</i>	550
reduce, to	* <i>t^hah-</i>	195
	* <i>k'al-</i>	475
	* <i>k^{wh}ar-</i>	534
	* <i>ʔek'-</i>	672
reduced, to be or become	* <i>k'al-</i>	475
reduction	* <i>ʔek'-a</i>	672
reed	* <i>ʕ'am-a</i>	351
	* <i>k^hal^y-a</i>	423
refuse (= rubbish)	* <i>gud-a</i>	404
	* <i>q^hoc^h-a</i>	588
regard, to	* <i>gal-</i>	372
regard attentively, to	* <i>rak'-</i>	989
related	* <i>ʔar-a</i>	656
relative (= kinsman)	* <i>ʔar-a</i>	656
relative (male or female), older	* <i>ʔat'ya</i>	661
relative (male or female), younger	* <i>ʔina</i> or * <i>ʔiŋa</i>	685
relative, (elder) male	* <i>t'ay-a</i>	244
relative, female	* <i>ʔay(y)a</i>	667
	* <i>nat'-a</i>	945
relative, male	* <i>ʔay(y)a</i>	668

English Meaning	Proto-Nostratic	Number
relative on the mother's side	* <i>haw-a</i>	745
relative pronoun stem	* <i>k^{whi}-</i> (~ * <i>k^{wh}e-</i>)	541
	* <i>ʔay-</i> , * <i>ʔya-</i>	664
	* <i>ma-</i> (~ * <i>mə-</i>)	909
relax, to	* <i>q^wad-</i>	600
	* <i>rom-</i>	995
relaxation	* <i>rom-a</i>	995
relaxed	* <i>rom-a</i>	995
release, to	* <i>ʕhal-</i>	347
released	* <i>ʕhal-a</i>	347
remain, to	* <i>k^war-</i>	554
	* <i>ham-</i>	730
	* <i>wan-</i>	824
	* <i>man-</i>	886
remembrance	* <i>gun-a</i>	406
remote	* <i>t^{aw}-a</i>	242
remoteness	* <i>t^{aw}-a</i>	242
removal	* <i>s^{yl}-a</i>	296
	* <i>k^{al}-a</i>	479
remove, to	* <i>t^{hek}-</i>	213
	* <i>k^{al}-</i>	475
	* <i>k^{al}-</i>	479
	* <i>q^hoc^h-</i>	588
remove by peeling, to	* <i>q^hoc^h-</i>	588
remove by pulling off, to	* <i>q^hoc^h-</i>	588
remove by rubbing, to	* <i>q^hoc^h-</i>	588
remove by sweeping, to	* <i>q^hoc^h-</i>	588
remove by tearing off, to	* <i>q^hoc^h-</i>	588
remove by wiping, to	* <i>q^hoc^h-</i>	588
removed, that which has been	* <i>q^hoc^h-a</i>	588
removing, the act of	* <i>t^{hek}-a</i>	213
	* <i>q^hoc^h-a</i>	588
rend, to	* <i>t^{ar}-</i>	240
	* <i>t^{ar}-V-p^h-</i>	241
rending	* <i>t^{ar}-p^h-a</i>	241
renown	* <i>k^{hul}-a</i>	460
repay in kind, to	* <i>k^{wh}ey-</i>	539
repayment	* <i>k^{wh}ey-a</i>	539
	* <i>muy-a</i>	929
report	* <i>war-a</i> and/or * <i>wir-a</i>	835
	* <i>wath-a</i>	840
repose (= rest; quietude; stillness)	* <i>k^war-a</i>	554
request	* <i>p^{hir}-a</i>	145

English Meaning	Proto-Nostratic	Number
	<i>*t'el-a</i>	247
request, to	<i>*p^hir-</i>	145
	<i>*t'el-</i>	247
requital	<i>*muy-a</i>	929
resemble, to	<i>*sam-</i>	334
reservoir	<i>*mor-a</i>	918
residence	<i>*buw-a</i>	88
resound, to	<i>*daw-</i>	166
respire, to	<i>*ʕan-</i>	768
rest (= relaxation)	<i>*saw-a</i>	358
	<i>*k^war-a</i>	554
	<i>*ʔan^y-a</i>	646
	<i>*rom-a</i>	995
rest, at	<i>*k^war-a</i>	554
rest, to	<i>*saw-</i>	358
	<i>*k^war-</i>	554
	<i>*q^wad-</i>	600
	<i>*ham-</i>	730
	<i>*rom-</i>	995
rest, to be at	<i>*ʔan^y-</i>	646
restful	<i>*ʔan^y-a</i>	646
resting place	<i>*k^hay-a</i>	450
	<i>*k^war-a</i>	554
	<i>*ham-a</i>	730
restraint	<i>*k^hal-a</i>	421
return	<i>*muy-a</i>	929
return an equal measure, to	<i>*k^wh^hay-</i>	539
return, to	<i>*muy-</i>	929
returned, that which is	<i>*muy-a</i>	929
reveal, to	<i>*c[']ar- or *č[']ar-</i>	322
revolve, to	<i>*c[']ur-</i>	326
	<i>*k^whal-</i>	526
	<i>*wal^y-</i>	821
revolves, that which	<i>*k^whal-a</i>	526
rid of, to get	<i>*č^hal-</i>	347
ridicule	<i>*zak'-a</i>	307
rift	<i>*t^yhal-m-a</i>	269
right (= correct)	<i>*woy-k^h-a</i>	856
rigid	<i>*t^yar-a</i>	281
rigid, that which is	<i>*t^yar-a</i>	281
rigid, to be	<i>*t^yar-</i>	281
rigid, to be or become	<i>*gar^y-</i>	386
rind	<i>*k^har-a</i>	435

English Meaning	Proto-Nostratic	Number
ring (= circle)	* <i>k^har-a</i>	436
rinse, to	* <i>hal-</i>	725
rip	* <i>t'ar-a</i>	240
	* <i>t'yar-a</i>	283
rip apart, to	* <i>šar-</i>	355
rip off, to	* <i>bir-</i>	55
ripe	* <i>p^har^y-a</i>	116
ripen, to	* <i>bul-V-γ-</i>	70
	* <i>p^har^y-</i>	116
ripeness	* <i>p^har^y-a</i>	116
ripening	* <i>bul-γ-a</i>	70
	* <i>dviʔ-a</i>	265
ripped	* <i>t'yar-a</i>	283
ripping off, the act of	* <i>bir-a</i>	55
rise, to	* <i>bir-</i>	53
	* <i>did-</i>	172
	* <i>k^hily-</i>	454
	* <i>k'ul-</i>	510
	* <i>hon-</i>	756
	* <i>šar-V-g-</i>	772
	* <i>xaŋ-</i>	790
	* <i>niŋ^h-</i>	951
rise (up), to	* <i>ʔor^y-</i>	692
rise high, to	* <i>šal-</i>	763
rising motion	* <i>ʔor^y-a</i>	692
rising movement	* <i>ʔor^y-a</i>	692
river	* <i>k'waly-a</i>	549
	* <i>Gal-a</i>	569
	* <i>hap^h-a</i>	736
road	* <i>mar-a</i>	897
roaming	* <i>k^whal-a</i>	525
roar	* <i>k'ar-a</i>	491
	* <i>k'um-a</i>	512
	* <i>Gar-a</i>	572
	* <i>Gar-Gar-a</i>	572
roar, to	* <i>gur-</i>	408
	* <i>Gar-</i>	572
	* <i>Gar-Gar-</i>	572
roaring noise or sound	* <i>gur-a</i>	408
roast, to	* <i>gub-</i>	403
	* <i>k'al-</i>	476
	* <i>ŋ^her-</i>	616
roasted	* <i>ŋ^her-a</i>	616

English Meaning	Proto-Nostratic	Number
roasting	* <i>k'al-a</i>	476
rob, to	* <i>k^hal^y-</i>	424
robbery	* <i>s^yil^y-a</i>	296
rock (= stone)	* <i>k'al-a</i>	474
	* <i>k'war-a</i>	555
rocking (= swaying; shaking)	* <i>rag-a</i>	985
rod	* <i>gar^y-a</i>	575
roil (water), to (= to stir up; to agitate)	* <i>dal-</i>	159
roll, to	* <i>g^war-</i>	522
	* <i>k^whal-</i>	526
	* <i>G^wal-</i>	598
	* <i>wal^y-</i>	821
	* <i>mar-</i>	896
	* <i>rat^h-</i>	991
roll down, to	* <i>c'ar-</i>	321
rolling	* <i>g^war-a</i>	522
	* <i>rat^h-a</i>	991
rolling down, the act of	* <i>c'ar-a</i>	321
rolls, that which	* <i>k^whal-a</i>	526
room (= space)	* <i>raw-^h-a</i>	992
rope	* <i>p^hir-a</i>	131
	* <i>k'an-a</i>	485
	* <i>k^whir-a</i>	542
	* <i>mar-a</i>	896
root (of tree or plant)	* <i>s^yir-a</i>	298
rot, to	* <i>k'wed-</i>	562
	* <i>q'ar^y-</i>	594
rot away, to	* <i>was^y-</i>	835
rotate, to	* <i>k'aw-</i>	496
rotation	* <i>wal^y-a</i>	821
rotten	* <i>q'ar^y-a</i>	594
rotten thing	* <i>q'ar^y-a</i>	594
rotten, that which is	* <i>t^yam-a</i>	279
rough	* <i>bar-a</i>	31
	* <i>t^yar-a</i>	281
	* <i>k^har-a</i>	439
rough, that which is	* <i>t^yar-a</i>	281
rough, to be	* <i>bar-</i>	29
	* <i>t^yar-</i>	269
roughness	* <i>bar-a</i>	31
	* <i>k^har-a</i>	439
round	* <i>p'ul-a</i>	150
	* <i>k^har-a</i>	436

English Meaning	Proto-Nostratic	Number
	<i>*k'aw-a</i>	496
	<i>*g^war-a</i>	522
	<i>*tɬ'il-a</i>	623
	<i>*wal^y-a</i>	821
round object	<i>*G^wal-a</i>	598
round object, any	<i>*k'aw-a</i>	496
	<i>*g^war-a</i>	522
round thing or object	<i>*tɬ'il-a</i>	623
round, to be	<i>*G^wal-</i>	598
	<i>*tɬ'il-</i>	623
rounded protuberance	<i>*bun-a</i>	76
rounded prominence at the end of the bone forming a ball and a socket joint with the hollow of another bone	<i>*ʔom-a</i>	690
rouse, to	<i>*wak'-</i>	813
rub, to	<i>*t^har-</i>	207
	<i>*wal-</i>	820
	<i>*mal-</i>	880
	<i>*mel-</i>	908
	<i>*mol-</i>	917
rub into, to	<i>*mel-</i>	908
	<i>*mol-</i>	917
rub smooth, to	<i>*mel-</i>	908
	<i>*mol-</i>	917
rub (with greast, oil, fat, ointment), to	<i>*mar-</i>	898
rubbed	<i>*t^har-a</i>	207
rubbing, the act of	<i>*mal-a</i>	880
rubbish	<i>*gud-a</i>	404
	<i>*q^hoc^h-a</i>	588
rude	<i>*nad^y-a</i>	939
rude, to be	<i>*nad^y-</i>	939
ruffle, to	<i>*dul-</i>	183
ruffled, to be	<i>*dul-</i>	183
ruin	<i>*bad-a</i>	9
	<i>*p^hul-a</i>	135
	<i>*k'^wed-a</i>	562
	<i>*hul-a</i>	757
	<i>*wed-a</i>	844
ruin, to	<i>*p^hul-</i>	135
	<i>*k'^wed-</i>	562
ruined	<i>*p^hul-a</i>	135
ruler	<i>*tɬ^hir-a</i>	619
	<i>*hak'-a</i>	723

English Meaning	Proto-Nostratic	Number
rumble, loud	* <i>Gad-a</i>	567
	* <i>Gad-Gad-a</i>	567
rumble, to	* <i>gur-</i>	408
	* <i>k'warʷ-</i>	557
rumbling noise or sound	* <i>gur-a</i>	408
rumination	* <i>k'ep'-a</i>	500
rump (= buttocks)	* <i>k'uŋ-a</i>	517
run, to	* <i>dun-</i>	189
	* <i>dʷaw-</i>	263
	* <i>tʷor-</i>	288
	* <i>girʷ-</i> or * <i>girʷ-</i>	400
	* <i>hapʰ-</i>	736
	* <i>mar-</i>	897
	* <i>ratʰ-</i>	991
run after, to	* <i>mar-</i>	897
run away, to	* <i>her-</i> and/or * <i>hor-</i>	717
run out, to	* <i>ʒar-</i> or * <i>ʒar-</i>	308
running	* <i>pʰar-a</i>	111
	* <i>dʷaw-a</i>	263
	* <i>tʷor-a</i>	288
	* <i>ʔor-a</i>	691
	* <i>ratʰ-a</i>	991
running water	* <i>waʒ-a</i>	843
rupture	* <i>ʰag-a</i>	315
	* <i>mur-a</i>	924
ruptured	* <i>mur-a</i>	924

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sadness	* <i>hag-a</i>	719
safe	* <i>sʷol-a</i>	299
safe, to be	* <i>sʷol-</i>	299
safety	* <i>sʷol-a</i>	299
saliva	* <i>thupʰ-a</i>	225
same	* <i>sam-a</i>	334
satisfied, to be	* <i>pʰar-</i>	106
	* <i>thir-</i>	218
	* <i>thir-V-pʰ-</i>	219
savor, to	* <i>birʷ-</i>	57
saw (= cutting tool)	* <i>gad-a</i>	367
	* <i>tʰar-a</i>	613
	* <i>haʒ-a</i>	751
say, to	* <i>t'eʔ-</i>	246

English Meaning	Proto-Nostratic	Number
	* <i>t'il-</i>	249
	* <i>k^hil-</i>	453
	* <i>q'wat^{yh}-</i>	607
	* <i>yan-</i>	804
	* <i>war-</i> and/or * <i>wir-</i>	835
	* <i>wat^h-</i>	840
	* <i>man-</i>	885
saying	* <i>yan-a</i>	804
scab	* <i>p^hak^h-a</i>	93
	* <i>gar-b-a</i>	384
scanty	* <i>k'al-a</i>	475
scar	* <i>gal-a</i>	375
	* <i>wah-a</i>	812
	* <i>wed-a</i>	844
scarcity	* <i>k'al-a</i>	475
scatter, to	* <i>p^har-</i>	108
	* <i>duw-</i>	193
	* <i>t^har-</i>	205
	* <i>sih-</i>	340
scattered	* <i>p^har-a</i>	108
	* <i>duw-a</i>	193
	* <i>t^har-a</i>	205
scattered about	* <i>sih-a</i>	340
scattered about, anything	* <i>duw-a</i>	193
scattered about, to be	* <i>duw-</i>	193
scattering	* <i>ban-a</i>	25
scattering about, the act of	* <i>sih-a</i>	340
scoop out, to	* <i>gal-</i>	370
	* <i>k^hay-</i>	452
scooping out, the act of	* <i>gal-a</i>	370
scrape, to	* <i>bar-</i>	37
	* <i>t^har-</i>	209
	* <i>č'ir-</i>	353
	* <i>gar-</i>	383
	* <i>har-</i>	740
	* <i>hok'-</i>	755
	* <i>x^wat'-</i>	795
scrapes, that which	* <i>gar-a</i>	383
scraping	* <i>t^har-a</i>	209
	* <i>har-a</i>	740
	* <i>hok'-a</i>	755
scraping, the act of	* <i>x^wat'-a</i>	795
scratch	* <i>č'ir-a</i>	353

English Meaning	Proto-Nostratic	Number
scratch, to	* <i>tʰar-t'-a</i>	614
	* <i>tʰar-</i>	209
	* <i>č'ir-</i>	353
	* <i>gar-</i>	383
	* <i>har-</i>	740
	* <i>hok'-</i>	755
	* <i>xʷat'-</i>	795
	* <i>wurʷ-</i>	859
scratches, that which scratching	* <i>gar-a</i>	383
	* <i>tʰar-a</i>	209
	* <i>har-a</i>	740
	* <i>hok'-a</i>	739
scratching, the act of screech, to	* <i>xʷat'-a</i>	795
	* <i>kʰatʰ-</i>	447
	* <i>k'ar-</i>	491
screeching	* <i>kʰatʰ-a</i>	447
sea	* <i>yam-a</i>	803
	* <i>mor-a</i>	918
seat	* <i>ʔasʷ-a</i>	659
seated	* <i>ham-a</i>	730
seated, to be	* <i>ʔasʷ-</i>	659
seclusion	* <i>xol-a</i>	793
second	* <i>mal-a</i>	881
section	* <i>sih-a</i>	359
see, to	* <i>tʰhil-</i> or (?) * <i>tʰhidʰ-</i>	618
	* <i>ʔil-</i>	683
	* <i>ʃen-</i>	774
	* <i>ʃukʷh-</i>	781
	* <i>raʔ-</i>	984
	* <i>raʔ-V-y-</i>	984
	* <i>bar-a</i>	34
	* <i>nʷaʃ-r-a</i>	956
	* <i>ʃukʷh-a</i>	781
	* <i>raʔ-a</i>	984
seed	* <i>raʔ-y-a</i>	984
	* <i>mar-</i>	897
	* <i>ʃey-a</i>	776
	* <i>pʰid-</i>	126
	* <i>tʰekʰ-</i>	213
	* <i>sʷilʷ-</i>	296
	* <i>ʒum-</i> or * <i>ʒum-</i>	313
	* <i>gab-</i>	365
	* <i>gar-</i>	381

English Meaning	Proto-Nostratic	Number
	<i>*k^ham-</i> or <i>*q^ham-</i>	425
	<i>*k'ab-</i>	467
	<i>*k'aw-</i>	497
	<i>*k'um-</i>	513
	<i>*ʔam-</i>	642
	<i>*ʕap'-</i>	770
	<i>*woth-</i>	854
seize hold of, to	<i>*bar-</i>	33
seize with the hand, to	<i>*k^haph-</i>	431
seize with the teeth, to	<i>*k'ab-</i>	467
seized	<i>*ʔam-a</i>	642
seizing	<i>*ʒum-a</i> or <i>*žum-a</i>	313
seizing, the act of	<i>*t^hek^h-a</i>	213
	<i>*ʒum-a</i> or <i>*žum-a</i>	313
	<i>*woth-a</i>	854
seizure	<i>*bar-a</i>	33
	<i>*k'ab-a</i>	467
	<i>*ʕap'-a</i>	770
self	<i>*bey-a</i>	49
semen	<i>*p^has^v-a</i>	119
send off, to	<i>*ʔan-</i>	645
sensation, burning	<i>*p^hal^v-a</i>	103
sense	<i>*san-a</i> or <i>*šan-a,</i> <i>*sin-a</i> or <i>*šin-a,</i> <i>*sun-a</i> or <i>*šun-a</i>	335
sense, to	<i>*san-</i> or <i>*šan-,</i> <i>*sin-</i> or <i>*šin-,</i> <i>*sun-</i> or <i>*šun-</i>	335
sensed, that which is	<i>*san-a</i> or <i>*šan-a,</i> <i>*sin-a</i> or <i>*šin-a,</i> <i>*sun-a</i> or <i>*šun-a</i>	335
senses, that which	<i>*san-a</i> or <i>*šan-a,</i> <i>*sin-a</i> or <i>*šin-a,</i> <i>*sun-a</i> or <i>*šun-a</i>	335
separate (= different)	<i>*ʔaŋ-a</i>	650
separate, to	<i>*bad-</i>	5
	<i>*ban-</i>	25
	<i>*p^har-</i>	107
	<i>*gal-</i>	369
	<i>*k^has-</i>	443
	<i>*k'al^v-</i>	479
	<i>*ʔaŋ-</i>	650
	<i>*ʔar-</i>	654

English Meaning	Proto-Nostratic	Number
	* <i>γor-</i>	801
	* <i>γor-V-b-</i>	801
	* <i>law-</i>	978
separate into (equal) parts, to	* <i>sih-</i>	359
separate into two parts, to	* <i>t'uɽw-</i>	253
separated	* <i>gar-a</i>	382
	* <i>ɽar-a</i>	654
separated from, to be	* <i>xol-</i>	793
separation	* <i>ban-a</i>	25
	* <i>sih-a</i>	359
	* <i>gal-a</i>	369
	* <i>k^has-a</i>	443
	* <i>k'alʸ-a</i>	479
	* <i>ɽaŋ-a</i>	650
	* <i>γor-a</i>	801
	* <i>γor-b-a</i>	801
	* <i>law-a</i>	978
separation into two	* <i>t'uɽw-a</i>	253
separateness	* <i>k^hay-a</i>	449
	* <i>k^hay-w-a</i>	449
set (= put; placed)	* <i>ɽasʸ-a</i>	659
set, to	* <i>daw-</i>	167
	* <i>k^hay-</i>	450
	* <i>ɽasʸ-</i>	659
set apart, to be	* <i>xol-</i>	793
set down, to	* <i>k^hat^h-</i>	446
	* <i>lag-</i>	963
set fire to, to	* <i>wal-</i>	819
set fire to something, to	* <i>bud-</i>	62
set free, to	* <i>ɕ^hal-</i>	347
set in motion, to	* <i>ɽor-</i>	691
set of two	* <i>γor-a</i>	807
set up, to	* <i>daw-</i>	167
setting down, the act of	* <i>lag-a</i>	963
settle down, to	* <i>ham-</i>	730
settled	* <i>ham-a</i>	730
settled place	* <i>p^hal-a</i>	100
settlement	* <i>p^hal-a</i>	100
sever, to	* <i>dum-</i>	185
	* <i>t'ar-</i>	240
	* <i>k'ir-</i> or * <i>k'ur-</i>	503
	* <i>ɽar-</i>	654
	* <i>law-</i>	978

English Meaning	Proto-Nostratic	Number
severance	* <i>dum-a</i>	185
severed	* <i>ʔar-a</i>	654
sewing	* <i>ʕorʷ-a</i>	779
sexual intercourse, to have	* <i>manʷ-</i>	890
sexual organs (male or female)	* <i>qʷalʷ-a</i>	591
shade	* <i>tʷal-a</i> and/or * <i>tʷil-a</i>	278
shadow	* <i>tʷal-a</i> and/or * <i>tʷil-a</i>	278
shaggy	* <i>bar-a</i>	31
shaggy, to be	* <i>bar-</i>	31
shagginess	* <i>bar-a</i>	31
shake, to	* <i>pʰel-</i>	125
	* <i>pʰir-</i>	132
	* <i>tʰar-</i>	211
	* <i>gud-</i>	404
	* <i>kʷal-</i>	477
	* <i>kʷhatʰ-</i>	537
	* <i>hatʷ-</i>	744
	* <i>hutʷ-</i>	760
	* <i>naḥ-</i>	941
	* <i>nʷukʰ-</i>	960
	* <i>rag-</i>	985
shaken, to be	* <i>hatʷ-</i>	744
shaking	* <i>dulʷ-a</i>	184
	* <i>kʷhatʰ-a</i>	537
	* <i>hatʷ-a</i>	744
	* <i>hutʷ-a</i>	760
	* <i>nʷukʰ-a</i>	960
	* <i>rag-a</i>	985
	* <i>raqʷ-a</i>	990
shaking (from fear, fright)	* <i>tʰar-a</i>	211
shape	* <i>sam-a</i>	334
share (= portion)	* <i>bay-a</i>	44
	* <i>pʰar-a</i>	107
	* <i>pʰasʷ-a</i>	118
	* <i>dunʷ-a</i>	190
	* <i>xal-a</i>	787
	* <i>wan-a</i>	825
share, to	* <i>bay-</i>	44
sharp (= pointed; cutting)	* <i>kʷwatʷ-a</i>	561
	* <i>ʔadʷ-a</i>	631
sharp (= pungent)	* <i>ʒem-a</i>	346
	* <i>kʰar-a</i>	440
	* <i>gatʷ-a</i>	577

English Meaning	Proto-Nostratic	Number
	<i>*ham-a</i>	729
sharp (= pungent), anything that is	<i>*žem-a</i>	346
sharp, to be (= to be pungent)	<i>*ham-</i>	729
sharp (of sounds)	<i>*k^hat^h-a</i>	447
sharp instrument	<i>*t^ʰal-a</i>	268
sharp instrument used for cutting, any	<i>*sak^h-a</i>	331
sharp point	<i>*hok^h-a</i>	754
sharp-tasting foodstuff, any	<i>*ham-a</i>	729
sharpen, to	<i>*žag-</i>	306
shatter, to	<i>*p^has^y-</i>	118
she	<i>*si-</i> (~ <i>*se-</i>)	338
sheep	<i>*bag-a</i>	11
	<i>*dur-a</i>	192
sheep, (young)	<i>*t^ʰah^h-a</i>	609
sheep and goats	<i>*ɬuw-a</i> (~ <i>*ɬow-a</i>)	785
shell	<i>*k^ʷoy-a</i>	565
shield	<i>*k^had-a</i>	417
shine (= luster; sparkle; brilliance)	<i>*gil-a</i>	580
shine, to	<i>*bah-</i>	13
	<i>*bal-</i>	23
	<i>*bar-</i>	35
	<i>*daɖ-</i>	157
	<i>*dil^y-</i>	175
	<i>*t^ʰay-</i> or <i>*t^ʰiy-</i>	245
	<i>*gil-</i>	580
	<i>*q^ʰal-</i> or <i>*q^ʰel-</i>	590
	<i>*ʔel-</i>	673
	<i>*hal-</i>	702
	<i>*wal^y-</i>	822
	<i>*lah-</i>	964
	<i>*law-</i>	977
shine brightly, to	<i>*hag-</i>	702
shining	<i>*bah-a</i>	13
	<i>*gil-a</i>	580
	<i>*hal-a</i>	702
	<i>*wal^y-a</i>	822
	<i>*lah-a</i>	964
	<i>*law-a</i>	977
shiver, to	<i>*hut^ʰ-</i>	760
shivering	<i>*hut^ʰ-a</i>	760
shoot (= sprout)	<i>*n^yaɬ-r-a</i>	956
shoot, to	<i>*ɬam-</i>	767
short	<i>*k^ʰut^ʰ-a</i>	518

English Meaning	Proto-Nostratic	Number
	<i>*k^whar-a</i>	534
short of (= wanting; needy; lacking)	<i>*k'al-a</i>	475
shortened	<i>*gar-a</i>	382
shortness	<i>*k'ut'-a</i>	518
	<i>*k^whar-a</i>	534
shout	<i>*q'^war-a</i> or <i>*q'^wur-a</i>	605
	<i>*waʃ-a</i>	810
shout, to	<i>*gal-</i>	373
	<i>*k^hal-</i>	420
	<i>*k'ar-</i>	491
	<i>*q'^wal-</i>	601
	<i>*waʃ-</i>	810
	<i>*wal-</i>	816
shove	<i>*ʒag-a</i>	304
	<i>*tʃ'uk^h-a</i>	625
shove, to	<i>*ʒag-</i>	304
	<i>*tʃ'uk^h-</i>	625
shove into, to	<i>*ʒer-</i> or <i>*ʒer-</i>	309
shower	<i>*duw-a</i>	193
shrill (of sounds)	<i>*k^hat^h-a</i>	447
shrill screech, to make a	<i>*k^hat^h-</i>	447
shrill sound, to make a	<i>*k^hat^h-</i>	447
	<i>*x^wir-</i>	798
shrub	<i>*ʒag^w-a</i>	342
shut, to	<i>*c^huk^h-</i>	319
	<i>*k'ap^h-</i>	490
sick, to be	<i>*nus^y-</i>	954
sick, to be or become	<i>*mar^y-</i>	902
sick, to become deathly	<i>*daw-</i>	168
sickness	<i>*daw-a</i>	168
	<i>*mar^y-a</i>	902
	<i>*nus^y-a</i>	954
side	<i>*ʒag-a</i>	306
	<i>*gaŋ-a</i>	380
	<i>*k^har-a</i>	437
	<i>*ʔar-a</i>	654
sieve	<i>*saʔ-y-a</i>	327
sift, to	<i>*saʔ-V-y-</i>	327
sigh	<i>*saw-a</i>	357
	<i>*k'um-a</i>	512
	<i>*k'^was-a</i>	559
sigh, to	<i>*p^huš-</i>	139
	<i>*saw-</i>	357

English Meaning	Proto-Nostratic	Number
	<i>*k'um-</i>	512
	<i>*k'was-</i>	559
sight	<i>*ʕen-a</i>	774
	<i>*ʕey-a</i>	776
	<i>*ʕuk^{wh}-a</i>	781
	<i>*raʔ-a</i>	984
	<i>*raʔ-y-a</i>	984
silence	<i>*dum-a</i>	186
silent	<i>*rom-a</i>	995
silent, to be	<i>*dum-</i>	186
silliness	<i>*ʔeb-a</i>	670
silly	<i>*ʔeb-a</i>	670
similar	<i>*sam-a</i>	334
simple, to be	<i>*ʔek'-</i>	672
sinew	<i>*s^yir-a</i>	297
	<i>*s[e]n-a</i> or <i>*š[e]n-a</i>	336
sing, to	<i>*bir-</i>	54
singing	<i>*bir-a</i>	54
single	<i>*ʔoy-a</i>	696
sink, to	<i>*ʕam-</i>	765
sink down, to	<i>*lam-</i>	971
	<i>*lam-V-d-</i>	971
sink into, to	<i>*t'al-</i>	232
sister	<i>*da</i>	154
	<i>*da-da-</i>	154
sister, elder	<i>*ʔen^ya</i>	675
sister-in-law	<i>*k'el-a</i>	498
	<i>*nus^y-a</i>	953
sit, to	<i>*ʔas^y-</i>	659
skill	<i>*t'am-a</i>	235
skin	<i>*p^hač'-a</i>	91
	<i>*p^hal-a</i>	141
	<i>*k^har-a</i>	435
	<i>*k'woy-a</i>	565
	<i>*lat^h-a</i>	975
skin, (animal)	<i>*nak^h-a</i>	942
skull	<i>*k^hap^h-a</i>	432
	<i>*k^hir-a</i>	455
	<i>*G^wal-a</i>	599
slack	<i>*dow-a, *doy-a</i>	179
slacken, to	<i>*dow-, *doy-</i>	179
slackness	<i>*dow-a, *doy-a</i>	179
slap	<i>*t^hap^h-a</i>	203

English Meaning	Proto-Nostratic	Number
slash	* <i>q^hal-a</i>	584
	* <i>t^har-a</i>	613
	* <i>wan-a</i>	828
slaughter	* <i>d^vab-a</i>	258
	* <i>q^hat^h-a</i>	587
	* <i>hal-a</i>	724
	* <i>wel-a</i>	845
	* <i>lah-a</i>	966
slaughter, to	* <i>hal-</i>	724
slay, to	* <i>g^wan-</i>	520
	* <i>q[']wal-</i>	602
	* <i>wel-</i>	845
sleep	* <i>bad-a</i>	9
	* <i>saw-a</i>	358
sleep, to	* <i>saw-</i>	358
sleep, to go to	* <i>nak^{wh}-</i>	943
slice	* <i>t[']ar-a</i>	240
	* <i>c[']ir-a</i>	353
	* <i>t^har-a</i>	613
	* <i>xat'-a</i>	792
slide, to	* <i>zil-</i> or * <i>žil-</i>	311
	* <i>gil-</i>	394
slide down, to	* <i>c[']ar-</i>	321
sliding	* <i>gil-a</i>	394
sliding, the act of	* <i>zil-a</i> or * <i>žil-a</i>	311
sliding down, the act of	* <i>c[']ar-a</i>	321
sling	* <i>q[']wal-a</i>	603
slip, to	* <i>gil-</i>	394
slip down, to	* <i>c[']ar-</i>	321
slippery	* <i>zil-a</i> or * <i>žil-a</i>	311
	* <i>gil-a</i>	394
slipping, the act of	* <i>zil-a</i> or * <i>žil-a</i>	311
slipping down, the act of	* <i>c[']ar-a</i>	321
slit	* <i>bit^h-a</i>	60
	* <i>k[']ir-a</i> or * <i>k[']ur-a</i>	503
	* <i>t^hal-a</i>	611
	* <i>t^har-a</i>	613
slow	* <i>dow-a</i> , * <i>doy-a</i>	179
slow, to be	* <i>hak^h-</i>	703
slow down, to	* <i>dow-</i> , * <i>doy-</i>	179
slowly	* <i>hak^h-</i>	703
slowly, to do or approach something	* <i>hak^h-</i>	703
slowness	* <i>dow-a</i> , * <i>doy-a</i>	179

English Meaning	Proto-Nostratic	Number
	<i>*hak^h-a</i>	703
sluggish, to be	<i>*hak^h-</i>	703
sluggishness	<i>*hak^h-a</i>	703
slumber	<i>*saw-a</i>	358
small	<i>*č'ik'-a</i>	352
	<i>*gin-a</i> or <i>*gin-a</i>	396
	<i>*k'ut'-a</i>	518
	<i>*nus^y-a</i>	952
small, to be	<i>*č'ik'-</i>	352
	<i>*gin-</i> or <i>*gin-</i>	396
	<i>*pek'-</i>	672
	<i>*nus^y-</i>	952
small piece	<i>*t'yak^h-a</i>	277
small pieces, to cut into	<i>*t'yak^h-</i>	277
small quantity	<i>*k'al-a</i>	475
small things	<i>*č'ik'-a</i>	352
smallness	<i>*k'ut'-a</i>	518
	<i>*nus^y-a</i>	952
smart, to (= to be painfull)	<i>*p^hal^y-</i>	103
smash, to	<i>*k'^wad-</i>	545
smear (with greast, oil, fat, ointment), to	<i>*mar-</i>	898
smell	<i>*ɬut'-a</i>	784
smell, pungent	<i>*d^yip^h-a</i>	266
smell, to	<i>*ɬut'-</i>	784
smoke	<i>*p'^ul^y-a</i>	151
	<i>*duw-a</i>	193
	<i>*t'uq'^w-a</i>	257
	<i>*k'^wam-a</i>	550
	<i>*k'^wat'-a</i>	560
smoke, to	<i>*k'^wam-</i>	550
	<i>*k'^wat'-</i>	560
smoke, to give off	<i>*p'^ul^y-</i>	151
smoky, to be	<i>*t'uq'^w-</i>	257
smolder, to	<i>*k^hum-</i>	464
	<i>*k'^wam-</i>	550
	<i>*k'^wat'-</i>	560
smoldering	<i>*k^hum-a</i>	464
smooth	<i>*zil-a</i> or <i>*žil-a</i>	311
	<i>*gil-a</i>	394
	<i>*mel-a</i>	908
smoothness	<i>*mel-a</i>	908
snake	<i>*g^wal-a</i>	519
snatch, to	<i>*s^yil^y-</i>	296

English Meaning	Proto-Nostratic	Number
snort	* <i>p^huš-a</i>	139
snow	* <i>t^how-a</i>	221
snow, to	* <i>t^how-</i>	221
snow-storm	* <i>t^how-a</i>	221
so-and-so, to be not	* <i>ʔal-</i> (perhaps also * <i>ʔel-</i> , * <i>ʔul-</i>)	641
soak, to	* <i>ʃuw-</i>	361
	* <i>ʃuw-V-l-</i>	361
soaked	* <i>ʃuw-a</i>	361
	* <i>ʃuw-l-a</i>	361
soft	* <i>mel-a</i>	908
	* <i>nus^y-a</i>	952
	* <i>lam-a</i> ~ (?) * <i>l^yam-a</i>	972
soft, to be	* <i>nus^y-</i>	952
soft, to be or become	* <i>lam-</i> ~ (?) * <i>l^yam-</i>	972
soften, to	* <i>mel-</i>	908
	* <i>mol-</i>	917
	* <i>lam-</i> ~ (?) * <i>l^yam-</i>	972
softened	* <i>gar-a</i>	573
softness	* <i>mel-a</i>	908
	* <i>lam-a</i> ~ (?) * <i>l^yam-a</i>	972
soil (= earth; ground; land)	* <i>t^hor^y-a</i>	220
	* <i>ʔul-a</i>	697
soil, to	* <i>mar-</i>	899
soiled (= dirty)	* <i>k^ʷar-a</i>	492
	* <i>mar-a</i>	899
sole of the foot	* <i>ʔul-a</i>	697
solid	* <i>t^hik'-a</i>	217
	* <i>t^yar-a</i>	282
	* <i>k^ʷur^y-a</i>	566
solid, to be	* <i>k^ʷur^y-</i>	566
solidity	* <i>t^hik'-a</i>	217
	* <i>t^yar-a</i>	282
	* <i>k^ʷur^y-a</i>	566
solitude	* <i>k^hay-a</i>	449
	* <i>k^hay-w-a</i>	449
	* <i>ʔoy-a</i>	696
	* <i>xol-a</i>	793
somebody [indefinite pronoun stem]	* <i>ma-</i> (~ * <i>mə-</i>), * <i>mi-</i> (~ * <i>me-</i>), * <i>mu-</i> (~ * <i>mo-</i>)	861
someone [indefinite pronoun stem]	* <i>ma-</i> (~ * <i>mə-</i>), * <i>mi-</i> (~ * <i>me-</i>),	

English Meaning	Proto-Nostratic	Number
	<i>*mu-</i> (~ <i>*mo-</i>)	861
son	<i>*sʷaw-a</i> or <i>*sʷew-a</i>	291
soot	<i>*tʰukʰ-a</i>	222
	<i>*tʷuqʷ-a</i>	257
sooty, to be	<i>*tʷuqʷ-</i>	257
sore	<i>*gar-b-a</i>	384
sore on the skin	<i>*gal-a</i>	375
soul	<i>*bey-a</i>	49
sound (= noise)	<i>*baḥ-a</i>	14
	<i>*bar-a</i>	38
	<i>*bug-r-a</i>	66
	<i>*daw-a</i>	166
	<i>*tʷeʔ-a</i>	246
	<i>*dʷan-a</i>	260
	<i>*kʰal-a</i>	420
	<i>*kʰil-a</i>	453
	<i>*qʷal-a</i>	601
	<i>*wal-a</i>	816
	<i>*watʰ-a</i>	840
	<i>*mur-a</i>	927
	<i>*mur-mur-a</i>	927
sound, (crackling)	<i>*kʷakʷ-</i>	471
sound, (ringing or tinkling)	<i>*kʰaŋ-a</i>	430
sound (= healthy)	<i>*sʷol-a</i>	299
sound, to be (= to be healthy)	<i>*sʷol-</i>	299
sound, to	<i>*daw-</i>	166
	<i>*kʰal-</i>	420
	<i>*kʰaŋ-</i>	430
sound, to make a	<i>*bar-</i>	38
	<i>*bug-V-r-</i>	66
	<i>*kʰil-</i>	453
	<i>*mur-</i>	927
	<i>*mur-mur-</i>	927
sound, to make a loud	<i>*gad-</i>	567
	<i>*gad-gad-</i>	567
sound judgment (= wisdom; judgment)	<i>*ḥakʰ-a</i>	721
sour	<i>*ǰem-a</i>	346
	<i>*ḥam-a</i>	729
sour, anything that is	<i>*ǰem-a</i>	346
sour, that which is	<i>*tʷam-a</i>	279
sour, to be	<i>*ḥam-</i>	729
sour, to turn	<i>*tʷam-</i>	279
sour foodstuff, any	<i>*ḥam-a</i>	729

English Meaning	Proto-Nostratic	Number
space	* <i>p^har-a</i>	108
	* <i>raw-^h-a</i>	992
spacious	* <i>p^hat^h-a</i>	121
	* <i>raw-^h-a</i>	992
spacious, to be	* <i>p^hat^h-</i>	121
	* <i>raw-V-^h-</i>	992
spade	* <i>gar-a</i>	383
	* <i>Gar-a</i>	574
sparse	* <i>k'al-a</i>	475
spark	* <i>p^ha^h-a</i>	140
	* <i>p^ha^h-w-a</i>	140
	* <i>k'was-a</i>	558
sparkle, to	* <i>bar-</i>	35
	* <i>q'al-</i> or * <i>q'el-</i>	590
speak, to	* <i>t'eʔ-</i>	246
	* <i>k^hil-</i>	453
	* <i>q'wat^h-</i>	607
	* <i>x^wat'-</i>	796
	* <i>yan-</i>	804
	* <i>war-</i> and/or * <i>wir-</i>	835
	* <i>wat^h-</i>	840
	* <i>man-</i>	885
spear	* <i>t^har-a</i>	206
	* <i>ʒer-a</i> or * <i>ʒer-a</i>	309
spear(head)	* <i>wah-a</i>	812
speech	* <i>t'eʔ-a</i>	246
	* <i>t'il-a</i>	249
	* <i>k^hil-a</i>	453
	* <i>war-a</i> and/or * <i>wir-a</i>	835
speed	* <i>p^har-a</i>	111
speedy	* <i>t'yor-a</i>	288
spend time, to	* <i>buw-</i>	88
sperm	* <i>p^has^v-a</i>	119
sphere	* <i>G^wal-a</i>	598
spike (= barb)	* <i>bar-a</i>	29
	* <i>t^hak^w^h-a</i>	610
spill	* <i>dun-a</i>	189
	* <i>ʔib-a</i>	680
spill out, to	* <i>ʒar-</i> or * <i>ʒar-</i>	308
spill over, to	* <i>ʔib-</i>	680
spin around, to	* <i>k^har-</i>	436
spirit	* <i>bey-a</i>	49
spirited, to be	* <i>ʔek^h-</i>	671

English Meaning	Proto-Nostratic	Number
spit, to	* <i>tʰupʰ-</i>	225
spit out, to	* <i>wam-</i>	823
spit up, to	* <i>wam-</i>	823
spite	* <i>qʰatʰ-a</i>	587
spittle	* <i>tʰupʰ-a</i>	225
	* <i>wam-a</i>	823
spleen	* <i>pʰal-a</i>	94
splendor	* <i>bah-a</i>	13
	* <i>ʔel-a</i>	673
	* <i>wilʷ-a</i>	850
	* <i>mag-a</i>	867
split	* <i>bad-a</i>	5
	* <i>bak'-a</i>	17
	* <i>pʰačʰ-a</i>	90
	* <i>pʰal-a</i>	95
	* <i>pʰasʷ-a</i>	118
	* <i>pʰilʷ-a</i>	143
	* <i>dal-a</i>	158
	* <i>tʰar-a</i>	206
	* <i>t'aḥ-a</i>	229
	* <i>t'ʷar-a</i>	283
	* <i>čʰal-a</i>	317
	* <i>gad-a</i>	367
	* <i>tʰut'-a</i>	621
split, that which is	* <i>gad-a</i>	367
split, to	* <i>bad-</i>	5
	* <i>bak'-</i>	17
	* <i>bitʰ-</i>	60
	* <i>pʰal-</i>	95
	* <i>pʰasʷ-</i>	118
	* <i>pʰilʷ-</i>	143
	* <i>dunʷ-</i>	190
	* <i>tʰar-</i>	206
	* <i>t'aḥ-</i>	229
	* <i>t'ʷar-</i>	283
	* <i>čʰal-</i>	317
	* <i>sakʰ-</i>	331
	* <i>šar-</i>	355
	* <i>gad-</i>	367
	* <i>gar-</i>	382
	* <i>k'ir-</i> or * <i>k'ur-</i>	503
	* <i>qʰal-</i>	584
	* <i>tʰut'-</i>	621

English Meaning	Proto-Nostratic	Number
	<i>*nag-</i>	940
split (with a tool or weapon), to	<i>*bar-</i>	37
split apart, to	<i>*bitʰ-</i>	60
	<i>*pʰačʰ-</i>	90
	<i>*haŋ-</i>	711
split into small pieces, to	<i>*k'ep'-</i>	500
split into two parts, to	<i>*t'uʔw-</i>	253
split open, to	<i>*pʰačʰ-</i>	90
	<i>*tʰal-</i>	611
splits, that which	<i>*sar-a</i>	355
splitting into small pieces, the act of	<i>*k'ep'-a</i>	500
spoil, to	<i>*k'wed-</i>	562
spoiled, that which is	<i>*t'yam-a</i>	279
spoon	<i>*kʰay-a</i>	452
sport	<i>*zak'-a</i>	307
sport, to make	<i>*zak'-</i>	307
spot	<i>*mar-a</i>	899
spotted, that which is	<i>*bul-a</i>	73
spray	<i>*rek'-a</i>	993
spray, to	<i>*rek'-</i>	993
spread	<i>*ban-a</i>	25
	<i>*bul-a</i>	68
	<i>*tʰaly-a</i>	199
	<i>*tʰar-a</i>	205
spread, to	<i>*ban-</i>	25
	<i>*pʰal-</i>	97
	<i>*pʰar-</i>	108
	<i>*tʰaly-</i>	199
	<i>*tʰany-</i>	201
	<i>*tʰar-</i>	205
	<i>*hak'-</i>	722
spread about, to	<i>*tʰar-</i>	205
spread forth, to	<i>*sʸor-</i>	300
spread out	<i>*pʰar-a</i>	108
	<i>*tʰaly-a</i>	199
spread out, to	<i>*bul-</i>	68
	<i>*pʰatʰ-</i>	121
	<i>*tʰar-</i>	205
spread out, to be	<i>*pʰatʰ-</i>	121
spring (= stream)	<i>*k'waly-a</i>	549
spring forth, to	<i>*sʸor-</i>	300
	<i>*zar-</i> or <i>*žar-</i>	308
sprinkle, to	<i>*ban-</i>	24

English Meaning	Proto-Nostratic	Number
	* <i>t'aly-</i>	234
	* <i>rek'-</i>	993
sprinkle with water, to	* <i>sih-</i>	340
sprinkled	* <i>duw-a</i>	193
sprinkled about, anything	* <i>duw-a</i>	193
sprinkling	* <i>zil-a</i> or * <i>žil-a</i>	310
	* <i>rek'-a</i>	993
sprout	* <i>ʕag-a</i>	761
	* <i>xan-a</i>	789
	* <i>nʷaʕ-r-a</i>	937
sprout, to	* <i>bul-V-γ-</i>	65
	* <i>ʕag-</i>	745
	* <i>xan-</i>	772
	* <i>nʷaʕ-V-r-</i>	956
squander, to	* <i>bad-</i>	6
squeak, to	* <i>c'irʷ-</i>	325
squeeze	* <i>bit'ʷ-a</i>	59
squeeze (out), to	* <i>mal-</i>	879
squeeze, to	* <i>bit'ʷ-</i>	59
	* <i>ʕhečh-</i>	349
	* <i>nʷam-</i>	958
squeeze tight, to	* <i>ʕag-</i>	305
squeeze together, to	* <i>tʰik'-</i>	217
	* <i>hak'-</i>	704
squeeze with the hand, to	* <i>kʰaph-</i>	431
squeezed, that which is	* <i>ʕhečh-a</i>	349
squeezing	* <i>ʕag-a</i>	305
	* <i>nʷam-a</i>	939
squeezing, the act of	* <i>ʕhečh-a</i>	349
squirrel	* <i>wur-a</i> (~ * <i>wor-a</i>)	858
stab	* <i>tʰakʷh-a</i>	610
stab, to	* <i>zer-</i> or * <i>žer-</i>	309
	* <i>tʰakʷh-</i>	610
	* <i>wah-</i>	812
	* <i>way-</i>	828
	* <i>mir-</i>	916
	* <i>nag-</i>	940
stable, to be (= to be firm)	* <i>dag-</i>	156
stack	* <i>tʰul-a</i>	223
stack (in a heap), to	* <i>tʰul-</i>	223
staff	* <i>garʷ-a</i>	575
stain	* <i>mar-a</i>	899
stain, to	* <i>mar-</i>	899

English Meaning	Proto-Nostratic	Number
stalk	* <i>k^hal^y-a</i>	423
	* <i>k^han^y-a</i>	428
	* <i>Gar^y-a</i>	575
stand guard over, to	* <i>man-</i>	887
stand on end, to	* <i>bar-</i>	29
stand out, to	* <i>gar^y-</i>	386
	* <i>mun-</i>	921
star	* <i>q^ʼal-a</i> or * <i>q^ʼel-a</i>	590
start, to	* <i>hal-</i>	707
startled, to be	* <i>hat^ʼ-</i>	744
starvation	* <i>wal-a</i>	820
stay, to	* <i>k^ʷar-</i>	554
	* <i>wan-</i>	824
	* <i>man-</i>	886
staying	* <i>buw-a</i>	88
steadfast	* <i>t^yar-a</i>	280
steadfast, to be	* <i>man-</i>	886
steal, to	* <i>k^hal^y-</i>	424
steam	* <i>p^ʷul^y-a</i>	151
	* <i>duw-a</i>	193
steam, to give off	* <i>p^ʷul^y-</i>	151
stem	* <i>k^hal^y-a</i>	423
	* <i>k^han^y-a</i>	428
	* <i>Gar^y-a</i>	575
stench	* <i>ɖip^h-a</i>	266
step	* <i>gir^y-a</i> or * <i>Gir^y-a</i>	400
	* <i>ʔot^ʼ-a</i>	694
step aside, to	* <i>ʔot^ʼ-</i>	694
step by step, to do or approach something	* <i>hak^h-</i>	703
stick	* <i>bud-a</i>	64
	* <i>k^han^y-a</i>	428
	* <i>Gar^y-a</i>	575
stick out, to	* <i>gar^y-</i>	386
stiff	* <i>t^yar-a</i>	281
stiff, that which is	* <i>t^yar-a</i>	281
stiff, to be	* <i>t^yar-</i>	281
stiff, to be or become	* <i>gar^y-</i>	386
still (= quiet)	* <i>k^ʷar-a</i>	554
	* <i>ʔan^y-a</i>	646
	* <i>rom-a</i>	995
still, to be	* <i>ʔan^y-</i>	646
still, to become	* <i>ham-</i>	730
stillness	* <i>k^ʷar-a</i>	554

English Meaning	Proto-Nostratic	Number
	* <i>ham-a</i>	730
sting	* <i>c^hag-a</i>	315
stink, to	* <i>d^{vi}p^h-</i>	266
	* <i>q'ar^y-</i>	594
stinking	* <i>q'ar^y-a</i>	594
stinking thing	* <i>q'ar^y-a</i>	594
stir, to	* <i>k'al-</i>	477
	* <i>rag-</i>	985
stir up, to	* <i>dal-</i>	159
	* <i>gal-</i>	570
	* <i>wak'-</i>	813
stir up trouble, to	* <i>dul-</i>	183
stirred up, to be	* <i>gal-</i>	570
stomach	* <i>wat'^y-a</i>	841
stone	* <i>p^hal-a</i>	96
	* <i>k^{hi}w-a</i>	457
	* <i>k'al-a</i>	474
	* <i>k'^war-a</i>	555
stone, grinding	* <i>k'^war-a</i>	555
stoop down, to	* <i>k'um-</i>	514
	* <i>lam-</i>	971
	* <i>lam-V-d-</i>	971
stooping, the act of	* <i>k'um-a</i>	514
stop, to	* <i>t'ad-</i>	228
	* <i>rom-</i>	995
stoppage	* <i>c^huk^h-a</i>	319
storm	* <i>bur-a</i>	81
	* <i>sig-a</i>	331
	* <i>k'^war^y-a</i>	557
storm cloud	* <i>nab-a</i>	937
stormy weather	* <i>k'^war^y-a</i>	557
story (= tale; narrative)	* <i>k^hul-a</i>	461
stove	* <i>gub-a</i>	403
straight	* <i>woy-k^h-a</i>	856
straightness	* <i>woy-k^h-a</i>	856
strain	* <i>k'ac^h-a</i>	468
strain, to	* <i>k'ac^h-</i>	468
	* <i>muk'-</i>	920
straining (as a woman in labor or as when defecating)	* <i>muk'-a</i>	920
stranger	* <i>gus-a</i>	410
strangle, to (= to choke)	* <i>han-V-g-</i>	733
strap	* <i>ʒal-a</i>	344

English Meaning	Proto-Nostratic	Number
stream	* <i>dʷaw-a</i>	263
	* <i>ʒar-a</i> or * <i>žar-a</i>	308
	* <i>kʷaly-a</i>	549
	* <i>hap^h-a</i>	736
	* <i>mor-a</i>	918
strength	* <i>tʷar-a</i>	280
	* <i>gal-a</i>	376
	* <i>g[e]n-d-a</i>	390
	* <i>k^har-a</i>	438
	* <i>ʔab-a</i>	628
	* <i>hal^y-a</i>	727
	* <i>ʕur-a</i>	783
	* <i>wak'-a</i>	813
	* <i>wal-a</i>	814
	* <i>woy-a</i>	855
	* <i>mag-a</i>	867
	* <i>mak'-a</i>	873
stretch	* <i>ban-a</i>	25
	* <i>t^haly-a</i>	199
	* <i>t^har-a</i>	205
	* <i>rak'-a</i>	988
stretch, to	* <i>t^haly-</i>	199
	* <i>t^han^y-</i>	201
	* <i>t^har-</i>	205
	* <i>ʔut'-</i>	701
	* <i>war-</i>	832
	* <i>mad-</i>	865
	* <i>mat'-</i>	905
	* <i>rak'-</i>	988
stretch out, to	* <i>t^har-</i>	205
	* <i>t'al-</i>	233
	* <i>c'al-</i> or * <i>č'al-</i>	320
	* <i>lap^h-</i>	973
stretch out the hand, to	* <i>Ger-</i>	579
stretched	* <i>t^haly-a</i>	199
	* <i>t^han^y-a</i>	201
	* <i>t^har-a</i>	205
	* <i>rak'-a</i>	988
stretching, the act of	* <i>rak'-a</i>	988
stretching out one's hand, the act of	* <i>Ger-a</i>	579
strew, to	* <i>t^har-</i>	205
	* <i>sih-</i>	340
strewing about, the act of	* <i>sih-a</i>	340

English Meaning	Proto-Nostratic	Number
strewn	* <i>duw-a</i>	193
strewn about	* <i>sih-a</i>	340
strewn about, anything	* <i>duw-a</i>	193
strewn about, to be	* <i>duw-</i>	193
strife	* <i>tʰar-a</i>	612
strife, to cause	* <i>tʰar-</i>	612
strike	* <i>baḥ-a</i>	15
	* <i>dal-a</i>	158
	* <i>tʰal-a</i>	268
	* <i>k'an-a</i>	484
	* <i>gʷan-a</i>	520
	* <i>wed-a</i>	833
strike, to	* <i>baḥ-</i>	15
	* <i>ban-</i>	26
	* <i>tʰak'-</i>	197
	* <i>tʰapʰ-</i>	203
	* <i>t'apʰ-</i>	238
	* <i>t'aw-</i>	243
	* <i>t'uk'-</i>	254
	* <i>dʷab-</i>	258
	* <i>tʰum-</i>	275
	* <i>t'yad-</i>	276
	* <i>k'an-</i>	484
	* <i>k'ud-</i>	507
	* <i>gʷan-</i>	520
	* <i>k'wad-</i>	545
	* <i>k'wah-</i>	547
	* <i>qʰal-</i>	584
	* <i>qʰatʰ-</i>	587
	* <i>q'wal-</i>	602
	* <i>ʕakʰ-</i>	762
	* <i>wah-</i>	812
	* <i>way-</i>	828
	* <i>nag-</i>	940
	* <i>nikʰ-</i>	950
	* <i>lah-</i>	966
	* <i>laxʷ-</i>	980
strike fire, to	* <i>k'was-</i>	558
strike (with a weapon), to	* <i>wed-</i>	844
strike (with an instrument), to	* <i>gad-</i>	367
strike with a sharp instrument, to	* <i>tʰal-</i>	268
striking, the act of	* <i>ʕakʰ-a</i>	762
	* <i>laxʷ-a</i>	980

English Meaning	Proto-Nostratic	Number
string	* <i>p^hir-a</i>	131
	* <i>ʒal-a</i>	344
	* <i>k'ay-a</i>	485
	* <i>mar-a</i>	896
strip away, to	* <i>k'alʷ-</i>	479
strip off, to	* <i>k'alʷ-</i>	479
stripping away	* <i>k'alʷ-a</i>	479
stripping off	* <i>k'alʷ-a</i>	479
strive against, to (= to oppose)	* <i>mar-</i>	894
strive for, to (= to wish for; to desire)	* <i>win-</i> or * <i>wiŋ-</i>	851
stroke	* <i>t^hak'-a</i>	197
	* <i>t^hap^h-a</i>	203
	* <i>t'ap^h-a</i>	238
	* <i>t'aw-a</i>	243
	* <i>t'uk'-a</i>	254
	* <i>dʷab-a</i>	258
	* <i>c^hal-a</i>	317
	* <i>k'ud-a</i>	507
	* <i>k'^wad-a</i>	545
	* <i>q^hal-a</i>	584
	* <i>nag-a</i>	940
	* <i>lax^w-a</i>	980
stroke, to	* <i>mal-</i>	880
stroking, the act of	* <i>mal-a</i>	880
strong	* <i>t'yar-a</i>	280
	* <i>k^har-a</i>	438
	* <i>ʔab-a</i>	628
	* <i>ʔad-a</i>	630
	* <i>ħalʷ-a</i>	727
	* <i>ʕur-a</i>	783
	* <i>mag-a</i>	867
	* <i>mak'-a</i>	873
	* <i>man-g-a</i>	889
strong, to be	* <i>gal-</i>	376
	* <i>ʔad-</i>	630
	* <i>ħalʷ-</i>	727
	* <i>ʕur-</i>	783
	* <i>xam-</i>	788
	* <i>xam-V-d-</i>	788
	* <i>mak'-</i>	873
strong, to be or become	* <i>wal-</i>	814
strong odor, to give off a	* <i>dʷip^h-</i>	266
strongly attached, to be	* <i>t'yar-</i>	282

English Meaning	Proto-Nostratic	Number
structure	* <i>t'am-a</i>	235
struggle	* <i>bur-a</i>	79
stuck together, to be or become	* <i>t'yar-</i>	282
study	* <i>k^hal-a</i>	422
stuff, to	* <i>t^hur-</i>	226
	* <i>t'an-</i>	236
	* <i>ʒag-</i>	305
(stupid, to be)	* <i>dul-</i>	183
(stupidity)	* <i>dul-a</i>	183
stupor	* <i>t^hum-a</i>	275
succumb, to	* <i>ʔeb-</i>	670
such-and-such, to be not	* <i>ʔal-</i>	
	(perhaps also * <i>ʔel-</i> , * <i>ʔul-</i>)	641
suck (milk from a breast), to	* <i>ʕun^y-</i>	782
suck (out), to	* <i>mal-</i>	879
suck, to	* <i>diy-</i>	178
	* <i>k'wan-</i>	551
	* <i>ʕim-</i>	778
suck, to give	* <i>mal-</i>	879
suck milk, to	* <i>lab-</i>	962
suck (the breast), to	* <i>mam-</i> , * <i>mem-</i>	845
sucking	* <i>lab-a</i>	943
sucking, the act of	* <i>ʕim-a</i>	762
suckle, to	* <i>diy-</i>	178
	* <i>k'wan-</i>	551
	* <i>mam-</i> , * <i>mem-</i>	861
	* <i>mal-</i>	879
	* <i>man-</i>	884
suckling	* <i>man-a</i>	884
suffer, to	* <i>t^hal^y-</i>	199
	* <i>gal-</i>	374
	* <i>muŋ-</i>	923
	* <i>nus^y-</i>	954
suffer, to make to	* <i>bad-</i>	7
suffering	* <i>bad-a</i>	7
	* <i>t^hal^y-a</i>	199
	* <i>muk'-a</i>	920
	* <i>muŋ-a</i>	923
	* <i>nik^h-a</i>	950
suffering, to be in	* <i>muŋ-</i>	923
suffering, to cause	* <i>muŋ-</i>	923
suitability	* <i>t'ak^h-a</i>	230
	* <i>s^yuw-a</i>	303

English Meaning	Proto-Nostratic	Number
suitable	* <i>t'ak^h-a</i>	230
	* <i>s^yuw-a</i>	303
suitable, to be	* <i>t'ak^h-</i>	230
	* <i>s^yuw-</i>	303
summer	* <i>s^yam-a</i>	289
summit	* <i>gub-a</i>	402
	* <i>k^hir-a</i>	455
	* <i>ʕal-a</i>	763
summons	* <i>q^{'w}at^{yh}-a</i>	607
sun	* <i>s^yax^w-a</i>	293
sun (heat of the)	* <i>ʔeŋ-</i>	676
	* <i>ʔeŋ-V-k'-</i>	676
sunken	* <i>ʕam-a</i>	765
sunlight	* <i>ʔeŋ-a</i>	676
	* <i>ʔeŋ-k'-a</i>	676
	* <i>hag-a</i>	702
sunny, to be	* <i>s^yam-</i>	289
sunset	* <i>ɣam-a</i>	799
sunshine	* <i>ʔeŋ-a</i>	676
	* <i>ʔeŋ-k'-a</i>	676
superior	* <i>ʔap^h-a</i>	653
	* <i>har-a</i>	739
superior, to be	* <i>ʔap^h-</i>	653
	* <i>har-</i>	739
supervise, to	* <i>rak'-</i>	989
support	* <i>k^hal-a</i>	421
surge	* <i>bal-a</i>	21
	* <i>s^yor-a</i>	300
	* <i>wel^y-a</i>	830
surge, to	* <i>bal-</i>	19
	* <i>wel^y-</i>	847
surge forth, to	* <i>s^yor-</i>	300
surge up, to	* <i>haw-</i>	746
surpass, to	* <i>p^har-</i>	109
	* <i>d^yiʔ-</i>	265
	* <i>ʔap^h-</i>	653
	* <i>maḥ-</i>	870
	* <i>mik'-</i>	914
surplus	* <i>t^hir-p^h-a</i>	219
	* <i>gam-a</i>	378
surprise, exclamation of	* <i>hay</i>	715
surround, to	* <i>c'ur-</i>	326
surroundings	* <i>c'ur-a</i>	326

English Meaning	Proto-Nostratic	Number
surrounds, that which (= enclosure; wall)	* <i>c'ur-a</i>	326
suspend, to	* <i>tʰuŋ-V-kʰ-</i>	620
sustenance	* <i>k'al-a</i>	473
swallow, to	* <i>saw-</i>	356
	* <i>q'el-</i>	596
	* <i>q'wur-</i>	608
	* <i>ɕim-</i>	778
	* <i>ɕunʸ-</i>	782
swallowing, the act of	* <i>ɕim-a</i>	778
swamp	* <i>ber-a</i>	47
	* <i>mar-a</i>	900
sweepings	* <i>qʰoçʰ-a</i>	588
swell, to	* <i>bar-</i>	28
	* <i>bir-</i>	53
	* <i>bug-</i>	65
	* <i>bul-</i>	68
	* <i>bul-bul- (> *bum-bul-)</i>	71
	* <i>bun-</i>	76
	* <i>bun-V-g-</i>	76
	* <i>pʰuʔ-</i>	134
	* <i>pʰulʸ-</i>	136
	* <i>p'ul-</i>	150
	* <i>darʸ-</i>	165
	* <i>did-</i>	172
	* <i>tʰaw-</i>	212
	* <i>tʰiqʷ-</i>	273
	* <i>siw-</i>	360
	* <i>garʸ-</i>	385
	* <i>kʰaw-</i>	448
	* <i>gʷan-</i>	521
	* <i>haw-</i>	747
	* <i>hay-V-t'-</i>	750
	* <i>hon-</i>	756
	* <i>mah-</i>	870
	* <i>man-</i>	888
	* <i>man-V-g-</i>	889
	* <i>mik'-</i>	914
swelling	* <i>bar-a</i>	28
	* <i>bul-bul-a (> *bum-bul-a)</i>	71
	* <i>bun-a</i>	76
	* <i>bun-g-a</i>	76
	* <i>pʰuʔ-a</i>	134
	* <i>p'ul-a</i>	150

English Meaning	Proto-Nostratic	Number
	<i>*dar^y-a</i>	165
	<i>*t^haw-a</i>	212
	<i>*t^yhⁱq^{'w}-a</i>	273
	<i>*šiw-a</i>	360
	<i>*gar^y-a</i>	385
	<i>*g^wan-a</i>	521
	<i>*haw-a</i>	747
	<i>*hay-t'-a</i>	750
	<i>*hon-a</i>	756
swelling (on the skin) (= blister; abscess)	<i>*p^hul^y-a</i>	136
swift	<i>*t^{'y}or-a</i>	288
swiftly, to move	<i>*p^har-</i>	110
	<i>*p^hir-</i>	130
	<i>*gⁱr^y-</i> or <i>*gⁱr^y-</i>	400
swim	<i>*wuy-a</i> or <i>*Huy-a</i>	860
swim, to	<i>*wuy-</i> or <i>*Huy-</i>	860
swimming	<i>*wuy-a</i> or <i>*Huy-a</i>	860
swing back and forth, to	<i>*dul^y-</i>	184
swinging	<i>*dul^y-a</i>	184
swollen	<i>*bun-g-a</i>	76
	<i>*p[']ul-a</i>	150
	<i>*did-a</i>	172
	<i>*t^haw-a</i>	212
	<i>*šiw-a</i>	360
	<i>*hay-t'-a</i>	750
	<i>*man-g-a</i>	889
swollen, that which is	<i>*p^hul^y-a</i>	136
sword	<i>*sak^h-a</i>	331
	<i>*wah-a</i>	812
T		
tail	<i>*k^{'w}ad-a</i>	546
take, to	<i>*day-</i>	171
	<i>*zum-</i> or <i>*žum-</i>	313
	<i>*k[']aw-</i>	497
	<i>*ʔam-</i>	642
	<i>*wad-</i>	811
	<i>*man^y-</i>	892
	<i>*nit^ʔh-</i>	951
take (away), to	<i>*t^hek^h-</i>	213
	<i>*s^yil^y-</i>	296
take away, to	<i>*k[']al-</i>	475

English Meaning	Proto-Nostratic	Number
	* <i>q^hoc^h-</i>	588
	* <i>wot^h-</i>	854
take by force, to	* <i>ʕap'-</i>	770
take care of, to	* <i>man-</i>	887
take hold of, to (= to grasp)	* <i>bar-</i>	33
	* <i>p^haŋ-</i>	104
	* <i>p^haŋ-V-k^{wh}-</i>	104
	* <i>gar-</i>	381
	* <i>k'ab-</i>	467
	* <i>ʕap'-</i>	770
	* <i>wot^h-</i>	854
	* <i>lab-</i>	961
take in hand, to	* <i>p^haŋ-</i>	104
	* <i>p^haŋ-V-k^{wh}-</i>	104
take off, to	* <i>q^hoc^h-</i>	588
take (with the hand), to	* <i>gat'-</i>	388
take (with the hands or arms), to	* <i>hap^h-</i>	735
take with the hand, to	* <i>k^hap^h-</i>	431
taking	* <i>ʒum-a</i> or * <i>ʒum-a</i>	313
	* <i>lab-a</i>	962
taking, the act of	* <i>t^hek^h-a</i>	213
	* <i>ʒum-a</i> or * <i>ʒum-a</i>	313
	* <i>wad-a</i>	811
	* <i>wot^h-a</i>	854
tale	* <i>t'il-a</i>	249
	* <i>k^hul-a</i>	461
talk (= speech; discourse)	* <i>t'il-a</i>	249
	* <i>x^wat'-a</i>	796
talk, to	* <i>k^hil-</i>	453
talkative, to be	* <i>wat^h-</i>	840
tall	* <i>bir-a</i>	53
	* <i>bir-g-a</i>	53
	* <i>t'al-a</i>	233
tall, to be	* <i>ʕal-</i>	763
tallness	* <i>bir-a</i>	53
(tallow)	* <i>p^hul^y-a</i>	137
tame	* <i>t'um-a</i>	256
tame, to	* <i>t'um-</i>	256
tamp (earth), to	* <i>diq^h-</i>	177
taut	* <i>t^har-a</i>	205
tear (= split)	* <i>t^har-a</i>	206
	* <i>t'ar-a</i>	240
	* <i>t'yar-a</i>	283

English Meaning	Proto-Nostratic	Number
	<i>*gal-a</i>	369
	<i>*row-a</i>	996
tear, to	<i>*p^{hid}-</i>	142
	<i>*t^har-</i>	206
	<i>*t'ar-</i>	240
	<i>*t'ar-V-p^h-</i>	241
tear apart, to	<i>*p'ut'-</i>	152
	<i>*row-</i>	996
tear asunder, to	<i>*sar-</i>	355
tear off, to	<i>*bir-</i>	55
	<i>*p^{hid}-</i>	142
	<i>*p'ut'-</i>	152
	<i>*gal-</i>	369
	<i>*k'alv-</i>	479
	<i>*x^wal-</i>	794
tear out, to	<i>*p^{hid}-</i>	142
	<i>*k'alv-</i>	479
	<i>*x^wal-</i>	794
tearing	<i>*t'ar-p^h-a</i>	241
tearing, the act of	<i>*p^{hid}-a</i>	142
tearing off, the act of	<i>*bir-a</i>	55
	<i>*x^wal-a</i>	794
tearing out, the act of	<i>*x^wal-a</i>	794
teat	<i>*diy-a</i>	178
	<i>*ɕim-a</i>	778
teeming	<i>*ʔap^h-a</i>	653
tell, to	<i>*t'il-</i>	249
	<i>*k^hul-</i>	461
	<i>*war-</i> and/or <i>*wir-</i>	835
tend, to	<i>*man-</i>	887
tender	<i>*ʔax-a</i>	633
	<i>*mel-a</i>	908
tender, to be	<i>*ʔax-</i>	633
	<i>*han-</i>	731
tender, to be or become	<i>*lam- ~ (?) *lvam-</i>	972
tenderness	<i>*han-a</i>	731
tendon	<i>*s^yir-a</i>	297
	<i>*s[e]n-a</i> or <i>*s̥[e]n-a</i>	336
terrified, to be	<i>*hat'-</i>	744
testicle	<i>*mun-a</i>	922
	<i>*mun-d-a</i>	922
testicles	<i>*bul-a (~ *bol-a)</i>	69
that	<i>*t^hi- (~ *t^he-)</i>	194

English Meaning	Proto-Nostratic	Number
	*ša- (~ *šə-)	354
	*k ^{hi} - (~ *k ^{he} -)	414
	*ʔu- (~ *ʔo-)	627
	*mi- (~ *me-)	861
	*na (~ *nə), *ni (~ *ne)	932
that one	*d ^{yi} - (~ *d ^{ye} -)	264
that over there	*t ^{ya} -	267
	*ʔa- (~ *ʔə-)	627
	*ʔul- (~ *ʔol-)	698
that yonder	*t ^{hu} - (~ *t ^{ho} -)	194
	*k ^{hu} - (~ *k ^{ho} -)	414
	*ʔa- (~ *ʔə-)	627
	*ʔul- (~ *ʔol-)	698
	*mu- (~ *mo-)	861
that yonder (not very far)	*t ^{ya} -	267
theft	*k ^{hal} -a	424
their	*-si (~ *-se)	338
them	*sī- (~ *se-)	338
then	*har ^y -	741
therefore	*har ^y -	741
they	*sī- (~ *se-)	338
thick	*bar-a	31
	*bun-g-a	76
	*t ^{hi} k'-a	217
	*t'an-a	236
	*k'an-a	483
thick, to be	*bar-	31
thickness	*bar-a	31
	*t'an-a	236
	*k'an-a	483
	*k' ^w ur ^y -a	566
(thin)	*t ^{hal} -a	199
thin, to grow	*t ^{ha} h-	195
think, to	*t' ^y iŋ-	286
	*ʕeŋ-	774
	*man-	885
think about, to	*saḥ- or *šaḥ-	330
thinness	*t ^{hal} -a	199
this	*t ^{ha} - (~ *t ^{hə} -)	194
	*ša- (~ *šə-)	354
	*k ^{ha} - (~ *k ^{hə} -)	414
	*ʔi- (~ *ʔe-)	627
	*ma- (~ *mə-)	861

English Meaning	Proto-Nostratic	Number
	<i>*na</i> (~ <i>*nə</i>), <i>*ni</i> (~ <i>*ne</i>)	932
this one	<i>*d^yi-</i> (~ <i>*d^ye-</i>)	264
thorn	<i>*t^hak^{wh}-a</i>	610
	<i>*ʔad^y-a</i>	631
though	<i>*k^{wh}ay-</i>	538
thought	<i>*t^yiŋ-a</i>	286
	<i>*saḥ-a</i> or <i>*šaḥ-a</i>	330
	<i>*ʕeŋ-a</i>	775
thrashing	<i>*c^haḥ-a</i>	316
thrashing, the act of	<i>*c^haḥ-a</i>	316
thrive, to	<i>*riy-</i>	994
throat	<i>*q^har^y-a</i>	586
	<i>*q^ʼel-a</i>	596
	<i>*q^ʼwur-a</i>	608
	<i>*ḥan-g-a</i>	733
	<i>*x^wel^y-a</i>	797
throng	<i>*gam-a</i>	571
throw, to	<i>*day-</i>	169
	<i>*siḥ-</i>	340
	<i>*gud-</i>	404
	<i>*q^ʼwal-</i>	603
	<i>*ʕam-</i>	767
throw down, to	<i>*c^ʼar-</i>	321
throwing	<i>*q^ʼwal-a</i>	603
throwing about, the act of	<i>*siḥ-a</i>	340
thrown about	<i>*siḥ-a</i>	340
thrown aside, that which is	<i>*gud-a</i>	404
thrown off, that which is	<i>*gud-a</i>	404
thrust	<i>*t^hal^y-a</i>	200
	<i>*t^hur-a</i>	226
	<i>*k^ʼwad-a</i>	545
	<i>*t^hak^{wh}-a</i>	610
	<i>*t^hʼuk^h-a</i>	612
thrust, to	<i>*t^hal^y-</i>	190
thrust (in), to	<i>*t^hʼuk^h-</i>	625
thrust in, to	<i>*t^hur-</i>	226
thrust into, to	<i>*ʒer-</i> or <i>*žer-</i>	309
thumb	<i>*p^hal-a</i>	101
thump	<i>*t^ʼuk^ʼ-a</i>	254
	<i>*k^ʼan-a</i>	484
	<i>*k^ʼud-a</i>	507
thunder, clap of	<i>*gad-a</i>	567
	<i>*gad-gad-a</i>	567

English Meaning	Proto-Nostratic	Number
thunder, to	* <i>k</i> ^{'w} <i>ar</i> ^y -	557
thunderstorm	* <i>k</i> ^{'w} <i>ar</i> ^y - <i>a</i>	557
tickle, to	* <i>Git</i> '-	581
tie	* <i>ba</i> ʕ- <i>a</i>	2
	* <i>ban</i> - <i>d</i> - <i>a</i>	27
	* <i>bin</i> - <i>a</i>	51
	* <i>k</i> ^h <i>ad</i> - <i>a</i>	418
	* <i>k</i> ^{'a} <i>č</i> ^h - <i>a</i>	469
	* <i>k</i> ^{'a} <i>d</i> - <i>a</i>	470
	* <i>k</i> ^{'a} <i>ŋ</i> - <i>a</i>	485
	* <i>k</i> ^w <i>h</i> <i>r</i> - <i>a</i>	542
	* <i>tʃ</i> ['] <i>im</i> - <i>a</i>	624
	* <i>rak</i> ^h - <i>a</i>	986
tie (together), to	* <i>ban</i> - <i>V</i> - <i>d</i> -	27
tie, to	* <i>ba</i> ʕ-	2
	* <i>t</i> ['] <i>an</i> -	237
	* <i>sak</i> ^{'w} -	332
	* <i>ʒal</i> -	344
	* <i>k</i> ^h <i>ad</i> -	418
	* <i>k</i> ^{'a} <i>d</i> -	470
	* <i>ya</i> ʔ-	802
	* <i>net</i> ^{'y} -	948
	* <i>rak</i> ^h -	996
tie tightly, to	* <i>han</i> - <i>V</i> - <i>g</i> -	733
tie (together), to	* <i>bin</i> -	51
	* <i>k</i> ^{'a} <i>r</i> -	493
tie together, to	* <i>bag</i> -	12
	* <i>s</i> ^y <i>ir</i> -	297
	* <i>c</i> ['] <i>ur</i> -	326
	* <i>k</i> ^{'a} <i>č</i> ^h -	469
	* <i>k</i> ^{'a} <i>ŋ</i> -	485
	* <i>k</i> ^{'u} <i>n</i> -	516
	* <i>k</i> ^w <i>h</i> <i>r</i> -	542
tie two things together, to	* <i>k</i> ^h <i>ol</i> ^y -	458
tied	* <i>k</i> ^{'a} <i>r</i> - <i>a</i>	493
	* <i>tʃ</i> ['] <i>im</i> - <i>a</i>	624
tied together, that which is	* <i>c</i> ['] <i>ur</i> - <i>a</i>	326
	* <i>k</i> ^{'a} <i>r</i> - <i>a</i>	493
tight	* <i>t</i> ^h <i>ar</i> - <i>a</i>	205
time	* <i>ʔam</i> - <i>a</i>	643
time, point of	* <i>ʔam</i> - <i>a</i>	643
tip (= point)	* <i>dud</i> - <i>a</i>	181
	* <i>ʒu</i> ʒ- <i>a</i>	314

English Meaning	Proto-Nostratic	Number
	* <i>gab-a</i>	364
	* <i>gar^y-a</i>	386
	* <i>k^hir-a</i>	455
	* <i>q^war-a</i>	694
	* <i>ʕam-a</i>	766
	* <i>ʕam-d-a</i>	766
tipsy	* <i>t^har-a</i>	210
tire, to (= to weaken)	* <i>dal^v-</i>	160
tire out, to	* <i>t^yum-</i>	275
tired (= weary; fatigued; exhausted)	* <i>bul-a</i>	74
	* <i>dal^v-a</i>	160
	* <i>t^han^y-a</i>	202
	* <i>mel-a</i>	908
tired, that which is	* <i>bul-a</i>	74
tired, to be or become	* <i>was^y-</i>	836
tired, to become	* <i>bul-</i>	74
	* <i>mel-</i>	908
	* <i>mol-</i>	917
tired, to grow	* <i>t^han^y-</i>	202
tiredness	* <i>dal^v-a</i>	160
to	* <i>ʔan^y-</i>	648
together	* <i>k^ham-</i>	427
together with	* <i>bi</i>	50
	* <i>da-</i> (~ * <i>də-</i>)	153
toil (= work; labor)	* <i>k^ham-a</i>	426
toil, to	* <i>k^ham-</i>	426
tongue	* <i>tⁱil-a</i>	250
	* <i>k^hil-a</i>	453
	* <i>las^y-a</i> , * <i>lis^y-a</i> , * <i>lus^y-a</i>	974
tool used to form something	* <i>t^hikh^h-a</i>	216
tool used to make something	* <i>t^hikh^h-a</i>	216
tooth	* <i>q[']am-a</i>	592
	* <i>t^ʃ'ar-s-a</i>	622
top	* <i>t^hal-a</i>	198
	* <i>s^yub-a</i>	301
	* <i>gab-a</i>	364
	* <i>gub-a</i>	402
	* <i>k^hir-a</i>	455
	* <i>ʕam-a</i>	766
	* <i>ʕam-d-a</i>	766
topmost part	* <i>war-a</i>	833
	* <i>mun-a</i>	921
torch	* <i>ʕal-a</i>	764

English Meaning	Proto-Nostratic	Number
torment, to	* <i>dar-</i>	163
	* <i>muŋ-</i>	923
torn	* <i>tʰar-a</i>	283
torn-off piece or part	* <i>pʰutʰ-a</i>	152
torrent	* <i>baʕ-a</i>	1
	* <i>ʒar-a</i> or * <i>ʒar-a</i>	308
	* <i>haw-a</i>	746
torrential rain	* <i>haw-a</i>	746
torture, to	* <i>muŋ-</i>	923
toss, to	* <i>gud-</i>	404
tossed aside, that which is	* <i>gud-a</i>	404
tossed off, that which is	* <i>gud-a</i>	404
touch	* <i>tʰakʰ-a</i>	197
touch, to	* <i>tʰakʰ-</i>	197
	* <i>gasʸ-</i>	387
	* <i>ʔam-</i>	642
touched	* <i>ʔam-a</i>	642
towards	* <i>ʔanʸ-</i>	648
trace	* <i>ʔirʸ-</i>	686
track (= way)	* <i>kʷal-a</i>	548
	* <i>ʔotʰ-a</i>	694
	* <i>mar-a</i>	897
trade (= commerce)	* <i>wos-a</i>	853
trade, to	* <i>wos-</i>	853
trample, to	* <i>tʰapʰ-</i>	203
	* <i>tʰukʰ-</i>	254
tranquil	* <i>rom-a</i>	995
tranquil, to become	* <i>ham-</i>	730
tranquility	* <i>tʰum-a</i>	256
	* <i>ʔanʸ-a</i>	646
	* <i>ham-a</i>	730
	* <i>rom-a</i>	995
travel, to	* <i>naʕ-</i>	935
travel on foot, to	* <i>lakʰ-</i>	968
tree	* <i>tʰorʸ-a</i>	251
	* <i>mar-a</i>	901
tree, a kind of	* <i>dʷan-w-a</i>	261
	* <i>wir-a</i>	852
tree, the parts of a	* <i>tʰorʸ-a</i>	251
tree, small	* <i>ʒagʷ-a</i>	342
tree and its fruit	* <i>hasʸ-a</i>	743
tremble, to	* <i>pʰatʰ-</i>	120
	* <i>pʰel-</i>	125

English Meaning	Proto-Nostratic	Number
	* <i>p^hir-</i>	132
	* <i>t^har-</i>	211
	* <i>k'al-</i>	477
	* <i>hat'-</i>	744
	* <i>hut'-</i>	760
	* <i>naḥ-</i>	941
	* <i>n^vuk^h-</i>	960
trembling	* <i>p^hir-a</i>	132
	* <i>k'al-a</i>	477
	* <i>hat'-a</i>	744
	* <i>hut'-a</i>	760
	* <i>n^vuk^h-a</i>	960
	* <i>rag-a</i>	985
	* <i>raq'-a</i>	990
trembling (from fear, fright)	* <i>t^har-a</i>	211
trench	* <i>k^wḥar-a</i>	533
	* <i>ʔak^h-a</i>	636
tribute (= payment; recompense)	* <i>k^hap'-a</i>	433
trick, to (= to deceive; to cheat)	* <i>mak^h-</i>	872
trickery (= deception)	* <i>mak^h-a</i>	872
trickle	* <i>k'^waly-a</i>	549
	* <i>wal-a</i>	818
trickle, to	* <i>k'^waly-</i>	549
trickling	* <i>ʒil-a</i> or * <i>ʒil-a</i>	310
trip (= voyage; journey)	* <i>gal-a</i>	568
trouble	* <i>bad-a</i>	7
	* <i>dul-a</i>	183
	* <i>k'ac^h-a</i>	468
	* <i>hag-a</i>	719
	* <i>nady-a</i>	939
trouble, to be in	* <i>muŋ-</i>	923
trouble, to cause	* <i>muŋ-</i>	923
trouble, to stir up	* <i>dul-</i>	183
troubled, to be	* <i>dal-</i>	159
	* <i>dul-</i>	183
	* <i>hag-</i>	719
	* <i>mak^h-</i>	872
true (= correct; right)	* <i>woy-k^h-a</i>	856
truncheon (= club)	* <i>k'an-a</i>	484
try to find out, to	* <i>sah-</i> or * <i>šah-</i>	330
try to understand, to	* <i>sah-</i> or * <i>šah-</i>	330
tumor	* <i>dar^y-a</i>	165
tumult (= turmoil)	* <i>gal-a</i>	373

English Meaning	Proto-Nostratic	Number
turbidity (= mixture; disorder)	* <i>bul-a</i>	72
turmoil (= disturbance)	* <i>gal-a</i>	373
turn	* <i>bur-a</i>	78
	* <i>p^hir-a</i>	131
	* <i>dar-a</i>	162
	* <i>wal^y-a</i>	821
	* <i>mal-a</i>	882
	* <i>maq^{wh}-a</i>	893
	* <i>law-a</i>	976
	* <i>rak^h-a</i>	986
turn, to	* <i>bur-</i>	78
	* <i>p^hir-</i>	131
	* <i>dar-</i>	162
	* <i>c'ur-</i>	326
	* <i>c^hok^h-</i>	350
	* <i>k'ar-</i>	493
	* <i>g^war-</i>	522
	* <i>hap^h-</i>	712
	* <i>haw-</i>	748
	* <i>wal^y-</i>	821
	* <i>mal-</i>	882
	* <i>maq^{wh}-</i>	893
	* <i>mar-</i>	896
	* <i>mur-</i>	925
	* <i>net'ɣ-</i>	948
	* <i>law-</i>	976
	* <i>rak^h-</i>	986
	* <i>rat^h-</i>	991
turn around, to	* <i>k^har-</i>	436
	* <i>ɕor^y-</i>	779
turn away, to	* <i>hap^h-</i>	712
turn back, to	* <i>hap^h-</i>	712
turn gray, (hair) to	* <i>p^har^y-</i>	116
turn over, to	* <i>mar-</i>	896
turn round, to	* <i>k'aw-</i>	496
	* <i>maq^{wh}-</i>	893
	* <i>mar-</i>	896
turn together, to	* <i>s^yir-</i>	297
	* <i>k'ar^y-</i>	485
turn upside down, to	* <i>maq^{wh}-</i>	893
turned	* <i>g^war-a</i>	522
turned away from	* <i>hap^h-a</i>	712
turned back	* <i>hap^h-a</i>	712

English Meaning	Proto-Nostratic	Number
turned together	* <i>dar-a</i>	162
turning	* <i>ʃorʷ-a</i>	779
	* <i>ratʰ-a</i>	991
turning, the act of	* <i>ʕʰokʰ-a</i>	350
	* <i>mar-a</i>	896
turning away, the act of	* <i>hapʰ-a</i>	712
turning back, the act of	* <i>hapʰ-a</i>	712
turning over, the act of	* <i>mar-a</i>	896
turning round, the act of	* <i>mar-a</i>	896
turns, that which	* <i>dar-a</i>	162
	* <i>kʷhal-a</i>	526
twilight	* <i>rum-a</i>	997
twine	* <i>pʰir-a</i>	131
twine together, to	* <i>kʷhir-</i>	542
twining	* <i>pʰir-a</i>	131
twining together, the act of	* <i>kʷhir-a</i>	542
twist	* <i>bur-a</i>	78
	* <i>pʰir-a</i>	131
	* <i>kʷhir-a</i>	542
	* <i>han-a</i>	732
	* <i>maqʷh-a</i>	893
	* <i>law-a</i>	976
	* <i>rakʰ-a</i>	986
twist, to	* <i>bur-</i>	78
	* <i>pʰir-</i>	131
	* <i>dar-</i>	162
	* <i>tʰakʰ-</i>	196
	* <i>c'ur-</i>	326
	* <i>ʕʰokʰ-</i>	350
	* <i>kʰatʰ-</i>	444
	* <i>k'ar-</i>	493
	* <i>ʒʷar-</i>	522
	* <i>Gub-</i>	582
	* <i>han-</i>	732
	* <i>haw-</i>	748
	* <i>mal-</i>	882
	* <i>maqʷh-</i>	893
	* <i>mar-</i>	896
	* <i>mur-</i>	925
	* <i>law-</i>	976
	* <i>rakʰ-</i>	986
twist around, to	* <i>kʰar-</i>	436
twist round, to	* <i>k'aw-</i>	496

English Meaning	Proto-Nostratic	Number
	<i>*ʕorʸ-</i>	779
twist together, to	<i>*bin-</i>	51
	<i>*dar-</i>	162
	<i>*tʰakʰ-</i>	196
	<i>*sʸir-</i>	297
	<i>*kʰaŋ-</i>	485
	<i>*kʰwʰir-</i>	542
	<i>*netʸ-</i>	948
twist (together), to	<i>*ban-V-d-</i>	27
twisted	<i>*kʰar-a</i>	437
	<i>*gʷar-a</i>	522
twisted, that which is	<i>*kʰatʰ-a</i>	444
	<i>*gub-a</i>	582
twisted, to be	<i>*tʰakʰ-</i>	196
twisted together	<i>*dar-a</i>	162
twisted together, anything	<i>*netʸ-a</i>	948
twisted together, that which is	<i>*cʰur-a</i>	326
twisting	<i>*ʕorʸ-a</i>	779
twisting, the act of	<i>*cʰokʰ-a</i>	350
twisting together, the act of	<i>*kʰwʰir-a</i>	542
twists, that which	<i>*dar-a</i>	162
two	<i>*yor-a</i>	807
two halves	<i>*tʰuʔw-a</i>	253
two things, any combination of	<i>*kʰolʸ-a</i>	458
tying	<i>*ʕorʸ-a</i>	779

U

udder	<i>*kʰʷan-a</i>	551
under, that which is	<i>*hal-a</i>	726
underpart	<i>*hal-a</i>	726
understanding	<i>*saḥ-a</i> or <i>*šaḥ-a</i>	330
	<i>*gal-a</i>	372
	<i>*hakʰ-a</i>	721
uneasiness (= disturbance; distress)	<i>*kʰal-a</i>	477
unfruitful (= desolate; useless)	<i>*bar-a</i>	42
unfruitful, to be or become	<i>*bar-</i>	42
unguent	<i>*mar-a</i>	898
union	<i>*gid-a</i> or <i>*gid-a</i>	393
	<i>*ʕim-a</i>	624
unite, to	<i>*gid-</i> or <i>*gid-</i>	393
unite together, to	<i>*ʕim-</i>	624
united	<i>*gid-a</i> or <i>*gid-a</i>	393

English Meaning	Proto-Nostratic	Number
united together	* <i>ʕim-a</i>	624
untamed (= wild)	* <i>guw-a</i>	412
	* <i>guw-r-a</i>	412
upon	* <i>ʔan^y-</i>	648
	* <i>ʕal-</i>	763
up	* <i>ʕan-</i>	769
upper part	* <i>ʕan-a</i>	769
uppermost part	* <i>war-a</i>	833
uppermost part (of anything)	* <i>k^hir-a</i>	455
uproar	* <i>gal-a</i>	373
	* <i>q^ywal-a</i>	602
upset, to	* <i>dul-</i>	183
upset, to be	* <i>dul-</i>	183
upward, to go	* <i>xan-</i>	790
us	* <i>wa-</i> (~ * <i>wə-</i>)	808
	* <i>ma</i> (~ * <i>mə</i>)	910
	* <i>na</i> (~ * <i>nə</i>)	931
used up	* <i>ʒaw-a</i>	345
used up, to be	* <i>ʒaw-</i>	345
useless	* <i>bar^y-a</i>	42
useless, to be or become	* <i>bar^y-</i>	42
utter, to	* <i>bak^h-</i>	16
utterance	* <i>bak^h-a</i>	16

V

vacant, to be	* <i>wel^y-</i>	846
valley	* <i>gol-a</i>	401
	* <i>ʕam-a</i>	765
vapor	* <i>duw-a</i>	193
vapor, to give off	* <i>p^yul^y-</i>	151
vehicle (= conveyance; cart)	* <i>wig-a</i>	849
vein	* <i>s^yir-a</i>	297
vessel (= pot)	* <i>gal-a</i>	371
	* <i>k^yud-a</i> (~ * <i>k^yod-a</i>)	508
	* <i>k^{wh}ar-a</i>	535
vex, to (= to disturb; to annoy)	* <i>nad^y-</i>	939
vexation	* <i>nad^y-a</i>	939
vexed, to be	* <i>hag-</i>	719
victory	* <i>sag-a</i> or * <i>šag-a</i>	329
	* <i>wel-a</i>	845
view	* <i>ʕen-a</i>	774
view, to come into	* <i>wil^y-</i>	850

English Meaning	Proto-Nostratic	Number
vigil (= watch)	* <i>war-a</i>	830
vigor	* <i>wak'-a</i>	813
vile (= low; base; mean)	* <i>p^hul-a</i>	135
violence	* <i>hal-a</i>	724
violent, to be	* <i>ʔek^h-</i>	671
violent movement	* <i>ʔek^h-a</i>	671
virility	* <i>g[e]n-d-a</i>	390
visibility	* <i>c'ar-a</i> or * <i>č'ar-a</i>	322
	* <i>gal-a</i>	372
visible	* <i>c'ar-a</i> or * <i>č'ar-a</i>	322
visible, that which is	* <i>xaŋ-a</i>	790
visible, to be or become	* <i>c'ar-</i> or * <i>č'ar-</i>	322
	* <i>gal-</i>	372
voice	* <i>baḥ-a</i>	14
vomit	* <i>p^hut^h-a</i>	146
	* <i>wam-a</i>	823
vomit, to	* <i>p^hut^h-</i>	146
voyage (= trip; journey)	* <i>Gal-a</i>	568

W

wail	* <i>wal-a</i>	816
walk	* <i>k^{wh}al-a</i>	525
	* <i>mar-a</i>	897
walk, to	* <i>bar-</i>	41
	* <i>gīr^y-</i> or * <i>gīr^y-</i>	400
	* <i>k^{wh}al-</i>	525
	* <i>mar-</i>	897
walking	* <i>bar-a</i>	41
	* <i>k^{wh}al-a</i>	525
	* <i>mar-a</i>	897
wall	* <i>c'ur-a</i>	326
	* <i>gīr-a</i>	398
wandering	* <i>k^{wh}al-a</i>	525
wane, to (= to wither)	* <i>t^har-</i>	208
want	* <i>bad-a</i>	8
	* <i>gaʔ-a</i>	362
	* <i>k'al-a</i>	475
	* <i>ʔek'-a</i>	672
	* <i>hiw-a</i> , * <i>hiy-a</i>	753
want, to be in	* <i>hiw-</i> , * <i>hiy-</i>	753
wanting	* <i>gaʔ-a</i>	362
	* <i>k'al-a</i>	475

English Meaning	Proto-Nostratic	Number
wanting, to be	*ʔek'-	672
warder (= guard)	*war-a	830
warm	*p ^{hekwh} -a	124
	*t'ab-a	227
	*k ^{hum} -a	464
warm, to	*p ^{hañ} -	140
	*p ^{hañ} -V-w-	140
	*dul-	182
	*t ^{hep^h} -	214
	*s ^{yax^w} -	293
	*k'al-	476
	*g ^{wir} -	523
	*wal-	819
warm, to be	*p ^{hal^y} -	103
	*p ^{hekwh} -	124
warm, to be or become	*t'ab-	227
	*s ^{yax^w} -	293
	*k ^{hay} -	451
warm, to make	*t'ab-	227
	*k ^{hay} -	451
warm oneself, to	*ʔak ^{wh} -	639
warmth	*p ^{hekwh} -a	124
	*dul-a	182
	*t ^{hep^h} -a	214
	*t'ab-a	227
	*s ^{yax^w} -a	293
	*k ^{hum} -a	464
	*wal-a	819
	*war-a	834
wash, to	*hal-	725
	*law-V-ñ-	979
washed	*hal-a	725
washed, that which is	*ʔal-a	640
washing, the act of	*ʔal-a	640
	*hal-a	725
	*law-h-a	979
waste	*bad-a	6
waste, to	*bad-	6
waste away, to	*t ^{hañ} -	195
	*t ^{yhum} -	275
	*k'er-	501
	*wal-	820
	*was ^y -	837

English Meaning	Proto-Nostratic	Number
waste away by rubbing, to	* <i>hur-</i>	759
wasted	* <i>ʒaw-a</i>	345
	* <i>k'er-a</i>	501
wasted, to become	* <i>ʔeb-</i>	670
wasteland	* <i>bad-a</i>	6
wasting away	* <i>wasʸ-a</i>	837
watch	* <i>war-a</i>	830
watch, to	* <i>guw-</i>	411
	* <i>kʰal-</i>	421
	* <i>rak'-</i>	989
watch out for, to	* <i>war-</i>	830
watch (over), to	* <i>pʰinʸ-</i>	128
watch over, to	* <i>man-</i>	887
watchfulness	* <i>rak'-a</i>	989
watchman	* <i>war-a</i>	830
	* <i>man-a</i>	887
water	* <i>ham-a</i>	709
	* <i>yam-a</i>	803
	* <i>wet'-a</i>	848
	* <i>maw-a</i>	907
water, (flowing or running)	* <i>hapʰ-a</i>	736
water, running	* <i>waʒ-a</i>	843
water, to	* <i>law-V-ħ-</i>	979
watercourse	* <i>Gal-a</i>	569
waterfowl	* <i>gaŋ-a</i>	379
wattle	* <i>Gub-a</i>	582
wave	* <i>welʸ-a</i>	847
way (= method)	* <i>har-a</i>	737
way (= path)	* <i>kʷal-a</i>	548
	* <i>qʰad-a</i>	583
	* <i>ʔiy-a</i>	688
	* <i>mar-a</i>	897
way, winding	* <i>dar-a</i>	162
we	* <i>wa-</i> (~ * <i>wə-</i>)	808
	* <i>ma</i> (~ * <i>mə</i>)	910
	* <i>na</i> (~ * <i>nə</i>)	931
weak	* <i>bul-a</i>	74
	* <i>dalʸ-a</i>	160
	* <i>gin-a</i> or * <i>gin-a</i>	396
	* <i>xal-a</i>	786
	* <i>mel-a</i>	908
	* <i>nusʸ-a</i>	952
	* <i>lam-a</i> ~ (?) * <i>lʷam-a</i>	972

English Meaning	Proto-Nostratic	Number
weak, that which is	* <i>bul-a</i>	74
weak, to be	* <i>lʷhʷum-</i>	275
	* <i>gin-</i> or * <i>gin-</i>	396
	* <i>ʔek'-</i>	672
	* <i>wal-</i>	820
	* <i>nusʷ-</i>	952
weak, to become	* <i>bul-</i>	74
	* <i>lʷhʷum-</i>	275
	* <i>ʔeb-</i>	670
	* <i>mel-</i>	908
	* <i>mol-</i>	917
weak, to be or become	* <i>lam-</i> ~ (?) * <i>lʷam-</i>	972
weak, to grow	* <i>dow-</i> , * <i>doy-</i>	179
weaken, to	* <i>bad-</i>	9
	* <i>bul-</i>	74
	* <i>dalʷ-</i>	160
	* <i>xal-</i>	786
	* <i>lam-</i> ~ (?) * <i>lʷam-</i>	972
weakened	* <i>pʰul-a</i>	135
	* <i>ʔeb-a</i>	670
	* <i>mur-a</i>	924
weakened, to be	* <i>xal-</i>	786
	* <i>marʷ-</i>	902
	* <i>nusʷ-</i>	952
weakness	* <i>bul-a</i>	74
	* <i>dalʷ-a</i>	160
	* <i>ʔeb-a</i>	670
	* <i>xal-a</i>	786
	* <i>wal-a</i>	820
	* <i>mel-a</i>	908
	* <i>nusʷ-a</i>	952
	* <i>lam-a</i> ~ (?) * <i>lʷam-a</i>	972
wealth	* <i>c'al-a</i> or * <i>č'al-a</i>	320
	* <i>haph-a</i>	735
	* <i>riy-a</i>	994
wealthy, to be	* <i>c'al-</i> or * <i>č'al-</i>	320
weapon	* <i>ʒer-a</i> or * <i>žer-a</i>	309
	* <i>wed-a</i>	844
wear (= abrasion)	* <i>bul-a</i>	74
	* <i>tʰah-a</i>	195
	* <i>tʰar-a</i>	207
wear away, to	* <i>tʰah-</i>	195
wear away by rubbing, to	* <i>hur-</i>	759

English Meaning	Proto-Nostratic	Number
wear down, to	* <i>bul-</i>	74
	* <i>t^har-</i>	207
	* <i>xal-</i>	786
wear out, to	* <i>ʒaw-</i>	345
	* <i>k'er-</i>	501
	* <i>xal-</i>	786
	* <i>wal-</i>	820
	* <i>was^y-</i>	837
	* <i>mel-</i>	908
	* <i>mol-</i>	917
wearied (from straining, laboring), to become	* <i>k'ac^h-</i>	468
weariness	* <i>dal^y-a</i>	160
	* <i>dow-a, *doy-a</i>	179
	* <i>t^han^y-a</i>	202
	* <i>t^yum-a</i>	275
	* <i>xal-a</i>	786
	* <i>was^y-a</i>	836
weary	* <i>dal^y-a</i>	160
	* <i>dow-a, *doy-a</i>	179
	* <i>t^han^y-a</i>	202
	* <i>xal-a</i>	786
	* <i>mel-a</i>	908
weary, to	* <i>t^yum-</i>	275
weary, to be	* <i>t^yum-</i>	275
weary, to be or become	* <i>was^y-</i>	836
weary, to become	* <i>t^yum-</i>	275
	* <i>mel-</i>	908
	* <i>mol-</i>	917
weary, to grow	* <i>dow-, *doy-</i>	179
	* <i>t^han^y-</i>	202
weave, to	* <i>t'an-</i>	237
	* <i>k^hat^h-</i>	444
	* <i>haw-</i>	748
	* <i>net^y-</i>	948
weaving	* <i>for^y-a</i>	763
	* <i>net^y-a</i>	929
weaving, the act of	* <i>haw-a</i>	748
web	* <i>net^y-a</i>	948
wedge	* <i>t'ul^y-a</i>	255
weep, to	* <i>k'um-</i>	512
weighed down, to be	* <i>hag-</i>	719
weight	* <i>k'w^yur^y-a</i>	566

English Meaning	Proto-Nostratic	Number
weighty	* <i>k'wur^y-a</i>	566
weighty, to be	* <i>k'wur^y-</i>	566
welfare	* <i>s^yol-a</i>	299
well	* <i>s^yol-a</i>	299
well, to be	* <i>s^yol-</i>	299
	* <i>s^yuw-</i>	303
well, to do	* <i>c'al-</i> or * <i>č'al-</i>	320
well up, to	* <i>bal-</i>	21
	* <i>ɽib-</i>	680
	* <i>wel^y-</i>	847
wet	* <i>suw-a</i>	361
	* <i>suw-l-a</i>	361
	* <i>wal-a</i>	818
	* <i>mat'-a</i>	906
	* <i>nat'-a</i>	946
wet, to	* <i>t'al^y-</i>	234
	* <i>wal-</i>	818
	* <i>wet'-</i>	848
	* <i>nat'-</i>	946
	* <i>laḥ-</i>	965
	* <i>rek'-</i>	993
wet, to be	* <i>suw-</i>	361
	* <i>suw-V-l-</i>	361
	* <i>maw-</i>	907
wet, to be or become	* <i>mat'-</i>	906
wet, to make	* <i>suw-</i>	361
	* <i>suw-V-l-</i>	361
wetness	* <i>wal-a</i>	818
	* <i>mat'-a</i>	906
	* <i>nat'-a</i>	946
	* <i>laḥ-a</i>	965
what [relative pronoun stem]	* <i>ɽay-</i> , * <i>ɽya-</i>	663
	* <i>ma-</i> (~ * <i>mə-</i>)	909
what? [interrogative pronoun stem]	* <i>ɽay-</i> , * <i>ɽya-</i>	663
	* <i>mi-</i> (~ * <i>me-</i>)	909
what?, to do	* <i>ɽay-</i>	663
what manner?, to act in	* <i>ɽay-</i>	663
when	* <i>k^{wh}ay-</i>	538
whet, to	* <i>ʒag-</i>	306
which [relative pronoun stem]	* <i>ɽay-</i> , * <i>ɽya-</i>	663
	* <i>ma-</i> (~ * <i>mə-</i>)	909
which? [interrogative pronoun stem]	* <i>ɽay-</i> , * <i>ɽya-</i>	663
	* <i>mi-</i> (~ * <i>me-</i>)	909

English Meaning	Proto-Nostratic	Number
whirl	* <i>bur-a</i>	81
whirl, to	* <i>bur-</i>	81
	* <i>mar-</i>	886
whisper	* <i>k^was-a</i>	559
whisper, to	* <i>k^was-</i>	559
white	* <i>wal^y-a</i>	822
whiteness	* <i>wal^y-a</i>	822
who [relative pronoun stem]	* <i>ʔay-</i> , * <i>ʔya-</i>	663
	* <i>ma-</i> (~ * <i>mə-</i>)	909
who? [interrogative pronoun stem]	* <i>ʔay-</i> , * <i>ʔya-</i>	663
	* <i>mi-</i> (~ * <i>me-</i>)	909
wicked, to be	* <i>ʔak^h-</i>	635
wickedness	* <i>t^yaw-a</i>	285
	* <i>ʔak^h-a</i>	635
(wide)	* <i>t^hal^y-a</i>	199
wide	* <i>p^hal-a</i>	97
	* <i>p^hat^h-a</i>	121
	* <i>t^han^y-a</i>	201
	* <i>ʔut'-a</i>	701
	* <i>war-a</i>	832
	* <i>raw-ḥ-a</i>	992
wide-open space	* <i>ʔut'-a</i>	701
	* <i>ḥak'-a</i>	722
wide, that which is	* <i>p^hal-a</i>	87
wide, to be	* <i>raw-V-ḥ-</i>	992
widen, to	* <i>ḥak'-</i>	722
width	* <i>p^har-a</i>	108
	* <i>t^han^y-a</i>	201
	* <i>war-a</i>	832
wife	* <i>k^wan-a</i>	552
	* <i>nus^y-a</i>	953
wild	* <i>guw-a</i>	412
	* <i>guw-r-a</i>	412
wild animal	* <i>guw-a</i>	412
	* <i>guw-r-a</i>	412
wild animals, to hunt	* <i>guw-</i>	412
	* <i>guw-V-r-</i>	412
wild ass	* <i>p^har-a</i>	111
wild beast	* <i>guw-a</i>	412
	* <i>guw-r-a</i>	412
wild boar	* <i>s^yaw-a</i>	292
wild bovine	* <i>t^yom-a</i>	274
wildfowl	* <i>Gar^y-a</i>	575

English Meaning	Proto-Nostratic	Number
wild goose	* <i>Gar^y-Gar^y-a</i>	575
	* <i>Gar^y-a</i>	575
	* <i>Gar^y-Gar^y-a</i>	575
wild, to be	* <i>ʔek^h-</i>	671
	* <i>xam-</i>	788
	* <i>xam-V-d-</i>	788
wind (= breeze)	* <i>bar-a</i>	30
wind, to (= to twist; to turn; to bend)	* <i>ɕ^hok^h-</i>	350
	* <i>k'ar-</i>	493
	* <i>g^war-</i>	522
wind around, to	* <i>k^har-</i>	436
winding couse or way	* <i>dar-a</i>	162
winding, the act of	* <i>ɕ^hok^h-a</i>	350
winds, that which	* <i>dar-a</i>	162
wing	* <i>bur-a</i>	85
wipe, to	* <i>mal-</i>	880
	* <i>mel-</i>	908
	* <i>mol-</i>	917
wiped out	* <i>ʔeb-a</i>	670
wiped out, to become	* <i>ʔeb-</i>	670
wiping, the act of	* <i>mal-a</i>	880
wisdom	* <i>hak^h-a</i>	721
wish (= desire)	* <i>t'el-a</i>	247
	* <i>win-a</i> or * <i>wiŋ-a</i>	851
wish for, to	* <i>win-</i> or * <i>wiŋ-</i>	851
with	* <i>bi</i>	50
	* <i>har^y-</i>	741
	* <i>mat^h-</i> or * <i>met^h-</i>	904
wither, to	* <i>t^har-</i>	208
	* <i>ʒa^ʔ-</i>	341
	* <i>k'er-</i>	501
	* <i>wal-</i>	820
	* <i>was^y-</i>	837
wither away, to	* <i>mar^y-</i>	902
withered	* <i>t^har-a</i>	208
	* <i>s^yaw-a</i>	290
	* <i>c'aw-a</i>	323
	* <i>c'aw-l^y-a</i>	323
	* <i>k'er-a</i>	501
withered, to be	* <i>s^yaw-</i>	290
withered, to be or become	* <i>c'aw-</i>	323
	* <i>c'aw-V-l^y-</i>	323
withered, that which is	* <i>c'aw-a</i>	323

English Meaning	Proto-Nostratic	Number
	<i>*c'aw-lʷ-a</i>	323
woe!	<i>*way</i>	842
woman	<i>*k'wan-a</i>	551
	<i>*nat'-a</i>	945
	<i>*nusʷ-a</i>	953
woman, (older)	<i>*ʔema</i>	674
woman, old	<i>*p'ap'-a</i>	149
womb	<i>*watʷ-a</i>	841
wood	<i>*mar-a</i>	901
wood of the poplar	<i>*tʷar-a</i>	282
wool	<i>*bur-a</i>	84
word	<i>*yan-a</i>	804
work	<i>*daw-a</i>	167
	<i>*kʰam-a</i>	426
	<i>*kʷhɪr-a</i>	542
work, hard	<i>*qʰad-a</i>	583
work, to	<i>*kʰam-</i>	426
worm	<i>*kʷhur-a</i>	544
worn down	<i>*mol-a</i>	917
worn down, to be	<i>*xal-</i>	786
worn out	<i>*bul-a</i>	74
	<i>*tʰar-a</i>	207
	<i>*ʒaw-a</i>	345
	<i>*k'er-a</i>	501
	<i>*xal-a</i>	786
	<i>*mel-a</i>	908
	<i>*mol-a</i>	917
worn out, that which is	<i>*bul-a</i>	74
worn out, to be	<i>*xal-</i>	786
	<i>*wal-</i>	820
worn out, to become	<i>*bul-</i>	74
	<i>*wasʷ-</i>	836
	<i>*mel-</i>	908
	<i>*mol-</i>	917
wound	<i>*ban-a</i>	26
	<i>*tʰar-a</i>	206
	<i>*qʰal-a</i>	584
	<i>*wah-a</i>	812
	<i>*waŋ-a</i>	828
	<i>*wed-a</i>	844
	<i>*mir-a</i>	916
	<i>*nag-a</i>	940
	<i>*nikʰ-a</i>	950

English Meaning	Proto-Nostratic	Number
wound, to	* <i>dal-</i>	158
	* <i>g^wan-</i>	520
	* <i>q^hal-</i>	584
	* <i>q^hʷal-</i>	602
	* <i>wah-</i>	812
	* <i>waŋ-</i>	828
	* <i>mir-</i>	916
woven, anything	* <i>tʰan-a</i>	237
	* <i>net ʷy-a</i>	948
woven, that which is	* <i>k^hat^h-a</i>	445
wrangle (over), to	* <i>bur-</i>	79
wrap, to	* <i>k^had-</i>	417
	* <i>g^war-</i>	522
wrap together, to	* <i>dar-</i>	162
	* <i>kʰač^h-</i>	469
wrap up, to	* <i>bur-</i>	83
	* <i>cʰur-</i>	326
wrapped together	* <i>dar-a</i>	162
wrapped together, that which is	* <i>cʰur-a</i>	326
wrapping	* <i>cʰur-a</i>	326
	* <i>kʰač^h-a</i>	469
wrath	* <i>q^hat^h-a</i>	587
wreath	* <i>kʰaŋ-a</i>	485
wrestle, to	* <i>bur-</i>	79
wrinkle	* <i>kʰun-a</i>	516
wrist	* <i>gam-a</i>	377

Y

yawn	* <i>haŋ-a</i>	711
yawn, to	* <i>haŋ-</i>	711
year	* <i>wat^h-a</i>	839
yelp, to	* <i>k^hat^h-</i>	447
yelping	* <i>k^hat^h-a</i>	447
yield, to	* <i>ʔeb-</i>	670
you	* <i>t^hi-</i> (~ * <i>t^he-</i>)	215
	* <i>sī-</i> (~ * <i>se-</i>)	337
	* <i>nī</i> (~ * <i>ne</i>) and/or * <i>na</i> (~ * <i>nə</i>)	949
you [oblique]	* <i>t^ha-</i> (~ * <i>t^hə-</i>)	215
young	* <i>gin-a</i> or * <i>gin-a</i>	384
	* <i>kʰan-a</i>	481
	* <i>ʔax-a</i>	633
	* <i>γil-a</i>	800

English Meaning	Proto-Nostratic	Number
	* <i>yaw-a</i>	805
	* <i>mag-a</i>	869
young (especially of animals)	* <i>k^huwan-a</i> or * <i>k^hun-a</i>	466
young (of humans and animals)	* <i>man-a</i>	884
young, to be	* <i>gin-</i> or * <i>gin-</i>	396
	* <i>ʔax-</i>	633
young, to produce	* <i>yaw-</i>	805
young dog	* <i>k^huwan-a</i> or * <i>k^hun-a</i>	466
young goat	* <i>gad-a</i>	368
(young) man	* <i>mar-a</i>	895
young man	* <i>ʔax-a</i>	633
	* <i>n^ʷaʃ-r-a</i>	957
young of an animal	* <i>p^hilʷ-a</i>	127
	* <i>ʃig-a</i>	777
young one	* <i>gin-a</i> or * <i>gin-a</i>	396
	* <i>n^ʷaph^h-a</i>	959
young person	* <i>ʔil-a</i>	800
	* <i>yaw-a</i>	805
	* <i>mag-a</i>	869
younger brother	* <i>bin-a</i> , * <i>ban-a</i>	52
	* <i>ʔax-a</i>	633
younger daughter	* <i>bin-a</i> , * <i>ban-a</i>	52
younger relative	* <i>bin-a</i> , * <i>ban-a</i>	52
younger relative (male or female)	* <i>ʔina</i> or * <i>ʔiŋa</i>	685
younger sister	* <i>bin-a</i> , * <i>ban-a</i>	52
younger son	* <i>bin-a</i> , * <i>ban-a</i>	52
youth	* <i>p^hilʷ-a</i>	127
	* <i>gin-a</i> or * <i>gin-a</i>	396
	* <i>ʔax-a</i>	633
	* <i>ʔil-a</i>	800
	* <i>yaw-a</i>	805
	* <i>n^ʷaʃ-r-a</i>	957
youthful, to be	* <i>ʔax-</i>	633

INDO-EUROPEAN STEMS
WITH A NOSTRATIC ETYMOLOGY

This index lists all of the Proto-Indo-European stems with a Nostratic etymology cited in Part 3, Comparative Vocabulary (Volumes 2 and 3). They are listed in the order in which they appear there.

PROTO-NOSTRATIC *b > PROTO-INDO-EUROPEAN *b^h

1. *b^habh^a- ‘father’ (Anatolian only) < Proto-Nostratic (n.) *baba ‘father’ (nursery word) (no 3).
2. *b^hābh^o- ‘babe, child’ < Proto-Nostratic (n.) *baaba ‘child, babe’ (nursery word) (no. 4).
3. *b^hed^h-/*b^hod^h- ‘to prick, to pierce, to dig’ < Proto-Nostratic (vb.) *bad- ‘to split, to cleave, to separate, to divide’; (n.) *bad-a ‘split, crack, breach, opening’ (no. 5).
4. *b^hed^h-/*b^hod^h- (lengthened-grade forms: *b^hēd^h-/*b^hōd^h-) ‘(vb.) to press, to force, to drive away, to repel, to remove; to force asunder; to harass, to pain, to trouble, to grieve, to vex; to suffer annoyance or oppression; (n.) trouble, distress, suffering, oppression’ < Proto-Nostratic (vb.) *bad- ‘to occur, to happen, to experience, to endure; to cause to endure, to make to suffer, to oppress’; (n.) *bad-a ‘experience, happening, trouble, distress, suffering, oppression’ (no. 7).
5. *b^hod^h- ‘pang, pain’ (Baltic only) < Proto-Nostratic (n.) *bad-a ‘need, want, lack, deprivation’ (> ‘hunger’) (no. 8).
6. *b^hed^h-yo- ‘sleeping place’ (Germanic only) < Proto-Nostratic (vb.) *bad- ‘to fall down, to lie down; to decay, to weaken; to perish’; (n.) *bad-a ‘lying down, fall, sleep, ruin’ (no. 9).
7. *b^hag^h- ‘ram’ (Germanic only) < Proto-Nostratic (n.) *bag-a ‘goat, sheep’ (no. 11).
8. *b^hag^h- ‘bundle, pack’ (Germanic only) < Proto-Nostratic (vb.) *bag- ‘to tie or bind together’; (n.) *bag-a ‘collection of things bound together: bunch, bundle, pack’ (no. 12).

9. **b^heh-* [**b^hah-*]/**b^hoh-* (> **b^hā-/b^hō-*) ‘to be bright, shining; to bring to light, to cause to appear; to make clear’ < Proto-Nostratic (vb.) **bah-* ‘to shine’; (n.) **bah-a* ‘brilliance, brightness, splendor, beauty; light’; (adj.) ‘shining, bright, radiant’ (no. 13).
10. **b^heh^hh-* [**b^ha^hh^hh-*]/**b^hoh^hh-* (> **b^hā-/b^hō-*) ‘to say, to speak’ < Proto-Nostratic (vb.) **ba^hh-* ‘to make noise’; (n.) **ba^hh-a* ‘noise, sound; voice’ (no. 14).
11. **b^heh^hh-w/u-* [**b^ha^hh^hh-w/u-*] (> **b^hāw/u-*) ‘to beat, to strike’ < Proto-Nostratic (vb.) **ba^hh-* ‘to cut, to cut off, to strike’; (n.) **ba^hh-a* ‘cut, strike, blow’ (no. 15).
12. **b^hek’-/b^hok’-* ‘to cut or split apart, to break apart’, (with nasal infix) **b^henk’-/b^honk’-* and **b^hak’-* ‘to divide, to distribute’ < Proto-Nostratic (vb.) **bak’-* ‘to cleave, to split, to break open’; (n.) **bak’-a* ‘crack, split, break’ (no. 17).
13. **b^hlend^h-/b^hlond^h-/b^hl^hnd^h-* ‘to make blind, to be blind’ < Proto-Nostratic (vb.) **bal-* ‘to be or become dark, obscure, blind’; (n.) **bal-a* ‘darkness, obscurity, blindness’; (adj.) ‘dark, obscure, blind’ (no. 20).
14. **b^hl-ew-/b^hl-ow-/b^hl-u-* ‘to overflow, to pour over, to flow’ and **b^hl-ey-t’-/b^hl-oy-t’-/b^hl-i-t’-* ‘to swell up, to overflow’ < Proto-Nostratic (vb.) **bal-* ‘to well up, to surge, to overflow, to pour over’; (n.) **bal-a* ‘outpour, down-pour, surge, flow’ (no. 21).
15. **b^hel-/b^hol-* ‘shining, white’; **b^hles-/b^hlos-* ‘to shine’; **b^hliyC-/b^hleyC-* (> **b^hlīC-/b^hlēC-*; **b^hliyV-/b^hleyV-*) ‘to shine’; **b^hlu-, b^hluH-* (> **b^hlū-*) ‘to shine’; and **b^hlek’-/b^hlok’-/b^hlk’-*, **b^helk’-/b^holk’-/b^hlk’-* ‘to shine’ < Proto-Nostratic (vb.) **bal-* ‘to shine, to be bright’; (n.) **bal-a* ‘glitter, gleam, brightness’ (no. 23).
16. **b^han-* ‘a drop’ (Celtic only) < Proto-Nostratic (vb.) **ban-* ‘to pour, to sprinkle, to drip’; (n.) **ban-a* ‘a drop (of water, rain, dew, etc.)’ (no. 24).
17. **b^han-o-, b^han-yo-* ‘wound’ (Germanic only) < Proto-Nostratic (Eurasianic only) (vb.) **ban-* ‘to cut, to strike’; (n.) **ban-a* ‘cut, wound’ (no. 26).
18. **b^hend^h-/b^hond^h-/b^hnd^h-* ‘to tie, to bind, to join, to unite’ < Proto-Nostratic (vb.) **ban-V-d-* ‘to tie (together), to fasten, to twist together, to bind (together)’; (n.) **ban-d-a* ‘tie, bond’ (no. 27).
19. **b^her-/b^hor-/b^hɣ-* (also **b^har-*) ‘to swell, to puff up, to expand, to bristle’, **b^hɣst^hi-s* ‘bristle, point’, **b^hrews-/b^hrows-/b^hrus-* ‘(vb.) to swell; (n.) swelling’; **b^hard^heA* (> **b^hard^hā*) ‘beard’; **b^herw-/b^horw-/b^hɣw-, b^hrew-*

- /*b^hrow-/*b^hru-* ‘to boil, to bubble up’; **b^hrend^h-/*b^hrond^h-/*b^hrṇd^h-* ‘to swell up’; and **b^hrew-/*b^hru-* ‘to sprout, to swell’ < Proto-Nostratic (vb.) **bar-* ‘to swell, to puff up, to expand’; (n.) **bar-a* ‘swelling, bulge, increase’ (no. 28).
20. **b^her-/*b^hor-/*b^hy-* (also **b^har-*) ‘to bristle (up)’, **b^hysthⁱ-s* ‘bristle, point’ < Proto-Nostratic (vb.) **bar-* ‘to bristle (up), to stand on end’; (n.) **bar-a* ‘bristle, point, spike’ (no. 29).
21. **b^hys-* ‘shaggy, coarse, rough, prickly’ < Proto-Nostratic (vb.) **bar-* ‘to be thick, bushy, shaggy; to be coarse, rough, harsh’; (n.) **bar-a* ‘roughness, coarseness, harshness; thickness, shagginess’; (adj.) ‘rough, harsh, coarse; thick, shaggy, bushy’ (no. 31).
22. **b^her-/*b^hor-/*b^hy-* ‘to bear, to carry; to bring forth, to bear children’, **b^her-no-s/*b^hor-no-s* ‘son, child’ < Proto-Nostratic (vb.) **bar-* ‘to bear children, to give birth’; (n.) **bar-a* ‘child’ (no. 32).
23. **b^har(s)-* ‘grain’ (> ‘barley’) < Proto-Nostratic (n.) **bar-a* ‘seed, grain’ (no. 34).
24. **b^herEk’-*, **b^hreEk’-* (> **b^hrēk’-*) ‘to shine, to gleam, to be bright’ and **b^hrek^h-* ‘to shine, to glitter’ < Proto-Nostratic (vb.) **bar-* ‘to shine, to be bright, to sparkle, to flash’; (n.) **bar-a* ‘light, brightness; lightning’ (no. 35).
25. **b^her-/*b^hor-/*b^hy-* ‘to be kind, charitable, beneficent; to do good’ < Proto-Nostratic (vb.) **bar-* ‘to be kind, charitable, beneficent; to do good’; (n.) **bar-a* ‘goodness, kindness’; (adj.) ‘good, kind, beneficent’ (no. 36).
26. **b^her-/*b^hor-/*b^hy-* ‘to strike, to smite, to beat, to knock, to cut, to thrust, to hit; to kill by striking, to give a death blow, to slay’; **b^hord^h-/*b^hṛd^h-*, **b^hred^h-* ‘(piece) cut off’; **b^her-ew-/*b^her-ow-/*b^her-u-* ‘to break into pieces, to cut or break off’; **b^her-ew-s-/*b^her-ow-s-/*b^her-u-s-* ‘to cut or break into pieces; to smash, to crush, to crumble, to shatter’; **b^hreyH-*, **b^hriH-* (> **b^hri-*) ‘to cut, to clip, to scrape’; and **b^her-s-/*b^hor-s-/*b^hy-s-* **b^her-es-/*b^hor-es-/*b^hy-s-* ‘to split into parts; to break, to divide’ < Proto-Nostratic (vb.) **bar-* ‘to split (with a tool or weapon); to cut, to cut into; to carve; to scrape’; (n.) **bar-a* ‘carving, engraving, cuttings, chip’ (no. 37).
27. **b^her-/*b^hor-/*b^hy-* ‘to make a sound, to hum, to buzz, to mutter’; **b^herk’-/*b^hork’-/*b^hyk’-* ‘to drone, to bark’; and **b^herm-/*b^horm-/*b^hym-*, **b^hrem-/*b^hrom-/*b^hym-* ‘to buzz, to hum, to make a sound’ < Proto-Nostratic (vb.) **bar-* ‘to make a sound, to utter a noise’; (n.) **bar-a* ‘sound, noise’ (no. 38).

28. **b^her-/b^hor-/b^hy-* ‘a stinging or biting insect’ < Proto-Nostratic (n.) **bar-a* used as the base for several insect names (no. 39).
29. **b^hewd^h-/b^howd^h-/b^hud^h-* ‘to be or become aware of’ < Proto-Nostratic (vb.) **baw-* ‘to be or become aware of or acquainted with, to observe, to notice’; (n.) **baw-a* ‘awareness, knowledge’ (no. 43).
30. **b^hey-/b^hoy-/b^hi-* ‘to give, to share’ (Anatolian only in this sense) < Proto-Nostratic (vb.) **bay-* ‘to apportion, to divide into shares, to distribute, to allot, to share’; (n.) **bay-a* ‘portion, share’ (no. 44).
31. **b^hey-/b^hoy-/b^hi-* ‘honey, bee’ < Proto-Nostratic (n.) **bay-a* ‘honey, bee’ (no. 45).
32. **b^hōr-* ‘swamp’ (Slavic only) < Proto-Nostratic (n.) **ber-a* ‘swamp’ (no. 47).
33. **(-)b^hi/y-, *-b^ho-* ‘in, with, within, among’ < Proto-Nostratic **bi* ‘in addition to, with, together with’ (no. 50).
34. **b^herg^h-/b^horg^h-/b^hyrg^h-* ‘(adj.) high, tall; (n.) mountain, hill’ < Proto-Nostratic (vb.) **bir-* ‘to swell, to rise, to grow’; (n.) **bir-a* ‘largeness, greatness, height, tallness’; (adj.) ‘big, large, great, tall’; (extended form) (vb.) **bir-V-g-* ‘to be high’; (n.) **bir-g-a* ‘height, high place’; (adj.) ‘high, tall, lofty’ (no. 53).
35. **b^hr-uH-k’- (> *b^hrūk’-)* ‘(vb.) to enjoy, to use; (n.) fruit’ < Proto-Nostratic (vb.) **bir^y-* ‘to enjoy, to savor’; (n.) **bir^y-a* ‘fruit’; (extended form) **bir^y-q’-a* ‘plum’ (no. 57).
36. **b^hor-, *b^hru-* (secondary *e*-grade form: **b^her-*) ‘brown’ (< ‘dark-colored’), (reduplicated) **b^he-b^hru-* < Proto-Nostratic (n.) **bor^y-a* ‘a dark color’; (adj.) ‘dark, dark-colored’ (no. 61).
37. *b^hud^h-* with various extensions: **b^hud^h-no-, *b^hud^h-mo- *b^hud^h-men-*, (nasal infix) **b^hu-n-d^h-* ‘bottom, ground, base, depth, lowest part of anything’ < Proto-Nostratic (n.) **bud-a* ‘lowest part or region (of anything)’ (no. 63).
38. **b^huk’-* ‘buck, he-goat’ < Proto-Nostratic (n.) **buk’-a* (~ **bok’-a*) ‘he-goat, buck’ (no. 67).
39. **b^hl-eE-/b^hl-oE-* (> **b^hlē-/b^hlō-*) ‘to puff up, to inflate, to blow up’; **b^hel-g^h-/b^hol-g^h-/b^hl-g^h-* ‘to swell’; and **b^hl-ek’w-/b^hl-k’w-* ‘to swell, to expand’ < Proto-Nostratic (vb.) **bul-* ‘to swell, to expand, to spread out, to overflow; to puff up, to inflate’; (n.) **bul-a* ‘large quantity or amount; expansion, spread, inflation; puff, blow’ (no. 68).

40. **b^hl-* (secondary full-grade forms: **b^hel-/b^hol-*) ‘penis, testicle’ < Proto-Nostratic (n.) **bul-a* ‘penis, testicle(s)’ (no. 69).
41. **b^hul^hfi-/b^hol^hfi-*, **b^hlo^hfi-* (> **b^hlō-*; later also **b^hlē-*) ‘to blossom, to sprout’ < Proto-Nostratic (vb.) **bul-V-γ-* ‘to ripen, to blossom, to bloom, to sprout, to mature’; (n.) **bul-γ-a* ‘increase, growth, ripening, maturity, prosperity, blossoming’ (no. 70).
42. **b^humb^hul-*, **b^homb^hol-* ‘puff, bubble, bulge, swelling’ < Proto-Nostratic (reduplicated) (vb.) **bul-bul-* (> **bum-bul-* in Dravidian, Kartvelian, Indo-European, and Altaic) ‘to swell, to bubble up’; (n.) **bul-bul-a* (> **bum-bul-a*) ‘puff, bubble, swelling’ (no. 71).
43. **b^hl-en-d^h-/b^hl-on-d^h-/b^hl-ŋ-d^h-* ‘to mix, to blend, to stir, to confuse’ < Proto-Nostratic (vb.) **bul-* ‘to mix, to mix up, to confuse’; (n.) **bul-a* ‘mixture, confusion, turbidity, blur’ (no. 72).
44. **b^hl-en-d^h-/b^hl-on-d^h-/b^hl-ŋ-d^h-* ‘mixed or dark colored’ < Proto-Nostratic (n.) **bul-a* ‘that which is dark, dark-colored; that which has mixed colors, that which is spotted’ (no. 73).
45. **b^hol-/b^hl-* ‘(adj.) worn out, weak; (n.) misfortune, calamity’ < Proto-Nostratic (vb.) **bul-* ‘to crush, to grind, to weaken, to wear down; to become worn out, weak, tired, old’; (n.) **bul-a* ‘that which is worn out, weak, tired: weakness, decline, decay, wear, etc.’; (adj.) ‘worn out, weak, tired, old’ (no. 74).
46. **b^hong^h-/b^hŋg^h-* (secondary full-grade form: **b^heng^h-*) ‘to swell, to fatten, to grow, to increase’, **b^hŋg^hu-* ‘swollen, fat, thick’ < Proto-Nostratic (vb.) **bun-* ‘to puff up, to inflate, to expand, to swell’; (n.) **bun-a* ‘swelling, lump, hump, growth, rounded protuberance’; (extended form) (vb.) **bun-V-g-* ‘to swell, to increase, to expand’; (n.) **bun-g-a* ‘swelling’; (adj.) ‘swollen, fat, thick’ (no. 76).
47. **b^hor-/b^hɣ-* ‘to bore, to pierce’ < Proto-Nostratic (vb.) **bur-* ‘to bore, to pierce’; (n.) **bur-a* ‘gimlet, borer, auger’ (no. 80).
48. **b^hur-/b^hɣ-* ‘to move rapidly, to rage, to quiver, to palpitate’ < Proto-Nostratic (vb.) **bur-* ‘to blow, to blow about, to whirl, to rage’; (n.) **bur-a* ‘storm, whirl, rage’ (no. 81).
49. **b^hor-/b^hɣ-* ‘to chew, to devour’ (Indo-Iranian only) < Proto-Nostratic (vb.) **bur-* ‘to bite, to eat’; (n.) **bur-a* ‘food’ (no. 82).
50. **b^hur-* ‘(vb.) to cover; (n.) covering’ (reduplicated **b^hur-b^hur-*) < Proto-Nostratic (vb.) **bur-* ‘to cover, to wrap up’; (n.) **bur-a* ‘cover, covering’ (no. 83).

51. **b^{hr}-uH-* (> **b^{hr}ũ-*) ‘eyelash, eyebrow’ < Proto-Nostratic (n.) **bur-a* ‘eyelash, eyebrow’ (no. 86).
52. **b^{hr}-em-* ‘buzzing insect’ (Germanic only) < Proto-Nostratic (n.) **bur^y-a* used as the base for several insect names, perhaps originally ‘buzzing insect’ (if this be the case, the following underlying verb form may be implied here: Proto-Nostratic **bur^y-* ‘to make a buzzing sound’) (no. 87).
53. **b^{he}wH-/b^howH-/b^huH-* (> **b^hũ-*) ‘to spend (time), to abide, to dwell’ < Proto-Nostratic (vb.) **buw-* ‘to go, to come, to proceed, to spend time’; (n.) **buw-a* ‘going, coming, staying; abode, dwelling, residence’ (no. 88).
54. **b^{he}wH-/b^howH-/b^huH-* (> **b^hũ-*) ‘to become, to arise, to come into being, to grow’ < Proto-Nostratic (vb.) **buw-* ‘to become, to arise, to come into being, to grow’; (n.) **buw-a* ‘growth, fullness, prosperity; blossom, bloom’ (no. 89).

PROTO-NOSTRATIC **p^h* (> PROTO-AFRASIAN **p*) >
PROTO-INDO-EUROPEAN **p^h*

55. **p^heh^hh-* [**p^hah^hh-*]/**p^hoh^hh-* (> **p^hā-/p^hō-*) ‘to feed’ < Proto-Nostratic (vb.) **p^hah^h-* ‘to eat’; (n.) **p^hah^h-a* ‘food, nourishment’ (no. 92).
56. **(s)p^hel-*, **(s)p^hl^h-* ‘spleen’ (plus various extensions: **(s)p^hel-g^h-*, **(s)p^hel-g^h-en-*, **(s)p^hel-g^h-eA*, **(s)p^hl-eH-g^h-*, **(s)p^hl^h-n-g^h-*, etc.) < Proto-Nostratic (n.) **p^hal-a* (metathesized variant **lap^h-a* in Uralic, Altaic, and part of Afrasian) ‘spleen’ (no. 94).
57. **(s)p^hel-/*(s)p^hol-/*(s)p^hl^h-*, **(s)p^hl-* (plus various extensions) ‘to split, to cleave’ < Proto-Nostratic (vb.) **p^hal-* ‘to split, to cleave’; (n.) **p^hal-a* ‘split, crack’ (no. 95).
58. **p^hels-/p^hols-/p^hl^hs-* ‘stone’ < Proto-Nostratic (n.) **p^hal-a* ‘stone’ (no. 96).
59. **p^hel-/p^hol-/p^hl^h-*; **p^hel^hh-*, **p^hle^hh-* [**p^hla^hh-*] (> **p^hlā-*), **p^hl^hh-* ‘level, flat, wide, broad’ < Proto-Nostratic (vb.) **p^hal-* ‘to spread, to extend’; (n.) **p^hal-a* ‘that which is wide, flat, level, broad, open: expanse, open space or surface’; (adj.) ‘wide, flat, level, broad, open’ (no. 97).
60. **p^hl^hh-meA* [**p^hl^hh-maA*] ‘palm of the hand’ < Proto-Nostratic (n.) **p^hal-a* ‘flat of the hand, palm’ (no. 98).

61. **p^helʔ-/p^holʔ-/p^hlʔ-*, **p^hleʔ-/p^hloʔ-* (> **p^hlē-/p^hlō-*) ‘to fill’ < Proto-Nostratic (vb.) **p^hal-* ‘to fill’; (n.) **p^hal-a* ‘fullness’; (adj.) ‘much, many’ (no. 99).
62. **p^hlH-* ‘fortified settlement’ < Proto-Nostratic (n.) **p^hal-a* ‘settlement, settled place’ (no. 100).
63. **p^hol-*, **p^hōl-* ‘thumb, big toe’ < Proto-Nostratic (n.) **p^hal-a* ‘thumb, big toe’ (no. 101).
64. **p^hel-/p^hol-/p^hl-* ‘to cover, to hide, to conceal’ < Proto-Nostratic (vb.) **p^hal-* ‘to cover, to hide, to conceal’; (n.) **p^hal-a* ‘covering’ (no. 102).
65. **p^hel-/p^hol-*, **p^hl-oH-* (> **p^hl-ō-*) ‘to burn, to be warm; to smart, to be painful’ < Proto-Nostratic (vb.) **p^haly-* ‘to burn, to be warm; to smart, to be painful’; (n.) **p^haly-a* ‘burn, burning sensation, pain’ (no. 103).
66. **p^henk^{wh}e* ‘five’; **p^hηk^{wh}-st^hi-* ‘fist’; **p^henk^{wh}-rō-* ‘finger’ < Proto-Nostratic (vb.) **p^haŋ-* ‘to take in hand, to take hold of, to handle’; (n.) **p^haŋ-a* ‘hand, handle’; (extended form in Indo-European and Uralic) (vb.) **p^haŋ-V-k^{wh}-* ‘to take in hand, to take hold of, to handle’; (n.) **p^haŋ-k^{wh}-a* ‘hand, handle’ (no. 104).
67. **p^hreyH-/p^hroyH-/p^hriH-* (> **p^hri-*) ‘to be fond of, to care for, to feel affection for; to be pleased, happy, satisfied, or delighted with’ < Proto-Nostratic (vb.) **p^har-* ‘to be fond of, to care for, to feel affection for; to be pleased, happy, satisfied, or delighted with’; (n.) **p^har-a* ‘love, affection; delight, joy’ (no. 106).
68. **p^her-/p^hor-/p^hɣ-* ‘to separate, to divide’ < Proto-Nostratic (vb.) **p^har-* ‘to separate, to divide, to break (apart)’; (n.) **p^har-a* ‘part, portion, share’ (no. 107).
69. **p^her-/p^hor-/p^hɣ-* ‘to spray, to sprinkle, to scatter’ (extended forms: **p^her-s-/p^hor-s-/p^hɣ-s-*, **p^hr-ew-/p^hr-ow-/p^hr-u-*, **p^hr-eE-* [> **p^hr-ē-*]); **p^herk^h-/p^hrok^h-/p^hɣk^h-* ‘spotted, speckled’; and **(s)p^her-/*(s)p^hor-/*(s)p^hɣ-* ‘to spread, to scatter, to strew’ < Proto-Nostratic (vb.) **p^har-* ‘to spread, to scatter’; (n.) **p^har-a* ‘breadth, width, extension, space’; (adj.) ‘broad, spread out, extended, scattered’ (no. 108).
70. **p^her-/p^hor-/p^hɣ-* base of prepositions and preverbs with a wide range of meanings such as ‘in front of, forward, before, first, chief, forth, foremost, beyond’ < Proto-Nostratic (vb.) **p^har-* ‘to press forward, to precede, to hasten in advance, to overtake, to surpass, to outstrip’; (n.) **p^har-a* ‘leader, master, lord, hero’; (adj.) ‘chief, foremost, first’ (no. 109).

71. **pher-/phor-/ph̥y-* ‘(vb.) to fly, to flee; (n.) feather, wing’ < Proto-Nostratic (vb.) **phar-* ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated; to flutter, to fly, to flee’; (n.) **phar-a* ‘flying, flight, fleeing’ (no. 110).
72. **phor-/ph̥y-* ‘young bull or calf’ < Proto-Nostratic (n.) **phar-a* ‘calf, heifer’ (no. 112).
73. **phēr* (nom.-acc. sg.) ‘house’, (oblique cases) **ph̥y-n-* (Anatolian only) < Proto-Nostratic (n.) **phar-a*, (?) **phur-a* ‘house’ (no. 113).
74. **pher-/phor-/ph̥y-* ‘to go or pass; to go or pass over or across; to go forth or out’ < Proto-Nostratic (vb.) **phar-* ‘to go or pass; to go or pass over or across; to go forth or out’; (n.) **phar-a* ‘going, passage, journey, crossing’ (no. 114).
75. **phes-t’-/phos-t’-* ‘to fart’ < Proto-Nostratic (vb.) **phas̥y-* ‘to breathe out, to blow; to fart’; (n.) **phas̥y-a* ‘a fart’ (no. 117).
76. **phes-/phos-* ‘penis’ < Proto-Nostratic (n.) **phas̥y-a* ‘sperm, semen; male genitals, penis; descendant, offspring’ (no. 119).
77. **pheth-/photh-* ‘to fly, to rush, to pursue; to fall, to fall down’ < Proto-Nostratic (vb.) **path-* ‘to flutter, to quiver, to tremble, to palpitate, to move rapidly’; (n.) **path-a* ‘haste, hurry’ (no. 120).
78. **pheth-* (secondary *o*-grade form: **ploth-*) ‘to be wide, open, spacious, spread out; to stretch, to extend, to spread out’ < Proto-Nostratic (vb.) **path-* ‘to spread, to open; to burst open; to be open’; (n.) **path-a* ‘opening, open space’; (adj.) ‘open, spacious; wide, broad’ (no. 121).
79. **phet’-/phot’-* ‘foot’ < Proto-Nostratic (vb.) **pat’-* ‘to hasten, to move quickly’; (n.) **pat-a* ‘foot’ (no. 122).
80. **phek^{wh}-* ‘to bake, to cook, to roast’ < Proto-Nostratic (vb.) **phek^{wh}-* ‘to warm, to heat’ (> ‘to cook, to bake’); (n.) **phek^{wh}-a* ‘warmth, heat’; (adj.) ‘warm, hot’ (> ‘cooked, baked’) (no. 124).
81. **phel-/ph̥l-* (secondary *o*-grade form: **phol-*) ‘to tremble, to shake; to be frightened, fearful, afraid’ < Proto-Nostratic (vb.) **phel-* ‘to tremble, to shake; to be frightened, fearful, afraid’; (n.) **phel-a* ‘fright, fear’ (no. 125).
82. **ph̥lH-* ‘filly, foal, colt’ (Germanic only) < Proto-Nostratic (n.) **phily-a* ‘child, infant, youth, young of animals’ (no. 127).

Note: A related verb stem **phily-* ‘to wean’ may cautiously be reconstructed here.

83. **phen-* ‘food, protection’ < Proto-Nostratic (vb.) **phin^v-* ‘to watch (over), to protect, to nourish, to nurture’; (n.) **phin^v-a* ‘protection, care; feeding, nourishing, nourishment’ (no. 128).
84. **pher-/p_hṛ-* ‘to bear, to bring forth’ < Proto-Nostratic (vb.) **phir-* ‘to bring forth, to bear fruit’; (n.) **phir-a* ‘birth, issue, offspring, descendant, fruit’ (no. 129).
85. **pheri* ‘around’ < Proto-Nostratic (vb.) **phir-* ‘to twist, to turn’; (n.) **phir-a* ‘twist, twining, turn; twine, string, rope, cord’ (no. 131).
86. **pherkh-/p_hṛkh-* (secondary *o*-grade form: **p_horkh-*) ‘to be afraid, to fear’ < Proto-Nostratic (vb.) **phir-* ‘to tremble, to shake; to be afraid, to fear’; (n.) **phir-a* ‘trembling, fear’ (no. 132).
87. **phit-* ‘(vb.) to give birth to; (n.) birth; vulva, womb’ < Proto-Nostratic (vb.) **phit^y-* ‘to give birth to’; (n.) **phit^y-a* ‘genitals (male or female); birth, origin’ (no. 133).
88. **pho[?](i/y)-* ‘to swell, to fatten’ and **pho[?](i/y)-* ‘to drink, to swallow’ < Proto-Nostratic (vb.) **phu[?]-* ‘to swell, to fatten’; (n.) **phu[?]-a* ‘swelling, fullness, fat(ness)’ (no. 134).
89. **phol-* ‘to fall, to fall down’ < Proto-Nostratic (vb.) **phul-* ‘to fall, to fall down, to collapse, to ruin’; (n.) **phul-a* ‘fall, collapse, ruin’; (adj.) ‘fallen, ruined, weakened; low, base, vile, mean’ (no. 135).
90. **phus-* ‘to puff, to blow; to blow up, to inflate; to swell, to grow’ < Proto-Nostratic (vb.) **phuš-* ‘to breathe out, to sigh; to blow, to puff (up), to inflate’; (n.) **phuš-a* ‘puff, breath, snort; bulge’ (no. 139).

PROTO-NOSTRATIC *p^h (> PROTO-AFRASIAN *f) >
PROTO-INDO-EUROPEAN *p^h

91. **phéh_hhur-* [**pháh_hhur-*], **phə_hh-wór-* ‘fire’ (heteroclitic *-r/-n*-stem: gen. sg. **ph_hhu-n-és*) < Proto-Nostratic (vb.) **pha_h-* ‘to warm, to heat, to burn’; (n.) **pha_h-a* ‘fire, flame, spark’; (extended form) (vb.) **pha_h-Vw-* ‘to warm, to heat, to burn’; (n.) **pha_h-w-a* ‘fire, flame, spark’ (no. 140).
92. **phel-* ‘skin, hide’ < Proto-Nostratic (n.) **phal-a* ‘skin, hide’ (no. 141).
93. **(s)phel-/*(s)phol-/*(s)p_hḷ-*, **(s)p_hl-* (plus various extensions) ‘to split, to cleave’ < Proto-Nostratic (vb.) **phily-* ‘to split, to cleave’; (n.) **phily-a* ‘split, crack’ (no. 143).

94. **p^herkh-/p^horkh-/p^hrk^h-, *p^hrek^h-/p^hrok^h-/p^hrk^h-* ‘to ask, to request’ < Proto-Nostratic (vb.) **p^hir-* ‘to ask, to request, to entreat, to beseech, to pray’; (n.) **p^hir-a* ‘request, entreaty, prayer’ (no. 145).
95. **p^hut^h-* ‘vulva’ < Proto-Nostratic (n.) **p^hut^h-a* ‘hole, opening’ (no. 147).
96. **p^hũ-* ‘to puff, to puff up, to blow’ < Proto-Nostratic (vb.) **p^huw-* ‘to puff, to blow, to exhale; to puff up, to inflate’; (n.) **p^huw-a* ‘a puff, the act of blowing, breath’ (no. 148).

PROTO-NOSTRATIC *p’ > PROTO-INDO-EUROPEAN *p’

97. **p’āp’aA* (> **p’āp’ā*) ‘old woman’ < Proto-Nostratic (n.) **p’ap’a-* ‘old man, old woman’ (nursery word) (no. 149).

Note: The forms from the individual daughter languages are phonologically ambiguous.

98. **p’ul-, *p’ol-* ‘swollen, round’, (reduplicated) **p’ulp’ul-, *p’olp’ol-* (dissimilated to **p’ump’ul-, *p’omp’ol-; *p’omp’ul-*) < Proto-Nostratic (vb.) **p’ul-* ‘to swell’; (n.) **p’ul-a* ‘swelling, hump, lump, bulge’; (adj.) ‘swollen, round, bulbous’ (no. 150).

PROTO-NOSTRATIC *d > PROTO-INDO-EUROPEAN *d^h

99. **-d^he, *-d^hi* suffixed particle < Proto-Nostratic **da* ‘along with, together with, in addition to’ (no. 153).
100. **d^habh-* ‘to fit together’ < Proto-Nostratic (vb.) **dab-* ‘to make fast, to join together, to fit together, to fasten (together)’; (n.) **dab-a* ‘joining, fitting, fastening’ (no. 155).
101. **d^heg^h-om-, *d^hg^h-om-* ‘earth, land, ground; human being’ < Proto-Nostratic (vb.) **dag-* ‘to put, to place, to put in place; to be put in place, to be stable, to be firmly established’; (n.) **dag-a* ‘place’ (no. 156).
102. **d^hogh-o-* ‘day’ (Germanic only), **d^hg^hyes-* ‘yesterday’ < Proto-Nostratic (vb.) **dag-* ‘to glitter, to shine, to burn’; (n.) **dag-a* ‘day’ (no. 157).
103. **d^hel-b^h-/*d^hol-b^h-/*d^hl^h-b^h-* ‘to dig, to hollow out’, **d^hel-g^h-/*d^hol-g^h-/*d^hl^h-g^h-* ‘to gash, to wound’, and **d^hel-k’-/*d^hol-k’-/*d^hl^h-k’-* ‘(vb.) to prick, to pierce; (n.) sharp object’ < Proto-Nostratic (vb.) **dal-* ‘to cut, to prick, to

pierce, to gash, to notch, to gouge, to wound'; (n.) **dal-a* 'gash, notch, strike, split' (no. 158).

104. **dher-gh-/*dhor-gh-/*dhy-gh-*, **dhr-egh-/*dhr-ogh-/*dhy-gh-* 'to turn' < Proto-Nostratic (vb.) **dar-* 'to bend, to twist, to turn; to twist, wrap, or join together'; (n.) **dar-a* 'bend, turn, curve; that which bends, turns, winds, or twists: winding course or way'; (adj.) 'bent, curved, crooked; wrapped, twisted, turned, or joined together' (no. 162).
105. **dhr-ew-gh-* 'to hurt, to harm', **dhr-ew-s-* 'to break, to shatter', **dhr-u-bh-* 'to break, to shatter' (Greek only), and **dhr-ew-s-* 'to break, to shatter' < Proto-Nostratic (vb.) **dar-* 'to pound, to break; to harm, to injure, to torment'; (n.) **dar-a* 'harm, injury'; (adj.) 'harmful, malevolent' (> 'bad' in Kartvelian and, within Indo-European, in Celtic) (no. 163).
106. **dher-/*dhor-/*dhy-* '(adj.) dark, dirty; (n.) dirt, filth' < Proto-Nostratic (vb.) **dar-* 'to be or become dark'; (n.) **dar-a* 'dark spot, darkness'; (adj.) 'dark, black' (no. 164).
107. **dhwēn-/*dhwon-/*dhun-* 'to sound, to resound, to make a noise' < Proto-Nostratic (?) (vb.) **daw-* 'to sound, to resound, to make a noise'; (n.) **daw-a* 'sound, noise' (no. 166).
108. **dheW-/*dhow-/*dhu(w)-* 'to put, to place' (Anatolian only) < Proto-Nostratic (vb.) **daw-* 'to put, to place, to set; to set up, to establish; to do, to make'; (n.) **daw-a* 'work, labor; deed, act' (no. 167).
109. **dheW-/*dhow-/*dhu-* 'to pass away, to die' < Proto-Nostratic (vb.) **daw-* 'to become deathly sick, to be ill; to die'; (n.) **daw-a* '(deadly) disease, sickness; death' (no. 168).
110. (**dheyC-* >) **dhẽC-*, (**dheyV-* >) **dheyV-*; (reduplicated) **dhe-dhẽC-* 'to set, to lay, to put, to place' < Proto-Nostratic (vb.) **day-* 'to throw, to cast, to put, to place'; (n.) **day-a* 'act, deed' (no. 169).
111. **dhey-A-/*dhyo-A-/*dhi-A-* (> **dhit-*), **dhyeA-* [**dhyāA-*] (> **dhyā-*) 'to look at, to fix one's eyes on' < Proto-Nostratic (vb.) **day-* 'to look at, to consider, to examine'; (n.) **day-a* 'judgment, examination, consideration' (no. 170).
112. (?) **dhidh-* 'big, large, great' (Baltic only) < Proto-Nostratic (vb.) **did-* 'to swell, to rise'; (n.) **did-a* 'prominence, protuberance'; (adj.) 'swollen, raised' (no. 172).
113. **dghuH-* (> **dghū-*) 'fish' < Proto-Nostratic (n.) **dig-a* 'fish' (no. 173).

114. **d^hel-* ‘to be shining, bright’ < Proto-Nostratic (vb.) **dil^y-* ‘to shine, to be or become bright’; (n.) **dil^y-a* ‘daylight, morning’ (no. 175).
115. **d^hm^bh-* ‘burial mound, kurgan’ < Proto-Nostratic (n.) **dim-a* ‘raised or elevated place’; (adj.) ‘raised, elevated’ (no. 176).
116. **d^hiq^h-* > (with progressive voicing assimilation) > **d^high-* (secondary full-grade forms: **d^heyg^h-*, **d^hoyg^h-*) ‘(vb.) to pound, to mold (clay), to knead (dough); (n.) clay’ < Proto-Nostratic (vb.) **diq^h-* ‘to crush, to pound or tamp (earth), to mold or knead (clay)’; (n.) **diq^h-a* ‘earth, clay, mud’ (no. 177).
117. **d^hẽ(i/y)-*/**d^hõ(i/y)-* ‘to suck, to suckle’ < Proto-Nostratic (vb.) **diy-* ‘to suck, to suckle’; (n.) **diy-a* ‘breast, teat, nipple’ (no. 178).
118. **d^how-ks-*/**d^hu-ks-* ‘to be weary’ < Proto-Nostratic (vb.) **dow-*, **doy-* ‘to slacken, to slow down; to grow weary, weak, faint’; (n.) **dow-a*, **doy-a* ‘slackness, slowness, laxity, weariness, fatigue’; (adj.) ‘slow, slack, lax, weary’ (no. 179).
119. **d^hul-* ‘(vb.) to be disturbed, confused, perplexed, troubled; (adj.) mad, raving, crazy, insane’ (secondary full-grade forms: **d^hwel-*/**d^hwol-*) < Proto-Nostratic (vb.) **dul-* ‘to disturb, to perplex, to bewilder, to confuse, to ruffle, to upset, to baffle, to stir up trouble, to agitate; to be disturbed, perplexed, bewildered, confused, ruffled, upset, baffled, troubled, agitated’ (> ‘to drive someone crazy, mad, insane; to be crazy, mad, insane; to be dumb, stupid’); (n.) **dul-a* ‘confusion, disturbance, trouble, agitation, perplexity’ (> ‘madness, craziness, insanity; stupidity’) (no. 183).
120. **d^hol-*/**d^hl-* (secondary *e*-grade form: **d^hel-*) ‘to swing, to dangle’ < Proto-Nostratic (vb.) **dul^y-* ‘to dangle, to hang, to swing back and forth’; (n.) **dul^y-a* ‘hanging, swinging; shaking, agitation, disturbance’ (no. 184).
121. **d^hm^bh-* (‘to be silent’ > ‘to be deprived of speech’ >) ‘to be dumb, mute’ < Proto-Nostratic (vb.) **dum-* ‘to be silent’; (n.) **dum-a* ‘silence’ (no. 186).
122. **d^hm-* (secondary full-grade forms: **d^hem-*/**d^hom-*) ‘(vb.) to become dark, to make dark, to darken; (adj.) dark, cloudy; (n.) darkness, cloud’ < Proto-Nostratic (vb.) **dum-* ‘to cover over, to obscure; to become dark, to make dark, to darken; to cloud over’; (n.) **dum-a* ‘darkness, cloud, fog’; (adj.) ‘dark, cloudy’ (no. 187).
123. **d^hnk^w-* (secondary full-grade forms: **d^henk^w-*/**d^honk^w-*) ‘(vb.) to cover over, to obscure, to be or become dark; (adj.) dark’ < Proto-Nostratic (n.) (**dum-k^w-a* >) **dun-k^w-a* ‘darkness, cloud’; (adj.) ‘dark, cloudy’ (no. 188).

124. **d^hη-* (secondary full-grade forms: **d^hen-/d^hon-*) ‘to run, to flow’ < Proto-Nostratic (vb.) **dun-* ‘to run, to flow (out), to leak’; (n.) **dun-a* ‘flow, spill, leak’ (no. 189).
125. **d^hη-* (secondary full-grade forms: **d^hen-/d^hon-*) ‘to cut, to cut off, to cleave’ < Proto-Nostratic (vb.) **dun^v-* ‘to cut off, to cleave, to split’; (n.) **dun^v-a* ‘part, share; piece cut off, bit, fragment’ (no. 190).
126. **d^hur-* ‘(vb.) to pierce, to penetrate; (n.) any pointed object: spike, prong, dagger, fork, pole, etc.’ < Proto-Nostratic (vb.) **dur-* ‘to bore, to drill, to make a hole’; (n.) **dur-a* ‘hole, opening’ (no. 191).
127. **d^hew-/d^how-/d^hu-, *d^hewH-/d^howH-/d^huH- (> **d^hū-*), **d^hweE-/d^hwoE-/d^huE- (> **d^hwē-/d^hwō-/d^hū-*), **d^hwes-/d^hwos-/d^hus-* ‘to blow about, to fly about; to be blown, strewn, or scattered about’, **d^huH-mo-s (> **d^hū-mo-s*)* ‘smoke, vapor, mist’ < Proto-Nostratic **duw-* (vb.) ‘to blow about, to fly about, to scatter; to be blown, strewn, or scattered about’; (n.) **duw-a* ‘anything blown, sprinkled, scattered, or strewn about; smoke, steam, vapor; rain, shower, drizzle, raindrops, dust’; (adj.) ‘blown about, sprinkled, scattered, strewn’ (no. 193).**

PROTO-NOSTRATIC **t^h* > PROTO-INDO-EUROPEAN **t^h*

128. **t^ho-* demonstrative pronoun stem < Proto-Nostratic demonstrative stems: (proximate) **t^ha-* ‘this’, (intermediate) **t^hi-* ‘that’, and (distant) **t^hu-* ‘that yonder’ (no. 194).
129. **t^he^hh-* [**t^ha^hh-*] (> **t^hā-*; **t^hā-y-*, **t^hā-w-*) ‘to melt, to dissolve’ < Proto-Nostratic (vb.) **t^ha^h-* ‘to reduce, to diminish, to wear away, to lessen; to waste away, to grow thin’; (n.) **t^ha^h-a* ‘wear, decay, dissipation, maceration’ (no. 195).
130. **t^hek^h(s)-/t^hok^h(s)-* ‘to form, to fashion, to make, to create, either by using a sharp tool or by bending, weaving, joining, braiding, or plaiting together’ < Proto-Nostratic (vb.) **t^hak^h-* ‘to twist, to bend; to fasten, twist, bend, join, or hook together; to be twisted, bent’; (n.) **t^hak^h-a* ‘hook, peg’ (no. 196).
131. **t^hak’-* ‘to touch, to strike, to push, to stroke’ < Proto-Nostratic (vb.) **t^hak’-* ‘to touch, to push, to strike’; (n.) **t^hak’-a* ‘touch, stroke’ (no. 197).
132. **t^hl^hH-* ‘head, top, end; headman, chief’ < Proto-Nostratic (n.) **t^hal-a* ‘head, top, end’ (no. 198).

133. **thel-/thol-/thl-* ‘to stretch, to extend; to bear, to endure, to suffer’ < Proto-Nostratic (vb.) **thalv-* (primary meaning) ‘to stretch, to spread, to extend’, (secondary meaning) ‘to endure, to suffer, to bear’; (n.) **thalv-a* ‘stretch, spread, thinness, breadth; pain, suffering, endurance’; (adj.) ‘stretched, spread out, extended’ (> ‘broad, wide, thin, flat, etc.’) (no. 199).
134. **thel-kh-/thol-kh-/thl-kh-* ‘to push, to thrust, to knock, to strike’ < Proto-Nostratic (vb.) **thalv-* ‘to press, to thrust, to force, to push’; (n.) **thalv-a* ‘pressure, thrust, force, push’ (no. 200).
135. **then-/thon-/thn-* ‘to extend, to spread, to stretch’; **thən-ú-s* ‘stretched, thin’; **then-kh-* ‘to stretch, to extend’; and **then-ph-* (> [through assimilation] **them-ph-*) ‘to stretch’ < Proto-Nostratic (vb.) **thanv-* ‘to extend, to spread, to stretch; to endure, to be long-lasting’; (n.) **thanv-a* ‘extension, width, length, breadth’; (adj.) ‘stretched, extended, wide, broad, long-lasting’ (no. 201).
136. **thən-ú-s* ‘stretched, thin; tired, weak, feeble’ < Proto-Nostratic (vb.) **thanv-* ‘to grow weary, exhausted, tired, old’; (n.) **thanv-a* ‘exhaustion, weariness, fatigue, old age’; (adj.) ‘tired, weary, exhausted, old’ (no. 202).
137. **thaph-* ‘to press, to tread, to trample’ < Proto-Nostratic (vb.) **thaph-* ‘to strike, to knock, to hit, to beat, to pound; to trample’; (n.) **thaph-a* ‘stroke, slap, blow, hit’ (no. 203).
138. **thr-eA-g^h-/thr-oA-g^h-* (> **thrāgh-/thrōgh-*) ‘to draw, to drag, to pull’ and **thr-ek^h-/th^h-kh-* ‘to pull’ < Proto-Nostratic (vb.) **thar-* ‘to draw, to drag, to pull’; (n.) **thar-a* ‘drag, pull; something dragged or pulled along’ (no. 204).
139. **sther-* ‘to spread, to spread out or about, to scatter, to strew’ < Proto-Nostratic (vb.) **thar-* ‘to spread, to spread out or about, to expand, to extend; to stretch, to stretch out; to scatter, to strew’; (n.) **thar-a* ‘stretch, spread, expanse’; (adj.) ‘stretched, tight, taut; spread, scattered, dispersed’ (no. 205).
140. **ther-/thor-/th^h-* ‘to rub, to wear down’ < Proto-Nostratic (vb.) **thar-* ‘to rub, to wear down’; (n.) **thar-a* ‘wear’; (adj.) ‘worn out, rubbed, abraded’ (no. 207).
141. **thers-/thors-/th^hs-* ‘to dry up, to wither; to become thirsty’ < Proto-Nostratic (vb.) **thar-* ‘to wither, to wane, to dry up’; (n.) **thar-a* ‘dryness’; (adj.) ‘withered, dry, dried up, arid’ (no. 208).
142. **ther-s-, *thr-es-* ‘to tremble, to shake’ and **thr-em-/thr-om-/thr-m-* ‘to tremble, to shake’ < Proto-Nostratic (vb.) **thar-* ‘to tremble, to shake’; (n.) **thar-a* ‘trembling, shaking (from fear, fright)’ (no. 211).

143. **thew-/thow-/thu-*, **thewH-/thowH-/thuH-* (> **thū-*) ‘to swell; to be swollen, fat’ < Proto-Nostratic (vb.) **thaw-* ‘to swell’; (n.) **thaw-a* ‘swelling, protuberance, bulge, lump, hump’; (adj.) ‘swollen, full, fat’ (no. 212).
144. **theph-* ‘to warm, to burn; to be warm’ (secondary *o*-grade form: **thoph-*) < Proto-Nostratic (Eurasianic only) (vb.) **theph-* ‘to warm, to burn’; (n.) **theph-a* ‘heat, warmth’ (no. 214).
145. (nom. sg.) **thū* ‘you’, (acc. sg.) **thwē/*thē*, **thwēm/*thēm*, (gen. sg.) **thewe*, **thewo*, (enclitic) **th(w)ey/*th(w)oy* and (2nd pl. verb ending) **-the* < Proto-Nostratic **thi-* second person pronoun stem: ‘you’; (oblique form) **tha-* (no. 215).
146. **thekh(s)-* (secondary *o*-grade form: **thokh(s)-*) ‘to form, to fashion, to make, to create, either by using a sharp tool or by bending, weaving, joining, braiding, or plaiting together’ < Proto-Nostratic (Eurasianic only) (vb.) **thikh-* ‘to form, to fashion, to make, to create’; (n.) **thikh-a* ‘tool used to form, fashion, make, or create something: axe, adze, chisel, etc.; the act of forming, fashioning, making, or creating something: action, deed, etc.’ (no. 216).
147. **thek’-u-* ‘firm, solid, thick’ < Proto-Nostratic (vb.) **thik’-* ‘to press or squeeze together’; (n.) **thik’-a* ‘pressure, solidity, hardness, massiveness, firmness’; (adj.) ‘compact, thick, massive, solid, firm’ (no. 217).
148. **therph-/thorph-/thṛph-*, **threph-/throph-/thṛph-* ‘to have enough, to be satisfied’ < Proto-Nostratic (vb.) **thir-V-ph-* ‘to have enough or more than enough, to have all needs fulfilled, to be satisfied, to have plenty’; (n.) **thir-ph-a* ‘abundance, excess, surplus, plenty’ (extended form of [vb.] **thir-* ‘to have enough or more than enough, to have all needs fulfilled, to be satisfied, to have plenty’; [n.] **thir-a* ‘abundance, fullness’; [adj.] ‘enough, abundant, full’) (no. 219).
149. **thow-g^h-/thu-g^h-* ‘(hoar)frost, snow’ < Proto-Nostratic (vb.) **thow-* ‘to snow’; (n.) **thow-a* ‘snow-storm; snow, (hoar)frost’ (no. 221).
150. **thul-/thḷ-* (secondary full-grade forms: **thel-/thol-*) ‘to lift, to raise’ < Proto-Nostratic (vb.) **thul-* ‘to lift, to raise; to pile up, to stack (in a heap)’; (n.) **thul-a* ‘hill, mound; stack, heap’ (no. 223).
151. **thum-/thm-* (secondary full-grade forms: **them-/thom-*) ‘dark; darkness’ < Proto-Nostratic (vb.) **thum-* ‘to cover over, to hide; to become dark’; (n.) **thum-a* ‘darkness’; (adj.) ‘dark’ (no. 224).
152. **thr-* (**thr-ew-d^h-/thr-ow-d^h-/thr-u-d^h-; *thr-en-k^h-*, etc.), **thṛ-* ‘to cram, to push in, to stuff, to thrust in, to press in’ < Proto-Nostratic (vb.) **thur-* ‘to

cram, to push in, to stuff, to thrust in, to press in'; (n.) **t^hur-a* 'pressure, force, thrust' (no. 226).

PROTO-NOSTRATIC **t*' > PROTO-INDO-EUROPEAN **t*'

153. **t'eḥh-* [**t'aḥh-*] (> **t'ā-*) 'to cleave, to split, to divide'; (extended form) **t'eḥh-y/i-* [**t'aḥh-y/i-*] < Proto-Nostratic (vb.) **t'ah-* 'to break, to split; to crush, to grind, to pound'; (n.) **t'ah-a* 'break, split, division; anything ground or pulverized' (no. 229).
154. **t'ek^h(s)-/*t'ok^h(s)-* 'to do what is fit, appropriate, suitable, proper' < Proto-Nostratic (vb.) **t'akh-* 'to be fit, appropriate, suitable, proper'; (n.) **t'akh-a* 'fitness, appropriateness, suitability, propriety'; (adj.) 'fit, appropriate, proper, suitable' (no. 230).
155. (**t'el-/*t'ol-/*t'l-* 'to stretch, to extend, to lengthen':) (extended forms) **t'l-H-g^ho-* 'long', **t'l-e-Eg^h-* (> **t'lēg^h-*) '(vb.) to stretch, to extend, to lengthen; (n.) length' < Proto-Nostratic (vb.) **t'al-* 'to stretch out, to extend'; (n.) **t'al-a* 'length; height'; (adj.) 'long, tall; high' (no. 233).
156. **t'el-/*t'ol-* 'to drip, to fall in drops, to sprinkle, to wet, to moisten' < Proto-Nostratic (vb.) **t'al-* 'to drip, to fall in drops, to sprinkle, to wet, to moisten'; (n.) **t'al-a* 'dew, (rain) drop, drizzle' (no. 234).
157. **t'em-/*t'om-/*t'ṁ-* (vb.) 'to build, to construct', (n.) **t'om-o-s*, **t'om-u-s* 'house, building, structure' < Proto-Nostratic (vb.) **t'am-* 'to make or construct (something) in a skillful manner' (> 'to build'); (n.) **t'am-a* 'the act of making or constructing (something) in a skillful manner' (> 'craft, skill'); 'that which is made or constructed in a skillful manner' (> 'building, structure'); 'one who makes or constructs (something) in a skillful manner' (> 'craftsman, carpenter') (no. 235).
158. **t'ṁs-u-* 'closely packed or pressed together; thick, dense' < Proto-Nostratic (vb.) **t'an-* 'to fill, to stuff, to pack tightly together'; (n.) **t'an-a* 'closeness, thickness, density; load, burden'; (adj.) 'closely packed or pressed together; close, thick, dense' (no. 236).
159. **t'ep^h-/*t'op^h-* 'to pound, to trample' < Proto-Nostratic (vb.) **t'ap^h-* 'to strike, to beat, to pound'; (n.) **t'ap^h-a* 'stroke, blow' (no. 238).
160. **(s)t'ek'-/*(s)t'ok'-* > (with regressive deglottalization) **(s)t^hek'-/*(s)t^hok'-* 'to cover' < Proto-Nostratic (vb.) **t'aq'-* 'to cover, to protect'; (n.) **t'aq'-a* 'covering' (no. 239).

161. **t'er-/t'or-/t'r-* 'to tear, to rend, to flay' < Proto-Nostratic (vb.) **t'ar-* 'to tear, to rend, to cut, to sever'; (n.) **t'ar-a* 'rip, tear, cut, slice' (no. 240).
162. **t'reph-/t'rop^h-* 'to tear, to rend, to pluck' < Proto-Nostratic (vb.) **t'ar-V-p^h-* 'to tear, to rend, to pluck'; (n.) **t'ar-p^h-a* 'tearing, rending, plucking' (no. 241).
163. **t'ew(A)/t'ow(A)/t'u(A)-* 'to go, to leave, to go away; far off, far away, distant' < Proto-Nostratic (vb.) **t'aw-* 'to go, to leave, to go away; to let go'; (n.) **t'aw-a* 'distance, remoteness'; (adj.) 'far away, remote, at a distance' (no. 242).
164. **t'ew-/t'ow-/t'u-* 'to hit, to strike' < Proto-Nostratic (vb.) **t'aw-* 'to hit, to strike'; (n.) **t'aw-a* 'stroke, blow, injury, harm, damage' (no. 243).
165. **t'ay-wer-/t'ay-wr-* 'brother-in-law on husband's side' < Proto-Nostratic (Eurasian only) (n.) **t'ay-a* '(elder) male in-law, (elder) male relative' (no. 244).
166. **t'ey-/t'oy-/t'i-* 'to shine, to be bright' < Proto-Nostratic (vb.) **t'ay-* or **t'iy-* 'to shine, to gleam, to be bright, to glitter, to glow; to burn brightly'; (n.) **t'ay-a* or **t'iy-a* 'light, brightness, heat' (no. 245).
167. **t'eʔ- (> *t'ē-)* 'to say, to speak' < Proto-Nostratic (vb.) **t'eʔ-* 'to say, to speak'; (n.) **t'eʔ-a* 'sound, speech' (no. 246).
168. **t'el-* (secondary *o*-grade form: **t'ol-*) '(vb.) to say, to tell, to recount; to list, to enumerate; (n.) talk, speech, language; list, enumeration' < Proto-Nostratic (vb.) **t'il-* 'to say, to tell; to recount, to list, to enumerate'; (n.) **t'il-a* 'talk, speech, discourse, tale' (no. 249).
169. (**t'g^huA-/t'g^hweA- > *t'g^hū-/t'g^hwā-* 'tongue' (with widely different reflexes in the daughter languages due to taboo) < Proto-Nostratic (vb.) **t'il-* 'to say, to tell; to recount, to list, to enumerate'; (n.) **t'il-a* 'talk, speech, discourse, tale' (no. 250).
170. **t'er-w/u-/t'or-w/u-, *t'r-ew-/t'r-ow-/t'r-u-* 'tree, wood' < Proto-Nostratic (n.) **t'or^v-a* 'tree, the parts of a tree' (> 'leaf, branch, bark, etc.') (no. 251).
171. (**t'ox^w-C- > *t'ō-, *t'ox^w-V- (> *t'ōw-)* < Proto-Nostratic (Eurasian only) (vb.) **t'ox^w-* 'to give, to bring'; (n.) **t'ox^w-a* 'giving, gift, present' (no. 252).
172. (**t'uʔ^w-o-, *t'uʔ^w-i- > *t'(u)wo-, *t'(u)wi-* 'two' < Proto-Nostratic (vb.) **t'uʔ^w-* 'to separate, divide, or split into two parts; to cut in half'; (n.) **t'uʔ^w-a*

‘separation or division into two; two halves’ (used as the base for the numeral ‘two’ in Indo-European and Altaic) (no. 253).

173. **t'ok'-* > (with regressive deglottalization) **thok'-* (secondary *e*-grade form: **thek'-*) ‘to knock, to beat, to strike’ < Proto-Nostratic (vb.) **t'uk'-* ‘to knock, to beat, to strike, to pound, to trample’; (n.) **t'uk'-a* ‘knock, thump, blow, stroke’ (no. 254).
174. **t'ul-* ‘pin, wedge, peg’ < Proto-Nostratic (Eurasianic only) (n.) **t'ul^y-a* ‘peg, wedge’ (no. 255).
175. **t'om-H-/*t'ṃ-H-* ‘to tame, to subdue’ < Proto-Nostratic (vb.) **t'um-* ‘to quiet, to calm, to pacify, to tame’; (n.) **t'um-a* ‘quietness, calmness, peace, tranquility’; (adj.) ‘quiet, calm, tame, peaceful’ (no. 256).

PROTO-NOSTRATIC **d^y* > PROTO-INDO-EUROPEAN **d^h*

176. **d^heb^h-/*d^hob^h-* ‘to beat, to hit, to strike, to harm, to injure’ < Proto-Nostratic (vb.) **d^yab-* ‘to beat, to hit, to strike, to harm, to injure’; (n.) **d^yab-a* ‘stroke, blow, harm, injury; slaughter, killing’ (no. 258).
177. **d^yak^{wh}-* > (with depalatalization) **d^hak^{wh}-* > (with progressive voicing assimilation) **d^heg^{wh}-/*d^hog^{wh}-* ‘to blaze, to burn’ < Proto-Nostratic (vb.) **d^yak^{wh}-* ‘to blaze, to be bright’; (n.) **d^yak^{wh}-a* ‘(burning) embers, fire, flame’ (no. 259).
178. **d^hanw/u-* ‘a kind of tree’ < Proto-Nostratic (n.) **d^yan-w-a* ‘a kind of tree or bush’ (no. 261).
179. **d^her-/*d^hor-/*d^hr-* ‘to hold firmly in the hand, to support’ < Proto-Nostratic (vb.) **d^yar-* ‘to hold firmly’; (n.) **d^yar-a* ‘firm grip; hand, arm’ (no. 262).
180. **d^hew-/*d^how-* ‘to run, to flow’ < Proto-Nostratic (vb.) **d^yaw-* ‘to run, to flow’; (n.) **d^yaw-a* ‘stream, current, flow’; (adj.) ‘running, flowing’ (no. 263).

PROTO-NOSTRATIC **t^yh* > PROTO-INDO-EUROPEAN **t^h*

181. **t^her-(hh)-/*t^hor-(hh)-/*t^hr-(hh)-, *t^hrehh- [**t^hrahh-/*t^hrohh-* (> **t^hrā-/*t^hrō-*)* ‘to advance to or toward an end or a goal, to pass across or over, to pass through; to achieve an end or a goal, to reach, to come to, to arrive at, to overcome, to overtake; to master, to become master of, to control’ < Proto-Nostratic (vb.) **t^yhar-* ‘to advance to or toward an end or a goal; to attain or

achieve an end or a goal, to reach, to come to, to arrive at'; (n.) **t^har-a* 'advance, arrival, goal, attainment, end, aim; approach' (no. 270).

182. **t^hem-* (secondary full-grade forms: **t^hem-/t^hom-*) 'to strike, to hit, to beat, to stun, to stupefy; to be stunned, stupefied, faint, exhausted, dizzy' < Proto-Nostratic (vb.) **t^hum-* 'to strike, to beat, to pound, to knock; to tire out, to weary; to be or become weak or weary, to fade, to waste away'; (n.) **t^hum-a* 'fatigue, weariness, dullness, stupor' (no. 275).

PROTO-NOSTRATIC **t^y* > PROTO-INDO-EUROPEAN **t*

183. **t'ak^h-* 'to cut or tear into shreds' < Proto-Nostratic (vb.) **t'yak^h-* 'to cut into small pieces, to chop, to chip'; (n.) **t'yak^h-a* 'chip, small piece' (no. 277).
184. **t'el-/t'ol-* 'to cover over, to stretch over' < Proto-Nostratic (vb.) **t'yal-* and/or **t'yil-* 'to overshadow, to cover over, to make dark'; (n.) **t'yal-a* and/or **t'yil-a* 'shade, shadow; covering; darkness' (no. 278).
185. **t'er-w/u-*; **t'r-ew-/t'r-u-*, **t'r-ew-H-/t'r-u-H-* (> **t'r-ū-*) 'to be firm, solid, strong, steadfast' < Proto-Nostratic (vb.) **t'yar-* 'to be or become stuck, joined, or bound together; to be firmly or strongly attached'; (n.) **t'yar-a* 'firmness, solidity, strength'; (adj.) **t'yar-a* 'firm, solid, strong, steadfast' (no. 280).
186. **t'ǵ-s-* 'rough, coarse' < Proto-Nostratic (vb.) **t'yar-* 'to be rough, coarse, rigid, stiff, hard'; (n.) **t'yar-a* 'that which is rough, coarse, rigid, stiff, hard'; (adj.) 'rough, coarse, rigid, stiff, hard' (no. 281).
187. **t'er-/t'or-/t'ǵ-* 'to make a noise; to hum, to buzz, to rattle' and **t'er-/t'or-/t'ǵ-* 'to chirp' < Proto-Nostratic (vb.) **t'yar-* 'to make a noise'; (n.) **t'yar-a* '(rustling or rumbling) noise' (onomatopoeic) (no. 284).
188. **t'ews-/t'ows-/t'us-* 'bad, evil; (prefix) ill-, un-, mis-' < Proto-Nostratic (n.) **t'aw-a* 'bad thing, evil, wickedness'; (adj.) 'bad, evil' (no. 285).
189. **t'en-s-/t'ǵ-s-* (secondary *o*-grade form: **t'on-s-*) 'great mental power, wise decision' < Proto-Nostratic (vb.) **t'iyǵ-* 'to think, to consider'; (n.) **t'iyǵ-a* 'thought, consideration, idea' (no. 286).
190. (**t'or-/t'ǵ-*, **t'r-:*) **t'reA-* [**t'raA-*] (> **t'rā-*); **t'rem-/t'rom-/t'rmǵ-*; **t'rew-/t'row-/t'ru-* 'to run, to flow' < Proto-Nostratic (vb.) **t'yor-* 'to run, to flow'; (n.) **t'yor-a* 'running, flowing'; (adj.) **t'yor-* 'speedy, swift' (no. 288).

PROTO-NOSTRATIC *sʷ > PROTO-INDO-EUROPEAN *s

191. *sem-/som-/sṃ- ‘summer’ < Proto-Nostratic (vb.) *sʷam- ‘to be hot, sunny’;
(n.) *sʷam-a ‘summer’ (no. 289).
192. *saw-s-/su-s- ‘dry’ < Proto-Nostratic (vb.) *sʷaw- ‘to be dry, arid, withered’;
(n.) *sʷaw-a ‘dryness, dry place’; (adj.) ‘dry, arid, withered’ (no. 290).
193. *sew(H)-/sow(H)-/su(H)- ‘to give birth’ < Proto-Nostratic (vb.) *sʷaw- or
*sʷew- ‘to give birth, to bring forth, to be born’; (n.) *sʷaw-a or *sʷew-a ‘son,
child’ (no. 291).
194. (*sewH-/*suH- ‘(wild or domesticated) pig, sow’ and *sw-iH-no-s (>
*swīnos) ‘of, belonging to, or pertaining to a pig’ < Proto-Nostratic (n.)
*sʷaw-a ‘wild boar’ (no. 292).
195. *seḥh^w- [*saḥh^w-] (unattested root) ‘to be or become hot, warm; to heat up, to
make hot, to warm, to burn’; only found with the suffixes *-(e)l-, *-(e)n-:
*seḥh^w-(e)l- (> *sāwel-), *sḥh^w-ōl- (> *swōl-), (*səḥh^w-l- >) *suḥh^w-l- (>
*sūl-); *sḥh^w-en- (> *swen-), *səḥh^w-n- > *suḥh^w-n- (> *sūn-), etc. ‘the sun’
< Proto-Nostratic (vb.) *sʷax^w- ‘to be or become hot, warm; to heat up, to
make hot, to warm, to burn’; (n.) *sʷax^w-a ‘warmth, heat; sun’ (no. 293).
196. *sen-/sṇ- ‘old’ < Proto-Nostratic (vb.) *sʷenʷ- ‘to change, to deteriorate, to
grow old’; (n.) *sʷenʷ-a ‘old age; old person’; (adj.) ‘aged, old’ (no. 294).
197. *sel-ph-/sḷ-ph- (secondary o-grade form: *solph-) ‘fat, butter’ < Proto-
Nostratic (Eurasian only) (n.) *sʷil-a ‘fat, lard’ (no. 295).
198. *sel-/sḷ- (secondary o-grade form: *sol-) ‘to take, to seize’ < Proto-Nostratic
(vb.) *sʷilʷ- ‘to take (away), to seize, to snatch’; (n.) *sʷilʷ-a ‘removal,
robbery, plunder’ (no. 296).
199. *ser-/sr- (secondary o-grade form: *sor-) ‘(vb.) to twist, turn, tie, or string
together; (n.) band, cord, string, thread; sinew, tendon, vein, nerve’ < Proto-
Nostratic (vb.) *sʷir- ‘to twist, turn, tie, or bind together’; (n.) *sʷir-a ‘band,
cord, any cord-like object: sinew, tendon, nerve, vein’ (no. 297).
200. *sol- ‘whole, sound, well, safe’ < Proto-Nostratic (vb.) *sʷol- ‘to be safe, well,
sound’; (n.) *sʷol-a ‘safety; health, welfare’; (adj.) ‘safe, well, sound’ (no.
299).
201. *sor- (secondary e-grade form: *ser-) ‘to move quickly, to run, to flow’,
*ser-ph-/sor-ph-/sr-ph- ‘to creep, to crawl’, and *sr-ew-/sr-ow-/sr-u- ‘to

flow' < Proto-Nostratic (vb.) *sʷor- 'to surge, gush, flow, spring, or spread forth'; (n.) *sʷor-a 'surge, gush, flow' (no. 300).

202. *su- (prefix) 'well, good' < Proto-Nostratic (vb.) *sʷuw- 'to be proper, fitting, suitable, appropriate, good, well, fine, beautiful'; (n.) *sʷuw-a 'propriety, suitability, appropriateness'; (adj.) 'proper, fitting, suitable, appropriate' (no. 303).

PROTO-NOSTRATIC *ʒ > PROTO-INDO-EUROPEAN *dʰ

203. *dʰer-/ *dʰor-/ *dʰy- 'to gush forth, to burst forth, to spurt' < Proto-Nostratic (vb.) *ʒar- or *ʒar- 'to run, flow, leak, or spill out; to spring forth, to issue (from); to flow or gush forth'; (n.) *ʒar-a or *ʒar-a 'drizzle, rain, downpour; current, stream, torrent' (no. 308).
204. (*dʰer-/) *dʰr- 'to strike, to beat, to knock; to thrust' < Proto-Nostratic (vb.) *ʒer- or *ʒer- 'to pierce, to jab, to stab, to thrust or shove into'; (n.) *ʒer-a or *ʒer-a 'spear, javelin, weapon' (no. 309).
205. *dʰem(H)-/ *dʰm(H)- (secondary o-grade form: *dʰom(H)-) 'to blow (as wind or as to blow any wind instrument)' < Proto-Nostratic (vb.) *ʒim- or *ʒim- 'to blow, to play (a wind instrument)'; (n.) *ʒim-a or *ʒim-a 'blowing, playing (a wind instrument)' (no. 312).
206. *dʰudʰdʰ-o- (reduplicated) 'nipple' (> 'anything having the size or shape of a nipple: lump, knot, dot, etc.') < Proto-Nostratic (n.) *ʒuʒ-a 'nipple, breast' (no. 314).

PROTO-NOSTRATIC *cʰ > PROTO-INDO-EUROPEAN *tʰ

207. (?) *tʰeḥḥ- [*tʰaḥḥ-] (> *tʰā-) (earlier *cʰeḥḥ-) 'to hit, to beat' (relic forms in Hittite, with possible cognates in Sanskrit) < Proto-Nostratic (vb.) *cʰaḥ- 'to crush, to pound, to grind, to beat, to bruise, to destroy'; (n.) *cʰaḥ-a 'the act of crushing, beating, thrashing, pounding, grinding'; (adj.) 'crushing, beating, thrashing, pounding, grinding' (no. 316).

PROTO-NOSTRATIC *c' > PROTO-INDO-EUROPEAN *t'

208. (?) (t'el-/ *t'ol-/) *t'f- (earlier [*c'el-/ *c'ol-/] *c'f-) 'to lengthen, to prolong; to take long' (relic forms in Hittite) < Proto-Nostratic (vb.) *c'al- or *c'al- 'to stretch out, to extend, to exceed; to be wealthy, to prosper, to do well'; (n.) *c'al-a or *c'al-a 'wealth, prosperity, abundance' (no. 320).

209. **t'er-/t'or-/t'r-* 'to be or become visible, clear, evident' and **t'erkh-/t'orkh-/t'rkh-* 'to be or become visible, clear, evident; to see clearly' < Proto-Nostratic (vb.) **c'ar-* or **č'ar-* 'to be or become visible, clear, evident; to reveal, to make known, to make clear, to clarify'; (n.) **c'ar-a* or **č'ar-a* 'visibility, clarity'; (adj.) 'visible, clear, evident' (no. 322).

PROTO-NOSTRATIC *s > PROTO-INDO-EUROPEAN *s

210. **seʔ(y/i)* 'to sift; (n.) sieve' < Proto-Nostratic (vb.) **saʔ-V-y-* 'to sift'; (n.) **saʔ-y-a* 'sieve' (no. 327).
211. **segh-/sogh-* 'to get, to obtain' < Proto-Nostratic (vb.) **sag-* or **šag-* 'to reach, to arrive at, to attain, to achieve, to get, to obtain'; (n.) **sag-a* or **šag-a* 'acquisition, attainment, victory' (no. 329).
212. **seh-k-* [**sah-k-*] (> **sāk-*) 'to examine, to consider, to try to find out, to try to understand, to think about' < Proto-Nostratic (vb.) **sah-* or **šah-* 'to examine, to consider, to try to find out, to try to understand, to think about'; (n.) **sah-a* or **šah-a* 'thought, idea, understanding, inquiry, examination, consideration, investigation' (no. 330).
213. **sekh-/sokh-* 'to cut' < Proto-Nostratic (vb.) **sakh-* 'to cut, to split'; (n.) **sakh-a* 'any sharp instrument used for cutting: knife, sword, dagger, axe, etc.' (no. 331).
214. **sek^w-/sok^w-* 'to attach, to fasten' < Proto-Nostratic (vb.) **sak^w-* 'to tie, to bind, to fasten'; (n.) **sak^w-a* 'fastening, loop' (no. 332).
215. **sel-/sol-* '(vb.) to go up, to lift up, to raise up; (adj.) raised, elevated, high' < Proto-Nostratic (vb.) **sal-* 'to go up, to lift up, to raise up'; (n.) **sal-a* 'ascent, height'; (adj.) 'elevated, high, raised' (no. 333).
216. **sem-/som-/sm-* 'like, same' < Proto-Nostratic (vb.) **sam-* 'to resemble, to be like'; (n.) **sam-a* 'form, shape, appearance, likeness'; (adj.) 'similar, alike, same' (no. 334).
217. **sen-th-/son-th-/st-th-* 'to sense, to perceive' < Proto-Nostratic (vb.) **san-* or **šan-*, **sin-* or **šin-*, **sun-* or **šun-* 'to sense, to perceive'; (n.) **san-a* or **šan-a*, **sin-a* or **šin-a*, **sun-a* or **šun-a* 'that which senses or perceives: mind, nose; that which is sensed or perceived: perception, sense, feeling' (no. 335).

218. **senHw-*, **sneHw-* (> **snēw-*) ‘sinew, tendon’ < Proto-Nostratic (Eurasianic only) (n.) **s[e]n-a* or **š[e]n-a* (root vowel uncertain but probably **e*) ‘sinew, tendon’ (no. 336).
219. **-si* (< **-s* plus deictic particle **-i*) second person singular primary verb ending; **-s* second person singular secondary verb ending < Proto-Nostratic **si-* second person pronoun stem: ‘you’ (no. 337).
220. **-s-* 3rd person singular verb ending and **-s-* in (m.) **ʔey-s-os*, (f.) **ʔey-s-eA* [-aA] (> *-ā*), **ʔey-s-yos* a compound demonstrative pronoun: ‘this’ (note: the **-s-* element could be from the Proto-Nostratic demonstrative pronoun stem **ša-* ‘this, that’ instead [see below]) < Proto-Nostratic **si-* 3rd person pronoun stem: ‘he, she, it; him, her; they, them’; 3rd person possessive suffix: **-si* ‘his, her, its; their’ (no. 338).
221. **sih̥h-* [**seh̥h-*] (> **sē-*) ‘to throw, to scatter’ > ‘to sow seeds, to make to grow’ < Proto-Nostratic (vb.) **sih̥-* ‘to scatter, to strew, to cast or throw, to sprinkle (with water)’; (n.) **sih̥-a* ‘the act of scattering, strewing, casting, or throwing about’; (adj.) ‘scattered, strewn, cast or thrown about’ (no. 340).

PROTO-NOSTRATIC **ž* > PROTO-INDO-EUROPEAN **d^h*

222. **d^heʔ-/d^hoʔ-* (> **d^hē-/d^hō-*) ‘to waste away; to become exhausted, faded, withered, weak, weary’ < Proto-Nostratic (vb.) **žəʔ-* ‘to die, to fade, to wither’; (n.) **žəʔ-a* ‘death’ (no. 341).
223. **d^hw-iH-* (> **d^hw-ī-*) ‘to dwindle, to waste away, to wane’ < Proto-Nostratic (vb.) **žaw-* ‘to wear out, to be used up, to cease to function’; (n.) **žaw-a* ‘cessation, end, extinction’; (adj.) ‘worn out, used up, wasted, decrepit, old’ (no. 345).

PROTO-NOSTRATIC **č^h* > PROTO-INDO-EUROPEAN **t^h*

224. **t^hel-/t^hol-/t^hl-* ‘to leave, to leave behind, to abandon, to get rid of, to empty; to set free, to release, to let go’ (extended form in Germanic: **t^hl-ew-/t^hl-ow-/t^hl-u-*, with root in zero-grade and suffix in full-grade) < Proto-Nostratic (vb.) **č^hal-* ‘to leave, to leave behind, to abandon, to get rid of, to empty; to set free, to release, to let go’; (n.) **č^hal-a* ‘freedom, leisure, emptiness’; (adj.) ‘empty, freed (from), at leisure’ (no. 347).
225. **t^hok^h-* ‘to bend, to turn, to twist, to wind’ < Proto-Nostratic (vb.) **č^hok^h-* ‘to bend, to twist, to turn, to wind; to close, to shut, to cover’; (n.) **č^hok^h-a* ‘bend, twist, turn; closure, cover, stoppage’ (no. 350).

PROTO-NOSTRATIC *š > PROTO-INDO-EUROPEAN *s

226. *so-, (f.) *seA [**saA*] (> **sā*) demonstrative pronoun stem: ‘this, that’ and *-s- in (m.) *ʔey-s-os, (f.) *ʔey-s-eA [*-aA*] (> *-ā*), *ʔey-s-yos compound demonstrative pronoun: ‘this’ (note: the *-s- element could be from the Proto-Nostratic 3rd person anaphoric stem *si- instead [see above]) < Proto-Nostratic *ša- demonstrative pronoun stem: ‘this, that’ (no. 354).
227. *ser-/sor-/sr- ‘to split, to rip apart, to tear asunder’ and *sor-gh- ‘to wound, to tear’ < Proto-Nostratic (vb.) *šar- ‘to split, to rip apart, to tear asunder’; (n.) *šar-a ‘that which splits: knife’ (no. 355).
228. *sew(H)/sow(H)/su(H)- ‘to suck, to drink, to swallow’ and *sw-el- ‘to swallow’ < Proto-Nostratic (vb.) *šaw- ‘to drink, to swallow’; (n.) *šaw-a ‘drink, juice’ (no. 356).
229. *sew-/sow-/su- ‘to sigh, to pant, to gasp’ < Proto-Nostratic (vb.) *šaw- ‘to sigh, to pant, to gasp, to breathe deeply’; (n.) *šaw-a ‘breath, sigh’ (no. 357).
230. *sw-eph-/sw-oph-/su-ph- ‘to sleep’ < Proto-Nostratic (vb.) *šaw- ‘to sleep, to rest’; (n.) *šaw-a ‘sleep, slumber, rest’ (no. 358).
231. *sihh- [**sehh-*] (> **sē-*) ‘separately, apart’, *sihh-th- [**sehh-th-*] (> **sē-th-*) ‘division, section’, and *sihh-mi- [**sehh-mi-*] (> **sē-mi-*) ‘half’ < Proto-Nostratic (vb.) *sih- ‘to separate into (equal) parts, to divide’; (n.) *sih-a ‘part, portion, separation, division, section’ (no. 359).
232. *sw-el- ‘to swell’ < Proto-Nostratic (vb.) *šiw- ‘to swell’; (n.) *šiw-a ‘swelling’; (adj.) ‘swollen, puffed up’ (no. 360).
233. *swel-/sul- ‘(vb.) to wet, to moisten, to flow; (n.) liquid, moisture’ < Proto-Nostratic (vb.) *šuw- ‘to be wet, moist; to make wet, to soak’; (n.) *šuw-a ‘moisture, liquid; (adj.) ‘moist, wet, soaked’; (extended form) (vb.) *šuw-l-l-; (n.) *šuw-l-a (no. 361).

PROTO-NOSTRATIC *g > PROTO-INDO-EUROPEAN *gh

234. *gheʔ-/ghoʔ- (> **ghē-/ghō-*), also *gheʔy/i-/ghoʔy/i- (> **ghēy/i-/ghōy/i-*) ‘to go, to leave, to depart; to abandon, to forsake’ < Proto-Nostratic (vb.) *gaʔ- ‘to go, to leave, to depart; to leave behind, to abandon, to forsake’; (n.) *gaʔ-a ‘abandonment, lack, want, need, deprivation, loss, deficit’; (adj.) ‘abandoned, forsaken, left behind; wanting, lacking, deprived of’ (no. 362).

235. **g^{he}b^h-* ‘gable, head, pinnacle’ < Proto-Nostratic (n.) **gab-a* ‘peak, tip, top’ (no. 364).
236. **g^hab^h-* ‘to grab, to seize’ < Proto-Nostratic (vb.) **gab-* ‘to grasp, to seize’; (n.) **gab-a* ‘hand, arm’ (no. 365).
237. **g^hod^h-* ‘to hit, to strike’ < Proto-Nostratic (vb.) **gad-* ‘to cut, to split, to strike (with an instrument)’; (n.) **gad-a* ‘that which cuts: (pick)axe, saw; that which is cut, split: cut, split, piece, fragment, bit’ (no. 367).
238. **g^{he}l-/g^hol-/g^hl-* ‘to cut off’ < Proto-Nostratic (vb.) **gal-* ‘to cut, break, tear, or pluck off; to separate’; (n.) **gal-a* ‘cut, break, tear, separation’ (no. 369).
239. **g^{he}l-/g^hol-/g^hl-* ‘(vb.) to plow; (n.) a plow’ < Proto-Nostratic (vb.) **gal-* ‘to dig, scoop, or hollow out’ (> ‘to plow’); (n.) **gal-a* ‘the act of digging, scooping, or hollowing out’ (no. 370).
240. **g^{he}l-/g^hol-/g^hl-*: **g^hl-en-d^h-* ‘to be or become visible, clear, obvious, evident; to regard, to look at, to peer at’ and **g^hl-ewH-/g^hl-owH-/g^hl-uH-* ‘clear, evident’ < Proto-Nostratic **gal-* ‘to be or become visible, clear, obvious, evident; to regard, to look at, to peer at’; (n.) **gal-a* ‘visibility, clarity, understanding’; (adj.) ‘visible, clear, obvious, evident’ (no. 372).
241. **g^{he}l-/g^hol-/g^hl-* ‘to cry out, to shout, to clamor; to be noisy, boisterous’ < Proto-Nostratic (vb.) **gal-* ‘to cry out, to shout, to clamor; to be noisy, boisterous’; (n.) **gal-a* ‘clamor, uproar, tumult, disturbance, turmoil, noise’ (no. 373).
242. (**g^{he}l-/g^hol-*) ‘(vb.) to ache, to be in pain, to be ill, to suffer; (n.) ache, pain, disease, illness’ < Proto-Nostratic (vb.) **gal-* ‘to ache, to be in pain, to be ill, to suffer’; (n.) **gal-a* ‘ache, pain, disease, illness’ (no. 374).
243. **g^hal-* ‘blemish, fault, sore on the skin’ < Proto-Nostratic (n.) **gal-a* ‘blemish, fault, scar, sore on the skin’ (no. 375).
244. **g^hal-* ‘(vb.) to be strong, powerful; to be able; (n.) strength, power, ability’ < Proto-Nostratic (vb.) **gal-* ‘to be strong, powerful; to be able’; (n.) **gal-a* ‘strength, power, ability’ (no. 376).
245. **g^{he}m-/g^hom-/g^hm-* ‘to bend down, to incline’ < Proto-Nostratic (vb.) **gam-* ‘to bend, to be bent’; (n.) **gam-a* ‘a bent or curved object: hook; wrist, ankle; etc.’ (no. 377).

246. **g^hans-* ‘goose’ < Proto-Nostratic (n.) **gaŋ-a* (with different extensions in the various daughter languages: **gaŋ-sʷ-* and/or **gaŋ-s-*, **gaŋ-tʷ-*, etc. and sporadic loss of *ŋ*) ‘a waterfowl, an aquatic bird: goose, duck, etc.’ (no. 379).
247. (**g^hen-/*)**g^hn-* ‘to bend or stoop forward; to bend’ (Germanic only) < Proto-Nostratic (vb.) **gaŋ-* ‘to bend: to bend forward; to bend back; to bend to the side’; (n.) **gaŋ-a* ‘side, corner, flank, edge’ (no. 380).
248. **g^her-/***g^hor-/***g^hʷ-* ‘to seize, to grasp, to take hold of’, **g^her(s)-* ‘hand’ < Proto-Nostratic (vb.) **gar-* ‘to seize, to grasp, to take hold of’; (n.) **gar-a* ‘hand’ (no. 381).
249. **g^her-/***g^hor-/***g^hʷ-* ‘to cut off, to shorten’ < Proto-Nostratic (vb.) **gar-* ‘to cut, to split’; (n.) **gar-a* ‘cut, injury; that which cuts: (pick)axe’; (adj.) ‘cut, separated, shortened’ (no. 382).
250. **g^her-/***g^hʷ-* ‘to scratch, to scrape’, **g^hreb^h-/***g^hrob^h-/***g^hʷb^h-* ‘to scratch, to scrape’, **g^hrem-/***g^hrom-* ‘to scrape’, and **g^hrew-/***g^hrow-/***g^hru-* ‘to scrape, to graze’ < Proto-Nostratic (vb.) **gar-* ‘to scratch, to scrape’; (n.) **gar-a* ‘that which scratches, scrapes: spade, rake’ (no. 383).
251. **g^hreE-/***g^hroE-* (> **g^hrē-/***g^hrō-*) ‘to grow’ < Proto-Nostratic (vb.) **garʷ-* ‘to swell, to increase, to grow’; (n.) **garʷ-a* ‘swelling, increase, growth; great quantity, abundance, excess’ (no. 385).
252. **g^her-/***g^hor-/***g^hʷ-* (extended form: **g^hr-eE-/***g^hr-oE-* > **g^hrē-/***g^hrō-*) ‘(vb.) to stick out, to stand out, to jut out, to project, to protrude; to be or become erect, rigid, stiff; (n.) tip, point, peak’ and **g^hers-/***g^hors-/***g^hʷs-* ‘to bristle’ < Proto-Nostratic (vb.) **garʷ-* ‘to stick out, to stand out, to jut out, to project, to protrude; to be or become erect, rigid, stiff’; (n.) **garʷ-a* ‘tip, point, peak’ (no. 386).
253. **g^hes-/***g^hos-* (**g^hes-ʃ-* and **g^hes-t^ho-*) ‘hand’ < Proto-Nostratic (vb.) **gasʷ-* ‘to touch, to feel, to handle’; (n.) **gasʷ-a* ‘hand’ (no. 387).
254. **g^het’-/***g^hot’-*, (with nasal infix) **g^he-n-t’-* ‘to take (with the hand)’ < Proto-Nostratic (vb.) **gat’-* ‘to take (with the hand), to grasp’; (n.) **gat’-a* ‘hand’ (no. 388).
255. **g^henu-* ‘jaw, cheek’ (Indo-Iranian only) < Proto-Nostratic (n.) **gen-a* ‘jaw, cheek’ (no. 389).
256. *-*g^h-* pronominal base of unclear deictic function in (nom. sg.) **ʔe-g^h-* ‘I’, (dat. sg.) **me-g^h-* ‘to me’, etc. < Proto-Nostratic **gi-* pronominal base of unclear deictic function (no. 391).

257. **g^{he}bh-* ‘to give’ (Germanic only) < Proto-Nostratic (vb.) **gib-* ‘to bestow upon, to give’; (n.) **gib-a* ‘gift’ (no. 392).
258. **g^{he}d^h-* (secondary *o*-grade form: **g^hod^h-*) ‘to force, drive, or press together; to join; to unite; to gather (together); to collect’ < Proto-Nostratic (vb.) **gid-* or **gid-* ‘to force, drive, or press together; to join; to unite; to gather (together); to collect’; (n.) **gid-a* or **gid-a* ‘force, compulsion; collection, heap; union’; (adj.) ‘pressed close together, near, united’ (no. 393).
259. **g^hl-ey-/g^hl-oy-/g^hl-i-* ‘to glide, to slip, to slide’ < Proto-Nostratic (vb.) **gil-* ‘to glide, to slip, to slide’; (n.) **gil-a* ‘gliding, sliding’; (adj.) ‘smooth, slippery’ (no. 394).
260. **g^{he}lHt’-/g^hlHt’-* ‘ice, hail’ < Proto-Nostratic (vb.) **gil-* ‘to freeze’; (n.) **gil-a* ‘ice’ (no. 395).
261. (**g^hen-/*) **g^hn-* ‘to gnaw, to rub or scrape away, to pulverize, to grate’ < Proto-Nostratic (vb.) **gin-* ‘to grind, to pound, to break or crush into pieces’; (n.) **gin-a* ‘the act of grinding, pounding, crushing’ (no. 397).
262. **g^{he}r-/g^hr-* (secondary *o*-grade form: **g^hor-*) ‘to gird, to enclose’ < Proto-Nostratic (vb.) **gir-* ‘to gird, to enclose’; (n.) **gir-a* ‘enclosure fence, wall’ (no. 398).
263. **g^hr-eH- (> g^hr-ē-)* ‘gray-haired, old’ < Proto-Nostratic (vb.) **gir^y-* ‘to be or become old’; (n.) **gir^y-a* ‘old age, old person’; (adj.) ‘old’ (no. 399).
264. **g^hr-ed^h-/g^hr-od^h-/g^hr-d^h-*, also **g^hr-ey-d^h-/g^hr-oy-d^h-/g^hr-i-d^h-* ‘to walk, to step’ < Proto-Nostratic (vb.) **gir^y-* or **gir^y-* ‘to move, to move swiftly, to hasten, to hurry; to run, to flow; to go, to walk’; (n.) **gir^y-a* or **gir^y-a* ‘movement, flow, flux, step, course’ (no. 400).
265. **g^hl-ent’o-s* ‘bank (of river), side, shore, valley’ < Proto-Nostratic (n.) **gol-a* ‘edge, corner, valley’ (no. 401).
266. (?) **g^hub^h-* ‘fire’ (Baltic only) < Proto-Nostratic (vb.) **gub-* ‘to cook, to roast, to burn’; (n.) **gub-a* ‘the act of cooking; that which is used for cooking: pot, pan; stove, furnace’ (no. 403).
267. **g^hup^h-* > (with progressive voicing assimilation) **g^hub^h-* (secondary full-grade forms: **g^{he}wb^h-/g^howb^h-*) ‘to be extinguished, destroyed; to perish’ (Balto-Slavic and Anatolian only) < Proto-Nostratic (Eurasian only) (vb.) **gup^h-* ‘to extinguish; to be extinguished, to die out, to perish’; (n.) **gup^h-a* ‘loss, destruction’ (no. 407).

268. **g^hur-* ‘to rumble, to roar, to growl, to gurgle’ < Proto-Nostratic (vb.) **gur-* ‘to rumble, to roar, to growl, to gurgle’; (n.) **gur-a* ‘rumbling, roaring, gurgling, growling noise or sound’ (onomatopoeic) (no. 408).
269. **g^hor-/g^hr-* ‘gut, cord’ < Proto-Nostratic (Eurasianic only) (n.) (?) **gur-a* ‘gut, cord’ (no. 409).
270. **g^hos-t^hi-* (‘outsider’ >) ‘stranger’ > ‘guest’ < Proto-Nostratic (vb.) **gus-* ‘to go outside of or forth from; to make to go outside or forth from, to drive away, to chase away’; (n.) **gus-a* ‘outsider, stranger’ (no. 410).
271. **g^how-* ‘to observe, to notice, to watch, to pay attention to, to heed, to be or become aware of’ < Proto-Nostratic (vb.) **guw-* ‘to observe, to notice, to watch, to pay attention to, to heed, to be or become aware of’; (n.) **guw-a* ‘observation, heed, awareness, attention, notice’ (no. 411).
272. **g^hwě-* ‘wild animal, wild beast’ < Proto-Nostratic (vb.) **guw-* ‘to hunt wild animals’; (n.) **guw-a* ‘wild animal, wild beast, game’; (adj.) ‘wild, untamed’; (extended form) (vb.) **guw-V-r-* ‘to hunt wild animals’; (n.) **guw-r-a* ‘wild animal, wild beast, game’; (adj.) ‘wild, untamed’ (no. 412).

PROTO-NOSTRATIC **k^h* > PROTO-INDO-EUROPEAN **k^h*

273. **-k^h*- perfect (< stative) suffix found in Greek, Italic, and Tocharian; originally used only in the 1st person singular < Proto-Nostratic **k^ha-* 1st person pronoun stem (stative) (no. 413).
274. **k^he-/k^ho-*, **k^hi-* demonstrative pronoun stem: ‘this, that’ < Proto-Nostratic **k^ha-*, **k^hi-*, **k^hu-* demonstrative pronoun stem (**k^ha-* appears to have been proximate, **k^hi-* intermediate, and **k^hu-* distant) (no. 414).
275. **k^habh-ro-* > (with progressive voicing assimilation) **k^hap^h-ro-* ‘he-goat, buck’ < Proto-Nostratic (n.) **k^hab-a* ‘he-goat, male-sheep, buck, ram’ (no. 415).
276. **k^habh-* > (with progressive voicing assimilation and with laryngeal suffix as suggested by Mallory—Adams 1997:272 and Watkins 2000:43) **k^hāp^h-Ho-* ‘hoof’ < Proto-Nostratic (n.) **k^hab-a* ‘foot, hoof’ (no. 416).
277. **k^hel-/k^hol-*, **k^hal-* (vb.) ‘to make a noise, to sound; to call out, to shout’; (n.) ‘noise, sound’ < Proto-Nostratic (vb.) **k^hal-* ‘to make a noise, to sound; to call out, to shout’; (n.) **k^hal-a* ‘noise, sound’ (no. 420).

278. **k^hel-/k^hol-* ‘to guard, to watch, to hold (back)’ < Proto-Nostratic (vb.) **k^hal-* ‘to guard, to hold (back), to watch’; (n.) **k^hal-a* ‘protection, care, support; restraint, detention, custody, hold’ (no. 421).
279. **k^holH-mo-/k^hlH-mo-* ‘reed, stalk, stem, haulm’ < Proto-Nostratic (n.) **k^hal^y-a* ‘reed, stalk, stem, blade of grass, haulm’ (no. 423).
280. **k^hl-ep^h-/k^hl-op^h-* ‘to rob, to steal, to hide’ < Proto-Nostratic (vb.) **k^hal^y-* ‘to rob, to steal, to hide’; (n.) **k^hal^y-a* ‘theft’ (no. 424).
281. **k^hem-th-/k^hom-th-/k^hṁ-th-* ‘(vb.) to seize, to grasp, to grip, to clutch; (n.) hand’ < Proto-Nostratic (vb.) **k^ham-* or **q^ham-* ‘to seize, to grasp, to grip, to clutch’; (n.) **k^ham-a* or **q^ham-a* ‘grip, hold, hand(ful); bond, fetter’ (no. 425).
282. **k^hṁH-* ‘to work, to toil, to labor’ < Proto-Nostratic (vb.) **k^ham-* ‘to work, to labor, to toil; to do, to make’; (n.) **k^ham-a* ‘work, labor, toil’ (no. 426).
283. **k^hem-/k^hom-/k^hṁ-* ‘to gather together’ and **k^hom-* ‘together, along with’ < Proto-Nostratic (vb.) **k^ham-* ‘to gather together, to collect’; (adv.) ‘together, along with’; (n.) **k^ham-a* ‘collection, assemblage, gathering’ (no. 427).
284. **k^henth-/k^honth-* ‘prick, point, spike’ < Proto-Nostratic (n.) **k^han^y-a* ‘stem, stalk, stick’ (no. 428).
285. **k^hṁH-k^ho-* ‘honey, honey-colored’ < Proto-Nostratic (n.) **k^han^y-a* ~ **k^hin^y-a* ~ **k^hun^y-a* ‘bee, honey’ (no. 429).
286. **k^han-* ‘to make a noise, to sound’ < Proto-Nostratic (vb.) **k^haṅ-* ‘to make a noise, to sound’; (n.) **k^haṅ-a* ‘noise, (ringing or tinkling) sound’ (no. 430).
287. **k^haph-* ‘to take, to seize’ < Proto-Nostratic (vb.) **k^haph-* ‘to take, seize, or grasp with the hand; to press or squeeze with the hand’; (n.) **k^haph-a* ‘hand’ (no. 431).
288. **k^haph-* ‘bowl, cup, jar, container; head’ < Proto-Nostratic (n.) **k^haph-a* ‘bowl, cup, jar, container; skull’ (no. 432).
289. **k^hap-* ‘to obtain’ (Germanic only) < (?) Proto-Nostratic (vb.) **k^hap-* ‘to buy; to pay back’; (n.) **k^hap-a* ‘recompense, tribute, pay-back’ (no. 433).
290. **k^her-/k^hor-/k^hṛ-* ‘to cut off, to cut down’ < Proto-Nostratic (vb.) **k^har-* ‘to cut, to cut into, to cut off’; (n.) **k^har-a* ‘cut, incision’ (no. 434).
291. **k^her-/k^hor-/k^hṛ-* ‘skin, hide; bark, rind’ < Proto-Nostratic (n.) **k^har-a* ‘skin, hide; bark, rind’ (no. 435).

292. **k^her-/k^hor-/k^hɣ-* and **(s)k^her-/*(s)k^hor-/*(s)k^hɣ-* ‘to twist, turn, or wind around’ < Proto-Nostratic (vb.) **k^har-* ‘to twist, turn, or wind around’; (n.) **k^har-a* ‘ring, circle, curve’; (adj.) ‘round, curved, twisted’ (no. 436).
293. **k^her-/k^hor-/k^hɣ-* ‘edge, shore, bank’ < Proto-Nostratic (n.) **k^har-a* ‘edge, side, bank’ (no. 437).
294. **k^har-* ‘hard, strong, firm’ < Proto-Nostratic (n.) **k^har-a* ‘hardness, strength, firmness, fortitude’; (adj.) ‘hard, strong, firm’ (no. 438).
295. **k^har-* ‘rough, hard, harsh’ < Proto-Nostratic (n.) **k^har-a* ‘roughness, coarseness’; (adj.) ‘rough, coarse’ (no. 439).
296. **k^har-/k^hɣ-* ‘sharp, pungent’ < Proto-Nostratic (n.) **k^har-a* ‘bitterness, pungency, harshness’; (adj.) ‘bitter, pungent, harsh, sharp, caustic, hot (of taste), acrid’ (no. 440).
297. *(k^har-s-/k^hɣ-s-* ‘black, dark’ < Proto-Nostratic (n.) **k^har-a* ‘blackness, darkness’; (adj.) ‘black, dark’ (no. 441).
298. **k^hert-/k^hɣt-* ‘heart’ < Proto-Nostratic (n.) **k^har-a* ‘heart, core, essence’ (no. 442).
299. **k^hes-, k^has-* ‘to cut’ < Proto-Nostratic (vb.) **k^has-* ‘to cut or break off, to divide, to separate’; (n.) **k^has-a* ‘cut, separation, division, break; cutting, clipping, piece, fragment, bit’ (no. 443).
300. **k^hath-* ‘to plait, to weave, to twist’ < Proto-Nostratic (vb.) **k^hath-* ‘to plait, to weave, to twist’; (n.) **k^hath-a* ‘that which is plaited, woven, twisted: mat, net, knot’ (no. 444).
301. **k^hath-* ‘rag, cloth’ (Germanic only) < Proto-Nostratic (n.) **k^hath-a* ‘rag, cloth’ (no. 445).
302. **k^hath-* ‘down, below, under, beneath; along, downwards’ < Proto-Nostratic (vb.) **k^hath-* ‘to fall down, to set down, to drop down’; (n.) **k^hath-a* ‘lower part, lower place, lower thing’; (adj.) ‘lower, inferior’; (particle) **k^hath-* ‘down’ (no. 446).
303. **k^hath-o-s* ‘harsh, shrill, sharp, piercing (of sounds)’ < Proto-Nostratic (vb.) **k^hath-* ‘to make a harsh, shrill screech or sound: to cackle, to caw, to screech, to cry, to yelp’; (n.) **k^hath-a* ‘cackling, cawing, screeching, crying, yelping’; (adj.) ‘harsh, shrill, sharp, piercing (of sounds)’ (no. 447).

304. **k^hew-/k^how-/k^hu-* ‘to swell, to expand, to inflate, to grow, to increase’ < Proto-Nostratic (vb.) **k^haw-* ‘to swell, to expand, to inflate, to grow, to increase’; (n.) **k^haw-a* ‘accumulation, inflation, expansion, growth; heap, pile; height’ (no. 448).
305. **k^hay-* (extended form **k^hay-wo-*) ‘alone’ < Proto-Nostratic (n.) **k^hay-a* ‘solitude, loneliness, separateness’; (adj.) ‘alone’; (extended form in Afrasian and Indo-European) (n.) **k^hay-w-a* ‘solitude, loneliness, separateness’; (adj.) ‘alone’ (no. 449).
306. **k^hey-/k^hoy-/k^hi-* ‘to lie, to be placed’ < Proto-Nostratic (vb.) **k^hay-* ‘to put, to place, to set, to lay; to be placed, to lie’; (n.) **k^hay-a* ‘resting place, abode, dwelling; cot, bed’ (no. 450).
307. **k^hay-* ‘(vb.) to heat; (n.) heat’ < Proto-Nostratic (vb.) **k^hay-* ‘to be or become warm or hot; to make warm, to heat’; (n.) **k^hay-a* ‘heat’ (no. 451).
308. **k^hay-wɣ-th*, **k^hay-wŋ-th* ‘cave, hollow’ < Proto-Nostratic (vb.) **k^hay-* ‘to scoop out’; (n.) **k^hay-a* ‘spoon, ladle’; (extended form) (vb.) **k^hay-V-w-* ‘to dig’; (n.) **k^hay-w-a* ‘cave, pit, hollow’ (no. 452).
309. **k^hel-/k^hl-* (secondary *o*-grade form: **k^hol-*) ‘(vb.) to lift, to raise, to elevate; (n.) hill’ < Proto-Nostratic (vb.) **k^hilv-* ‘to rise, to ascend, to lift up’; (n.) **k^hilv-a* ‘hill, height’; (adj.) ‘raised, high’ (no. 454).
310. **k^her-/k^hɣ-* (secondary *o*-grade form: **k^hor-*), **k^herH-/k^hɣH-* ‘uppermost part (of anything): horn, head, skull, crown of head; tip, top, summit, peak; horned animal’ < Proto-Nostratic (n.) **k^hir-a* ‘uppermost part (of anything): horn, head, skull, crown of head; tip, top, summit, peak’ (no. 455).
311. **k^hr-ew-/k^hr-ow-/k^hr-u-* ‘(vb.) to freeze, to form a crust; (n.) crust; coating of ice, frost’ < Proto-Nostratic (vb.) **k^hir-* ‘to freeze, to be cold’; (n.) **k^hir-a* ‘frost, cold’ (no. 456).
312. **k^honk’-* (secondary *e*-grade form: **k^henk’-*) ‘hook’ < Proto-Nostratic (vb.) **k^hok’-*, **k^hon-V-k’-* ‘to be bent, curved, crooked’; (n.) **k^hok’-a*, **k^hon-k’-a* ‘hook, clasp’; (adj.) ‘bent, curved, crooked’ (no. 459).
313. **k^hl-ew-/k^hl-ow-/k^hl-u-* ‘to hear’, **k^hl-ew-os* ‘fame, glory, renown’ < Proto-Nostratic (vb.) **k^hul-* ‘to hear, to listen’; (n.) **k^hul-a* ‘renown, fame; ear’ (no. 460).
314. **k^hr-ew-H-/k^hr-ow-H-/k^hr-u-H-* (> **k^hr-ū-*) ‘blood, gore’ < Proto-Nostratic (n.) **k^hur-a* ‘blood’ (no. 465).

315. **k^h(u)wōn-/k^hun-* ‘dog’ < Proto-Nostratic **k^huwan-a* or **k^hun-a* originally a generic term meaning ‘young (especially of animals)’; later specialized as ‘young dog, puppy’ (as in Kannāḍa and Kolami [Dravidian]) and then simply ‘dog’ (no. 466).

PROTO-NOSTRATIC *k’ > PROTO-INDO-EUROPEAN *k’

316. **k’ak’-* ‘to cackle, to chatter’ < Proto-Nostratic (vb.) **k’ak’-* ‘to cackle, to chatter’; (n.) **k’ak’-a* ‘crackling sound’ (onomatopoeic) (no. 471).
317. **k’al-* ‘to (breast-)feed, to nourish, to satisfy’, **k’(a)lak^hth-* ‘nourishment, milk’ < Proto-Nostratic (vb.) **k’al-* ‘to feed, to nourish’; (n.) **k’al-a* ‘nourishment, sustenance, nutriment’ (no. 473).
318. **k’(e)l-* ‘rock, stone’ < Proto-Nostratic (n.) **k’al-a* ‘stone, rock’ (no. 474).
319. **k’el(H)-/k’ol(H)-/k’l(H)-* ‘to burn, to scorch, to char’ < Proto-Nostratic (vb.) **k’al-* ‘to burn, to warm, to cook, to roast’; (n.) **k’al-a* ‘cooking, roasting, baking; glowing embers’ (no. 476).
320. **k’al-* ‘pregnant, young of animals’ < Proto-Nostratic (vb.) **k’al-* ‘to come into being, to be born’; (n.) **k’al-a* ‘existence, presence, appearance, birth’ (no. 478).
321. **k’l-ew-b^h-/k’l-ow-b^h-/k’l-u-b^h-* ‘to separate, to remove, to strip off or away: to pluck, tear, or pull off or out; to split or tear apart’ < Proto-Nostratic (vb.) **k’al^y-* ‘to separate, to remove, to strip off or away: to pluck, tear, or pull off or out’; (n.) **k’al^y-a* ‘separation, removal, stripping off or away, etc.’ (no. 479).
322. **k’al-wo-*, **k’al-Ho-* ‘bald, bare, naked’ < Proto-Nostratic (n.) **k’al^y-a* ‘bald spot’; (adj.) ‘bald, bare’ (no. 480).
323. **k’en-/k’on-/k’ŋ-* ‘to beget, to produce, to create, to bring forth’ < Proto-Nostratic (vb.) **k’an-* ‘to get, to acquire, to create, to produce, to beget’; (n.) **k’an-a* ‘birth, offspring, child, produce’; (adj.) ‘born, begotten, produced’ (no. 481).
324. **k’en-u-* ‘jaw, cheek’ < Proto-Nostratic (n.) **k’an-a* ‘jaw, cheek’ (no. 482).
325. *(k’en-/k’on-/k’n-* ‘to pound, to beat, to strike’ < Proto-Nostratic (vb.) **k’an-* ‘to pound, to beat, to strike’; (n.) **k’an-a* ‘knock, strike, quaff, thump; mallet, club, cudgel, truncheon’ (no. 484).

326. *(*k'en-/k'on-)*k'n-* 'to bend, twist, turn, or tie together' < Proto-Nostratic (vb.) **k'aŋ-* 'to bend, twist, turn, or tie together'; (n.) **k'aŋ-a* 'wreath, rope, cord, fiber, tie, band, string' (no. 485).
327. *(*k'en-/k'on-)*k'n-* 'knot, knob' < Proto-Nostratic (n.) **k'aŋ-a* 'knot, knob, joint' (no. 486).
328. **k'en(H)/k'on(H)/k'ŋ(H)-, *k'n-oH- (> *k'nō-)* 'to perceive, to recognize, to know, to understand' < Proto-Nostratic (vb.) **k'anʷ-* 'to observe, to perceive'; (n.) **k'anʷ-a* 'that which observes, perceives: eye; perception, observation, recognition, comprehension' (no. 487).
329. **k'epʰ-/k'opʰ-* 'jaw, mouth' < Proto-Nostratic (n.) **k'apʰ-a* 'jaw, jawbone' (the Altaic cognates seem to point to Proto-Nostratic **k'epʰ-a*) (no. 488).
330. **k'er-/k'or-/k'r-* 'to call out to' < Proto-Nostratic (vb.) **k'ar-* 'to shout, to screech, to call (out to), to cry (out)'; (n.) **k'ar-a* 'call, cry, invocation, proclamation; roar, lamentation' (no. 491).
331. **k'r-u-k'o-s, -eA [-aA] (> -ā)* 'dirt, grime' < Proto-Nostratic (n.) **k'ar-a* 'blackness, darkness, obscurity; dark cloud, rainy weather; dirt, grime'; (adj.) 'dark, dark-colored; dirty, soiled' (no. 492).
332. **k'er-/k'or-/k'r-* '(vb.) to twist, to turn, to bend, to wind; to tie (together), to bind; (adj.) curved, bent, crooked; tied, bound; (n.) that which is tied or bound together: bunch, bundle' < Proto-Nostratic (vb.) **k'ar-* 'to twist, to turn, to bend, to wind; to tie (together), to bind'; (n.) **k'ar-a* 'that which is tied or bound together: bunch, bundle'; (adj.) 'curved, bent, crooked; tied, bound' (no. 493).
333. **k'er-/k'or-/k'r-* 'protuberance, lump, hump, breast' < Proto-Nostratic (n.) **k'ar-a* 'protuberance, lump, hump, breast' (no. 494).
334. **k'ew-/k'ow-/k'u-*, also **k'ewH-/k'owH-/k'uH- (> *k'ū-)* '(adj.) bent, curved, round; (n.) any round object' < Proto-Nostratic (vb.) **k'aw-* 'to bend, twist, curve, or turn round; to rotate'; (n.) **k'aw-a* 'any round object'; (adj.) 'bent, curved, round' (no. 496).
335. **k'ow(H)/k'u(H)- (or *k'aw[H]/k'u[H]-)* '(vb.) to take, to seize, to grasp, to hold; (n.) hand' < Proto-Nostratic (vb.) **k'aw-* 'to take, to seize, to grasp, to hold'; (n.) **k'aw-a* 'hand' (no. 497).
336. **k'elHowV-, *k'ġHōC-* 'husband's sister' < Proto-Nostratic (Eurasian only) (n.) **k'el-a* 'female in-law: husband's sister, sister-in-law; daughter-in-law' (no. 498).

337. **k'enu-/k'nu-* (secondary *o*-grade form: **k'onu-*) 'knee, bend of the leg; angle' < Proto-Nostratic (n.) **k'en^y-a* 'knot, joint' (no. 499).
338. **k'er(H)/k'or(H)/k'ɣ(H)-* 'to decay, to wear out, to wither, to waste away, to become old' < Proto-Nostratic (Eurasianic only) (vb.) **k'er-* 'to decay, to wear out, to wither, to waste away, to become old'; (n.) **k'er-a* 'old age, old person'; (adj.) 'decayed, worn out, withered, wasted, old' (no. 501).
339. **k'er-/k'or-/k'ɣ-* 'to gather (together), to collect, to take a handful' < Proto-Nostratic (vb.) **k'er-* 'to gather, to collect; to take a handful, to pick, to pluck'; (n.) **k'er-a* 'collection, gathering, handful' (no. 502).
340. **k'er-/k'or-/k'ɣ-* (extended form: **k'er-b^h-/k'or-b^h-/k'ɣ-b^h-*) 'to cut, to carve, to notch' < Proto-Nostratic (vb.) **k'ir-* or **k'ur-* 'to cut, to cut into, to incise, to engrave, to notch; to cut off, to sever, to nip off, to clip; to cut in two, to split'; (n.) **k'ir-a* or **k'ur-a* 'cut, slit, notch; chip, piece cut off' (no. 503).
341. **k'er-/k'or-/k'r-* 'crane' < Proto-Nostratic (n.) **k'or-a* or **k'ar-a* 'crane' (no. 505).
342. **k^hos-th-* (< **k'os-th-* ?) 'rib, bone' < Proto-Nostratic (n.) **k'os-a* 'bone' (no. 506).
343. (**k'el-/k'ol-/*)**k'l-* 'to lift, to raise, to pick up; to climb' (found only in derivatives, such as: **k'lemb^h-/k'lomb^h-/k'lp^hb^h-* 'to climb') < Proto-Nostratic (vb.) **k'ul-* 'to lift, to raise, to pick up; to rise, to ascend; to make high, to elevate'; (n.) **k'ul-a* 'highest point' (no. 510).
344. **k'ol-/k'l-* (secondary *e*-grade form: **k'el-*) '(vb.) to be or become cold; to freeze; (n.) cold, coldness, chill, frost' < Proto-Nostratic (vb.) **k'ul^y-* 'to be or become cold; to freeze'; (n.) **k'ul^y-a* 'cold, coldness, chill, frost' (no. 511).
345. **k'om-/k'm-* (secondary *e*-grade form: **k'em-*) 'to sigh, to weep, to lament, to moan, to groan' < Proto-Nostratic (vb.) **k'um-* 'to sigh, to weep, to lament, to moan, to groan'; (n.) **k'um-a* 'sigh, mourning, lamentation, moan, groan, roar, grumble' (no. 512).
346. **k'om-/k'm-* (secondary *e*-grade form: **k'em-*) 'to press together; to seize, to grasp' < Proto-Nostratic (vb.) **k'um-* 'to seize, to grasp, to press together'; (n.) **k'um-a* 'heap, mass, lump, clump; pressure, compression' (no. 513).
347. **k'um-* 'a bent or curved object: hollow, cavity (> basin, bowl, trough; valley); knob, lump, hump; etc.' < Proto-Nostratic (vb.) **k'um-* 'to bend, to curve; to

bend the head or body, to bow or stoop down'; (n.) **k'um-a* 'bend, curve; the act of bending, bowing, stooping' (no. 514).

348. **k'un-k'o-s* 'rump, buttocks' < Proto-Nostratic (n.) **k'uy-a* 'buttocks, rump, anus' (no. 517).

PROTO-NOSTRATIC **g^w* > PROTO-INDO-EUROPEAN **g^{wh}*

349. **g^{wh}en-/*g^{wh}on-/*g^{wh}η-* '(vb.) to hit, to strike, to slay, to kill, to wound, to harm, to injure; (n.) strike, blow, wound' < Proto-Nostratic (vb.) **g^wan-* 'to hit, to strike, to slay, to kill, to wound, to harm, to injure'; (n.) **g^wan-a* 'strike, harm, injury' (no. 520).
350. **g^{wh}en-/*g^{wh}on-* 'to swell, to abound' < Proto-Nostratic (vb.) **g^wan-* 'to swell, to abound'; (n.) **g^wan-a* 'swelling, abundance, large quantity, prosperity' (no. 521).
351. **g^{wh}er-/*g^{wh}ŷ-* (secondary *o*-grade form: **g^{wh}or-*) '(vb.) to burn, to be hot; (n.) heat, fire' < Proto-Nostratic (vb.) **g^wir-* 'to be or become hot, to warm'; (n.) **g^wir-a* 'heat, fire' (no. 523).

PROTO-NOSTRATIC **k^w* > PROTO-INDO-EUROPEAN **k^{wh}*

352. **k^{wh}e* intensifying and conjoining particle: 'moreover, and, also, etc.' < Proto-Nostratic **k^{wh}a-* post-positional intensifying and conjoining particle (no. 524).
353. **k^{wh}el-/*k^{wh}ol-/*k^{wh}ŷ-* 'to go, to walk, to move about' < Proto-Nostratic (vb.) **k^{wh}al-* 'to go, to walk, to move about'; (n.) **k^{wh}al-a* 'walking, walk, wandering, roaming' (no. 525).
354. **k^{wh}el-/*k^{wh}ol-/*k^{wh}ŷ-* 'to revolve, to go around, to roll' < Proto-Nostratic (vb.) **k^{wh}al-* 'to revolve, to go around, to roll'; (n.) **k^{wh}al-a* 'circle, circuit' (no. 526).
355. **k^{wh}elo-, *k^{wh}olo-,* (reduplicated) **k^{wh}e-k^{wh}lo-, *k^{wh}o-k^{wh}lo-* 'wheel' < Proto-Nostratic (n.) **k^{wh}al-a* 'that which turns, rolls, revolves, or goes round and round' (> 'wheel' in the daughter languages) (no. 527).
356. **k^{wh}el-/*k^{wh}ol-/*k^{wh}ŷ-* 'to bring to an end' < Proto-Nostratic (vb.) **k^{wh}al-* 'to end, to come to an end; to bring to an end, to finish, to complete'; (n.) **k^{wh}al-a* 'end, finish, completion, fulfillment' (no. 528).

357. **k^{wh}el-* ‘far off, far away, distant’ < Proto-Nostratic (Eurasianic only) (adv.) (?) **k^{wh}al-* ‘far off, far away, distant’ (no. 529).
358. **k^{wh}alo-* ‘large fish’ < Proto-Nostratic (n.) **k^{wh}al-a* ‘a large fish’ (no. 530).
359. **k^{wh}elp-* ‘whelp, puppy’ (Germanic only) < Proto-Nostratic (n.) **k^{wh}al-a* ‘dog’; (extended form) (n.) **k^{wh}al-p-a* ‘dog’ (no. 531).
360. **k^{wh}er-/k^{wh}or-/k^{wh}ɣ-* ‘to cut’ < Proto-Nostratic (vb.) **k^{wh}ar-* ‘to cut’; (n.) **k^{wh}ar-a* ‘piece cut off; knife’ (no. 532).
361. **k^{wh}er-/k^{wh}or-/k^{wh}ɣ-* ‘(vb.) to draw or make furrows, to plow; (n.) furrow’ < Proto-Nostratic (vb.) **k^{wh}ar-* ‘to cut a groove, to hollow out, to dig’; (n.) **k^{wh}ar-a* ‘cut, hole, hollow, digging, excavation, pit, groove, trench’ (no. 533).
362. **k^{wh}er-/k^{wh}or-* ‘vessel, pot’ < Proto-Nostratic (n.) **k^{wh}ar-a* ‘vessel, pot’ (no. 535).
363. **k^{wh}rey(H)-/k^{wh}roy(H)-/k^{wh}ri(H)-* (> **k^{wh}rĩ-*) ‘to buy, to purchase’ < Proto-Nostratic (vb.) **k^{wh}ar-* ‘to procure’; (n.) **k^{wh}ar-a* ‘payment, procurement’ (no. 536).
364. **k^{wh}ath-* ‘to move, to shake’ < Proto-Nostratic (vb.) **k^{wh}ath-* ‘to move rapidly, to shake’; (n.) **k^{wh}ath-a* ‘rapid movement, shaking’ (no. 537).
365. **k^{wh}ay-* ‘when, as, though, also’ < Proto-Nostratic **k^{wh}ay-* ‘when, as, though, also’ (no. 538).
366. **k^{wh}ey-/k^{wh}oy-/k^{wh}i-* ‘(vb.) to repay in kind, to return like for like; (n.) payment, repayment’ < Proto-Nostratic (vb.) **k^{wh}ey-* ‘to repay in kind, to return an equal measure’; (n.) **k^{wh}ey-a* ‘payment, repayment’ (no. 539).
367. **k^{wh}ey-/k^{wh}i-* (secondary *o*-grade form: **k^{wh}oy-*) ‘to do, to make, to create; to form, to fashion’ < Proto-Nostratic (vb.) **k^{wh}ey-* ‘to do, to make, to create; to form, to fashion’; (n.) **k^{wh}ey-a* ‘act, deed, creation’ (no. 540).
368. **k^{wh}e-/k^{wh}o-, *k^{wh}i-* stem of interrogative and relative pronouns < Proto-Nostratic **k^{wh}i-* relative pronoun stem, **k^{wh}a-* interrogative pronoun stem (no. 541).
369. **k^{wh}er-/k^{wh}ɣ-* (secondary *o*-grade form: **k^{wh}or-*) ‘to do, to make, to build’ < Proto-Nostratic (vb.) **k^{wh}ir-* ‘to twist or twine together, to tie together, to bind, to fasten’; (n.) **k^{wh}ir-a* ‘twist, tie, bundle, rope; the act of twisting or twining together: work, craft, act, action’ (no. 542).

370. **k^whrep^h-*/**k^wh_rp^h-* ‘body, belly’ < Proto-Nostratic (n.) (?) **k^whur-a* ‘body, belly’ (no. 543).
371. **k^wh_r-mi-* ‘worm’ and **k^wh_r-wi-* ‘worm’ < Proto-Nostratic (n.) **k^whur-a* ‘worm, grub, maggot, insect’ (no. 544).

PROTO-NOSTRATIC **k^w* > PROTO-INDO-EUROPEAN **k^w*

372. **k^wed^h-*/**k^wod^h-* ‘to strike, to beat, to smash’ < Proto-Nostratic (vb.) **k^wad-* ‘to strike, to beat, to smash, to pound’; (n.) **k^wad-a* ‘knock, stroke, thrust’ (no. 545).
373. **k^weh_h-d^h-* [**k^wah_h-d^h-*] (> **k^wād^h-*) ‘to push or press in, to dive or plunge into’ < Proto-Nostratic (vb.) **k^wah-* ‘to hit, to strike, to beat, to pound; to push or press in’; (n.) **k^wah-a* ‘club, cudgel’; (adj.) ‘hit, beaten, pounded, pushed or pressed together, crammed, filled’ (no. 547).
374. **k^wel-*/**k^wol-*/**k^wl-* ‘to go, to follow’ (Tocharian only) < Proto-Nostratic (vb.) **k^wal-* ‘to go: to go away from, to go after or behind’; (n.) **k^wal-a* ‘track, way’ (no. 548).
375. **k^wel(H)-*/**k^wol(H)-*/**k^wl(H)-* ‘to gush forth, to overflow; to flow, to leak, to ooze, to drip, to trickle’ < Proto-Nostratic (vb.) **k^wal^y-* ‘to gush forth, to overflow; to flow, to leak, to ooze, to drip, to trickle’; (n.) **k^wal^y-a* ‘gush, flow, drip, trickle; river, stream, spring’ (no. 549).
376. **k^wen-* ‘woman, wife, female’ < Proto-Nostratic (n.) **k^wan-a* ‘woman, wife’ (no. 552).
377. **k^wer-*/**k^wor-*/**k^wr-* ‘gentle, mild, calm, at rest, still’ < Proto-Nostratic (vb.) **k^war-* ‘to rest, to stay, to remain’; (n.) **k^war-a* ‘stillness, quietude, repose, rest, resting place’; (adj.) ‘still, quiet, at rest’ (no. 554).
378. **k^werAn-*/**k^wrAn-*, **k^wreAn-* [**k^wraAn-*] (> **k^wrān-*), **k^wreAw_h-* [**k^wraAw_h-*] (> **k^wrāw_h-*) ‘mill, millstone’ < Proto-Nostratic (vb.) **k^war-* ‘to crush, to grind’; (n.) **k^war-a* ‘grinding pestle, grinding stone; stone, rock’ (no. 555).
379. **k^werb^h-*/**k^worb^h-*, **k^wreb^h-* ‘the inside, the middle, interior, inward part’ < Proto-Nostratic (n.) **k^war-b-a* ‘the inside, the middle, interior, inward part’ (no. 556).

380. (?) **k'wer-/k'wor-/k'wɣ-* 'to thunder, to rumble, to roar' < Proto-Nostratic (vb.) **k'warɣ-* 'to thunder, to rumble'; (n.) **k'warɣ-a* 'rain, storm, stormy weather, thunderstorm' (no. 557).
381. **k'wes-/k'wos-* 'to extinguish, to put out (originally, of fire)' < Proto-Nostratic (vb.) **k'was-* 'to strike fire, to put out (fire)'; (n.) **k'was-a* 'spark, fire' (no. 558).
382. **k'wes-/k'wos-* 'to sigh, to moan, to groan; to whisper' (Germanic only) < Proto-Nostratic (vb.) **k'was-* 'to sigh, to moan, to groan; to whisper, to murmur, to mumble'; (n.) **k'was-a* 'sigh, moan, groan, whisper, murmur, mumble' (onomatopoeic) (no. 559).
383. **k'wat'-/k'wat'-* > (with regressive deglottalization) *k^{wh}et'-/k^{wh}ot'-* '(vb.) to burn, to smoke, to smolder; (n.) smoke' < Proto-Nostratic (vb.) **k'wat'-* 'to burn, to smolder, to smoke'; (n.) **k'wat'-a* 'burning, heat, smoke' (no. 560).
384. **k'wat'-/k'wat'-* > (with regressive deglottalization) **k^{wh}et'-/k^{wh}ot'-* 'to whet, to sharpen' < Proto-Nostratic (vb.) **k'wat'-* 'to cut'; (n.) **k'wat'-a* 'knife, cutting instrument'; (adj.) 'sharp' (no. 561).
385. **k'wēdh-/k'wōdh-* 'rotten, bad, repulsive' < Proto-Nostratic (vb.) **k'wed-* 'to destroy, to damage, to ruin; to decay, to rot, to spoil'; (n.) **k'wed-a* 'death, destruction, damage, ruin, decay' (no. 562).
386. **k'wey-/k'wi-* 'to be putrid, purulent' < Proto-Nostratic (vb.) **k'wiy-* 'to be putrid, purulent'; (n.) **k'wiy-a* 'pus' (no. 563).
387. **k'wōw-* 'bullock, ox, cow' < Proto-Nostratic (n.) **k'wow-a* 'bullock, ox, cow' (no. 564).
388. **k'woyH-/k'wiH-* (secondary *e*-grade form: **k'weyH-*) 'skin, hide, leather' < Proto-Nostratic (Eurasianic only) (n.) **k'woy-a* 'outer covering: skin, hide, leather; bark (of a tree), shell, crust' (no. 565).
389. **k'wor(H)-/k'wɣ(H)-* (secondary *e*-grade form: **k'wer(H)-*) 'heavy, weighty' < Proto-Nostratic (vb.) **k'wurɣ-* 'to be heavy, weighty, solid, bulky'; (n.) **k'wurɣ-a* 'heaviness, weight, solidity, thickness'; (adj.) 'heavy, weighty, solid, bulky' (no. 566).

PROTO-NOSTRATIC **g* > PROTO-INDO-EUROPEAN **g*^h

390. (?) (**g^hel-/g^hor-/g^hl-* ‘brook, stream, rivulet’ (Old Irish only) < Proto-Nostratic (vb.) **gal-* ‘to flow’; (n.) **gal-a* ‘ravine, gully, watercourse, river’ (no. 569).
391. **g^her-/g^hor-/g^hr-* ‘to growl, to wail, to weep, to cry (out)’ < Proto-Nostratic (vb.) **gar-* ‘to mutter, to groan, to grumble, to howl, to roar’; (n.) **gar-a* ‘groan, howl, murmur, roar, cry’ (no. 572).
392. **g^hr-en-t’-/g^hr-on-t’-* ‘to grind’ and **g^hr-en-d^h-/g^hr-on-d^h-* ‘to grind’ < Proto-Nostratic (vb.) **gar-* ‘to crush, to grate, to grind; to melt, to dissolve’; (n.) **gar-a* ‘the act of crushing, grating, grinding’; (adj.) ‘crushed, grated, ground, dissolved, melted, softened’ (no. 573).
393. **g^hrend^ho-s* ‘bar, pole, shaft’ < Proto-Nostratic (n.) **gar^y-a* ‘stick, staff, rod, pole, stalk, stem’ (no. 575).
394. **g^hel-/g^hl-* (secondary *o*-grade form: **g^hol-*) ‘to shine, to glisten’ < Proto-Nostratic (Eurasian only) (vb.) **gil-* ‘to shine, to glisten’; (n.) **gil-a* ‘brilliance, shine’; (adj.) ‘shining, glistening, gleaming, brilliant’ (no. 580).

PROTO-NOSTRATIC **q*^h > PROTO-INDO-EUROPEAN **k*^h

395. **k^hel-/k^hol-, k^hal-* ‘to strike, to wound, to injure’ < Proto-Nostratic (vb.) **q^hal-* ‘to strike, to split, to cut, to wound, to injure’; (n.) **q^hal-a* ‘stroke, blow, wound, cut, slash, damage, injury’ (no. 584).
396. **k^hem-/k^hom-* ‘to cover, to conceal’ < Proto-Nostratic (vb.) **q^ham-* ‘to cover, to conceal’; (n.) **q^ham-a* ‘covering’ (no. 585).
397. **k^her-/k^hor-/k^hr-* (vb.) ‘to make a rasping sound, to be hoarse; to creak, to croak’; (n.) ‘neck, throat’ < Proto-Nostratic (vb.) **q^har^y-* ‘to make a rasping sound, to be hoarse; to creak, to croak’; (n.) **q^har^y-a* ‘neck, throat’ (no. 586).
398. **k^hath-* ‘to fight’ < Proto-Nostratic (vb.) **q^hath-* ‘to beat, to strike, to fight’; (n.) **q^hath-a* ‘anger, fury, wrath, spite; fight, battle, quarrel; killing, slaughter’ (no. 587).

PROTO-NOSTRATIC **q*’ > PROTO-INDO-EUROPEAN **k*’

399. **k’eb^h-/k’ob^h-* ‘(vb.) to munch, to chew’; (n.) ‘jaw’ < Proto-Nostratic (n.) **q’ab-a* ‘jaw’ (no. 589).

400. **k'el-* 'to shine, to be bright; to make bright' (extended form **k'leHy-*) < Proto-Nostratic (vb.) **q'al-* or **q'el-* 'to glitter, to sparkle, to shine, to be or become bright; to make bright'; (n.) **q'al-a* or **q'el-a* 'any bright, shining object: star' (no. 590).
401. **k'el-th-/*k'f-th-* 'vulva, womb' < Proto-Nostratic (n.) **q'alv-a* 'sexual organs, genitals, private parts (male or female)' (no. 591).
402. **k'em-bh-/*k'om-bh-/*k'ṃ-bh-* 'to chew (up), to bite, to cut to pieces, to crush', **k'om-bh-o-s* 'tooth, spike, nail' < Proto-Nostratic (vb.) **q'am-* 'to crush, to grind; to chew, to bite, to eat'; (n.) **q'am-a* 'bite; tooth' (no. 592).
403. (?) (**k'ew-lo-s-/*k'u-lo-s* 'head, top, summit, peak' (Proto-Germanic **kullaz*) < Proto-Nostratic (n.) **q'aw-a* 'head, forehead, brow' (no. 595).
404. **k'el-/*k'l-* '(n.) neck, throat; (vb.) to swallow' < Proto-Nostratic (vb.) **q'el-* 'to swallow'; (n.) **q'el-a* 'neck, throat' (no. 596).

PROTO-NOSTRATIC **q'w* > PROTO-INDO-EUROPEAN **k'w*

405. **k'wl-eA-* [**k'wl-aA-*] (> **k'wl-ā-*) 'wailing, crying' < Proto-Nostratic (vb.) **q'wal-* 'to call (out), to cry (out), to shout'; (n.) **q'wal-a* 'call, cry, outcry, sound, noise, hubbub, uproar' (no. 601).
406. **k'wel-/*k'wol-/*k'wl-* 'to strike, to hit, to cut, to hurt, to wound, to slay, to kill' < Proto-Nostratic (vb.) **q'wal-* 'to strike, to hit, to cut, to hurt, to wound, to slay, to kill'; (n.) **q'wal-a* 'killing, murder, manslaughter, destruction, death' (no. 602).
407. **k'wel-/*k'wol-/*k'wl-* 'to throw, to hurl' < Proto-Nostratic (vb.) **q'wal-* or **k'wal-* 'to throw, to hurl'; (n.) **q'wal-a* or **k'wal-a* 'sling, club; throwing, hurling' (no. 603).
408. **k'wer-/*k'wor-/*k'wḡ-* 'hill, mountain, peak' < Proto-Nostratic (n.) **q'war-a* 'edge, point, tip, peak' (no. 604).
409. **k'wer-/*k'wor-/*k'wḡ-* 'to make a sound, to call, to call out, to praise' and **k'werdh-/*k'wordh-/*k'wḡdh-* 'to call out, to cry out' < Proto-Nostratic (vb.) **q'war-* or **q'wur-* 'to call out, to cry out'; (n.) **q'war-a* or **q'wur-a* 'call, cry, shout' (no. 605).
410. (?) (**k'werH-/*k'worH-/*k'wḡH-*) 'to hear' < Proto-Nostratic (vb.) **q'warʷ-* or **q'wurʷ-* 'to hear'; (n.) **q'warʷ-a* or **q'wurʷ-a* 'ear' (no. 606).

411. **k^wet^h-*/**k^wot^h-* ‘to say, to speak, to call’ < Proto-Nostratic (Eurasianic only) (vb.) **q^wat^{wh}-* ‘to say, to speak, to call’; (n.) **q^wat^{wh}-a* ‘call, invocation, invitation, summons’ (no. 607).
412. **k^wor-*/**k^wr-* (secondary *e*-grade form: **k^wer-*) ‘(vb.) to swallow; (n.) neck, throat’ < Proto-Nostratic (vb.) **q^wur-* ‘to swallow’; (n.) **q^wur-a* ‘neck, throat’ (no. 608).

PROTO-NOSTRATIC **t^h* > PROTO-INDO-EUROPEAN **k^h*

413. **k^haḥ^h-k’-* (> **k^hāk’-*) ‘(young) goat, kid’ < Proto-Nostratic (n.) **t^haḥ-a* ‘(young) sheep or goat’ (no. 609).
414. **k^hak^{wh}-* ‘spike, prong’ (perhaps also Proto-Indo-European **k^hā^hH-* [better ? **k^hā^hk^{wh}H-*] ‘branch, bough’) < Proto-Nostratic (vb.) **t^hak^{wh}-* ‘to prick, to pierce, to stab’; (n.) **t^hak^{wh}-a* ‘stab, thrust, jab; thorn, spike, prong, barb’ (no. 610).
415. **k^hor-mo-* ‘injury, harm, suffering’ < Proto-Nostratic (vb.) **t^har-* ‘to cause harm, to injure, to cause strife’; (n.) **t^har-a* ‘injury, harm, strife’ (no. 612).
416. **k^hert’-* ‘(vb.) to cut into, to make incisions, to carve; (n.) craft, trade; craftsman, artisan’ < Proto-Nostratic (extended form) (vb.) **t^har-V-t’-* ‘to cut into, to make incisions’; (n.) **t^har-t’-a* ‘scratch, incision’ (no. 614).
417. **k^hey-*/**k^hoy-*/**k^hi-* ‘gray-haired, old’ < Proto-Nostratic (vb.) **t^hay-* ‘to grow old, to turn gray (hair)’; (n.) **t^hay-a* ‘old age, gray hair’ (no. 615).
418. **k^her-*/**k^hr-* (secondary *o*-grade form: **k^hor-*) ‘to burn, to roast’ < Proto-Nostratic (vb.) **t^her-* ‘to burn, to roast’; (n.) **t^her-a* ‘ash(es), charcoal, burnt wood; firewood’; (adj.) ‘burned, heated, roasted, charred, parched’ (no. 616).
419. **k^hiṣṣ^hr-* [**k^heṣṣ^hr-*] (> **k^hēr-*) ‘hair’ < Proto-Nostratic (n.) **t^hiṣ-r-a* ‘hair’ (the original meaning of the extended verb stem **t^hiṣ-V-r-* may have been ‘to scratch, to scrape’ > ‘to comb [hair]’) (no. 617).
420. **k^hreyH-*/**k^hriH-* (> **k^hrī-*) ‘(adj.) better, superior, glorious, illustrious; (n.) high rank’ < Proto-Nostratic (vb.) **t^hir-* ‘to be highly esteemed, eminent, illustrious, glorious’; (n.) **t^hir-a* ‘high rank, chief, chieftain, ruler’ (no. 619).
421. **k^honk^h-* ‘(vb.) to hook up, to hang up; (n.) peg, hook’ < Proto-Nostratic (vb.) **t^huṣ-V-k^h-* ‘to hook up, to hang up, to suspend (tr.); to dangle, to hang (intr.)’; (n.) **t^huṣ-k^h-a* ‘peg, hook’ (no. 620).

PROTO-NOSTRATIC *tʰ > PROTO-INDO-EUROPEAN *kʰ

422. *kʰras- ‘to bite, to gnaw, to eat’ < Proto-Nostratic (vb.) *tʰar- ‘to bite, to gnaw’; (n.) *tʰar-a ‘bite’; (extended form in Semitic and Indo-European) (vb.) *tʰar-V-s- ‘to bite, to gnaw’; (n.) *tʰar-s-a ‘tooth; food, nourishment’ (no. 622).
423. *kʰel-/kʰkl- ‘bent, curved, round’ < Proto-Nostratic (vb.) *tʰil- ‘to be bent, curved, round’; (n.) *tʰil-a ‘bent, curved, round thing or object’; (adj.) ‘bent, curved, round’ (no. 623).
424. *kʰem-/kʰm- (secondary *o*-grade form: *kʰom-) ‘(vb.) to join together, to unite (in marriage); to wed, to marry; (n.) the one who is married, son-in-law’ < Proto-Nostratic (vb.) *tʰim- ‘to join, bind, press, or unite together’; (n.) *tʰim-a ‘bond, tie, union, connection’; (adj.) ‘joined, bound, pressed, or united together; tied, harnessed, glued, etc.’ (no. 624).

PROTO-NOSTRATIC *ʔ > PROTO-INDO-EUROPEAN *ʔ

425. *ʔe- in: *ʔe+kʰ-, *ʔe+gʰ-, *ʔe+kʰ- 1st singular personal pronoun stem: ‘I’ < Proto-Nostratic *ʔa-, *ʔi- 1st singular personal pronoun stem (no doubt originally the same as the deictic particles *ʔa-, *ʔi- listed below) (no. 626).
426. *ʔe-/ʔo-, *ʔey-/ʔoy-/ʔi- (< *ʔe-/ʔo- + *y/i-) demonstrative stem, *-i deictic particle meaning ‘here and now’ added to verbs to form so-called “primary” endings, and adverbial particle *ʔē-/ʔō- ‘near, by, together with’ < Proto-Nostratic demonstrative stems: (A) *ʔa- distant: ‘that yonder (most remote, farthest away from the speaker)’, (B) *ʔi- proximate: ‘this (nearest to the speaker)’, and (C) *ʔu- intermediate: ‘that (neither too far from nor too near to the speaker)’ (originally deictic particles) (no. 627).
427. *ʔabh-ro- ‘strong, powerful, mighty’ < Proto-Nostratic (n.) *ʔab-a ‘strength, power’; (adj.) ‘strong, mighty’ (no. 628).
428. *ʔabh- ‘father, forefather, man’ and *ʔaphpha ‘father’ < Proto-Nostratic (n.) *ʔab(b)a ~ *ʔaph(p)a ‘father, forefather’ (nursery word) (no. 629).
429. *ʔedh-/ʔodh- ‘pointed, sharp, prickly’ < Proto-Nostratic (n.) *ʔadv-a ‘thorn’; (adj.) ‘pointed, sharp, prickly’ (no. 631).
430. *ʔakh- ‘to eat’ < Proto-Nostratic (vb.) *ʔakh- ‘to eat’; (n.) *ʔakh-a ‘food, meal; fodder, feed, morsel’ (no. 634).

431. **ʔak^h*- ‘evil, pain, trouble, misfortune’ < Proto-Nostratic (vb.) **ʔak^h*- ‘to be evil, wicked, bad; to hurt, to harm’; (n.) **ʔak^h-a* ‘evil, wickedness, harm’ (no. 635).
432. **ʔok^h*- ‘(vb.) to dig; (n.) furrow’ < Proto-Nostratic (vb.) **ʔak^h*- ‘to dig’; (n.) **ʔak^h-a* ‘that which is dug; digging, ditch, trench, hole; that which is used to dig; carving tool, chisel, cutter, gouge’ (no. 636).
433. **ʔak^hkh-eA* [**ʔak^hkh-aA*] > (**ʔak^hkhā*) (f.) ‘female relative, mother’ < Proto-Nostratic (n.) **ʔak^hkh-a* ‘older female relative’ (nursery word) (also **ʔak^hkh-a* ‘older male relative’) (no. 637).
434. (?) **(ʔ)le-* ‘not’ (Hittite only) < Proto-Nostratic (vb.) **ʔal-* ‘to be not so-and-so or such-and-such’; (n.) **ʔal-a* ‘nothing’ (originally a negative verb stem meaning ‘to be not so-and-so or such-and-such’ — later used in some branches as a negative particle) (no. 641).
435. **ʔem-/ʔm-* ‘to take, to obtain’ < Proto-Nostratic (vb.) **ʔam-* ‘to seize, to grasp, to take, to touch, to hold (closely or tightly)’; (n.) **ʔam-a* ‘grasp, hold, hand(ful)’; (adj.) ‘seized, grasped, touched, held, obtained’ (no. 642).
436. **ʔam-o-*; **ʔam-s-tero-*, -*ā* ‘time, moment’ (Celtic only) < Proto-Nostratic (n.) **ʔam-a* ‘time, moment, point of time, now’ (no. 643).
437. **ʔam(m)a* ‘mother’ < Proto-Nostratic (n.) **ʔam(m)a* ‘mother’ (nursery word) (no. 644).
438. **ʔen-os-/ʔon-os-* ‘load, burden’ < Proto-Nostratic (vb.) **ʔan-* ‘to load up and go, to send off’; (n.) **ʔan-a* ‘load, burden’ (no. 645).
439. **ʔen-o-s* (‘span of time’ >) ‘year’ < Proto-Nostratic (vb.) **ʔan^v-* ‘to draw near to, to approach, to come (close to)’; (n.) **ʔan^v-a* ‘nearness, proximity’ (no. 647).
440. **ʔan-* ‘to, towards, over, for, against, upon, on’ < Proto-Nostratic **ʔan^v-* ‘to, towards, over, for, against, upon, on’ (no. 648).
441. **ʔan-* ‘separate, different’ in: **ʔan-yo-s* ‘other, different’, **ʔan-t^hero-s* ‘different’ < Proto-Nostratic (vb.) **ʔaŋ-* ‘to divide, to separate’; (n.) **ʔaŋ-a* ‘separation, difference’; (adj.) ‘separate, different’ (no. 651).
442. **ʔan(n)o-s*, **ʔan(n)i-s*, **ʔan(n)a* ‘mother’ < Proto-Nostratic (n.) **ʔan^va* ‘mother, aunt’ (nursery word) (no. 649) or < Proto-Nostratic (n.) **ʔaŋ(ŋ)a* ‘(older) female relative’ (nursery word) (no. 651).

443. **ʔep^{hi}/*ʔop^{hi}* (zero-grade form: **p^{hi}*) ‘and, also, and also, besides, moreover’ < Proto-Nostratic **ʔaph-* ‘and, also, and also’ (the *CVC*- patterning shows that this could not originally have been a particle; though the original meaning is unknown, we may speculate that it may have been something like [vb.] **ʔaph-* ‘to be more, over, above, extra’; [n.] **ʔaph-a* ‘that which is more, over, above, extra’; [adj.] ‘many, more, extra, additional, numerous, teeming’) (no. 653).
444. **ʔer-dh-/*ʔor-dh-/*ʔr-dh-* ‘to split, to divide, to separate’ < Proto-Nostratic (vb.) **ʔar-* ‘to cut (off, apart), to sever, to separate, to part asunder’; (n.) **ʔar-a* ‘half, side, part’; (adj.) ‘severed, separated, parted, disjoined’ (no. 654).
445. **ʔer-s-/*ʔr-s-* ‘male, man’ < Proto-Nostratic (n.) **ʔar-a* ‘male, man, husband’ (no. 655).
446. **ʔer-/*ʔor-/*ʔr-* ‘associated, related’ < Proto-Nostratic (n.) **ʔar-a* ‘associated or related person or thing; associate, companion, friend; kinsman’; (adj.) ‘associated, related’ (no. 656).
447. **ʔer-/*ʔor-/*ʔr-* used as the base for the designation of various horned animals: ‘ram, goat’ < Proto-Nostratic (n.) **ʔar-a* used as the base for the designation of various horned animals: ‘ram, goat, mountain-goat, chamois, ibex, gazelle, etc.’ (no. 657).
448. **ʔes-/*ʔos-* ‘harvest-time’ < Proto-Nostratic (vb.) **ʔas-* ‘to gather, to collect’; (n.) **ʔas-a* ‘the act of gathering’ (no. 658).
449. **ʔēs-/*ʔōs-* ‘to put, to place, to set; to sit, to be seated’ < Proto-Nostratic (vb.) **ʔas^v-* ‘to put, to place, to set; to sit, to be seated’; (n.) **ʔas^v-a* ‘place, seat’; (adj.) ‘put, placed, set, established’ (no. 659).
450. **ʔath^{ta}* ‘father, daddy’ < Proto-Nostratic (n.) **ʔath^{ta}* ‘older male relative, father’ (nursery word) (no. 660).
451. **ʔwe* ‘or’ < Proto-Nostratic **ʔaw-*, **ʔwa-/*ʔwa-* coordinating conjunction: ‘or’ (no. 662).
452. **ʔ(e)yo-* originally an interrogative verb stem meaning ‘to do what?, to act in what manner?’, later simply ‘to do, to make, to perform’ < Proto-Nostratic **ʔay-* interrogative verb stem: ‘to do what?, to act in what manner?’ (no. 663).
453. **ʔyo-* relative pronoun stem < Proto-Nostratic **ʔay-*, **ʔya-* interrogative-relative pronoun stem: ‘who, which, what; who?, which?, what?’ (no. 664).
454. **ʔey-/*ʔoy-/*ʔi-* ‘to go’ and **ʔy-eh-* [**ʔy-ah-*] (> **ʔyā-*) ‘to go, to proceed’ < Proto-Nostratic (vb.) **ʔay-* ‘to go, to proceed’; (n.) **ʔay-a* ‘journey’ (no. 665).

- or Proto-Nostratic (vb.) **ɬiy-* ‘to come, to go’; (n.) **ɬiy-a* ‘approach, arrival; path, way’ (no. 688).
455. **ɬay-tʰ-* ‘mother’ < Proto-Nostratic (n.) **ɬay(y)a* ‘mother, female relative’ (nursery word) (no. 667).
456. **ɬekʰu-*, **ɬekʰw-o-s* ‘horse’ (literally, ‘the spirited, violent, fiery, or wild one’) < Proto-Nostratic (vb.) **ɬekʰ-* ‘to move quickly, to rage; to be furious, raging, violent, spirited, fiery, wild’; (n.) **ɬekʰ-a* ‘rapid or violent movement, fury, rage’ (no. 671).
457. **ɬek-* ‘to lack, to need, to want’ < Proto-Nostratic (vb.) **ɬek-* ‘to diminish, to decrease, to reduce; to be insufficient, lacking, wanting; to be small, weak, lowly, ignoble, common, ordinary, plain, simple’; (n.) **ɬek'-a* ‘diminishment, reduction, decrease, loss; deficiency, want, need, lack’ (no. 672).
458. **ɬɲk'-ni-s* ‘fire’ < Proto-Nostratic (vb.) **ɬeɲ-* ‘to burn, to heat up’; (n.) **ɬeɲ-a* ‘fire, heat; (heat of the) sun, sunshine, sunlight’; (extended form in Indo-European and Uralic [Finno-Ugrian]) (vb.) **ɬeɲ-V-k-* ‘to burn, to heat up’; (n.) **ɬeɲ-k'-a* ‘fire, heat; (heat of the) sun, sunshine, sunlight’ (no. 676).
459. **ɬepʰ-* ‘to cook’ < Proto-Nostratic (vb.) **ɬepʰ-* ‘to burn, to be hot; to cook, to boil, to bake’; (n.) **ɬepʰ-a* ‘the act of cooking, baking; oven’ (no. 677).
460. **ɬer-* ‘earth, ground’ < Proto-Nostratic (n.) **ɬer-a* ‘earth, ground’ (no. 678).
461. **ɬetʰi* (‘from the opposite side’ >) ‘over, beyond, further’ < Proto-Nostratic (vb.) **ɬetʰ-* ‘to oppose’; (n.) **ɬetʰ-a* ‘that which is opposite’ (no. 679).
462. **ɬel-* (secondary *o*-grade form: **ɬol-*) ‘deer (and similar animals)’ < Proto-Nostratic (n.) **ɬil-a* ‘deer’ (no. 682).
463. **ɬen-* ‘in, into, among, on’ < Proto-Nostratic (n.) **ɬin-a* ‘place, location’ (> ‘in, within, into’ in the daughter languages) (no. 684).
464. **ɬet-* (secondary *o*-grade form: **ɬot'-*) ‘to eat’ (original meaning ‘to bite’) < Proto-Nostratic (vb.) **ɬit'-* ‘to chew, to bite, to eat, to consume’; (n.) **ɬit'-a* ‘the act of eating; that which is eaten: food, nourishment’ (no. 687).
465. **ɬom-es-*, **ɬom-so-* ‘shoulder’ < Proto-Nostratic (n.) **ɬom-a* ‘rounded prominence at the end of a bone forming a ball and socket joint with the hollow part of another bone, condyle (of the lower jaw, the shoulder, the elbow, the hip, etc.)’ (semantic shifts took place in Semitic, Indo-European, and, in part, Altaic; the original meaning was preserved in Egyptian and Turkic) (no. 690).

466. **ʔor-/ʔr-* ‘to move, to set in motion; to rise, to arise; to raise’ < Proto-Nostratic (vb.) **ʔor-* ‘to move rapidly, quickly, hastily; to set in motion; (adj.) rapid, quick, hasty’; (n.) **ʔor-a* ‘any rapid motion: running, flowing, pouring, etc.’; (adj.) ‘rapid, quick, hasty’ (no. 691) and < Proto-Nostratic (vb.) **ʔorʷ-* ‘to rise (up)’; (n.) **ʔorʷ-a* ‘rising movement or motion’ (no. 692). Note: Two separate Proto-Nostratic stems have fallen together in Proto-Indo-European: (A) **ʔor-* ‘to move rapidly, quickly, hastily; to set in motion’ and (B) **ʔorʷ-* ‘to rise (up)’.
467. **ʔorgh-/ʔrgh-* ‘to climb on, to mount, to copulate (with)’, **ʔorgh-i-s* ‘testicle’ < Proto-Nostratic (vb.) **ʔorʷ-V-g-* ‘to climb on, to mount, to copulate (with)’; (n.) **ʔorʷ-g-a* ‘mounting, copulation’ (no. 693).
468. **ʔowh̥h-yo-m* ‘egg’ < Proto-Nostratic (vb.) **ʔow-V-h-* ‘to hatch eggs’; (n.) **ʔow-h-a* ‘egg’ (no. 695). Note: **ʔowh̥h-yo-m* (traditional **ʔowh̥h-yo-m*) ‘egg’ cannot, as is often assumed, be a derivative of the common Proto-Indo-European word for ‘bird’, which requires an initial *a*-coloring laryngeal (preserved in Armenian *hav* ‘bird’): **h̥h̥éw-i-s* [**h̥h̥áw-i-s*], **h̥h̥w-éy-s*.
469. **ʔoy-* ‘single, alone; one’ (with non-apophonic *-o-*) (extended forms: **ʔoy-no-*, **ʔoy-wo-*, **ʔoy-kʰo-*) < Proto-Nostratic (vb.) **ʔoy-* ‘to be by oneself, to be alone’; (n.) **ʔoy-a* ‘solitude, aloneness’; (adj.) ‘single, alone; one’ (no. 696).
470. **ʔol-* demonstrative pronoun stem < Proto-Nostratic **ʔul-* deictic stem indicating distance farthest away from the speaker: ‘that over there, that yonder’ (no. 698).
471. **ʔūt-* ‘out, out of, outside, away from’ < Proto-Nostratic (vb.) **ʔut-* ‘to stretch, to lengthen’; (n.) **ʔut-a* ‘wide-open space, outdoor area, exterior; length, distance’; (adj.) ‘wide, broad, long’ (no. 701).

PROTO-NOSTRATIC *h > PROTO-INDO-EUROPEAN *h

472. **hegh-* [**hagh-*] ‘day’ (Indo-Iranian only) < Proto-Nostratic (vb.) **hag-* ‘to burn, to be on fire, to be aflame, to be ablaze, to shine brightly’; (n.) **hag-a* ‘midday heat, heat of sun, sunlight’ (no. 702).
473. **hek’-os-* [**hak’-os-*] ‘pain, affliction, injury’ < Proto-Nostratic (vb.) **hak’-* ‘to press, squeeze, pack, or cram together; to confine, to oppress’; (n.) **hak’-a* ‘oppression, affliction, pain’ (no. 704).
474. **hel-bʰo-s* [**hal-bʰo-s*] ‘white; cloud, whiteness’ < Proto-Nostratic (vb.) **hal-* ‘to light up, to beam forth, to shine, to brighten up, to radiate’; (n.) **hal-a*

- ‘clearness, brightness, radiance, purity’; (adj.) ‘clear, pure, bright, shining, radiant’ (no. 705).
475. **hel-yo-* [**hal-yo-*] ‘else, otherwise; other’ < Proto-Nostratic (adv.) **hal-* ‘else, otherwise’; (n.) **hal-a* ‘other side’; (adj.) ‘other’ (no. 706).
476. **hem-s-* [**ham-s-*], **hm-es-* ‘blackbird’ (named due to its color) < Proto-Nostratic (n.) **ham-a* ‘blackness; black object’; (adj.) ‘black’ (no. 708).
477. **hem-bh-* [**ham-bh-*]/**hom-bh-*/**hm-bh-*, possibly also **hem-p’-* [**ham-p’-*]/**hom-p’-*/**hm-p’-* ‘water, rain, rain-cloud’ < Proto-Nostratic (n.) **ham-a* ‘water’ (no. 709).
478. **hen-thro-* [**han-thro-*] (‘hole, opening’ >) ‘cave, cavern’ < Proto-Nostratic (vb.) **həŋ-* ‘to split apart, to open (tr.); to gape, to open the mouth, to yawn’; (n.) **həŋ-a* ‘opening: yawn, gape, mouth; hole; crack, crevice’ (no. 711).
479. **hep^{ho}* [**hap^{ho}*] ‘(turned) away, back’ < Proto-Nostratic (vb.) **hap^h-* ‘to turn, to turn away, to turn back’; (n.) **hap^h-a* ‘the act of turning away, turning back, overturning’; (adj.) ‘turned away from, turned back, overturned’ (no. 712).
480. **hew-* [**haw-*] ‘to long for, to desire’ < Proto-Nostratic (vb.) **haw-* ‘to long for, to desire’; (n.) **haw-a* ‘desire’ (no. 713).
481. **hey-* [**hay-*] ‘a type of cereal or grain’ (West Germanic only) < Proto-Nostratic (n.) **hay-a* ‘a kind of cereal or grain’ (no. 714).
482. **hay-* exclamation of surprise, astonishment, grief, or misfortune < Proto-Nostratic **hay* exclamation of surprise, astonishment, grief, or misfortune (no. 715).
483. **hey-os-*/**hey-es-* [**hay-os-*/**hay-es-*] ‘metal, ore’ (> ‘copper, bronze’) < Proto-Nostratic (n.) **hay-a* ‘metal, ore’ (no. 716).
484. **her-* [**har-*]/**hor-*/**hɹ-* ‘(vb.) to liberate, to set free; (adj.) free’ < Proto-Nostratic **her-* and/or **hor-* ‘(vb.) to escape, to flee, to run away’; (n.) **her-a* and/or **hor-a* ‘escape, flight’; (adj.) ‘escaped, liberated, freed’ (no. 717).

PROTO-NOSTRATIC *h > PROTO-INDO-EUROPEAN *h̥

485. **h̥het-* [**h̥hat-*] ‘crop, grain’ < Proto-Nostratic (vb.) **hac-* ‘to pick, to pluck’; (n.) **hac-a* ‘the act of picking, plucking’; (adj.) ‘picked, plucked’ (no. 718).

486. **hhegh-* [**hhag^h-*] ‘(vb.) to be weighed down, oppressed, fearful; (n.) pain, sorrow, grief, fear’ < Proto-Nostratic (vb.) **hag-* ‘to be pressed or weighed down; to be oppressed; to be disheartened, vexed, distressed, afflicted, troubled’; (n.) **hag-a* ‘trouble, affliction, oppression, distress, grief, sadness’ (no. 719).
487. **hhegh-lu-* [**hhag^h-lu-*] ‘mist, darkness, cloudy weather’ < Proto-Nostratic (vb.) **hag-* ‘to cover over, to hide, to conceal, to obscure, to overshadow’; (n.) **hag-a* ‘mist, darkness, cloudy weather’; (adj.) ‘misty, dark, cloudy’ (no. 720).
488. **hhekh-* [**hhakh-*] ‘to be mentally sharp, keen’ < Proto-Nostratic (vb.) **hak^h-* ‘to be mentally sharp, keen’; (n.) **hak^h-a* ‘wisdom, sound judgment, understanding’ (no. 721).
489. **hhek’-ro-* [**hhak’-ro-*] ‘field, plain’ < Proto-Nostratic (vb.) **hak’-* ‘to spread, to widen, to extend’; (n.) **hak’-a* ‘expanse, wide-open space, earth, field’ (no. 722).
490. **hhek’-* [**hhak’-*] ‘to direct, to guide, to command’ (> ‘to drive’) < Proto-Nostratic (vb.) **hak’-* ‘to direct, to guide, to command’; (n.) **hak’-a* ‘direction, guidance, command, decree; leader, chief, chieftain, ruler, headman’ (no. 723).
491. **hhel-* [**hhal-*] ‘to lay waste, to kill, to destroy’ < Proto-Nostratic (vb.) **hal-* ‘to lay waste, to destroy, to kill, to slaughter’; (n.) **hal-a* ‘destruction, violence, killing, slaughter’ (no. 724).
492. **hhel-* [**hhal-*] ‘to grow, to be strong’ < Proto-Nostratic (vb.) **hal^v-* ‘to grow, to be strong’; (n.) **hal^v-a* ‘health, strength, power’; (adj.) ‘healthy, strong, powerful; grown, great, large’ (no. 727).
493. **hhel-wo-* [**hhal-wo-*] ‘hollow, cavity’ < Proto-Nostratic (n.) **hal^v-a* ‘hole, hollow, cavity’ (no. 728).
494. **hhem-* [**hham-*]/**hhom-* ‘sharp, sour, bitter, acrid’ < Proto-Nostratic (vb.) **ham-* ‘to be sharp, sour, acrid’; (n.) **ham-a* ‘any sharp-tasting, sour, bitter, or acrid foodstuff’; (adj.) ‘sharp, sour, bitter, acrid’ (no. 729).
495. **hhen-s-* [**hhan-s-*]/**hhn-s-* ‘to be gracious, to show favor’ < Proto-Nostratic (vb.) **han-* ‘to show favor; to be gracious, affectionate, tender’; (n.) **han-a* ‘affection, tenderness, favor, graciousness’ (no. 731).
496. **hhen-k^h-* [**hhan-k^h-*] ‘to bend, to curve’ and **hhen-k’-* [**hhan-k’-*] ‘to bend, to curve’ < Proto-Nostratic (vb.) **han-* ‘to bend, to curve, to twist’; (n.) **han-a* ‘bend, curve, twist’ (no. 732).

497. **h₁heng^h-* [**h₁hang^h-*] ‘(vb.) to tie tightly, to constrict; to choke, to strangle; (adj.) narrow, constricted’ < Proto-Nostratic (vb.) **han-V-g-* ‘to tie tightly, to constrict, to make narrow; to choke, to strangle’; (n.) **han-g-a* ‘throat’; (adj.) ‘constricted, narrow’ (no. 733).
498. **h₁henH-t^hi-s* [**h₁hanH-t^hi-s*]/**h₁ηH-t^hi-s* ‘duck’ < Proto-Nostratic (vb.) **h₁an-* ‘to dive into water (bird)’; (n.) **h₁an-a* ‘an aquatic bird’ (no. 734).
499. **h₁hep^h-* [**h₁hap^h-*]/**h₁hop^h-* ‘to gather, to collect; to gather wealth’ < Proto-Nostratic (vb.) **hap^h-* ‘to take, gather, or collect (with the hands or arms)’; (n.) **hap^h-a* ‘that which has been gathered or collected: plenty, fullness, abundance, wealth, possessions, property; embrace, armful, handful’ (no. 735).
500. **h₁hep^h-* [**h₁hap^h-*] ‘water, stream’ < Proto-Nostratic (vb.) **hap^h-* ‘to move quickly, to run, to flow’; (n.) **hap^h-a* ‘(flowing or running) water, river, stream, current’ (no. 736).
501. **h₁her-* [**h₁har-*]/**h₁ηr-* ‘to prepare, to make ready, to put together’ < Proto-Nostratic (vb.) **har-* ‘to prepare, to make ready, to put together’; (n.) **har-a* ‘way, manner, method’ (no. 737).
502. **h₁herH-mo-* [**h₁harH-mo-*]/**h₁ηH-mo-* ‘arm, shoulder’ < Proto-Nostratic (n.) **har-a* ‘arm, hand’ (no. 738).
503. **h₁her-yo-* [**h₁har-yo-*] ‘a superior, a person higher in status or rank’ < Proto-Nostratic (vb.) **har-* ‘to be superior, to be higher in status or rank, to be above or over’; (n.) **har-a* ‘nobleman, master, chief, superior’; (adj.) ‘free-born, noble’ (no. 739).
504. **h₁her(H)-* [**h₁har(H)-*] ‘to plow’ < Proto-Nostratic (vb.) **har-* ‘to scratch, to scrape’ (> ‘to plow’); (n.) **har-a* ‘scraping, scratching’ (no. 740).
505. **h₁her-* [**h₁har-*]/**h₁ηr-* ‘then, therefore; and’ < Proto-Nostratic **har^y-*: (1) particle introducing an alternative: ‘or’, (2) conjoining particle: ‘with, and’, (3) inferential particle: ‘then, therefore’ (no. 741). Note: The *CVC-* patterning shows that this stem could not originally have been a particle, though this is how it is preserved in the daughter languages. The original meaning is unknown.
506. **h₁hes-* [**h₁has-*] ‘to burn, to be hot’ < Proto-Nostratic (vb.) **has-* ‘to burn, to be hot’; (n.) **has-a* ‘cinder, ember, ashes; heat’ (no. 742).
507. **h₁hes-* [**h₁has-*]/**h₁hōs-* originally ‘a tree and its fruit’ (as in Hittite), but later specialized in the post-Anatolian Indo-European daughter languages < Proto-

- Nostratic root **hasʷ-* (used as the base to designate various tree names): (n.) **hasʷ-a* ‘a tree and its fruit’ (no. 743).
508. **hhet-* [**hhat-*] ‘(vb.) to terrify, to frighten; (adj.) terrible, horrible, hateful’ < Proto-Nostratic (vb.) **hat-* ‘to shake, to tremble; to be shaken, startled, frightened, afraid, terrified’; (n.) **hat'-a* ‘trembling, shaking’ (no. 744).
509. **hhewhho-s* [**hhawhho-s*] ‘maternal grandfather; maternal uncle’ < Proto-Nostratic (n.) **haw-a* ‘a relative on the mother’s side’ (no. 745).
510. **hhew-r-* [**hhaw-r-*]/**hhow-r-*/**hhu-r-*, **hhw-er-*/**hhw-or-*/**hhur-* ‘(vb.) to rain, to sprinkle, to spray; (n.) rain, moisture’, **hhew-on(th)-* [**hhaw-o(nth)-*], **hhew-η(th)-* [**hhaw-η(th)-*] ‘spring, well’ (also used as the base of river names), and **hhw-er-s-*/**hhw-or-s-*/**hhw-r-s-* ‘(vb.) to rain; (n.) rain’ < Proto-Nostratic (vb.) **haw-* ‘to surge up, to overflow, to rain’; (n.) **haw-a* ‘torrential rain, torrent, deluge’ (no. 746).
511. **hhew-k-* [**hhaw-k-*]/**hhu-k-*, **hhw-ek'(s)-*/**hhw-ok'(s)-* ‘to grow, to increase’ < Proto-Nostratic (vb.) **haw-* ‘to swell, to increase’; (n.) **haw-a* ‘swelling, increase, growth; great number or amount’ (no. 747).
512. **hhew-* [**hhaw-*] ‘to plait, to weave’, **hhw-ihh-* [**hhw-ehh-*] (> **Hwē-*) ‘to weave, to braid, to plait’, **hhw-ey-*/**hhw-oy-*/**hhw-i-* ‘to weave, to braid, to plait, to twist, to turn’, (**hhw-ep^h-*/**hhw-op^h-*)/**hhu-p^h-* ‘to weave, to braid, to plait, to twist, to turn’, and **hhw-eb^h-*/**hhw-ob^h-*/**hhu-b^h-* ‘to weave’ < Proto-Nostratic (vb.) **haw-* ‘to weave, to braid, to plait, to twist, to turn’; (n.) **haw-a* ‘the act of weaving, braiding, plaiting’ (no. 748).
513. **hheyw-* [**hhayw-*]/**hhoyw-*, **hheyu-* [**hhayu-*]/**hhoyu-* ‘(adj.) alive; (n.) life, lifetime’ < Proto-Nostratic (vb.) **hay-* ‘to live, to be alive’; (n.) **hay-a* ‘life, age’; (extended form) (vb.) **hay-V-w-*; (n.) **hay-w-a* (no. 749).
514. **hhoyt-* ‘to swell’ < Proto-Nostratic (vb.) **hay-V-t-* ‘to swell, to be fat’; (n.) **hay-t'-a* ‘a swelling, fat’; (adj.) ‘fat, swollen’ (no. 750).
515. **hhink^h-* [**hhenk^h-*]/**hhṅk^h-* ‘to reach, to come to, to arrive at; to offer, to present’ < Proto-Nostratic (vb.) **hin-V-k^h-* ‘to reach, to come to, to arrive at, to gain; to offer, to present’; (n.) **hin-k^h-a* ‘gain, mastery, experience; offering, present’ (no. 752).
516. **hhiw-* [**hhew-*]/**hhu-*, **hhw-eA-* [**hhw-aA-*] (> **Hw-ā-*), **hhu-A-* (> **Hū-*) ‘to lack, to stand in need, to be in want’ < Proto-Nostratic (vb.) **hiw-*, **hiy-* ‘to lack, to stand in need, to be in want’; (n.) **hiw-a*, **hiy-a* ‘need, want, lack, deficiency’ (no. 753).

517. **h₂hok^h-* (secondary *e*-grade form: **h₂hek^h-* [**h₂hak^h-*]) ‘sharp point’ < Proto-Nostratic (Eurasianic only) (n.) **hok^h-a* ‘sharp point’ (no. 754).
518. **h₂hul-* (> **h₂hol-*) ‘to smite, to destroy’ < Proto-Nostratic (vb.) **hul-* ‘to destroy, to lay waste, to cause to perish’; (n.) **hul-a* ‘ruin, destruction; end, death’ (no. 757).
519. **h₂hor-/h₂hyr-* ‘eagle’ < Proto-Nostratic (n.) **hur-a* (and/or **her-a* ?) ‘hawk-like bird: falcon, hawk, eagle, kite’ (no. 758).

PROTO-NOSTRATIC *ʕ > PROTO-INDO-EUROPEAN *ʕ̥

520. **ʕ₂hel-* [**ʕ₂hal-*] ‘to burn’ < Proto-Nostratic (vb.) **ʕal-* ‘to make a fire, to light a fire, to ignite, to kindle, to burn’; (n.) **ʕal-a* ‘fire, torch’ (no. 764).
521. (**ʕ₂hmd^h-i* >) **ʕ₂hnd^h-i* ‘on top of, over, above; in addition to’ < Proto-Nostratic (vb.) **ʕam-* ‘to lift, to raise, to make high’; (n.) **ʕam-a* ‘highest point, tip, top’; (extended form [Semitic and Indo-European]) (vb.) **ʕam-V-d-* ‘to lift, to raise, to make high’; (n.) *ʕam-d-a* ‘highest point, tip, top’ (no. 766).
522. **ʕ₂henE-* [**ʕ₂hanE-*] ‘to breathe, to respire, to live’ < Proto-Nostratic (vb.) **ʕan-* ‘to breathe, to respire, to live’; (n.) **ʕan-a* ‘life, breath’ (no. 768).
523. **ʕ₂het^h-* [**ʕ₂hat^h-*] ‘to move, to proceed, to advance (in years)’ < Proto-Nostratic (vb.) **ʕath-* ‘to move, to proceed, to advance (in years)’; (n.) **ʕath-a* ‘maturity, old age; advance’; (adj.) ‘mature, old; advanced’ (no. 773).
524. **ʕ₂hey-* [**ʕ₂hay-*] ‘to know, to recognize’ (Tocharian only) < Proto-Nostratic (vb.) **ʕey-* ‘to know, to recognize’; (n.) **ʕey-a* ‘sight, recognition’; (adj.) ‘known, seen, recognized’ (no. 776).
525. **ʕ₂hig^h-* [**ʕ₂heg^h-*] ‘with young (of animals)’ < Proto-Nostratic (n.) **ʕig-a* ‘young of an animal, calf’ (no. 777).
526. **ʕ₂hok^{wh}-* ‘(vb.) to see; (n.) eye’ < Proto-Nostratic (Eurasianic only) (vb.) **ʕuk^{wh}-* ‘to perceive, to notice, to observe’ (> ‘to see’); (n.) **ʕuk^{wh}-a* ‘perception, observation; seeing, sight’ (> ‘eye’) (no. 781).
527. **ʕ₂hot-* ‘to smell’ < Proto-Nostratic (vb.) **ʕut-* ‘to smell’; (n.) **ʕut-a* ‘smell, odor, fragrance’ (no. 784).
528. **ʕ₂howi-s* ‘sheep’ < Proto-Nostratic (n.) **ʕuw-a* ‘herd of small animals, sheep and goats’ (no. 785).

PROTO-NOSTRATIC *x > PROTO-INDO-EUROPEAN *h

529. **h_hel-* [**h_hal-*] ‘to wear down, to grind’ < Proto-Nostratic (vb.) **xal-* ‘to wear down, to wear out, to weaken; to be worn out, worn down, weakened’; (n.) **xal-a* ‘weakness, exhaustion, fatigue, weariness’; (adj.) ‘weak, worn out, tired, exhausted, weary’ (no. 786).
530. **h_hend^h-ro-* [**h_hand^h-ro-*] ‘man’ (Greek only) < Proto-Nostratic (vb.) **xam-* ‘to be wild, fierce, brave, strong, manly’; (n.) **xam-a* ‘a male (human or animal), (extended form in Dravidian and Indo-European) (vb.) **xam-V-d-* ‘to be wild, fierce, brave, strong, manly’; (n.) **xam-d-a* ‘a male (human or animal)’ (**xam-d-* > **xan-d-*) (no. 788).
531. **h_hen-d^h-* [**h_han-d^h-*] ‘to sprout, to blossom, to bloom’ (Greek and Albanian only), **h_hen-d^h-os-* [**h_han-d^h-os-*] ‘sprout, blossom, bloom, flower’ < Proto-Nostratic (vb.) **xan-* ‘to sprout, to flourish, to bloom’; (n.) **xan-a* ‘sprout, bloom, blossom’ (no. 789).
532. **h_hent^h-s* [**h_hant^h-s*] ‘front, front part’, **h_hent^hi* [**h_hant^hi*] ‘in front of, before’ < Proto-Nostratic (n.) **xan-t^h-a* ‘the most prominent or foremost (person or thing), front, front part’ (extended form of [vb.] **xan-* ‘to lift, to raise; to rise, to go upward, to ascend’; [n.] **xan-a* ‘that which is most prominent, foremost, visible, or noticeable’; [particle] ‘on top of, over, above’) (no. 791).
533. **h_het-* [**h_hat-*] ‘to cut into, to hollow out, to engrave, to prick, to pierce’ < Proto-Nostratic (vb.) **xat-* ‘to cut into, to hollow out, to engrave, to prick, to pierce’; (n.) **xat-a* ‘slice, carving, engraving, engraved line, incision’ (no. 792).

PROTO-NOSTRATIC *x^w > PROTO-INDO-EUROPEAN *h^w

534. **h_hwel-/h_hwol-/h_hw_l-* ‘to draw, to pull, to tear out’ < Proto-Nostratic (vb.) **x^wal-* ‘to pull (off, out), to tear (off, out)’; (n.) **x^wal-a* ‘the act of pulling or tearing (off, out)’ (no. 794).
535. **h_hwet-* ‘to say, to speak’ < Proto-Nostratic (vb.) **x^wat-* ‘to chatter, to speak’; (n.) **x^wat-a* ‘chatter, talk’ (no. 796).
536. **h_hwer-k^h-* ‘to cry, to squeal’ (Balto-Slavic only) < Proto-Nostratic (vb.) **x^wir-* ‘to make a loud noise, to make a shrill sound’; (n.) **x^wir-a* ‘loud noise’ (no. 798).

PROTO-NOSTRATIC * γ > PROTO-INDO-EUROPEAN * ζh

537. * $\zeta\text{h}orb^h$ - (with non-apophonic -o-) ‘to be or become separated, abandoned, bereft’, * $\zeta\text{h}orb^h$ -o-s (n.) orphan, servant; (adj.) bereft, abandoned, deprived (of) < Proto-Nostratic (vb.) * γor - ‘to leave, to go away, to depart; to separate; to abandon’; (n.) * γor -a ‘leaving, departure; separation; abandonment’. (extended form) (vb.) * γor -V-b- ‘to leave, to go away, to depart; to separate; to abandon’; (n.) * γor -b-a ‘leaving, departure; separation; abandonment’ (no. 801).

PROTO-NOSTRATIC *y > PROTO-INDO-EUROPEAN *y

538. * $yo\text{?}$ -s- (> * $y\text{os}$ -) ‘to gird’ < Proto-Nostratic (vb.) * $ya\text{?}$ - ‘to tie, to bind, to gird’; (n.) * $ya\text{?}$ -a ‘binding, bond, bandage; belt, girdle’ (no. 802).
539. * yew -/* yow -/* yu - (adj.) young; (n.) youth, young person’ in: * $yuwen$ -, * $yuwn\text{?}khos$ ‘young’; * $yuwn\text{?}th$ -eA, -os, -is ‘youth, young person’ < Proto-Nostratic (vb.) * yaw - ‘to produce young’; (n.) * yaw -a ‘youth, young person, child’; (adj.) ‘young’ (no. 805).
540. * $yewo$ - ‘grain’ < Proto-Nostratic (Eurasian only) (n.) * yiw -a ‘grain’ (no. 806).

PROTO-NOSTRATIC *w > PROTO-INDO-EUROPEAN *w

541. * we -/* wo -, * wey - 1st person dual and plural personal pronoun stem < Proto-Nostratic * wa - 1st person personal pronoun stem: ‘I, me; we us’ (no. 808).
542. * we , * u sentence particle: ‘and, also, but; like, as’ < Proto-Nostratic * wa - sentence particle: ‘and, also, but; like, as’ (no. 809).
543. * $we\zeta\text{h}$ - [* $wa\zeta\text{h}$ -]/* $wo\zeta\text{h}$ - > * $w\bar{a}$ -/* $w\bar{o}$ - ‘to call, to cry out’ < Proto-Nostratic (vb.) * $w\acute{a}\zeta$ - ‘to call, to cry out, to shout’; (n.) * $w\acute{a}\zeta$ -a ‘cry, howl, clamor, shout, noise’ (no. 810).
544. * wed^h -/* wod^h - ‘to lead, to bring, to carry’ < Proto-Nostratic (vb.) * wad - ‘to take, to lead, to carry, to bring’; (n.) * wad -a ‘the act of taking, leading, carrying, bringing’ (no. 811).
545. * $welh$ - [* $wahh$ -]/* $wohh$ - > * $w\bar{a}$ -/* $w\bar{o}$ - ‘to strike, to wound’ < Proto-Nostratic (vb.) * wah - ‘to strike, to stab, to wound’; (n.) * wah -a ‘wound, scar; knife, sword, blade, spear(head)’ (no. 812).

546. **wek'-/*wok'-* 'to rouse, to stir up, to excite, to awaken' < Proto-Nostratic (vb.) **wak'-* 'to rouse, to stir up, to excite'; (n.) **wak'-a* 'energy, vigor, strength, power, might' (no. 813).
547. **wal-* 'to be strong' < Proto-Nostratic (vb.) **wal-* 'to be or become strong'; (n.) **wal-a* 'strength, power' (no. 814).
548. **wel-//*wol-//*wl-* 'to draw, to pull, to tear out' < Proto-Nostratic (vb.) **wal-* 'to pull (out)'; (n.) **wal-a* 'pulling, dragging' (no. 815).
549. **wal-* 'to shout' < Proto-Nostratic (vb.) **wal-* 'to cry out, to call out, to shout'; (n.) **wal-a* 'sound, noise, cry, wail, lamentation, howl, hubbub' (no. 816).
550. **wel-kh-//*wol-kh-//*wl-kh-*, **wel-k'-/*wol-k'-/*wl-k'-*, and **wel-gh-//*wol-gh-//*wl-gh-* 'to wet, to moisten' < Proto-Nostratic (vb.) **wal-* 'to flow, to wet, to moisten'; (n.) **wal-a* 'flow, trickle; wetness, moisture, dampness'; (adj.) 'wet, damp' (no. 818).
551. **wel-//*wol-//*wl-* 'to heat, to warm, to boil' < Proto-Nostratic (vb.) **wal-* 'to set fire to, to burn, to heat up, to warm'; (n.) **wal-a* 'heat, warmth, boiling' (no. 819).
552. **wel-//*wol-//*wl-* 'to crush, to grind, to wear out; to press; to be worn out, weak; to fade, to wither, to waste away' < Proto-Nostratic **wal-* '(vb.) to crush, to grind, to wear out; to rub, to press; to be worn out, weak; to fade, to wither, to waste away'; (n.) **wal-a* 'distress, pain, difficulty; weakness, hunger, starvation' (no. 820).
553. **wel-//*wol-//*wl-* 'to turn, to roll, to revolve' < Proto-Nostratic (vb.) **walv-* 'to turn, to roll, to revolve'; (n.) **walv-a* 'circle, circumference; turn, rotation'; (adj.) 'round' (no. 821).
554. **wem-//*wom-//*wṃ-* 'to vomit, to spit up' < Proto-Nostratic (vb.) **wam-* 'to eject, to spit out, to spit up'; (n.) **wam-a* 'spittle, vomit' (no. 823).
555. **wen-//*won-//*wṃ-* 'to dwell, to abide, to remain' (Germanic only) < Proto-Nostratic (vb.) **wan-* 'to stay, to remain'; (n.) **wan-a* 'abode, dwelling' (no. 824).
- Note: Proto-Indo-European **wen-//*won-//*wṃ-* 'to dwell, to abide, to remain' is distinct from **wen(H)-* 'to strive for, to wish for, to desire' (cf. Pokorny 1959:1146—1147).
556. **wen-dh-//*won-dh-//*wṃ-dh-* 'to bend, to twist, to turn', **wen-kh-//*won-kh-//*wṃ-kh-* 'to bend, to twist, to turn', **wen-k'-/*won-k'-/*wṃ-k'-* 'to curve, to

- bend', and **wen-gh-/*won-gh-/*wη-gh-* 'to turn, to twist, to go crookedly' < Proto-Nostratic (vb.) **wan-* 'to bend'; (n.) **wan-a* 'bend, curve'; (adj.) 'crooked, bent, curved' (no. 827).
557. **wen-/*won-/*wη-* 'to wound' < Proto-Nostratic (vb.) **wan-* 'to strike, to stab, to wound, to cut'; (n.) **wan-a* 'cut, slash, gash, wound, harm, injury; dagger, knife' (no. 828).
558. **wers-/*wɣs-* 'man, male, male animal' < Proto-Nostratic (n.) **war-a* 'man, male, male animal' (no. 829).
559. **wer-/*wor-/*wɣ-* 'to look, to watch out for, to observe, to care for' < Proto-Nostratic (vb.) **war-* 'to look, to watch out for, to observe, to care for'; (n.) **war-a* 'watch, vigil, guardianship, care; guard, keeper, warder, watchman' (no. 830).
560. **wer-/*ur-* '(vb.) to stretch, to extend; (adj.) wide, broad, extended, great, large' < Proto-Nostratic **war-* '(vb.) to stretch, to extend, to expand'; (n.) **war-a* 'width, breadth, length'; (adj.) 'wide, broad' (no. 832).
561. **wer-dh-/*wor-dh-/*wɣ-dh-* '(vb.) to raise, to elevate; to grow, to increase; (n.) growth, increase'; and **wer-s-/*wor-s-/*wɣ-s-* 'uppermost, highest, or topmost part'; probably also **wer-/*wor-*, (extended form) **wer-H-k-* 'to swell' (> 'to be or become fat, strong, furious, angry, etc.') < Proto-Nostratic (vb.) **war-* 'to raise, to elevate, to grow, to increase'; (n.) **war-a* 'uppermost, highest, or topmost part' (no. 833).
562. **wer-/*wor-* 'to burn' < Proto-Nostratic (vb.) *war-* 'to burn, to blaze'; (n.) **war-a* 'blaze, flame, heat, warmth' (no. 834).
563. **wer-/*wor-* 'to say, to speak, to tell' < Proto-Nostratic (vb.) **war-* and/or **wir-* 'to say, to speak, to tell, to point out, to make known'; (n.) **war-a* and/or **wir-a* 'news, report, gossip, speech' (no. 835).
564. **wes-* 'to crush, to grind, to pound, to wear out; to wither, to fade, to rot away, to waste away, to dry up, to decay' < Proto-Nostratic (vb.) **wasʷ-* 'to crush, to grind, to pound, to wear out; to wither, to fade, to rot away, to waste away, to dry up, to decay'; (n.) **wasʷ-a* 'the act of crushing, grinding, pounding; wasting away, decay, decomposition' (no. 837).
565. **weth-* '(vb.) to pass (of time); to grow old, to age; (adj.) old; (n.) year, age' < Proto-Nostratic (vb.) **wath-* 'to pass (of time); to grow old, to age'; (n.) **wath-a* 'year, age'; (adj.) 'old' (no. 839).

566. **wethH-/wot^hH-* ‘to say, to speak’ < Proto-Nostratic (vb.) **wath-* ‘to say, to speak, to be talkative’; (n.) **wath-a* ‘sound, cry, chatter, babble, report’ (no. 840).
567. **wet’-er-o-/ut’-er-o-* ‘the belly, stomach, bowels; womb; the interior or inside of anything’ < Proto-Nostratic (n.) **wat^y-a* ‘the belly, stomach, bowels; womb; the interior or inside of anything’ (no. 841).
568. **way* exclamation: ‘woe!’ < Proto-Nostratic **way* exclamation: ‘woe!’ (no. 842).
569. **wed^h-* (secondary *o*-grade form: **wod^h-*) ‘to cut, to strike, to slay’ < Proto-Nostratic (vb.) **wed-* ‘to strike (with a weapon)’; (n.) **wed-a* ‘death, ruin, murder; strike, cut, wound, scar; weapon, axe’ (no. 844).
570. **welH-/w_lH-* (secondary *o*-grade form: **wolH-*) ‘to strike, to wound’ < Proto-Nostratic (vb.) **wel-* ‘to slay, to fight’; (n.) **wel-a* ‘conquest, victory, defeat, slaughter, massacre; fight, battle, attack’ (no. 845).
571. **wel-* ‘field, meadow’ < Proto-Nostratic (vb.) **wel^v-* ‘to be open, to be vacant’; (n.) **wel^v-a* ‘open space, open land, field, meadow’ (no. 846).
572. **welH-/w_lH-* (secondary *o*-grade form: **wolH-*) ‘(vb.) to well up, to surge, to flow forth, to boil up; (n.) surge, wave’ < Proto-Nostratic (vb.) **wel^v-* ‘to well up, to surge, to flow forth, to flood’; (n.) **wel^v-a* ‘deluge, flood, inundation; surge, wave’ (no. 847).
573. **wet’-/ut’-* (secondary *o*-grade form: **wot’-*) ‘(vb.) to wet, to moisten; (n.) water’ < Proto-Nostratic (vb.) **wet’-* ‘to wet, to moisten’; (n.) **wet’-a* ‘water’ (no. 848).
574. **weg^h-* (secondary *o*-grade form: **wog^h-*) ‘to carry, to convey, to weigh’ < Proto-Nostratic (vb.) **wig-* ‘to carry, to convey’; (n.) **wig-a* ‘burden, load; conveyance, cart, vehicle’ (no. 849).
575. **wel-/w_l-* (secondary *o*-grade form: **wol-*) ‘to see, to look, to view’ < Proto-Nostratic (vb.) **wil^v-* ‘to become bright, to manifest, to appear, to come into view’; (n.) **wil^v-a* ‘appearance, manifestation; light, brightness, radiance, splendor’; (adj.) ‘bright, manifest, clear’ (no. 850).
576. **wen(H)-/w_ŋ(H)-* (secondary *o*-grade form: **won(H)-*) ‘to strive for, to wish for, to desire’ < Proto-Nostratic (vb.) **win-* or **wiŋ-* ‘to strive for, to wish for, to desire’; (n.) **win-a* or **wiŋ-a* ‘wish, desire’ (no. 851).

577. **wer-n-* ‘alder, poplar’ < Proto-Nostratic (n.) **wir-a* ‘a kind of tree: aspen, alder, poplar, or the like’ (no. 852).
578. **wos-/us-* (secondary *e*-grade form: **wes-*) ‘to trade, to deal’ < Proto-Nostratic (Eurasian only) (vb.) **wos-* ‘to trade, to deal’; (n.) **wos-a* ‘trade, commerce’ (no. 853).
579. **woy(H)-/wi(H)-* (secondary *e*-grade form: **wey-*) ‘(vb.) to make an effort, to act with energy; (n.) strength, power’ and **wey-kh-/woy-kh-/wi-kh-* ‘(vb.) to overcome, to overpower, to conquer; (n.) fight, battle’ < Proto-Nostratic (Eurasian only) (vb.) **woy-* ‘to make an effort, to act with energy’; (n.) **woy-a* ‘strength, power’ (no. 855).
580. **woykh-/wikh-* (secondary *e*-grade form: **weykh-*) ‘(vb.) to arrange or put in order, to make equal or similar; (n.) that which is reasonable, true, equal, or similar’ < Proto-Nostratic (vb.) **woy-V-kh-* ‘to arrange or put in order’; (n.) **woy-kh-a* ‘arrangement, order; straightness, correctness, rectitude’; (adj.) ‘straight, right, correct, true’ (no. 856).
581. **wondh-/wɪndh-* (secondary *e*-grade form: **wendh-*) ‘beard, (young, fine, or soft) hair’ < Proto-Nostratic (n.) **wun-d-a* ‘(young, fine, or soft) hair’ (no. 857).
582. **wer-* ‘squirrel’ also ‘polecat, ferret’ (reduplicated forms: **we-wer-*, **wer-wer-*, **wi-wer-*, **way-wer-*, etc.) < Proto-Nostratic **wur-a* ‘squirrel’ (no. 858).
583. **wor-/wɪr-* ‘(vb.) to plow; (n.) furrow, ditch’ < Proto-Nostratic (vb.) **wur^v-* ‘to scratch, to incise, to dig up’; (n.) **wur^v-a* ‘pit, ditch’ (no. 859).

PROTO-NOSTRATIC **m* > PROTO-INDO-EUROPEAN **m*

584. **mo-* ‘this, that’ (Celtic only) < Proto-Nostratic indefinite pronoun stem: **ma-*, **mi-*, **mu-* ‘one, someone, somebody, anyone, anybody; other, another’. This may originally have been a demonstrative stem (as suggested by Illič-Svityč), with three degrees of distance: **ma-* (proximate), (B) **mu-* (distant), and (C) **mi-* (intermediate), as in the stems: **kha-* (proximate), (B) **khu-* (distant), and (C) **khi-* (intermediate) and **tha-* (proximate), (B) **thu-* (distant), and (C) **thi-* (intermediate) (no. 861).
585. **mā* ‘mother, mommy’, (reduplicated) **mamma* ‘mother, mommy; (mother’s) breast’, (dissimilated) **mānā*, **manna* (nursery words) and **mā-t^her-* ‘mother’ (no laryngeal!) < Proto-Nostratic (nursery word) (n.) **ma(a)* ‘mother, mommy’, (reduplicated) **mam(m)a*, **mem[e]* ‘mother; (mother’s) breast, milk’; used as a verb, the meaning was probably ‘to suckle, to nurse; to

- suck (the breast)’ (as noted by Watkins 2000:50: “[a] linguistic near-universal found in many of the world’s languages, often in reduplicated form”) (no. 862).
586. **mē* negative/prohibitive particle: ‘no, not’ < Proto-Nostratic **ma(?)*-negative/prohibitive particle: ‘no, not’ (no. 863).
587. **meʔ-/moʔ-* (> **mē-/mō-*) ‘more, abundant, considerable’ < Proto-Nostratic (vb.) **maʔ-* ‘to increase (in number), to be abundant, to be many’; (n.) **maʔ-a* ‘large quantity, plenty, abundance’; (adj.) ‘great, big, large, many, abundant’ (no. 864).
588. **med^hw/u-* ‘honey, mead’ < Proto-Nostratic (n.) **mad-w-a* ‘honey, mead’ (no. 866).
589. **meg^h-/mog^h-* ‘to be of great influence, importance, or power; to be eminent, exalted, highly esteemed, glorious, illustrious’ < Proto-Nostratic (vb.) **mag-* ‘to be of great influence, importance, or power; to be eminent, exalted, highly esteemed, glorious, illustrious’; (n.) **mag-a* ‘strength, power, might; glory, splendor, magnificence, grandeur, nobility, honor, distinction, excellence’; (adj.) ‘strong, powerful, eminent, exalted, highly esteemed, glorious, illustrious’ (no. 867).
590. **mag^h-* ‘earth, land’ < Proto-Nostratic (Eurasian only) (n.) **mag-a* ‘earth, land’ (no. 868).
591. **mag^h-* ‘young’, **mag^hu-* ‘young person, child’ < Proto-Nostratic (n.) **mag-a* ‘young person, child’; (adj.) ‘young’ (no. 869).
592. **meḥḥ-k^h-* [**maḥḥ-k^h-*] (> **mā-k^h-*) ‘to increase; to cause to grow, to breed’ < Proto-Nostratic (vb.) **maḥ-* ‘to increase, to swell, to exceed, to surpass, to be great’; (n.) **maḥ-a* ‘bigness, greatness, fullness, excellence’; (adj.) ‘big, great, full’ (no. 870).
593. **mak^h-* ‘(to be) bewildered, perplexed, confused’ (Greek only: Greek μακκοῦω ‘to be stupid’ [either derived from Μακκῶ the name of a stupid woman, or the other way around] — “popular term with expressive gemination”) < Proto-Nostratic (vb.) **mak^h-* ‘to deceive, to trick, to cheat; to be deceived, troubled, confused, perplexed’; (n.) **mak^h-a* ‘deception, trickery, confusion’ (no. 872).
594. **mak’-* ‘great, strong, mighty, powerful’ < Proto-Nostratic (vb.) **mak’-* ‘to be great, strong, mighty, powerful’; (n.) **mak’-a* ‘strength, power’; (adj.) ‘great, strong, powerful; much, many’ (no. 873).

595. (?) **mok'-o-* 'comfortable, suitable, convenient, fitting; pleasant, agreeable; at ease' (Germanic only) < Proto-Nostratic (vb.) **mak'-* 'to be happy, cheerful; to be pleasant, agreeable'; (n.) **mak'-a* 'happiness, joy, pleasure' (no. 874).
596. **mel-/mol-* 'hill, mountain' < Proto-Nostratic (n.) **mal-a* 'hill, mountain' (no. 875).
597. **mel-/mol-/m̥l-* 'much, many, very much' and **mel-gh-/mol-gh-/m̥l-gh-* 'to fill up, to swell' < Proto-Nostratic (vb.) **mal-* 'to fill, to be or become full, to increase'; (n.) **mal-a* 'fullness, abundance'; (adj.) 'full, filled, abundant, numerous, many' (no. 876).
598. **mel-/mol-/m̥l-* '(vb.) to be favorably disposed towards, to care about, to be devoted to, to like; (adj.) good, pleasant' < Proto-Nostratic (vb.) **mal-* 'to be favorably disposed towards, to care about, to be devoted to, to like'; (n.) **mal-a* 'goodness, pleasantness'; (adj.) 'good, pleasant, pleasing' (no. 877).
599. **mel-i-th* (gen. sg. **mel-n-es*) 'honey' < Proto-Nostratic (n.) **mal-a* 'honey' (no. 878).
600. **mel-k'-/mol-k'-/m̥l-k'-* '(vb.) to draw (milk), to milk, to suck; to give suck, to suckle; (n.) milk' < Proto-Nostratic (vb.) **mal-* 'to draw (out), to squeeze (out), to suck (out); to give suck, to suckle, to nurse'; (n.) **mal-a* 'milk; breast' (no. 879).
601. **mel-k'-/mol-k'-/m̥l-k'-* 'to wipe, to stroke' and **mel-kh-/mol-kh-/m̥l-kh-* 'to touch, to stroke, to handle' < Proto-Nostratic (Eurasian only) (vb.) **mal-* 'to rub, to wipe, to stroke'; (n.) **mal-a* 'the act of rubbing, wiping, stroking' (no. 880).
602. **mel-/mol-/m̥l-* '(vb.) to be confused, mistaken, wrong; (n.) wrong, falsehood; (adj.) wrong, false' < Proto-Nostratic (vb.) **mal-* 'to be confused, perplexed, disturbed, bewildered, mistaken'; (n.) **mal-a* 'confusion, perplexity, bewilderment' (no. 883).
603. **men-t'-/mon-t'-/m̥n̥-t'-* '(vb.) to suckle, to nurse (a child), to breastfeed; (n.) suckling, young animal; breast' < Proto-Nostratic (vb.) **man-* 'to suckle, to nurse (a child), to breastfeed'; (n.) **man-a* 'suckling, young (of humans and animals); breast' (no. 884).
604. **men-/mon-/m̥n̥-* 'to reckon, to consider, to think' < Proto-Nostratic (vb.) **man-* 'to count, to reckon' (> 'to consider, to think' > 'to recount' > 'to say, to speak') (there may be more than one root involved here: [A] 'to count, to reckon' and [B] 'to say, to speak'); (n.) **man-a* 'counting, reckoning' (no. 885).

605. **men-/mon-/m̥-* ‘to stay, to remain, to abide, to dwell; to be firm, steadfast, established, enduring’ < Proto-Nostratic (vb.) **man-* ‘to stay, to remain, to abide, to dwell; to be firm, steadfast, established, enduring’; (n.) **man-a* ‘dwelling, house, home’ (no. 886).
606. (**men-/mon-/m̥-*) ‘(vb.) to protect; (n.) protection’ (Germanic only) < Proto-Nostratic (vb.) **man-* ‘to protect, to watch over, to stand guard over, to care for, to take care of, to tend’; (n.) **man-a* ‘protection, care, guardianship; watchman, herdsman, guardian, protector’ (no. 887).
607. **men(e)gho-s/*mon(e)gho-s/*m̥gho-s* ‘copious, abundant, many’ < Proto-Nostratic (extended form) (vb.) **man-V-g-* ‘to swell, to expand, to increase, to grow’; (n.) **man-g-a* ‘great number, large amount; abundance; multitude, crowd’; (adj.) ‘many, numerous, copious, abundant; swollen, big, fat, strong’ (no. 889).
608. **men-/mon-/m̥-* ‘(vb.) to desire passionately, to yearn for; (n.) ardent desire, passion, lust’ < Proto-Nostratic (vb.) **man^v-* ‘to lust after, to desire passionately, to copulate with, to have sexual intercourse, to beget’; (n.) **man^v-a* ‘ardent desire, passion, lust’ (no. 890).
609. **manu-s* ‘man, begetter, progenitor’ < Proto-Nostratic (n.) **man^v-a* ‘man, male, progenitor, begetter; penis’ (no. 891).
610. **man-(/mon-)/m̥-* ‘hand’ < Proto-Nostratic (vb.) **man^v-* ‘to hold, to take’; (n.) **man^v-a* ‘hand, paw’ (no. 892).
611. (**mek^{wh}-/m̥-*) **mok^{wh}-* ‘to twist, to turn, to churn’ < Proto-Nostratic (vb.) **maq^{wh}-* ‘to twist, to turn; to overturn, to turn upside down, to turn round’; (n.) **maq^{wh}-a* ‘twist, turn; overturning’ (no. 893).
612. **mer-s-/mor-s-/m̥r-s-* ‘to disturb, to offend, to irritate’ < Proto-Nostratic (vb.) **mar-* ‘to strive against, to oppose, to fight with or against; to argue, to quarrel, to contend, to dispute, to disagree’; (n.) **mar-a* ‘quarrel, argument, dispute, fight’ (no. 894).
613. **mer-yo-* ‘(young) man’ < Proto-Nostratic (n.) **mar-a* ‘(young) man, male (human or animal)’ (no. 895).
614. **mer-/mor-/m̥-* ‘to twist, to turn, to plait’ < Proto-Nostratic (vb.) **mar-* ‘to turn: to overturn, to turn round, to turn over, etc.; to twist, to whirl, to roll; to bend’; (n.) **mar-a* ‘the act of turning, turning over, turning round, etc.; rope, coil, string, cord’ (no. 896).

615. **merg-/morg-/mrg-* ‘to go’, **mer-go-s* ‘track, path, road’ (Indo-Iranian only) < Proto-Nostratic (vb.) **mar-* ‘to go (round), to walk, to run; to go after, to run or chase after’ (> ‘to seek, to pursue’); (n.) **mar-a* ‘walk, walking, passage; road, track, way’ (no. 897).
616. **(s)mer-/*(s)mor-/*(s)mr-* ‘to smear, to anoint, to rub (with grease, fat, ointment)’ < Proto-Nostratic (vb.) **mar-* ‘to smear, to anoint, to rub (with grease, oil, fat, ointment)’; (n.) **mar-a* ‘grease, oil, fat, ointment, unguent’ (no. 898).
617. **mer-/mōr-/mr-* ‘(vb.) to soil, to stain; (n.) spot, stain, dirt; (adj.) dark, dirty, soiled’ < Proto-Nostratic **(vb.) mar-* ‘to soil, to stain’; (n.) **mar-a* ‘spot, stain, dirt’; (adj.) ‘dark, dirty, soiled’ (no. 899).
618. **mar-i-* or **mōr-i-* ‘any body of water: sea, lake, swamp, marsh’ < Proto-Nostratic (Eurasian only) (n.) **mar-a* ‘marsh, swamp’ (no. 900).
619. **mer-/mōr-/mr-* ‘(vb.) to perish; (n.) death’ < Proto-Nostratic (vb.) **mar^v-* ‘to be weakened, to wither away, to decay; to be or become sick, to fall ill; to die (from a fatal disease), to perish’; (n.) **mar^v-a* ‘sickness, illness, fatal disease, malady, ailment; death’ (no. 902).
620. **mr^g-gh-o-* ‘horned animal, game’ (Indo-Aryan only) < Proto-Nostratic (n.) **mar-a* ‘horned animal, game’ (no. 903).
621. **meth-* ‘middle; in the middle of, with, among’ < Proto-Nostratic (n.) **math^h-a* or **meth^h-a* ‘middle’; (particle) **math^h-* or **meth^h-* ‘in the middle of, with, among’ (no. 904).
622. **met’-/mot’-* ‘to measure, to measure out, to estimate, to reckon’ < Proto-Nostratic (vb.) **mat’-* ‘to stretch, to expand, to lengthen, to draw out, to measure out’; (n.) **mat’-a* ‘measure, measurement, amount; extent, limit’ (no. 905).
623. **mat’-* ‘to be wet, moist’ < Proto-Nostratic (vb.) **mat’-* ‘to be or become wet, moist’; (n.) **mat’-a* ‘moisture, wetness; dew, rain’; (adj.) ‘wet, moist’ (no. 906).
624. **mew(H)-/mow(H)-/mu(H)-* ‘(vb.) to be wet, damp; (n.) water, liquid, fluid’ < Proto-Nostratic (vb.) **maw-* ‘to be wet’; (n.) **maw-a* ‘water, liquid, fluid’ (no. 907).
625. **mel-/ml-* (secondary *o*-grade form: **mol-*) ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’ < Proto-Nostratic (vb.) **mel-* ‘to rub’ (> ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to

- soften; to become worn out, weak, tired, weary'); (n.) **mel-a* 'smoothness, softness; weakness'; (adj.) 'smooth, soft, tender, weak, worn out, tired, weary' (no. 908 or no. 917).
626. **me-/mo-* interrogative and relative pronoun stem < Proto-Nostratic **mi-* interrogative pronoun stem, **ma-* relative pronoun stem (no. 909).
627. **me-* used to form the oblique cases of the first person personal pronoun stem and (a) **-mi* first person singular non-thematic primary ending, (b) **-m* first person singular non-thematic secondary ending < Proto-Nostratic first person singular **mi* 'I, me', first person plural (inclusive) **ma* 'we, us' (no. 910).
628. **meʔ-* (> **mē-*) 'to mow, to reap' < Proto-Nostratic (vb.) **miʔ-* 'to cut'; (n.) **miʔ-a* 'cutting instrument: knife' (later also 'sickle, scythe') (no. 911).
629. **megh-* 'to give' (Indo-Iranian only) < Proto-Nostratic (vb.) **mig-* 'to give'; (n.) **mig-a* 'gift' (no. 812).
630. **mihh-* [**mehh-*] (> **mē-*) 'to measure, to mark off' < Proto-Nostratic (vb.) **mih-* 'to measure, to mark off'; (n.) **mih-a* 'measure, measurement' (no. 913).
631. **mek-* 'big, great, much' < Proto-Nostratic (vb.) **mik-* 'to exceed, to surpass, to be in excess, to grow, to increase, to swell, to expand'; (n.) **mik-a* 'growth, excess, increase, abundance, fullness'; (adj.) 'large, big, great, much' (no. 914).
632. **mḡH-i-* '(a kind of) fish' < Proto-Nostratic (n.) **min-a* '(a kind of) fish' (no. 915).
633. **mol-/m/-* (secondary *e*-grade form: **mel-*) 'to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary' < Proto-Nostratic (vb.) **mol-* 'to rub' (> 'to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary'); (n.) **mol-a* 'crumb, piece, morsel; mortar'; (adj.) 'crushed, ground, worn out or down' (no. 917 or no. 908).
634. **mar-i-* or **mor-i-* 'any body of water: sea, lake, swamp, marsh' < Proto-Nostratic (n.) **mor-a* 'any body of water: sea, lake, pool, cistern, reservoir, flood, stream, basin, canal, channel' (no. 918).
635. (?) **mok-* 'to toil, to suffer; to suffer pain; to labor at' (Greek only) < Proto-Nostratic (vb.) **muk-* 'to strain, to make great efforts'; (n.) **muk-a* 'straining

(as a woman in labor or as when defecating), effort; fatigue, suffering' (no. 920).

636. **mon-/mṇ-* (secondary *e*-grade form: **men-*) '(vb.) to protrude, to stand out, to jut out; (n.) highest or farthest point, topmost or most protuberant part' < Proto-Nostratic (vb.) **mun-* 'to protrude, to stand out; to jut out; to be first, foremost, in front of'; (n.) **mun-a* 'topmost or most prominent part, highest or farthest point' (no. 921).
637. **mon-dh-* 'testicle' (Slavic only) < Proto-Nostratic (n.) **mun-a* 'egg, testicle'; (extended form [Dravidian and Slavic]) **mun-d-a* (no. 922).
638. **monkh-/mṇkh-* 'torment, torture' < Proto-Nostratic (vb.) **muṇ-* 'to torment, to torture, to afflict; to cause pain, trouble, distress, suffering, difficulty; to suffer; to be in pain, trouble, distress, suffering, difficulty'; (n.) **muṇ-a* 'suffering, pain, malady, difficulty, distress, affliction, calamity, misery' (no. 923).
639. **mor-/mṛ-* (secondary *e*-grade form: **mer-*) 'to crush, to destroy; to be or become crushed, to disintegrate' < Proto-Nostratic (vb.) **mur-* 'to crush, to break, to destroy'; (n.) **mur-a* 'break, breach, rupture, fracture'; (adj.) 'crushed, broken, destroyed, ruptured, mutilated; weakened' (no. 924).
640. **mer-/mor-/mṛ-* 'to twist, to turn, to plait' < Proto-Nostratic (vb.) **mur-* 'to turn, to twist, to bend'; (n.) **mur-a* 'bend, curve' (no. 925).
641. **mor-o-* 'blackberry, mulberry' < Proto-Nostratic (Eurasian only) (n.) **mur-a* 'mulberry, blackberry' (no. 926).
642. **mur-, *mor-*; (reduplicated) **mur-mur-, *mor-mor-* 'to murmur, to rustle, to grumble' < Proto-Nostratic (vb.) **mur-* 'to make noise, to make sound, to murmur'; (n.) **mur-a* 'noise, sound, murmur'; (reduplicated) (vb.) **mur-mur-*; (n.) **mur-mur-a* (no. 927).
643. **mosk'-* (secondary *e*-grade form: **mesk'-*) 'to immerse in water, to dip or plunge in water' < Proto-Nostratic (vb.) **mus^y-* 'to immerse, dip, or plunge in water, to bathe'; (n.) **mus^y-a* 'immersion, dip, plunge, bath'; (extended form) (vb.) **mus^y-V-k'-*; (n.) **mus^y-k'-a* (no. 928).
644. **moy-/mi-* (secondary *e*-grade form: **mey-*) 'to exchange, to change' < Proto-Nostratic (vb.) **muy-* 'to return, to give back'; (n.) **muy-a* 'that which is returned or given back: return, recompense, requital, repayment, etc.' (no. 929).

PROTO-NOSTRATIC *n > PROTO-INDO-EUROPEAN *n

645. *n(-i-) (?) first singular pronoun stem (Tocharian only): ‘I, me’ < Proto-Nostratic *na first person singular personal pronoun: ‘I, me’ (no. 930). Note: on the basis of Dravidian (and possibly Altaic), the original form of this stem may have been *ŋa, but this is not certain. Sumerian (Emegir) *ĝá.e* (= /ŋa-/) ‘I’ supports such a reconstruction as well.
646. *ne-/ *no-/ *ŋ-s- personal pronoun of the first person dual and plural: ‘we, us’ < Proto-Nostratic *na first person plural exclusive personal pronoun: ‘we, us’ (no. 931).
647. *ne-, *no-; *ŋe-no-, *ŋo-no- demonstrative stem: ‘this, these’ < Proto-Nostratic *na, *ni deictic particle: ‘this, that’ (no. 932).
648. *ŋan-, *-ne interrogative particles < Proto-Nostratic *na- interrogative-relative particle (no. 933).
649. *neĕ, *ney- negative particles: ‘no, not’, *ŋ- negative prefix < Proto-Nostratic *na, *ni, *nu negative/prohibitive particle: ‘no, not’ (no. 934).
650. (*neŋfi- [*naŋfi-] / *noŋfi- ‘to travel by boat, to sail’): (nom. sg.) *neŋfi-u-s [*naŋfi-u-s] ‘ship, boat’, (gen. sg. *neŋfi-w-os [*naŋfi-w-os]) < Proto-Nostratic (vb.) *naŋ- ‘to come, to go, to journey, to travel’; (n.) *naŋ-a ‘journey’ (no. 935).
651. *nebh-/ *nobh- ‘to burst out, to burst forth’ < Proto-Nostratic (vb.) *nab- ‘to burst forth, to gush forth’; (n.) *nab-a ‘a bursting or gushing forth’ (no. 936).
652. *nebh-es/os- ‘heavy rain, storm cloud, cloudy sky’ < Proto-Nostratic (Eurasian only) (n.) *nab-a ‘heavy rain, storm cloud, cloudy sky’ (no. 937).
653. *negh-/ *nogh- ‘to strike, to split, to pierce’ < Proto-Nostratic (vb.) *nag- ‘to strike, to split, to pierce’; (n.) *nag-a ‘stroke, blow, wound’ (no. 940).
654. *neħh- [*naħh-] (> *nā-) ‘to fear’ < Proto-Nostratic (vb.) *naħ- ‘to tremble, to shake; to fear, to be afraid’; (n.) *naħ-a ‘fear’ (no. 941).
655. *nakh- ‘(animal) skin, pelt, hide’ < Proto-Nostratic (n.) *nakh-a ‘(animal) skin, pelt, hide’ (no. 94422).
656. *nekwh-th-/ *nokwh-th- ‘night’ < Proto-Nostratic (vb.) *nakwh- ‘to lie down, to go to sleep, to go to bed’; (n.) *nakwh-a ‘bedtime, evening, nighttime’ (no. 943).

657. **np^h-* > (with metathesis) **p^hn-* in: (A) **p^hn-ew-/***p^hn-ow-/***p^hn-u-*, (B) **p^hn-ek^h-*, (C) **p^hn-es-/***p^hn-os-* ‘to breathe, to blow’ < Proto-Nostratic (vb.) **nap^h-*, **nip^h-*, **nup^h-* ‘to breathe, to blow’; (n.) **nap^h-a*, **nip^h-a*, **nup^h-a* ‘breath, life’ (no. 944).
658. **net’-/***not’-* ‘to wet, to moisten’ < Proto-Nostratic (vb.) **nat’-* ‘to moisten, to wet’; (n.) **nat’-a* ‘wetness, dampness, moistness’; (adj.) ‘wet, damp, moist’ (no. 946).
659. **ner-* ‘(the foremost) man or person, hero’ < Proto-Nostratic (n.) **ner-a* ‘the highest, foremost, or most prominent person or thing’ (no. 947).
660. **net’-* (secondary *o*-grade form: **not’-*) ‘to turn, to twist together, to tie, to bind’ < Proto-Nostratic (vb.) **net’^y-* ‘to turn, to twist together, to tie, to bind, to weave, to entwine’; (n.) **net’^y-a* ‘anything twisted together, woven, entwined: mat, net, web, etc.; weaving, entwining, braiding’ (no. 948).
661. **nek^h-/***n^hek^h-* (secondary *o*-grade form: **nok^h-*) ‘to slay, to smite’ < Proto-Nostratic (vb.) **nik^h-* ‘to strike, to hit’; (n.) **nik^h-a* ‘injury, harm, damage, wound, murder, destruction; suffering, pain’ (no. 950).
662. **nek^h-* (secondary *o*-grade form: **nok^h-*) ‘to bear, to carry, to convey’ < Proto-Nostratic (vb.) **nit^h-* ‘to lift (up), to raise; to carry, to take; to rise, to arise’; (n.) **nit^h-a* ‘the act of lifting, raising, carrying’ (no. 951).
663. **(s)nuso-s* ‘daughter-in-law’ < Proto-Nostratic (n.) **nus^y-a* ‘woman, female; any female connected by marriage: wife, bride, sister-in-law, daughter-in-law’ (no. 953).
664. **nos-* ‘to be weakened, ill, debilitated’ (Greek only) < Proto-Nostratic (vb.) **nus^y-* ‘to be weakened, debilitated, sick; to ache, to suffer, to be in pain’; (n.) **nus^y-a* ‘weakness, sickness, disease, malady, ache, pain, affliction’ (no. 954).
665. **nu* (adv.) ‘now’ < Proto-Nostratic (adv.) **nuw-* ‘now, at present, currently’ (no. 955).

PROTO-NOSTRATIC **n^y* > PROTO-INDO-EUROPEAN **n*

666. **nep^h-(ō)t^h-* ‘descendant, offspring, grandson’ < Proto-Nostratic (n.) **n^yap^h-a* ‘offspring, descendant, young one’ (no. 959).

PROTO-NOSTRATIC *1 > PROTO-INDO-EUROPEAN *1

667. **lab^h-* ‘(vb.) to take, to seize, to take into one’s possession, to gain, to obtain; (n.) gain’ < Proto-Nostratic (vb.) **lab-* ‘to take hold of, to grasp’; (n.) **lab-a* ‘taking, grasping’ (no. 961).
668. **leg^h-*/**log^h-* ‘to put, to place, to lay (down), to set; to lie (down)’ < Proto-Nostratic (vb.) **lag-* ‘to put, to place, to lay (down), to set’; (n.) **lag-a* ‘the act of putting, placing, laying, or setting down’ (no. 963).
669. **leh-p^h-* [*lah-p^h-*] (> **lāp^h-*) ‘to light, to burn’ < Proto-Nostratic (vb.) **lah-* ‘to shine, to blaze, to burn’; (n.) **lah-a* ‘shining, blazing, burning’ (no. 964).
670. **leḥḥ-* [*laḥḥ-*] (extended form **leḥḥ-w/u-* [**laḥḥ-w/u-*]) ‘to pour, to pour out (liquids)’ < Proto-Nostratic (vb.) **lah-* ‘to make flow, to pour, to moisten, to wet’; (n.) **lah-a* ‘flowing, pouring; moistness, wetness’ (no. 965).
671. **leḥḥ-* [**laḥḥ-*] ‘warfare, military campaign’, **leḥḥ-wo-s* [**laḥḥ-wo-s*] ‘men under arms (as opposed to their leaders): warriors, soldiers, troops’ < Proto-Nostratic (vb.) **lah-* ‘to strike, to fight’; (n.) **lah-a* ‘fight, battle, slaughter’ (no. 966).
672. **lak^h-* ‘to lick, to lap up’ < Proto-Nostratic (vb.) **lak^h-* ‘to lick, to lap up’; (n.) **lak^h-a* ‘licking’ (onomatopoeic) (no. 967).
673. **lak^h-* ‘leg, foot’ < Proto-Nostratic (vb.) **lak^h-* ‘to go on foot, to travel on foot’; (n.) **lak^h-a* ‘leg, foot’ (no. 968).
674. **lek’-/*lok’-* ‘to pick, to gather, to collect’ < Proto-Nostratic (vb.) **lak’-* ‘to gather, to collect’; (n.) **lak’-a* ‘collection’; (adj.) ‘gathered, collected, picked, chosen’ (no. 969).
675. **lik’-* ‘to lick’ < Proto-Nostratic (vb.) **lak’-*, **lik’-*, **luk’-* ‘to lick’; (n.) **lak’-a*, **lik’-a*, **luk’-a* ‘licking’ (onomatopoeic) (no. 970).
676. **lend^h-/*lond^h-/*lṇd^h-* ‘low-lying ground, lowland, any piece of land’ < Proto-Nostratic (vb.) **lam-* ‘to bend down, to stoop down, to sink down, to lie down, to duck down; to be or become bent down, curved down; to be low’; (n.) **lam-a* ‘lowland, low-lying ground, any piece of land’; (adj.) ‘low’; (extended form) (vb.) **lam-V-d-*; (n.) **lam-d-a* (no. 971).
677. **lem-* ‘(vb.) to break, to beat; (adj.) broken, injured, crippled, lame’ < Proto-Nostratic (vb.) **lam-* ‘to break down or apart (tr.), to crush; to soften, to weaken; to be or become soft, weak, mild, tender, broken, crushed’; (n.) **lam-a* ‘softness, weakness’; (adj.) ‘soft, weak, flexible; broken, crushed’ (no. 972).

678. (?) **les-/*los-* ‘to taste, to relish’ < Proto-Nostratic (vb.) **las^y-*, **lis^y-*, **lus^y-* (?) ‘to lick, to lap (up)’; (n.) **las^y-a*, **lis^y-a*, **lus^y-a* ‘tongue; lip’ (onomatopoeic) (no. 974).
679. **leth-ro-* ‘skin, hide, leather’ < Proto-Nostratic (n.) **lat^h-a* ‘skin’ (no. 975).
680. **lew-/*low-/*lu-* ‘to bend, to twist, to turn, to wind’ (extended forms: **lew-k’-/*low-k’-/*lu-k’-* and **lew-t’-/*low-t’-/*lu-t’-*) < Proto-Nostratic (vb.) **law-* ‘to bend, to twist, to turn’; (n.) **law-a* ‘bend, twist, turn’ (no. 976).
681. **lew-k^h-/*low-k^h-/*lu-k^h-* ‘to shine, to be bright’ < Proto-Nostratic (vb.) **law-* ‘to shine’; (n.) **law-a* ‘light, glow’; (adj.) ‘shining, gleaming, glowing, bright’ (no. 977).
682. **lew(H)-/*low(H)-/*lu(H)-* (> **lū-*) ‘to separate, to divide, to part, to sever, to detach’ and **lew-s-/*low-s-/*lu-s-* ‘to lose, to loosen; to untie, to undo; to release, to set free’ < Proto-Nostratic (vb.) **law-* ‘to separate, to divide, to part, to sever, to detach’; (n.) **law-a* ‘part cut off, separation, division’ (no. 978).
683. **lewḥh-/*lowḥh-* ‘to wash, to bathe’ < Proto-Nostratic (extended form) (vb.) **law-V-ḥ-* ‘to moisten, to water; to wash, to clean’; (n.) **law-ḥ-a* ‘the act of bathing, washing’ (no. 979).
684. **leḥḥ^w-* [**laḥḥ^w-*] (> **lāw-*), (**ləḥḥ^w-* >) **luḥḥ^w-* (> **lū-*) ‘to hit, to strike, to beat’ < Proto-Nostratic (vb.) **lax^w-* ‘to strike, to hit, to beat’; (n.) **lax^w-a* ‘the act of striking, hitting, beating; stroke, hit, blow’ (no. 980).
685. **lip^h-o-s* ‘fat’ < Proto-Nostratic (n.) **lip^h-a* ‘fat, fatty tissue’ (no. 982).
686. (?) **lip’-* ‘handy, skilled, adroit’ (Germanic only [Old Icelandic]) < Proto-Nostratic (vb.) **lip’-* ‘to form, to fashion, to mold’; (n.) **lip’-a* ‘form, mold’ (no. 983).

PROTO-NOSTRATIC *r > PROTO-INDO-EUROPEAN *r

687. **reʔi-C-/*roʔi-C-/*raʔi-C-* > (with syncope of *i*) **reʔ-C-/*roʔ-C-/*raʔ-C-* > (with loss of the laryngeal) **rē-C-/*rō-C-/*ra-C-*; **reʔy-V-/*roʔy-V-/*raʔy-V-* > (with metathesis) **reyʔ-V-/*royʔ-V-/*rayʔ-V-* > (with loss of the laryngeal) **rey-V-/*roy-V-/*riy-V-* ‘to contemplate, to consider, to ponder, to reckon’ < Proto-Nostratic (vb.) **raʔ-* ‘to see, to perceive’; (n.) **raʔ-a* ‘observation, perception, sight’; (adj.) ‘seeing, perceiving’; (extended form) (vb.) **raʔ-V-y-*; (n.) **raʔ-y-a* (no. 984).

688. **reg^h-*/**rog^h-* ‘to stir, to move’ < Proto-Nostratic (vb.) **rag-* ‘to stir, to move, to shake’; (n.) **rag-a* ‘movement, agitation, shaking, trembling; collapse (from shaking)’ (no. 985).
689. **rek^h-*/**rok^h-* ‘(vb.) to tie, to bind; (n.) rope, cord’ < Proto-Nostratic (vb.) **rak^h-* ‘to twist, to turn, to bend; to tie, to bind, to fasten’; (n.) **rak^h-a* ‘twist, turn, bend; tie, bond, cord’ (no. 986).
690. **rek^h-*/**rok^h-* ‘to put together, to put in order, to arrange, to prepare, to construct’ < Proto-Nostratic (vb.) **rak^h-* ‘to put, join, fit, or fasten (together); to assemble, to prepare, to construct’; (n.) **rak^h-a* ‘the act of putting, joining, fitting, or fastening (together); the act of assembling, preparing, constructing’ (no. 987).
691. **rek’-*/**rok’-*/**ĵk’-* ‘to stretch out, to draw out, to extend’ < Proto-Nostratic (vb.) **rak’-* ‘to stretch, to extend, to draw out’; (n.) **rak’-a* ‘the act of stretching, extending, drawing out; stretch, extension’; (adj.) ‘stretched, extended, drawn out’ (no. 988).
692. **rek’-*/**rok’-* (lengthened-grade: **rēk’-*/**rōk’-*) ‘to observe, to watch, to watch out for, to care for’ < Proto-Nostratic (vb.) **rak’-* ‘to observe, to watch, to regard attentively; to supervise, to control’; (n.) **rak’-a* ‘observation, watchfulness, care, protection’ (no. 989).
693. **reth-*/**roth-* ‘to turn, to roll; to run’ < Proto-Nostratic (vb.) **rath-* ‘to turn, to roll; to run’; (n.) **rath-a* ‘turning, rolling; running’ (no. 991).
694. **rew^hh-*/**row^hh-*/**ru^hh-* (> **rū-*) ‘(adj.) wide, spacious; (n.) open space’ < Proto-Nostratic (vb.) **raw-V-^h-* ‘to be spacious, wide’; (n.) **raw-^h-a* ‘space, room’; (adj.) ‘spacious, wide’ (no. 992).
695. **rek’-*/**rok’-* ‘to wet, to moisten’ (**rek’-nó-s* ‘rain’, apparently deglottalized to **rek-nó-s* in Germanic **reg-na-z* ‘rain’) < Proto-Nostratic (vb.) **rek’-* ‘to sprinkle, to spray, to wet, to moisten’; (n.) **rek’-a* ‘sprinkling, spray, rain’ (no. 993).
696. **riy-C-*/**rey-C-* > (**rī-C-*)/**rē-C-*; (**riy-V-*)/**rey-V-* (also **rēy-* in Indo-Iranian) ‘wealth, prosperity, riches’ < Proto-Nostratic (vb.) **riy-* ‘to prosper, to thrive, to flourish, to increase, to grow’; (n.) **riy-a* ‘increase, growth, prosperity, wealth’ (no. 994).
697. **rom-*/**rṃ-* (secondary *e*-grade form: **rem-*) ‘to stop, to rest, to relax’ < Proto-Nostratic (vb.) **rom-* ‘to stop, to rest, to relax’; (adj.) **rom-a* ‘quiet, tranquil, still, gentle, silent, relaxed’ (no. 995).

698. **row-/rũ-* (secondary *e*-grade form: **rew-*) ‘to cut, tear, or break apart’ < Proto-Nostratic (vb.) **row-* ‘to cut, tear, or break apart’; (n.) **row-a* ‘cut, tear’ (no. 996).
699. **romH-/rṃH-* (secondary *e*-grade form: **remH-*) ‘dark, dark-colored’ < Proto-Nostratic (vb.) **rum-* ‘to grow or become dark; to darken’; (n.) **rum-a* ‘darkness, night; twilight, dusk’; (adj.) ‘dark’ (no. 997).

INDEX OF PROTO-NOSTRATIC ROOTS AND STEMS

PROTO-NOSTRATIC *b

1. Proto-Nostratic root **baɫ-* (~ **bəɫ-*):
(vb.) **baɫ-* ‘to pour’;
(n.) **baɫ-a* ‘torrent, outpour’
2. Proto-Nostratic root **baɫ-* (~ **bəɫ-*):
(vb.) **baɫ-* ‘to tie, to bind; to attach, to fasten’;
(n.) **baɫ-a* ‘tie, bond, bandage, fastening’
3. Proto-Nostratic (n.) **baba* ‘father’ (nursery word)
4. Proto-Nostratic (n.) **baaba* ‘child, babe’ (nursery word)
5. Proto-Nostratic root **bad-* (~ **bəd-*):
(vb.) **bad-* ‘to split, to cleave, to separate, to divide’;
(n.) **bad-a* ‘split, crack, breach, opening’
6. Proto-Nostratic root **bad-* (~ **bəd-*):
(vb.) **bad-* ‘to waste, to dissipate, to squander’;
(n.) **bad-a* ‘dissipation, waste, wasteland, desolated area’
7. Proto-Nostratic root **bad-* (~ **bəd-*):
(vb.) **bad-* ‘to occur, to happen, to experience, to endure; to cause to endure, to make to suffer, to oppress’;
(n.) **bad-a* ‘experience, happening, trouble, distress, suffering, oppression’
Derivative:
(n.) **bad-a* ‘need, want, lack, deprivation’
8. Proto-Nostratic (n.) **bad-a* ‘need, want, lack, deprivation’ (> ‘hunger’):
Derivative of:
(vb.) **bad-* ‘to occur, to happen, to experience, to endure; to cause to endure, to make to suffer, to oppress’;
(n.) **bad-a* ‘experience, happening, trouble, distress, suffering, oppression’
9. Proto-Nostratic root **bad-* (~ **bəd-*):
(vb.) **bad-* ‘to fall down, to lie down; to decay, to weaken; to perish’;
(n.) **bad-a* ‘lying down, fall, sleep, ruin’

10. Proto-Nostratic root **bad-* (~ **bəd-*):
 (vb.) **bad-* ‘to bring into being, to bring forth; to bring into action, to initiate,
 to instigate, to activate, to originate’;
 (n.) **bad-a* ‘creation, initiation, origination’
11. Proto-Nostratic (n.) **bag-a* ‘goat, sheep’
12. Proto-Nostratic root **bag-* (~ **bæg-*):
 (vb.) **bag-* ‘to tie or bind together’;
 (n.) **bag-a* ‘collection of things bound together: bunch, bundle, pack’
13. Proto-Nostratic root **bah-* (~ **bəh-*):
 (vb.) **bah-* ‘to shine’;
 (n.) **bah-a* ‘brilliance, brightness, splendor, beauty; light’; (adj.) ‘shining,
 bright, radiant’
14. Proto-Nostratic root **baḥ-* (~ **bəḥ-*):
 (vb.) **baḥ-* ‘to make noise’;
 (n.) **baḥ-a* ‘noise, sound; voice’
15. Proto-Nostratic root **baḥ-* (~ **bəḥ-*):
 (vb.) **baḥ-* ‘to cut, to cut off, to strike’;
 (n.) **baḥ-a* ‘cut, strike, blow’
16. Proto-Nostratic root **bak^h-* (~ **bək^h-*):
 (vb.) **bak^h-* ‘to declare, to utter, to announce, to assert, to proclaim’;
 (n.) **bak^h-a* ‘declaration, utterance, announcement, assertion, proclamation’
17. Proto-Nostratic root **bak’-* (~ **bək’-*):
 (vb.) **bak’-* ‘to cleave, to split, to break open’;
 (n.) **bak’-a* ‘crack, split, break’
18. Proto-Nostratic root **bak’-* (~ **bək’-*):
 (vb.) **bak’-* ‘to look at, to look over, to observe, to examine; to look for’;
 (n.) **bak’-a* ‘looking at or over, observation, examination’
19. Proto-Nostratic (n.) **bak’-a* ‘cattle, herd of cattle’
20. Proto-Nostratic root **bal-* (~ **bəl-*):
 (vb.) **bal-* ‘to be or become dark, obscure, blind’;
 (n.) **bal-a* ‘darkness, obscurity, blindness’; (adj.) ‘dark, obscure, blind’
21. Proto-Nostratic root **bal-* (~ **bəl-*):
 (vb.) **bal-* ‘to well up, to surge, to overflow, to pour over’;
 (n.) **bal-a* ‘outpour, downpour, surge, flow’

22. Proto-Nostratic root **bal-* (\sim **bəl-*):
 (vb.) **bal-* ‘to bite, to eat’;
 (n.) **bal-a* ‘bite, morsel’
23. Proto-Nostratic root **bal-* (\sim **bəl-*):
 (vb.) **bal-* ‘to shine, to be bright’;
 (n.) **bal-a* ‘glitter, gleam, brightness’
24. Proto-Nostratic root **ban-* (\sim **bən-*):
 (vb.) **ban-* ‘to pour, to sprinkle, to drip’;
 (n.) **ban-a* ‘a drop (of water, rain, dew, etc.)’
25. Proto-Nostratic root **ban-* (\sim **bən-*):
 (vb.) **ban-* ‘to separate, to open, to spread’;
 (n.) **ban-a* ‘separation, opening, stretch, spread, scattering’
26. Proto-Nostratic root (Eurasian only) **ban-* (\sim **bən-*):
 (vb.) **ban-* ‘to cut, to strike’;
 (n.) **ban-a* ‘cut, wound’
27. Proto-Nostratic root **ban-* (\sim **bən-*):
 Extended form:
 (vb.) **ban-V-d-* ‘to tie, bind, fasten, or twist (together)’;
 (n.) **ban-d-a* ‘tie, bond’
- Note: Only the extended form is attested in the daughter languages.
28. Proto-Nostratic root **bar-* (\sim **bər-*):
 (vb.) **bar-* ‘to swell, to puff up, to expand’;
 (n.) **bar-a* ‘swelling, bulge, increase’
 Derivatives:
 (vb.) **bar-* ‘to bristle (up), to stand on end’;
 (n.) **bar-a* ‘bristle, point, spike’
 (vb.) *bar-* ‘to blow’;
 (n.) **bar-a* ‘wind’
 (vb.) **bar-* ‘to be thick, bushy, shaggy; to be coarse, rough, harsh’
 (n.) **bar-a* ‘roughness, coarseness, harshness; thickness, shagginess’; (adj.)
 ‘rough, harsh, coarse; thick, shaggy, bushy’
29. Proto-Nostratic root **bar-* (\sim **bər-*):
 (vb.) **bar-* ‘to bristle (up), to stand on end’;
 (n.) **bar-a* ‘bristle, point, spike’
 Derivative of:
 (vb.) **bar-* ‘to swell, to puff up, to expand’;
 (n.) **bar-a* ‘swelling, bulge, increase’

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30. Proto-Nostratic root **bar-* (~ **bər-*):
 (vb.) *bar-* ‘to blow’;
 (n.) **bar-a* ‘wind’
 Derivative of:
 (vb.) **bar-* ‘to swell, to puff up, to expand’;
 (n.) **bar-a* ‘swelling, bulge, increase’
31. Proto-Nostratic **bar-* (~ **bər-*):
 (vb.) **bar-* ‘to be thick, bushy, shaggy; to be coarse, rough, harsh’;
 (n.) **bar-a* ‘roughness, coarseness, harshness; thickness, shagginess’; (adj.)
 ‘rough, harsh, coarse; thick, shaggy, bushy’
 Derivative of:
 (vb.) **bar-* ‘to swell, to puff up, to expand’;
 (n.) **bar-a* ‘swelling, bulge, increase’
32. Proto-Nostratic root **bar-* (~ **bər-*):
 (vb.) **bar-* ‘to bear children, to give birth’;
 (n.) **bar-a* ‘child’
33. Proto-Nostratic root **bar-* (~ **bər-*):
 (vb.) **bar-* ‘to take or seize hold of, to grasp’;
 (n.) **bar-a* ‘hold, grasp, seizure’
34. Proto-Nostratic (n.) **bar-a* ‘seed, grain’
35. Proto-Nostratic root **bar-* (~ **bər-*):
 (vb.) **bar-* ‘to shine, to be bright, to sparkle, to flash’;
 (n.) **bar-a* ‘light, brightness; lightning’
36. Proto-Nostratic root **bar-* (~ **bər-*):
 (vb.) **bar-* ‘to be kind, charitable, beneficent; to do good’;
 (n.) **bar-a* ‘goodness, kindness’; (adj.) ‘good, kind, beneficent’
37. Proto-Nostratic root **bar-* (~ **bər-*):
 (vb.) **bar-* ‘to split (with a tool or weapon); to cut into, to carve; to scrape’;
 (n.) **bar-a* ‘carving, engraving, cuttings, chip’
38. Proto-Nostratic root **bar-* (~ **bər-*):
 (vb.) **bar-* ‘to make a sound, to utter a noise’;
 (n.) **bar-a* ‘sound, noise’
39. Proto-Nostratic (n.) **bar-a* used as the base for several insect names
40. Proto-Nostratic (n.) **bar-a* ‘bone of leg or arm’

41. Proto-Nostratic **bar-* (\sim **bər-*):
 (vb.) **bar-* ‘to walk, to go (away)’;
 (n.) **bar-a* ‘walking, going (away), leaving, departing’
42. Proto-Nostratic root **barʷ-* (\sim **bərʷ-*):
 (vb.) **barʷ-* ‘to be or become barren, desolate, useless, unfruitful’;
 (n.) **barʷ-a* ‘open, fallow, or barren land’; (adj.) ‘barren, desolate, useless, unfruitful’
43. Proto-Nostratic root **baw-* (\sim **bəw-*):
 (vb.) **baw-* ‘to be or become aware of or acquainted with, to observe, to notice’;
 (n.) **baw-a* ‘awareness, knowledge’
44. Proto-Nostratic root **bay-* (\sim **bəy-*):
 (vb.) **bay-* ‘to apportion, to divide into shares, to distribute, to allot, to share’;
 (n.) **bay-a* ‘portion, share’
45. Proto-Nostratic (n.) **bay-a* ‘honey, bee’
46. Proto-Nostratic root **baǰ-* (\sim **bəǰ-*):
 (vb.) **baǰ-* ‘to be abundant, to be numerous, to be much, to be many’;
 (n.) **baǰ-a* ‘abundance’; (adj.) ‘abundant, much, many’
47. Proto-Nostratic (n.) **ber-a* ‘swamp’
48. Proto-Nostratic (n.) **b[e]r-a* ‘knee’
49. Proto-Nostratic (n.) **bey-a* ‘spirit, soul, self’
50. Proto-Nostratic relational marker **bi* ‘in addition to, with, together with’
51. Proto-Nostratic root **bin-* (\sim **ben-*):
 (vb.) **bin-* ‘to tie (together), to fasten, to twist together, to bind (together)’;
 (n.) **bin-a* ‘tie, bond’
52. Proto-Nostratic (n.) **bin-a*, **ban-a* ‘younger relative: (m.) younger brother, younger son; (f.) younger sister, younger daughter’
53. Proto-Nostratic root **bir-* (\sim **ber-*):
 (vb.) **bir-* ‘to swell, to rise, to grow’;
 (n.) **bir-a* ‘largeness, greatness, height, tallness’; (adj.) ‘big, large, great, tall’
 Extended form:
 (vb.) **bir-V-g-* ‘to be high’;
 (n.) **bir-g-a* ‘height, high place’; (adj.) ‘high, tall, lofty’

Note: The unextended form is found in Dravidian.

54. Proto-Nostratic root **bir-* (~ **ber-*):
 (vb.) **bir-* ‘to sing, to play (a musical instrument)’;
 (n.) **bir-a* ‘singing, playing (a musical instrument), musical instrument’
55. Proto-Nostratic root **bir-* (~ **ber-*):
 (vb.) **bir-* ‘to cut, rip, pull, break, or tear off; to pull’;
 (n.) **bir-a* ‘the act of cutting, ripping, pulling, breaking, or tearing off’
56. Proto-Nostratic (n.) **bir-a* ‘gnat, mosquito, midge, fly’
57. Proto-Nostratic root **bir^y-* (~ **ber^y-*):
 (vb.) **bir^y-* ‘to enjoy, to savor’;
 (n.) **bir^y-a* ‘fruit’
 Extended form:
 (n.) **bir^y-q-a* ‘plum’
58. Proto-Nostratic (n.) **bir^y-a* ‘penis’
59. Proto-Nostratic root **bit^y-* (~ **bet^y-*):
 (vb.) **bit^y-* ‘to press between the fingers, to squeeze, to crush’;
 (n.) **bit^y-a* ‘squeeze, pinch, pressure’
60. Proto-Nostratic root **bit^h-* (~ **bet^h-*):
 (vb.) **bit^h-* ‘to break, to split, to prick (tr.); to split apart, to break open, to burst forth (intr.)’;
 (n.) **bit^h-a* ‘break, slit, hole, piece broken off’
61. Proto-Nostratic **bor^y-a* ‘(n.) a dark color; (adj.) dark, dark-colored’
62. Proto-Nostratic root **bud-* (~ **bud-*):
 (vb.) **bud-* ‘to set fire to something, to kindle’;
 (n.) **bud-a* ‘blaze, light, fire’
63. Proto-Nostratic (n.) **bud-a* ‘lowest part or region (of anything)’
64. Proto-Nostratic (n.) **bud-a* ‘stick’
65. Proto-Nostratic root **bug-* (~ **bog-*):
 (vb.) **bug-* ‘to blister, to swell’;
 (n.) **bug-a* ‘boil, blister, pustule’

66. Proto-Nostratic root **bug-* (~ **bog-*):
 Extended form:
 (vb.) **bug-V-r-* ‘to make a sound, to make a noise’;
 (n.) **bug-r-a* ‘sound, noise’

 Note: Only the extended form is attested in the daughter languages.
67. Proto-Nostratic (n.) **buk’-a* (~ **bok’-a*) ‘he-goat, buck’
68. Proto-Nostratic root **bul-* (~ **bol-*):
 (vb.) **bul-* ‘to swell, to expand, to spread out, to overflow; to puff up, to inflate’;
 (n.) **bul-a* ‘large quantity or amount; expansion, spread, inflation; puff, blow’
 Derivatives:
 (n.) **bul-a* (~ **bol-a*) ‘penis, testicle(s)’
 (vb.) **bul-V-γ-* ‘to ripen, to blossom, to bloom, to sprout, to mature’;
 (n.) **bul-γ-a* ‘increase, growth, ripening, maturity, prosperity, blossoming’
 Reduplicated:
 (vb.) **bul-bul-* ‘to swell, to bubble up’;
 (n.) **bul-bul-a* ‘puff, bubble, swelling’
69. Proto-Nostratic (n.) **bul-a* (~ **bol-a*) ‘penis, testicle(s)’:
 Derivative of:
 (vb.) **bul-* ‘to swell, to expand, to spread out, to overflow; to puff up, to inflate’;
 (n.) **bul-a* ‘large quantity or amount; expansion, spread, inflation; puff, blow’
70. Proto-Nostratic root **bul-* (~ **bol-*):
 Extended form:
 (vb.) **bul-V-γ-* ‘to ripen, to blossom, to bloom, to sprout, to mature’;
 (n.) **bul-γ-a* ‘increase, growth, ripening, maturity, prosperity, blossoming’
 Derivative of:
 (vb.) **bul-* ‘to swell, to expand, to spread out, to overflow; to puff up, to inflate’;
 (n.) **bul-a* ‘large quantity or amount; expansion, spread, inflation; puff, blow’
71. Proto-Nostratic root (reduplicated) **bul-bul-* (~ **bol-bol-*) (> **bum-bul-* [~ **bom-bol-*]):
 (vb.) **bul-bul-* (> **bum-bul-*) ‘to swell, to bubble up’;
 (n.) **bul-bul-a* (> **bum-bul-a*) ‘puff, bubble, swelling’
 Derivative of:
 (vb.) **bul-* ‘to swell, to expand, to spread out, to overflow; to puff up, to inflate’;
 (n.) **bul-a* ‘large quantity or amount; expansion, spread, inflation; puff, blow’

72. Proto-Nostratic root **bul-* (~ **bol-*):
 (vb.) **bul-* ‘to mix, to mix up, to confuse’;
 (n.) **bul-a* ‘mixture, confusion, turbidity, blur’
 Derivative:
 (n.) **bul-a* ‘that which is dark, dark colored; that which has mixed colors, that which is spotted’
73. Proto-Nostratic (n.) **bul-a* ‘that which is dark, dark-colored; that which has mixed colors, that which is spotted’
 Derivative of:
 (vb.) **bul-* ‘to mix, to mix up, to confuse’;
 (n.) **bul-a* ‘mixture, confusion, turbidity, blur’
74. Proto-Nostratic root **bul-* (~ **bol-*):
 (vb.) **bul-* ‘to crush, to grind, to weaken, to wear down; to become worn out, weak, tired, old’;
 (n.) **bul-a* ‘that which is worn out, weak, tired: weakness, decline, decay, wear, etc.; (adj.) worn out, weak, tired, old’
75. Proto-Nostratic (n.) **bulʷ-a* ‘a kind of small bird: pigeon, dove’
76. Proto-Nostratic root **bun-* (~ **bon-*):
 (vb.) **bun-* ‘to puff up, to inflate, to expand, to swell’;
 (n.) **bun-a* ‘rounded protuberance, swelling, lump, hump, growth’
 Extended form:
 (vb.) **bun-V-g-* ‘to swell, to increase, to expand’;
 (n.) **bun-g-a* ‘swelling’; (adj.) ‘swollen, fat, thick’
 Derivative:
 (vb.) **bun-* ‘to flow, to overflow’;
 (n.) **bun-a* ‘flow, flood’
77. Proto-Nostratic root **bun-* (~ **bon-*):
 (vb.) **bun-* ‘to flow, to overflow’;
 (n.) **bun-a* ‘flow, flood’
 Derivative of:
 (vb.) **bun-* ‘to puff up, to inflate, to expand, to swell’;
 (n.) **bun-a* ‘rounded protuberance, swelling, lump, hump, growth’
78. Proto-Nostratic root **bur-* (~ **bor-*):
 (vb.) **bur-* ‘to twist, to turn’;
 (n.) **bur-a* ‘twist, turn’

Derivatives:

(vb.) **bur-* ‘to fight, to wrangle (over), to quarrel, to wrestle’;(n.) **bur-a* ‘fight, dispute, quarrel, battle, struggle’(vb.) **bur-* ‘to bore, to pierce’;(n.) **bur-a* ‘gimlet, borer, auger’79. Proto-Nostratic root **bur-* (~ **bor-*):(vb.) **bur-* ‘to fight, to wrangle (over), to quarrel, to wrestle’;(n.) **bur-a* ‘fight, dispute, quarrel, battle, struggle’

Derivative of:

(vb.) **bur-* ‘to twist, to turn’;(n.) **bur-a* ‘twist, turn’80. Proto-Nostratic root **bur-* (~ **bor-*):(vb.) **bur-* ‘to bore, to pierce’;(n.) **bur-a* ‘gimlet, borer, auger’

Derivative of:

(vb.) **bur-* ‘to twist, to turn’;(n.) **bur-a* ‘twist, turn’81. Proto-Nostratic root **bur-* (~ **bor-*):(vb.) **bur-* ‘to blow, to blow about, to whirl, to rage’;(n.) **bur-a* ‘storm, whirl, rage’82. Proto-Nostratic root **bur-* (~ **bor-*):(vb.) **bur-* ‘to bite, to eat’;(n.) **bur-a* ‘food’83. Proto-Nostratic root **bur-* (~ **bor-*):(vb.) **bur-* ‘to cover, to wrap up’;(n.) **bur-a* ‘cover, covering’84. Proto-Nostratic (n.) **bur-a* ‘(fine, soft) feathers, fur, wool, (body) hair’85. Proto-Nostratic (n.) **bur-a* ‘wing, pinion, feather(s)’86. Proto-Nostratic (n.) **bur-a* ‘eyelash, eyebrow’87. Proto-Nostratic (n.) **bur^y-a* used as the base for several insect names, perhaps originally ‘buzzing insect’ (if this be the case, the following underlying verb form may be implied here: Proto-Nostratic **bur^y-* ‘to make a buzzing sound’)88. Proto-Nostratic root **buw-* (~ **bow-*):(vb.) **buw-* ‘to go, to come, to proceed, to spend time’;(n.) **buw-a* ‘going, coming, staying; abode, dwelling, residence’

89. Proto-Nostratic root **buw-* (~ **bow-*):
 (vb.) **buw-* ‘to become, to arise, to come into being, to grow’;
 (n.) **buw-a* ‘growth, fullness, prosperity; blossom, bloom’

PROTO-NOSTRATIC **p^h* (> PROTO-AFRASIAN **p*)

90. Proto-Nostratic root **p^hač^h-* (~ **p^həč^h-*):
 (vb.) **p^hač^h-* ‘to split or break open, to split or break apart’;
 (n.) **p^hač^h-a* ‘crack, split, opening, break’
91. Proto-Nostratic root **p^hač’-* (~ **p^həč’-*):
 (vb.) **p^hač’-* ‘to cover up’;
 (n.) **p^hač’-a* ‘skin, hide, covering’
92. Proto-Nostratic root **p^haĥ-* (~ **p^həĥ-*):
 (vb.) **p^haĥ-* ‘to eat’;
 (n.) **p^haĥ-a* ‘food, nourishment’
93. Proto-Nostratic (n.) **p^hak^h-a* ‘scab, dried mucus’
94. Proto-Nostratic (n.) **p^hal-a* (metathesized variant **lap^h-a* in Uralic, Altaic, and part of Afrasian) ‘spleen’
95. Proto-Nostratic root **p^hal-* (~ **p^həl-*):
 (vb.) **p^hal-* ‘to split, to cleave’;
 (n.) **p^hal-a* ‘split, crack’
 Derivative:
 (n.) **p^hal-a* ‘stone’
96. Proto-Nostratic (n.) **p^hal-a* ‘stone’
 Derivative of:
 (vb.) **p^hal-* ‘to split, to cleave’ (in the sense ‘to chip or break stone[s]’);
 (n.) **p^hal-a* ‘split, crack’
97. Proto-Nostratic root **p^hal-* (~ **p^həl-*):
 (vb.) **p^hal-* ‘to spread, to extend’;
 (n.) **p^hal-a* ‘that which is wide, flat, level, broad, open: expanse, open space or surface’; (adj.) ‘wide, flat, level, broad, open’
 Derivative:
 (n.) **p^hal-a* ‘flat of the hand, palm’

98. Proto-Nostratic (n.) **p^hal-a* ‘flat of the hand, palm’
 Derivative of:
 (vb.) **p^hal-* ‘to spread, to extend’;
 (n.) **p^hal-a* ‘that which is wide, flat, level, broad, open: expanse, open space or surface’; (adj.) ‘wide, flat, level, broad, open’
99. Proto-Nostratic root **p^hal-* (∼ **p^həɫ-*):
 (vb.) **p^hal-* ‘to fill’;
 (n.) **p^hal-a* ‘fullness’; (adj.) ‘much, many’
100. Proto-Nostratic (n.) **p^hal-a* ‘settlement, settled place’
101. Proto-Nostratic (n.) **p^hal-a* ‘thumb, big toe’
102. Proto-Nostratic root **p^hal-* (∼ **p^həɫ-*):
 (vb.) **p^hal-* ‘to cover, to hide, to conceal’;
 (n.) **p^hal-a* ‘covering’
103. Proto-Nostratic root **p^halv-* (∼ **p^həɫv-*):
 (vb.) **p^halv-* ‘to burn, to be warm; to smart, to be painful’;
 (n.) **p^halv-a* ‘burn, burning sensation, pain’
104. Proto-Nostratic root **p^haɲ-* (∼ **p^həɲ-*):
 (vb.) **p^haɲ-* ‘to take in hand, to take hold of, to handle’;
 (n.) **p^haɲ-a* ‘hand, handle’
 Extended form (Indo-European and Uralic):
 (vb.) **p^haɲ-V-k^{wh}-* ‘to take in hand, to take hold of, to handle’;
 (n.) **p^haɲ-k^{wh}-a* ‘hand, handle’
105. Proto-Nostratic (n.) **p^haɲ-a* ‘front part, head, forehead, face’
106. Proto-Nostratic root **p^har-* (∼ **p^həɾ-*):
 (vb.) **p^har-* ‘to be fond of, to care for, to feel affection for; to be pleased, happy, satisfied, or delighted with’;
 (n.) **p^har-a* ‘love, affection; delight, joy’
107. Proto-Nostratic root **p^har-* (∼ **p^həɾ-*):
 (vb.) **p^har-* ‘to separate, to divide, to break (apart)’;
 (n.) **p^har-a* ‘part, portion, share’
108. Proto-Nostratic root **p^har-* (∼ **p^həɾ-*):
 (vb.) **p^har-* ‘to spread, to scatter’;
 (n.) **p^har-a* ‘breadth, width, extension, space’; (adj.) ‘broad, extended, spread out, scattered’

109. Proto-Nostratic root **p^har-* (~ **p^har-*):
 (vb.) **p^har-* ‘to press forward, to precede, to hasten in advance, to overtake, to surpass, to outstrip’;
 (n.) **p^har-a* ‘leader, master, lord, hero’; (adj.) ‘chief, foremost, first’
110. Proto-Nostratic root **p^har-* (~ **p^har-*):
 (vb.) **p^har-* ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated; to flutter, to fly, to flee’;
 (n.) **p^har-a* ‘flying, flight, fleeing’
 Note also:
 (vb.) **p^hir-* ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated; to flutter, to fly, to flee’;
 (n.) **p^hir-a* ‘flying, flight, fleeing’
111. Proto-Nostratic (n.) **p^har-a* ‘running, rapid motion, speed’ > ‘equid: horse, wild ass, onager, mule, etc.’ in Afrasian and Dravidian
 Derivative of:
 (vb.) **p^har-* ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated; to flutter, to fly, to flee’;
 (n.) **p^har-a* ‘flying, flight, fleeing’
112. Proto-Nostratic (n.) **p^har-a* ‘calf, heifer’
 Note also:
 (n.) **p^hur-a* ‘calf, heifer’
113. Proto-Nostratic (n.) **p^har-a*, (?) **p^hur-a* ‘house’
114. Proto-Nostratic root **p^har-* (~ **p^har-*):
 (vb.) **p^har-* ‘to go or pass; to go or pass over or across; to go forth or out’;
 (n.) **p^har-a* ‘going, passage, journey, crossing’
115. Proto-Nostratic root **p^har^y-* (~ **p^har^y-*):
 (vb.) **p^har^y-* ‘to cover’;
 (n.) **p^har^y-a* ‘covering’
116. Proto-Nostratic root **p^har^y-* (~ **p^har^y-*):
 (vb.) **p^har^y-* ‘to ripen, to mature, to grow old, (hair) to turn gray’;
 (n.) **p^har^y-a* ‘ripeness, maturity’; (adj.) ‘ripe, mature, gray’
117. Proto-Nostratic root **p^has^y-* (~ **p^has^y-*):
 (vb.) **p^has^y-* ‘to breathe out, to blow; to fart’;
 (n.) **p^has^y-a* ‘a fart’

118. Proto-Nostratic root **p^has^y-* (~ **p^has^y-*):
 (vb.) **p^has^y-* ‘to split, to cleave, to break, to shatter’;
 (n.) **p^has^y-a* ‘split, break; part, share, portion’
119. Proto-Nostratic (n.) **p^has^y-a* ‘sperm, semen; male genitals, penis; descendant, offspring’
120. Proto-Nostratic root **p^hat^h-* (~ **p^hat^h-*):
 (vb.) **p^hat^h-* ‘to flutter, to quiver, to tremble, to palpitate, to move rapidly’;
 (n.) **p^hat^h-a* ‘haste, hurry’
121. Proto-Nostratic root **p^hat^h-* (~ **p^hat^h-*):
 (vb.) **p^hat^h-* ‘to open; to be wide, open, spacious, spread out; to stretch, to extend, to spread out’;
 (n.) **p^hat^h-a* ‘opening, open space’; (adj.) ‘wide, open, spacious’
122. Proto-Nostratic root **p^hat’-* (~ **p^hat’-*):
 (vb.) **p^hat’-* ‘to hasten, to move quickly’;
 (n.) **p^hat’-a* ‘foot’
123. Proto-Nostratic (n.) **p^hat’-a* ‘chaff, husk, (unripe or blighted) grain’
124. Proto-Nostratic root (Eurasian only) **p^hek^{wh}-*:
 (vb.) **p^hek^{wh}-* ‘to warm, to heat’ (> ‘to cook, to bake’);
 (n.) **p^hek^{wh}-a* ‘warmth, heat’; (adj.) ‘warm, hot’ (> ‘cooked, baked’)
125. Proto-Nostratic root **p^hel-*:
 (vb.) **p^hel-* ‘to tremble, to shake; to be frightened, fearful, afraid’;
 (n.) **p^hel-a* ‘fright, fear’
126. Proto-Nostratic root **p^hid-* (~ **p^hid-*):
 (vb.) **p^hid-* ‘to seize, to hold, to clutch, to capture, to cling to’;
 (n.) **p^hid-a* ‘hold, grasp’
127. Proto-Nostratic (n.) **p^hil^y-a* ‘child, infant, youth, young of animals’
128. Proto-Nostratic root **p^hin^y-* (~ **p^hin^y-*):
 (vb.) **p^hin^y-* ‘to watch (over), to protect, to nourish, to nurture’;
 (n.) **p^hin^y-a* ‘protection, care; feeding, nourishing, nourishment’
129. Proto-Nostratic root **p^hir-* (~ **p^hir-*):
 (vb.) **p^hir-* ‘to bring forth, to bear fruit’;
 (n.) **p^hir-a* ‘birth, issue, offspring, descendant, fruit’

130. Proto-Nostratic root **p^hir-* (~ **p^her-*):
 (vb.) **p^hir-* ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated;
 to flutter, to fly, to flee’;
 (n.) **p^hir-a* ‘flying, flight, fleeing’
 Note also:
 (vb.) **p^har-* ‘to move swiftly, to hasten, to be in a hurry, to be greatly agitated;
 to flutter, to fly, to flee’;
 (n.) **p^har-a* ‘flying, flight, fleeing’
131. Proto-Nostratic root **p^hir-* (~ **p^her-*):
 (vb.) **p^hir-* ‘to twist, to turn’;
 (n.) **p^hir-a* ‘twist, twining, turn; twine, string, rope, cord’
132. Proto-Nostratic root **p^hir-* (~ **p^her-*):
 (vb.) **p^hir-* ‘to tremble, to shake; to be afraid, to fear’;
 (n.) **p^hir-a* ‘trembling, fear’
133. Proto-Nostratic root **p^hit^{’y-}* (~ **p^het^{’y-}*):
 (vb.) **p^hit^{’y-}* ‘to give birth to’;
 (n.) **p^hit^{’y-a}* ‘genitals (male or female); birth, origin’
134. Proto-Nostratic root **p^huʔ-* (~ **p^hoʔ-*):
 (vb.) **p^huʔ-* ‘to swell, to fatten’;
 (n.) **p^huʔ-a* ‘swelling, fullness, fat(ness)’
135. Proto-Nostratic root **p^hul-* (~ **p^hol-*) stem indicating downward motion:
 (vb.) **p^hul-* ‘to fall, to fall down, to collapse, to ruin, etc.’;
 (n.) **p^hul-a* ‘fall, collapse, ruin’; (n.) ‘fallen, ruined, weakened; low, base,
 vile, mean’
136. Proto-Nostratic root **p^hul^{y-}* (~ **p^hol^{y-}*):
 (vb.) **p^hul^{y-}* ‘to swell’;
 (n.) **p^hul^{y-a}* ‘a swelling (on the skin): blister, abscess, pimple, etc.’
 Derivative:
 (n.) **p^hul^{y-a}* ‘that which is fat, swollen, etc.’ (> ‘tallow, grease, fat, oil,
 blubber, etc.’ in the daughter languages)
137. Proto-Nostratic (n.) **p^hul^{y-a}* ‘that which is fat, swollen, etc.’ (> ‘tallow,
 grease, fat, oil, blubber, etc.’ in the daughter languages)
 Derivative of:
 (vb.) **p^hul^{y-}* ‘to swell’;
 (n.) **p^hul^{y-a}* ‘a swelling (on the skin): blister, abscess, pimple, etc.’

138. Proto-Nostratic (n.) **p^hur-a* ‘calf, heifer’
 Note also:
 (n.) **p^har-a* ‘calf, heifer’
139. Proto-Nostratic root **p^huš-* (~ **p^hoš-*):
 (vb.) **p^huš-* ‘to breathe out, to sigh; to blow, to puff (up), to inflate’;
 (n.) **p^huš-a* ‘puff, breath, snort; bulge’

PROTO-NOSTRATIC **p^h* (> PROTO-AFRASIAN **f*)

140. Proto-Nostratic root **p^haḥ-* (~ **p^həḥ-*):
 (vb.) **p^haḥ-* ‘to warm, to heat, to burn’;
 (n.) **p^haḥ-a* ‘fire, flame, spark’
 Extended form:
 (vb.) **p^haḥ-V-w-* ‘to warm, to heat, to burn’;
 (n.) **p^haḥ-w-a* ‘fire, flame, spark’
141. Proto-Nostratic (n.) **p^hal-a* ‘skin, hide’
142. Proto-Nostratic root **p^hid-* (~ **p^hed-*):
 (vb.) **p^hid-* ‘to tear, to pluck, to pull; to tear off, to pluck off, to pull off; to tear out, to pluck out, to pull out’;
 (n.) **p^hid-a* ‘the act of pulling, tearing, plucking’
143. Proto-Nostratic root **p^hilv-* (~ **p^helv-*):
 (vb.) **p^hilv-* ‘to split, to cleave’;
 (n.) **p^hilv-a* ‘split, crack’
144. Proto-Nostratic root **p^hin-* (~ **p^hen-*):
 (vb.) **p^hin-* ‘to break’;
 (n.) **p^hin-a* ‘break’
145. Proto-Nostratic root **p^hir-* (~ **p^her-*):
 (vb.) **p^hir-* ‘to ask, to request, to entreat, to beseech, to pray’;
 (n.) **p^hir-a* ‘request, entreaty, prayer’
146. Proto-Nostratic root **p^huth-* (~ **p^hoth-*):
 (vb.) **p^huth-* ‘to vomit’;
 (n.) **p^huth-a* ‘vomit’
147. Proto-Nostratic (n.) **p^huth-a* ‘hole, opening’

148. Proto-Nostratic root **p^huw-* (~ **p^how-*):
 (vb.) **p^huw-* ‘to puff, to blow, to exhale; to puff up, to inflate’;
 (n.) **p^huw-a* ‘a puff, the act of blowing, breath’

PROTO-NOSTRATIC *p’

149. Proto-Nostratic (n.) **p’ap’-a* ‘old man, old woman’
150. Proto-Nostratic root **p’ul-* (~ **p’ol-*):
 (vb.) **p’ul-* ‘to swell’;
 (n.) **p’ul-a* ‘swelling, hump, lump, bulge’; (adj.) ‘swollen, round, bulbous’
151. Proto-Nostratic root **p’ul^v-* (~ **p’ol^v-*):
 (vb.) **p’ul^v-* ‘to blow about; to give off smoke, vapor, steam’;
 (n.) **p’ul^v-a* ‘mist, fog, haze; smoke, steam; cloud’
152. Proto-Nostratic root **p’ut’-* (~ **p’ot’-*):
 (vb.) **p’ut’-* ‘to cut, tear, break, or pull off or apart’;
 (n.) **p’ut’-a* ‘cut-off, pulled-off, torn-off, or broken-off piece or part’

PROTO-NOSTRATIC *d

153. Proto-Nostratic relational marker **da-* (~ **də-*) ‘along with, together with, in addition to’
154. Proto-Nostratic (n.) **da-* ‘mother, sister’; (reduplicated) (n.) **da-da-* ‘mother, sister’ (nursery words)
155. Proto-Nostratic root **dab-* (~ **dəb-*):
 (vb.) **dab-* ‘to make fast, to join together, to fit together, to fasten (together)’;
 (n.) **dab-a* ‘joining, fitting, fastening’
156. Proto-Nostratic root **dag-* (~ **dəg-*):
 (vb.) **dag-* ‘to put, to place, to put in place; to be put in place, to be stable, to be firmly established’;
 (n.) **dag-a* ‘place’
157. Proto-Nostratic root **dag-* (~ **dəg-*):
 (vb.) **dag-* ‘to glitter, to shine, to burn’;
 (n.) **dag-a* ‘day’

158. Proto-Nostratic root **dal-* (\sim **dəl-*):
 (vb.) **dal-* ‘to cut, to prick, to pierce, to gash, to notch, to gouge, to wound’;
 (n.) **dal-a* ‘gash, notch, strike, split’
159. Proto-Nostratic root **dal-* (\sim **dəl-*):
 (vb.) **dal-* ‘to stir up, to disturb, to roil (water), to agitate; to be disturbed, confused, agitated, troubled’;
 (n.) **dal-a* ‘disturbance, agitation’
 Note also:
 (vb.) **dul-* ‘to disturb, to perplex, to bewilder, to confuse, to ruffle, to upset, to baffle, to stir up trouble, to agitate; to be disturbed, perplexed, bewildered, confused, ruffled, upset, baffled, troubled, agitated’ (> ‘to drive someone crazy, mad, insane; to be crazy, mad, insane; to be dumb, stupid’);
 (n.) **dul-a* ‘confusion, disturbance, trouble, agitation, perplexity’ (> ‘madness, craziness, insanity; stupidity’)
160. Proto-Nostratic root **dalʷ-* (\sim **dəlʷ-*):
 (vb.) **dalʷ-* ‘to oppress, to harass, to weaken, to tire’;
 (n.) **dalʷ-a* ‘tiredness, weakness, exhaustion, weariness’; (adj.) ‘oppressed, tired, weary, weak, exhausted’
161. Proto-Nostratic (n.) **daq^h-a* ‘male of certain animals: billy-goat, ram’
162. Proto-Nostratic root **dar-* (\sim **dər-*):
 (vb.) **dar-* ‘to bend, to twist, to turn; to twist, wrap, or join together’;
 (n.) **dar-a* ‘bend, turn, curve; that which bends, turns, winds, or twists: winding course or way’; (adj.) ‘bent, curved, crooked; wrapped, twisted, turned, or joined together’
163. Proto-Nostratic root **dar-* (\sim **dər-*):
 (vb.) **dar-* ‘to pound, to break; to harm, to injure, to torment’;
 (n.) **dar-a* ‘harm, injury’; (adj.) ‘harmful, malevolent’ (> ‘bad’ in Kartvelian and, within Indo-European, in Celtic)
164. Proto-Nostratic root **dar-* (\sim **dər-*):
 (vb.) **dar-* ‘to be or become dark’;
 (n.) **dar-a* ‘dark spot, darkness’; (adj.) ‘dark, black’
165. Proto-Nostratic root **darʷ-* (\sim **dərʷ-*):
 (vb.) **darʷ-* ‘to swell, to enlarge’;
 (n.) **darʷ-a* ‘swelling, inflammation, blister, blotch, blemish; outgrowth, tumor’

166. Proto-Nostratic root (?) **daw-* (~ **dəw-*):
 (vb.) **daw-* ‘to sound, to resound, to make a noise’;
 (n.) **daw-a* ‘sound, noise’
167. Proto-Nostratic root **daw-* (~ **dəw-*):
 (vb.) **daw-* ‘to put, to place, to set; to set up, to establish; to do, to make’;
 (n.) **daw-a* ‘work, labor; deed, act’
168. Proto-Nostratic root **daw-* (~ **dəw-*):
 (vb.) **daw-* ‘to become deathly sick, to be ill; to die’;
 (n.) **daw-a* ‘(deadly) disease, sickness; death’
169. Proto-Nostratic root **day-* (~ **dəy-*):
 (vb.) **day-* ‘to throw, to cast, to put, to place’;
 (n.) **day-a* ‘act, deed’
170. Proto-Nostratic root **day-* (~ **dəy-*):
 (vb.) **day-* ‘to look at, to consider, to examine’;
 (n.) **day-a* ‘judgment, examination, consideration’
171. Proto-Nostratic root **day-* (~ **dəy-*):
 (vb.) **day-* ‘to take, to bring, to convey’;
 (n.) **day-a* ‘leader, guide’
172. Proto-Nostratic root **did-* (~ **ded-*):
 (vb.) **did-* ‘to swell, to rise’;
 (n.) **did-a* ‘prominence, protuberance’; (adj.) ‘swollen, raised’
173. Proto-Nostratic (n.) **dig-a* ‘fish’
174. Proto-Nostratic root **dig-* (~ **deg-*):
 (vb.) **dig-* ‘to be confused, puzzled, perplexed’;
 (n.) **dig-a* ‘confusion, perplexity’
175. Proto-Nostratic root **dilʷ-* (~ **delʷ-*):
 (vb.) **dilʷ-* ‘to shine, to be or become bright’;
 (n.) **dilʷ-a* ‘daylight, morning’
176. Proto-Nostratic (n.) **dim-a* ‘raised or elevated place’; (adj.) ‘raised, elevated’
177. Proto-Nostratic root **diqʰ-* (~ **deqʰ-*):
 (vb.) **diqʰ-* ‘to crush, to pound or tamp (earth), to mold or knead (clay)’;
 (n.) **diqʰ-a* ‘earth, clay, mud’

178. Proto-Nostratic root **diy-* (~ **dey-*):
 (vb.) **diy-* ‘to suck, to suckle’;
 (n.) **diy-a* ‘breast, teat, nipple’
179. Proto-Nostratic root **dow-*, **doy-*:
 (vb.) **dow-*, **doy-* ‘to slacken, to slow down; to grow weary, weak, faint’;
 (n.) **dow-a*, **doy-a* ‘slackness, slowness, laxity, weariness, fatigue’; (adj.)
 ‘slow, slack, lax, weary’
180. Proto-Nostratic (n.) **dub-a* ‘back, hind part’
181. Proto-Nostratic (n.) **dud-a* ‘tip, point’
182. Proto-Nostratic root **dul-* (~ **dol-*):
 (vb.) **dul-* ‘to burn, to be bright, to warm, to heat up’;
 (n.) **dul-a* ‘heat, warmth, fire’
183. Proto-Nostratic root **dul-* (~ **dol-*):
 (vb.) **dul-* ‘to disturb, to perplex, to bewilder, to confuse, to ruffle, to upset, to baffle, to stir up trouble, to agitate; to be disturbed, perplexed, bewildered, confused, ruffled, upset, baffled, troubled, agitated’ (> ‘to drive someone crazy, mad, insane; to be crazy, mad, insane; to be dumb, stupid’);
 (n.) **dul-a* ‘confusion, disturbance, trouble, agitation, perplexity’ (> ‘madness, craziness, insanity; stupidity’)
 Note also:
 (vb.) **dal-* ‘to stir up, to disturb, to roil (water), to agitate; to be disturbed, confused, agitated, troubled’;
 (n.) **dal-a* ‘disturbance, agitation’
184. Proto-Nostratic root **dulʷ-* (~ **dolʷ-*):
 (vb.) **dulʷ-* ‘to dangle, to hang, to swing back and forth’;
 (n.) **dulʷ-a* ‘hanging, swinging; shaking, agitation, disturbance’
185. Proto-Nostratic root **dum-* (~ **dom-*):
 (vb.) **dum-* ‘to cut (off), to sever’;
 (n.) **dum-a* ‘cut, severance; piece cut off, bit, fragment’
186. Proto-Nostratic root **dum-* (~ **dom-*):
 (vb.) **dum-* ‘to be silent’;
 (n.) **dum-a* ‘silence’
187. Proto-Nostratic root **dum-* (~ **dom-*):
 (vb.) **dum-* ‘to cover over, to obscure; to cloud over; to become dark, to make dark, to darken’;
 (n.) **dum-a* ‘darkness, cloud, fog’; (adj.) ‘dark, cloudy’

Derivative:

(n.) (**dum-k* 'w-a >) **dun-k* 'w-a 'darkness, cloud'; (adj.) 'dark, cloudy'

188. Proto-Nostratic (n.) (**dum-k* 'w-a >) **dun-k* 'w-a 'darkness, cloud'; (adj.) 'dark, cloudy':

Derivative of:

(vb.) **dum-* 'to cover over, to obscure; to cloud over; to become dark, to make dark, to darken';

(n.) **dum-a* 'darkness, cloud, fog'; (adj.) 'dark, cloudy'

189. Proto-Nostratic root **dun-* (~ **don-*):

(vb.) **dun-* 'to run, to flow (out), to leak';

(n.) **dun-a* 'flow, spill, leak'

190. Proto-Nostratic root **dun*^v- (~ **don*^v-):

(vb.) **dun*^v- 'to cut off, to cleave, to split';

(n.) **dun*^v-a 'part, share; piece cut off, bit, fragment'

191. Proto-Nostratic root **dur-* (~ **dor-*):

(vb.) **dur-* 'to bore, to drill, to make a hole';

(n.) **dur-a* 'hole, opening'

192. Proto-Nostratic (n.) **dur-a* 'goat, sheep, ram' (perhaps originally 'horned animal')

193. Proto-Nostratic root **duw-* (~ **dow-*):

(vb.) **duw-* 'to blow about, to fly about, to scatter; to be blown, strewn, or scattered about';

(n.) **duw-a* 'anything blown, sprinkled, scattered, or strewn about: smoke, steam, vapor; rain, shower, drizzle, raindrops; dust'; (adj.) 'blown about, sprinkled, scattered, strewn'

PROTO-NOSTRATIC *t^h

194. Proto-Nostratic demonstrative stems:

Proximate: *t^ha- (~ *t^hə-) 'this';

Intermediate: *t^hi- (~ *t^he-) 'that';

Distant: *t^hu- (~ *t^ho-) 'that yonder'

195. Proto-Nostratic root *t^haĥ- (~ *t^həĥ-):

(vb.) *t^haĥ- 'to reduce, to diminish, to wear away, to lessen; to waste away, to grow thin';

(n.) *t^haĥ-a 'wear, decay, dissipation, maceration'

196. Proto-Nostratic root **thakh-* (\sim **thəkh-*):
 (vb.) **thakh-* ‘to twist, to bend; to fasten, twist, bend, join, or hook together; to be twisted, bent’;
 (n.) **thakh-a* ‘hook, peg’
197. Proto-Nostratic root **thak’-* (\sim **thək’-*):
 (vb.) **thak’-* ‘to touch, to push, to strike’;
 (n.) **thak’-a* ‘touch, stroke’
198. Proto-Nostratic (n.) **thal-a* ‘head, top, end’
199. Proto-Nostratic root **thaly-* (\sim **thəly-*):
 (vb.) **thaly-* (primary meaning) ‘to stretch, to spread, to extend’, (secondary meaning) ‘to endure, to suffer, to bear’;
 (n.) **thaly-a* ‘stretch, spread, thinness, breadth; pain, suffering, endurance’;
 (adj.) ‘stretched, spread out, extended’ (> ‘broad, wide, thin, flat, etc.’)
200. Proto-Nostratic root **thaly-* (\sim **thəly-*):
 (vb.) **thaly-* ‘to press, to thrust, to force, to push’;
 (n.) **thaly-a* ‘pressure, thrust, force, push’
201. Proto-Nostratic root **than^y-* (\sim **thən^y-*):
 (vb.) **than^y-* ‘to extend, to spread, to stretch; to endure, to be long-lasting’;
 (n.) **than^y-a* ‘extension, width, length, breadth’; (adj.) ‘stretched, extended, wide, broad, long-lasting’
 Derivative:
 (vb.) **than^y-* ‘to grow weary, exhausted, tired, old’;
 (n.) **than^y-a* ‘exhaustion, weariness, fatigue, old age’; (adj.) ‘tired, weary, exhausted, old’
202. Proto-Nostratic root **than^y-* (\sim **thən^y-*):
 (vb.) **than^y-* ‘to grow weary, exhausted, tired, old’;
 (n.) **than^y-a* ‘exhaustion, weariness, fatigue, old age’; (adj.) ‘tired, weary, exhausted, old’
 Derivative of:
 (vb.) **than^y-* ‘to extend, to spread, to stretch; to endure, to be long-lasting’;
 (n.) **than^y-a* ‘extension, width, length, breadth’; (adj.) ‘stretched, extended, wide, broad, long-lasting’
203. Proto-Nostratic root **thaph-* (\sim **thəph-*):
 (vb.) **thaph-* ‘to strike, to knock, to hit, to beat, to pound; to trample’;
 (n.) **thaph-a* ‘stroke, slap, blow, hit’
 Note also:
 (vb.) **t’aph-* ‘to strike, to beat, to pound’;
 (n.) **t’aph-a* ‘stroke, blow’

204. Proto-Nostratic root **thar-* (~ **thər-*):
 (vb.) **thar-* ‘to draw, to drag, to pull’;
 (n.) **thar-a* ‘drag, pull; something dragged or pulled along’
 Possible derivative:
 (vb.) **thar-* ‘to spread, to spread out or about, to expand, to extend; to stretch, to stretch out; to scatter, to strew’;
 (n.) **thar-a* ‘stretch, spread, expanse’; (adj.) ‘stretched, tight, taut; spread, scattered, dispersed’
205. Proto-Nostratic root **thar-* (~ **thər-*):
 (vb.) **thar-* ‘to spread, to spread out or about, to expand, to extend; to stretch, to stretch out; to scatter, to strew’;
 (n.) **thar-a* ‘stretch, spread, expanse’; (adj.) ‘stretched, tight, taut; spread, scattered, dispersed’
 Perhaps derived from:
 (vb.) **thar-* ‘to draw, to drag, to pull’, in the sense ‘to stretch by pulling’;
 (n.) **thar-a* ‘drag, pull; something dragged or pulled along’
206. Proto-Nostratic root **thar-* (~ **thər-*):
 (vb.) **thar-* ‘to tear, to break, to split, to pierce’;
 (n.) **thar-a* ‘cut, tear, split, incision; wound, injury; spear’
207. Proto-Nostratic root **thar-* (~ **thər-*):
 (vb.) **thar-* ‘to rub, to wear down’;
 (n.) **thar-a* ‘wear’; (adj.) ‘worn out, rubbed, abraded’
 Possible Derivatives:
 (vb.) **thar-* ‘to wither, to wane, to dry up’;
 (n.) **thar-a* ‘dryness’; (adj.) ‘withered, dry, dried up, arid’
 (vb.) **thar-* ‘to scratch, to scrape, to plane’;
 (n.) **thar-a* ‘scratching, scraping, raking; rake, comb’
208. Proto-Nostratic root **thar-* (~ **thər-*):
 (vb.) **thar-* ‘to wither, to wane, to dry up’;
 (n.) **thar-a* ‘dryness’; (adj.) ‘withered, dry, dried up, arid’
 Perhaps derived from:
 (vb.) **thar-* ‘to rub, to wear down’;
 (n.) **thar-a* ‘wear’; (adj.) ‘worn out, rubbed, abraded’
209. Proto-Nostratic root **thar-* (~ **thər-*):
 (vb.) **thar-* ‘to scratch, to scrape, to plane’;
 (n.) **thar-a* ‘scratching, scraping, raking; rake, comb’
 Perhaps derived from:
 (vb.) **thar-* ‘to rub, to wear down’;
 (n.) **thar-a* ‘wear’; (adj.) ‘worn out, rubbed, abraded’

210. Proto-Nostratic root **thar-* (\sim **thər-*):
 (vb.) **thar-* ‘to drink’;
 (n.) **thar-a* ‘a drink; the act of drinking’; (adj.) ‘drunk, tipsy, intoxicated’
211. Proto-Nostratic root **thar-* (\sim **thər-*):
 (vb.) **thar-* ‘to tremble, to shake’;
 (n.) **thar-a* ‘trembling, shaking (from fear, fright)’
212. Proto-Nostratic root **thaw-* (\sim **thəw-*):
 (vb.) **thaw-* ‘to swell’;
 (n.) **thaw-a* ‘swelling, protuberance, bulge, lump, hump’; (adj.) ‘swollen, full, fat’
213. Proto-Nostratic **thekh-*:
 (vb.) **thekh-* ‘to take (away), to grasp, to seize, to remove’;
 (n.) **thekh-a* ‘the act of taking, grasping, seizing, removing’
214. Proto-Nostratic root (Eurasian only) **theph-*:
 (vb.) **theph-* ‘to warm, to burn’;
 (n.) **theph-a* ‘heat, warmth’
 Note also:
 (vb.) **t’ab-* ‘to be or become warm; to make warm, to heat up; to cook’;
 (n.) **t’ab-a* ‘heat, warmth’; (adj.) ‘hot, warm; cooked, baked’
215. Proto-Nostratic second person pronoun stem: **thi-* (\sim **the-*) ‘you’; (oblique form) **tha-* (\sim **thə-*)
216. Proto-Nostratic root **thikh-* (\sim **thekh-*):
 (vb.) **thikh-* ‘to form, to fashion, to make, to create’;
 (n.) **thikh-a* ‘tool used to form, fashion, make, or create something: axe, adze, chisel, etc.; the act of forming, fashioning, making, or creating something: action, deed, etc.’
217. Proto-Nostratic root **thik’-* (\sim **thek’-*):
 (vb.) **thik’-* ‘to press or squeeze together’;
 (n.) **thik’-a* ‘pressure, solidity, hardness, massiveness, firmness’; (adj.) ‘compact, thick, massive, solid, firm’
218. Proto-Nostratic root **thir-* (\sim **ther-*):
 (vb.) **thir-* ‘to have enough or more than enough, to have all needs fulfilled, to be satisfied, to have plenty’;
 (n.) **thir-a* ‘abundance, fullness’; (adj.) ‘enough, abundant, full’

Extended form:

(vb.) **thir-V-ph-* ‘to have enough, to have all needs fulfilled, to be satisfied, to have plenty’;

(n.) **thir-ph-a* ‘abundance, excess, surplus, plenty’

219. Proto-Nostratic root **thir-* (~ **ther-*):

Extended form:

(vb.) **thir-V-ph-* ‘to have enough, to have all needs fulfilled, to be satisfied, to have plenty’;

(n.) **thir-ph-a* ‘abundance, excess, surplus, plenty’

Derivative of:

(vb.) **thir-* ‘to have enough or more than enough, to have all needs fulfilled, to be satisfied, to have plenty’;

(n.) **thir-a* ‘abundance, fullness’; (adj.) ‘enough, abundant, full’

220. Proto-Nostratic (n.) **thorʷ-a* ‘dust, soil, earth’

221. Proto-Nostratic root **thow-*:

(vb.) **thow-* ‘to snow’;

(n.) **thow-a* ‘snow-storm; snow, (hoar)frost’

222. Proto-Nostratic root **thukh-* (~ **thokh-*):

(vb.) **thukh-* ‘to burn, to blaze’;

(n.) **thukh-a* ‘ash(es), soot’

223. Proto-Nostratic root **thul-* (~ **thol-*):

(vb.) **thul-* ‘to lift, to raise; to pile up, to stack (in a heap)’;

(n.) **thul-a* ‘hill, mound; stack, heap’

224. Proto-Nostratic root **thum-* (~ **thom-*):

(vb.) **thum-* ‘to cover over, to hide; to become dark’;

(n.) **thum-a* ‘darkness’; (adj.) ‘dark’

225. Proto-Nostratic root **thuph-*:

(vb.) **thuph-* ‘to spit’;

(n.) **thuph-a* ‘spittle, saliva’

226. Proto-Nostratic root **thur-* (~ **thor-*):

(vb.) **thur-* ‘to cram, to push in, to stuff, to thrust in, to press in’;

(n.) **thur-a* ‘pressure, force, thrust’

PROTO-NOSTRATIC *t'

227. Proto-Nostratic root *t'ab- (~ *t'əb-):
 (vb.) *t'ab- 'to be or become warm; to make warm, to heat up; to cook';
 (n.) *t'ab-a 'heat, warmth'; (adj.) 'hot, warm; cooked, baked'
 Note also:
 (vb.) *t^hep^h- 'to warm, to burn';
 (n.) *t^hep^h-a 'heat, warmth'
228. Proto-Nostratic root *t'ad- (*t'əd-):
 (vb.) *t'ad- 'to hinder, to stop, to obstruct';
 (n.) *t'ad-a 'hindrance, obstacle, impediment, obstruction'
229. Proto-Nostratic root *t'aĥ- (~ *t'əĥ-):
 (vb.) *t'aĥ- 'to break, to split; to crush, to grind, to pound';
 (n.) *t'aĥ-a 'break, split, division; anything ground or pulverized'
230. Proto-Nostratic root *t'akh- (~ *t'əkh-):
 (vb.) *t'akh- 'to be fit, appropriate, suitable, proper';
 (n.) *t'akh-a 'fitness, appropriateness, suitability, propriety'; (adj.) 'fit, appropriate, suitable, proper'
231. Proto-Nostratic root *t'al- (~ *t'əl-):
 (vb.) *t'al- 'to lick';
 (n.) *t'al-a 'licking'
232. Proto-Nostratic root *t'al- (~ *t'əl-):
 (vb.) *t'al- 'to plunge, sink, dive, dip, or fall into; to immerse';
 (n.) *t'al-a 'immersion; depth'
233. Proto-Nostratic root *t'al- (~ *t'əl-):
 (vb.) *t'al- 'to stretch out, to extend';
 (n.) *t'al-a 'length; height'; (adj.) 'long, tall; high'
234. Proto-Nostratic root *t'alʷ-:
 (vb.) *t'alʷ- 'to drip, to fall in drops, to sprinkle, to wet, to moisten';
 (n.) *t'alʷ-a 'dew, (rain) drop, drizzle'
235. Proto-Nostratic root *t'am-:
 (vb.) *t'am- 'to make or construct (something) in a skillful manner' (> 'to build');
 (n.) *t'am-a 'the act of making or constructing (something) in a skillful manner' (> 'craft, skill'); 'that which is made or constructed in a skillful manner' (> 'building, structure'); 'one who makes or constructs (something) in a skillful manner' (> 'craftsman, carpenter')

236. Proto-Nostratic root **t'an-* (*~ *t'an-*):
 (vb.) **t'an-* 'to fill, to stuff, to pack or load tightly together';
 (n.) **t'an-a* 'closeness, thickness, density; load, burden'; (adj.) 'tightly packed or pressed together; close, thick, dense'
237. Proto-Nostratic root **t'an-* (*~ *t'an-*):
 (vb.) **t'an-* 'to tie, to bind, to plait, to weave';
 (n.) **t'an-a* 'anything woven or plaited'
238. Proto-Nostratic root **t'aph-* (*~ *t'aph-*):
 (vb.) **t'aph-* 'to strike, to beat, to pound';
 (n.) **t'aph-a* 'stroke, blow'
 Note also:
 (vb.) **t'aph-* 'to strike, to knock, to hit, to beat, to pound; to trample';
 (n.) **t'aph-a* 'stroke, slap, blow, hit'
239. Proto-Nostratic root **t'aq'-* (*~ *t'aq'-*):
 (vb.) **t'aq'-* 'to cover, to protect';
 (n.) **t'aq'-a* 'covering'
240. Proto-Nostratic root **t'ar-* (*~ *t'ar-*):
 (vb.) **t'ar-* 'to tear, to rend, to cut, to sever';
 (n.) **t'ar-a* 'rip, tear, cut, slice'
 Extended form:
 (vb.) **t'ar-V-ph-* 'to tear, to rend, to pluck';
 (n.) **t'ar-ph-a* 'tearing, rending, plucking'
241. Proto-Nostratic root **t'ar-* (*~ *t'ar-*):
 Extended form:
 (vb.) **t'ar-V-ph-* 'to tear, to rend, to pluck';
 (n.) **t'ar-ph-a* 'tearing, rending, plucking'
 Derivative of:
 (vb.) **t'ar-* 'to tear, to rend, to cut, to sever';
 (n.) **t'ar-a* 'rip, tear, cut, slice'
242. Proto-Nostratic root **t'aw-* (*~ *t'aw-*):
 (vb.) **t'aw-* 'to go, to leave, to go away; to let go';
 (n.) **t'aw-a* 'distance, remoteness'; (adj.) 'far away, remote, at a distance'
243. Proto-Nostratic root **t'aw-* (*~ *t'aw-*):
 (vb.) **t'aw-* 'to hit, to strike';
 (n.) **t'aw-a* 'stroke, blow, injury, harm, damage'
244. Proto-Nostratic (Eurasian only) (n.) **t'ay-a* '(elder) male in-law, (elder) male relative'

245. Proto-Nostratic root **t'ay-* (\sim **t'əy-*) or **t'iy-* (\sim **t'ey-*):
 (vb.) **t'ay-* or **t'iy-* 'to shine, to gleam, to be bright, to glitter, to glow; to burn brightly';
 (n.) **t'ay-a* or **t'iy-a* 'light, brightness, heat'
246. Proto-Nostratic root **t'eʔ-*:
 (vb.) **t'eʔ-* 'to say, to speak';
 (n.) **t'eʔ-a* 'sound, speech'
247. Proto-Nostratic root **t'el-*:
 (vb.) **t'el-* 'to ask for, to request, to beg, to beseech';
 (n.) **t'el-a* 'request, wish, desire'
248. Proto-Nostratic (n.) **t'id-a* 'elevated ground, hill, mountain':
249. Proto-Nostratic root **t'il-* (\sim **t'el-*):
 (vb.) **t'il-* 'to say, to tell; to recount, to list, to enumerate';
 (n.) **t'il-a* 'talk, speech, discourse, tale'
 Derivative:
 (n.) **t'il-a* 'tongue, language'
250. Proto-Nostratic (n.) **t'il-a* 'tongue, language':
 Derivative of:
 (vb.) **t'il-* 'to say, to tell; to recount, to list, to enumerate';
 (n.) **t'il-a* 'talk, speech, discourse, tale'
251. Proto-Nostratic (n.) **t'orʷ-a* 'tree, the parts of a tree' (> 'leaf, branch, bark, etc.')
252. Proto-Nostratic root (Eurasianic only) **t'oxʷ-*:
 (vb.) **t'oxʷ-* 'to give, to bring';
 (n.) **t'oxʷ-a* 'giving, gift, present'
253. Proto-Nostratic root **t'uʔʷ-* (\sim **t'oʔʷ-*):
 (vb.) **t'uʔʷ-* 'to separate, divide, or split into two parts; to cut in half';
 (n.) **t'uʔʷ-a* 'separation or division into two; two halves'
- Note: used as the base for the numeral 'two' in Indo-European and Altaic.
254. Proto-Nostratic root **t'uk'-* (\sim **t'ok'-*):
 (vb.) **t'uk'-* 'to knock, to beat, to strike, to pound, to trample';
 (n.) **t'uk'-a* 'knock, thump, blow, stroke'
255. Proto-Nostratic (Eurasianic only) (n.) **t'ulʷ-a* 'wedge, peg'

256. Proto-Nostratic root **t'um-* (*~ *t'om-*):
 (vb.) **t'um-* 'to quiet, to calm, to pacify, to tame';
 (n.) **t'um-a* 'quietness, calmness, peace, tranquility'; (adj.) 'quiet, calm, tame, peaceful'
257. Proto-Nostratic root **t'uq^{'w-}* (*~ *t'oq^{'w-}*):
 (vb.) **t'uq^{'w-}* 'to be dark, cloudy, dusty, dirty, sooty, smoky';
 (n.) **t'uq^{'w-a}* 'darkness, (dark) cloud, dust, dirt, soot, smoke'

PROTO-NOSTRATIC **dʷ*

258. Proto-Nostratic root **dʷab-* (*~ *dʷəb-*):
 (vb.) **dʷab-* 'to beat, to hit, to strike, to harm, to injure';
 (n.) **dʷab-a* 'stroke, blow, harm, injury; slaughter, killing'
259. Proto-Nostratic root **dʷak^{wh-}* (*~ *dʷək^{wh-}*):
 (vb.) **dʷak^{wh-}* 'to blaze, to be bright';
 (n.) **dʷak^{wh-a}* '(burning) embers, fire, flame'
260. Proto-Nostratic (n.) **dʷan-a* 'sound; hearing; organ of hearing, ear':
 Comment: A Proto-Nostratic verb stem seems to be implied here: **dʷan-* 'to listen, to hear', though this is nowhere attested. The verb forms found in the Semitic daughter languages are all denominative.
261. Proto-Nostratic (n.) **dʷan-w-a* 'a kind of tree or bush'
262. Proto-Nostratic root **dʷar-* (*~ *dʷər-*):
 (vb.) **dʷar-* 'to hold firmly';
 (n.) **dʷar-a* 'firm grip; hand, arm'
263. Proto-Nostratic root **dʷaw-* (*~ *dʷəw-*):
 (vb.) **dʷaw-* 'to run, to flow';
 (n.) **dʷaw-a* 'stream, current, flow'; (adj.) 'running, flowing'
264. Proto-Nostratic indefinite pronoun stem **dʷi-* (*~ *dʷe-*) 'this one, that one'
265. Proto-Nostratic root **dʷiʔ-* (*~ *dʷeʔ-*):
 (vb.) **dʷiʔ-* 'to reach, to arrive at, to come to; to surpass, to exceed';
 (n.) **dʷiʔ-a* 'arrival, attainment, ripening'
266. Proto-Nostratic root **dʷip^{h-}* (*~ *dʷep^{h-}*):
 (vb.) **dʷip^{h-}* 'to stink, to give off a strong odor';
 (n.) **dʷip^{h-a}* 'pungent smell, stench'

PROTO-NOSTRATIC *tʰy

267. Proto-Nostratic deictic stem *tʰya- ‘that over there, that yonder (not very far)’
268. Proto-Nostratic root *tʰyal- (~ *tʰyɔl-):
 (vb.) *tʰyal- ‘to strike with a sharp instrument’;
 (n.) *tʰyal-a ‘strike, blow; sharp instrument’
 Derivative:
 (n.) *tʰyal-m-a ‘breach, opening, gap; crack, fissure, rift; hole’
269. Proto-Nostratic root *tʰyal- (~ *tʰyɔl-):
 Extended form:
 (n.) *tʰyal-m-a ‘breach, opening, gap; crack, fissure, rift; hole’
 Derivative of:
 (vb.) *tʰyal- ‘to strike with a sharp instrument’;
 (n.) *tʰyal-a ‘strike, blow; sharp instrument’
270. Proto-Nostratic root *tʰyar- (~ *tʰyɔr-):
 (vb.) *tʰyar- ‘to advance to or toward an end or a goal; to attain or achieve an end or a goal, to reach, to come to, to arrive at’;
 (n.) *tʰyar-a ‘advance, arrival, goal, attainment, end, aim; approach’
271. Proto-Nostratic (n.) *tʰyary-a ‘bull, bullock, ox’
272. Proto-Nostratic (n.) *tʰyin-a ‘the other or opposite side’; (adj.) ‘different, other’
273. Proto-Nostratic root *tʰiqʷ- (~ *tʰeqʷ-):
 (vb.) *tʰiqʷ- ‘to swell’;
 (n.) *tʰiqʷ-a ‘swelling, growth’
274. Proto-Nostratic (n.) *tʰyom-a ‘wild bovine’
275. Proto-Nostratic root *tʰhum- (~ *tʰyom-):
 (vb.) *tʰhum- ‘to strike, to beat, to pound, to knock; to tire out, to weary; to be or become weak or weary, to fade, to waste away’;
 (n.) *tʰhum-a ‘fatigue, weariness, dullness, stupor’

PROTO-NOSTRATIC *tʰy

276. Proto-Nostratic root *tʰyad- (~ *tʰyɔd-):
 (vb.) *tʰyad- ‘to strike, to beat, to pound, to hammer’;
 (n.) *tʰyad-a ‘hammer’

277. Proto-Nostratic root **t'yak^h-* (~ **t'yə^hk^h-*):
 (vb.) **t'yak^h-* 'to cut into small pieces, to chop, to chip';
 (n.) **t'yak^h-a* 'chip, small piece'
278. Proto-Nostratic root **t'yal-* (~ **t'yəl-*) and/or **t'yil-* (~ **t'yel-*):
 (vb.) **t'yal-* and/or **t'yil-* 'to overshadow, to cover over, to make dark';
 (n.) **t'yal-a* and/or **t'yil-a* 'shade, shadow; covering; darkness'
279. Proto-Nostratic root **t'yam-* (~ **t'yəm-*):
 (vb.) **t'yam-* 'to be sour, bitter';
 (n.) **t'yam-a* 'that which is sour, bitter, rotten, or spoiled'
280. Proto-Nostratic root **t'yar-* (~ **t'yər-*):
 (vb.) **t'yar-* 'to be or become stuck, joined, or bound together; to be firmly or strongly attached';
 (n.) **t'yar-a* 'firmness, solidity, strength'; (adj.) 'firm, solid, strong, steadfast'
 Derivative:
 (vb.) **t'yar-* 'to be rough, coarse, rigid, stiff, hard';
 (n.) **t'yar-a* 'that which is rough, coarse, rigid, stiff, hard'; (adj.) 'rough, coarse, rigid, stiff, hard'
281. Proto-Nostratic root **t'yar-* (~ **t'yər-*):
 (vb.) **t'yar-* 'to be rough, coarse, rigid, stiff, hard';
 (n.) **t'yar-a* 'that which is rough, coarse, rigid, stiff, hard'; (adj.) 'rough, coarse, rigid, stiff, hard'
 Derivative of:
 (vb.) **t'yar-* 'to be or become stuck, joined, or bound together; to be firmly or strongly attached';
 (n.) **t'yar-a* 'firmness, solidity, strength'; (adj.) 'firm, solid, strong, steadfast'
282. Proto-Nostratic (n.) **t'yar-a* 'poplar tree, wood of the poplar':
 Perhaps derived from:
 (vb.) **t'yar-* 'to be or become stuck, joined, or bound together; to be firmly or strongly attached';
 (n.) **t'yar-a* 'firmness, solidity, strength'; (adj.) 'firm, solid, strong, steadfast'
283. Proto-Nostratic root **t'yar-* (~ **t'yər-*):
 (vb.) **t'yar-* 'to cut, to split';
 (n.) **t'yar-a* 'cut, split, rip, tear; damage'; (adj.) 'cut, split, ripped, torn'
284. Proto-Nostratic root **t'yar-* (~ **t'yər-*) (onomatopoeic):
 (vb.) **t'yar-* 'to make a noise';
 (n.) **t'yar-a* '(rustling or rumbling) noise'
285. Proto-Nostratic (n.) **t'yaw-a* 'bad thing, evil, wickedness'; (adj.) 'bad, evil'

286. Proto-Nostratic root **t'yij-* (\sim **t'yey-*):
 (vb.) **t'yij-* 'to think, to consider';
 (n.) **t'yij-a* 'thought, consideration, idea'
287. Proto-Nostratic root **t'yip^h-* (\sim **t'yep^h-*):
 (vb.) **t'yip^h-* 'to pinch, to nip';
 (n.) **t'yip^h-a* 'fingernail, claw'
288. Proto-Nostratic root **t'yor-*:
 (vb.) **t'yor-* 'to run, to flow';
 (n.) **t'yor-a* 'running, flowing'; (adj.) 'speedy, swift'

PROTO-NOSTRATIC **s^y*

289. Proto-Nostratic root **s^yam-* (\sim **s^yam-*):
 (vb.) **s^yam-* 'to be hot, sunny';
 (n.) **s^yam-a* 'summer'
290. Proto-Nostratic root **s^yaw-* (\sim **s^yaw-*):
 (vb.) **s^yaw-* 'to be dry, arid, withered';
 (n.) **s^yaw-a* 'dryness, dry place'; (adj.) 'dry, arid, withered'
291. Proto-Nostratic root **s^yaw-* (\sim **s^yaw-*) or **s^yew-*:
 (vb.) **s^yaw-* 'to give birth, to bring forth, to be born';
 (n.) **s^yaw-a* 'son, child'
292. Proto-Nostratic (n.) **s^yaw-a* 'wild boar'
293. Proto-Nostratic root **s^yax^w-* (\sim **s^yax^w-*):
 (vb.) **s^yax^w-* 'to be or become hot, warm; to heat up, to make hot, to warm, to burn';
 (n.) **s^yax^w-a* 'warmth, heat; sun'
294. Proto-Nostratic root **s^yen^y-*:
 (vb.) **s^yen^y-* 'to change, to deteriorate, to grow old';
 (n.) **s^yen^y-a* 'old age; old person'; (adj.) 'aged, old'
295. Proto-Nostratic (Eurasian only) (n.) **s^yil-a* 'fat, lard'
296. Proto-Nostratic root **s^yil^y-* (\sim **s^yel^y-*):
 (vb.) **s^yil^y-* 'to take (away), to seize, to snatch';
 (n.) **s^yil^y-a* 'removal, robbery, plunder'

297. Proto-Nostratic root **sʷir-* (∼ **sʷer-*):
 (vb.) **sʷir-* ‘to twist, turn, tie, or bind together’;
 (n.) **sʷir-a* ‘band, cord, any cord-like object: sinew, tendon, nerve, vein’
 Perhaps related to:
 (n.) **sʷir-a* ‘root (of tree or plant)’
298. Proto-Nostratic (n.) **sʷir-a* ‘root (of tree or plant)’
 Perhaps related to:
 (vb.) **sʷir-* ‘to twist, turn, tie, or bind together’;
 (n.) **sʷir-a* ‘band, cord, any cord-like object: sinew, tendon, nerve, vein’
299. Proto-Nostratic root **sʷol-*:
 (vb.) **sʷol-* ‘to be safe, well, sound’;
 (n.) **sʷol-a* ‘safety; health, welfare’; (adj.) ‘safe, well, sound’
300. Proto-Nostratic root **sʷor-*:
 (vb.) **sʷor-* ‘to surge, gush, flow, spring, or spread forth’;
 (n.) **sʷor-a* ‘surge, gush, flow’
301. Proto-Nostratic (n.) **sʷub-a* ‘end, edge; top, front part’
302. Proto-Nostratic root **sʷur-* (∼ **sʷor-*):
 (vb.) **sʷur-* ‘to frighten; to be or become frightened, to fear’;
 (n.) **sʷur-a* ‘fear’
303. Proto-Nostratic root **sʷuw-* (∼ **sʷow-*):
 (vb.) **sʷuw-* ‘to be proper, fitting, suitable, appropriate, good, well, fine, beautiful’;
 (n.) **sʷuw-a* ‘propriety, suitability, appropriateness’; (adj.) ‘proper, fitting, suitable, appropriate’
- Semantics as in Geez / Ethiopic *šannaya* [ሠንዖል] ‘to be beautiful, to be good, to seem good, to be well, to be fine, to be excellent, to be fitting, to be appropriate’ and its derivatives.

PROTO-NOSTRATIC *3

304. Proto-Nostratic root **3ag-* (∼ **3əg-*):
 (vb.) **3ag-* ‘to push, to shove, to drive’;
 (n.) **3ag-a* ‘push, shove, force’
 Related to:
 (vb.) **3ag-* ‘to stuff, press, or squeeze tight’;
 (n.) **3ag-a* ‘plug’; (adj.) ‘pressing, squeezing, cramming’

305. Proto-Nostratic root **zag-* (~ **ʒəg-*):
 (vb.) **zag-* ‘to stuff, press, or squeeze tight’;
 (n.) **zag-a* ‘plug’; (adj.) ‘pressing, squeezing, cramming’
 Related to:
 (vb.) **zag-* ‘to push, to shove, to drive’;
 (n.) **zag-a* ‘push, shove, force’
306. Proto-Nostratic root **zag-* (~ **ʒəg-*):
 (vb.) **zag-* ‘to whet, to sharpen’;
 (n.) **zag-a* ‘edge, side’
307. Proto-Nostratic root **zak’-* (~ **ʒək’-*):
 (vb.) **zak’-* ‘to make fun of, to deride, to mock; to make sport, to play about, to joke’;
 (n.) **zak’-a* ‘mockery, ridicule, sport’
308. Proto-Nostratic root **zar-* (~ **ʒər-*) or **žar-* (~ **žər-*):
 (vb.) **zar-* or **žar-* ‘to run, flow, leak, or spill out; to spring forth, to issue (from); to flow or gush forth’;
 (n.) **zar-a* or **žar-a* ‘drizzle, rain, downpour; current, stream, torrent’
309. Proto-Nostratic root **zer-* or **žer-*:
 (vb.) **zer-* or **žer-* ‘to pierce, to jab, to stab, to thrust or shove into’;
 (n.) **zer-a* or **žer-a* ‘spear, javelin, weapon’
310. Proto-Nostratic root **zil-* (~ **ʒel-*) or **žil-* (~ **žel-*):
 (vb.) **zil-* or **žil-* ‘to flow, to flow forth’;
 (n.) **zil-a* or **žil-a* ‘drip, drop, raindrop’; (adj.) ‘flowing, trickling, dropping, sprinkling’
 Probably identical to:
 (vb.) **zil-* or **žil-* ‘to glide, to slide’;
 (n.) **zil-a* or **žil-a* ‘the act of slipping, sliding, gliding’; (adj.) ‘smooth, slippery’
311. Proto-Nostratic root **zil-* (~ **ʒel-*) or **žil-* (~ **žel-*):
 (vb.) **zil-* or **žil-* ‘to glide, to slide’;
 (n.) **zil-a* or **žil-a* ‘the act of slipping, sliding, gliding’; (adj.) ‘smooth, slippery’
 Probably identical to:
 (vb.) **zil-* or **žil-* ‘to flow, to flow forth’;
 (n.) **zil-a* or **žil-a* ‘drip, drop, raindrop’; (adj.) ‘flowing, trickling, dropping, sprinkling’

312. Proto-Nostratic root **zim-* (~ **zem-*) or **žim-* (~ **žem-*):
 (vb.) **zim-* or **žim-* ‘to blow, to play (a wind instrument)’;
 (n.) **zim-a* or **žim-a* ‘blowing, playing (a wind instrument)’
313. Proto-Nostratic root **zum-* (~ **zom-*) or **žum-* (~ **žom-*):
 (vb.) **zum-* or **žum-* ‘to take, to seize’;
 (n.) **zum-a* or **žum-a* ‘the act of taking or seizing’; (adj.) ‘taking, seizing’
314. Proto-Nostratic (replicated) (n.) **zu3-a* (< **zu3-zu-*) ‘tip, point’ (> ‘nipple, breast’)

Note: There has been a good deal of remodeling in the Nostratic daughter languages, including Afrasian (Semitic). The original form has been best preserved in Kartvelian in Georgian and Mingrelian.

PROTO-NOSTRATIC **c^h*

315. Proto-Nostratic root **c^hag-* (~ **c^həg-*):
 (vb.) **c^hag-* ‘to prick, to pierce’;
 (n.) **c^hag-a* ‘prick, sting, rupture’
316. Proto-Nostratic root **c^haħ-* (~ **c^həħ-*):
 (vb.) **c^haħ-* ‘to crush, to pound, to grind, to beat, to bruise, to destroy’;
 (n.) **c^haħ-a* ‘the act of crushing, beating, thrashing, pounding, grinding’;
 (adj.) ‘crushing, beating, thrashing, pounding, grinding’
317. Proto-Nostratic root **c^hal-* (~ **c^həl-*):
 (vb.) **c^hal-* ‘to cut, to split, to cleave, to break off or apart’;
 (n.) **c^hal-a* ‘cut, crack, split; stroke, blow’
 Derivative:
 (n.) **c^hal-a* ‘part, piece, chip, fragment’
318. Proto-Nostratic (n.) **c^hal-a* ‘part, piece, chip, fragment’:
 Derivative of:
 (vb.) **c^hal-* ‘to cut, to split, to cleave, to break off or apart’;
 (n.) **c^hal-a* ‘cut, crack, split; stroke, blow’
319. Proto-Nostratic root **c^huk^h-* (~ **c^hok^h-*):
 (vb.) **c^huk^h-* ‘to close, to shut, to cover’;
 (n.) **c^huk^h-a* ‘closure, cover, stoppage’

PROTO-NOSTRATIC *c'

320. Proto-Nostratic root *c'al- (~ *c'əl-) or *č'al- (~ *č'əl-):
 (vb.) *c'al- or *č'al- 'to stretch out, to extend, to exceed; to be wealthy, to prosper, to do well';
 (n.) *c'al-a or *č'al-a 'wealth, prosperity, abundance'
321. Proto-Nostratic root *c'ar- (~ *c'ər-) stem indicating downward motion:
 (vb.) *c'ar- 'to slip or slide down, to fall down, to roll down, to lean or bend down, to throw down';
 (n.) *c'ar-a 'the act of slipping, sliding, falling, or rolling down';
 (particle) *c'ar- 'down'
322. Proto-Nostratic root *c'ar- (~ *c'ər-) or *č'ar- (~ *č'ər-):
 (vb.) *c'ar- or *č'ar- 'to be or become visible, clear, evident; to reveal, to make known, to make clear, to clarify';
 (n.) *c'ar-a or *č'ar-a 'visibility, clarity'; (adj.) 'visible, clear, evident'
323. Proto-Nostratic root *c'aw- (~ *c'əw-):
 (vb.) *c'aw- 'to be or become dry, withered, emaciated, lean';
 (n.) *c'aw-a 'that which is withered, dry, lean, blighted'; (adj.) 'dry, withered, lean, blighted'
 Extended form:
 (vb.) *c'aw-V-l̥- 'to be or become dry, withered, emaciated, lean';
 (adj.) *c'aw-l̥-a 'that which is withered, dry, lean, blighted'; (adj.) 'dry, withered, lean, blighted'
324. Proto-Nostratic root *c'il̥- (~ *c'el̥-):
 (vb.) *c'il̥- 'to strip off, to peel off, to pick, to pluck';
 (n.) *c'il̥-a 'peeling, picking, plucking'
325. Proto-Nostratic root *c'ir̥- (~ *c'er̥-):
 (vb.) *c'ir̥- 'to squeak, to chirp, to cheep, to peep';
 (n.) *c'ir̥-a 'a kind of bird'
326. Proto-Nostratic root *c'ur- (~ *c'or-):
 (vb.) *c'ur- 'to twist, to turn, to revolve; to press, tie, or bind together; to wrap up; to surround, to encircle, to enclose';
 (n.) *c'ur-a 'that which is tied, twisted, wrapped, or bound together: coil, wrapping, binding, loop, etc.; that which surrounds, encircles, or encloses: enclosure, wall, surroundings, circle'

PROTO-NOSTRATIC *s

327. Proto-Nostratic root *saʔ- (~ *səʔ-):
 Extended form:
 (vb.) *saʔ-V-y- ‘to sift’;
 (n.) *saʔ-y-a ‘sieve’
328. Proto-Nostratic root *sadʷ- (~ *sədʷ-):
 (vb.) *sadʷ- ‘to hear, to listen, to judge’;
 (n.) *sadʷ-a ‘hearing, judgment, condemnation, punishment’
329. Proto-Nostratic root *sag- (~ *səg-) or *šag- (~ *šəg-):
 (vb.) *sag- or *šag- ‘to reach, to arrive at, to attain, to achieve, to get, to obtain’;
 (n.) *sag-a or *šag-a ‘acquisition, attainment, victory’
330. Proto-Nostratic root *saḥ- (~ *səḥ-) or *šaḥ- (~ *šəḥ-):
 (vb.) *saḥ- or *šaḥ- ‘to examine, to consider, to try to find out, to try to understand, to think about’;
 (n.) *saḥ-a or *šaḥ-a ‘thought, idea, understanding, inquiry, examination, consideration, investigation’
331. Proto-Nostratic root *sakʰ- (~ *səkh-):
 (vb.) *sakʰ- ‘to cut, to split’;
 (n.) *sakʰ-a ‘any sharp instrument used for cutting: knife, sword, dagger, axe, etc.’
332. Proto-Nostratic root *sakʷ- (~ *səkw-):
 (vb.) *sakʷ- ‘to tie, to bind, to fasten’;
 (n.) *sakʷ-a ‘fastening, loop’
333. Proto-Nostratic root *sal- (~ *səl-):
 (vb.) *sal- ‘to go up, to lift up, to raise up’;
 (n.) *sal-a ‘ascent; height’; (adj.) ‘elevated, high, raised’
334. Proto-Nostratic root *sam- (~ *səm-):
 (vb.) *sam- ‘to resemble, to be like’;
 (n.) *sam-a ‘form, shape, appearance, likeness’; (adj.) ‘similar, alike, same’
335. Proto-Nostratic root *san- (~ *sən-) or *šan- (~ *šən-), *sin- (~ *sen-) or *šin- (~ *šen-), *sun- (~ *son-) or *šun- (~ *šon-):
 (vb.) *san- or *šan-, *sin- or *šin-, *sun- or *šun- ‘to sense, to perceive’;
 (n.) *san-a or *šan-a, *sin-a or *šin-a, *sun-a or *šun-a ‘(a) that which senses or perceives: mind, nose; (b) that which is sensed or perceived: perception, sense, feeling’

336. Proto-Nostratic (Eurasian only) (n.) **s[e]n-a* or **š[e]n-a* (the root vowel is uncertain but is probably **e*) ‘sinew, tendon’
337. Proto-Nostratic second person pronoun stem **si-* (~ **se-*) ‘you’
338. Proto-Nostratic 3rd person pronoun stem **si-* (~ **se-*) ‘he, she, it; him, her; they, them’; 3rd person possessive suffix **-si* (~ **-se*) ‘his, her, its; their’
339. Proto-Nostratic root **sig-* (~ **seg-*):
(vb.) **sig-* ‘to flow forth, to rain’;
(n.) **sig-a* ‘flowing, raining, storm’
340. Proto-Nostratic root **sih-* (~ **seh-*):
(vb.) **sih-* ‘to scatter, to strew, to cast or throw, to sprinkle (with water)’;
(n.) **sih-a* ‘the act of scattering, strewing, casting, or throwing about’; (adj.) ‘scattered, strewn, cast, or thrown about’

PROTO-NOSTRATIC **ž*

341. Proto-Nostratic root **žal-* (~ **žal-*):
(vb.) **žal-* ‘to die, to fade, to wither’;
(n.) **žal-a* ‘death’
342. Proto-Nostratic (n.) **žag^w-a* ‘a small tree, a bush or shrub’
343. Proto-Nostratic root **žah-* (~ **žah-*):
(vb.) **žah-* ‘to call (out), to cry (out)’;
(n.) **žah-a* ‘call, cry; name’
344. Proto-Nostratic root **žal-* (~ **žal-*):
(vb.) **žal-* ‘to fasten, to tie’;
(n.) **žal-a* ‘string, strap, cord’
345. Proto-Nostratic root **žaw-* (~ **žaw-*):
(vb.) **žaw-* ‘to wear out, to be used up, to cease to function’;
(n.) **žaw-a* ‘cessation, end, extinction’; (adj.) ‘worn out, used up, wasted, decrepit, old’
346. Proto-Nostratic (n.) **žem-a* ‘anything that is sour, bitter, pungent, sharp’;
(adj.) ‘sour, bitter, pungent, sharp’

PROTO-NOSTRATIC *č^h

347. Proto-Nostratic root *č^hal- (~ *č^həl-):
 (vb.) *č^hal- ‘to leave, to leave behind, to abandon, to get rid of, to empty; to set free, to release, to let go’;
 (n.) *č^hal-a ‘freedom, leisure, emptiness’; (adj.) ‘empty, abandoned, released, freed (from), at leisure’
- Semantics as in Sanskrit *ric-* and its derivatives: *ric-* ‘to empty, to evacuate, to leave, to give up, to resign; to release, to set free; to leave behind; to separate, to remove from’, *ricyáte* ‘to be emptied, to be deprived of or freed from’, *riktá-h* ‘emptied, empty, void’.
348. Proto-Nostratic root *č^han- (~ *č^hən-):
 (vb.) *č^han- ‘to bring forth, to produce, to grow, to be born’;
 (n.) *č^han-a ‘that which is brought forth, produced, grown: fruit; bringing forth: birth’
349. Proto-Nostratic root *č^heč^h-:
 (vb.) *č^heč^h- ‘to press, to squeeze, to crush’;
 (n.) *č^heč^h-a ‘the act of pressing, squeezing, crushing; that which is pressed, squeezed, crushed: crumb(s)’
350. Proto-Nostratic root *č^hok^h-:
 (vb.) *č^hok^h- ‘to bend, to twist, to turn, to wind’;
 (n.) *č^hok^h-a ‘the act of bending, twisting, turning, winding’

PROTO-NOSTRATIC *č’

351. Proto-Nostratic (n.) *č’am-a ‘reed, grass’
352. Proto-Nostratic root *č’ik’- (~ *č’ek’-):
 (vb.) *č’ik’- ‘to be small’;
 (n.) *č’ik’-a ‘small things’; (adj.) ‘small’
353. Proto-Nostratic root *č’ir- (~ *č’er-):
 (vb.) *č’ir- ‘to cut, to cut off, to cut through; to cut into, to scratch, to scrape’;
 (n.) *č’ir-a ‘that which is cut, cut off, cut into: slice, board, plank, scratch; that which cuts: knife, axe, adze’

PROTO-NOSTRATIC *š

354. Proto-Nostratic demonstrative pronoun stem *ša- (~ *šə-): ‘this, that’
355. Proto-Nostratic root *šar- (~ *šər-):
 (vb.) *šar- ‘to split, to rip apart, to tear asunder’;
 (n.) *šar-a ‘that which splits: knife’
356. Proto-Nostratic root *šaw- (~ *šəw-):
 (vb.) *šaw- ‘to drink, to swallow’;
 (n.) *šaw-a ‘drink, juice’
357. Proto-Nostratic root *šaw- (~ *šəw-):
 (vb.) *šaw- ‘to sigh, to pant, to gasp, to breathe deeply’;
 (n.) *šaw-a ‘breath, sigh’
 Related to:
 (vb.) *šaw- ‘to sleep, to rest’;
 (n.) *šaw-a ‘sleep, slumber, rest’
358. Proto-Nostratic root *šaw- (~ *šəw-):
 (vb.) *šaw- ‘to sleep, to rest’;
 (n.) *šaw-a ‘sleep, slumber, rest’
 Related to:
 (vb.) *šaw- ‘to sigh, to pant, to gasp, to breathe deeply’;
 (n.) *šaw-a ‘breath, sigh’
359. Proto-Nostratic root *šiḥ- (~ *šeḥ-):
 (vb.) *šiḥ- ‘to separate into (equal) parts, to divide’;
 (n.) *šiḥ-a ‘part, portion, separation, division, section’
360. Proto-Nostratic root *šiw- (~ *šew-):
 (vb.) *šiw- ‘to swell’;
 (n.) *šiw-a ‘swelling’; (adj.) ‘swollen, puffed up’
361. Proto-Nostratic root *šuw- (~ *šow-):
 (vb.) *šuw- ‘to be wet, moist; to make wet, to soak’;
 (n.) *šuw-a ‘liquid, moisture’; (adj.) ‘moist, wet, soaked’
 Extended form:
 (vb.) *šuw-l- ‘to be wet, moist; to make wet, to soak’;
 (n.) *šuw-l-a ‘liquid, moisture’; (adj.) ‘moist, wet, soaked’

PROTO-NOSTRATIC *g

362. Proto-Nostratic root **gaʔ-* (~ **gəʔ-*):
 (vb.) **gaʔ-* ‘to go, to leave, to depart; to leave behind, to abandon, to forsake’;
 (n.) **gaʔ-a* ‘abandonment, lack, want, need, deprivation, loss, deficit’; (adj.)
 ‘abandoned, forsaken, left behind; wanting, lacking, deprived of’
363. Proto-Nostratic (n.) **gab-a* ‘front, front part’
 Probably identical to:
 (n.) **gab-a* ‘peak, tip, top’
364. Proto-Nostratic (n.) **gab-a* ‘peak, tip, top’
 Probably identical to:
 (n.) **gab-a* ‘front, front part’
 Note also:
 (n.) **gub-a* ‘highest point, summit, top’
365. Proto-Nostratic root **gab-* (~ **gəb-*):
 (vb.) **gab-* ‘to grasp, to seize’;
 (n.) **gab-a* ‘hand, arm’
366. Proto-Nostratic root **gad-* (~ **gəd-*):
 (vb.) **gad-* ‘to be or become big, great, mighty’;
 (n.) **gad-a* ‘bigness, greatness, might’; (adj.) ‘big, great, mighty’
367. Proto-Nostratic root **gad-* (~ **gəd-*):
 (vb.) **gad-* ‘to cut, to split, to strike (with an instrument)’;
 (n.) **gad-a* ‘that which cuts: (pick)axe, saw; that which is cut, split: cut, split,
 piece, fragment, bit’
368. Proto-Nostratic (n.) **gad-a* ‘kid, young goat’
369. Proto-Nostratic root **gal-* (~ **gəl-*):
 (vb.) **gal-* ‘to cut, break, tear, or pluck off; to separate’;
 (n.) **gal-a* ‘cut, break, tear, separation’
 Derivative:
 (vb.) **gal-* ‘to dig, scoop, or hollow out’ (> ‘to plow’);
 (n.) **gal-a* ‘the act of digging, scooping, or hollowing out’
370. Proto-Nostratic root **gal-* (~ **gəl-*):
 (vb.) **gal-* ‘to dig, scoop, or hollow out’ (> ‘to plow’);
 (n.) **gal-a* ‘the act of digging, scooping, or hollowing out’
 Derivative of:
 (vb.) **gal-* ‘to cut, break, tear, or pluck off; to separate’;
 (n.) **gal-a* ‘cut, break, tear, separation’

371. Proto-Nostratic (n.) **gal-a* ‘pot, vessel’
372. Proto-Nostratic root **gal-* (∼ **gəl-*):
 (vb.) **gal-* ‘to be or become visible, clear, obvious, evident; to regard, to look at, to peer at’;
 (n.) **gal-a* ‘visibility, clarity, understanding’; (adj.) ‘clear, plain, evident’
373. Proto-Nostratic **gal-* (∼ **gəl-*):
 (vb.) **gal-* ‘to cry out, to shout, to clamor; to be noisy, boisterous’;
 (n.) **gal-a* ‘clamor, uproar, tumult, disturbance, turmoil, noise’
374. Proto-Nostratic root **gal-* (∼ **gəl-*):
 (vb.) **gal-* ‘to ache, to be in pain, to be ill, to suffer’;
 (n.) **gal-a* ‘ache, pain, disease, illness’
375. Proto-Nostratic (n.) **gal-a* ‘blemish, fault, scar, sore on the skin’
376. Proto-Nostratic root **gal-* (∼ **gəl-*):
 (vb.) **gal-* ‘to be strong, powerful; to be able’;
 (n.) **gal-a* ‘strength, power, ability’
377. Proto-Nostratic root **gam-* (∼ **gəm-*):
 (vb.) **gam-* ‘to bend, to be bent’;
 (n.) **gam-a* ‘a bent or curved object: hook; wrist, ankle; etc.’
378. Proto-Nostratic root **gam-* (∼ **gəm-*):
 (vb.) **gam-* ‘to fill (up)’;
 (n.) **gam-a* ‘plenty, surplus, abundance’
379. Proto-Nostratic (n.) **gaŋ-a* (with different extensions in the various daughter languages: **gaŋ-sʷ-* and/or **gaŋ-s-*, **gaŋ-tʷ-*, etc. and sporadic loss of *ŋ*) ‘a waterfowl, an aquatic bird: goose, duck, etc.’
380. Proto-Nostratic root **gaŋ-* (∼ **gəŋ-*):
 (vb.) **gaŋ-* ‘to bend: to bend forward; to bend back; to bend to the side’;
 (n.) **gaŋ-a* ‘side, corner, flank, edge’
381. Proto-Nostratic root **gar-* (∼ **gər-*):
 (vb.) **gar-* ‘to seize, to grasp, to take hold of’;
 (n.) **gar-a* ‘hand’
382. Proto-Nostratic root **gar-* (∼ **gər-*):
 (vb.) **gar-* ‘to cut, to split’;
 (n.) **gar-a* ‘cut, injury; that which cuts: (pick)axe’; (adj.) ‘cut, separated, shortened’

383. Proto-Nostratic root **gar-* (\sim **gər-*):
 (vb.) **gar-* ‘to scratch, to scrape’;
 (n.) **gar-a* ‘that which scratches, scrapes: spade, rake’
 Derivative:
 (n.) **gar-b-a* ‘itch, scab, sore’
384. Proto-Nostratic (n.) **gar-b-a* ‘itch, scab, sore’:
 Derivative of:
 (vb.) **gar-* ‘to scratch, to scrape’;
 (n.) **gar-a* ‘that which scratches, scrapes: spade, rake’
385. Proto-Nostratic root **garʷ-* (\sim **gərʷ-*):
 (vb.) **garʷ-* ‘to swell, to increase, to grow’;
 (n.) **garʷ-a* ‘swelling, increase, growth; great quantity, abundance, excess’
 Identical to:
 (vb.) **garʷ-* ‘to stick out, to stand out, to jut out, to project, to protrude; to be or become erect, rigid, stiff’;
 (n.) **garʷ-* ‘tip, point, peak’
386. Proto-Nostratic root **garʷ-* (\sim **gərʷ-*):
 (vb.) **garʷ-* ‘to stick out, to stand out, to jut out, to project, to protrude; to be or become erect, rigid, stiff’;
 (n.) **garʷ-* ‘tip, point, peak’
 Identical to:
 (vb.) **garʷ-* ‘to swell, to increase, to grow’;
 (n.) **garʷ-a* ‘swelling, increase, growth; great quantity, abundance, excess’
387. Proto-Nostratic root **gasʷ-* (\sim **gəsʷ-*):
 (vb.) **gasʷ-* ‘to touch, to feel, to handle’;
 (n.) **gasʷ-a* ‘hand’
388. Proto-Nostratic root **gat-* (\sim **gət-*):
 (vb.) **gat-* ‘to take (with the hand), to grasp’;
 (n.) **gat-a* ‘hand’
389. Proto-Nostratic (n.) **gen-a* ‘jaw, cheek’
390. Proto-Nostratic (n.) **g[e]n-d-a* ‘virility, strength; a male (human or animal)’
391. Proto-Nostratic pronominal base of unclear deictic function **gi-* (\sim **ge-*)
392. Proto-Nostratic root **gib-* (\sim **geb-*):
 (vb.) **gib-* ‘to bestow upon, to give’;
 (n.) **gib-a* ‘gift’

393. Proto-Nostratic root **gid-* (~ **ged-*) or **gid-* (~ **ged-*):
 (vb.) **gid-* or **gid-* ‘to force, drive, or press together; to join; to unite; to gather (together); to collect’;
 (n.) **gid-a* or **gid-a* ‘force, compulsion; collection, heap; union’; (adj.) ‘pressed close together, near, united’
394. Proto-Nostratic root **gil-* (~ **gel-*):
 (vb.) **gil-* ‘to glide, to slip, to slide’;
 (n.) **gil-a* ‘gliding, sliding’; (adj.) ‘smooth, slippery’
395. Proto-Nostratic root **gil-* (~ **gel-*):
 (vb.) **gil-* ‘to freeze’;
 (n.) **gil-a* ‘ice’
396. Proto-Nostratic root **gin-* (~ **gen-*) or **gin-* (~ **gen-*):
 (vb.) **gin-* or **gin-* ‘to be young, small, weak’;
 (n.) **gin-a* or **gin-a* ‘youth, young one’; (adj.) ‘young, small, weak’
397. Proto-Nostratic root **gin-* (~ **gen-*):
 (vb.) **gin-* ‘to grind, to pound, to break or crush into pieces’;
 (n.) **gin-a* ‘the act of grinding, pounding, crushing’
398. Proto-Nostratic root **gir-* (~ **ger-*):
 (vb.) **gir-* ‘to gird, to enclose’;
 (n.) **gir-a* ‘enclosure, fence, wall’
399. Proto-Nostratic root **gir^y-* (~ **ger^y-*):
 (vb.) **gir^y-* ‘to be or become old’;
 (n.) **gir^y-a* ‘old age, old person’; (adj.) ‘old’
400. Proto-Nostratic root **gir^y-* (~ **ger^y-*) or **gir^y-* (~ **ger^y-*):
 (vb.) **gir^y-* or **gir^y-* ‘to move, to move swiftly, to hasten, to hurry; to run, to flow; to go, to walk’;
 (n.) **gir^y-a* or **gir^y-a* ‘movement, flow, flux, step, course’
401. Proto-Nostratic (n.) **gol-a* ‘edge, corner, valley’
402. Proto-Nostratic (n.) **gub-a* ‘highest point, summit, top’
 Note also:
 (n.) **gab-a* ‘peak, tip, top’
403. Proto-Nostratic root **gub-* (~ **gob-*):
 (vb.) **gub-* ‘to cook, to roast, to burn’;
 (n.) **gub-a* ‘the act of cooking; that which is used for cooking: pot, pan; stove, furnace’

404. Proto-Nostratic root **gud-* (~ **god-*):
 (vb.) **gud-* ‘to throw, to toss, to shake’;
 (n.) **gud-a* ‘that which is thrown or tossed off or aside: rubbish, refuse, cast-out things’
405. Proto-Nostratic (n.) **gul-a* (~ **gol-a*) ‘enclosed space’
406. Proto-Nostratic root **gun-* (~ **gon-*):
 (vb.) **gun-* ‘to perceive, to notice’;
 (n.) **gun-a* ‘notice, memory, mind, perception, remembrance, recollection’
407. Proto-Nostratic root (Eurasianic only) **gup^h-* (~ **gop^h-*):
 (vb.) **gup^h-* ‘to extinguish; to be extinguished, to die out, to perish’;
 (n.) **gup^h-a* ‘loss, destruction’
408. Proto-Nostratic root **gur-* (onomatopoeic):
 (vb.) **gur-* ‘to rumble, to roar, to growl, to gurgle’;
 (n.) **gur-a* ‘rumbling, roaring, gurgling, growling noise or sound’
409. Proto-Nostratic (Eurasianic only) (n.) **gur-a* ‘gut, cord’
410. Proto-Nostratic root **gus-* (~ **gos-*):
 (vb.) **gus-* ‘to go outside of or forth from; to make to go outside or forth from, to drive away, to chase away’;
 (n.) **gus-a* ‘outsider, stranger’
411. Proto-Nostratic root **guw-* (~ **gow-*):
 (vb.) **guw-* ‘to observe, to notice, to watch, to pay attention to, to heed, to be or become aware of’;
 (n.) **guw-a* ‘observation, heed, awareness, attention, notice’
412. Proto-Nostratic root **guw-* (~ **gow-*):
 (vb.) **guw-* ‘to hunt wild animals’;
 (n.) **guw-a* ‘wild animal, wild beast, game’; (adj.) ‘wild, untamed’
 Extended form:
 (vb.) **guw-V-r-* ‘to hunt wild animals’;
 (n.) **guw-r-a* ‘wild animal, wild beast, game’; (adj.) ‘wild, untamed’

Notes:

1. The unextended stem is preserved in Egyptian.
2. The Afrasian (Cushitic and Chadic) and Indo-European forms are deverbatives: **guw-V-r-*.

PROTO-NOSTRATIC *k^h

413. Proto-Nostratic 1st person pronoun stem (stative) *k^ha-
414. Proto-Nostratic demonstrative pronoun stem:
 Proximate: *k^ha- (~ *k^hə-) ‘this’;
 Intermediate: *k^hi- (~ *k^he-) ‘that’;
 Distant: *k^hu- (~ *k^ho-) ‘that yonder’
415. Proto-Nostratic (n.) *k^hab-a ‘he-goat, male sheep, buck, ram’
416. Proto-Nostratic (n.) *k^hab-a ‘foot, hoof’
417. Proto-Nostratic root *k^had- (~ *k^həd-):
 (vb.) *k^had- ‘to cover, to wrap, to clothe’;
 (n.) *k^had-a ‘covering, shield, protection’
 Perhaps identical to:
 (vb.) *k^had- ‘to tie, to bind’;
 (n.) *k^had-a ‘tie, band, fastening’
418. Proto-Nostratic root *k^had- (~ *k^həd-):
 (vb.) *k^had- ‘to tie, to bind’;
 (n.) *k^had-a ‘tie, band, fastening’
 Perhaps identical to:
 (vb.) *k^had- ‘to cover, to wrap, to clothe’;
 (n.) *k^had-a ‘covering, shield, protection’
419. Proto-Nostratic (n.) *k^hal-a ‘female in-law’
 Note also:
 (n.) *k^hel-a ‘female in-law’
420. Proto-Nostratic root *k^hal- (~ *k^həl-):
 (vb.) *k^hal- ‘to make a noise, to sound; to call out, to shout’;
 (n.) *k^hal-a ‘noise, sound’
421. Proto-Nostratic root *k^hal- (~ *k^həl-):
 (vb.) *k^hal- ‘to guard, to hold (back), to watch’;
 (n.) *k^hal-a ‘protection, care, support; restraint, detention, custody, hold’
422. Proto-Nostratic root *k^hal- (~ *k^həl-):
 (vb.) *k^hal- ‘to point out, to make clear, to make known, to disclose, to explain’;
 (n.) *k^hal-a ‘study, learning; investigation, explanation, clarification’
423. Proto-Nostratic (n.) *k^halʷ-a ‘reed, stalk, stem, blade of grass, haulm’

424. Proto-Nostratic root **k^halʷ-* (~ **k^həʷ-*):
 (vb.) **k^halʷ-* ‘to rob, to steal, to hide’;
 (n.) **k^halʷ-a* ‘theft’
425. Proto-Nostratic root **k^ham-* (~ **k^həm-*) or **q^ham-* (~ **q^həm-*):
 (vb.) **k^ham-* or **q^ham-* ‘to seize, to grasp, to grip, to clutch’;
 (n.) **k^ham-a* or **q^ham-a* ‘grip, hold, hand(ful); bond, fetter’
426. Proto-Nostratic root **k^ham-* (~ **k^həm-*):
 (vb.) **k^ham-* ‘to work, to labor, to toil; to do, to make’;
 (n.) **k^ham-a* ‘work, labor, toil’
427. Proto-Nostratic root **k^ham-* (~ **k^həm-*):
 (vb.) **k^ham-* ‘to gather together, to collect’; (adv.) ‘together, along with’;
 (n.) **k^ham-a* ‘collection, assemblage, gathering’
428. Proto-Nostratic (n.) **k^hanʷ-a* ‘stem, stalk, stick’
429. Proto-Nostratic (n.) **k^hanʷ-a* ~ **k^hinʷ-a* ~ **k^hunʷ-a* ‘bee, honey’
430. Proto-Nostratic root **k^haŋ-* (~ **k^həŋ-*):
 (vb.) **k^haŋ-* ‘to make a noise, to sound’;
 (n.) **k^haŋ-a* ‘noise, (ringing or tinkling) sound’
431. Proto-Nostratic root **k^hap^h-*:
 (vb.) **k^hap^h-* ‘to take, seize, or grasp with the hand; to press or squeeze with the hand’;
 (n.) **k^hap^h-a* ‘hand’
432. Proto-Nostratic (n.) **k^hap^h-a* ‘bowl, cup, jar, container; skull’
433. Proto-Nostratic root **k^hap’-* (~ **k^həp’-*):
 (vb.) **k^hap’-* ‘to buy; to pay back’;
 (n.) **k^hap’-a* ‘recompense, tribute, pay-back’
434. Proto-Nostratic root **k^har-* (~ **k^hər-*):
 (vb.) **k^har-* ‘to cut, to cut into, to cut off’;
 (n.) **k^har-a* ‘cut, incision’
 Derivative:
 (n.) **k^har-a* ‘skin, hide; bark, rind’
435. Proto-Nostratic (n.) **k^har-a* ‘skin, hide; bark, rind’:
 Derivative of:
 (vb.) **k^har-* ‘to cut, to cut into, to cut off’;
 (n.) **k^har-a* ‘cut, incision’

436. Proto-Nostratic root **khar-* (\sim **khar-*):
 (vb.) **khar-* ‘to twist, turn, spin, or wind around’;
 (n.) **khar-a* ‘ring, circle, curve’; (adj.) ‘round, curved, twisted’
 Possible derivative:
 (n.) **khar-a* ‘edge, side, bank’
437. Proto-Nostratic (n.) **khar-a* ‘edge, side, bank’
 Perhaps a derivative of:
 (vb.) **khar-* ‘to twist, turn, spin, or wind around’;
 (n.) **khar-a* ‘ring, circle, curve’; (adj.) ‘round, curved, twisted’
438. Proto-Nostratic (n.) **khar-a* ‘hardness, strength, firmness, fortitude’; (adj.) ‘hard, strong, firm’
 Identical to:
 (n.) **khar-a* ‘roughness, coarseness’; (adj.) ‘rough, coarse’
439. Proto-Nostratic (n.) **khar-a* ‘roughness, coarseness’; (adj.) ‘rough, coarse’
 Identical to:
 (n.) **khar-a* ‘hardness, strength, firmness, fortitude’; (adj.) ‘hard, strong, firm’
 Derivative:
 (n.) **khar-a* ‘bitterness, pungency, harshness’; (adj.) ‘bitter, pungent, harsh, sharp, caustic, hot (of taste), acrid’
440. Proto-Nostratic (n.) **khar-a* ‘bitterness, pungency, harshness’; (adj.) ‘bitter, pungent, harsh, sharp, caustic, hot (of taste), acrid’
 Derivative of:
 (n.) **khar-a* ‘roughness, coarseness’; (adj.) ‘rough, coarse’
441. Proto-Nostratic (n.) **khar-a* ‘blackness, darkness’; (adj.) ‘black, dark’
442. Proto-Nostratic (n.) **khar-a* ‘heart, core, essence’
443. Proto-Nostratic root **khas-* (\sim **khas-*):
 (vb.) **khas-* ‘to cut or break off, to divide, to separate’;
 (n.) **khas-a* ‘cut, separation, division, break; cutting, clipping, fragment, piece, bit’
444. Proto-Nostratic root **kath-* (\sim **kath-*):
 (vb.) **kath-* ‘to plait, to weave, to twist’;
 (n.) **kath-a* ‘that which is plaited, woven, twisted: mat, net, knot’
 Derivative:
 (n.) **kath-a* ‘rag, cloth’

445. Proto-Nostratic (n.) **kʰatʰ-a* ‘rag, cloth’:
 Derivative of:
 (vb.) **kʰatʰ-* ‘to plait, to weave, to twist’;
 (n.) **kʰatʰ-a* ‘that which is plaited, woven, twisted: mat, net, knot’
446. Proto-Nostratic root **kʰatʰ-*:
 (vb.) **kʰatʰ-* ‘to fall down, to set down, to drop down’;
 (n.) **kʰatʰ-a* ‘lower part, lower place, lower thing’; (adj.) ‘lower, inferior’;
 (particle) **kʰatʰ-* ‘down’
447. Proto-Nostratic root **kʰatʰ-*:
 (vb.) **kʰatʰ-* ‘to make a harsh, shrill screech or sound: to cackle, to caw, to screech, to cry, to yelp’;
 (n.) **kʰatʰ-a* ‘cackling, cawing, screeching, crying, yelping’; (adj.) ‘harsh, shrill, sharp, piercing (of sounds)’
448. Proto-Nostratic root **kʰaw-* (*~ *kʰəw-*):
 (vb.) **kʰaw-* ‘to swell, to expand, to inflate, to grow, to increase’;
 (n.) **kʰaw-a* ‘accumulation, inflation, expansion, growth; heap, pile; height’
449. Proto-Nostratic (n.) **kʰay-a* ‘solitude, loneliness, separateness’; (adj.) ‘alone’
 Extended form (Afrasian and Indo-European):
 (n.) **kʰay-w-a* ‘solitude, loneliness, separateness’; (adj.) ‘alone’
450. Proto-Nostratic root **kʰay-* (*~ *kʰəy-*):
 (vb.) **kʰay-* ‘to put, to place, to set, to lay; to be placed, to lie’;
 (n.) **kʰay-a* ‘resting place, abode, dwelling; cot, bed’
451. Proto-Nostratic root **kʰay-* (*~ *kʰəy-*):
 (vb.) **kʰay-* ‘to be or become warm or hot; to make warm, to heat’;
 (n.) **kʰay-a* ‘heat’
452. Proto-Nostratic root **kʰay-*:
 (vb.) **kʰay-* ‘to scoop out’;
 (n.) **kʰay-a* ‘spoon, ladle’
 Extended form:
 (vb.) **kʰay-V-w-* ‘to dig’;
 (n.) **kʰay-w-a* ‘cave, pit, hollow’
453. Proto-Nostratic root **kʰil-* (*~ *kʰel-*):
 (vb.) **kʰil-* ‘to make a sound or a noise; to say, to speak, to talk’;
 (n.) **kʰil-a* ‘sound, noise; tongue, speech, language’

454. Proto-Nostratic root **k^hilʷ-* (~ **k^helʷ-*):
 (vb.) **k^hilʷ-* ‘to rise, to ascend, to lift up’;
 (n.) **k^hilʷ-a* ‘hill, height’; (adj.) ‘raised, high’
455. Proto-Nostratic (n.) **k^hir-a* ‘uppermost part (of anything): horn, head, skull, crown of head; tip, top, summit, peak’
456. Proto-Nostratic root **k^hir-* (~ **k^her-*):
 (vb.) **k^hir-* ‘to freeze, to be cold’;
 (n.) **k^hir-a* ‘frost, cold’
457. Proto-Nostratic (n.) **k^hiʷ-a* ‘stone’
458. Proto-Nostratic root **k^holʷ-*:
 (vb.) **k^holʷ-* ‘to tie, bind, fasten, fit, combine, or join two things together; to couple, to pair’;
 (n.) **k^holʷ-a* ‘any combination of two things: couple, pair’
459. Proto-Nostratic roots **k^hon-k’-*, **k^hok’-*:
 (vb.) **k^hon-V-k’-*, **k^hok’-* ‘to be bent, curved, crooked’;
 (n.) **k^hon-k’-a*, **k^hok’-a* ‘hook, clasp’; (adj.) ‘bent, curved, crooked’
460. Proto-Nostratic root **k^hul-* (~ **k^hol-*):
 (vb.) **k^hul-* ‘to hear, to listen’;
 (n.) **k^hul-a* ‘renown, fame; ear’
 Possible derivative:
 (vb.) **k^hul-* ‘to tell’;
 (n.) **k^hul-a* ‘story, tale’
461. Proto-Nostratic root **k^hul-* (~ **k^hol-*):
 (vb.) **k^hul-* ‘to tell’;
 (n.) **k^hul-a* ‘story, tale’
 Perhaps a derivative of:
 (vb.) **k^hul-* ‘to hear, to listen’;
 (n.) **k^hul-a* ‘renown, fame; ear’
- Assuming semantic development as in Greek κλέω ‘to tell of, to make famous, to celebrate’; or Pāli (causative) *sāvēti* (also *suṇāpēti*) ‘to cause to hear, to tell, to declare, to announce’ (*suṇāti* ‘to hear’); or Romany (Palestinian) *snaúār* ‘to inform’ — all ultimately from Proto-Indo-European **k^hl-eʷ-/k^hl-ow-/k^hl-u-* ‘to hear’.
462. Proto-Nostratic root **k^hum-*:
 (vb.) **k^hum-* ‘to heap up, to pile up, to accumulate’;
 (n.) **k^hum-a* ‘large amount, accumulation, heap; crowd, multitude’

463. Proto-Nostratic (n.) **k^hum-a* ‘man, male; penis’
464. Proto-Nostratic root **k^hum-* (*~ *k^hom-*):
 (vb.) **k^hum-* ‘to char, to blacken; to burn, to smolder; to be or become hot’;
 (n.) **k^hum-a* ‘(hot or smoldering) ashes, embers, charcoal; heat, warmth’;
 (adj.) ‘warm, hot; glowing, smoldering; black’
465. Proto-Nostratic (n.) **k^hur-a* ‘blood’
466. Proto-Nostratic (n.) **k^huwan-a* or **k^hun-a* originally a generic term meaning ‘young (especially of animals)’; later specialized as ‘young dog, puppy’ (as in Kannāḍa and Kolami within Dravidian) and then simply ‘dog’

Note: This term may be an early borrowing.

PROTO-NOSTRATIC **k’*

467. Proto-Nostratic root **k’ab-* (*~ *k’əb-*):
 (vb.) **k’ab-* ‘to seize, to take hold of; to seize with the teeth, to bite’;
 (n.) **k’ab-a* ‘seizure, grasp, grip, hold; bite’
468. Proto-Nostratic root **k’ac^h-* (*~ *k’əc^h-*):
 (vb.) **k’ac^h-* ‘to labor, to strain; to become fatigued, exhausted, wearied (from straining, laboring)’;
 (n.) **k’ac^h-a* ‘trouble, difficulty, pain, strain’
469. Proto-Nostratic root **k’ac^h-* (*~ *k’əc^h-*):
 (vb.) **k’ac^h-* ‘to put, join, fasten, wrap, fold, or tie together’;
 (n.) **k’ac^h-a* ‘tie, band, knot, fastening, wrapping’
470. Proto-Nostratic root **k’ad-* (*~ *k’əd-*):
 (vb.) **k’ad-* ‘to tie, to fasten; to build, to construct’;
 (n.) **k’ad-a* ‘tie, band, fastening’
471. Proto-Nostratic root **k’ak’-* (onomatopoeic):
 (vb.) **k’ak’-* ‘to cackle, to chatter’;
 (n.) **k’ak’-a* ‘crackling sound’
 Derivative:
 (n.) **k’ak’-a* (onomatopoeic bird name) ‘partridge’
472. Proto-Nostratic (n.) **k’ak’-a* (onomatopoeic bird name) ‘partridge’
 Derivative of:
 (vb.) **k’ak’-* ‘to cackle, to chatter’;
 (n.) **k’ak’-a* ‘crackling sound’

473. Proto-Nostratic root **k'al-* (~ **k'əl-*):
 (vb.) **k'al-* 'to feed, to nourish';
 (n.) **k'al-a* 'nourishment, sustenance, nutriment'
474. Proto-Nostratic (n.) **k'al-a* 'stone, rock'
475. Proto-Nostratic root **k'al-* (~ **k'əl-*):
 (vb.) **k'al-* 'to take away, to remove, to deprive of; to decrease, to diminish, to reduce; to be or become reduced or diminished';
 (n.) **k'al-a* 'littleness, small quantity, scarcity; few things; lack, want, poverty, deficiency, insufficiency'; (adj.) 'little, scanty, sparse, meager, insufficient, lacking, short of, wanting, needy'
476. Proto-Nostratic root **k'al-* (~ **k'əl-*):
 (vb.) **k'al-* 'to burn, to warm, to cook, to roast';
 (n.) **k'al-a* 'cooking, roasting, baking; glowing embers'
477. Proto-Nostratic root **k'al-* (~ **k'əl-*):
 (vb.) **k'al-* 'to move, to tremble, to shake, to agitate, to stir, to mix';
 (n.) **k'al-a* 'agitation, trembling, perturbation, distress, confusion, uneasiness, disturbance'
478. Proto-Nostratic root **k'al-* (~ **k'əl-*):
 (vb.) **k'al-* 'to come into being, to be born';
 (n.) **k'al-a* 'existence, presence, appearance, birth'
479. Proto-Nostratic root **k'alʷ-* (~ **k'əlʷ-*):
 (vb.) **k'alʷ-* 'to separate, to remove, to strip off or away: to pluck, tear, or pull off or out';
 (n.) **k'alʷ-a* 'separation, removal, stripping off or away, etc.'
 Derivative:
 (n.) **k'alʷ-a* 'bald spot'; (adj.) 'bald, bare'
480. Proto-Nostratic (Eurasian only) (n.) **k'alʷ-a* 'bald spot'; (adj.) 'bald, bare'
 Derivative of:
 (vb.) **k'alʷ-* 'to separate, to remove, to strip off or away: to pluck, tear, or pull off or out';
 (n.) **k'alʷ-a* 'separation, removal, stripping off or away, etc.'
481. Proto-Nostratic root **k'an-* (~ **k'ən-*):
 (vb.) **k'an-* 'to get, to acquire, to create, to produce, to beget';
 (n.) **k'an-a* 'birth, offspring, child, young, produce'; (adj.) 'born, begotten, produced'
482. Proto-Nostratic (n.) **k'an-a* 'jaw, cheek'

483. Proto-Nostratic (n.) **k'an-a* 'thickness, density, fatness, abundance'; (adj.) 'thick, dense, fat, abundant, much'
484. Proto-Nostratic root **k'an-* (\sim **k'an-*):
 (vb.) **k'an-* 'to pound, to beat, to strike';
 (n.) **k'an-a* 'knock, strike, cuff, thump; mallet, club, cudgel, truncheon'
485. Proto-Nostratic root **k'aŋ-* (\sim **k'aŋ-*):
 (vb.) **k'aŋ-* 'to bend, twist, turn, or tie together';
 (n.) **k'aŋ-a* 'wreath, rope, cord, fiber, tie, band, string'
 Derivative:
 (n.) **k'aŋ-a* 'knot, knob, joint'
486. Proto-Nostratic (n.) **k'aŋ-a* 'knot, knob, joint'
 Derivative of:
 (vb.) **k'aŋ-* 'to bend, twist, turn, or tie together';
 (n.) **k'aŋ-a* 'wreath, rope, cord, fiber, tie, band, string'
487. Proto-Nostratic root **k'anʷ-* (\sim **k'anʷ-*):
 (vb.) **k'anʷ-* 'to observe, to perceive';
 (n.) **k'anʷ-a* 'the act of observing, perceiving; that which observes, perceives: eye; perception, observation, recognition, comprehension'
488. Proto-Nostratic (n.) **k'aph-a* and/or **k'eph-a* 'jaw, jawbone'
- Note: The Altaic cognates seem to point to Proto-Nostratic **k'eph-a*, while the Indo-European cognates can be derived from either **k'aph-a* or **k'eph-a*.
489. Proto-Nostratic (n.) **k'aph-a* 'nape of the neck, back of the head'
490. Proto-Nostratic root **k'aph-* (\sim **k'aph-*):
 (vb.) **k'aph-* 'to cover; to shut, to close';
 (n.) **k'aph-a* 'covering'
491. Proto-Nostratic root **k'ar-* (\sim **k'ar-*):
 (vb.) **k'ar-* 'to shout, to screech, to call (out to), to cry (out)';
 (n.) **k'ar-a* 'call, cry, invocation, proclamation; roar, lamentation'
492. Proto-Nostratic (n.) **k'ar-a* 'blackness, darkness, obscurity; dark cloud, rainy weather; dirt, grime'; (adj.) 'dark, dark-colored; dirty, soiled'
493. Proto-Nostratic root **k'ar-* (\sim **k'ar-*):
 (vb.) **k'ar-* 'to twist, to turn, to bend, to wind; to tie (together), to bind';
 (n.) **k'ar-a* 'that which is tied or bound together: bunch, bundle'; (adj.) 'bent, curved, crooked; tied, bound'

Possible derivative:

(n.) **k'ar-a* 'protuberance, lump, hump, breast'

494. Proto-Nostratic (n.) **k'ar-a* 'protuberance, lump, hump, breast':
Possibly derived from (in the sense 'curved shape, swelling'):
(vb.) **k'ar-* 'to twist, to turn, to bend, to wind; to tie (together), to bind';
(n.) **k'ar-a* 'that which is tied or bound together: bunch, bundle'; (adj.) 'bent, curved, crooked; tied, bound'
495. Proto-Nostratic root **k'atʰ-* (~ **k'əʔʰ-*):
(vb.) **k'atʰ-* 'to add, join, bring, come, gather, or mix together';
(n.) **k'atʰ-a* 'blend, mixture, conglomeration, gathering'
496. Proto-Nostratic root **k'aw-* (~ **k'əw-*):
(vb.) **k'aw-* 'to bend, twist, curve, or turn round; to rotate';
(n.) **k'aw-a* 'any round object'; (adj.) 'bent, curved, round'
497. Proto-Nostratic root **k'aw-* (~ **k'əw-*):
(vb.) **k'aw-* 'to take, to seize, to grasp, to hold';
(n.) **k'aw-a* 'hand'
498. Proto-Nostratic (Eurasian only) (n.) **k'el-a* 'female in-law: husband's sister, sister-in-law; daughter-in-law'
Note also:
(n.) **kʰal-a* 'female in-law'
499. Proto-Nostratic (n.) **k'enʷ-a* 'knot, joint'
500. Proto-Nostratic root **k'ep'-*:
(vb.) **k'ep'-* 'to cut, chop, split, or break into small pieces; to munch, to chew';
(n.) **k'ep'-a* 'the act of cutting, chopping, splitting, or breaking into small pieces, the act of mincing; chewing (the cud), rumination'
501. Proto-Nostratic root (Eurasian only) **k'er-*:
(vb.) **k'er-* 'to decay, to wear out, to wither, to waste away, to become old';
(n.) **k'er-a* 'old age, old person'; (adj.) 'decayed, worn out, withered, wasted, old'
502. Proto-Nostratic root **k'er-*:
(vb.) **k'er-* 'to gather, to collect; to take a handful, to pick, to pluck';
(n.) **k'er-a* 'collection, gathering, handful'

503. Proto-Nostratic root **k'ir-* (*~ *k'er-*) or **k'ur-* (*~ *k'or-*):
 (vb.) **k'ir-* or **k'ur-* 'to cut, to cut into, to incise, to engrave, to notch; to cut off, to sever, to nip off, to clip; to cut in two, to split';
 (n.) **k'ir-a* or **k'ur-a* 'cut, slit, notch; chip, piece cut off'
504. Proto-Nostratic (Eurasianic only) (n.) **k'om-a* 'hand, fist'
 Perhaps related to:
 (vb.) **k'um-* 'to seize, to grasp, to press together';
 (n.) **k'um-a* 'heap, mass, lump, clump; pressure, compression'
505. Proto-Nostratic (n.) **k'or-a* or **k'ar-a* 'crane'
506. Proto-Nostratic (n.) **k'os-a* 'bone'
507. Proto-Nostratic root **k'ud-* (*~ *k'od-*):
 (vb.) **k'ud-* 'to strike';
 (n.) **k'ud-a* 'stroke, blow, knock, cuff, thump'
508. Proto-Nostratic (n.) **k'ud-a* (*~ *k'od-a*) 'vessel, pot'
509. Proto-Nostratic (n.) **k'ug-n-a* (*~ *k'og-n-a*) 'gnat, mosquito'
510. Proto-Nostratic root **k'ul-* (*~ *k'ol-*):
 (vb.) **k'ul-* 'to lift, to raise, to pick up; to rise, to ascend; to make high, to elevate';
 (n.) **k'ul-a* 'highest point'
511. Proto-Nostratic root **k'ulv-* (*~ *k'olv-*):
 (vb.) **k'ulv-* 'to be or become cold; to freeze';
 (n.) **k'ulv-a* 'cold, coldness, chill, frost'
512. Proto-Nostratic root **k'um-* (*~ *k'om-*):
 (vb.) **k'um-* 'to sigh, to weep, to lament, to moan, to groan';
 (n.) **k'um-a* 'sigh, mourning, lamentation, moan, groan, roar, grumble'
513. Proto-Nostratic root **k'um-* (*~ *k'om-*):
 (vb.) **k'um-* 'to seize, to grasp, to press together';
 (n.) **k'um-a* 'heap, mass, lump, clump; pressure, compression'
 Perhaps related to:
 (n.) **k'om-a* 'hand, fist'
514. Proto-Nostratic root **k'um-* (*~ *k'om-*):
 (vb.) **k'um-* 'to bend, to curve; to bend the head or body, to bow or stoop down';
 (n.) **k'um-a* 'bend, curve; the act of bending, bowing, stooping'

Identical to:

(n.) **k'um-a* 'a bent or curved object: hollow, cavity; knob, lump, hump; etc.'

515. Proto-Nostratic (n.) **k'um-a* 'a bent or curved object: hollow, cavity; knob, lump, hump; etc.':

Identical to:

(vb.) **k'um-* 'to bend, to curve; to bend the head or body, to bow or stoop down';

(n.) **k'um-a* 'bend, curve; the act of bending, bowing, stooping'

516. Proto-Nostratic root **k'un-* (~ **k'on-*):

(vb.) **k'un-* 'to bend; to bend or fold together; to tie or bind together';

(n.) **k'un-a* 'that which is bent, folded, crooked, curved, hooked: bend, fold, curve, curvature, angle, wrinkle'

517. Proto-Nostratic (n.) **k'uŋ-a* 'buttocks, rump, anus'

518. Proto-Nostratic (n.) **k'ut'-a* 'shortness, smallness'; (adj.) 'short, small'

PROTO-NOSTRATIC **g^w*

519. Proto-Nostratic (n.) **g^wal-a* 'snake'

520. Proto-Nostratic root **g^wan-* (~ **g^wən-*):

(vb.) **g^wan-* 'to hit, to strike, to slay, to kill, to wound, to harm, to injure';

(n.) **g^wan-a* 'strike, harm, injury'

521. Proto-Nostratic root **g^wan-* (~ **g^wən-*):

(vb.) **g^wan-* 'to swell, to abound';

(n.) **g^wan-a* 'swelling, abundance, large quantity, prosperity'

522. Proto-Nostratic root **g^war-* (~ **g^wər-*):

(vb.) **g^war-* 'to turn, to twist, to wind, to wrap, to roll';

(n.) **g^war-a* 'any round or circular object'; (adj.) 'rolling, round, bent, twisted, turned'

523. Proto-Nostratic root **g^wir-* (~ **g^wer-*):

(vb.) **g^wir-* 'to be or become hot, to warm';

(n.) **g^wir-a* 'heat, fire'

PROTO-NOSTRATIC *k^{wh}

524. Proto-Nostratic post-positional intensifying and conjoining particle *k^{wh}a- (~ *k^{wh}ə-)
525. Proto-Nostratic root *k^{wh}al- (~ *k^{wh}əl-):
 (vb.) *k^{wh}al- ‘to go, to walk, to move about’;
 (n.) *k^{wh}al-a ‘walking, walk, wandering, roaming’
 Probably identical to:
 (vb.) *k^{wh}al- ‘to revolve, to go around, to roll’;
 (n.) *k^{wh}al-a ‘circle, circuit’
526. Proto-Nostratic root *k^{wh}al- (~ *k^{wh}əl-):
 (vb.) *k^{wh}al- ‘to revolve, to go around, to roll’;
 (n.) *k^{wh}al-a ‘circle, circuit’
 Probably identical to:
 (vb.) *k^{wh}al- ‘to go, to walk, to move about’;
 (n.) *k^{wh}al-a ‘walking, walk, wandering, roaming’
 Derivative:
 (n.) *k^{wh}al-a ‘that which turns, rolls, revolves, or goes round and round’ (> ‘wheel’ in the daughter languages)
527. Proto-Nostratic (n.) *k^{wh}al-a ‘that which turns, rolls, revolves, or goes round and round’ (> ‘wheel’ in the daughter languages)
 Derivative of:
 (vb.) *k^{wh}al- ‘to revolve, to go around, to roll’;
 (n.) *k^{wh}al-a ‘circle, circuit’
528. Proto-Nostratic root *k^{wh}al- (~ *k^{wh}əl-):
 (vb.) *k^{wh}al- ‘to end, to come to an end; to bring to an end, to complete, to finish’;
 (n.) *k^{wh}al-a ‘end, finish, completion, fulfillment’
529. Proto-Nostratic (Eurasianic only) (adv.) (?) *k^{wh}al- ‘far off, far away, distant’
530. Proto-Nostratic (n.) *k^{wh}al-a ‘a large fish’
- Note: The Indo-European evidence requires the reconstruction of a Proto-Nostratic initial labiovelar */k^{wh}l-.
531. Proto-Nostratic (n.) *k^{wh}al-a ‘dog’
 Extended form:
 (n.) *k^{wh}al-p’-a ‘dog’

532. Proto-Nostratic root **k^{wh}ar-* (\sim **k^{wh}ar-*):
 (vb.) **k^{wh}ar-* ‘to cut’;
 (n.) **k^{wh}ar-a* ‘piece cut off; knife’
 Derivatives:
 (vb.) **k^{wh}ar-* ‘to cut a groove, to hollow out, to dig’;
 (n.) **k^{wh}ar-a* ‘cut, hole, hollow, digging, excavation, pit, groove, trench’
 (vb.) **k^{wh}ar-* ‘to cut short, to reduce, to decrease, to diminish, to lessen’;
 (n.) **k^{wh}ar-a* ‘shortness’; (adj.) ‘short’
533. Proto-Nostratic root **k^{wh}ar-* (\sim **k^{wh}ar-*):
 (vb.) **k^{wh}ar-* ‘to cut a groove, to hollow out, to dig’;
 (n.) **k^{wh}ar-a* ‘cut, hole, hollow, digging, excavation, pit, groove, trench’
 Derivative of:
 (vb.) **k^{wh}ar-* ‘to cut’;
 (n.) **k^{wh}ar-a* ‘piece cut off; knife’
534. Proto-Nostratic root **k^{wh}ar-* (\sim **k^{wh}ar-*):
 (vb.) **k^{wh}ar-* ‘to cut short, to reduce, to decrease, to diminish, to lessen’;
 (n.) **k^{wh}ar-a* ‘shortness’; (adj.) ‘short’
 Derivative of:
 (vb.) **k^{wh}ar-* ‘to cut’;
 (n.) **k^{wh}ar-a* ‘piece cut off; knife’
535. Proto-Nostratic (n.) **k^{wh}ar-a* ‘vessel, pot’
536. Proto-Nostratic root **k^{wh}ar-* (\sim **k^{wh}ar-*):
 (vb.) **k^{wh}ar-* ‘to procure’;
 (n.) **k^{wh}ar-a* ‘payment, procurement’
537. Proto-Nostratic root **k^{wh}at^h-* (\sim **k^{wh}at^h-*):
 (vb.) **k^{wh}at^h-* ‘to move rapidly, to shake’;
 (n.) **k^{wh}at^h-a* ‘rapid movement, shaking’
538. Proto-Nostratic (particle) **k^{wh}ay-* ‘when, as, though, also’
 Possibly derived from:
 Relative pronoun stem **k^{wh}i-*; interrogative pronoun stem **k^{wh}a-*
539. Proto-Nostratic root **k^{wh}ey-*:
 (vb.) **k^{wh}ey-* ‘to repay in kind, to return an equal measure’;
 (n.) **k^{wh}ey-a* ‘payment, repayment’
540. Proto-Nostratic root **k^{wh}ey-*:
 (vb.) **k^{wh}ey-* ‘to do, to make, to create; to form, to fashion’;
 (n.) **k^{wh}ey-a* ‘act, deed, creation’

541. Proto-Nostratic relative pronoun stem **k^{wh}i-* (*~ *k^{wh}e-*); interrogative pronoun stem **k^{wh}a-* (*~ *k^{wh}ə-*)
542. Proto-Nostratic root **k^{wh}ir-* (*~ *k^{wh}er-*):
 (vb.) **k^{wh}ir-* ‘to twist or twine together, to tie together, to bind, to fasten’;
 (n.) **k^{wh}ir-a* ‘twist, tie, bundle, rope; the act of twisting or twining together: work, craft, act, action’
543. Proto-Nostratic (n.) (?) **k^{wh}ur-a* ‘body, belly’
544. Proto-Nostratic (n.) **k^{wh}ur-a* ‘worm, grub, maggot, insect’

PROTO-NOSTRATIC **k^w*

545. Proto-Nostratic root **k^wad-* (*~ *k^wəd-*):
 (vb.) **k^wad-* ‘to strike, to beat, to smash, to pound’;
 (n.) **k^wad-a* ‘knock, stroke, thrust’
 Note also:
 (vb.) **k^wed-* ‘to destroy, to damage, to ruin; to decay, to rot, to spoil’;
 (n.) **k^wed-a* ‘death, destruction, damage, ruin, decay’
546. Proto-Nostratic (n.) **k^wad-a* ‘hind part, end, tail’
547. Proto-Nostratic root **k^waĥ-* (*~ *k^wəĥ-*):
 (vb.) **k^waĥ-* ‘to hit, to strike, to beat, to pound; to push or press in’;
 (n.) **k^waĥ-a* ‘club, cudgel’; (adj.) ‘hit, beaten, pounded, pushed or pressed together, crammed, filled’
548. Proto-Nostratic root **k^wal-* (*~ *k^wəl-*):
 (vb.) **k^wal-* ‘to go: to go away from, to go after or behind’;
 (n.) **k^wal-a* ‘track, way’
549. Proto-Nostratic root **k^walʷ-* (*~ *k^wəʷ-*):
 (vb.) **k^walʷ-* ‘to gush forth, to overflow; to flow, to leak, to ooze, to drip, to trickle’;
 (n.) **k^walʷ-a* ‘gush, flow, drip, trickle; river, stream, spring’
550. Proto-Nostratic root **k^wam-* (*~ *k^wəm-*):
 (vb.) **k^wam-* ‘to burn slowly, to smolder; to be hot, to be red-hot, to be glowing; to smoke’;
 (n.) **k^wam-a* ‘embers, ashes; heat; smoke’

551. Proto-Nostratic root **k^wan-* (\sim **k^wən-*):
 (vb.) **k^wan-* ‘to suckle, to nurse; to suck’;
 (n.) **k^wan-a* ‘udder, bosom, breast’
 Derivative:
 (n.) **k^wan-a* ‘woman, wife’
552. Proto-Nostratic (Eurasianic only) (n.) **k^wan-a* ‘woman, wife’
 Derivative of:
 (vb.) **k^wan-* ‘to suckle, to nurse; to suck’;
 (n.) **k^wan-a* ‘udder, bosom, breast’
- Semantic development as in Latin *fēmina* ‘female, woman’ from the same root as in *fēlō* ‘to suck’, hence, ‘one who gives suck’.
553. Proto-Nostratic root **k^war-* (\sim **k^wər-*):
 (vb.) **k^war-* ‘to be cold’;
 (n.) **k^war-a* ‘cold, coldness’
554. Proto-Nostratic root **k^war-* (\sim **k^wər-*):
 (vb.) **k^war-* ‘to rest, to stay, to remain’;
 (n.) **k^war-a* ‘stillness, quietude, repose, rest, resting place’; (adj.) ‘still, quiet, at rest’
555. Proto-Nostratic root **k^war-* (\sim **k^wər-*):
 (vb.) **k^war-* ‘to crush, to grind’;
 (n.) **k^war-a* ‘grinding pestle, grinding stone; stone, rock’
556. Proto-Nostratic (n.) **k^war-b-a* ‘the inside, the middle, interior, inward part’
557. Proto-Nostratic root **k^warʷ-* (\sim **k^wərʷ-*):
 (vb.) **k^warʷ-* ‘to thunder, to rumble’;
 (n.) **k^warʷ-a* ‘rain, storm, stormy weather, thunderstorm’
558. Proto-Nostratic root **k^was-* (\sim **k^wəs-*):
 (vb.) **k^was-* ‘to strike fire, to put out (fire)’;
 (n.) **k^was-a* ‘spark, fire’
559. Proto-Nostratic root **k^was-* (\sim **k^wəs-*) (onomatopoeic):
 (vb.) **k^was-* ‘to sigh, to moan, to groan; to whisper, to murmur, to mumble’;
 (n.) **k^was-a* ‘sigh, moan, groan, whisper, murmur, mumble’
560. Proto-Nostratic root **k^wat’-* (\sim **k^wət’-*):
 (vb.) **k^wat’-* ‘to burn, to smolder, to smoke’;
 (n.) **k^wat’-a* ‘burning, heat, smoke’

561. Proto-Nostratic root **k'wat'* - (*~ *k'wat'*):
 (vb.) **k'wat'* - 'to cut';
 (n.) **k'wat'-a* 'knife, cutting instrument'; (adj.) 'sharp'
562. Proto-Nostratic root **k'wed-*:
 (vb.) **k'wed-* 'to destroy, to damage, to ruin; to decay, to rot, to spoil';
 (n.) **k'wed-a* 'death, destruction, damage, ruin, decay'
 Note also:
 (vb.) **k'wad-* 'to strike, to beat, to smash, to pound';
 (n.) **k'wad-a* 'knock, stroke, thrust'
563. Proto-Nostratic root **k'wiy-* (*~ *k'wey-*):
 (vb.) **k'wiy-* 'to be putrid, purulent';
 (n.) **k'wiy-a* 'pus'
564. Proto-Nostratic (n.) **k'wow-a* 'bullock, ox, cow'
565. Proto-Nostratic (Eurasianic only) (n.) **k'woy-a* 'outer covering: skin, hide, leather; bark (of a tree), shell, crust'
566. Proto-Nostratic root **k'wur^y-* (*~ *k'wor^y-*):
 (vb.) **k'wur^y-* 'to be heavy, weighty, solid, bulky';
 (n.) **k'wur^y-a* 'heaviness, weight, solidity, thickness'; (adj.) 'heavy, weighty, solid, bulky'

PROTO-NOSTRATIC *_G

567. Proto-Nostratic root **gad-* (*~ *gəd-*):
 (vb.) **gad-* 'to make a loud sound or loud noise';
 (n.) **gad-a* 'loud noise, clap of thunder, loud clatter, loud rumble'
 Reduplicated (Semitic and Dravidian):
 (vb.) **gad-gad-* 'to make a loud sound or loud noise';
 (n.) **gad-gad-a* 'loud noise, clap of thunder, loud clatter, loud rumble'
568. Proto-Nostratic root **gal-* (*~ *gəl-*):
 (vb.) **gal-* 'to come, to go';
 (n.) **gal-a* 'the act of coming or going; trip, voyage'
569. Proto-Nostratic root **gal-* (*~ *gəl-*):
 (vb.) **gal-* 'to flow';
 (n.) **gal-a* 'ravine, gully, watercourse, river'

570. Proto-Nostratic root **gal-* (\sim **gəl-*):
 (vb.) **gal-* ‘to stir up, to agitate, to disturb; to be stirred up, agitated, disturbed’;
 (n.) **gal-a* ‘agitation, disturbance, perturbation; quarrel, fight, battle’
571. Proto-Nostratic root **gam-* (\sim **gəm-*):
 (vb.) **gam-* ‘to gather together, to bring together, to put together, to join together, to come together, to do together’;
 (n.) **gam-a* ‘gathering, collection, crowd, multitude, throng’
572. Proto-Nostratic root **gar-* (\sim **gər-*):
 (vb.) **gar-* ‘to mutter, to groan, to grumble, to howl, to roar’;
 (n.) **gar-a* ‘groan, howl, murmur, roar, cry’
 Reduplicated (Semitic and Kartvelian):
 (vb.) **gar-gar-* ‘to mutter, to groan, to grumble, to howl, to roar’;
 (n.) **gar-gar-a* ‘groan, howl, murmur, roar, cry’
573. Proto-Nostratic root **gar-* (\sim **gər-*):
 (vb.) **gar-* ‘to crush, to grate, to grind; to melt, to dissolve’;
 (n.) **gar-a* ‘the act of crushing, grating, grinding’; (adj.) ‘crushed, grated, ground, dissolved, melted, softened’
574. Proto-Nostratic root **gar-* (\sim **gər-*):
 (vb.) **gar-* ‘to dig, to dig up, to dig out’;
 (n.) **gar-a* ‘that which is used to dig: spade; that which is dug (out): furrow, ditch, gutter, canal’
575. Proto-Nostratic (n.) **garʸ-a* ‘stick, staff, rod, pole, stalk, stem’
576. Proto-Nostratic (n.) **garʸ-a* ‘wildfowl, wild goose’
 Reduplicated:
 (n.) **garʸ-garʸ-a* ‘wildfowl, wild goose’
577. Proto-Nostratic root **gatʸ-* (\sim **gətʸ-*):
 (vb.) **gatʸ-* ‘to bite’;
 (n.) **gatʸ-a* ‘bite’; (adj.) ‘biting, sharp, bitter’
 Derivative:
 (n.) **gatʸ-a* ‘jaw, chin’
578. Proto-Nostratic (n.) **gatʸ-a* ‘jaw, chin’
 Derivative of:
 (vb.) **gatʸ-* ‘to bite’;
 (n.) **gatʸ-a* ‘bite’; (adj.) ‘biting, sharp, bitter’

579. Proto-Nostratic root **ger-*:
 (vb.) **ger-* ‘to stretch out the hand, to raise one’s hand’;
 (n.) **ger-a* ‘the act of stretching out or raising one’s hand’
580. Proto-Nostratic root (Eurasian only) **gil-* (*~ *gel-*):
 (vb.) **gil-* ‘to shine, to glisten’;
 (n.) **gil-a* ‘brilliance, shine’; (adj.) ‘shining, glistening, gleaming, brilliant’
581. Proto-Nostratic root **git-* (*~ *get-*):
 (vb.) **git-* ‘to tickle’;
 (n.) **git-a* ‘armpit’
582. Proto-Nostratic root **gub-* (*~ *gob-*):
 (vb.) **gub-* ‘to bend, to twist’;
 (n.) **gub-a* ‘that which is twisted, bent, curved: hunch, wattle’

PROTO-NOSTRATIC **q^h*

583. Proto-Nostratic root **q^had-* (*~ *q^həd-*):
 (vb.) **q^had-* ‘to move, to put in motion, to be in motion’;
 (n.) **q^had-a* ‘way, path, direction, passage; movement, motion; hard work, diligence’
584. Proto-Nostratic root **q^hal-* (*~ *q^həl-*):
 (vb.) **q^hal-* ‘to strike, to split, to cut, to wound, to injure’;
 (n.) **q^hal-a* ‘stroke, blow, wound, cut, slash, damage, injury’
585. Proto-Nostratic root **q^ham-* (*~ *q^həm-*):
 (vb.) **q^ham-* ‘to cover, to conceal’;
 (n.) **q^ham-a* ‘covering’
586. Proto-Nostratic root **q^har^y-* (*~ *q^hər^y-*):
 (vb.) **q^har^y-* ‘to make a rasping sound, to be hoarse; to creak, to croak’;
 (n.) **q^har^y-a* ‘neck, throat’
587. Proto-Nostratic root **q^hat^h-* (*~ *q^hət^h-*):
 (vb.) **q^hat^h-* ‘to beat, to strike, to fight’;
 (n.) **q^hat^h-a* ‘anger, fury, wrath, spite; fight, battle, quarrel; killing, slaughter’
588. Proto-Nostratic root **q^hoc^h-*:
 (vb.) **q^hoc^h-* ‘to take off, to take away, to remove’ (> ‘to remove by wiping, sweeping, rubbing, peeling, pulling or tearing off, etc.’);
 (n.) **q^hoc^h-a* ‘the act of removing; that which has been removed’ (> ‘rubbish, refuse, sweepings, etc.’)

PROTO-NOSTRATIC *q'

589. Proto-Nostratic (n.) *q'ab-a 'jaw'
590. Proto-Nostratic root *q'al- (~ *qəl-) or *q'el-:
 (vb.) *q'al- or *q'el- 'to glitter, to sparkle, to shine, to be or become bright; to make bright';
 (n.) *q'al-a or *q'el-a 'any bright, shining object: star'
591. Proto-Nostratic (n.) *q'alʷ-a 'sexual organs, genitals, private parts (male or female)'
592. Proto-Nostratic root *q'am- (~ *q'əm-):
 (vb.) *q'am- 'to crush, to grind; to chew, to bite, to eat';
 (n.) *q'am-a 'bite; tooth'
593. Proto-Nostratic (n.) *q'an-a 'field, land, (open) country'
594. Proto-Nostratic root *q'arʷ- (~ *q'ərʷ-):
 (vb.) *q'arʷ- 'to rot, to stink';
 (n.) *q'arʷ-a 'rotten, stinking, putrid thing'; (adj.) 'rotten, stinking, putrid'
595. Proto-Nostratic (n.) *q'aw-a 'head, forehead, brow'
596. Proto-Nostratic root *q'el-:
 (vb.) *q'el- 'to swallow';
 (n.) *q'el-a 'neck, throat'
597. Proto-Nostratic root *q'in- (~ *q'en-):
 (vb.) *q'in- 'to freeze, to be or become cold';
 (n.) *q'in-a 'cold, frost'

PROTO-NOSTRATIC *G^w

598. Proto-Nostratic root *G^wal- (~ *G^wəl-):
 (vb.) *G^wal- 'to curve, to bend, to roll; to be round';
 (n.) *G^wal-a 'round object: circle, globe, sphere, ball, etc.'
 Derivative:
 (n.) *G^wal-a 'head, skull'
599. Proto-Nostratic (n.) *G^wal-a 'head, skull'
 Derivative of:
 (vb.) *G^wal- 'to curve, to bend, to roll; to be round';
 (n.) *G^wal-a 'round object: circle, globe, sphere, ball, etc.'

PROTO-NOSTRATIC *q^w

600. Proto-Nostratic root *q^wad- (~ *q^wəd-):
 (vb.) *q^wad- ‘to abide, to dwell; to relax, to rest, to be or become calm’;
 (n.) *q^wad-a ‘dwelling, abode, house’
601. Proto-Nostratic root *q^wal- (~ *q^wəl-):
 (vb.) *q^wal- ‘to call (out), to cry (out), to shout’;
 (n.) *q^wal-a ‘call, cry, outcry, sound, noise, hubbub, uproar’
602. Proto-Nostratic root *q^wal- (~ *q^wəl-):
 (vb.) *q^wal- ‘to strike, to hit, to cut, to hurt, to wound, to slay, to kill’;
 (n.) *q^wal-a ‘killing, murder, manslaughter, destruction, death’
 Probably identical to:
 (vb.) *q^wal- ‘to throw, to hurl’;
 (n.) *q^wal-a ‘sling, club; throwing, hurling’
603. Proto-Nostratic root *q^wal- (~ *q^wəl-):
 (vb.) *q^wal- ‘to throw, to hurl’;
 (n.) *q^wal-a ‘sling, club; throwing, hurling’
 Probably identical to:
 (vb.) *q^wal- ‘to strike, to hit, to cut, to hurt, to wound, to slay, to kill’;
 (n.) *q^wal-a ‘killing, murder, manslaughter, destruction, death’
604. Proto-Nostratic (n.) *q^war-a ‘edge, point, tip, peak’
605. Proto-Nostratic root *q^war- (~ *q^wər-) or *q^wur- (~ *q^wor-):
 (vb.) *q^war- or *q^wur- ‘to call out, to cry out’;
 (n.) *q^war-a or *q^wur-a ‘call, cry, shout’
606. Proto-Nostratic root *q^war^y- (~ *q^wər^y-) or *q^wur^y- (~ *q^wor^y-):
 (vb.) *q^war^y- or *q^wur^y- ‘to hear’;
 (n.) *q^war^y-a or *q^wur^y-a ‘ear’
607. Proto-Nostratic root (Eurasian only) *q^wat^yh- (~ *q^wət^yh-):
 (vb.) *q^wat^yh- ‘to say, to speak, to call’;
 (n.) *q^wat^yh-a ‘call, invocation, invitation, summons’
608. Proto-Nostratic root *q^wur- (~ *q^wor-):
 (vb.) *q^wur- ‘to swallow’;
 (n.) *q^wur-a ‘neck, throat’

PROTO-NOSTRATIC *t^h

609. Proto-Nostratic (n.) *t^hah-a ‘(young) sheep or goat’
610. Proto-Nostratic root *t^hak^{wh}- (~ *t^hak^{wh}-):
 (vb.) *t^hak^{wh}- ‘to prick, to pierce, to stab’;
 (n.) *t^hak^{wh}-a ‘stab, thrust, jab; thorn, spike, prong, barb’
611. Proto-Nostratic root *t^hal- (~ *t^hal-):
 (vb.) *t^hal- ‘to cut, split, or break open’;
 (n.) *t^hal-a ‘slit, crack’
612. Proto-Nostratic root *t^har- (~ *t^har-):
 (vb.) *t^har- ‘to cause harm, to injure, to cause strife’;
 (n.) *t^har-a ‘injury, harm, strife’
613. Proto-Nostratic root *t^har- (~ *t^har-):
 (vb.) *t^har- ‘to cut, to cut into’;
 (n.) *t^har-a ‘cut, slit, slice, slash; that which cuts: saw, knife, axe’
 Extended form:
 (vb.) *t^har-V-t- ‘to make incisions, to cut into’;
 (n.) *t^har-t-a ‘scratch, incision’
614. Proto-Nostratic root *t^har- (~ *t^har-):
 Extended form:
 (vb.) *t^har-V-t- ‘to make incisions, to cut into’;
 (n.) *t^har-t-a ‘scratch, incision’
 Derivative of:
 (vb.) *t^har- ‘to cut, to cut into’;
 (n.) *t^har-a ‘cut, slit, slice, slash; that which cuts: saw, knife, axe’
615. Proto-Nostratic root *t^hay- (~ *t^hay-):
 (vb.) *t^hay- ‘to grow old, to turn gray (hair)’;
 (n.) *t^hay-a ‘old age, gray hair’
616. Proto-Nostratic root *t^her-:
 (vb.) *t^her- ‘to burn, to roast’;
 (n.) *t^her-a ‘ash(es), charcoal, burnt wood; firewood’; (adj.) ‘burned, heated, roasted, charred, parched’
617. Proto-Nostratic root *t^hiɕ- (~ *t^heɕ-):
 Extended form:
 (vb.) *t^hiɕ-V-r- ‘to comb’;
 (n.) *t^hiɕ-r-a ‘hair’:

Note: The original meaning of the stem **tʰiʕ-* (*~ *tʰheʕ-*) may have been ‘to scratch, to scrape’ (> ‘to comb’ > ‘hair’); this stem may be preserved in Cushitic: Proto-Cushitic **taʕf-/tiʕf-* or **laʕf-/liʕf-* ‘to claw, to scratch’ (cf. Ehret 1995:429, no. 891). For derivation of the word for ‘hair’ from a stem with the meaning ‘to scratch, to scrape’, cf. Old Church Slavic *kosa* ‘hair’, Serbo-Croatian *kōsa* ‘hair, wool’, etc., *o*-grade of the root found in Common Slavic **česati* ‘to scratch, to comb’ > Russian *česát’* [чесать] ‘to scratch, to comb’.

618. Proto-Nostratic root **tʰhil-* (*~ *tʰhel-*) or (?) **tʰhidʒ-* (*~ *tʰhedʒ-*):
 (vb.) **tʰhil-* or (?) **tʰhidʒ-* ‘to see’;
 (n.) **tʰhil-a* or (?) **tʰhidʒ-a* ‘eye’
619. Proto-Nostratic root **tʰhir-* (*~ *tʰher-*):
 (vb.) **tʰhir-* ‘to be highly esteemed, eminent, illustrious, glorious’;
 (n.) **tʰhir-a* ‘high rank, chief, chieftain, ruler’
620. Proto-Nostratic root **tʰhuŋ-* (*~ *tʰhoŋ-*):
 Extended form:
 (vb.) **tʰhuŋ-V-kh-* ‘to hook up, to hang up, to suspend (tr.); to dangle, to hang (intr.)’;
 (n.) **tʰhuŋ-kh-a* ‘peg, hook’
621. Proto-Nostratic root **tʰhut-* (*~ *tʰhot-*):
 (vb.) **tʰhut-* ‘to cut, to split’;
 (n.) **tʰhut-a* ‘cut, split’

PROTO-NOSTRATIC **tʰ*

622. Proto-Nostratic root **tʰ'ar-* (*~ *tʰ'ər-*):
 (vb.) **tʰ'ar-* ‘to bite, to gnaw’;
 (n.) **tʰ'ar-a* ‘bite’
 Extended form (in Semitic and Indo-European):
 (vb.) **tʰ'ar-V-s-* ‘to bite, to gnaw’;
 (n.) **tʰ'ar-s-a* ‘tooth; morsel bitten, food, nourishment’
623. Proto-Nostratic root **tʰ'il-* (*~ *tʰ'el-*):
 (vb.) **tʰ'il-* ‘to be bent, curved, round’;
 (n.) **tʰ'il-a* ‘bent, curved, round thing or object’; (adj.) ‘bent, curved, round’
624. Proto-Nostratic root **tʰ'im-* (*~ *tʰ'em-*):
 (vb.) **tʰ'im-* ‘to join, bind, press, or unite together’;
 (n.) **tʰ'im-a* ‘bond, tie, union, connection’; (adj.) ‘joined, bound, pressed, or united together; tied, harnessed, glued, etc.’

625. Proto-Nostratic root $*t\acute{t}'uk^h-$ ($\sim *t\acute{t}'ok^h-$):
 (vb.) $*t\acute{t}'uk^h-$ 'to push, to shove, to thrust (in), to press (in)';
 (n.) $*t\acute{t}'uk^h-a$ 'push, shove, thrust'

PROTO-NOSTRATIC $*\gamma$

626. Proto-Nostratic 1st singular personal pronoun stem $*\gamma a-$ ($\sim * \gamma \partial-$), $*\gamma i-$ ($\sim * \gamma e-$)
 'I, me'

No doubt originally the same as the deictic particles $*\gamma a-$, $*\gamma i-$ listed below.

Note: The Chukchi forms support the view that we are dealing with what was originally a deictic particle here inasmuch as the same patterning is found in both the first and second person predicative pronoun stems. Moreover, it is the proximate deictic form $*\gamma i-$ ($\sim * \gamma e-$) that is represented in Chukchi-Kamchatkan as opposed to the distant form $*\gamma a-$ ($\sim * \gamma \partial-$) found in Afrasian (the Proto-Indo-European forms $*\gamma e+k-$, $*\gamma e+g^h-$, and $*\gamma e+k^h-$ are phonologically ambiguous). This seems to indicate that independent developments were involved in each branch, using the same basic elements.

627. Proto-Nostratic demonstrative stems (originally deictic particles):
 Proximate: $*\gamma i-$ ($\sim * \gamma e-$) 'this';
 Intermediate: $*\gamma u-$ ($\sim * \gamma o-$) 'that';
 Distant: $*\gamma a-$ ($\sim * \gamma \partial-$) 'that yonder, that over there'

Note: These stems often combined with other deictic particles: $*\gamma a/i/u+na-$, $*\gamma a/i/u+\acute{s}a-$, $*\gamma a/i/u+ma-$, $*\gamma a/i/u+t^ha-$, $*\gamma a/i/u+k^ha-$, $*\gamma a/i/u+ya-$, etc.

628. Proto-Nostratic (n.) $*\gamma ab-a$ 'strength, power'; (adj.) 'strong, mighty'
629. Proto-Nostratic (n.) $*\gamma ab(b)a \sim * \gamma ap^h(p^h)a$ 'father, forefather' (nursery word)
630. Proto-Nostratic root $*\gamma ad-$ ($\sim * \gamma \partial d-$):
 (vb.) $*\gamma ad-$ 'to be strong, mighty, powerful, exalted';
 (n.) $*\gamma ad-a$ 'lord, master'; (adj.) 'strong, mighty, powerful, exalted'
631. Proto-Nostratic (n.) $*\gamma ad^y-a$ 'thorn'; (adj.) 'pointed, sharp, prickly'
632. Proto-Nostratic (n.) $*\gamma a\acute{h}-a$ 'cow'
633. Proto-Nostratic root $*\gamma ax-$ ($\sim * \gamma \partial x-$):
 (vb.) $*\gamma ax-$ 'to be young, youthful, tender, fresh';
 (n.) $*\gamma ax-a$ 'a youth, young man, younger brother'; (adj.) 'young, tender'

634. Proto-Nostratic root **ʔakʰ-* (\sim **ʔəʔkʰ-*):
 (vb.) **ʔakʰ-* ‘to eat’;
 (n.) **ʔakʰ-a* ‘food, meal; fodder, feed, morsel’
635. Proto-Nostratic root **ʔakʰ-* (\sim **ʔəʔkʰ-*):
 (vb.) **ʔakʰ-* ‘to be evil, wicked, bad; to hurt, to harm’;
 (n.) **ʔakʰ-a* ‘evil, wickedness, harm’
636. Proto-Nostratic root **ʔakʰ-* (\sim **ʔəʔkʰ-*):
 (vb.) **ʔakʰ-* ‘to dig’;
 (n.) **ʔakʰ-a* ‘that which is dug: digging, ditch, trench, hole; that which is used to dig: carving tool, chisel, cutter, gouge’
637. Proto-Nostratic (n.) **ʔakʰkʰa* ‘older female relative’ (nursery word)
 Note also:
 (n.) **ʔakʰkʰa* ‘older male relative’
638. Proto-Nostratic (n.) **ʔakʰkʰa* ‘older male relative’ (nursery word)
 Note also:
 (n.) **ʔakʰkʰa* ‘older female relative’
639. Proto-Nostratic root **ʔakʰw-* (\sim **ʔəʔkʰw-*):
 (vb.) **ʔakʰw-* ‘to be hot, to burn; to warm oneself’;
 (n.) **ʔakʰw-a* ‘heat, fire’
640. Proto-Nostratic root **ʔal-* (\sim **ʔəl-*):
 (vb.) **ʔal-* ‘to purify, to cleanse’ (> ‘to sift, to clean grain’ in the daughter languages);
 (n.) **ʔal-a* ‘the act of washing, cleaning; that which is washed, cleaned’
- Semantics as in Sanskrit *punāti* ‘to make clean, clear, pure, or bright; to cleanse, to purify, to purge, to clarify; (with *sáktum*) to cleanse from chaff, to winnow; to sift, to discriminate, to discern’, (passive) *pūyáte* ‘to be cleaned, washed, or purified’; related to Old High German *fowen* ‘to sift, to clean grain’ and Latin *pūrus* ‘clean, pure’.
641. Proto-Nostratic root **ʔal-* (\sim **ʔəl-*) (perhaps also **ʔel-*, **ʔul-*):
 (vb.) **ʔal-* ‘to be not so-and-so or such-and-such’;
 (n.) **ʔal-a* ‘nothing’

Originally a negative verb stem meaning ‘to be not so-and-so or such-and-such’ — later used in some branches as a negative particle.

642. Proto-Nostratic root **ʔam-* (*~ *ʔam-*):
 (vb.) **ʔam-* ‘to seize, to grasp, to take, to touch, to hold (closely or tightly)’;
 (n.) **ʔam-a* ‘grasp, hold, hand(ful)’; (adj.) ‘seized, grasped, touched, held, obtained’
643. Proto-Nostratic (n.) **ʔam-a* ‘time, moment, point of time’; (particle) ‘now’
644. Proto-Nostratic (n.) **ʔam(m)a* ‘mother’ (nursery word)
 Note also:
 (n.) **ʔema* ‘older female relative; mother; (older) woman’
645. Proto-Nostratic root **ʔan-* (*~ *ʔan-*):
 (vb.) **ʔan-* ‘to load up and go, to send off’;
 (n.) **ʔan-a* ‘load, burden’
646. Proto-Nostratic root **ʔanʷ-* (*~ *ʔanʷ-*):
 (vb.) **ʔanʷ-* ‘to be quiet, still, at peace, at rest’;
 (n.) **ʔanʷ-a* ‘tranquility, peace, rest’; (adj.) ‘quiet, still, peaceful, restful’
647. Proto-Nostratic root **ʔanʷ-* (*~ *ʔanʷ-*):
 (vb.) **ʔanʷ-* ‘to draw near to, to approach, to come (close to)’;
 (n.) **ʔanʷ-a* ‘nearness, proximity’
 Derivative:
 (particle) **ʔanʷ-* ‘to, towards, over, for, against, upon, on’
648. Proto-Nostratic (particle) **ʔanʷ-* ‘to, towards, over, for, against, upon, on’
 Derivative of:
 (vb.) **ʔanʷ-* ‘to draw near to, to approach, to come (close to)’;
 (n.) **ʔanʷ-a* ‘nearness, proximity’
649. Proto-Nostratic (n.) **ʔanʷa* ‘mother, aunt’ (nursery word)
 Note also:
 (n.) **ʔenʷa* ‘mother, elder sister’
650. Proto-Nostratic root **ʔaŋ-* (*~ *ʔaŋ-*):
 (vb.) **ʔaŋ-* ‘to divide, to separate’;
 (n.) **ʔaŋ-a* ‘separation, difference’; (adj.) ‘separate, different’
651. Proto-Nostratic (n.) **ʔaŋ(ŋ)a* ‘(older) female relative’ (nursery word)
652. Proto-Nostratic (n.) **ʔaŋ(ŋ)a* ‘(older) male relative’

653. Proto-Nostratic root **ʔap^h*- (~ **ʔap^h*-):
 (vb.) **ʔap^h*- ‘to be more, over, above, extra, superior; to surpass’;
 (n.) **ʔap^h-a* ‘that which is more, over, above, extra, superior’; (adj.) ‘many, more, extra, additional, numerous, teeming, superior’
 (particle) **ʔap^h*- ‘also, moreover, besides’

Note: The *CVC*- patterning shows that this stem could not originally have been a particle, though this is how it is preserved in the daughter languages. Though the original meaning is unknown, we may speculate that it may have been something like ‘(vb.) to be more, over, above, extra; (n.) that which is more, over, above, extra; (adj.) many, more, extra, additional, numerous, teeming’.

654. Proto-Nostratic root **ʔar*- (~ **ʔar*-):
 (vb.) **ʔar*- ‘to cut (off, apart), to sever, to separate, to part asunder’;
 (n.) **ʔar-a* ‘half, side, part’; (adj.) ‘severed, separated, parted, disjoined’
655. Proto-Nostratic (n.) **ʔar-a* ‘male, man, husband’
656. Proto-Nostratic (n.) **ʔar-a* ‘associated or related person or thing; associate, companion, friend; kinsman, relative’; (adj.) ‘associated, related’
657. Proto-Nostratic root **ʔar*- (~ **ʔar*-) (used as the base for the designation of various horned animals):
 (n.) **ʔar-a* ‘ram, goat, mountain-goat, chamois, ibex, gazelle, etc.’
658. Proto-Nostratic root **ʔas*- (~ **ʔas*-):
 (vb.) **ʔas*- ‘to gather, to collect’;
 (n.) **ʔas-a* ‘the act of gathering, collecting’
659. Proto-Nostratic root **ʔas^y*- (~ **ʔas^y*-):
 (vb.) **ʔas^y*- ‘to put, to place, to set; to sit, to be seated’;
 (n.) **ʔas^y-a* ‘place, seat’; (adj.) ‘put, placed, set, established’
660. Proto-Nostratic (n.) **ʔat^hta* ‘older male relative, father’ (nursery word)
661. Proto-Nostratic (n.) **ʔat^ya* ‘older relative (male or female)’ (nursery word)
662. Proto-Nostratic coordinating conjunction **ʔaw*-, **ʔwa*- (~ **ʔwə*-) ‘or’
663. Proto-Nostratic root **ʔay*- (~ **ʔay*-) (interrogative verb stem):
 (vb.) **ʔay*- ‘to do what?, to act in what manner?’
 Derivative:
 Interrogative-relative pronoun stem **ʔay*-, **ʔya*- ‘(relative) who, which, what; (interrogative) who?, which?, what?’

664. Proto-Nostratic interrogative-relative pronoun stem **ʔay-*, **ʔya-* '(relative) who, which, what; (interrogative) who?, which?, what?':
Derivative of:
(vb.) **ʔay-* 'to do what?, to act in what manner?'
665. Proto-Nostratic root **ʔay-* (*~ *ʔay-*):
(vb.) **ʔay-* 'to go, to proceed';
(n.) **ʔay-a* 'journey'
Note also:
(vb.) **ʔiy-* 'to come, to go';
(n.) **ʔiy-a* 'approach, arrival; path, way'
666. Proto-Nostratic **ʔay-a* 'brain':
667. Proto-Nostratic (n.) **ʔay(y)a* 'mother, female relative' (nursery word)
668. Proto-Nostratic (n.) **ʔay(y)a* 'father, male relative' (nursery word)
669. Proto-Nostratic negative particle **ʔe* 'no, not'
670. Proto-Nostratic root **ʔeb-*:
(vb.) **ʔeb-* 'to become weak, exhausted, wasted, debilitated, wiped out; to yield, to succumb; to go mad, to become insane, to lose one's mind; to lose one's way';
(n.) **ʔeb-a* 'weakness, exhaustion; madness, silliness, foolishness'; (adj.) 'weakened, exhausted, debilitated, wiped out; mad, foolish, silly, half-witted'
671. Proto-Nostratic root **ʔek^h-*:
(vb.) **ʔek^h-* 'to move quickly, to rage; to be furious, raging, violent, spirited, fiery, wild';
(n.) **ʔek^h-a* 'rapid or violent movement, fury, rage'
672. Proto-Nostratic root **ʔek'-*:
(vb.) **ʔek'-* 'to diminish, to decrease, to reduce; to be insufficient, lacking, wanting; to be small, weak, lowly, ignoble, common, ordinary, plain, simple';
(n.) **ʔek'-a* 'diminishment, reduction, decrease, loss; deficiency, want, need, lack'
673. Proto-Nostratic root **ʔel-*:
(vb.) **ʔel-* 'to shine, to radiate, to glitter, to glisten';
(n.) **ʔel-a* 'luster, splendor, light'

674. Proto-Nostratic (Eurasianic only) (n.) **ɣema* ‘older female relative; mother; (older) woman’ (nursery word)
Note also:
(n.) **ɣam(m)a* ‘mother’
675. Proto-Nostratic (n.) **ɣen^{va}a* ‘mother, elder sister’ (nursery word)
Note also:
(n.) **ɣan^{va}a* ‘mother, aunt’
676. Proto-Nostratic root **ɣeɣ-*:
(vb.) **ɣeɣ-* ‘to burn, to heat up’;
(n.) **ɣeɣ-a* ‘fire, heat; (heat of the) sun, sunshine, sunlight’
Extended form (in Indo-European and Uralic [Finno-Ugric]):
(vb.) **ɣeɣ-V-k-* ‘to burn, to heat up’;
(n.) **ɣeɣ-k-a* ‘fire, heat; (heat of the) sun, sunshine, sunlight’
677. Proto-Nostratic root **ɣep^h-*:
(vb.) **ɣep^h-* ‘to burn, to be hot; to cook, to boil, to bake’;
(n.) **ɣep^h-a* ‘the act of cooking, baking; oven’
678. Proto-Nostratic (n.) **ɣer-a* ‘earth, ground’
679. Proto-Nostratic root **ɣeθ-*:
(vb.) **ɣeθ-* ‘to oppose’;
(n.) **ɣeθ-a* ‘that which is opposite’
680. Proto-Nostratic root **ɣib-* (~ **ɣeb-*):
(vb.) **ɣib-* ‘to well up, to overflow, to spill over; to pour out or over’;
(n.) **ɣib-a* ‘spill, overflow, flood, deluge’
681. Proto-Nostratic root **ɣil-* (~ **ɣel-*):
(vb.) **ɣil-* ‘to live, to be alive; to be, to exist’;
(n.) **ɣil-a* ‘dwelling, habitation, house’; (adj.) ‘living, alive, existing’
682. Proto-Nostratic (n.) **ɣil-a* (~ **ɣel-a*) ‘deer’
683. Proto-Nostratic root **ɣil-* (~ **ɣel-*):
(vb.) **ɣil-* ‘to see, to know’;
(n.) **ɣil-a* ‘eye’
684. Proto-Nostratic (n.) **ɣin-a* (~ **ɣen-a*) ‘place, location’ (> ‘in, within, into’ in the daughter languages)
685. Proto-Nostratic (n.) **ɣina* or **ɣiŋa* ‘younger relative (male or female)’ (nursery word)

686. Proto-Nostratic root **ɫirʷ-* (~ **ɫerʷ-*):
 (vb.) **ɫirʷ-* ‘to draw, to drag, to pull’;
 (n.) **ɫirʷ-a* ‘(the act of) drawing, dragging, pulling; trace, furrow’
687. Proto-Nostratic root **ɫitʼ-* (~ **ɫetʼ-*):
 (vb.) **ɫitʼ-* ‘to chew, to bite, to eat, to consume’;
 (n.) **ɫitʼ-a* ‘the act of eating; that which is eaten: food, nourishment’
688. Proto-Nostratic root **ɫiy-* (~ **ɫey-*):
 (vb.) **ɫiy-* ‘to come, to go’;
 (n.) **ɫiy-a* ‘approach, arrival; path, way’
 Note also:
 (vb.) **ɫay-* ‘to go, to proceed’;
 (n.) **ɫay-a* ‘journey’
689. Proto-Nostratic 1st person personal pronoun stem **ɫiya*: (a) ‘by me’; (b) agent marker of the 1st singular of verbs; (c) postnominal possessive pronoun: ‘my’
690. Proto-Nostratic (n.) **ɫom-a* ‘rounded prominence at the end of a bone forming a ball and socket joint with the hollow part of another bone, condyle (of the lower jaw, the shoulder, the elbow, the hip, etc.)’
- Note: Semantic shifts took place in Semitic, Indo-European, and, in part, Altaic; the original meaning was preserved in Egyptian and Turkic.
691. Proto-Nostratic root **ɫor-*:
 (vb.) **ɫor-* ‘to move rapidly, quickly, hastily; to set in motion’;
 (n.) **ɫor-a* ‘any rapid motion: running, flowing, pouring, etc.’; (adj.) ‘rapid, quick, hasty’
692. Proto-Nostratic root **ɫorʷ-*:
 (vb.) **ɫorʷ-* ‘to rise (up)’;
 (n.) **ɫorʷ-a* ‘rising movement or motion’
 Extended form:
 (vb.) **ɫorʷ-V-g-* ‘to climb on, to mount, to copulate (with)’;
 (n.) **ɫorʷ-g-a* ‘mounting, copulation’
693. Proto-Nostratic root **ɫorʷ-*:
 Extended form:
 (vb.) **ɫorʷ-V-g-* ‘to climb on, to mount, to copulate (with)’;
 (n.) **ɫorʷ-g-a* ‘mounting, copulation’
 Derivative of:
 (vb.) **ɫorʷ-* ‘to rise (up)’;
 (n.) **ɫorʷ-a* ‘rising movement or motion’

694. Proto-Nostratic root **ʔot*’-:
 (vb.) **ʔot*’- ‘to move to or toward; to move away from; to move out of the way, to step aside’;
 (n.) **ʔot*’-*a* ‘movement to or toward; movement away from; step, track’
695. Proto-Nostratic root **ʔow*’-:
 Extended form:
 (vb.) **ʔow*-*V*-*h*- ‘to hatch eggs’;
 (n.) **ʔow*-*h*-*a* ‘egg’

Dolgopolsky has proposed a very attractive etymology here. However, it must be noted that Arabic *ʔāḥ* ‘eggwhite, albumen’ is isolated within Semitic. Moreover, even though the Proto-Indo-European form is traditionally reconstructed as **ōu̯iom* ‘egg’, no single reconstruction can account for all of the forms found in the Indo-European daughter languages. Accordingly, there are difficulties with this etymology. If this is a valid etymology, it would imply that the Proto-Indo-European form is to be reconstructed as **ʔ₁ou̯ʔ₂iom* ‘egg’, with short vowel in the first syllable and a laryngeal (**ʔ₂* [= **h̥*]) between **u̯* and **i* (the long vowel found in the first syllable of the forms attested in several of the Indo-European daughter languages would then be due to compensatory lengthening following the loss of this laryngeal). There may have been a non-apophonic **o* (original, or inherited, **o*) in the first syllable, in which case the Proto-Nostratic form would have been **ʔow*-*h*-. Reconstructing a medial laryngeal (**ʔ₂* [= **h̥*]) would also account for the Germanic developments. **ʔowh̥-yo-m* (traditional **ʔ₁ou̯ʔ₂iom*) ‘egg’ cannot, as is often assumed, be a derivative of the common Proto-Indo-European word for ‘bird’, which requires an initial *a*-coloring laryngeal (preserved in Armenian): **Aéw-i-s* [**Aáw-i-s*], **Aw-éy-s* > Armenian *hav* ‘bird, hen, chicken’; Latin *avis* ‘a bird’; Umbrian (acc.) *avif* ‘bird’; Sanskrit (nom. sg.) *vī-h*, (Rigveda) *vé-h* ‘a bird’; etc.

696. Proto-Nostratic root **ʔoy*’-:
 (vb.) **ʔoy*- ‘to be by oneself, to be alone’;
 (n.) **ʔoy*-*a* ‘solitude, aloneness’; (adj.) ‘single, alone; one’
697. Proto-Nostratic (n.) **ʔul*-*a* ‘the bottom or lowest part of anything; the sole of the foot; soil, earth, ground, land’

Semantics as in Latin *solum* ‘the bottom or lowest part of anything; the sole of the foot; soil, earth, ground, land’ (cf. Buck 1949:1.212).

698. Proto-Nostratic deictic stem indicating distance farthest away from the speaker
 **ʔul*- (~ **ʔol*-) ‘that over there, that yonder’

699. Proto-Nostratic root **ʔum-* (~ **ʔom-*):
 (vb.) **ʔum-* ‘to bear, to give birth’;
 (n.) **ʔum-a* ‘offspring, descendant’
700. Proto-Nostratic root **ʔup^h-* (onomatopoeic):
 (vb.) **ʔup^h-* ‘to blow’;
 (n.) **ʔup^h-a* ‘puff of air, breath’
701. Proto-Nostratic root **ʔut’-* (~ **ʔot’-*):
 (vb.) **ʔut’-* ‘to stretch, to lengthen’;
 (n.) **ʔut’-a* ‘wide-open space, outdoor area, exterior; length, distance’; (adj.) ‘wide, broad, long’

PROTO-NOSTRATIC *h

702. Proto-Nostratic root **hag-* (~ **həg-*):
 (vb.) **hag-* ‘to burn, to be on fire, to be aflame, to be ablaze, to shine brightly’;
 (n.) **hag-a* ‘midday heat, heat of sun, sunlight’
703. Proto-Nostratic root **hak^h-* (~ **hək^h-*):
 (vb.) **hak^h-* ‘to be sluggish, slow; to do or approach something gradually, slowly, step by step’; (adv.) ‘slowly, gradually’;
 (n.) **hak^h-a* ‘slowness, gradualness, sluggishness’
704. Proto-Nostratic root **hak’-* (~ **hək’-*):
 (vb.) **hak’-* ‘to press, squeeze, pack, or cram together; to confine, to oppress’;
 (n.) **hak’-a* ‘oppression, affliction, pain’
705. Proto-Nostratic root **hal-* (~ **həl-*):
 (vb.) **hal-* ‘to light up, to beam forth, to shine, to brighten up, to radiate’;
 (n.) **hal-a* ‘clearness, brightness, radiance, purity’; (adj.) ‘clear, pure, bright, shining, radiant’
706. Proto-Nostratic root **hal-* (~ **həl-*):
 (adv.) **hal-* ‘else, otherwise’;
 (n.) **hal-a* ‘other side’; (adj.) ‘other’
707. Proto-Nostratic root **hal-* (~ **həl-*) (?):
 (vb.) **hal-* ‘to begin, to start’;
 (n.) **hal-a* ‘beginning, start; the front of anything’
708. Proto-Nostratic (n.) **ham-a* ‘blackness; black object’; (adj.) ‘black’

709. Proto-Nostratic (n.) **ham-a* ‘water’
710. Proto-Nostratic root **ham-* (∼ **həm-*):
(vb.) **ham-* ‘to take into the mouth, to eat’;
(n.) **ham-a* ‘mouth’
711. Proto-Nostratic root **haŋ-* (∼ **həŋ-*):
(vb.) **haŋ-* ‘to split apart, to open (tr.); to gape, to open the mouth, to yawn’;
(n.) **haŋ-a* ‘opening: yawn, gape, mouth; hole; crack, crevice’
712. Proto-Nostratic root **hap^h-* (∼ **həp^h-*):
(vb.) **hap^h-* ‘to turn, to turn away, to turn back’;
(n.) **hap^h-a* ‘the act of turning away, turning back, overturning’; (adj.) ‘turned away from, turned back, overturned’
713. Proto-Nostratic root **haw-* (∼ **həw-*):
(vb.) **haw-* ‘to long for, to desire’;
(n.) **haw-a* ‘desire’
714. Proto-Nostratic (n.) **hay-a* ‘a kind of cereal or grain’
715. Proto-Nostratic exclamation of surprise, astonishment, grief, or misfortune
**hay*
716. Proto-Nostratic (n.) **hay-a* ‘metal, ore’
717. Proto-Nostratic root **her-* and/or **hor-*:
(vb.) **her-* and/or **hor-* ‘to escape, to flee, to run away’;
(n.) **her-a* and/or **hor-a* ‘escape, flight’; (adj.) ‘escaped, liberated, freed’

PROTO-NOSTRATIC *h

718. Proto-Nostratic root **hac’-* (∼ **həc’-*):
(vb.) **hac’-* ‘to pick, to pluck’;
(n.) **hac’-a* ‘the act of picking, plucking’; (adj.) ‘picked, plucked’
719. Proto-Nostratic root **hag-* (∼ **həg-*):
(vb.) **hag-* ‘to be pressed or weighed down; to be oppressed; to be vexed, distressed, disheartened, afflicted, troubled’;
(n.) **hag-a* ‘trouble, affliction, oppression, distress, grief, sadness’
720. Proto-Nostratic root **hag-* (∼ **həg-*):
(vb.) **hag-* ‘to cover over, to hide, to conceal, to obscure, to overshadow’;
(n.) **hag-a* ‘mist, darkness, cloudy weather’; (adj.) ‘misty, dark, cloudy’

721. Proto-Nostratic root **hak^h-* (~ **hək^h-*):
 (vb.) **hak^h-* ‘to be mentally sharp, keen’;
 (n.) **hak^h-a* ‘wisdom, sound judgment, understanding’
722. Proto-Nostratic root **hak’-* (~ **hək’-*):
 (vb.) **hak’-* ‘to spread, to widen, to extend’;
 (n.) **hak’-a* ‘expanse, wide-open space, earth, field’
723. Proto-Nostratic root **hak’-* (~ **hək’-*):
 (vb.) **hak’-* ‘to direct, to guide, to command’;
 (n.) **hak’-a* ‘direction, guidance, command, decree; leader, chief, chieftain, ruler, headman’
724. Proto-Nostratic root **hal-* (~ **həl-*):
 (vb.) **hal-* ‘to lay waste, to destroy, to kill, to slaughter’;
 (n.) **hal-a* ‘destruction, violence, killing, slaughter’
 Note also:
 (vb.) **xal-* ‘to wear down, to wear out, to weaken; to be worn out, worn down, weakened’;
 (n.) **xal-a* ‘weakness, exhaustion, fatigue, weariness’; (adj.) ‘weak, worn out, tired, exhausted, weary’
725. Proto-Nostratic root **hal-* (~ **həl-*):
 (vb.) **hal-* ‘to wash, to rinse, to clean’;
 (n.) **hal-a* ‘the act of washing, cleaning’; (adj.) ‘washed, clean(ed)’
726. Proto-Nostratic root **hal-* (~ **həl-*):
 (vb.) **hal-* ‘to lower’;
 (n.) **hal-a* ‘that which is beneath or under; lower part, underpart’; (adj.) ‘lower’
727. Proto-Nostratic root **hal^y-* (~ **həl^y-*):
 (vb.) **hal^y-* ‘to grow, to be strong’;
 (n.) **hal^y-a* ‘health, strength, power’; (adj.) ‘healthy, strong, powerful; grown, great, large’
728. Proto-Nostratic (n.) **hal^y-a* ‘hole, hollow, cavity’
729. Proto-Nostratic root **ham-* (~ **həm-*):
 (vb.) **ham-* ‘to be sharp, sour, bitter, acrid’;
 (n.) **ham-a* ‘any sharp-tasting, sour, bitter, or acrid foodstuff’; (adj.) ‘sharp, sour, bitter, acrid’

730. Proto-Nostratic root **ham-* (~ **həm-*):
 (vb.) **ham-* ‘to become still, quiet, tranquil; to rest, to settle down, to remain, to abide’;
 (n.) **ham-a* ‘abode, resting place; stillness, tranquility’; (adj.) ‘seated, settled’
731. Proto-Nostratic root **han-* (~ **hən-*):
 (vb.) **han-* ‘to show favor; to be gracious, affectionate, tender’;
 (n.) **han-a* ‘affection, tenderness, favor, graciousness’
732. Proto-Nostratic root **han-* (~ **hən-*):
 (vb.) **han-* ‘to bend, to curve, to twist’;
 (n.) **han-a* ‘bend, curve, twist’
733. Proto-Nostratic root **han-* (~ **hən-*):
 Extended form:
 (vb.) **han-V-g-* ‘to tie tightly, to constrict, to make narrow; to choke, to strangle’;
 (n.) **han-g-a* ‘throat’; (adj.) ‘narrow, constricted’
734. Proto-Nostratic root **haŋ-* (~ **həŋ-*):
 (vb.) **haŋ-* ‘to dive into water (bird)’;
 (n.) **haŋ-a* ‘an aquatic bird’
735. Proto-Nostratic root **hap^h-* (~ **həp^h-*):
 (vb.) **hap^h-* ‘to take, gather, or collect (with the hands or arms)’;
 (n.) **hap^h-a* ‘that which has been gathered or collected: plenty, fullness, abundance, wealth, possessions, property; embrace, armful, handful’
736. Proto-Nostratic root **hap^h-* (~ **həp^h-*):
 (vb.) **hap^h-* ‘to move quickly, to run, to flow’;
 (n.) **hap^h-a* ‘(flowing or running) water, river, stream, current’
737. Proto-Nostratic root **har-* (~ **hər-*):
 (vb.) **har-* ‘to prepare, to make ready, to put together’;
 (n.) **har-a* ‘way, manner, method’
738. Proto-Nostratic (n.) **har-a* ‘arm, hand’
739. Proto-Nostratic root **har-* (~ **hər-*):
 (vb.) **har-* ‘to be superior, to be higher in status or rank, to be above or over’;
 (n.) **har-a* ‘nobleman, master, chief, superior’; (adj.) ‘free-born, noble’
740. Proto-Nostratic root **har-* (~ **hər-*):
 (vb.) **har-* ‘to scratch, to scrape’ (> ‘to plow’ in the daughter languages);
 (n.) **har-a* ‘scraping, scratching’

741. Proto-Nostratic **har^y*-: (1) particle introducing an alternative: ‘or’, (2) conjoining particle: ‘with, and’, (3) inferential particle: ‘then, therefore’

Note: The *CVC*- patterning shows that this stem could not originally have been a particle, though this is how it is preserved in the daughter languages. The original meaning is unknown.

742. Proto-Nostratic root **has-* (*~ *həs-*):
(vb.) **has-* ‘to burn, to be hot’;
(n.) **has-a* ‘cinder, ember, ashes; heat’
743. Proto-Nostratic root **has^y*- (*~ *həs^y*-) (used to designate various tree names):
(n.) **has^y-a* ‘a tree and its fruit’
744. Proto-Nostratic root **hat’-* (*~ *hət’-*):
(vb.) **hat’-* ‘to shake, to tremble; to be shaken, startled, frightened, terrified, afraid’;
(n.) **hat’-a* ‘trembling, shaking’
Note also:
(vb.) **hut’-* ‘to shake, to shiver, to tremble’;
(n.) **hut’-a* ‘trembling, shaking’; (adj.) ‘shaking, shivering, trembling’
745. Proto-Nostratic (n.) **haw-a* ‘a relative on the mother’s side’
746. Proto-Nostratic root **haw-* (*~ *həw-*):
(vb.) **haw-* ‘to surge up, to overflow, to rain’;
(n.) **haw-a* ‘torrential rain, torrent, deluge’
Probably related to:
(vb.) **haw-* ‘to swell, to increase’;
(n.) **haw-a* ‘swelling, increase, growth; great number or amount’
747. Proto-Nostratic root **haw-* (*~ *həw-*):
(vb.) **haw-* ‘to swell, to increase’;
(n.) **haw-a* ‘swelling, increase, growth; great number or amount’
Probably related to:
(vb.) **haw-* ‘to surge up, to overflow, to rain’;
(n.) **haw-a* ‘torrential rain, torrent, deluge’
748. Proto-Nostratic root **haw-* (*~ *həw-*):
(vb.) **haw-* ‘to weave, to braid, to plait, to twist, to turn’;
(n.) **haw-a* ‘the act of weaving, braiding, plaiting’
749. Proto-Nostratic root **hay-* (*~ *həy-*):
(vb.) **hay-* ‘to live, to be alive’;
(n.) **hay-a* ‘life, age’

Extended form:

(vb.) **haya-V-w-* ‘to live, to be alive’;

(n.) **haya-w-a* ‘life, age’

750. Proto-Nostratic root **hay-* (~ **həy-*):

Extended form:

(vb.) **hay-V-t’-* ‘to swell, to be fat’;

(n.) **hay-t’-a* ‘a swelling, fat’; (adj.) ‘fat, swollen’

751. Proto-Nostratic root **haz-* (~ **həz-*):

(vb.) **haz-* ‘to cut into, to carve, to notch’;

(n.) **haz-a* ‘that which is cut: incision, notch, nick; that which cuts: saw, chisel, axe, hatchet’

752. Proto-Nostratic root **hin-* (~ **hen-*):

Extended form:

(vb.) **hin-V-k^h-* ‘to reach, to come to, to arrive at, to gain; to offer, to present’;

(n.) **hin-k^h-a* ‘gain, mastery, experience; offering, present’

753. Proto-Nostratic root **hiw-* (~ **hew-*), **hiy-* (~ **hey-*):

(vb.) **hiw-*, **hiy-* ‘to lack, to stand in need, to be in want’;

(n.) **hiw-a*, **hiy-a* ‘need, want, lack, deficiency’

754. Proto-Nostratic (Eurasian only) (n.) **hok^h-a* ‘sharp point’

755. Proto-Nostratic root **hok’-*:

(vb.) **hok’-* ‘to scrape, to scratch’;

(n.) **hok’-a* ‘scraping, scratching’

756. Proto-Nostratic root **hon-*:

(vb.) **hon-* ‘to swell, to grow, to rise’;

(n.) **hon-a* ‘height, elevation, swelling’

757. Proto-Nostratic root **hul-* (~ **hol-*):

(vb.) **hul-* ‘to destroy, to lay waste, to cause to perish’;

(n.) **hul-a* ‘ruin, destruction; end, death’

758. Proto-Nostratic (n.) **hur-a* (and/or **her-a* ?) ‘hawk-like bird: falcon, hawk, eagle, kite’

759. Proto-Nostratic root **hur-* (~ **hor-*):

(vb.) **hur-* ‘to pound, to grind, to crush, to waste away or wear down by rubbing’;

(n.) **hur-a* ‘pestle, mortar’

760. Proto-Nostratic root **hut-* (~ **hot-*):
 (vb.) **hut-* ‘to shake, to shiver, to tremble’;
 (n.) **hut-a* ‘trembling, shaking’; (adj.) ‘shaking, shivering, trembling’
 Note also:
 (vb.) **hat-* ‘to shake, to tremble; to be shaken, startled, frightened, terrified, afraid’;
 (n.) **hat-a* ‘trembling, shaking’

PROTO-NOSTRATIC *ʕ

761. Proto-Nostratic root **ʕag-* (~ **ʕəg-*):
 (vb.) **ʕag-* ‘to bud, to sprout, to grow’;
 (n.) **ʕag-a* ‘outgrowth, bud, sprout, protuberance’
762. Proto-Nostratic root **ʕak^h-* (~ **ʕəkh-*):
 (vb.) **ʕak^h-* ‘to beat, to strike, to break’;
 (n.) **ʕak^h-a* ‘the act of beating, striking, breaking’
763. Proto-Nostratic root **ʕal-* (~ **ʕəl-*):
 (vb.) **ʕal-* ‘to be high, tall, elevated, exalted; to rise high; to ascend’;
 (n.) **ʕal-a* ‘highest point: peak, summit, mountain’;
 (particle) **ʕal-* ‘on, upon, on top of, over, above, beyond’
764. Proto-Nostratic root **ʕal-* (~ **ʕəl-*):
 (vb.) **ʕal-* ‘to make a fire, to light a fire, to ignite, to kindle, to burn’;
 (n.) **ʕal-a* ‘fire, torch’
765. Proto-Nostratic root **ʕam-* (~ **ʕəm-*):
 (vb.) **ʕam-* ‘to sink, to dip, to plunge’;
 (n.) **ʕam-a* ‘deep place, valley’; (adj.) ‘sunken, deep’
766. Proto-Nostratic root **ʕam-* (~ **ʕəm-*):
 (vb.) **ʕam-* ‘to lift, to raise, to make high’;
 (n.) **ʕam-a* ‘highest point, tip, top’
 Extended form (Semitic and Indo-European):
 (vb.) **ʕam-V-d-* ‘to lift, to raise, to make high’;
 (n.) **ʕam-d-a* ‘highest point, tip, top’
767. Proto-Nostratic root **ʕam-* (~ **ʕəm-*):
 (vb.) **ʕam-* ‘to shoot, to hurl, to throw’;
 (n.) **ʕam-a* ‘arrow’

768. Proto-Nostratic root **ʕan-* (*~ *ʕən-*):
 (vb.) **ʕan-* ‘to breathe, to respire, to live’;
 (n.) **ʕan-a* ‘life, breath’
769. Proto-Nostratic (n.) **ʕaŋ-a* ‘upper part’; (particle) **ʕaŋ-* ‘up, above’
770. Proto-Nostratic root **ʕap’-* (*~ *ʕəp’-*):
 (vb.) **ʕap’-* ‘to grasp, to seize, to take hold of, to take by force’;
 (n.) **ʕap’-a* ‘grasp, hold, seizure’
771. Proto-Nostratic (n.) **ʕar-a* ‘back, rear; hindquarters, behind’
772. Proto-Nostratic root **ʕar-* (*~ *ʕər-*):
 Extended form:
 (vb.) **ʕar-V-g-* ‘to climb on, to mount; to rise, to ascend; to lift up, to raise’;
 (n.) **ʕar-g-a* ‘climbing, mounting’
773. Proto-Nostratic root **ʕaṯ-* (*~ *ʕəṯ-*):
 (vb.) **ʕaṯ-* ‘to move, to proceed, to advance (in years)’;
 (n.) **ʕaṯ-a* ‘maturity, old age; advance’; (adj.) ‘mature, old; advanced’
774. Proto-Nostratic root **ʕen-*:
 (vb.) **ʕen-* ‘to see, to notice, to pay attention’;
 (n.) **ʕen-a* ‘sight, view, attention’
775. Proto-Nostratic root **ʕeŋ-*:
 (vb.) **ʕeŋ-* ‘to think, to consider’;
 (n.) **ʕeŋ-a* ‘thought, idea, notion, concept, intention, deliberation’
776. Proto-Nostratic root **ʕey-*:
 (vb.) **ʕey-* ‘to know, to recognize’;
 (n.) **ʕey-a* ‘sight, recognition’; (adj.) ‘known, seen, recognized’
777. Proto-Nostratic (n.) **ʕig-a* ‘young of an animal, calf’
778. Proto-Nostratic root **ʕim-* (*~ *ʕem-*):
 (vb.) **ʕim-* ‘to suck, to swallow’;
 (n.) **ʕim-a* ‘the act of sucking, swallowing; breast, nipple, teat’
779. Proto-Nostratic root **ʕorʷ-*:
 (vb.) **ʕorʷ-* ‘to turn or twist round’;
 (n.) **ʕorʷ-a* ‘turning, twisting; binding, tying; sewing, weaving’
780. Proto-Nostratic (n.) **ʕub-a* ‘bosom, breast’

781. Proto-Nostratic root (Eurasianic only) **ʕuk^{wh}-* (~ **ʕok^{wh}-*):
 (vb.) **ʕuk^{wh}-* ‘to perceive, to notice, to observe’ (> ‘to see’);
 (n.) **ʕuk^{wh}-a* ‘perception, observation; seeing, sight’ (> ‘eye’)
782. Proto-Nostratic root **ʕun^v-* (~ **ʕon^v-*):
 (vb.) **ʕun^v-* ‘to eat, to drink, to swallow; to feed (on), to suck (milk from a breast)’;
 (n.) **ʕun^v-a* ‘food, meal’
783. Proto-Nostratic root **ʕur-* (~ **ʕor-*):
 (vb.) **ʕur-* ‘to be firm, hard, strong’;
 (n.) **ʕur-a* ‘firmness, hardness, strength’; (adj.) ‘firm, hard, strong’
784. Proto-Nostratic root **ʕut’-* (~ **ʕot’-*):
 (vb.) **ʕut’-* ‘to smell’;
 (n.) **ʕut’-a* ‘smell, odor, fragrance’
785. Proto-Nostratic (n.) **ʕuw-a* (~ **ʕow-a*) ‘herd of small animals, sheep and goats’

PROTO-NOSTRATIC **x*

786. Proto-Nostratic root **xal-* (~ **xəl-*):
 (vb.) **xal-* ‘to wear down, to wear out, to weaken; to be worn out, worn down, weakened’;
 (n.) **xal-a* ‘weakness, exhaustion, fatigue, weariness’; (adj.) ‘weak, worn out, tired, exhausted, weary’
 Note also:
 (vb.) **ħal-* ‘to lay waste, to destroy, to kill, to slaughter’;
 (n.) **ħal-a* ‘destruction, violence, killing, slaughter’
787. Proto-Nostratic root **xal-* (~ **xəl-*):
 (vb.) **xal-* ‘to divide, to allot, to apportion, to enumerate, to count’;
 (n.) **xal-a* ‘division, allotment, portion, share; measurement, calculation, number’
788. Proto-Nostratic root **xam-* (~ **xəm-*):
 (vb.) **xam-* ‘to be wild, fierce, brave, strong, manly’;
 (n.) **xam-a* ‘a male (human or animal)’
 Extended form (Dravidian and Indo-European):
 (vb.) **xam-V-d-* ‘to be wild, fierce, brave, strong, manly’;
 (n.) **xam-d-a* ‘a male (human or animal)’ (**xam-d-* > **xan-d-*)

789. Proto-Nostratic root **xan-* (\sim **xən-*):
 (vb.) **xan-* ‘to sprout, to flourish, to bloom’;
 (n.) **xan-a* ‘sprout, bloom, blossom’
790. Proto-Nostratic root **xan-* (\sim **xən-*):
 (vb.) **xan-* ‘to lift, to raise; to rise, to go upward, to ascend’;
 (n.) **xan-a* ‘that which is most prominent, foremost, visible, or noticeable’;
 (particle) **xan-* ‘on top of, over, above’
 Extended form:
 (n.) **xan-th-a* ‘the most prominent or foremost (person or thing), front, front part’
791. Proto-Nostratic root **xan-* (\sim **xən-*):
 Extended form:
 (n.) **xan-th-a* ‘the most prominent or foremost (person or thing), front, front part’
 Derivative of:
 (vb.) **xan-* ‘to lift, to raise; to rise, to go upward, to ascend’;
 (n.) **xan-a* ‘that which is most prominent, foremost, visible, or noticeable’;
 (particle) **xan-* ‘on top of, over, above’
792. Proto-Nostratic root **xat-* (\sim **xət-*):
 (vb.) **xat-* ‘to cut into, to hollow out, to engrave, to prick, to pierce’;
 (n.) **xat-a* ‘slice, carving, engraving, engraved line, incision’
793. Proto-Nostratic root **xol-*:
 (vb.) **xol-* ‘to be separated or apart from, by oneself, alone; to set apart’;
 (n.) **xol-a* ‘solitude, seclusion, loneliness’; (adj.) ‘alone, lonely’

PROTO-NOSTRATIC **x^w*

794. Proto-Nostratic root **x^wal-* (\sim **x^wəl-*):
 (vb.) **x^wal-* ‘to pull (off, out), to tear (off, out)’;
 (n.) **x^wal-a* ‘the act of pulling or tearing (off, out)’
795. Proto-Nostratic root **x^wat-* (\sim **x^wət-*):
 (vb.) **x^wat-* ‘to scratch, to scrape’;
 (n.) **x^wat-a* ‘the act of scratching, scraping’
796. Proto-Nostratic root **x^wat-* (\sim **x^wət-*):
 (vb.) **x^wat-* ‘to chatter, to speak’;
 (n.) **x^wat-a* ‘chatter, talk’

797. Proto-Nostratic root **x^welʷ-*:
 (vb.) **x^welʷ-* ‘to gulp down’;
 (n.) **x^welʷ-a* ‘neck, throat’
798. Proto-Nostratic root **x^wir-* (~ **x^wer-*):
 (vb.) **x^wir-* ‘to make a loud noise, to make a shrill sound’;
 (n.) **x^wir-a* ‘loud noise’

PROTO-NOSTRATIC **γ*

799. Proto-Nostratic root **γam-* (~ **γəm-*):
 (vb.) **γam-* ‘to be or become dark; to cover, to hide’;
 (n.) **γam-a* ‘darkness; sunset, evening’
800. Proto-Nostratic root **γil-* (~ **γel-*):
 (vb.) **γil-* ‘to bear, to give birth, to beget (of humans)’;
 (n.) **γil-a* ‘child, youth, young person’; (adj.) ‘young, immature’
801. Proto-Nostratic root **γor-*:
 (vb.) **γor-* ‘to leave, to go away, to depart; to separate; to abandon’;
 (n.) **γor-a* ‘leaving, departure; separation; abandonment’
 Extended form:
 (vb.) **γor-V-b-* ‘to leave, to go away, to depart; to separate; to abandon’;
 (n.) **γor-b-a* ‘leaving, departure; separation; abandonment’

PROTO-NOSTRATIC **y*

802. Proto-Nostratic root **yaʔ-* (~ **yəʔ-*):
 (vb.) **yaʔ-* ‘to tie, to bind, to gird’;
 (n.) **yaʔ-a* ‘binding, bond, bandage; belt, girdle’
803. Proto-Nostratic (n.) **yam-a* ‘water, sea’
804. Proto-Nostratic root **yan-* (~ **yən-*):
 (vb.) **yan-* ‘to say, to speak’;
 (n.) **yan-a* ‘saying, word, expression’
805. Proto-Nostratic root **yaw-* (~ **yəw-*):
 (vb.) **yaw-* ‘to produce young’;
 (n.) **yaw-a* ‘youth, young person, child’; (adj.) ‘young’
806. Proto-Nostratic (Eurasian only) (n.) **yiw-a* (~ **yew-a*) ‘grain’

807. Proto-Nostratic (n.) **yor-a* ‘set of two, group of two; a pair of ...’ (> ‘two’)

PROTO-NOSTRATIC **w*

808. Proto-Nostratic 1st person personal pronoun stem **wa-* (~ **wə-*) ‘I, me; we us’
809. Proto-Nostratic sentence particle **wa-* (~ **wə-*) ‘and, also, but; like, as’
810. Proto-Nostratic root **waɕ-* (~ **wəɕ-*):
(vb.) **waɕ-* ‘to call, to cry out, to shout’;
(n.) **waɕ-a* ‘cry, howl, clamor, shout, noise’
811. Proto-Nostratic root **wad-* (~ **wəd-*):
(vb.) **wad-* ‘to take, to lead, to carry, to bring’;
(n.) **wad-a* ‘the act of taking, leading, carrying, bringing’
812. Proto-Nostratic root **waḥ-* (~ **wəḥ-*):
(vb.) **waḥ-* ‘to strike, to stab, to wound’;
(n.) **waḥ-a* ‘wound, scar; knife, sword, blade, spear(head)’
813. Proto-Nostratic root **wak’-* (~ **wək’-*):
(vb.) **wak’-* ‘to rouse, to stir up, to excite’;
(n.) **wak’-a* ‘energy, vigor, strength, power, might’
814. Proto-Nostratic root **wal-* (~ **wəl-*):
(vb.) **wal-* ‘to be or become strong’;
(n.) **wal-a* ‘strength, power’
815. Proto-Nostratic root **wal-* (~ **wəl-*):
(vb.) **wal-* ‘to pull (out)’;
(n.) **wal-a* ‘pulling, dragging’
816. Proto-Nostratic root **wal-* (~ **wəl-*):
(vb.) **wal-* ‘to cry out, to call out, to shout’;
(n.) **wal-a* ‘sound, noise, cry, wail, lamentation, howl, hubbub’
817. Proto-Nostratic root **wal-* (~ **wəl-*):
(vb.) **wal-* ‘to go, to go away, to depart’;
(n.) **wal-a* ‘departure, flight, escape’
818. Proto-Nostratic root **wal-* (~ **wəl-*):
(vb.) **wal-* ‘to flow, to wet, to moisten’;
(n.) **wal-a* ‘flow, trickle; wetness, moisture, dampness’; (adj.) ‘wet, damp’

819. Proto-Nostratic root **wal-* (\sim **wəl-*):
 (vb.) **wal-* ‘to set fire to, to burn, to heat up, to warm’;
 (n.) **wal-a* ‘heat, warmth, boiling’
820. Proto-Nostratic root **wal-* (\sim **wəl-*):
 (vb.) **wal-* ‘to crush, to grind, to wear out; to rub, to press; to be worn out, weak; to fade, to wither, to waste away’;
 (n.) **wal-a* ‘distress, pain, difficulty; weakness, hunger, starvation’
821. Proto-Nostratic root **walʷ-* (\sim **wəlʷ-*):
 (vb.) **walʷ-* ‘to turn, to roll, to revolve’;
 (n.) **walʷ-a* ‘circle, circumference; turn, rotation’; (adj.) ‘round’
822. Proto-Nostratic root **walʷ-* (\sim **wəlʷ-*):
 (vb.) **walʷ-* ‘to blaze, to shine, to be bright’;
 (n.) **walʷ-a* ‘whiteness, glitter, luster, brightness, light’; (adj.) ‘shining, bright, white’
823. Proto-Nostratic root **wam-* (\sim **wəm-*):
 (vb.) **wam-* ‘to eject, to spit out, to spit up’;
 (n.) **wam-a* ‘spittle, vomit’
824. Proto-Nostratic root **wan-* (\sim **wən-*):
 (vb.) **wan-* ‘to stay, to remain’;
 (n.) **wan-a* ‘abode, dwelling’
825. Proto-Nostratic (n.) **wan-a* ‘share, portion, period (of time)’
826. Proto-Nostratic (n.) **wan-a* ‘first, first-born, eldest’
827. Proto-Nostratic root **wan-* (\sim **wən-*):
 (vb.) **wan-* ‘to bend’;
 (n.) **wan-a* ‘bend, curve’; (adj.) ‘crooked, bent, curved’
828. Proto-Nostratic root **way-* (\sim **wəy-*):
 (vb.) **way-* ‘to strike, to stab, to wound, to cut’;
 (n.) **way-a* ‘cut, slash, gash, wound; harm, injury; dagger, knife’
829. Proto-Nostratic (n.) **war-a* ‘man, male, male animal’
830. Proto-Nostratic root **war-* (\sim **wər-*):
 (vb.) **war-* ‘to look, to watch out for, to observe, to care for’;
 (n.) **war-a* ‘watch, vigil, guardianship, care; watchman, guard, keeper, warder’

831. Proto-Nostratic root **war-* (~ **wər-*):
 (vb.) **war-* ‘to comb’;
 (n.) **war-a* ‘comb’
832. Proto-Nostratic root **war-* (~ **wər-*):
 (vb.) **war-* ‘to stretch, to extend, to expand’;
 (n.) **war-a* ‘width, breadth, length’; (adj.) ‘wide, broad’
 Probably identical to:
 (vb.) **war-* ‘to raise, to elevate, to grow, to increase’;
 (n.) **war-a* ‘uppermost, highest, or topmost part’
833. Proto-Nostratic root **war-* (~ **wər-*):
 (vb.) **war-* ‘to raise, to elevate, to grow, to increase’;
 (n.) **war-a* ‘uppermost, highest, or topmost part’
 Probably identical to:
 (vb.) **war-* ‘to stretch, to extend, to expand’;
 (n.) **war-a* ‘width, breadth, length’; (adj.) ‘wide, broad’
834. Proto-Nostratic root **war-* (~ **wər-*):
 (vb.) **war-* ‘to burn, to blaze’;
 (n.) **war-a* ‘blaze, flame, heat, warmth’
835. Proto-Nostratic root **war-* (~ **wər-*) and/or **wir-* (~ **wer-*):
 (vb.) **war-* and/or **wir-* ‘to say, to speak, to tell, to point out, to make known’;
 (n.) **war-a* and/or **wir-a* ‘news, report, gossip, speech’
836. Proto-Nostratic root **wasʷ-* (~ **wəsʷ-*):
 (vb.) **wasʷ-* ‘to be or become worn out, tired, weary, fatigued, exhausted’;
 (n.) **wasʷ-a* ‘weariness, fatigue, exhaustion’
 Identical to:
 (vb.) **wasʷ-* ‘to crush, to grind, to pound, to wear out; to wither, to fade, to rot away, to waste away, to dry up, to decay’;
 (n.) **wasʷ-a* ‘the act of crushing, grinding, pounding; wasting away, decay, decomposition’
837. Proto-Nostratic root **wasʷ-* (~ **wəsʷ-*):
 (vb.) **wasʷ-* ‘to crush, to grind, to pound, to wear out; to wither, to fade, to rot away, to waste away, to dry up, to decay’;
 (n.) **wasʷ-a* ‘the act of crushing, grinding, pounding; wasting away, decay, decomposition’
 Identical to:
 (vb.) **wasʷ-* ‘to be or become worn out, tired, weary, fatigued, exhausted’;
 (n.) **wasʷ-a* ‘weariness, fatigue, exhaustion’

838. Proto-Nostratic root **waš-* (~ **wəš-*):
 (vb.) **waš-* ‘to add (to), to augment, to increase, to heap up’;
 (n.) **waš-a* ‘augmentation, increase, addition, increment’; (adj.) ‘increased, augmented, heaped up, filled, full’
839. Proto-Nostratic root **wath-* (~ **wəth-*):
 (vb.) **wath-* ‘to pass (of time); to grow old, to age’;
 (n.) **wath-a* ‘year, age’; (adj.) ‘old’
840. Proto-Nostratic root **wath-* (~ **wəth-*):
 (vb.) **wath-* ‘to say, to speak, to be talkative’;
 (n.) **wath-a* ‘sound, cry, chatter, babble, report’
841. Proto-Nostratic (n.) **wat^y-a* ‘the belly, stomach, bowels; womb; the interior or inside of anything’
842. Proto-Nostratic exclamation **way* ‘woe!’
843. Proto-Nostratic root **waž-* (~ **wəž-*):
 (vb.) **waž-* ‘to flow’;
 (n.) **waž-a* ‘running water’
844. Proto-Nostratic root **wed-*:
 (vb.) **wed-* ‘to strike (with a weapon)’;
 (n.) **wed-a* ‘death, ruin, murder; strike, cut, wound, scar; weapon, axe’
845. Proto-Nostratic root **wel-*:
 (vb.) **wel-* ‘to slay, to fight’;
 (n.) **wel-a* ‘conquest, victory, defeat, slaughter, massacre; fight, battle, attack’
846. Proto-Nostratic root **wel^y-*:
 (vb.) **wel^y-* ‘to be open, to be vacant’;
 (n.) **wel^y-a* ‘open space, open land, field, meadow’
847. Proto-Nostratic root **wel^y-*:
 (vb.) **wel^y-* ‘to well up, to surge, to flow forth, to flood’;
 (n.) **wel^y-a* ‘deluge, flood, inundation; surge, wave’
848. Proto-Nostratic root **wet’-*:
 (vb.) **wet’-* ‘to wet, to moisten’;
 (n.) **wet’-a* ‘water’
849. Proto-Nostratic root **wig-* (~ **weg-*):
 (vb.) **wig-* ‘to carry, to convey’;
 (n.) **wig-a* ‘burden, load; conveyance, cart, vehicle’

850. Proto-Nostratic root **wily-* (∼ **welʷ-*):
 (vb.) **wily-* ‘to become bright, to manifest, to appear, to come into view’;
 (n.) **wily-a* ‘appearance, manifestation; light, brightness, radiance, splendor’;
 (adj.) ‘bright, manifest, clear’
851. Proto-Nostratic root **win-* (∼ **wen-*) or **wiŋ-* (∼ **weŋ-*):
 (vb.) **win-* or **wiŋ-* ‘to strive for, to wish for, to desire’;
 (n.) **win-a* or **wiŋ-a* ‘wish, desire’
852. Proto-Nostratic (n.) **wir-a* ‘a kind of tree: aspen, alder, poplar, or the like’
853. Proto-Nostratic root (Eurasian only) **wos-*:
 (vb.) **wos-* ‘to trade, to deal’;
 (n.) **wos-a* ‘trade, commerce’
854. Proto-Nostratic root **woth-*:
 (vb.) **woth-* ‘to take hold of, to seize, to grasp, to collect, to take away’;
 (n.) **woth-a* ‘the act of taking, seizing, grasping’
855. Proto-Nostratic root (Eurasian only) **woy-*:
 (vb.) **woy-* ‘to make an effort, to act with energy’;
 (n.) **woy-a* ‘strength, power’
856. Proto-Nostratic root (vb.) **woy-*:
 Extended form:
 (vb.) **woy-V-kh-* ‘to arrange or put in order’;
 (n.) **woy-kh-a* ‘arrangement, order; straightness, correctness, rectitude’; (adj.)
 ‘straight, right, correct, true’
857. Proto-Nostratic (n.) **wun-d-a* (∼ **won-d-a*) ‘(young, fine, or soft) hair’
858. Proto-Nostratic (n.) **wur-a* (∼ **wor-a*) ‘squirrel’
859. Proto-Nostratic root **wurʷ-* (∼ **worʷ-*):
 (vb.) **wurʷ-* ‘to scratch, to incise, to dig up’;
 (n.) **wurʷ-a* ‘pit, ditch’
860. Proto-Nostratic root (Eurasian only) **wuy-* (∼ **woy-*) or **Huy-* (∼ **Hoy-*):
 (vb.) **wuy-* or **Huy-* ‘to swim, to float’;
 (n.) **wuy-a* or **Huy-a* ‘swim, swimming, floating’

PROTO-NOSTRATIC *m

861. Proto-Nostratic indefinite pronoun stem **ma-* (\sim **mǝ-*), **mi-* (\sim **me-*), **mu-* (\sim **mo-*) ‘one, someone, somebody, anyone, anybody; other, another’:

Note: This may originally have been a demonstrative stem (as suggested by Illič-Svityč), with three degrees of distance:

Proximate: **ma-* (\sim **mǝ-*) ‘this’;

Intermediate: **mi-* (\sim **me-*) ‘that’;

Distant: **mu-* (\sim **mo-*) ‘that yonder’

As in the stems:

Proximate: **k^ha-* (\sim **k^hǝ-*) ‘this’;

**t^ha-* (\sim **t^hǝ-*) ‘this’;

Intermediate: **k^hi-* (\sim **k^he-*) ‘that’;

**t^hi-* (\sim **t^he-*) ‘that’;

Distant: **k^hu-* (\sim **k^ho-*) ‘that yonder’

**t^hu-* (\sim **t^ho-*) ‘that yonder’

862. Proto-Nostratic (nursery word) (n.) **ma(a)* ‘mother, mommy’, (reduplicated) **mam(m)a*, **mema* ‘mother; (mother’s) breast, milk’; used as a verb, the meaning was probably ‘to suckle, to nurse; to suck (the breast)’

863. Proto-Nostratic negative/prohibitive particle **ma(?)*- (\sim **mǝ(?)*-) ‘no, not’

864. Proto-Nostratic root **maʔ-* (\sim **mǝʔ-*):

(vb.) **maʔ-* ‘to increase (in number), to be abundant, to be many’;

(n.) **maʔ-a* ‘large quantity, plenty, abundance’; (adj.) ‘great, big, large, many, abundant’

865. Proto-Nostratic root **mad-* (\sim **mǝd-*):

(vb.) **mad-* ‘to stretch, to expand, to lengthen, to draw out, to measure out’;

(n.) **mad-a* ‘measure, measurement, amount; extent, limit’

Note also:

(vb.) **mat’-* ‘to stretch, to expand, to lengthen, to draw out, to measure out’;

(n.) **mat’-a* ‘measure, measurement, amount; extent, limit’

866. Proto-Nostratic (n.) **mad-w-a* ‘honey, mead’

867. Proto-Nostratic root **mag-* (\sim **mǝg-*):

(vb.) **mag-* ‘to be of great influence, importance, or power; to be eminent, exalted, highly esteemed, glorious, illustrious’;

(n.) **mag-a* ‘strength, power, might; glory, splendor, magnificence, grandeur, nobility, honor, distinction, excellence’; (adj.) ‘strong, powerful, eminent, exalted, highly esteemed, glorious, illustrious’

868. Proto-Nostratic (Eurasianic only) (n.) **mag-a* ‘earth, land’

869. Proto-Nostratic (n.) **mag-a* ‘young person, child’; (adj.) ‘young’
870. Proto-Nostratic root **mah-* (∼ **məh-*):
 (vb.) **mah-* ‘to increase, to swell, to exceed, to surpass, to be great’;
 (n.) **mah-a* ‘bigness, greatness, fullness, excellence’; (adj.) ‘big, great, full’
871. Proto-Nostratic (n.) **mak^h-a* ‘neck’
872. Proto-Nostratic root **mak^h-* (∼ **mək^h-*):
 (vb.) **mak^h-* ‘to deceive, to trick, to cheat; to be deceived, troubled, confused, perplexed’;
 (n.) **mak^h-a* ‘deception, trickery, confusion’
873. Proto-Nostratic root **mak’-* (∼ **mək’-*):
 (vb.) **mak’-* ‘to be great, strong, mighty, powerful’;
 (n.) **mak’-a* ‘strength, power’; (adj.) ‘great, strong, powerful; much, many’
 Note also:
 (vb.) **mik’-* ‘to exceed, to surpass, to be in excess, to grow, to increase, to swell, to expand’;
 (n.) **mik’-a* ‘growth, excess, increase, abundance, fullness’; (adj.) ‘large, big, great, much’
874. Proto-Nostratic root **mak’-* (∼ **mək’-*):
 (vb.) **mak’-* ‘to be happy, cheerful; to be pleasant, agreeable’;
 (n.) **mak’-a* ‘happiness, joy, pleasure’
875. Proto-Nostratic (n.) **mal-a* ‘hill, mountain’
876. Proto-Nostratic root **mal-* (∼ **məl-*):
 (vb.) **mal-* ‘to fill, to be or become full, to increase’;
 (n.) **mal-a* ‘fullness, abundance’; (adj.) ‘full, filled, abundant, numerous, many’
877. Proto-Nostratic root **mal-* (∼ **məl-*):
 (vb.) **mal-* ‘to be favorably disposed towards, to care about, to be devoted to, to like’;
 (n.) **mal-a* ‘goodness, pleasantness’; (adj.) ‘good, pleasant, pleasing’
878. Proto-Nostratic (n.) **mal-a* ‘honey’
879. Proto-Nostratic root **mal-* (∼ **məl-*):
 (vb.) **mal-* ‘to draw (out), to squeeze (out), to suck (out); to give suck, to suckle, to nurse’;
 (n.) **mal-a* ‘milk; breast’

880. Proto-Nostratic root (Eurasianic only) **mal-* (~ **māl-*):
 (vb.) **mal-* ‘to rub, to wipe, to stroke’;
 (n.) **mal-a* ‘the act of rubbing, wiping, stroking’
881. Proto-Nostratic (adj.) **mal-a* ‘other, next, second’
882. Proto-Nostratic root **mal-* (~ **māl-*):
 (vb.) **mal-* ‘to bend, to twist, to turn’;
 (n.) **mal-a* ‘bend, turn’
 Derivative:
 (vb.) **mal-* ‘to be confused, perplexed, disturbed, bewildered, mistaken’;
 (n.) **mal-a* ‘confusion, perplexity, bewilderment’
883. Proto-Nostratic root **mal-* (~ **māl-*):
 (vb.) **mal-* ‘to be confused, perplexed, disturbed, bewildered, mistaken’;
 (n.) **mal-a* ‘confusion, perplexity, bewilderment’
 Derivative of:
 (vb.) **mal-* ‘to bend, to twist, to turn’;
 (n.) **mal-a* ‘bend, turn’
884. Proto-Nostratic root **man-* (~ **mān-*):
 (vb.) **man-* ‘to suckle, to nurse (a child), to breastfeed’;
 (n.) **man-a* ‘suckling, young (of humans and animals); breast’
885. Proto-Nostratic root **man-* (~ **mān-*):
 (vb.) **man-* ‘to count, to reckon’ (> ‘to consider, to think’ > ‘to recount’ > ‘to say, to speak’);
 (n.) **man-a* ‘counting, reckoning’
- Note: There may be more than one Proto-Nostratic root involved here: (1) **man-* ‘to count, to reckon’ and (2) **man-* ‘to say, to speak’.
886. Proto-Nostratic root **man-* (~ **mān-*):
 (vb.) **man-* ‘to stay, to remain, to abide, to dwell; to be firm, steadfast, established, enduring’;
 (n.) **man-a* ‘dwelling, house, home’
887. Proto-Nostratic root **man-* (~ **mān-*):
 (vb.) **man-* ‘to protect, to watch over, to stand guard over, to care for, to take care of, to tend’;
 (n.) **man-a* ‘protection, care, guardianship; watchman, herdsman, guardian, protector’

888. Proto-Nostratic root **man-* (~ **mən-*):
 (vb.) **man-* ‘to swell, to expand, to grow, to increase’;
 (n.) **man-a* ‘multitude, crowd, herd, flock’
 Related to (extended form):
 (vb.) **man-V-g-* ‘to swell, to expand, to grow, to increase’;
 (n.) **man-g-a* ‘great number, large amount; abundance; multitude, crowd’;
 (adj.) ‘many, numerous, copious, abundant; swollen, big, fat, strong’
889. Proto-Nostratic root **man-* (~ **mən-*):
 Extended form:
 (vb.) **man-V-g-* ‘to swell, to expand, to grow, to increase’;
 (n.) **man-g-a* ‘great number, large amount; abundance; multitude, crowd’;
 (adj.) ‘many, numerous, copious, abundant; swollen, big, fat, strong’
 Related to:
 (vb.) **man-* ‘to swell, to expand, to grow, to increase’;
 (n.) **man-a* ‘multitude, crowd, herd, flock’
890. Proto-Nostratic root **man^y-* (~ **mən^y-*):
 (vb.) **man^y-* ‘to lust after, to desire passionately, to copulate with, to have sexual intercourse, to beget’;
 (n.) **man^y-a* ‘ardent desire, passion, lust’
 Derivative:
 (n.) **man^y-a* ‘progenitor, begetter, man, male; penis’
891. Proto-Nostratic (n.) **man^y-a* ‘progenitor, begetter, man, male; penis’
 Derivative of:
 (vb.) **man^y-* ‘to lust after, to desire passionately, to copulate with, to have sexual intercourse, to beget’;
 (n.) **man^y-a* ‘ardent desire, passion, lust’
892. Proto-Nostratic root **man^y-* (~ **mən^y-*):
 (vb.) **man^y-* ‘to hold, to take’;
 (n.) **man^y-a* ‘hand, paw’
893. Proto-Nostratic root **maq^{wh}-* (~ **məq^{wh}-*):
 (vb.) **maq^{wh}-* ‘to twist, to turn; to overturn, to turn upside down, to turn round’;
 (n.) **maq^{wh}-a* ‘twist, turn; overturning’
894. Proto-Nostratic root **mar-* (~ **mər-*):
 (vb.) **mar-* ‘to strive against, to oppose, to fight with or against; to argue, to quarrel, to contend, to dispute, to disagree’;
 (n.) **mar-a* ‘quarrel, argument, dispute, fight’
895. Proto-Nostratic (n.) **mar-a* ‘(young) man, male (human or animal)’

896. Proto-Nostratic root **mar-* (~ **mər-*):
 (vb.) **mar-* ‘to turn: to overturn, to turn round, to turn over, etc.; to twist, to whirl, to roll; to bend’;
 (n.) **mar-a* ‘the act of turning, turning over, turning round, etc.; rope, coil, string, cord’
 Derivative:
 (vb.) **mar-* ‘to go (round), to walk, to run; to go after, to run or chase after’ (> ‘to seek, to pursue’);
 (n.) **mar-a* ‘walk, walking, passage; road, track, way’
 Note also:
 (vb.) **mur-* ‘to turn, to twist, to bend’;
 (n.) **mur-a* ‘bend, curve’
897. Proto-Nostratic root **mar-* (~ **mər-*):
 (vb.) **mar-* ‘to go (round), to walk, to run; to go after, to run or chase after’ (> ‘to seek, to pursue’);
 (n.) **mar-a* ‘walk, walking, passage; road, track, way’
 Derivative of:
 (vb.) **mar-* ‘to turn: to overturn, to turn round, to turn over, etc.; to twist, to whirl, to roll; to bend’;
 (n.) **mar-a* ‘the act of turning, turning over, turning round, etc.; rope, coil, string, cord’
898. Proto-Nostratic root **mar-* (~ **mər-*):
 (vb.) **mar-* ‘to smear, to anoint, to rub (with grease, oil, fat, ointment)’;
 (n.) **mar-a* ‘grease, oil, fat, ointment, unguent’
899. Proto-Nostratic root **mar-* (~ **mər-*):
 (vb.) **mar-* ‘to soil, to stain’;
 (n.) **mar-a* ‘spot, stain, dirt’; (adj.) ‘dark, dirty, soiled’
900. Proto-Nostratic (Eurasian only) (n.) **mar-a* ‘marsh, swamp’
901. Proto-Nostratic (n.) **mar-a* ‘tree, wood’
902. Proto-Nostratic root **marʷ-* (~ **mərʷ-*):
 (vb.) **marʷ-* ‘to be weakened, to wither away, to decay; to be or become sick, to fall ill; to die (from a fatal disease), to perish’;
 (n.) **marʷ-a* ‘sickness, illness, fatal disease, malady, ailment; death’
903. Proto-Nostratic (n.) **mar-a* ‘horned animal, game’
904. Proto-Nostratic (n.) **math-a* or **meth-a* ‘middle’; (particle) **math-* or **meth-* ‘in the middle of, with, among’

905. Proto-Nostratic root **mat’*- (~ **mæt’*-):
 (vb.) **mat’*- ‘to stretch, to expand, to lengthen, to draw out, to measure out’;
 (n.) **mat’-a* ‘measure, measurement, amount; extent, limit’
 Note also:
 (vb.) **mad-* ‘to stretch, to expand, to lengthen, to draw out, to measure out’;
 (n.) **mad-a* ‘measure, measurement, amount; extent, limit’
906. Proto-Nostratic root **mat’*- (~ **mæt’*-):
 (vb.) **mat’*- ‘to be or become wet, moist’;
 (n.) **mat’-a* ‘moisture, wetness; dew, rain’; (adj.) ‘wet, moist’
907. Proto-Nostratic root **maw-* (~ **maw-*):
 (vb.) **maw-* ‘to be wet’;
 (n.) **maw-a* ‘water, liquid, fluid’
908. Proto-Nostratic root **mel-*:
 (vb.) **mel-* ‘to rub’ (> ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’);
 (n.) **mel-a* ‘smoothness, softness; weakness’; (adj.) ‘smooth, soft, tender, weak, worn out, tired, weary’
 Note also:
 (vb.) **mol-* ‘to rub’ (> ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’);
 (n.) **mol-a* ‘crumb, piece, morsel; mortar’; (adj.) ‘crushed, ground, worn out or down’
909. Proto-Nostratic interrogative pronoun stem **mi-* (~ **me-*) ‘who?, which?, what?’, relative pronoun stem **ma-* (~ **mā-*) ‘who, which, what’
910. Proto-Nostratic first person singular **mi* (~ **me*) ‘I, me’, first person plural (inclusive) **ma* (~ **mā*) ‘we, us’

 Note: In Afrasian and Dravidian, first person singular **mi* and first person plural (inclusive) **ma* have been mostly lost.
911. Proto-Nostratic root **miʔ-* (~ **meʔ-*):
 (vb.) **miʔ-* ‘to cut’;
 (n.) **miʔ-a* ‘cutting instrument: knife’ (later also ‘sickle, scythe’)
912. Proto-Nostratic root **mig-* (~ **meg-*):
 (vb.) **mig-* ‘to give’;
 (n.) **mig-a* ‘gift’

913. Proto-Nostratic root **miḥ-* (~ **meḥ-*):
 (vb.) **miḥ-* ‘to measure, to mark off’;
 (n.) **miḥ-a* ‘measure, measurement’
914. Proto-Nostratic root **mik’-* (~ **mek’-*):
 (vb.) **mik’-* ‘to exceed, to surpass, to be in excess, to grow, to increase, to swell, to expand’;
 (n.) **mik’-a* ‘growth, excess, increase, abundance, fullness’; (adj.) ‘large, big, great, much’
 Note also:
 (vb.) **mak’-* ‘to be great, strong, mighty, powerful’;
 (n.) **mak’-a* ‘strength, power’; (adj.) ‘great, strong, powerful; much, many’
915. Proto-Nostratic (n.) **min-a* ‘(a kind of) fish’
916. Proto-Nostratic root **mir-* (~ **mer-*):
 (vb.) **mir-* ‘to stab, to pierce, to wound, to cause pain’;
 (n.) **mir-a* ‘wound, pain’
917. Proto-Nostratic root **mol-*:
 (vb.) **mol-* ‘to rub’ (> ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’);
 (n.) **mol-a* ‘crumb, piece, morsel; mortar’; (adj.) ‘crushed, ground, worn out or down’
 Note also:
 (vb.) **mel-* ‘to rub’ (> ‘to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary’);
 (n.) **mel-a* ‘smoothness, softness; weakness’; (adj.) ‘smooth, soft, tender, weak, worn out, tired, weary’
918. Proto-Nostratic (n.) **mor-a* ‘any body of water: sea, lake, flood, stream, pool, cistern, reservoir, basin, canal, channel’
919. Proto-Nostratic root **mud-* (~ **mod-*):
 (vb.) **mud-* ‘to finish, to end, to complete, to accomplish, to achieve, to perish’;
 (n.) **mud-a* ‘end, finish, completion, accomplishment, achievement’
920. Proto-Nostratic **muk’-* (~ **mok’-*):
 (vb.) **muk’-* ‘to strain, to make great efforts’;
 (n.) **muk’-a* ‘straining (as a woman in labor or as when defecating), effort; fatigue, suffering’

921. Proto-Nostratic root **mun-* (~ **mon-*):
 (vb.) **mun-* ‘to protrude, to stand out; to jut out; to be first, foremost, in front of’;
 (n.) **mun-a* ‘topmost or most prominent part, highest or farthest point’
922. Proto-Nostratic (n.) **mun-a* ‘egg, testicle’
 Extended form (Dravidian and Indo-European [only in Slavic]):
 (n.) **mun-d-a* (~ **mon-d-a*) ‘egg, testicle’
923. Proto-Nostratic root **muŋ-* (~ **moŋ-*):
 (vb.) **muŋ-* ‘to torment, to torture, to afflict; to cause pain, trouble, distress, suffering, difficulty; to suffer; to be in pain, trouble, distress, suffering, difficulty’;
 (n.) **muŋ-a* ‘suffering, pain, malady, difficulty, distress, affliction, calamity, misery’
924. Proto-Nostratic root **mur-* (~ **mor-*):
 (vb.) **mur-* ‘to crush, to break, to destroy’;
 (n.) **mur-a* ‘break, breach, rupture, fracture’; (adj.) ‘crushed, broken, destroyed, ruptured, mutilated; weakened’
925. Proto-Nostratic root **mur-* (~ **mor-*):
 (vb.) **mur-* ‘to turn, to twist, to bend’;
 (n.) **mur-a* ‘bend, curve’
 Note also:
 (vb.) **mar-* ‘to turn: to overturn, to turn round, to turn over, etc.; to twist, to whirl, to roll; to bend’;
 (n.) **mar-a* ‘the act of turning, turning over, turning round, etc.; rope, coil, string, cord’
926. Proto-Nostratic (Eurasian only) (n.) **mur-a* ‘mulberry, blackberry’
927. Proto-Nostratic root **mur-* (~ **mor-*):
 (vb.) **mur-* ‘to make noise, to make sound, to murmur’;
 (n.) **mur-a* ‘noise, sound, murmur’
 Reduplicated:
 (vb.) **mur-mur-* ‘to make noise, to make sound, to murmur’;
 (n.) **mur-mur-a* ‘noise, sound, murmur’
928. Proto-Nostratic root **musʷ-* (~ **mosʷ-*):
 (vb.) **musʷ-* ‘to immerse, dip, or plunge in water, to bathe’;
 (n.) **musʷ-a* ‘immersion, dip, plunge, bath’
 Extended form (Indo-European and Uralic):
 (vb.) **musʷ-V-k-* ‘to immerse, dip, or plunge in water, to bathe’;
 (n.) **musʷ-k-a* ‘immersion, dip, plunge, bath’

929. Proto-Nostratic root **muy-* (\sim **moy-*):
 (vb.) **muy-* ‘to return, to give back’;
 (n.) **muy-a* ‘that which is returned or given back: return, recompense, requital, repayment, etc.’

PROTO-NOSTRATIC **n*

930. Proto-Nostratic first person singular personal pronoun **na* (\sim **nə*) ‘I, me’

Note: On the basis of Dravidian (and possibly Altaic), the original form of this stem may have been **ŋa* (\sim **ŋə*), but this is not certain. Sumerian [Emegir] *ĝá.e* [= /ŋa-/] ‘I’ supports such a reconstruction as well.

931. Proto-Nostratic first person plural exclusive personal pronoun **na* (\sim **nə*) ‘we, us’
932. Proto-Nostratic deictic particle **na* (\sim **nə*), **ni* (\sim **ne*) ‘this, that’
933. Proto-Nostratic interrogative-relative particle **na-* (\sim **nə-*)
934. Proto-Nostratic negative/prohibitive particle **na* (\sim **nə*), **ni* (\sim **ne*), **nu* (\sim **no*) ‘no, not’
935. Proto-Nostratic root **naf-* (\sim **nəf-*):
 (vb.) **naf-* ‘to come, to go, to journey, to travel’;
 (n.) **naf-a* ‘journey’
936. Proto-Nostratic root **nab-* (\sim **nəb-*):
 (vb.) **nab-* ‘to burst forth, to gush forth’;
 (n.) **nab-a* ‘a bursting or gushing forth’
 Derivative:
 (n.) **nab-a* ‘heavy rain, storm cloud, cloudy sky’
937. Proto-Nostratic (n.) (Eurasian only) **nab-a* ‘heavy rain, storm cloud, cloudy sky’
 Derivative of:
 (vb.) **nab-* ‘to burst forth, to gush forth’;
 (n.) **nab-a* ‘a bursting or gushing forth’
938. Proto-Nostratic root **nad^y-* (\sim **nəd^y-*):
 (vb.) **nad^y-* ‘to press, to crush, to mash’;
 (n.) **nad^y-a* ‘anything crushed or mashed’

939. Proto-Nostratic root **nad^y-* (~ **nəd^y-*):
 (vb.) **nad^y-* ‘to vex, to disturb, to annoy, to irritate, to agitate; to be annoying, irritating, malicious, rude, bad, mean, base’;
 (n.) **nad^y-a* ‘vexation, disturbance, annoyance, irritation, trouble’; (adj.) ‘annoying, irritating, malicious, rude, bad, mean, base’
940. Proto-Nostratic root **nag-* (~ **nəg-*):
 (vb.) **nag-* ‘to strike, to split, to pierce, to stab’;
 (n.) **nag-a* ‘stroke, blow, wound’
941. Proto-Nostratic root **naḥ-* (~ **nəḥ-*):
 (vb.) **naḥ-* ‘to tremble, to shake; to fear, to be afraid’;
 (n.) **naḥ-a* ‘fear’
942. Proto-Nostratic (n.) **nak^h-a* ‘(animal) skin, pelt, hide’
943. Proto-Nostratic root **nak^{wh}-* (~ **nək^{wh}-*):
 (vb.) **nak^{wh}-* ‘to lie down, to go to sleep, to go to bed’;
 (n.) **nak^{wh}-a* ‘bedtime, evening, nighttime’
944. Proto-Nostratic root **nap^h-* (~ **nəp^h-*), **nip^h-* (~ **nep^h-*), **nup^h-* (~ **nop^h-*):
 (vb.) **nap^h-*, **nip^h-*, **nup^h-* ‘to breathe, to blow’;
 (n.) **nap^h-a*, **nip^h-a*, **nup^h-a* ‘breath, life’
945. Proto-Nostratic (n.) **nat’-a* ‘woman, female relative’
946. Proto-Nostratic root **nat’-* (~ **nət’-*):
 (vb.) **nat’-* ‘to moisten, to wet’;
 (n.) **nat’-a* ‘wetness, dampness, moistness’; (adj.) ‘wet, damp, moist’
947. Proto-Nostratic (n.) **ner-a* ‘the highest, foremost, or most prominent person or thing’
948. Proto-Nostratic root **net^y-*:
 (vb.) **net^y-* ‘to turn, to twist together, to tie, to bind, to weave, to entwine’;
 (n.) **net^y-a* ‘anything twisted together, woven, entwined: mat, net, web, etc.; weaving, entwining, braiding’
949. Proto-Nostratic second person personal pronoun stem **ni* (~ **ne*) and/or **na* (~ **nə*) ‘you’
950. Proto-Nostratic root **nik^h-* (~ **nek^h-*):
 (vb.) **nik^h-* ‘to strike, to hit’;
 (n.) **nik^h-a* ‘injury, harm, damage, wound, murder, destruction; suffering, pain’

951. Proto-Nostratic root **nitʰh-* (~ **netʰh-*):
 (vb.) **nitʰh-* ‘to lift (up), to raise; to carry, to take; to rise, to arise’;
 (n.) **nitʰh-a* ‘the act of lifting, raising, carrying’
952. Proto-Nostratic root **nusʷ-* (~ **nosʷ-*):
 (vb.) **nusʷ-* ‘to be small, minute, soft, weak, delicate’;
 (n.) **nusʷ-a* ‘smallness, insufficiency, decrease, diminishment’; (adj.) ‘small, minute, soft, weak, delicate’
 Derivatives:
 (n.) **nusʷ-a* ‘woman, female; any female connected by marriage: wife, bride, sister-in-law, daughter-in-law’
 (vb.) **nusʷ-* ‘to be weakened, debilitated, sick; to ache, to suffer, to be in pain’;
 (n.) **nusʷ-a* ‘weakness, sickness, disease, malady, ache, pain, affliction’
953. Proto-Nostratic (n.) **nusʷ-a* ‘woman, female; any female connected by marriage: wife, bride, sister-in-law, daughter-in-law’
 Derivative of:
 (vb.) **nusʷ-* ‘to be small, minute, soft, weak, delicate’;
 (n.) **nusʷ-a* ‘smallness, insufficiency, decrease, diminishment’; (adj.) ‘small, minute, soft, weak, delicate’
- Semantic development as in Naikri *koraʃ* ‘daughter-in-law, bride’ and Telugu *kōḍalu* ‘daughter-in-law’, both from the same stem found in Tamil *kuṛa* ‘young, tender’, Kannaḍa *koḍa* ‘tenderness, tender age, youth’, Tuḷu *korè* ‘weak, small’, etc.
954. Proto-Nostratic root **nusʷ-* (~ **nosʷ-*):
 (vb.) **nusʷ-* ‘to be weakened, debilitated, sick; to ache, to suffer, to be in pain’;
 (n.) **nusʷ-a* ‘weakness, sickness, disease, malady, ache, pain, affliction’
 Derivative of:
 (vb.) **nusʷ-* ‘to be small, minute, soft, weak, delicate’;
 (n.) **nusʷ-a* ‘smallness, insufficiency, decrease, diminishment’; (adj.) ‘small, minute, soft, weak, delicate’
955. Proto-Nostratic (adv.) **nuw-* ‘now, at present, currently’

PROTO-NOSTRATIC **nʷ*

956. Proto-Nostratic root **nʷaʃ-* (~ **nʷəʃ-*):
 Extended form:
 (vb.) **nʷaʃ-V-r-* ‘to appear, to arise, to sprout, to come into being; to grow (up), to mature’;

(n.) **nʷaʕ-r-a* ‘shoot, sprout, seedling’

Derivative:

(n.) **nʷaʕ-r-a* ‘young man, boy, youth’

957. Proto-Nostratic (n.) **nʷaʕ-r-a* ‘young man, boy, youth’

Derivative of:

(vb.) **nʷaʕ-V-r-* ‘to appear, to arise, to sprout, to come into being; to grow (up), to mature’;

(n.) **nʷaʕ-r-a* ‘shoot, sprout, seedling’

958. Proto-Nostratic root **nʷam-* (~ **nʷəm-*):

(vb.) **nʷam-* ‘to press, to squeeze’;

(n.) **nʷam-a* ‘pressing, squeezing’

959. Proto-Nostratic (n.) **nʷaph-a* ‘offspring, descendant, young one’

960. Proto-Nostratic root **nʷukʰ-* (~ **nʷokʰ-*):

(vb.) **nʷukʰ-* ‘to shake, to tremble’;

(n.) **nʷukʰ-a* ‘shaking, trembling’

PROTO-NOSTRATIC *I

961. Proto-Nostratic root **lab-* (~ **ləb-*):

(vb.) **lab-* ‘to take hold of, to grasp’;

(n.) **lab-a* ‘taking, grasping’

Possible derivative:

(vb.) **lab-* ‘to eat greedily, to lap (up), to suck milk’;

(n.) **lab-a* ‘eating, sucking’

962. Proto-Nostratic root **lab-* (~ **ləb-*):

(vb.) **lab-* ‘to eat greedily, to lap (up), to suck milk’;

(n.) **lab-a* ‘eating, sucking’

Possibly related to or derived from:

(vb.) **lab-* ‘to take hold of, to grasp’;

(n.) **lab-a* ‘taking, grasping’

Assuming semantic development from ‘to grasp with the teeth’ > ‘to eat greedily’ as in Proto-Tungus **laba-da-* ‘to eat greedily’.

963. Proto-Nostratic root **lag-* (~ **ləg-*):

(vb.) **lag-* ‘to put, place, lay, or set down’;

(n.) **lag-a* ‘the act of putting, placing, laying, or setting down’

964. Proto-Nostratic root **lah-* (*~ *ləh-*):
 (vb.) **lah-* ‘to shine, to blaze, to burn’;
 (n.) **lah-a* ‘shining, blazing, burning’
965. Proto-Nostratic root **lah̃-* (*~ *ləh̃-*):
 (vb.) **lah̃-* ‘to make flow, to pour, to moisten, to wet’;
 (n.) **lah̃-a* ‘flowing, pouring; moistness, wetness’
966. Proto-Nostratic root **lah̄-* (*~ *ləh̄-*):
 (vb.) **lah̄-* ‘to strike, to fight’;
 (n.) **lah̄-a* ‘fight, battle, slaughter’
967. Proto-Nostratic root **lak^h-* (onomatopoetic):
 (vb.) **lak^h-* ‘to lick, to lap up’;
 (n.) **lak^h-a* ‘licking’
968. Proto-Nostratic **lak^h-* (*~ *lək^h-*):
 (vb.) **lak^h-* ‘to go on foot, to travel on foot’;
 (n.) **lak^h-a* ‘leg, foot’
969. Proto-Nostratic root **lak’-* (*~ *lək’-*):
 (vb.) **lak’-* ‘to gather, to collect’;
 (n.) **lak’-a* ‘collection’; (adj.) ‘gathered, collected, picked, chosen’
970. Proto-Nostratic root **lak’-* (*~ *lək’-*), **lik’-* (*~ *lek’-*), **luk’-* (*~ *lok’-*)
 (onomatopoetic):
 (vb.) **lak’-*, **lik’-*, **luk’-* ‘to lick’;
 (n.) **lak’-a*, **lik’-a*, **luk’-a* ‘licking’
971. Proto-Nostratic root **lam-* (*~ *ləm-*):
 (vb.) **lam-* ‘to bend down, to stoop down, to sink down, to lie down, to duck down; to be or become bent down, curved down; to be low’;
 (n.) **lam-a* ‘lowland, low-lying ground, any piece of land’; (adj.) ‘low’
 Extended form:
 (vb.) **lam-V-d-* ‘to bend down, to stoop down, to sink down, to lie down, to duck down; to be or become bent down, curved down; to be low’;
 (n.) **lam-d-a* ‘lowland, low-lying ground, any piece of land’; (adj.) ‘low’
972. Proto-Nostratic root **lam-* (*~ *ləm-*) *~ (?) *l̥am-* (*~ *l̥ə̃m-*):
 (vb.) **lam-* ‘to break down or apart (tr.), to crush; to soften, to weaken; to be or become soft, weak, mild, tender, broken, crushed’;
 (n.) **lam-a* ‘softness, weakness’; (adj.) ‘soft, weak, flexible; broken, crushed’

973. Proto-Nostratic root **lap^h-* (~ **lɔp^h-*):
 (vb.) **lap^h-* ‘to stretch out, to flatten’
 (n.) **lap^h-a* ‘flat surface’; (adj.) ‘flat, broad; even, level’
974. Proto-Nostratic root **las^y-* (~ **ləs^y-*), **lis^y-* (~ **les^y-*), **lus^y-* (~ **los^y-*) (?)
 (onomatopoeic):
 (vb.) **las^y-*, **lis^y-*, **lus^y-* ‘to lick, to lap (up)’;
 (n.) **las^y-a*, **lis^y-a*, **lus^y-a* ‘tongue; lip’
975. Proto-Nostratic (n.) **lat^h-a* ‘skin’
976. Proto-Nostratic root **law-* (~ **lɔw-*):
 (vb.) **law-* ‘to bend, to twist, to turn’;
 (n.) **law-* ‘bend, twist, turn’
977. Proto-Nostratic root **law-* (~ **lɔw-*):
 (vb.) **law-* ‘to shine’;
 (n.) **law-a* ‘light, glow’; (adj.) ‘shining, gleaming, glowing, bright’
978. Proto-Nostratic root **law-* (~ **lɔw-*):
 (vb.) **law-* ‘to separate, to divide, to part, to sever, to detach’;
 (n.) **law-a* ‘part cut off, separation, division’
979. Proto-Nostratic root **law-* (~ **lɔw-*):
 Extended form:
 (vb.) **law-V-ḥ-* ‘to moisten, to water; to wash, to clean’;
 (n.) **law-ḥ-a* ‘the act of bathing, washing’
980. Proto-Nostratic root **lax^w-* (~ **lɔx^w-*):
 (vb.) **lax^w-* ‘to strike, to hit, to beat’;
 (n.) **lax^w-a* ‘the act of striking, hitting, beating; stroke, hit, blow’
981. Proto-Nostratic root **liʔ-* (~ **leʔ-*):
 (vb.) **liʔ-* ‘to come into being, to arise, to grow, to become’;
 (n.) **liʔ-a* ‘being, becoming’
982. Proto-Nostratic (n.) **lip^h-a* ‘fat, fatty tissue’
983. Proto-Nostratic root **lip’-* (~ **lep’-*):
 (vb.) **lip’-* ‘to form, to fashion, to mold’;
 (n.) **lip’-a* ‘form, mold’

PROTO-NOSTRATIC *r

984. Proto-Nostratic root **raʔ-* (~ **rəʔ-*):
 (vb.) **raʔ-* ‘to see, to perceive’;
 (n.) **raʔ-a* ‘sight, observation, perception’; (adj.) ‘seeing, perceiving’
 Extended form:
 (vb.) **raʔ-V-y-* ‘to see, to perceive’;
 (n.) **raʔ-y-a* ‘sight, observation, perception’; (adj.) ‘seeing, perceiving’
985. Proto-Nostratic root **rag-* (~ **rəg-*):
 (vb.) **rag-* ‘to stir, to move, to shake’;
 (n.) **rag-a* ‘trembling, quaking, shaking, rocking; movement; collapse (from shaking)’
986. Proto-Nostratic root **rak^h-* (~ **rək^h-*):
 (vb.) **rak^h-* ‘to twist, to turn, to bend; to tie, to bind, to fasten’;
 (n.) **rak^h-a* ‘twist, turn, bend; tie, bond, cord’
 Derivative:
 (vb.) **rak^h-* ‘to put, join, fit, or fasten (together); to assemble, to prepare, to construct’;
 (n.) **rak^h-a* ‘the act of putting, joining, fitting, or fastening (together); the act of assembling, preparing, constructing’
987. Proto-Nostratic root **rak^h-* (~ **rək^h-*):
 (vb.) **rak^h-* ‘to put, join, fit, or fasten (together); to assemble, to prepare, to construct’;
 (n.) **rak^h-a* ‘the act of putting, joining, fitting, or fastening (together); the act of assembling, preparing, constructing’
 Derivative of:
 (vb.) **rak^h-* ‘to twist, to turn, to bend; to tie, to bind, to fasten’;
 (n.) **rak^h-a* ‘twist, turn, bend; tie, bond, cord’
988. Proto-Nostratic root **rak’-* (~ **rək’-*):
 (vb.) **rak’-* ‘to stretch, to extend, to draw out’;
 (n.) **rak’-a* ‘the act of stretching, extending, drawing out; stretch, extension’;
 (adj.) ‘stretched, extended, drawn out’
989. Proto-Nostratic root **rak’-* (~ **rək’-*):
 (vb.) **rak’-* ‘to observe, to watch, to regard attentively; to supervise, to control’;
 (n.) **rak’-a* ‘observation, watchfulness, care, protection’
990. Proto-Nostratic root **raq’-* (~ **rəq’-*):
 (vb.) **raq’-* ‘to move quickly, to move back and forth’;
 (n.) **raq’-a* ‘any rapid motion: shaking, trembling, jumping, dancing, etc.’

991. Proto-Nostratic root **rat^h-* (~ **rə^h-*):
 (vb.) **rat^h-* ‘to turn, to roll; to run’;
 (n.) **rat^h-a* ‘turning, rolling; running’
992. Proto-Nostratic root **raw-* (~ **rəw-*):
 Extended form:
 (vb.) **raw-V-^h-* ‘to be spacious, wide’;
 (n.) **raw-^h-a* ‘space, room’; (adj.) ‘spacious, wide’
993. Proto-Nostratic root **rek’-*:
 (vb.) **rek’-* ‘to sprinkle, to spray, to wet, to moisten’;
 (n.) **rek’-a* ‘sprinkling, spray, rain’
994. Proto-Nostratic root **riy-* (~ **rey-*):
 (vb.) **riy-* ‘to prosper, to thrive, to flourish, to increase, to grow’;
 (n.) **riy-a* ‘increase, growth, prosperity, wealth’
995. Proto-Nostratic root **rom-*:
 (vb.) **rom-* ‘to stop, to rest, to relax’;
 (n.) **rom-a* ‘rest, quietude, calmness, tranquility, relaxation’; (adj.) ‘quiet, tranquil, still, gentle, silent, relaxed’
996. Proto-Nostratic root **row-*:
 (vb.) **row-* ‘to cut, tear, or break apart’;
 (n.) **row-a* ‘cut, tear’
997. Proto-Nostratic root **rum-* (~ **rom-*):
 (vb.) **rum-* ‘to grow or become dark; to darken’;
 (n.) **rum-a* ‘darkness, night; twilight, dusk’; (adj.) ‘dark’

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To Indo-European*

VOLUME 5

Allan R. Bomhard



FIFTH EDITION
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By Allan R. Bomhard

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PART FIVE

SUPPLEMENTAL MATERIAL

APPENDIX 1

A CRITICAL REVIEW OF VOLUMES 1 AND 2 OF:
ОПЫТ СРАВНЕНИЯ НОСТРАТИЧЕСКИХ ЯЗЫКОВ (СЕМИТО-ХАМИТСКИЙ, КАРТВЕЛЬСКИЙ, ИНДОЕВРОПЕЙСКИЙ, УРАЛЬСКИЙ, ДРАВИДИЙСКИЙ, АЛТАЙСКИЙ) [AN ATTEMPT AT A COMPARISON OF THE NOSTRATIC LANGUAGES (HAMITO-SEMITIC, KARTVELIAN, INDO-EUROPEAN, URALIC, DRAVIDIAN, ALTAIC)]. 3 VOLS. MOSCOW: NAUKA (1971—1984), BY VLADISLAV MARKOVIČ ILLIČ-SVITYČ

INTRODUCTORY REMARKS

In 2008, I prepared an 82-page critical peer review of Aharon Dolgopolsky's massive *Nostratic Dictionary* at the request of the McDonald Institute for Archaeological Research at the University of Cambridge, United Kingdom. That review is available for free download from academia.edu. However, until recently, I had not prepared a similar review of Vladislav Markovič Illič-Svityč's (Владислав Маркович Иллич-Свитыч) *Опыт сравнения ностратических языков (семитохамитский, картвельский, индоевропейский, уральский, дравидийский, алтайский) [An Attempt at a Comparison of the Nostratic Languages (Hamito-Semitic, Kartvelian, Indo-European, Uralic, Dravidian, Altaic)]* (1971—1984). I finally completed such a review in August 2020 — this Appendix is an enhanced and corrected version of that review.

Illič-Svityč (12 September 1934—22 August 1966) prepared an earlier (1965), preliminary summary of his research entitled “Материалы к сравнительному словарю ностратических языков (индоевропейский, алтайский, уральский, дравидийский, картвельский, семитохамитский)” [Materials for a Comparative Dictionary of the Nostratic Languages (Indo-European, Altaic, Uralic, Dravidian, Kartvelian, Hamito-Semitic)], *Этимология (Ėtimologija)* 1965:321—373. That work is not under review here, though it is cited where appropriate. Subsequently, two volumes of his Nostratic dictionary appeared. The first volume was partially prepared by Illič-Svityč himself and was arranged for publication by a team of his associates. It was published in 1971. Vladimir Dybo prepared the introductory material found in Volume 1, including the tables of sound correspondences. The second volume was prepared solely by a team of scholars, based upon Illič-Svityč's notes. It was published in 1976. After a considerable delay, a third volume under Illič-Svityč's name was published in 1984. This volume was prepared by a team of scholars and was not based directly upon Illič-Svityč's notes. Nothing further has

appeared. Only the first two volumes will be reviewed here, that is, only the material actually prepared by Illič-Svityč himself or based upon his notes.

In Chapter 1, §1.5, I noted the following problem areas with Illič-Svityč's work (and that of Dolgopolsky as well):

Let me begin by stating unequivocally that I have the highest admiration for what Moscovite scholarship (especially the work of V. M. Illič-Svityč and A. B. Dolgopolsky — some of the work done by other Russian scholars is not on the same level) on Nostratic has achieved. Their research has opened up new and exciting possibilities and given Nostratic studies new respectability. However, this does not mean that I agree with everything they say. I regard their work as a pioneering effort and, as such, subject to modification in light of advances in linguistic theory, in light of new data from the Nostratic daughter languages, and in light of findings from typological studies that give us a better understanding of the kind of patterning that is found in natural languages as well as a better understanding of what is characteristic of language in general, including language change.

Let us begin by looking at phonology: In 1972 and 1973, the Georgian scholar Thomas V. Gamkrelidze and the Russian scholar Vjačeslav V. Ivanov jointly proposed a radical reinterpretation of the Proto-Indo-European stop system. According to their reinterpretation, the Proto-Indo-European stop system was characterized by the three-way contrast glottalized ~ voiceless (aspirated) ~ voiced (aspirated). In this revised interpretation, aspiration is viewed as a redundant feature, and the phonemes in question could also be realized as allophonic variants without aspiration. Paul J. Hopper made a similar proposal at about the same time (Hopper 1973). I should point out here that, even though I support the revisions proposed by Gamkrelidze, Hopper, and Ivanov, my views are not dependent upon any particular reconstruction of the Proto-Indo-European stop system — the sound correspondences I have proposed can be maintained using the traditional reconstruction as well. What the new views of Proto-Indo-European consonantism did was bring into light the implausibility of certain Nostratic sound correspondences established by Illič-Svityč and Dolgopolsky (see below for details). Moreover, this new interpretation opened new possibilities for comparing Proto-Indo-European with the other Nostratic daughter languages, especially Proto-Kartvelian and Proto-Afrasian, each of which had a similar three-way contrast. The simplest and most straightforward assumption would be that the glottalized stops posited by Gamkrelidze, Hopper, and Ivanov for Proto-Indo-European would correspond to glottalized stops in Proto-Kartvelian and Proto-Afrasian, while the voiceless stops would correspond to voiceless stops and voiced stops to voiced stops. This, however, is quite different from the correspondences proposed by Illič-Svityč and Dolgopolsky. They see the glottalized stops of Proto-Kartvelian and Proto-Afrasian as corresponding to the traditional plain voiceless stops of Proto-Indo-European, while the voiceless stops in the former two branches are seen as corresponding to the traditional plain voiced stops of Proto-Indo-European, and, finally, the voiced stops to the traditional voiced aspirates of Proto-Indo-European. Illič-Svityč and

Dolgopolsky then reconstruct the Proto-Nostratic phonological system on the model of Kartvelian and Afrasian, with the three-way contrast glottalized ~ voiceless ~ voiced in the series of stops and affricates.

The mistake that Illič-Svityč and Dolgopolsky made was in trying to equate the glottalized stops of Proto-Kartvelian and Proto-Afrasian with the traditional plain voiceless stops of Proto-Indo-European. Their reconstruction would make the glottalized stops the least marked members in the Proto-Nostratic bilabial series and the most marked in the velar series. Such a reconstruction is thus in contradiction to typological evidence, according to which glottalized stops uniformly have the opposite frequency distribution (most marked in the bilabial series and least marked in the velar series [for details, cf. Gamkrelidze 1978]). The reason that Illič-Svityč's and Dolgopolsky's reconstruction contradicts the typological evidence is as follows: Illič-Svityč and Dolgopolsky posit glottalics for Proto-Nostratic based upon a small number of seemingly solid examples in which glottalics in Proto-Afrasian and/or Proto-Kartvelian appear to correspond to traditional plain voiceless stops in Proto-Indo-European. Based upon these examples, they assume that, whenever there is a voiceless stop in the Proto-Indo-European examples they cite, a glottalic is to be reconstructed for Proto-Nostratic, even when there are no glottalics in the corresponding Kartvelian and Afrasian forms! This means that the Proto-Nostratic glottalics have the same frequency distribution as the Proto-Indo-European plain voiceless stops. Clearly, this cannot be correct. The main consequence of the mistaken comparison of the glottalized stops of Proto-Kartvelian and Proto-Afrasian with the traditional plain voiceless stops of Proto-Indo-European is that Illič-Svityč and Dolgopolsky are led to posit forms for Proto-Nostratic based upon theoretical considerations but for which there is absolutely no evidence in any of the daughter languages. The following examples illustrate the ad hoc nature of these reconstructions:

1. Dolgopolsky (1998:17) reconstructs a second singular personal pronoun **tū* > **t̥i* 'thou', with an initial glottalized dental, based upon data from Indo-European, Afrasian, Uralic, and Mongolian. When one looks at the attested forms in the daughter languages, one cannot find a single form anywhere that begins with a glottalized consonant. Indeed, in natural languages having glottalized consonants, these sounds tend to be underrepresented in pronoun stems and inflectional affixes. What, then, is the basis for the reconstruction **tū*? — nothing more than an ad hoc rule set up by Illič-Svityč.
2. Dolgopolsky (1998:17) also reconstructs an interrogative stem **ko-* 'who?' (see also Illič-Svityč 1971—1984.I:355—356, no. 232, **Ko* 'who'). As in the preceding example, there is no evidence in any of the Nostratic daughter languages to support the reconstruction of an initial glottalized velar here.

Do these criticisms completely invalidate the cognate sets proposed by Illič-Svityč and Dolgopolsky in which glottalics in Kartvelian and Afrasian appear to correspond to plain voiceless stops in Indo-European? Well, no, not exactly — it is

not quite that simple. In some cases, the etymologies are correct, but the Proto-Nostratic reconstructions are wrong. This applies to the examples cited above — for the second person personal pronoun, I would reconstruct Proto-Nostratic **tʰi*, and, in place of **ko-* ‘who?’, I would reconstruct Proto-Nostratic **kʷha-*. Other examples adduced by Illič-Svityč and Dolgopolsky admit alternative explanations, while still others are questionable from a semantic point of view and should be abandoned. Once the questionable examples are removed, there is an extremely small number (no more than a handful) left over that appear to support their position. However, compared to the massive counter-evidence in which glottalized stops in Kartvelian and Afrasian correspond to similar sounds (the traditional plain voiced stops) in Proto-Indo-European, even these residual examples become suspect (they may be borrowings or simply false cognates). Finally, there are even some examples where Dolgopolsky’s and Illič-Svityč’s comparison of glottalized stops in Proto-Kartvelian and Proto-Afrasian with plain voiceless stops in Proto-Indo-European is correct. This occurs in the cases where two glottalics originally appeared in a Proto-Nostratic root: **C’VC’-*. Such roots are preserved without change in Proto-Kartvelian and Proto-Afrasian, while in Proto-Indo-European, they have been subject to a rule of regressive deglottalization: **C’VC’- > *CVC’-*.

Another major shortcoming is in Illič-Svityč’s reconstruction of the Proto-Nostratic vowel system, which, according to him, is essentially that of modern Finnish. It simply stretches credibility beyond reasonable bounds to assume that the Proto-Nostratic vowel system could have been preserved unchanged in Finnish, especially considering the many millennia that must have passed between the dissolution of the Nostratic parent language and the emergence of Finnish (Serebrennikov 1986:75 makes the same point). No doubt, this erroneous reconstruction came about as a result of Illič-Svityč’s failure to deal with the question of subgrouping. The Uralic-Yukaghir phylum, of which Finnish is a member, belongs to the Eurasiatic branch of Nostratic. Now, Eurasiatic is several millennia younger than Afrasian, which appears to be the oldest branch of the Nostratic macrofamily. Therefore, Afrasian must play a key role in the reconstruction of the Proto-Nostratic vowel system, and the Uralic-Yukaghir vowel system must be considered a later development that cannot possibly represent the original state of affairs.

In closing, we may note that Alexis Manaster Ramer (1997:94—96) arrived at the same conclusions reached here regarding the need to reexamine the Nostratic sound correspondences proposed by Illič-Svityč (and, by implication, Dolgopolsky as well) in light of typological considerations. Specifically, he writes:

6.1. Finally, quite recently, I decided to see what would happen if one counted up the occurrences of the different stops (voiceless vs. voiced vs. glottalized as well as labial vs. coronal vs. velar) reconstructed for Nostratic by Illich-Svitych. I only performed the experiment on root-initial stops, with the following results: (they are given as approximations because there is a problem arriving at exact figures given that there [are] some cases where it is difficult to tell whether one

is dealing with a single Nostratic form or two, or whether a particular form should begin with this or that stop):

*b 50+	*d 20+	*g 40+
*p 15+	*t 15+	*k 50+
*p' 40+	*t' 30+	*k' 60+

The first observation (see Manaster Ramer in press a) was that ... the relative frequencies of the three phonation types (voiced, voiceless, glottalized) posited for Proto-Nostratic stops, as reflected in the sets of cognates compiled by Illich-Svitych, seem to be inconsistent with typological predictions. Specifically, at least in initial position, the series of stops reconstructed as glottalized is much more frequent at all points of articulation than the series reconstructed as (plain) voiceless.

Since one expects glottalized stops to be more marked and hence less frequent than plain voiceless, in particular, something was amiss. However, just as in the case of the clusters and affricates discussed above, the solution turned out to be quite simple. Given the markedness considerations, I would suggest that the “glottalized” series was actually plain voiceless in Proto-Nostratic, while the “voiceless” series represented some more marked phonation type, glottalized or perhaps aspirated. This is consistent with the fact that the Nostratic series Illich-Svitych wrote as “glottalized” is in fact realized as glottalized only in parts of Afro-Asiatic and in Kartvelian, and in the latter it is easy to imagine that this could be a contact-induced development.

This reinterpretation of Nostratic ... naturally calls to mind the glottalic theory of Indo-European. As it happens, the stop series reconstructed by Illich-Svitych as plain voiceless and by me as glottalized (or aspirated) comes out in Proto-Indo-European as that series of stops which is traditionally reconstructed as voiced (media) but which many scholars have recently interpreted as glottalized.

Nostratic (Illich-Svitych)	Nostratic (Manaster Ramer)	Indo-European (Traditional)	Indo-European (Glottalic)
*t	*t' (or *t ^h)	*d	*t'
*t'	*t	*t	*t
*d	*d	*dh	*d

Totally unexpectedly, typological considerations provide us with arguments for reinterpreting the Nostratic stop series in a way that fits quite well with the glottalic theory of Indo-European. Of course, there is no reason in general to expect the phonetics of related languages and proto-languages to agree in this way, and such a convergence cannot be regarded as a criterion or an argument for relatedness among languages, since that would entail the “misuse of similarity” which Hamp (1992) cautions against. But it is not an unwelcome development when it occurs.

Now, there is another rather troublesome problem that must be addressed. To this day, more than half a century after it first appeared, the work on Nostratic by Illič-Svityč and, to a lesser extent, Dolgopolsky are seen as a source of national pride in Russia, so much so that some non-Russian scholars have compared the adulation that their work has received to a “cult”. Any attempt to criticize or even modify/correct the work of Illič-Svityč is, more often than not, met with ill-tempered, gratuitous, and irrational outbursts by some Russian scholars — “defend at any cost”. Needless to say, this attitude tends to stifle progress in the study of distant-linguistic relationships among the languages/language families involved. At the same time, the defects in the work of Illič-Svityč (and Dolgopolsky) have been recognized by non-Russian (and even some Russian) scholars from the very beginning and have been repeated over and over again in the relevant literature almost ad nauseum. Russian scholars have every right to be proud of the unquestionably impressive accomplishments of Illič-Svityč, but, surely, the time is long past for a level of objectivity, civility, and honesty that will lead to genuine advancements in the field.

CRITERIA FOR EVALUATION

I will use the same scale here that I used in my review of Dolgopolsky’s *Nostratic Dictionary*:

- | | |
|-----------|---|
| Strong: | This is a solid etymology, without major problems. |
| Possible: | This is a plausible etymology, but there are problem areas. Quite often, one of the putative cognates in the daughter languages (at the macro level, not individual cited forms) does not belong or is questionable, while the remaining cognates do, indeed, fit together quite well. There may also be minor problems with the semantics or with the phonology, but these can usually be explained in terms of widely-attested semantic shifts or phonological processes. |
| Weak: | There are major problems with this etymology, usually either with the semantics or the phonology or with the quality or quantity of the supporting material from the daughter languages. Nonetheless, this etymology is not to be rejected outright. Typically, there are parts that can be salvaged, though the etymology cannot stand as written. |
| Rejected: | There are so many problems with this etymology that it must be fully disqualified. Some of these etymologies may involve borrowings. |

Each entry has been evaluated exclusively in terms of the material cited from the daughter languages to determine the extent to which viable comparisons were proposed, that is to say, whether they had a chance of being true cognates or

whether they were merely specious. Moreover, the validity of the reconstructed forms posited by Illič-Svityč was also evaluated. Finally, the etymologies were further judged both in terms of the sound correspondences proposed by Illič-Svityč (and extracted and formatted into tables by Vladimir Dybo) and the alternative set proposed by Allan R. Bomhard (Chapter 12, §12.6, table of sound correspondences). As noted above, some of the sound laws proposed by Illič-Svityč are simply wrong.

In evaluating the individual etymologies, the vowels were given as much weight as the consonants. If there was not a perfect or nearly perfect match in *both*, or if Illič-Svityč failed to give a convincing explanation for exceptions to the expected correspondences, the etymology was rejected, even if the semantics were solid. In like manner, even though the correspondences may have been flawless, an etymology was rejected or evaluated as “weak” if the semantics were not perfect or nearly perfect. In spite of all of these conditions, whenever there were uncertainties, Illič-Svityč was always given the benefit of the doubt. I also tried to be mindful that Illič-Svityč based his proposals on the best material that was available to him at the time. Needless to say, there have been many advances since then in each of the languages/language families which Illič-Svityč included in his version of Nostratic. Newer works are cited in this review where appropriate.

Finally, reviews of Illič-Svityč's work prepared by other scholars have also been consulted.

ILLIČ-SVITYČ'S NOSTRATIC DICTIONARY: VOLUME 1

Illič-Svityč's transcription has been retained (note: Illič-Svityč uses the symbol /Λ/ to indicate a vowel of indeterminate quality). I have mostly used Mark Kaiser's English translations from the original Russian, though, in several cases, I have used my own translations instead. Where they exist, I provide references to the alternative Nostratic etymologies I have proposed in this book (referred to by the entry number) but not to those proposed by Dolgopolsky, unless relevant to the discussion, inasmuch as he and Illič-Svityč follow essentially the same system and inasmuch as I have already evaluated Dolgopolsky's work. Finally, I have retained the older term “Hamito-Semitic” as the translation for “семитохамитский” when citing Illič-Svityč's work since this is the term he preferred. Elsewhere, I use “Afrasian” (= “Afroasiatic”) in this review.

1. (?) **baHli* ‘wound, pain’: Indo-European **bhehl-* ‘wound, pain’ ~ Altaic [**bāli* ‘wound’]: Rejected.

Comments:

1. According to Bomhard (no. 69), the Proto-Indo-European form is to be reconstructed as **b^hol-/b^hl-* ‘(adj.) worn out, weak; (n.) misfortune, calamity’ based upon all of the related forms from the Indo-European daughter languages (note: no medial laryngeal is reconstructed in any of the

standard etymological dictionaries for either the Indo-European parent language or for any of the daughter languages).

2. Starostin—Dybo—Mudrak (2003:345) reconstruct Proto-Altaic **b_iǎľč_a* (= **b_iǎľč_a*) ‘harm, wound’.

Bomhard (no. 69) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Yukaghir, and Altaic:

Proto-Nostratic root **bul-* (~ **bol-*):

(vb.) **bul-* ‘to crush, to grind, to weaken, to wear down; to become worn out, weak, tired, old’;

(n.) **bul-a* ‘that which is worn out, weak, tired: weakness, decline, decay, wear, etc.; (adj.) worn out, weak, tired, old’

2. **baH_a* ‘to tie to’: Kartvelian **b-* ‘to tie to, to hang’ ~ Altaic **bā-* ‘to tie to’. Strong.

Bomhard (no. 2) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, and Altaic:

Proto-Nostratic root **baś-* (~ **bǝś-*):

(vb.) **baś-* ‘to tie, to bind; to attach, to fasten’;

(n.) **baś-a* ‘tie, bond, bandage, fastening’

3. **baK_a* ‘to look’: Hamito-Semitic **bq-* ‘to look’ ~ Altaic **baka-* ‘to look’. Strong.

Comments:

1. The meaning in Afrasian is more ‘to look at, to look over, to examine’.
2. Starostin—Dybo—Mudrak (2003:323) reconstruct Proto-Altaic **bǎk_a* ‘to look, to watch’.
3. Not in Bomhard (this book).

4. **bał̥/u/* ‘to swallow’: Hamito-Semitic **bl̥* ‘to swallow’ ~ Altaic **balgu-* / **bilgu* ‘to swallow; throat’. Strong.

Comments:

1. A laryngeal (/ł̥/) should not be reconstructed in the Proto-Nostratic form. Proto-Afrasian **/ł̥/* does not correspond to Proto-Altaic **/g/*.
2. The Chara (Чара) (North Omotic) form (*borkā*) included by Illič-Svityč does not belong here.
3. Starostin—Dybo—Mudrak (2003:344) reconstruct Proto-Altaic **b_ialge* ‘throat; to swallow’.

Bomhard (no. 20) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Uralic, Altaic, and (possibly) Chukchi-Kamchatkan:

Proto-Nostratic root **bal-* (~ **bəl-*):

(vb.) **bal-* 'to bite, to eat';

(n.) **bal-a* 'bite, morsel'

5. **balga* 'to flash, to sparkle': Hamito-Semitic **brq* 'flash, lightning' ~ Kartvelian **berçq-* 'to flash, to sparkle' ~ Indo-European **bhelg-/ *bhleg-* 'to flash, to sparkle' ~ Altaic [**balka-* 'to shine, to sparkle']. Rejected.

Comments:

1. This etymology cannot stand as written and, therefore, must be disqualified. Illič-Svityč has confused two separate, unrelated Proto-Nostratic stems here. Each is a solid Nostratic etymology in its own right, but they do not belong together.
2. There is no basis whatsoever for reconstructing Proto-Nostratic **/g/*, even within the context of the evidence supplied by Illič-Svityč. This violates Illič-Svityč's own sound correspondences: Proto-Afrasian **/q/* does not correspond to Proto-Kartvelian **/ç/* nor to Proto-Indo-European **/g/*.

Bomhard (no. 21) reconstructs the following Proto-Nostratic forms for the first etymology based upon evidence from Afrasian, Dravidian, Indo-European, and Altaic:

Proto-Nostratic root **bal-* (~ **bəl-*):

(vb.) **bal-* 'to shine, to be bright';

(n.) **bal-a* 'glitter, gleam, brightness'

Bomhard (no. 33) reconstructs the following Proto-Nostratic forms for the second etymology based upon evidence from Afrasian, Dravidian, Indo-European, and Kartvelian:

Proto-Nostratic root **bar-* (~ **bər-*):

(vb.) **bar-* 'to shine, to be bright, to sparkle, to flash';

(n.) **bar-a* 'light, brightness; lightning'

6. (?) **bala* 'blind': Hamito-Semitic **bll* 'blind' ~ Altaic **bala* 'blind'. Strong.

Bomhard (no. 18) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, Altaic, and Chukchi-Kamchatkan:

Proto-Nostratic root **bal-* (~ **bəl-*):

(vb.) **bal-* ‘to be or become dark, obscure, blind’;

(n.) **bal-a* ‘darkness, obscurity, blindness’; (adj.) ‘dark, obscure, blind’

7. **bara* ‘big, good’: Indo-European **bher-* ‘big, good’ ~ Uralic **para* ‘good’ ~ Dravidian [**par-* ‘big’] ~ Altaic [**bara* ‘much/many’]. Possible.

Comment: The Dravidian and Altaic forms should be removed.

Bomhard (no. 34) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, and Uralic:

Proto-Nostratic root **bar-* (~ **bər-*):

(vb.) **bar-* ‘to be kind, charitable, beneficent; to do good’;

(n.) **bar-a* ‘goodness, kindness’; (adj.) ‘good, kind, beneficent’

8. **bari* ‘to take’: Hamito-Semitic **br-* ‘to catch, to grab’ ~ Indo-European **bher-* ‘to take, to bring, to carry’ ~ (?) Dravidian **per-* ‘to pick up, to gather’ ~ Altaic **bari-* ‘to take into the hands’. Possible.

Comments:

1. The Dravidian and Indo-European forms included by Illič-Svityč should be removed.
2. Better Dravidian forms to compare here are:

Tamil *parru* (*parri-*) ‘(vb.) to grasp, to seize, to catch, to hold, to adhere to, to touch, to comprehend; to hold (as color), to be kindled, to have effect (as drugs), to stick, to become joined to or welded to (as metals soldered), to be fitting, to be sufficient; (n.) grasp, seizure, acceptance, adherence, affection, friendship, affinity, solder, paste’, *parram* ‘grasping’; Malayalam *parru* ‘adhesion, close relation, friendship’, *parruka* ‘to stick to, to adhere, to catch, to suit, to fit, to take effect (as fire), to get, to seize’; Kota *paṭ-* (*pac-*) ‘to catch, to seize, to hold, to hold out, to be obstinate, to resolve, to catch (fire), to suit, to please’; Kannada *paṭṭu* ‘(vb.) to seize, to catch, to hold, to take hold of; to be held or contained, to stick to; (n.) hold, seizure, firm grasp, persistence, resolution, obstinacy, habit, coherence’; Tulu *pattuni* ‘to hold, to catch; to adhere, to stick, to be joined’; Telugu *paṭṭu* ‘(vb.) to hold, to catch, to seize, to take hold of, to restrain, to receive; to be required (days, money), to be contained; (n.) hold, grasp, seizure, a wrestler’s hold, perseverance, obstinacy, diligence’; Parji *patt-* ‘to take hold of, to buy’; Gadba (Ollari) *pat-* ‘to take hold of, to catch, to buy, (Salur) *patt-* ‘to take hold of, to catch’.

3. It is better to derive Proto-Indo-European **b^her-/b^hor-/b^hṛ-* 'to bear, to carry; to bring forth, to bear children', **b^hernos/b^hornos* 'son, child' from the following Proto-Nostratic forms (cf. Bomhard, no. 30):

Proto-Nostratic root **bar-* (~ **bār-*):
 (vb.) **bar-* 'to bear children, to give birth';
 (n.) **bar-a* 'child'

4. Starostin—Dybo—Mudrak (2003:328) reconstruct Proto-Altaic **bāra* 'goods; to possess, to earn'. It appears to me that they have combined two separate stems in their etymology: (1) Proto-Altaic **bāra* 'to increase; many, capacious' (> Proto-Tungus **bara-* 'to increase; many, capacious') and (2) Proto-Altaic **bari-* 'to take, to hold' (> Proto-Mongolian **bari-* 'to take, to hold'; Proto-Turkic **bār* 'there is, there are; existence, goods'). The overlapping meanings found among some of the forms in the various Altaic daughter languages leads me to suspect that there may have been lexical diffusion involved here.

Bomhard (no. 31) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian (see above), and Altaic:

Proto-Nostratic root **bar-* (~ **bār-*):
 (vb.) **bar-* 'to take or seize hold of, to grasp';
 (n.) **bar-a* 'hold, grasp, seizure'

9. **berg/i/* 'high': Hamito-Semitic **brg* 'high' ~ (?) Kartvelian **brg-e* 'high' ~ Indo-European **bherǵh-/bhreǵh-* 'high' ~ Uralic [**p/e/r/-kʌ/* 'high'] ~ (?) Dravidian **pēḷ-* 'high'. Possible.

Comment: The Uralic form included by Illič-Svityč should be removed.

Bomhard (no. 49) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, and Indo-European:

Proto-Nostratic root **bir-* (~ **ber-*):
 (vb.) **bir-* 'to swell, to rise, to grow';
 (n.) **bir-a* 'largeness, greatness, height, tallness'; (adj.) 'big, large, great, tall'
 Extended form:
 (vb.) **bir-V-g-* 'to be high';
 (n.) **bir-g-a* 'height, high place'; (adj.) 'high, tall, lofty'

Note: The unextended stem is found in Dravidian.

10. (?) **be/rH/u* ‘to give’: Hamito-Semitic [**br/H/* ‘to give’] ~ Altaic [**bērü-* ‘to give’]. Rejected.

Comment: Starostin—Dybo—Mudrak (2003:353) reconstruct Proto-Altaic **biōr[é]* ‘to give; to take, to collect’.

11. [Descriptive] **biČa* ‘small’: Uralic [**piČa* ‘small’] ~ Dravidian **pīc-/picc-* ‘small, short’ ~ Altaic **biča* ‘small’. Rejected.
12. **biča* ‘to break’: Hamito-Semitic **bš-/bq-* ‘to break, to smash, to press’ ~ Kartvelian **bič-* ‘to break, to crumble’ ~ Indo-European **peis-* ‘to smash, to crush, to press’ ~ Dravidian **pīc-* ‘to smash, to shell, to knead’. Weak.

Comments:

1. The Proto-Indo-European form should be removed. It violates Illič-Svityč’s own sound correspondences: Proto-Indo-European **p/* is not derived from Proto-Nostratic **b/*, and it never corresponds either to Proto-Kartvelian **b/* or to Proto-Afrasian **b/*.
 2. According to Klimov (1998:14) and Fähnrich—Sardshweladse (1995:54), the Proto-Kartvelian form is to be reconstructed as **beč-/bič-* ‘to break, to crumble’.
13. **bilwi* ‘cloud’: Hamito-Semitic **bjl* ‘heavenly waters, cloud’ ~ Uralic **pilwe* ‘cloud’ ~ Altaic [**buli-t* ‘cloud’]. Rejected.

Comments:

1. This is another case where Illič-Svityč violates his own sound correspondences — the Uralic and Altaic vowels do not correspond.
 2. The Afrasian material cited by Illič-Svityč does not form a coherent Afrasian etymology.
14. [Descriptive] **bil’A* ‘to scream’: Kartvelian **bir-* ‘to sing’ ~ Indo-European **bhel-* ‘to talk, to roar’ ~ Dravidian **pi’A-* ‘to scream’. Rejected.

Comments:

1. The sound correspondences do not work — Proto-Kartvelian **t/* does not correspond to either Proto-Indo-European **l/* or Proto-Dravidian **l/*.
 2. Proto-Indo-European **e/* does not correspond to either Proto-Kartvelian **i/* or Proto-Dravidian **i/* here.
 3. The semantics are weak. Moreover, the label “descriptive” [дескрипт.] is inappropriate.
15. **bok/a/* ‘to flee’: Indo-European **bheug-/bhegʷ-* ‘to flee’ ~ Uralic **pok-ta-*, **poke-* ‘to flee’. Rejected.

Comment: The semantics are good, but the sound correspondences are not valid. Proto-Indo-European */g/ and */gʷ/ do not go back to Proto-Nostratic */k/. Moreover, Proto-Nostratic */o/ does not become either */eu/ or */e/ in Proto-Indo-European.

16. **bolʔi* 'to grow (of plants)': Hamito-Semitic **ʔbl* 'leaf, growing plant' ~ Indo-European **bhelh-/bhleh-* 'a plant, leaf, flower' ~ Dravidian [**poli-* 'to grow, to bloom']. Strong.

Comments:

1. The Afrasian evidence indicates that the Proto-Nostratic laryngeal was */γ/ and not */ʔ/.
2. Better Afrasian forms to compare are:

Proto-Afrasian **bul-Vγ-* 'to grow, to mature': Proto-Semitic **bal-aγ-* 'to ripen, to mature, to attain puberty' > Arabic *balaġa* 'to reach, to arrive, to come, to attain puberty, to ripen, to mature'; Ḥarsūsi *belōġ* 'to arrive', *bēlēġ* 'to reach puberty, to be fully grown'; Mehri *bēlāġ* 'to reach maturity, puberty', *bōlēġ* 'grown up, adult'; Šheri / Jibbāli *bēlāġ* 'to reach puberty'.

3. According to Bomhard (no. 65), the following Indo-European forms are to be compared here:

Proto-Indo-European **bʰulǵh-/bʰolǵh-*, **bʰloǵh-* > **bʰlō-* (later also **bʰlē-*) 'to blossom, to sprout': Greek φύλλον 'leaf'; Latin *folium* 'leaf', *flōs* 'a flower, blossom'; Old Irish *bláth* 'flower'; Gothic *blōma* 'flower'; Old Icelandic *blóm* 'bloom, blossom, flower', *blað* 'leaf of a plant'; Old English *blōwan* 'to bloom, to flower', *blēd* 'shoot, branch, fruit, flower', *blæd* 'leaf, blade', *blōstma* 'blossom, flower'; Old West Frisian *blām* 'flower, bloom'; Old Saxon *blōmo* 'flower, bloom', *blōian* 'to bloom', *blad* 'leaf, blade'; Dutch *bloeien* 'to bloom'; Old High German *bluoēn*, *bluojan* 'to bloom' (New High German *blühen*), *bluomo* 'flower, blossom' (New High German *Blume*), *bluot* 'flower, blossom, bloom' (New High German *Blüte*), *blat* 'leaf, blade' (New High German *Blatt*); Tocharian A *pält*, B *pilta* 'leaf'.

Bomhard (no. 65) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, Yukaghir, Altaic, and Eskimo-Aleut:

Proto-Nostratic root **bul-* (~ **bol-*):

Extended form:

(vb.) **bul-V-γ-* 'to ripen, to blossom, to bloom, to sprout, to mature';

(n.) **bul-γ-a* 'increase, growth, ripening, maturity, prosperity, blossoming'

Derivative of:

(vb.) **bul-* ‘to swell, to expand, to spread out, to overflow; to puff up, to inflate’;

(n.) **bul-a* ‘large quantity or amount; expansion, spread, inflation; puff, blow’

17. [Descriptive] **bongä* ‘fat; to swell’: Indo-European **bhenĝh-* ‘fat, thick’ ~ Uralic **puŋka/*poŋka* ‘fat, swelling’ ~ Dravidian **poŋk-* ‘to swell, to boil over’ ~ (?) Altaic [**boŋa* ‘fat, big’]. Strong.

Bomhard (no. 70) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, Altaic, and Eskimo:

Proto-Nostratic root **bun-* (~ **bon-*):

(vb.) **bun-* ‘to puff up, to inflate, to expand, to swell’;

(n.) **bun-a* ‘rounded protuberance, swelling, lump, hump, growth’

Extended form:

(vb.) **bun-V-g-* ‘to swell, to increase, to expand’;

(n.) **bun-g-a* ‘swelling’; (adj.) ‘swollen, fat, thick’

Derivative:

(vb.) **bun-* ‘to flow, to overflow’;

(n.) **bun-a* ‘flow, flood’

18. **bor’a* ‘brown, grey-brown’: Indo-European **bher-*, **bhe-bhru-*, **bhreu-* ‘brown’ ~ Altaic **bor’a* ‘brown’. Strong.

Comments:

1. The Proto-Indo-European cognates should be reconstructed as follows: **b^hor-*, **b^hru-* (secondary *e*-grade form: **b^her-* [in the Germanic words for ‘bear’; lengthened-grade **/ē/* in the Lithuanian word for ‘brown’, *bėras*]) ‘brown’ (< ‘dark-colored’), (reduplicated) **b^he-b^hru-*.
2. Starostin—Dybo—Mudrak (2003:376) reconstruct Proto-Altaic **bor^yV* (= **bor^yV*) ‘gray’.

Bomhard (no. 56) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, and Altaic:

Proto-Nostratic **bor^y-a* ‘(n.) a dark color; (adj.) dark, dark-colored.’

19. **buHi* ‘to grow up, to arise’: Indo-European **bheuH-* ‘to grow up; to become, to be’ ~ Uralic **puŋe* ‘tree’ ~ Altaic **büi-* ‘to be’. Strong.

Comments:

1. The laryngeal reconstructed by Illič-Svityč is actually an extension and is not part of the root.

2. According to Rédei (1986—1988:410—411), the Proto-Uralic form is to be reconstructed as **puwe* ‘tree, wood’, while Sammallahti (1988:539) reconstructs Proto-Uralic **pu/o/äxi/i* ‘tree’, Proto-Finno-Ugrian **puxi*.
3. Starostin—Dybo—Mudrak (2003:342) reconstruct Proto-Altaic **biju* ‘to be, to sit’.

Bomhard (no. 81) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Elamite, Indo-European, Uralic, Yukaghir, and Altaic:

Proto-Nostratic root **buw-* (~ **bow-*):

(vb.) **buw-* ‘to become, to arise, to come into being, to grow’;

(n.) **buw-a* ‘growth, fullness, prosperity; blossom, bloom’

20. **bula* ‘precipitation; mud’: Hamito-Semitic **b(w)l* ‘to moisten, to dampen; to mix’ ~ (?) Indo-European **bhl-endh-* ‘turbid; to mix’ ~ Altaic **bula* ‘mud; to stir up, to mix’. Possible.

Comments:

1. Illič-Svityč has confused two different stems here. The Afrasian forms meaning ‘to moisten, to dampen’ should be removed from this etymology, while those meaning ‘to mix, to mix up, to confuse’ should be included. The forms meaning ‘to moisten, to dampen’ are to be derived from the following Proto-Nostratic forms (cf. Bomhard, no. 19):

Proto-Nostratic root **bal-* (~ **bəl-*):

(vb.) **bal-* ‘to well up, to surge, to overflow, to pour over’;

(n.) **bal-a* ‘outpour, downpour, surge, flow’

2. Starostin—Dybo—Mudrak (2003:381—382) reconstruct Proto-Altaic **buli* ‘to stir, to shake, to smear’. They do not include forms meaning ‘mud’ in their etymology. They (2003:283—284) also reconstruct a separate stem (**bū́la*) meaning ‘confusion, fright’.
3. The Proto-Indo-European cognate is to be reconstructed as follows:
**bhl-en-dh-/*bhl-on-dh-/*bhl-ŋ-dh-* ‘to mix, to blend, to stir, to confuse’.

Bomhard (no. 67) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, Yukaghir, and Altaic:

Proto-Nostratic root **bul-* (~ **bol-*):

(vb.) **bul-* ‘to mix, to mix up, to confuse’;

(n.) **bul-a* ‘mixture, confusion, turbidity, blur’

Derivative:

(n.) **bul-a* ‘that which is dark, dark colored; that which has mixed colors, that which is spotted’

21. **bura* ‘to bore’: Hamito-Semitic **b(w)r* ‘to bore, to dig; opening’ ~ (?) Kartvelian [**br(u)-* ‘to turn’] ~ Indo-European **bher-* ‘to bore, to dig, to prick’ ~ Uralic **pura* ‘instrument for boring; to bore, to hollow, to dig’ ~ (?) Dravidian **pōḷ-* ‘opening’ ~ Altaic [**bura-* ‘to turn, to bore’]. Possible.

Comments:

1. I am rating this etymology as “possible” rather than “strong” because of the faulty Dravidian and Kartvelian evidence cited by Illič-Svityč. To his credit, he puts a question mark before the material in question.
2. The Dravidian forms cited by Illič-Svityč should be removed and replaced with the following:

Tuḷu *burma*, *burmu* ‘a gimlet’, *perepini* ‘to bore, to perforate’, *perevuni* ‘to be bored, perforated’, *berpuri* ‘a borer’; Tamil *purai* ‘tubular hollow, tube, pipe, windpipe’.

3. The Proto-Kartvelian form should be removed. Instead, it goes better with the following Proto-Nostratic forms (cf. Bomhard, no. 72), of which the Proto-Nostratic forms meanings ‘to bore, to pierce’ are derivatives:

Proto-Nostratic root **bur-* (~ **bor-*):

(vb.) **bur-* ‘to twist, to turn’;

(n.) **bur-a* ‘twist, turn’

Derivatives:

(vb.) **bur-* ‘to fight, to wrangle (over), to quarrel, to wrestle’;

(n.) **bur-a* ‘fight, dispute, quarrel, battle, struggle’

(vb.) **bur-* ‘to bore, to pierce’;

(n.) **bur-a* ‘gimlet, borer, auger’

Bomhard (no. 74) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, and Altaic:

Proto-Nostratic root **bur-* (~ **bor-*):

(vb.) **bur-* ‘to bore, to pierce’;

(n.) **bur-a* ‘gimlet, borer, auger’

Derivative of:

(vb.) **bur-* ‘to twist, to turn’;

(n.) **bur-a* ‘twist, turn’

22. **bur(H)Λ/*bor(H)Λ* ‘porous soil, dust’: Hamito-Semitic **b(w)r/*b(w)rH* ‘porous soil, soil, sand, dust’ ~ (?) Kartvelian **buryw-* ‘dust’ ~ Uralic **pora*

‘dust, sand, dirt’ ~ Dravidian **pūr̥a*/**por̥a* ‘porous soil, sand, dust’ ~ Altaic **bōr*, **b/ūr* ‘porous soil, limestone, dust’. Possible.

Comments:

1. Klimov (1964 and 1998) does not list the Proto-Kartvelian form cited by Illič-Svityč. Instead, he lists (1998:126) Proto-Kartvelian **m̥twer-* ‘dust, whirlwind of dust’, which is clearly not related to the forms under discussion here. Likewise, the form in question is not listed in either Fähnrich—Sardshweladse (1995) or Fähnrich (2007).
 2. I could not find Proto-Uralic **pora* ‘dust, sand, dirt’ in Rédei (1986—1988) or Sammallahti (1988). Collinder (1955:50 and 1977:68), on the other hand, lists the following: Finnish *poro* ‘hot ashes; coarse dust, rubble’ | [(?) Ostyak *per*, *pär* ‘ashes’ || Kamassian *püre* ‘sand, bed of sand’ | Koibal **prja** | Motor **hura**]. (Descriptive words ?)
 3. Proto-Dravidian **/r̥/* points to Proto-Nostratic **/r̥/*.
 4. Dolgopolsky (2008:303—304, no. 234) reconstructs Proto-Nostratic **bōri*[*y*]/*U* ‘loose earth, dust, (?) sand’.
 5. According to Bomhard (no. 75), some of the forms cited by Illič-Svityč here are to be included in the following etymology (no. 23) instead.
23. **bur̥a* ‘snow (sand) storm’: (?) Hamito-Semitic **bwr-* ‘(sand) storm, wind’ ~ Indo-European **bher-* ‘storm; to seethe’ ~ Uralic **pura-* ‘whirl (of snow)’, **purka* ‘blizzard’ ~ Altaic **bur̥a*/**bora* ‘storm, blizzard’. Strong.

Comments:

1. As noted above, some of the forms cited by Illič-Svityč in the preceding etymology (no. 22) belong here.
2. Bomhard (no. 75) reconstructs Proto-Indo-European **bhur-*/**bh̥r-* ‘to move rapidly, to rage, to palpitate, to quiver’:

Proto-Indo-European **bhur-*/**bh̥r-* ‘to move rapidly, to rage, to quiver, to palpitate’: Sanskrit *bhurāti* ‘to move rapidly, to stir, to palpitate, to quiver, to struggle (in swimming)’, *bhurváni-h* ‘restless, excited’; Greek *φύρω* ‘to mix’; Latin *furō* ‘to rage’; Old Icelandic *byrr* ‘fair wind’; Old English *byre* ‘strong wind, storm’; East Frisian *bur* ‘wind’; Middle High German *burren* ‘to rush, to roar, to whirr’; Armenian *buṙn* ‘violence’; Old Church Slavonic *burja* ‘storm’.

3. The Proto-Indo-European forms meaning ‘to seethe’ or the like (**bherw-*/**bh̥orw-*/**bh̥rw-*, **bherw-*/**bh̥row-*/**bh̥ru-* ‘to boil, to bubble up, to seethe’) do not belong here. Rather, they belong with the following etymology (no. 24).
4. Starostin—Dybo—Mudrak (2003:375—376) reconstruct Proto-Altaic **bōru* (~ *-a*, *-o*) ‘dust, smoke, whirlwind’.

Bomhard (no. 75) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, Altaic, and Eskimo:

Proto-Nostratic root **bur-* (~ **bor-*):

(vb.) **bur-* ‘to blow, to blow about, to whirl, to rage’;

(n.) **bur-a* ‘storm, whirl, rage’

24. (Descriptive) **bur'a* ‘to boil, to bubble up’: Hamito-Semitic **br-* ‘to boil’ ~ Indo-European **bhreu-* ‘to boil, to bubble up’ ~ Uralic **pura-/pōra-* ‘to boil, to gurgle’ ~ Dravidian [**pur-* ‘to boil’]. Strong.

Comment: We would expect Proto-Uralic **r* (= **/rʲ/*) here.

As a complement to Illič-Svityč’s etymology, Bomhard (no. 26) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Uralic:

Proto-Nostratic root **bar-* (~ **bār-*):

(vb.) **bar-* ‘to swell, to puff up, to expand’;

(n.) **bar-a* ‘swelling, bulge, increase’

Derivatives:

(vb.) **bar-* ‘to bristle (up), to stand on end’;

(n.) **bar-a* ‘bristle, point, spike’

(vb.) *bar-* ‘to blow’;

(n.) **bar-a* ‘wind’

(vb.) **bar-* ‘to be thick, bushy, shaggy; to be coarse, rough, harsh’

(n.) **bar-a* ‘roughness, coarseness, harshness; thickness, shagginess’; (adj.) ‘rough, harsh, coarse; thick, shaggy, bushy’

25. **büKa* ‘to bend; bent’: Indo-European **bheug-/bheugh-* ‘to bend’ ~ Altaic **bökä-* ‘to bend; bent’. Rejected.

Comment: Starostin—Dybo—Mudrak (2003:360—361) reconstruct Proto-Altaic **bükkʲi* (= **bükkʰi*) ‘to bow, to bend’. Proto-Altaic **/kʲ/* (= **/kʰ/*) does not correspond to either Proto-Indo-European **/g/* or **/gh/*.

26. **büri* ‘to cover’: Kartvelian **bur-* ‘to cover, to darken’ ~ Dravidian **pūr-* ‘to cover, to bury’ ~ Altaic **büri-* ‘to cover’. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:385—386) reconstruct Proto-Altaic **büri* (~ *-iū, -e*) ‘to cover, to shade’.
2. Klimov (1964:55 and 1998:20) reconstructs Proto-Kartvelian **bur-* ‘to muffle up, to wrap up; to darken’.

3. The Proto-Dravidian form cited by Illič-Svityč does not belong here — Proto-Dravidian */ɾ/ is derived from Proto-Nostratic */ɾʷ/. A better comparison would be with the following Dravidian forms:

Dravidian: Tamil *pōr* 'to wear, to wrap oneself in, to cover, to envelope, to surround', *pōrvai* 'covering, wrapping, upper garment, cloak, rug'; Telugu *pōruva* 'cloth'; Malayalam *pōrkkuka* 'to wrap, to cloak'; Koḍagu *poraḍ* (*poraḍuv*-, *poraḍ*-) 'to dress (well)'; Kolami *porkip*- 'to cover, to close'; Naikri *porkip*- 'to cover, to close'; Gadba *porege* 'loincloth'; Gondi *poriyā* 'loincloth'; Konḍa *porpa*- 'to cover the body with a garment, to put on an upper garment'; Pengo *por*- 'to put on an upper garment, to wear round the shoulders'; Kuwi *por*- 'to wrap around myself, to wear (cloak)', *porbi ki*- 'to cover another', *porvu* 'a cover'; Kui *porpa* (*port*-) 'to wrap around the body, to put on an upper cloth'; Maṇḍa *pur*- 'to put on an upper garment'.

Bomhard (no. 77) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, and Altaic:

Proto-Nostratic root **bur-* (~ **bor-*):
(vb.) **bur-* 'to cover, to wrap up';
(n.) **bur-a* 'cover, covering'

27. (?) **-bʌ* suffix in the names of wild animals: Hamito-Semitic [**-b*/**-ab* suffix in the names of wild animals] ~ Indo-European **-bh-* suffix in the names of wild animals. Rejected.
28. **bʌgʌ* 'sufficient, excessive': Hamito-Semitic **bġ* 'to be excessive' ~ Kartvelian **beγ-* 'to be sufficient'. Rejected.

Comments:

1. Lax semantics.
2. The Afrasian evidence presented by Illič-Svityč is questionable.

29. **bʌlHʌ* 'to blow, to inflate': Kartvelian **bēr-/bēl-* 'to blow, to inflate' ~ Indo-European **bhelh̥-/bhelh̥-* 'to blow, to swell'. Possible.

Comment: Illič-Svityč confuses two separate stems in Kartvelian.

Bomhard (no. 19) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, (?) Kartvelian, Indo-European, Altaic, and Chukchi-Kamchatkan:

Proto-Nostratic root **bal-* (~ **bəl-*):
(vb.) **bal-* 'to well up, to surge, to overflow, to pour over';

(n.) **bal-a* ‘outpour, downpour, surge, flow’

30. **banʔa* ‘to tie, to bind’: Hamito-Semitic **bnʔ* ‘to tie, to wrap’ ~ Indo-European **bhendh-* ‘to tie’. Weak.

Comments:

1. Proto-Afrasian **/t/* does not correspond to Proto-Indo-European **/dh/* (keeping Illič-Svityč’s transcription here). Consequently, this etymology cannot stand as written.
2. Hebrew *ʔaḇnēṭ* [אַבְנֵט] ‘girdle’ is most likely a loan from Egyptian (cf. Klein 1987:3).
3. Dolgopolsky (2008:280—281, no. 214) (erroneously) reconstructs Proto-Nostratic **bænʔV* (~ **bændV*?) ‘to tie’.

Bomhard (no. 25) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, Indo-European, and Chukchi-Kamchatkan:

Proto-Nostratic root **ban-* (~ **bən-*):

Extended form:

(vb.) **ban-V-d-* ‘to tie, bind, fasten, or twist (together)’;

(n.) **ban-d-a* ‘tie, bond’

Note: Only the extended form is attested in the daughter languages.

31. **baʔKa* ‘knee’: Hamito-Semitic **brk* ‘knee’ ~ Kartvelian [**bʔg* ‘knee’]. Rejected.

Comment: Faulty sound correspondences.

32. **baʔa* ‘child’: Hamito-Semitic **br-* ‘child’ ~ (?) Kartvelian [**ber-* ‘child’] ~ Indo-European **bher-* ‘child’. Strong.

Note: The Afrasian form is taken from Kaiser (1990:140). It is missing in the original (Illič-Svityč 1971—1984.1:194—195, no. 32), though it is present in Illič-Svityč’s earlier work (1965:361).

Bomhard (no. 30) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Elamite, Indo-European, Yukaghir, and (?) Altaic:

Proto-Nostratic root **bar-* (~ **bər-*):

(vb.) **bar-* ‘to bear children, to give birth’;

(n.) **bar-a* ‘child’

33. **calu* 'to split, to cut': Hamito-Semitic **sl-* 'to split, to cut, to point' ~ Kartvelian **cel-* 'to mow, to cut' ~ Indo-European **(s)kel-* 'to split' ~ Uralic **sale-* 'to cut, to split' ~ Dravidian *cal-* 'to split, to cut' ~ Altaic **čalu-* 'to cut'. Possible.

Comments: Proto-Indo-European **(s)kel-* 'to split' must be removed.

Bomhard (no. 305) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, Altaic, and Chukchi-Kamchatkan:

Proto-Nostratic root **chal-* (~ **chəl-*):

(vb.) **chal-* 'to cut, to split, to cleave, to break off or apart';

(n.) **chal-a* 'cut, crack, split; stroke, blow'

Derivative:

(n.) **chal-a* 'part, piece, chip, fragment'

34. **cujha* 'thorn': Kartvelian **cxw-* 'thorn, point' ~ Indo-European **skuei(H)-* 'thorn' ~ (?) Dravidian **cī-* 'thorn' ~ Altaic **čüjā* 'thorn point'. Rejected.

Comments:

1. Faulty sound correspondences.
2. The Altaic material cited by Illič-Svityč does not belong here. Starostin—Dybo—Mudrak (2003:432) derive it from Proto-Altaic **č'ipV* (= **č'hipV*) 'sharp edge, peg'.
3. Proto-Indo-European **skuei(H)-* 'thorn' must also be removed.
4. Dravidian **cī-* 'thorn' is not related to Kartvelian **cxw-* 'thorn, point'.

35. (Descriptive) **cura/*cora* 'to drip': Kartvelian **cwar-/cur-* 'to drip, to drop' ~ (?) Uralic **čora* 'to drip, to flow' ~ Dravidian **cōr-/cūr-* 'to drip, to flow' ~ Altaic **čur(ā)-* 'to drip, to flow'. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:404—405) reconstruct Proto-Altaic **čúrka* (~ *-jo-*) 'swift, stream, current' with initial **/č/*. Proto-Altaic **/č/* is derived from a Proto-Nostratic ejective. Hence, the Proto-Nostratic form should be reconstructed accordingly (see below).
2. The Kartvelian forms cited by Illič-Svityč do not belong here.
3. According to the reconstruction of the Proto-Uralic consonant system proposed by Bomhard (vol. 1, Chapter 8), Proto-Uralic **čora* should be reinterpreted as **ʋor3-* 'to run, to flow' (cf. Bomhard, no. 276; see also Rédei 1986—1988:40).

Bomhard (no. 276) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, and Altaic:

Proto-Nostratic root **tʷor-*:

(vb.) **tʷor-* ‘to run, to flow’;

(n.) **tʷor-a* ‘running, flowing’; (adj.) ‘speedy, swift’

36. (?) **cata* ‘to cover’: Hamito-Semitic [**str/*štr* ‘to cover (clothe), to protect’] ~ Indo-European **(s)ked-* ‘to cover (clothe)’. Rejected.

Comment: Faulty sound correspondences.

37. **čājha* ‘to glimmer, to twinkle’: Hamito-Semitic **š(j)h* ‘light, bright’ ~ Indo-European **skeih-* ‘to glimmer, to shine weakly; shadow’ ~ Uralic **šäjä* ‘to glimmer, to shine’ ~ Dravidian [**cāj* ‘luster, shine’]. Rejected.

Comment:

1. Faulty sound correspondences.
2. The Proto-Dravidian form should be glossed as ‘brilliance, light, beauty, color, etc.’ (cf. Burrow—Emeneau 1984:215, no. 2457).

38. (?) **čawa* ‘to scream, to talk’: Hamito-Semitic **šw-* ‘to scream’ ~ Kartvelian [**čw-* ‘to say’]. Rejected.

Comment: Contradictory root structures.

39. **Cali* ‘to tie around, to tie to’: Uralic **solme* ‘knot’ ~ Altaic **čali-* ‘to tie around, to hook’. Rejected.

Comments:

1. The Proto-Uralic and Proto-Altaic vowels do not match.
2. Proto-Uralic **/š/* does not correspond to Proto-Altaic **/č/* (cf. Illič-Svityč 1971—1984.1:148 — faulty sound correspondences; for more accurate correspondences, cf. Bomhard, vol. 1, Chapter 12, table of Nostratic sound correspondences, and vol. 2 for supporting examples).

40. (?) **Cura* ‘herd (wild animals)’: Hamito-Semitic **s(w)r/*šwr* ‘herd (wild animals)’ ~ Uralic **šura* ‘herd of deer’. Rejected.

Comment: Faulty sound correspondences.

41. (Descriptive) **čap’a* ‘to beat, to chop’: Hamito-Semitic [**sP-* ‘to beat, to hit’] ~ Indo-European **skep-* ‘to split’ ~ Uralic **čappa-* ‘to chop, to beat’ ~ Dravidian [**cava-* ‘to chop’] ~ Altaic **čap(a)-* ‘to beat, to chop’. Weak.

Comments:

1. Faulty sound correspondences.
 2. The Proto-Dravidian form should be glossed 'to cut down, to cut off, to strip off' (cf. Burrow—Emeneau 1984:210, no. 2390).
 3. Starostin—Dybo—Mudrak (2003:416—417) reconstruct Proto-Altaic **č'ăp'a* (~ -u, -i) (= **č'hăp'ha*) 'to chop, to hit'. This may correspond to Proto-Uralic **čappa-* 'to chop, to beat'. Hence, the rating "weak" rather than total rejection.
42. **čina* 'to know': Hamito-Semitic **s(j)n* 'to know' ~ Kartvelian **c₁an-/***c₁n-* 'to know'. Rejected.

Comment: Faulty sound correspondences.

43. **čuH_Λ* 'to look': Kartvelian **c₁ew-/***c₁aw-/***c₁w-* 'to look after, to guard' ~ Indo-European **(s)keuH-* 'to look' ~ Dravidian **cū-(r-)* 'to look'. Rejected.

Comment: Faulty sound correspondences.

44. **čel_Λ* 'to jump': (?) Hamito-Semitic **šl-* 'to jump' ~ Indo-European **(s)kel-* 'to jump' ~ Uralic **čel_Λ-* 'to jump' ~ (?) Dravidian [**cEl-ai* 'source, waterfall'] ~ Altaic [**č/e/l_Λ* 'to limp, to stumble']. Rejected.

Comment: Faulty sound correspondences; lax semantics.

45. **-č₁a* adjectival and diminutive formant: Indo-European **-i-sk-* adjectival and diminutive suffix ~ Uralic **-ca/***-cä* adjectival and diminutive suffix ~ Altaic **-ča/***-čä* diminutive suffix. Rejected.

Comments:

1. Faulty sound correspondences; faulty analysis of derivational morphology.
 2. Cf. Starostin—Dybo—Mudrak (2003:173—220), Robbeets (2015), and Bomhard (vol. 1, Chapter 18, §18.9) for details on Altaic derivational morphology.
46. (Descriptive) **ČaK_Λ* 'to tickle': Uralic **čik(k)_Λ* 'to tickle' ~ Dravidian **cakk-/***čank-* 'to tickle' ~ (?) Altaic [**čik-/***čak_Λ-* 'to tickle']. Rejected.

Comments:

1. Faulty sound correspondences — the vowels do not match.
2. Starostin—Dybo—Mudrak (2003) do not have an entry in their Altaic dictionary listing/discussing the Tungusic material cited by Illič-Svityč.

47. **Car*_Λ ‘hardened crust’: Indo-European **sker-* ‘(ice) crust, scab’ ~ Uralic **čara* ‘(hardened) film’ ~ Dravidian **car*_Λ ‘rough’ ~ Altaic **čar*(_Λ) ‘hardened crust’. Possible.

Comments:

1. The Proto-Indo-European form cited by Illič-Svityč does not belong here.
2. Starostin—Dybo—Mudrak (2003) to not have an entry in their Altaic dictionary listing/discussing the Altaic material cited by Illič-Svityč.

Bomhard (no. 269) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Indo-European, and Uralic:

Proto-Nostratic root **tʷar-* (~ **tʷər-*):

(vb.) **tʷar-* ‘to be rough, coarse, rigid, stiff, hard’;

(n.) **tʷar-a* ‘that which is rough, coarse, rigid, stiff, hard’; (adj.) ‘rough, coarse, rigid, stiff, hard’

Derivative of:

(vb.) **tʷar-* ‘to be or become stuck, joined, or bound together; to be firmly or strongly attached’;

(n.) **tʷar-a* ‘firmness, solidity, strength’; (adj.) ‘firm, solid, strong, steadfast’

48. **-Ċi* formant of frequentive and iterative verbs: Indo-European **-sk-* suffix of iterative/intensive forms of the verb ~ Uralic **-će-* suffix of frequentive verbs ~ Altaic **-čī-* suffix of intensive-iterative verbs. Rejected.

Comments:

1. Faulty sound correspondences; faulty analysis of derivational morphology.
2. The Proto-Indo-European form cited by Illič-Svityč does not belong here. It corresponds in neither form nor function. For example, in Hittite, the verbal suffix *-ške/a-* is used to mark imperfective aspect, in addition to iterativity and habitual action, to name its most important functions (cf. Hoffner—Melchert 2008:318—322).
3. Cf. Starostin—Dybo—Mudrak (2003:173—220), Robbeets (2015), and Bomhard (vol. 1, Chapter 18, §18.9) for details on Altaic derivational morphology. Starostin—Dybo—Mudrak (2003:198) reconstruct a Proto-Altaic **-čċ-* (= **-čh-*) verbal intensive, usually denominative, but also deverbative suffix.
4. Though comparable in form, the Proto-Uralic and Proto-Altaic suffixes have different functions. Hence, this entry must be disqualified.

49. **Ċimpa* ‘curved, bent’: Indo-European *(s)*Kemb-* ‘curved’ ~ Uralic **čimpa* ‘bent, curved’. Rejected.

Comment: Faulty sound correspondences.

50. *čiru 'pus, slush': Hamito-Semitic *t(j)r 'moist, feces' ~ Indo-European *(s)ter- 'slush, pus, feces' ~ Altaic *čirü- 'rot, decay'. Rejected.

Comment: Faulty sound correspondences; lax semantics.

51. *čüŋa 'smell, odor': Hamito-Semitic *t(w)n/*t(j)n 'smell' ~ Uralic *čüŋa 'smell, odor, smoke'. Rejected.

Comment: Faulty sound correspondences; faulty Proto-Nostratic reconstruction.

52. (?) *čAda 'to beat': Kartvelian *čēd-/*čād- 'to nail, to forge' ~ Dravidian *caṭṭ- 'to beat, to destroy'. Strong.

Bomhard (no. 264) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian and Kartvelian:

Proto-Nostratic root *t'yad- (~ *t'yəd-):

(vb.) *t'yad- 'to strike, to beat, to pound, to hammer';

(n.) *t'yad-a 'hammer'

53. *čArA 'to cut': Hamito-Semitic *tr- 'to cut, to split; sharp stone' ~ Kartvelian *čer-/*čar- 'to cut, to chop' ~ Dravidian car- 'to tear apart, to split apart'. Strong.

Bomhard (no. 271) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Elamite, Kartvelian, Uralic, and Chukchi-Kamchatkan:

Proto-Nostratic root *t'yar- (~ *t'yər-):

(vb.) *t'yar- 'to cut, to split';

(n.) *t'yar-a 'cut, split, rip, tear; damage'; (adj.) 'cut, split, ripped, torn'

54. (?) *čäma 'astringent': Hamito-Semitic *šm- 'bitter, astringent, sour', *sm- 'bitter, poison' ~ Uralic *čäma 'sour'. Rejected.

Comment: Faulty sound correspondences.

Bomhard (no. 334) has proposed an alternative Nostratic etymology based upon evidence from (?) Afrasian, Kartvelian, and Uralic:

Proto-Nostratic (n.) *žem-a 'anything that is sour, bitter, pungent, sharp'; (adj.) 'sour, bitter, pungent, sharp':

- A. (?) Afrasian: Semitic: Akkadian (reduplicated) *zimzimmu* (*zinzimmu*) ‘a type of onion’, probably ‘red onion’.
- B. Proto-Kartvelian **žm-* ‘salt’: Georgian [ʒm-] ‘salt’; Mingrelian *žimu-* ‘salt’; Laz (*n*)*žumu-* ‘salt’; Svan *žəm-*, *žim-* ‘salt’. Proto-Kartvelian **žm-ar-* ‘vinegar’: Georgian *žm-ar-i* ‘vinegar’; Mingrelian [*žimol-*] ‘vinegar’; Laz *žumori* ‘vinegar’; Svan *žimar-* (?) ‘vinegar’.
- C. Uralic: Proto-Finno-Ugrian **čemэ* ‘sour; to become sour’ > Votyak / Udmurt *šōm* ‘taste, leaven’; Zyrian / Komi *šom* ‘leaven, sourness’; Ostyak / Xanty (North Kazym) *šīm-*, (Tremyugan) *čim-*, (Obdorsk) *šīm-* ‘to turn sour (dough), to rise, to ferment, to get spoiled, to rot from humidity (of garment or rope)’.

55. (Descriptive) **čikA* ‘to cut’: Kartvelian **čečk-* ‘to cut (finely)’ ~ Altaic [**čikA-* ‘to cut, to chop’]. Rejected.

Comment: Starostin—Dybo—Mudrak (2003:427) reconstruct Proto-Altaic **č’ik’ā* (= **č’ik’hā*) ‘to cut; cutting instrument’. Proto-Altaic */*č’*/ (= */*č’h*/) (aspirated) does not correspond to Proto-Kartvelian */*č’*/ (= */*č’*/) (ejective), and Proto-Altaic */*k’*/ (= */*k’h*/) (aspirated) does not correspond to Proto-Kartvelian */*k’*/ (= */*k’*/) (ejective). Hence, this etymology must be disqualified.

56. **čira* ‘to look after, to guard’: Hamito-Semitic **tr-/sr-* ‘to look, to guard, to take care of’ ~ Kartvelian **čir-* ‘care, need’ ~ Indo-European **ster-g-*, **ster-k-* ‘to guard, to love’. Rejected.

Comments:

1. The Proto-Indo-European form must be removed due to faulty sound correspondences and lax semantics.
 2. Klimov (1998:322) reconstructs Proto-Kartvelian **čir-* ‘need, plague’. He notes: “At the same time it forms the basis of the secondary verb stem **čir-* ‘to need; to suffer a misfortune’.
 3. This etymology must be rejected due both to faulty sound correspondences and to dubious semantics.
57. **čAmA* ‘to eat’: Hamito-Semitic **čm* ‘to eat’ / **čm* ‘to taste’ ~ Kartvelian **čām-/čēm-* ‘to eat’. Rejected.

Comment: According to Klimov (1998:319—320), the Proto-Kartvelian form is to be reconstructed as **čām-* : **čm-* ‘to eat’, while Fähnrich (2007:664—665) reconstructs Proto-Kartvelian **čām-*. Neither Klimov nor Fähnrich reconstruct a long vowel. This greatly reduces the probability that the Afrasian and Kartvelian forms are related.

58. *ČalHa 'wide': Indo-European *stelh- 'wide' ~ Altaic [*čāl(a) 'wide, expansive']. Rejected.

Comment: Faulty sound correspondences.

59. *da locative particle: Hamito-Semitic *da particle with locative meaning ~ Kartvelian *da (with pronouns), *-d/*-ad (with nouns) suffix of directive/adverbial case ~ Indo-European *-D/*-eD suffix of ablative case (pronominal and o-stems) ~ Uralic *-da/*-dä suffix of ablative (pronominal and adverbial stems) ~ Dravidian *-ttu/*-tt(ɿ) postpositional particle with locative-ablative meaning ~ Altaic *-da/*-dä, *-du/*-dū formant of locative cases. Possible.

Comments:

1. The Proto-Indo-European form should be removed. The suffix of the ablative case (pronominal and o-stems) is now thought to have arisen from the incorporation of an adverb *H₁ét(i) into the thematic declension: *-ō/ē-t < *-o/e-+*H₁ét(i) (cf. Bomhard, vol. 1, Chapter 19, §19.6).
2. The Proto-Uralic form should be removed. Proto-Uralic */δ/ is not a reflex of Proto-Nostratic */d/.

Bomhard (no. 143) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Elamite, Kartvelian, Indo-European, Altaic, and Chukchi-Kamchatkan:

Proto-Nostratic relational marker *da- (~ *dā-) 'along with, together with, in addition to':

- A. Proto-Afrasian *da, *di 'along with, together with, in addition to': Berber: Kabyle *d*, *yid*, *id* 'with, together with, and'; Tamazight (Ayt Ndhir) *d* 'with, and'; Tuareg *d*, *əd* 'and, with together with'; Nefusa *əd*, *did* 'and, with'; Ghadames *əd*, *did* 'and, with'; Zenaga *əd*, *id*, *d* 'and with'; Mzab *əd*, *did* 'and, with'. Central Cushitic: Bilin comitative case suffix *-dī* 'together with'; Quara *-dī* 'together with'. Highland East Cushitic: Burji *-ddi* locative suffix (with absolute case) in, for example, *miná-ddi* 'in the house'. Proto-Chadic *dā- 'with, and' > Hausa *dà* 'with; and; by, by means of; regarding, with respect to, in relation to; at, in during; than'; Kulere *tu*; Bade *də*; Tera *ndə*; Gidar *di*; Mokulu *ti*; Kanakuru *də*. Note: Diakonoff (1988:61) reconstructs comitative-dative case endings *-dV and *-Vd for Proto-Afrasian based upon evidence from Cushitic (Agaw) and Berber-Libyan.
- B. Proto-Kartvelian *da 'and': Georgian *da* 'and'; Mingrelian *do*, *ndo* 'and'; Laz *do* 'and'.
- C. Elamo-Dravidian: Royal Achaemenid Elamite, Neo-Elamite *da* (also *-da* in *-be-da*, *e-da*, *ku-da*, etc.) 'also, too, as well, likewise; so, therefore, hence,

consequently, accordingly; thereby, thereupon'. Note also: Middle Elamite, Neo-Elamite *tak* 'also' (< *da-* 'also' + *a-ak* 'and').

- D. Proto-Indo-European **-d^he*, **-d^hi* suffixed particle: Sanskrit *sa-há* (Vedic *sa-dha*) 'with', *i-há* 'here' (Prakrit *i-dha*), *kú-ha* 'where?', *á-dhi* 'above, over, from, in'; Avestan *iða* 'here', *kudā* 'where?'; Greek locative particle -θι, in, for example, οἶκο-θι 'at home', πό-θι 'where?'; Old Church Slavic *kъ-de* 'where?', *сѣ-de* 'here'.
- E. Proto-Altaic dative-locative particle **da*: Tungus: Manchu dative-locative suffix *-de*. The locative suffix is *-du* in other Tungus languages. Common Mongolian dative-locative suffix **-da* > Mongolian *-da*; Dagur *-da*; Khalkha *-dv*; Buriat *-da*; Kalmyk *-dv*; Moghol *-du*; Ordos *-du*; Monguor *-du*. Regarding the *-du* variant, Greenberg (2000:156) notes: "It seems probable that the vowel here has been influenced by the dative-allative *ru...*" Common Turkic (except Yakut) locative suffix *-da/-dā* > Old Turkic locative-ablative suffix *-dA*; Chagatay locative suffix *-dA*; Turkish locative suffix *-dA*; Azerbaijani locative suffix *-dA*; Turkmenian locative suffix *-dA*; Tatar locative suffix *-dA*; Bashkir locative suffix *-dA*; Kazakh locative suffix *-dA*; Noghay locative suffix *-dA*; Kirghiz locative suffix *-dA*; Uzbek locative suffix *-dā*; Uighur locative suffix *-dA*. Turkish *da*, *de* (also *ta*, *te*) 'and, also, but'.
- F. Proto-Chukchi-Kamchatkan instrumental case marker **-tæ* and the suffix **-tæ* in the comitative 1 case marker **kæ- -tæ* 'together with' (both class 1). Perhaps also Proto-Chukotian **to* 'and' > Koryak *to* 'and'; Alyutor *tu* (Palana *to*) 'and'.
60. **daHa* intensifying and conjoining particle: Hamito-Semitic **dH* 'and, also' ~ Kartvelian **da* 'and' ~ Altaic **dā* 'also, but, and'. Rejected.

Comment: This cannot be separated from the preceding entry (no. 59).

61. **daKa* 'nearby' ~ Hamito-Semitic **dḳ* 'nearby' ~ Uralic **taka* 'back, rear', **taka-na* 'from behind' ~ Altaic **daka-/*daga-* 'close; to approach, to follow'. Rejected.

Comments:

1. Starostin—Dybo—Mudrak (2003:456) reconstruct Proto-Altaic **dāgá* 'near; to follow'. Proto-Altaic **/g/* does not correspond to Proto-Afrasian **/k/*.
2. The Afrasian material cited by Illič-Svityč is problematic. No single Proto-Afrasian form can be reconstructed which can account for all of the forms found in the daughter languages.

62. **dalq/u/* 'a wave': Hamito-Semitic **dlx* 'to upset, to stir up' ~ (?) Indo-European [**dhelH-* (with suffix) 'sea'] ~ Dravidian **talla* 'upset' ~ Altaic **d/ā/lu-/***dōli* 'wave'. Possible.

Comments:

1. The Proto-Indo-European form should be removed. The only supporting evidence that Illič-Svityč cites is Greek *θάλασσα* 'sea', and this is rightfully seen to be of Pre-Greek origin (cf. Beekes 2010.I:530; Boisacq 1950:331; Chantraine 1968—1980.II:420; Frisk 1970—1973.I:648—649) and not inherited from Proto-Indo-European. Thus, there is no justification for reconstructing Proto-Indo-European **dhelH-* 'sea'.
2. Starostin—Dybo—Mudrak (2003:459) reconstruct Proto-Altaic **dāla* 'wave, deep place'. Given the semantic range of the supporting evidence from the Altaic daughter languages cited by Starostin—Dybo—Mudrak, the Altaic forms should probably not be included here. Moreover, the supporting evidence from the other Nostratic daughter languages points more to a semantic range similar to what is found in Semitic — nowhere is there a cognate meaning 'wave', and the same goes for Dravidian and Eskimo:

Proto-Semitic **dal-ax-* 'to stir up, to disturb, to roil (water), to agitate' > Akkadian *dalāhu* 'to stir up, to roil (water), to blur (eyes); to disturb; to become muddied, roiled, blurred; to be or become troubled, confused, embarrassed', *dalhu* 'disturbed, blurred, muddy, cloudy, confused', *dilihtu* 'disturbed condition, confusion, distress'; Hebrew *dālah* 'to trouble, to make turbid'; Syriac *dālah* 'to trouble, to disturb'; Harari *dālāha* 'to sin, to err, to go astray, to miss the way'; Gurage (Masqan, Gogot) *dälla*, (Wolane, Zway) *dāla* 'to make a mistake, to be mistaken, to err, to lose the way, to miss the way'.

Bomhard (no. 149) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Eskimo:

Proto-Nostratic root **dal-* (~ **dāl-*):

- (vb.) **dal-* 'to stir up, to disturb, to roil (water), to agitate; to be disturbed, confused, agitated, troubled';
 (n.) **dal-a* 'disturbance, agitation'

Note also:

- (vb.) **dul-* 'to disturb, to perplex, to bewilder, to confuse, to ruffle, to upset, to baffle, to stir up trouble, to agitate; to be disturbed, perplexed, bewildered, confused, ruffled, upset, baffled, troubled, agitated' (> 'to drive someone crazy, mad, insane; to be crazy, mad, insane; to be dumb, stupid');
 (n.) **dul-a* 'confusion, disturbance, trouble, agitation, perplexity' (> 'madness, craziness, insanity; stupidity')

63. **danga* ‘to cover’: Hamito-Semitic **dm-* ‘to cover, to close, to press’ ~ Indo-European **dhengh-* ‘to cover, to press’ ~ Uralic **taja/*taje* ‘to cover’. Weak.

Comment: There are problems with this etymology. The Afrasian forms cited by Illič-Svityč can only belong here if we assume that the unextended Proto-Nostratic form is to be reconstructed as **dam-* ‘to cover’. This would mean that the Proto-Indo-European form is to be derived from an extended form **dam-g-* > (with assimilation of **m* to **n* [ŋ] before **g*) **dan-g-*. But then, this raises questions about the Uralic material. The Proto-Uralic **-/ŋ-/* reconstructed by Illič-Svityč does not correspond to Proto-Afrasian **-/m-/*, unless we assume that the same developments took place as in Proto-Indo-European but with the subsequent loss of the velar. However, this is all extremely speculative. In fact, there is really no evidence for such a development.

64. **dEwHi* ‘to shake, to blow’: Indo-European **dheuH-* ‘to shake, to blow’ ~ Altaic **dEbi-* ‘wave, blow’. Rejected.

Comment: This etymology cannot stand as written. Proto-Altaic **/b/* does not correspond to Proto-Indo-European **/u/* or **/u/* [w].

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 183) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Indo-European, and Yukaghir:

Proto-Nostratic root **duw-* (~ **dow-*):

- (vb.) **duw-* ‘to blow about, to fly about, to scatter; to be blown, strewn, or scattered about’;
 (n.) **duw-a* ‘anything blown, sprinkled, scattered, or strewn about: smoke, steam, vapor; rain, shower, drizzle, raindrops; dust’; (adj.) ‘blown about, sprinkled, scattered, strewn’

65. **-di* suffix of past tense forms: Kartvelian **-di* suffix of imperfect ~ Dravidian **-/tt-/*-t-* suffix of preterit ~ Altaic **-di* suffix of preterit. Rejected.

Comments:

1. Faulty sound correspondences — we would expect the Dravidian suffix to be **-/tt-/* ~ **-/t-/* were it truly comparable to the other suffixes under consideration here. Thus, the Dravidian forms must be removed.
2. Klimov (1964:67), Fähnrich (2007:119), and Fähnrich—Sardshweladse (1995: 96—97) reconstruct Proto-Kartvelian **-d* passive suffix.
3. Starostin—Dybo—Mudrak (2003:236) do not reconstruct Proto-Altaic **-di* suffix of preterit.
4. At the end of this entry, Illič-Svityč mentions the Germanic preterit suffix **-da* (found, for example, in Gothic *lagi-da*, Old Icelandic *lagþa*, and Old

High German *legi-ta*), though he marks it as questionable. Indeed, it is questionable — it does not belong here.

66. (?) (Descriptive) **did*_Λ 'big': Hamito-Semitic **d(j)d* 'big, fat' ~ Kartvelian **did-* 'big'. Weak.

Comment: Neither Ehret (1995) nor Orël—Stolbova (1995) reconstruct Proto-Afro-asiatic **d(j)d* 'big, fat'. Moreover, the Afrasian evidence (exclusively from Chadic and Cushitic) cited by Illič-Svityč is problematic — the vowels do not match, which makes it difficult to reconstruct a common Afrasian proto-form.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 162) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Kartvelian, and (?) Indo-European:

Proto-Nostratic root **did-* (~ **ded-*):

(vb.) **did-* 'to swell, to rise';

(n.) **did-a* 'prominence, protuberance'; (adj.) 'swollen, raised'

67. **diga* 'fish': Hamito-Semitic [**d(j)g* 'fish'] ~ Indo-European **dhǵh-u-H* 'fish' ~ Altaic [**/d/iga-* 'fish']. Strong.

Comments:

1. The Semitic evidence points to Proto-Semitic **dag-* 'fish':

Proto-Semitic **dag-* 'fish' > Hebrew *dāγ* 'fish', *dāγāh* 'fish', *dawwāγ* 'fisherman'; Ugaritic *dg* 'fish', *dgy* 'fisherman' (cf. Klein 1987:114; D. Cohen 1970— .3:216). The forms with medial /w/ ~ /y/ are derivatives.

2. Starostin—Dybo—Mudrak (2003:477) reconstruct Proto-Altaic **d̥iagi* (~ -*jo-*) 'fish'.
3. Dolgopolsky (1998:61—62, no. 74) (erroneously) reconstructs Proto-Nostratic **doTgiHU* 'fish'.

Bomhard (no. 163) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Indo-European, and Altaic (note: both Illič-Svityč and Bomhard agree on the reconstruction of the Nostratic proto-form and on the evidence adduced from the Nostratic daughter languages to support such a reconstruction):

Proto-Nostratic (n.) **dig-a* 'fish'.

68. **dila* ‘sunlight’: (?) Kartvelian [**dila* ‘morning’] ~ Indo-European **dhel-* ‘sun, bright, light’ ~ Altaic **dila* ‘sun, solar year’. Possible.

Comments:

1. The Dravidian evidence adduced by Bomhard points to Proto-Nostratic medial */-ly-/. If the Dravidian evidence belongs here, then the Altaic evidence must be excluded. Here is the Dravidian evidence:

Tamil *teḷi* ‘to become clear, limpid (as water by settling of sediment), serene (as the mind); to be bright (as the countenance), to become white; to disappear (as famine, epidemic); to become obvious, evident; to consider, to investigate, to understand’, *teḷir* ‘to shine, to sparkle’; Malayalam *teḷi* ‘cleanness, brightness’, *teḷivu* ‘cleanness, brightness, perspicuity, proof’, *teḷiyuka* ‘to become clear, to brighten up, to please, to be decided (a matter)’; Kannada *tiḷi*, *taḷi* ‘to become clear, pellucid, pure, bright; to brighten up; to be exhilarated or pleased; to be calmed; to cease (as sleep, a swoon); to come to light; to be or become plain or known; to know, to perceive, to learn’; Telugu *teḷi* ‘white, pure’.

2. Starostin—Dybo—Mudrak (2003:475) reconstruct Proto-Altaic **d̥ilo* ‘year; sun, sun cycle’. The Altaic evidence adduced by Illič-Svityč points to Proto-Nostratic medial */-//. If the Altaic evidence belongs here, then the Dravidian evidence must be excluded. In fairness, the case for including the Altaic evidence is stronger.

Bomhard (no. 165) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian (Southern Cushitic: Rift), Dravidian, Kartvelian, and Indo-European:

Proto-Nostratic root **dilʷ-* (~ **delʷ-*):
 (vb.) **dilʷ-* ‘to shine, to be or become bright’;
 (n.) **dilʷ-a* ‘daylight, morning’

Note: As noted above, the case for including the Altaic evidence is stronger. This means that Illič-Svityč’s reconstruction of the Nostratic proto-form is to be preferred: **dil-a*.

69. **diqA* ‘soil’: Kartvelian **diqa* ‘soil, clay’ ~ Indo-European **dhghem-* ‘soil’. Rejected.

Comments:

1. Faulty sound correspondences: Proto-Kartvelian */i/ does not correspond to Proto-Indo-European */e/, which must be reconstructed for the Indo-

European proto-form based upon the Hittite evidence (cf. Wodtko—Irslinger—Schneider 2008:86—99 **d^héǵ^h-om-*, etc.).

2. According to Klimov (1964:94—95 and 1998:72), the Proto-Kartvelian form is to be reconstructed as **tika-* 'soil, clay'. Klimov assumes that Proto-Kartvelian */t-/ has become /d-/ in Mingrelian and Laz through dissimilation. However, Illič-Svityč assumes the opposite, that is, that Proto-Kartvelian */d-/ has become /t-/ in Georgian through assimilation. Illič-Svityč's interpretation is the more plausible.
3. According to Bomhard (no. 167), Proto-Kartvelian **diqa* 'soil, clay' is descended from the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Indo-European, in addition to Kartvelian:

Proto-Nostratic root **diq^h-* (~ **deq^h-*):

- (vb.) **diq^h-* 'to crush, to pound or tamp (earth), to mold or knead (clay)';
 (n.) **diq^h-a* 'earth, clay, mud'

4. According to Bomhard (no. 146), Proto-Indo-European **d^heg^h-om-*, **d^hg^h-om-* 'earth, land, ground; human being' is descended from the following Proto-Nostratic forms based upon evidence from Afrasian, (?) Dravidian, Kartvelian, and Uralic, in addition to Indo-European:

Proto-Nostratic root **dag-* (~ **dəg-*):

- (vb.) **dag-* 'to put, to place, to put in place; to be put in place, to be stable, to be firmly established';
 (n.) **dag-a* 'place'

5. Bomhard (no. 146) also notes that the following Kartvelian forms have been borrowed from Indo-European: Georgian (dial.) *dil(l)γvam* 'black earth', (toponym) *Diγom* a region inside Tbilisi, occupying the so-called "Diγomian Field"; Svan *diγwam* 'black earth'.

70. **dīga* 'bright, light': Kartvelian *(*s₁a-*)*dγ-e* 'day' ~ Indo-European **dheih-* / **dh₁eh-* 'to see'. Rejected.

Comment: Proto-Kartvelian */γ/ does not correspond to a laryngeal in Proto-Indo-European.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 147) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, and Indo-European:

Proto-Nostratic root **dag-* (~ **dəg-*):

- (vb.) **dag-* 'to glitter, to shine, to burn';
 (n.) **dag-a* 'day'

Note: Bomhard includes the following Indo-European evidence:

Proto-Indo-European **dʰogh-o-* ‘day’: Proto-Germanic **daǵaz* ‘day’ > Gothic *dags* ‘day’; Old Icelandic *dagr* ‘day’; Swedish *dag* ‘day’; Norwegian *dag* ‘day’; Danish *dag* ‘day’; Old English *dæg* ‘day’; Old Frisian *dei* ‘day’; Old Saxon *dag* ‘day’; Old High German *tag, tac* ‘day’ (New High German *Tag*). Note: The following words for ‘yesterday’ should be considered here as well: Sanskrit *hyás* ‘yesterday’; Greek *χθές* ‘yesterday’.

71. **duli* ‘fire’: Uralic **tule* ‘fire’ ~ Dravidian **tuɭa-* ‘to shine, to spark’ ~ Altaic **duli-* ‘to warm up; warm’. Strong.

Comments:

1. The Dravidian evidence points to a Pre-Dravidian **tuly-* ‘to shine, to sparkle’.
2. Starostin—Dybo—Mudrak (2003:480—481) reconstruct Proto-Altaic **d̡iũlu* ‘warm’.

Bomhard (no. 172) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Uralic, and Altaic:

Proto-Nostratic root **dul-* (~ **dol-*):

(vb.) **dul-* ‘to burn, to be bright, to warm, to heat up’;

(n.) **dul-a* ‘heat, warmth, fire’

72. **duɭa* ‘tip, extremity’: Kartvelian **dud-* ‘tip, extremity’ ~ Uralic **tuδ'ka* ‘tip, top’ ~ Dravidian **tutɐ* ‘extremity, tip’. Possible.

Comments:

1. The Proto-Nostratic reconstruction is erroneous.
2. Proto-Uralic **/δ'/** does not correspond either to Proto-Kartvelian **/d/** or to Dravidian **/t/**. Consequently, the Uralic forms should be removed. The remaining parts of this etymology are mostly correct.
3. Proto-Dravidian **tut-* ‘tip, point end’ is most likely derived from earlier **tuɭ-*, through progressive assimilation: **tuɭ-* > **tut-*. The earlier form is preserved in the reduplicated form **tuɭta-tut-* ‘the very end or extremity’ found in Kannada and Telugu.

Bomhard (no. 171) reconstructs the following Proto-Nostratic form based upon evidence from Dravidian and Kartvelian:

Proto-Nostratic (n.) **dud-a* ‘tip, point’.

73. **dūnga* 'to be peaceful, silent': Hamito-Semitic **d(w)m* 'to be peaceful, silent' ~ Kartvelian [**dum-* 'to be silent'] ~ Altaic **dūṇä* 'to sit quietly, to be silent'. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:1375—1376) reconstruct Proto-Altaic **tjūm(k)u* 'silent, calm'. Accordingly, the Altaic material should be removed from this etymology.
2. With the removal of the Altaic material, the Proto-Nostratic form can be revised as follows: **dum-* 'to be silent'.

Bomhard (no. 176) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, and Indo-European:

Proto-Nostratic root **dum-* (~ **dom-*):

(vb.) **dum-* 'to be silent';

(n.) **dum-a* 'silence'

74. (?) **dUrA* 'deaf': Hamito-Semitic **d(w)r* 'deaf' ~ Kartvelian [**dura* 'deaf']. Rejected.

Comment: The Afrasian material cited by Illič-Svityč is extremely problematic.

75. **daʕA* 'to lay': Hamito-Semitic **dʕ* 'to lay' ~ Kartvelian **d-* 'to lay' ~ Indo-European **dheh₁-* 'to lay, to stand'. Rejected.

Comments:

1. Dolgopolsky (2008:491—492, no. 497) reconstructs **diʕê* (~ **dVHU*) 'to put, to place'.
2. Proto-Afrasian **/ʕ/* does not correspond to the Proto-Indo-European laryngeal commonly reconstructed for this form: **dʰeʔ-* (= **dʰeH₁-*, **dʰeʔ₁-*, **dʰeh₁-/dʰeh₁-*, etc.) (cf. Rix 2001:136—138 **dʰeh₁-*; Watkins 2000:17 **dʰeʔ₁-*; Mallory—Adams 1997:472 **dʰeh₁-*).

As an alternative proposal to Illič-Svityč's (and Dolgopolsky's) etymology, Bomhard (no. 159) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Elamite, Indo-European, Etruscan, and Chukchi-Kamchatkan:

Proto-Nostratic root **day-* (~ **dəy-*):

(vb.) **day-* 'to throw, to cast, to put, to place';

(n.) **day-a* 'act, deed'

76. **dawa* ‘to be ill, to die’: Hamito-Semitic **dw-* ‘to be ill, to die’ ~ Indo-European **dheu-* ‘to die, to lose consciousness’. Strong.

Bomhard (no. 158) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian and Indo-European:

Proto-Nostratic root **daw-* (~ **dəw-*):

(vb.) **daw-* ‘to become deathly sick, to be ill; to die’;

(n.) **daw-a* ‘(deadly) disease, sickness; death’

77. **ga(H)* ‘to take, to receive’: Kartvelian **g-* ‘to acquire’ ~ Altaic **ga-* ‘to take, to receive’. Rejected.

Comments:

1. Klimov (1998:24—25) reconstructs Proto-Kartvelian **g-* ‘to acquire, to gain, to win’.
2. The evidence from the Altaic daughter languages indicates that the Proto-Altaic form had a wider semantic range than indicated by either Starostin—Dybo—Mudrak (2003:525) or Illič-Svityč:

Proto-Altaic **ga-* ‘to take, to take off, to take away; to let go, to leave; to put’: Proto-Tungus **ga-* ‘to take’ > Manchu *gai-* ‘to take, to take away, to take off’; Spoken Manchu (Sibo) *gia-* ‘to take, to take away, to take off’; Evenki *ga-* ‘to take’; Lamut / Even *ga-* ‘to take’; Negidal *ga-* ‘to take’; Ulch *ga-* ‘to take’; Orok *ga-* ‘to take’; Nanay / Gold *ga-* ‘to take’; Oroch *ga-* ‘to take’; Udihe *ga-* ‘to take’. Proto-Turkic **Ko-* (perhaps originally **Ka-* but changed to **Ko-* under the influence of the synonymous stem **Kod-* ‘to put; to leave’) ‘to put; to let go; to leave’ > Turkish *ko-*, *koy-* ‘to put; to let go; to leave; to permit; to suppose’; Karaim *qo-* ‘to put; to leave’; Chuvash *χiv-*, *χu-* ‘to put; to leave’.

3. This etymology is rejected due to the irreconcilable semantic differences between the Kartvelian and Altaic material cited by Illič-Svityč. Any resemblance is purely fortuitous.
78. **gara* ‘thorny branch, thorn’ ~ Indo-European **gher-*, **gherh-/ghreh-* ‘thorn, point, branch’ ~ Uralic **kara* ‘thorn, branch, conifer’ ~ Dravidian **kar(a)-* ‘thorn, point’ ~ Altaic **gara-* ‘point, branch, conifer’. Weak.

Comments:

1. The etymology of the Greek form (χάρμη = ἐπιδορατίς ‘tip, point of a lance, spear-head’) cited by Illič-Svityč is uncertain, though relationship to (Hesychius) χαρία· βουνός ‘hill’ and χοιράς ‘rocks (rising just above the sea) like a hog’s back’ is considered likely. The full complement of

possible related Greek forms is as follows: *χάρμη* 'tip, point of a lance, spear-head', *χοιράς* (< *χορ-ιαδ-) '(adj.) of a hog; (n.) 'a sunken rock; (pl.) scrofulous swellings in the glands of the neck', *χοιράς πέτραι* 'rocks (rising just above the sea) like a hog's back', *χοῖρος* (< *χορ-ιο-) 'a young pig, a porker', *χοιραδ-ώδης* 'rocky', *χαρία· βουνός* 'hill'. Derivation from Proto-Indo-European **g^{her}*- 'to stick out, to protrude' has been proposed. The Norwegian, Old High German, Slavic, and Tocharian forms cited by Illič-Svityč can also be derived from Proto-Indo-European **g^{her}*- 'to stick out, to protrude', though there are some uncertainties here as well. This examination of the Indo-European material indicates that the semantic range assigned to the reconstructed Proto-Indo-European form by Illič-Svityč is far too narrow.

2. Starostin—Dybo—Mudrak (2003:531—532) reconstruct Proto-Altaic **gǝr̥[ǝ]* (= **gǝr̥[ǝ]*) 'sharp edge' based upon slightly different evidence from the Altaic daughter languages than that cited by Illič-Svityč. Proto-Altaic */-r̥-/ (= *-r̥-/) implies Proto-Nostratic */-r̥-/ . Some of the Altaic forms cited by Illič-Svityč are included by Starostin—Dybo—Mudrak in their etymology, though the semantic range is broader.
3. Reconstructing a Proto-Nostratic */-r̥-/ makes the Dravidian forms cited by Illič-Svityč questionable — we would expect **kar(a)-* instead. If we reconstruct the Proto-Nostratic form as **gar̥-* 'to stick out, to stand out, to jut out, to project, to protrude; to be or become erect, rigid, stiff', as required by the Altaic evidence, then a better Dravidian comparison might be with the following:

Tamil *kaṛal* (*kaṛalv-*, *kaṛanr-*) 'to produce, to bulge out, to pass through (as an arrow)', *kaṛalai* 'wen, tubercle, tumor'; Malayalam *kaṛarruka* 'to protrude', *kaṛala* 'a swelling (chiefly in the groin)'; Kota *kaṛv-* (*kaṛd-*) 'to be stretched, to protrude through a hole (for example, piles)', *kart-* (*karty-*) 'to make to protrude through a hole'; Tulu *karalè* 'a swelling'; (?) Telugu *koḍalu-komu* 'to swell, to rise, to increase'.

4. In like manner, reconstructing the Proto-Nostratic form as **gar̥-* 'to stick out, to stand out, to jut out, to project, to protrude; to be or become erect, rigid, stiff' makes the Uralic evidence suspect. We would expect Proto-Uralic **kaŕa* instead.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 374) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, (?) Kartvelian, Indo-European, and Chukchi-Kamchatkan:

Proto-Nostratic root **gar̥-* (~ **gər̥-*):

- (vb.) **gar̥-* 'to stick out, to stand out, to jut out, to project, to protrude; to be or become erect, rigid, stiff';

(n.) **gar*^y- ‘tip, point, peak’

Identical to:

(vb.) **gar*^y- ‘to swell, to increase, to grow’;

(n.) **gar*^y-*a* ‘swelling, increase, growth; great quantity, abundance, excess’

79. **gāndu* ‘male’: Dravidian **kaṇṭ*- ‘male’ ~ Altaic **gāndū* ‘male’. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:541) reconstruct Proto-Altaic **gentV* (~ **k-*) ‘male, self’. Bomhard (no. 378) accepts Street’s (1974:13) alternative Proto-Altaic reconstruction: **gendū(n)* ‘male; self’
2. Semantically, this is a very attractive etymology. However, the lack of agreement between the Dravidian and Altaic stem vowels is problematic.

Bomhard (no. 378) reconstructs the following Proto-Nostratic form based upon evidence from Dravidian and Altaic, indicating uncertainty concerning the reconstruction of the stem vowel:

Proto-Nostratic (n.) **g[e]n-d-a* ‘virility, strength; a male (human or animal)’

Here is the evidence cited by Bomhard (no. 378), with references:

- A. Dravidian: Tamil *kaṇṭan* ‘warrior, husband’, *kaṇṭi* ‘buffalo bull’, *kaṇavan* ‘husband’, *keṇṭan* ‘robust, stout man’, *kiṇṭan* ‘fat man, strong person’; Malayalam *kaṇṭan* ‘the male, especially of cat’, *kaṇavan* ‘husband’, *kiṇṭan* ‘big; a stout, bulky fellow’; Kota *gaṇḍ* ‘male’; Kannaḍa *gaṇḍu* ‘strength, manliness, bravery; the male sex, a male, man’, *gaṇḍa* ‘a strong, manly male person, a husband; strength, greatness’, *gaṇḍiga* ‘a valiant man’, *gaṇḍasa*, *gaṇḍasu*, *gaṇḍusa*, *gaṇḍusu* ‘male person’, *gaṇḍike* ‘prowess’, *geṇḍā* ‘husband’, *geṇḍu* ‘male’; Koḍagu *kaṇḍē* ‘male (of dogs and other animals, mostly wild; not of cats)’; Tuḷu *gaṇḍu* ‘male, valiant, stout’, *gaṇḍusu* ‘husband’, *gaṇḍūkāyi*, *gaṇḍustana*, *gaṇḍastana* ‘manliness’, *kaṇḍaṇi*, *kaṇḍaṇye* ‘husband’, *gaṇṭē*, *gaṇṭapuccē* ‘male cat’; Telugu *gaṇḍu* ‘bravery, strength, the male of the lower animals’, *gaṇḍūdu*, *gaṇḍādu* ‘a brave, strong man’; Malto *geṇḍa* ‘male’. Krishnamurti 2003:11 **kaṇṭ-a-* ‘male’, 169 **kaṇ-ṭV-* ‘warrior’, and 525 **kaṇṭ-anṭu* ‘husband, warrior’; Burrow—Emeneau 1984:111, no 1173. Dravidian loanword in Sanskrit *gaṇḍā-*, *gaṇḍīra-* ‘hero’ (cf. Mayrhofer 1956—1980.I:318). Perhaps also: Kota *geṇḍ kaṭ-* (*kac-*) ‘dog’s penis becomes stuck in copulation’; Kannaḍa *keṇḍa* ‘penis’; Gondi *geṭānā*, *gēṭ-* ‘to have sexual intercourse’, *gēṭ* ‘sexual intercourse’. Burrow—Emeneau 1984:177, no. 1949.
- B. Proto-Altaic **gendV* (~ **k-*) ‘male, self’: Proto-Mongolian **gendū* ‘male of animals’ > Written Mongolian *gendū(n)* ‘small male panther; male of animals in general; male tiger’; Khalkha *gendū* ‘a male tiger or leopard’;

Buriat *gende* 'male sable'; Kalmyk *gendŋ* 'male of animals'. Proto-Turkic **[g]əntü* (-nd-) 'self' > Old Turkish (Orkhon, Old Uighur) *kentü* 'self'; Karakhanide Turkic *kendü* 'self'; Turkish *kendi* 'self'; Azerbaijani *gendi* 'self'; Yakut *kini* 'he'; Dolgon *gini* 'he'. Starostin—Dybo—Mudrak 2003: 541 **gentV* (~ **k-*) 'male, self'; Poppe 1960:25; Street 1974:13 **gendü(n)* 'male; self'.

80. **gäti* 'hand': Indo-European **ĝhes-* 'hand' ~ (?) Uralic **käte-* 'hand' ~ Dravidian **kac-* 'hand'. Rejected.

Comment: Though the semantics are good, there are problems with the phonology — Proto-Indo-European **/-s-/* does not correspond to Proto-Uralic **/-t-/*. In like manner, Proto-Dravidian **/-c-/* does not correspond to Proto-Uralic **/-t-/*. Consequently, this etymology must be abandoned.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 376) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Uralic:

Proto-Nostratic root **gat'-* (~ **gət'-*):
(vb.) **gat'-* 'to take (with the hand), to grasp';
(n.) **gat'-a* 'hand'

81. (?) **gedi* 'nape of neck': Hamito-Semitic **gd* 'nape of neck, backside' ~ Altaic **gedi* 'nape of neck, backside'. Rejected.

Comment: The Afrasian material cited by Illič-Svityč is problematic. No single Proto-Afrasian form can be reconstructed which can account for all of the forms found in the daughter languages. This indicates that the Afrasian forms cited by Illič-Svityč are probably chance resemblances, at best, and not cognates.

82. **gE/hr/a* 'dawn': Hamito-Semitic **ghr* 'sunlight, day' ~ Indo-European **ĝherh-/* **ghreh-* 'to dawn, to shine' ~ Altaic **gĒra* 'dawn, morning, light'. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:531) reconstruct Proto-Altaic **gari* (~ *-r̥-*, *-o*) 'light', with a range of meanings in the forms cited from the Altaic daughter languages as follows: 'ray, beam, light; to shine'.
2. Illič-Svityč cites disparate forms from the Afrasian daughter languages which are probably not cognates. These should be left out of consideration.

3. The Proto-Indo-European form is better reconstructed as **ġ^her-*; extended forms: **ġ^hr-éh₁/h₁-*, **ġ^hr-h₁ié-* — this reconstruction is taken from Rix 2001:177.
4. This leaves only Indo-European and Altaic. Based upon the evidence from these two branches, the Proto-Nostratic reconstruction should be revised as follows:

Proto-Nostratic root **gar-* (~ **gər-*):

(vb.) **gar-* ‘to shine, to be bright’,

(n.) **gar-a* ‘that which is shining, bright: ray, beam, light; sun; etc.’

5. This etymology is not in Bomhard (this book).
83. **gila* ‘state of sickness, grief’: Kartvelian **gl-* ‘grief, sorrow’ ~ Indo-European **ġh(e)l-* ‘sickness, loss’ ~ (?) Altaic [**gil(a)* ‘to be ill, to be sad’]. Possible.

Comments:

1. Klimov (1964:63 and 1998:31) reconstructs Proto-Kartvelian **glo(w)-* ‘to grieve, to deplore’, while Schmidt (1962:101) reconstructs Proto-Kartvelian **gel-*, and Fähnrich—Sardshweladse (1995:86) and Fähnrich (2007:107—108) reconstruct Proto-Kartvelian **gl-*.
2. Starostin—Dybo—Mudrak (2003:555) reconstruct Proto-Altaic **ġiðlo* ‘to be unhappy, to endure’. The vowel of the first syllable is problematic. Hence, the Altaic material should be removed from this etymology.
3. Bomhard (no. 362) excludes the Altaic material but adds material from Semitic (Afrasian):

Proto-Semitic **gal-aw-* ‘to ache, to be in pain, to be ill, to have a fever’ > Ḥarsūsi *ġēlew* ‘to have a fever’, *ġōlew* ‘fever’; Soqotri *ġóle?* ‘fever’; Mehri *ġēləw* ‘to be ill, to have a fever, to have a short illness’, *ġōləw* ‘fever’; Šheri / Jibbāli *ġīzi/ygól* ‘to be ill, to have a fever’, *ġóle?* ‘fever’, *ġélé?* ‘ill’. Tigre *ġele* ‘weak, miserable’, *ġolāli ġā?a* ‘to suffer pain (head, body), to have no power’; Amharic *ag^wlalla* ‘to mistreat, to inflict hardship on’.

Bomhard (no. 362) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, and Indo-European:

Proto-Nostratic root **gal-* (~ **gəl-*):

(vb.) **gal-* ‘to ache, to be in pain, to be ill, to suffer’;

(n.) **gal-a* ‘ache, pain, disease, illness’

84. **gi/l/hu* ‘smooth and shiny’: Hamito-Semitic [**glh* ‘bald’] ~ (?) Kartvelian [**glu-* ‘smooth’] ~ Indo-European **ġhelh^u-*/**ġhle^u-* ‘shiny, of light color’,

ḡhleḡ-dh-* 'smooth, shiny' ~ Dravidian [kɪɭ/ɭ* 'smooth and shiny'] ~ Altaic
**gilu-/gila-* 'smooth and shiny'. Possible.

Comments:

1. It appears that Illič-Svityč has confused two different Proto-Nostratic stems here: (A) **gil-* 'to glide, to slip, to slide' (reflexes in Kartvelian, Indo-European, and Uralic); and (B) **gil-* 'to shine, to glisten' (reflexes in Indo-European, Uralic, Altaic, and Chukchi-Kamchatkan) (see below).
2. The origin of the Semitic forms is unclear. They could have come from a stem meaning 'bright, shiny', from a stem meaning 'smooth', or from a stem meaning 'to scratch, to scrape', all of which have Nostratic antecedents. On the other hand, if the Beja / Beḡawye form cited by Illič-Svityč is a true cognate, it would point to an original initial labiovelar, **/gʷ-/*, which would make it impossible to include the Afrasian evidence in this etymology.
3. Starostin—Dybo—Mudrak (2003:544—545) reconstruct Proto-Altaic **gilə* (~ *-i, -o*) 'to shine, to glitter'.

Bomhard (no. 382) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, and Indo-European:

Proto-Nostratic root **gil-* (~ **gel-*):

(vb.) **gil-* 'to glide, to slip, to slide';

(n.) **gil-a* 'gliding, sliding'; (adj.) 'smooth, slippery'

Bomhard (no. 567) reconstructs the following Proto-Nostratic forms based upon evidence from Indo-European, Uralic, Chukchi-Kamchatkan, and Altaic:

Proto-Nostratic root (Eurasianic only) **gil-* (~ **gel-*):

(vb.) **gil-* 'to shine, to glisten';

(n.) **gil-a* 'brilliance, shine'; (adj.) 'shining, glistening, gleaming, brilliant'

85. **goHjɐ* 'sunlight, dawn': Indo-European **gʰeh₂-* 'light, bright' ~ Uralic **koja* 'dawn' ~ (?) Altaic [**gia-* 'dawn']. Rejected.

Comments:

1. Starostin—Dybo—Mudrak (2003:553—554) reconstruct Proto-Altaic **ḡiòḡu* (= **ḡiòḡu*) 'dawn, daylight'. Clearly, this does not belong here.
2. According to Beekes (2010.II:1547), the etymology of Greek φαῖός 'grey; dark grey, blackish' is unknown. He rejects comparison with Lithuanian *giēdras* 'clear'. However, he (2010.II:1544) accepts the comparison of Greek φαῖδρός 'bright, clear, cheerful, joyous' with Lithuanian *gaidrūs* 'bright, clear', *gaidrà* 'cloudless heaven, clear weather', and *giēdras* 'clear'. He posits derivation from Proto-Indo-European **gʷeh₂id-*.

3. Rédei (1986—1988:167) reconstructs Proto-Finno-Ugrian **koje* ‘dawn, sunrise’, while Sammallahti (1988:543) reconstructs Proto-Finno-Ugrian **koji* ‘dawn’. In terms of both phonology and semantics, it is difficult to reconcile this form with Proto-Indo-European **g^{wh}eh₂id-*.

86. **golH₁* ‘heart’: Kartvelian **gul-* ‘heart’ ~ Altaic **gōl(ḷ)* ‘core, middle, river source’. Rejected.

Comment: Starostin—Dybo—Mudrak (2003:561) reconstruct Proto-Altaic **goblu* ‘valley’ as the antecedent of the Altaic forms cited by Illič-Svityč: Proto-Mongolian **gowl* ‘river; river valley; center (река; долина реки; центр)’; Proto-Turkic **Kōl* ‘valley (долина)’.

87. **gop’a* ‘empty’: Hamito-Semitic **gwP* ‘empty’ ~ (?) Kartvelian **kwab-* ‘cave, hole’ ~ Indo-European **geup-* ‘cavity, hole’ ~ Uralic **koppa* ‘empty; skull’ ~ Altaic **goba-/gobi-* ‘empty; a hollow’. Rejected.

Comment: The sound correspondences do not work — Proto-Afrasian **/g/* does not correspond to either Proto-Kartvelian **/k(w)-/* or Indo-European **/g-/* (= **/k’-/* under the glottalic model of Proto-Indo-European consonantism). Proto-Indo-European **/p-/* does not correspond to either Proto-Kartvelian **/-b-/* or Proto-Altaic **/-b-/*.

88. (?) **goḡra* ‘to search’: Hamito-Semitic **g(w)ḡr* ‘to search’ ~ Kartvelian [**gō/r-* ‘to search’]. Rejected.

Comment: The forms cited by Illič-Svityč from the Afrasian daughter languages cannot possibly all be related.

89. **gu/nH/i* ‘think’: Kartvelian **gwān-/gōn-* ‘to think, to recall’ ~ Altaic **gūni-* ‘to think, to be sad’. Strong.

Comments:

1. Klimov (1964:63—64 and 1998:31), Fähnrich (2007:109—110), and Fähnrich—Sardshweladse (1995:87—88) reconstruct Proto-Kartvelian **gon-* ‘to think, to remember’.
2. Starostin—Dybo—Mudrak (2003:571—572) reconstruct Proto-Altaic **gūno* ‘to think’.

Bomhard (no. 394) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, Uralic, and Altaic:

Proto-Nostratic root **gun-* (~ **gon-*):
(vb.) **gun-* ‘to perceive, to notice’;

(n.) **gun-a* 'notice, memory, mind, perception, remembrance, recollection'

90. **gurHa* 'antelope, male antelope': Hamito-Semitic **g(w)rH* 'antelope, male antelope' ~ Dravidian **kūr-* 'antelope, deer' ~ Altaic [**gūra* 'male antelope']. Strong.

Comment: Starostin—Dybo—Mudrak (2003:574—575) reconstruct Proto-Altaic **guri* (~ -o-, -r-, -e) 'deer, game'.

Bomhard (no. 400) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Altaic:

Proto-Nostratic root **guw-* (~ **gow-*):

(vb.) **guw-* 'to hunt wild animals';

(n.) **guw-a* 'wild animal, wild beast, game'; (adj.) 'wild, untamed'

Extended form:

(vb.) **guw-V-r-* 'to hunt wild animals';

(n.) **guw-r-a* 'wild animal, wild beast, game'; (adj.) 'wild, untamed'

Notes:

1. The unextended stem is preserved in Ancient Egyptian: *gw* '(wild) bull'.
2. The Afrasian (Cushitic and Chadic) and Indo-European forms are deverbatives: **guw-V-r-*.

91. (Descriptive) **gura* 'to swallow': Hamito-Semitic **g(w)r* 'to swallow; throat' ~ (?) Indo-European **g^uerh^u-* 'to swallow' ~ Uralic **kurka* 'throat' ~ Dravidian **kura-* 'throat'. Possible.

Comment: The Afrasian evidence listed by Illič-Svityč does not belong here. Proto-Afrasian */g/ does not correspond to Proto-Indo-European */g^u/ (= */k^w- / under the glottalic model of Proto-Indo-European consonantism). Rather, it corresponds to Proto-Indo-European */g^h/ (see the table of sound correspondences in Bomhard, vol. 1, Chapter 12). The Afrasian evidence should be replaced with the following Semitic forms:

Semitic: South Arabian: Šheri / Jibbāli *kerd* 'throat'; Ḥarsūsi *kard* 'throat'; Mehri *kard* 'voice, throat'.

Bomhard (no. 595) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, Indo-European, and Uralic:

Proto-Nostratic root **q^wur-* (~ **q^wor-*):

(vb.) **q^wur-* 'to swallow';

(n.) **q^wur-a* ‘neck, throat’

92. **güpa* ‘to bend’: Hamito-Semitic **g(w)b/*k(w)P* ‘bend, protuberance’ ~ Indo-European **gheub-* ‘bend, curved, crooked’ ~ Altaic **gübä-/göbä-* ‘bent, bulging’. Rejected.

Comments:

1. The Indo-European form should be removed. Proto-Indo-European **b/* (= **p’/* under the glottalic model of Proto-Indo-European consonantism) does not correspond to Proto-Afrasian **b/* or Altaic **b/* and is certainly not derived from Proto-Nostratic **p/*.
2. Starostin—Dybo—Mudrak (2003:566—567) include the Mongolian forms cited by Illič-Svityč under the following: Proto-Altaic **gōp’i* (= **gōp^{hi}i*) ‘to beat, to hit’. Hence, the Altaic forms should also be removed.

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 569) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, and Eskimo:

Proto-Nostratic root **gub-* (~ **gob-*):

(vb.) **gub-* ‘to bend, to twist’;

(n.) **gub-a* ‘that which is twisted, bent, curved: hunch, wattle’

93. **gUjRä* ‘wild beast’: Indo-European **gh_uēr-* ‘(wild) beast’ ~ Altaic [**göra* ‘wild’]. Rejected.

Comment: This entry was discussed under no. 90 above.

94. **gUl’A* ‘round, sphere’: Hamito-Semitic **g(w)l* ‘round, sphere, head’ ~ Kartvelian **gwar-/gur-* ‘round; to roll’ ~ (?) Indo-European **ghel-* ‘round outgrowth, head’. Rejected.

Comment: Proto-Kartvelian **l/* does not correspond to either Proto-Afrasian **l/* or Proto-Indo-European **l/*.

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 585) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, Indo-European, and Chukchi-Kamchatkan:

Proto-Nostratic root **G^wal-* (~ **G^wəl-*):

(vb.) **G^wal-* ‘to curve, to bend, to roll; to be round’;

(n.) **G^wal-a* ‘round object: circle, globe, sphere, ball, etc.’

Derivative:

(n.) **G^wal-a* ‘head, skull’

In addition, Bomhard (no. 586) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian and Indo-European:

Proto-Nostratic (n.) **G^wal-a* 'head, skull':

Derivative of:

(vb.) **G^wal-* 'to curve, to bend, to roll; to be round';

(n.) **G^wal-a* 'round object: circle, globe, sphere, ball, etc.'

95. **gUr_A* 'hot coals': Hamito-Semitic **g(w)r* 'fire, coal' ~ Indo-European **g^uher-* 'to burn; hot, hot coals' ~ (?) Altaic *gur(ḷ)-* 'hot coals; to catch fire'. Strong.

Bomhard (no. 511) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Elamite, Indo-European, and Altaic:

Proto-Nostratic root **g^wir-* (~ **g^wer-*):

(vb.) **g^wir-* 'to be or become hot, to warm';

(n.) **g^wir-a* 'heat, fire'

96. (?) **galpa* 'weak, feeble': Indo-European **help-* 'weak' ~ (?) Kartvelian [**γalp-* 'weak'] ~ Altaic [**alba-* 'to be unable']. Rejected.

Comments:

1. Proto-Indo-European **/h/* does not correspond to Proto-Kartvelian **/γ/*.
2. Proto-Altaic **/b/* does not correspond to either Indo-European **/p/* or Proto-Kartvelian **/p/*.

97. (?) **garḱu* 'to bend': Kartvelian **γrek(w)-* 'to bend, to twist' ~ Indo-European **herḱu-* 'bent, flexible'. Rejected.

Comments:

1. Proto-Indo-European **/h/* does not correspond to Proto-Kartvelian **/γ/*.
2. There is absolutely no basis whatsoever for reconstructing a medial ejective **/-ḱ-/* (= **/-k'-/*) at the Nostratic level. The only reason for this reconstruction is an ad hoc sound law set up by Illič-Svityč. There is no evidence in the data cited by Illič-Svityč to support such a reconstruction. A methodologically rigorous approach to linguistic comparison demands strict adherence to established sound laws based upon the hard evidence provided by the languages being compared and avoidance of ad hoc proposals that ignore that evidence.

98. **guru* 'to flow, to pour': Hamito-Semitic [**g^wr* 'deep water'] ~ Kartvelian [**γwar-/γwer-* 'to pour; flood'] ~ Dravidian **ūr-* 'to melt, to fuse' ~ Altaic **ūRu-* 'to flow'. Rejected.

Comments:

1. Faulty sound correspondences are involved here. Proto-Nostratic initial */g-/ is not lost in Dravidian and Altaic.
2. The underlying root in the Semitic material cited by Illič-Svityč is *gVr-. The forms *g(w)r- ~ *g/y/r- are derivatives. On the origin of the */w/ ~ */y/ root extensions, cf. Militarev 2005. Militarev refers to them as “triconsonantizers”. He notes (2005:83):

Though a triconsonantal root may show certain meaning difference from its biconsonantal match, a triconsonantizer has no semantic value of its own and does not cause any regular meaning shift. Formerly, any consonant may be classified as a triconsonantizer in a broader sense, if it meets the above conditions. However, I prefer to classify as triconsonantizers in Semitic and, most probably, other Afrasian languages only the following consonants: *w*, *y*, *ʔ* (and, with hesitations, much less common *t*, *ʕ*, and *h*). All of them occur in the An-, In- and Auslaut position.

99. *g_{AMA} ‘darkness, night’: Hamito-Semitic [*g_m ‘dark’] ~ Kartvelian *γ_{am}-(*e*) ‘night’. Weak.

Comments:

1. Klimov (1998:220) reconstructs Proto-Kartvelian *γ_{ame}- ‘last night’.
 2. The underlying meanings of the Semitic forms cited by Illič-Svityč is: ‘(vb.) to cover, to hide, to conceal; (adj.) hidden, concealed, dark; (n.) darkness, obscurity, etc.’ as in the following Arabic forms: *ḡamuḍa*, *ḡamaḍa* ‘to be hidden, to be concealed, to hide; to close (eye); to be obscure, dark, abstruse, recondite, difficult to comprehend; to make obscure, abstruse, recondite, difficult to comprehend’, *ḡāmiḍ* ‘hidden, concealed; obscure, dark, ambiguous, abstruse, recondite, difficult to comprehend’, *ḡamma* ‘to cover, to veil, to conceal (something); to fill (someone) with sadness, pain, or grief; to pain, to grieve, distress’; *ḡumma* ‘grief, affliction, sorrow, distress, sadness, anxiety’; etc. Thus, the sense ‘(adj) dark; (n.) darkness’ is not the primary meaning but is derived from ‘to cover, to hide, to conceal’.
100. *h_{awa} ‘to desire passionately’: Hamito-Semitic *h_{wj} ‘to desire passionately’ ~ Indo-European *he_u- ‘to desire passionately’ ~ Dravidian [*ā_v- ‘to desire passionately’]. Strong.

Comments:

1. In this entry, Illič-Svityč has correctly compared the initial laryngeal */h-/ (= */ǵ₄/ ~ */H₄/ ~ */h₄/, etc.) in Proto-Indo-European with Proto-Semitic */h-/.
2. The Ancient Egyptian form cited by Illič-Svityč should be removed. The Cushitic material, on the other hand, belongs here.

Bomhard (no. 697) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Indo-European:

Proto-Nostratic root **haw-* (\sim **həw-*):
 (vb.) **haw-* 'to long for, to desire';
 (n.) **haw-a* 'desire'

101. **haju* 'to live; life force': Hamito-Semitic **hɿw* 'to live' \sim Indo-European **heju-* 'life force' \sim (?) Altaic **öjü-* 'alive, life'. Strong.

Comments:

1. The Proto-Indo-European laryngeal involved here is **/ǵ₂/* (= **/H₂/* \sim **/h₂/*, etc.). It corresponds to Proto-Afrasian **/h/* (IPA [h]).
2. Starostin—Dybo—Mudrak (2003:1043—1044) reconstruct Proto-Altaic **ōje* 'life, age'.

Bomhard (no. 733) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Altaic, Chukchi-Kamchatkan, and Indo-European:

Proto-Nostratic root **hay-* (\sim **həy-*):
 (vb.) **hay-* 'to live, to be alive';
 (n.) **hay-a* 'life, age'
 Extended form:
 (vb.) **hay-V-w-* 'to live, to be alive';
 (n.) **hay-w-a* 'life, age'

102. (?) **Ha* 'to become, to be': Dravidian **ā-* 'to become, to be' \sim Altaic [**ā-* 'to be']. Rejected.

Comment: Illič-Svityč was correct in putting a question mark before this entry. This is probably a chance resemblance.

103. **Haja* 'to pursue, to chase': Indo-European [**Hei-* 'to pursue, to cause evil'] \sim Uralic **aja-* 'to chase, to pursue, to flee' \sim Altaic **aja-* 'to hunt, to bag game'. Weak.

Comments:

1. Starostin—Dybo—Mudrak (2003:277—278) reconstruct Proto-Altaic **āja* 'to go, to walk'.
2. Rédei (1986—1988:4—5) reconstructs Proto-Uralic **aja-* 'to drive, to ride; to go, to travel; to chase away, to chase off, to drive away; to pursue' (semantics based upon Finnish). Aikio (2020:7—8) reconstructs Proto-Uralic **aja-* 'to drive, to chase'. In spite of claims that this form may be

borrowed from Proto-Indo-European **H₂aĝ-* (= **H₂ak-* according to the glottalic model of Proto-Indo-European consonantism), it is better to view this as a native Uralic word.

3. The Proto-Indo-European laryngeal involved here is **/ǵ₁/* (= **/H₁/* ~ **/h₁/*, etc.)

As an alternative to Illič-Svityč's proposal, Bomhard (no. 652) includes these forms in the following Proto-Nostratic etymology, reconstructed based upon evidence from Afrasian, (?) Indo-European, Uralic, Altaic, Chukchi-Kamchatkan, and Eskimo:

Proto-Nostratic root **ǵay-* (~ **ǵəy-*):

(vb.) **ǵay-* 'to go, to proceed';

(n.) **ǵay-a* 'journey'

Note: The Indo-European evidence is ambiguous. It could also be derived from the following Proto-Nostratic forms, reconstructed based upon evidence from Afrasian, Dravidian, (?) Indo-European, and Chukchi-Kamchatkan (cf. Bomhard, no. 673):

Proto-Nostratic root **ǵiy-* (~ **ǵey-*):

(vb.) **ǵiy-* 'to come, to go';

(n.) **ǵiy-a* 'approach, arrival; path, way'

104. **HalA* 'forward edge': Uralic **alA-*, **alka-* 'beginning, forward edge' ~ Altaic **āl-* 'front'. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:284) reconstruct Proto-Altaic **āla* 'front side'.
2. Rédei (1986—1988:6—7) reconstruct Proto-Finno-Ugrian **alka-* '(front or back) end, beginning; to begin, to start'. A comparable Proto-Uralic entry is not listed in either Sammallahti 1988 or Aikio 2020.
3. Not in Bomhard (this book).

105. **Hanga* 'to gape': Uralic **aŋa/*ōŋe* 'mouth, opening; to open' ~ Dravidian **aŋk(a)* 'gape' ~ Altaic **aŋa* 'gape, opened'. Strong.

Comments:

1. Aikio (2020:20—22) reconstructs Proto-Uralic **aŋa-* 'to open, to take off', (2020:22—23) **aŋi/*aŋa* 'opening, mouth', (2020:23—24) **aŋmV-* 'to yawn, to gape open', and (2020:24) **aŋta-* 'to open, to take off'. See also Rédei 1986—1988:11 **aŋa-* 'to open', 11—12 **aŋe* 'opening'; Sammallahti 1988:542 Proto-Finno-Ugrian **aŋi* 'mouth'.

2. Starostin—Dybo—Mudrak (2003:304) reconstruct Proto-Altaic **ǎŋa* ‘hole, crack, gape’.

Bomhard (no. 695) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, Altaic, and Eskimo:

Proto-Nostratic root **haŋ-* (~ **həŋ-*):

(vb.) **haŋ-* ‘to split apart, to open (tr.); to gape, to open the mouth, to yawn’;

(n.) **haŋ-a* ‘opening; yawn, gape, mouth; hole; crack, crevice’

106. **Henka* ‘to burn’: Indo-European **Heng-* ‘to burn’ (**Hŋg-n-i-* ‘fire’, etc.) ~ Uralic **eŋka-* ‘to burn’. Possible.

Comments:

1. De Vaan (2008:297) derives Latin *ignis* ‘fire’ from Proto-Indo-European **h₁ngʷ-ni-* ‘(a) fire’, while Derksen (2015:478) derives Lithuanian *ugnìs* ‘fire’ from the same Proto-Indo-European form. Mayrhofer (1956—1980.I: 18), on the other hand, reconstructs Proto-Indo-European **ŋg-ni-s* ‘fire’, with a plain velar instead of a labiovelar, thus supporting Illič-Svityč’s reconstruction. The initial laryngeal is uncertain here — De Vaan and Derksen opt for */h₁-/ (= */H₁-/ ~ */ǵ₁-/).
 2. The Uralic forms are difficult to evaluate. Here, I am giving Illič-Svityč the benefit of the doubt, though, if this is a valid etymology, it should be revised as **Henka* ‘to burn’, with medial ejective */-k̟-/ (= */-k’-/) based upon the Proto-Indo-European form **Hŋg-ni-s*, which would be **Hŋk’-ni-s* according to the glottalic model of Proto-Indo-European consonantism.
 3. Illič-Svityč also mentions possible Dravidian cognates at the end of the entry. These are best left out of consideration.
 4. The limited attestation indicates that this entry can only be reconstructed as Proto-Indo-Uralic rather than as Proto-Nostratic.
 5. Not in Bomhard (this book).
107. **Herä* ‘to collapse’: Indo-European **her-* ‘to collapse’ ~ Uralic **erä-* ‘to collapse; part, portion’ ~ Dravidian **ir(a)-*/**er-* ‘to break apart’ ~ (?) Altaic [**ärü-* ‘to disintegrate, to dissolve, to melt’]. Possible.

Comments:

1. The Indo-European material collected by Illič-Svityč is somewhat problematic. For example, De Vaan (2008:514) does not endorse any of the proposals concerning the etymology of Latin *rārus* ‘of loose structure, sparse, rare’, while Beekes (2010.1:456—457), in agreement with Illič-Svityč, derives Greek ἐρήμος ‘lonely, uninhabited, deserted’ from Proto-Indo-European **h₁r(e)h₁-* ‘loose, rare, separate’. In view of the most viable

evidence from the Indo-European daughter languages, it seems preferable to assign a meaning of ‘to separate, to break apart’ (‘ломать’) to the Proto-Indo-European form rather than ‘to collapse, to fall down’ (‘разваливаться’).

2. From what has already been discussed in this review, in addition to what will follow below, it should be completely obvious that Illič-Svityč displays a rather superficial understanding of the Proto-Indo-European laryngeals. This is rather surprising given that most of the details concerning the Laryngeal Theory had already been worked out (by Kuryłowicz, Benveniste, Couvreur, and Sturtevant, to name the most important scholars) well before Illič-Svityč began his work on Nostratic.
3. Starostin—Dybo—Mudrak (2003:590) reconstruct Proto-Altaic **ire* ‘to melt’ to account for the Turkic forms cited by Illič-Svityč. This is closer to Proto-Dravidian **iṛ(a)-/*eṛ-* ‘to break apart’ (cf. Burrow—Emeneau 1984:51, no. 520) in form, though the semantic differences are harder to reconcile.
4. The Uralic forms cited by Illič-Svityč also point to derivation from a Proto-Uralic form meaning ‘to separate, to break apart’ rather than ‘to collapse’ (cf. Finnish *eri* ‘separate, different; several, various, sundry’, *erotan* ‘to separate, to divide, to part, to sever, to disjoin’, *ero* ‘parting, separation; difference’, *erä* ‘part, portion, share’, etc.).
5. Not in Bomhard (this book). However, as an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 641) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian and Indo-European:

Proto-Nostratic root **ʔar-* (~ **ʔər-*):

(vb.) **ʔar-* ‘to cut (off, apart), to sever, to separate, to part asunder’;

(n.) **ʔar-a* ‘half, side, part’; (adj.) ‘severed, separated, parted, disjoined’

108. **Herä* ‘male’: Dravidian **ēṛ-* ‘male’ ~ Altaic **ērä* ‘male, man’. Possible.

Comment: Starostin—Dybo—Mudrak (2003:312) reconstruct Proto-Altaic **āri* (~ **ēra*) ‘man’.

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 642) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Elamite, Indo-European. (?) Uralic, and Altaic:

Proto-Nostratic (n.) **ʔar-a* ‘male, man, husband’

109. **H/i/mi* ‘to suck, to swallow’: Uralic **ime-* ‘to suck’ ~ Altaic **ām* ‘to suck, to swallow’. Strong.

Comments:

1. Starostin—Dybo—Mudrak (2003:505—506) reconstruct Proto-Altaic **emV* (~ **ami*) 'to suck' > Proto-Mongolian **em-kü-* 'to swallow; to bite, to chew', Proto-Turkic **em-ig*, **em-ček* 'breast (fem.); to suck; nipple'.
2. Aikio reconstructs (2010:59—60) Proto-Uralic **imi-* 'to suck' and (2010:60) (?) Proto-Uralic **imčä* 'breast'.
3. Dolgopolsky (2008:213—214, no. 134) reconstructs Proto-Nostratic **ʕim[ê]* 'to suck, to swallow'.

Bomhard (no. 762) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Uralic, and Altaic:

Proto-Nostratic root **ʕim-* (~ **ʕem-*):

(vb.) **ʕim-* 'to suck, to swallow';

(n.) **ʕim-a* 'the act of sucking, swallowing; breast, nipple, teat'

110. (?) **HENPA* 'navel': Kartvelian **mp-e* 'navel' ~ Indo-European **hēnbh-/hnebh-* 'navel'. Rejected.

Comments:

1. Proto-Kartvelian **/m̥/* does not correspond to Proto-Indo-European **/n/*, and Proto-Kartvelian **/p/* does not correspond to Proto-Indo-European **/bh/*.
 2. The Proto-Indo-European form may be a borrowing from Northwest Caucasian or vice versa — note the following:
 - A. Proto-Indo-European (**neb^h-/*) **nob^h-* 'navel': Sanskrit *nābhi-ḥ* 'navel'; Old High German *naba* 'nave, hub (of a wheel)'; Old Prussian *nabis* 'navel'; etc.
 - B. Proto-Circassian **nəba* 'belly': Bžedux *nəba* 'belly'; Kabardian *nəba* 'belly'. Note also: Temirgoy *nəbəʒʹə* 'navel'; Kabardian *bənʒa* 'navel'; Abaza/Tapanta *bənʒ'a* 'navel'; Ubykh *nəbəʒʹ* 'navel'.
111. **Hi* particle indicating past tense: Hamito-Semitic **(H)j* particle indicating past tense ~ Kartvelian **-e/*-i* suffix of aorist ~ Indo-European **hē-* particle indicating past tense (augment) ~ Uralic **-i-* suffix of past tense ~ Dravidian **-i-* suffix of past tense. Weak.

Comment: Bomhard (vol. 1, Chapter 17, §17.4) proposes that a series of "formative vowels" are to be reconstructed for verbal stems in Proto-Nostratic and that they may have been aspect markers, as follows:

The formative vowels found in verbal stems may have been aspect markers, as Zaborski has tried to show for Omotic (cited in Bender 2000:217). Here,

according to Zaborski, the patterning was as follows: *a* marks present (imperfective), *i* ~ *e* mark past (perfective), and *u* ~ *o* mark subordinate. Though originally supportive of Zaborski's views, Bender later became skeptical, pointing out that he finds the consonantal markers to be more significant. Indeed, for Omotic or even Afrasian, this is what we would expect. But Zaborski's views are not so easily dismissed. What he may have uncovered is a more archaic pattern, as Bender himself admits. In Finno-Ugrian, the ending **-i-* shows up as a past tense marker (cf. Collinder 1960:305—307 and 1965:132—134; Décsy 1990:76). Likewise in Dravidian, where the suffix **-i-* is one of several used to mark past tense (cf. Krishnamurti 2003:296—298). These may ultimately be derived from a perfective marker **-i-*.

112. **Hir'a* 'to drag, to pull': Dravidian **īr-/ir-* 'to drag, to pull' ~ Altaic **ir'a-* 'to drag, to pull'. Strong.

Comments:

1. Starostin—Dybo—Mudrak (2003:592—593) reconstruct Proto-Altaic **īru* (= **īr^yu*) 'trace, furrow'. They also note that Tsintsius (1975—1977.I: 323—324: ИП- II волочить) lists Proto-Tungus **ir-* 'to draw, to drag, to haul, to pull, to tow, etc.' (< 'to leave a trace').
2. Burrow—Emeneau (1984:49, no. 504) show both initial short and long vowels in the Dravidian forms they cite: Tamil *iru* (*-pp-*, *-tt-*) 'to draw, to pull, to drag along the ground, to attract (as a magnet), to wheedle, to draw out, to stretch out, to draw into (as a whirlpool), to engulf, to absorb; to have convulsions'; Malayalam *irukka* 'to draw, to take off clothes'; Kannada *ir*, *īr*, *ere* 'to pull, to drag, to attract, to take away by force'; Konda *iris-* (*-t-*) 'to pull, to drag'; etc.
3. Though not in Bomhard, both the sound correspondences and semantics proposed by Illič-Svityč are solid.

113. **HoKi* 'point, spike': Indo-European **Heḱ-* 'point, spike' ~ Altaic **oki* 'arrow, extremity'. Strong.

Comments:

1. Starostin—Dybo—Mudrak (2003:1046) reconstruct Proto-Altaic **ōk'a* (= **ōk^ha*) 'sharp point, notch'.
2. Beekes (2010.I:47, I:50—51, I:52) reconstructs Proto-Indo-European **h₂ek-* and (2020.II:1066) **h₂ok-ri-*, while Mallory—Adams (1997:509) reconstruct Proto-Indo-European **h₂ek-* 'sharp, pointed'. And so on, and so forth. Altogether, the consensus appears to be that the initial laryngeal in Proto-Indo-European was **/₂-/* (= **/H₂-/*, **/h₂-/*).
3. This is another case where the forms cited from the daughter languages provide absolutely no evidence whatsoever for reconstructing an ejective at the Proto-Nostratic level. Consequently, though the etymology itself is

acceptable, the Proto-Nostratic reconstruction proposed by Illič-Svityč, with a medial ejective */-Ḳ-/, is baseless.

Bomhard (no. 738) reconstructs the following Proto-Nostratic form based upon evidence from Indo-European, Uralic, and Altaic:

Proto-Nostratic (Eurasianic only) (n.) **hok^h-a* 'sharp point'.

114. **Homsa* 'meat': Indo-European *(*H*)*mēms-* 'meat' ~ Uralic **omśa* 'meat' ~ (?) Dravidian **ũñc-* 'meat'. Rejected.

Comments:

1. There is no evidence for an initial laryngeal in the Proto-Indo-European form (cf. Gamkrelidze—Ivanov 1995.1:604; Watkins 1985:41; Mallory—Adams 1997:374—375; etc.).
2. The Dravidian form does not belong here.

115. (?) **HonĆa* 'end, edge': Uralic **oñća* 'end, forward edge, front' ~ Altaic [**ũč(a)* 'tip, point']. Rejected.

Comments:

1. Illič-Svityč was right in putting a question mark before this entry. While the semantics are acceptable, the sound correspondences are flawed.
2. Starostin—Dybo—Mudrak (2003:1482) reconstruct Proto-Altaic **ũč^hi* (= **ũč^hi*) 'end, edge'.

116. **Horä* 'to rise': Indo-European **H^uer-* 'to raise, to rise, to move' ~ (?) Dravidian **ēḷ-* 'to rise' ~ Altaic **or/a-/***örä-* 'to rise, to enter'. Possible.

Comments:

1. The Dravidian form should be removed.
2. Starostin—Dybo—Mudrak (2003:1065) reconstruct Proto-Altaic **ōri* (= **ōr^yi*) 'to rise up', with */-ř-/ (= */-r^y-/) instead of */-r-/.
3. There is no basis for reconstructing an initial labialized laryngeal */H^u-/ in Proto-Indo-European.

Bomhard (no. 677) reconstructs the following Proto-Nostratic forms based upon evidence from Indo-European, Yukaghir, and Altaic:

Proto-Nostratic root **ʔor^y-*:

(vb.) **ʔor^y-* 'to rise (up)';

(n.) **ʔor^y-a* 'rising movement or motion'

Extended form:

(vb.) **ʔorʷ-V-g-* ‘to climb on, to mount, to copulate (with)’;

(n.) **ʔorʷ-g-a* ‘mounting, copulation’

117. (?) **Hosa* ‘poplar’: Indo-European **Hues-* ‘poplar’ ~ Uralic **oska* ‘poplar’. Possible.

Comments:

1. There is no basis for reconstructing an initial labialized laryngeal */H^u-/ in Proto-Indo-European. As shown by the Hittite cognate, the laryngeal involved was */ǵ₂-/ (= */H₂-/, */h₂-/): Hittite *ḫaššik(ka)-* ‘a tree and its fruit’ (?). Related forms include: Greek ὄξύη (< *ὀσκ[ε]σ- ?) ‘a kind of beech-tree’; Armenian *hacī* ‘ash-tree’; Albanian *ah* (< **oskā*) ‘beech-tree’, *ashe* ‘holly’; Latin *ornus* (< **os-en-os*) ‘mountain-ash’; Old Irish (*h*)*uinn-ius* ‘ash-tree’; Old Icelandic *askr* ‘ash-tree’; Swedish *ask* ‘ash-tree’; Old English *æsc* ‘ash-tree’; North Frisian *esk* ‘ash-tree’; Dutch *esch* ‘ash-tree’; Old High German *ask* ‘ash-tree’ (New High German *Esche*); Old Prussian *woasis* ‘ash-tree’; Lithuanian *úosis* (< **ōs-*) ‘ash-tree’; Russian *jásen’* [ясень] ‘ash-tree’.
2. Rédei (1986—1988:812) derives the Uralic forms cited by Illič-Svityč from Proto-Uralic **wakšt̚re* (**wokšt̚re*). On the other hand, the Uralic forms cited by Illič-Svityč may be loans from Indo-European (cf. Collinder 1955:138—139 and 1977:149; Joki 1973:333).

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 727) reconstructs the following Proto-Nostratic form based upon evidence from (?) Dravidian, Indo-European, and (?) Uralic:

Proto-Nostratic root **hasʷ-* (~ **həsʷ-*) (used as the base to designate various tree names):

(n.) **hasʷ-a* ‘a tree and its fruit’

118. **HuKa* ‘eye; to see’: Indo-European **H^uek^u-* ‘eye; to see’ ~ Altaic **uka-* ‘to notice, to understand’. Strong.

Comments:

1. There is no basis for reconstructing an initial labialized laryngeal */H^u-/ in Proto-Indo-European. According to Beekes (2010.II:1118), the laryngeal was */ǵ₃-/ (= */H₃-/, */h₃-/), without labialization. He reconstructs Proto-Indo-European **h₃ek^w-* ‘to see’.
2. The Latin form cited by Illič-Svityč (*okulus*) is a typographical error — it should be *oculus* ‘eye’.
3. Starostin—Dybo—Mudrak (2003:1490—1491) reconstruct Proto-Altaic **uk^u* (= **uk^hu*) ‘to understand, to look into’.

4. This is another case where the forms cited from the daughter languages provide absolutely no evidence whatsoever for reconstructing an ejective at the Proto-Nostratic level. Consequently, though the etymology itself is acceptable, the Proto-Nostratic reconstruction proposed by Illič-Svityč, with a medial ejective */-Ḳ-/ , is baseless.
5. Not in Bomhard (this book).

119. **Huwa* 'flow of water': Uralic **uwa* 'current, flow' ~ Altaic **ū(a)* 'water, wave'. Rejected.

Comment: Starostin—Dybo—Mudrak (2003:1285—1286) derive the Mongolian forms cited by Illič-Svityč from Proto-Altaic **sju̯ba* (~ -*u*) 'water'. They explain the Mongolian forms as having originated through dissimilation: **u-su-* < **su-su-* (< **sub-su-*).

120. (?) **Hüta* 'rest period': Uralic **ütä*/**jütä* 'evening, night' ~ Altaic **üdä* 'rest time (day or night)'. Rejected.

Comment: According to Starostin—Dybo—Mudrak (2003:1042), the Altaic forms cited by Illič-Svityč go back to Proto-Altaic **odi* (~ -*e*) 'day, time', which clearly cannot be related to the Uralic forms he cites.

121. **ʔa* demonstrative pronoun indicating distant object, 'that': Hamito-Semitic **ʔ/a* demonstrative pronoun ~ Kartvelian *(*h*)*a* demonstrative pronoun indicating nearby object ~ Indo-European **he-n-* demonstrative particle ~ Uralic **a-/o-* demonstrative pronoun indicating distant object ~ Dravidian **ā* demonstrative pronoun indicating distant object ~ (?) Altaic [**a-/o-* 'that']. Strong.

Comments:

1. Proto-Nostratic **ʔ/* does not become */*h/* in either Proto-Indo-European or Proto-Kartvelian.
2. The Indo-European material cited by Illič-Svityč does not belong here. Instead, the following material from Indo-European should be included (cf. Bomhard, no. 614):

Proto-Indo-European demonstrative stem **ʔe-/ʔo-*, **ʔey-/ʔoy-/ʔi-* (< **ʔe-/ʔo-+y/i-*): Sanskrit *ayám* 'this' (gen. sg. m./n. *a-syá*, *á-sya*; f. *a-syáh*, *idám* 'this', (f.) *iyám* 'she, this', *á-taḥ* 'from this, hence' (< **e-to-s*), (n.) *e-tát* 'this, this here', *ihá* 'here' (Pāli *idha* 'here, in this place, in this connection, now'), *e-śá* (f. *e-ṣā*) 'this'; Old Persian *a-* 'this', *aita-* 'this', *ima-* 'this', *iyam* 'this', *idā* 'here'; Avestan *a-* 'this', *aētaṭ* 'this', *ima-* 'this', *iḍa* 'here'; Hittite enclitic demonstrative particle (nom. sg.) -*aš*, (acc. sg.) -*an*, (n. sg.) -*at* 'he, she, it'; (dat. sg.) *e-di*, *i-di*, *e-da-ni* 'to or for him, her,

it'; Latin *is, ea, id* 'he, she, it; this or that person or thing'; Oscan *eiso-* 'this'; Umbrian (dat. sg.) *esmei* 'to this, to it'; Old Irish *é* 'he, they', *ed* 'it'; Gothic anaphoric pronoun *is* 'he', *ita* 'it'; Old Icelandic relative particle *es* (later *er*) 'who, which, what'; Old Saxon *et, it* 'it'; Old High German *er, ir* 'he', *ez, iz* 'it' (New High German *er* 'he', *es* 'it'); Lithuanian *jìs* (< **is*) 'he'.

Bomhard (no. 614) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, Indo-European, Uralic, Altaic, Gilyak / Nivkh, and Etruscan (see below, no. 134):

Proto-Nostratic demonstrative stems (originally deictic particles):

Proximate:	<i>*ʔi-</i> (~ <i>*ʔe-</i>) 'this';
Intermediate:	<i>*ʔu-</i> (~ <i>*ʔo-</i>) 'that';
Distant:	<i>*ʔa-</i> (~ <i>*ʔə-</i>) 'that yonder, that over there'

Note: These stems regularly combined with other deictic particles: **ʔa/i/u+na-*, **ʔa/i/u+ša-*, **ʔa/i/u+ma-*, **ʔa/i/u+tḥa-*, **ʔa/i/u+kʰa-*, **ʔa/i/u+ya-*, etc.

122. **ʔa* formant of verbal constructions ~ Hamito-Semitic **ʔ-/*-ʔ* formant of deverbative nouns ~ Kartvelian **(h)a-/*-a* formant of deverbative nouns ~ Indo-European **-o-* suffix of deverbative nouns ~ Dravidian *-a* suffix of participles and deverbative nouns. Weak.

Comments:

1. I have rated this entry as "weak" because it appears that Illič-Svityč has confused different grammatical markers here, some of which can be compared, some not, and because Illič-Svityč failed to grasp the correct morphological function of this formant. Thus, this entry cannot stand as written.
2. The Afrasian material should be completely removed, as should the Proto-Kartvelian prefixed **(h)a-/*.
3. Bomhard (vol. 1, Chapter 17, §17.5) has proposed that a series of *terminal vowels* are to be reconstructed for Proto-Nostratic and that these terminal vowels are morphologically significant:

During the earliest period of Proto-Nostratic, *roots* could only have the forms: (a) **CV-* and (b) **CVC-*. Type (a) was restricted to pronominal stems and indeclinables, while type (b) characterized nominal and verbal stems. A single *derivational suffix* could be placed after root type (b): **CVC+C* (derivational suffix [DS]). Grammatical relationships were indicated by placing *particles* either after the undifferentiated stem or after the stem plus a derivational suffix: (a) **CVC + CV* (particle [P]) or (b) **CVC+C* (derivational suffix [DS]) + *CV*

(particle [P]). In nominal stems, a morphologically significant *terminal vowel* (TV) had to be added directly after the root, while in verbal stems, a *formative vowel* (FV) had to be added between the root and any following element, be it derivational suffix or particle; thus, we get the following patterns:

- (a) (noun stem) $*CVC(+C_{DS})+V_{TV}$ (plus particle): $*CVC(+C_{DS})+V_{TV} + CV_P$
 (b) (verb stem) $*CVC+V_{FV}(+C_{DS})$ (plus particle): $*CVC+V_{FV}(+C_{DS}) + CV_P$

The derivational suffixes were derivational rather than grammatical in that they either changed the grammatical category of a word or affected its meaning rather than its relation to other words in a sentence.

These terminal vowels may be roughly comparable to the suffixed grammatical formants that Illič-Svityč envisioned, though with different functions. Bomhard (vol. 1, Chapter 17, §17.5) assumes the following patterning existed in early Proto-Nostratic for the terminal vowels in noun stems:

1. $*-u$ was used to mark the subject (the agent) in active constructions — these subjects “perform, effect, instigate, and control events” (Mithun 1991:538);
2. $*-i$ indicated possession;
3. $*-a$ was used to mark:
 - (a) The direct object (the patient) of transitive verbs;
 - (b) The subject (“non-agent subject” [= the patient]) in stative constructions — these subjects are “affected; things happen or have happened to them”, just like direct objects (Mithun 1991:538);
 - (c) The so-called “*status indeterminatus*”.

123. $*\text{ʔ}al'a$ ‘food’: Hamito-Semitic $*\text{ʔ}l$ ‘fat, fatty food’ ~ Indo-European $*hel-$ ‘feed, breed’ ~ Dravidian $*al(a)$ ‘fat, strength’ ~ Altaic $*al'(a)-$ ‘food’. Rejected.

Comments:

1. Here again, Proto-Nostratic $*\text{ʔ}/$ does not become $*h/$ in Proto-Indo-European.
2. The material cited by Illič-Svityč does not form a coherent etymology.
3. A totally different Proto-Indo-European stem should be included: Proto-Indo-European $*\text{ǵ}₂el-$ [$*\text{ǵ}₂al-$] ‘to grow, to be strong’ ($*\text{ǵ}₂/ = */\text{H}_2/, */\text{h}_2/$) (cf. Walde 1927—1932.I:86—87; Pokorny 1959:26—27; Rix 2001:262; Mallory—Adams 1997:258; etc.).
4. The Afrasian material cited by Illič-Svityč should be removed and replaced by the following (cf. Bomhard, no. 711):

Proto-Afrasian $*\text{ħ}al-$ ‘to grow, to be strong’: Proto-Semitic $*\text{ħ}al-am-$ ‘to grow, to be strong’ > Arabic *ħalama* ‘to attain puberty’; Hebrew *ħālam* ‘to

be healthy, strong'; Syriac *ḥalīm* 'healthy, firm'. Proto-Semitic **ḥal-ak*- 'to grow (up)' > Geez / Ethiopic *ḥalkā* 'to grow, to grow up, to increase'.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 711) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Indo-European:

Proto-Nostratic root **ḥalʷ-* (~ **ḥəʷ-*):

(vb.) **ḥalʷ-* 'to grow, to be strong';

(n.) **ḥalʷ-a* 'health, strength, power'; (adj.) 'healthy, strong, powerful; grown, great, large'

124. **ʔamu* 'morning, daylight': (?) Hamito-Semitic **ʔmr* 'daylight; to see' ~ Indo-European **hēm-* 'day' ~ Uralic **ama-*/**oma-* (< **amo-*) 'morning'. Rejected.

Comment: Here again, Proto-Nostratic **ʔ/* does not become **h/* in Proto-Indo-European.

125. (Descriptive) **ʔanqʌ* 'to breathe': Hamito-Semitic [**ʔnh* 'to sigh'] ~ Indo-European **henH-* 'to breathe'. Rejected.

Comments:

1. Here again, Proto-Nostratic **ʔ/* does not become **h/* in Proto-Indo-European.
2. Though the Semitic evidence cited by Illič-Svityč must be removed, the Egyptian/Coptic forms are correct. Even between Semitic and Egyptian/Coptic, Illič-Svityč has proposed faulty sound correspondences: Semitic **ʔ/* does not correspond to Egyptian /ʕ/ (= ʕ) — the usual correspondence is to Egyptian /β/ (= ʕ) ~ /i/ (= i).

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 752) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian (Egyptian/Coptic), Indo-European, and Eskimo:

Proto-Nostratic root **ʕan-* (~ **ʕən-*):

(vb.) **ʕan-* 'to breathe, to respire, to live';

(n.) **ʕan-a* 'life, breath'

126. **ʔarba* 'to practice witchcraft': Hamito-Semitic [**ʔrb* 'to be clever, prudent'] ~ Uralic **arpa-* 'to practice witchcraft; magical equipment of sorcerer' ~ Altaic [**arba-* 'to practice witchcraft']. Rejected.

Comments:

1. For Afrasian, Illič-Svityč only cites material from Semitic, and, even there, the meanings assigned to the forms cited are not even close to the meanings of the forms cited from Uralic and Altaic: Arabic *ʿariba* 'to be skillful, to be proficient', *ʿirba* 'skill, resourcefulness, cleverness, smartness'. The underlying root here is **rVb-*: cf. the related Arabic *rabba* (with reduplicated /b/) 'to be master, to be lord, to have possession (of); to control, to have command or authority (over)'. For comparison with the Hebrew *ʿāraḇ* (with /ʿ-/ first radical = "triconsonantizer" [cf. Militarev 2005]) 'to lie in ambush, to lie in wait for' cited by Illič-Svityč, cf. Arabic *rabaṣa* (with /-ṣ-/ third radical) 'to wait for, to look, to watch, to be on the lookout (for); to lurk, to lie in wait, to waylay, to ambush; etc.'; *Tamūdīc wrb* (with /w-/ first radical = "triconsonantizer" [cf. Militarev 2005]) 'to lie in ambush'. And so on, and so forth. Thus, the Semitic material should be removed.
 2. Starostin—Dybo—Mudrak (2003:313—314) reconstruct Proto-Altaic **ār-* 'witchcraft, craft'. Illič-Svityč only cites Turkic forms (he reconstructs Proto-Turkic **arba-* 'to cast spells'), while Starostin—Dybo—Mudrak base their etymology on forms from Tungusic and Mongolian as well as Turkic. They also note that Middle Mongolian *arba-* 'to cast spells' is a loan from Turkic.
 3. Rédei (1986—1988) reconstructs Proto-Finno-Ugrian **arpa* 'to practice magic, soothsaying, fortune-telling; sorcerer, magician, soothsayer, fortune-teller'. The Uralic material cited by Illič-Svityč may be borrowed from Turkic.
127. **ʔaSa* 'fire': Hamito-Semitic **ʔš* 'fire' ~ Indo-European **hes-* 'hearth; dry' ~ Altaic [**aSa-*] 'ignite'. Possible.

Comments:

1. The Afrasian material cited by Illič-Svityč does not belong here. A better comparison would be with Arabic (reduplicated) *haṣḥasa* 'to place meat on the coals'. Note: Orël—Stolbova (1995: 275, no. 1244) reconstruct Proto-Afro-asiatic **has-* 'to roast'.
2. Here again, Proto-Nostratic **ʔ/* does not become **h/* in Proto-Indo-European.
3. Hittite (acc. sg.) *ḫa-aš-ša-an* 'hearth', (nom sg.) *ḫa-a-aš* 'ashes (in pl.); soda ash, potash, soap' show that the Proto-Indo-European laryngeal involved here is **ʔ₂/* (= **H₂/*, **h₂/*). This means that, if the Proto-Indo-European form is to be included here, as it must be, then Illič-Svityč's reconstruction of an initial **ʔ-/* in the Proto-Nostratic form is mistaken.
4. Rédei (1986—1988:27) reconstructs Proto-Finno-Ugrian **äs₃-* 'to heat up; to be hot, warm'.

5. Starostin—Dybo—Mudrak (2003:316—317) reconstruct Proto-Altaic **ase-* (~ **p̣-*) ‘to catch fire; hot’.

Bomhard (no. 726) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, Uralic, and Altaic:

Proto-Nostratic root **has-* (~ **h̥as-*):

(vb.) **has-* ‘to burn, to be hot’;

(n.) **has-a* ‘cinder, ember, ashes; heat’

128. **äla* particle of categorical negation: Hamito-Semitic **ʔl*/**lʔ* prohibitive and negative particle ~ (?) Kartvelian [**ar(a)* particle of categorical negation] ~ Uralic **äla*/**ela* 2nd person singular imperative of negative verb ~ Dravidian **al(a)-* negative verb ~ (?) Altaic [**ülä-* negative verb]. Strong.

Comments:

1. The Kartvelian material does not belong here.
2. Starostin—Dybo—Mudrak (2003:1493) reconstruct Proto-Altaic **ule* (~ *-i*) negative particle.
3. Only found in Hittite in Indo-European: Hittite *li-e* element used with the present indicative to express a negative command. The Hittite form is isolated within Indo-European. Many scholars take it to be from Proto-Indo-European **ne*, but this is disputed by Kloekhorst (2008:523).

Bomhard (no. 628) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, Altaic, Chukchi-Kamchatkan, and Gilyak / Nivkh:

Proto-Nostratic root **ʔal-* (~ **ʔəl-*) (perhaps also **ʔel-*, **ʔul-*):

(vb.) **ʔal-* ‘to be not so-and-so or such-and-such’;

(n.) **ʔal-a* ‘nothing’

Originally a negative verb stem meaning ‘to be not so-and-so or such-and-such’ — later used in some branches as a negative particle.

129. **ʔe* negative particle: Hamito-Semitic **ʔj* negative and prohibitive particle ~ Uralic **e-* negative verb (indicative stem) ~ Dravidian **-a*/**-e-* infix of negative form of verb ~ Altaic **e-* negative verb. Strong.

Comments:

1. The Proto-Afrasian form should be removed.
2. Starostin—Dybo—Mudrak (2003:488) reconstruct Proto-Altaic **e* ‘not’.

Bomhard (no. 656) reconstructs the following Proto-Nostratic form based upon evidence from Uralic, Altaic, Chukchi-Kamchatkan, and Etruscan:

Proto-Nostratic negative particle **ʔe* 'no, not'.

130. **ʔejʌ* 'to arrive, to come': Hamito-Semitic **ʔj* 'to arrive, to come' ~ Indo-European **h₁ei-* 'to go' ~ Dravidian **ej-* 'to arrive, to approach' ~ Altaic **i-* 'to arrive, to enter'. Strong.

Comments:

1. The Proto-Indo-European laryngeal involved here is **ǵ₁/* (= **/H₁/*, **/h₁/*).
2. The Proto-Altaic form should be removed.

Bomhard (no. 673) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Chukchi-Kamchatkan:

Proto-Nostratic root **ʔiy-* (~ **ʔey-*):

(vb.) **ʔiy-* 'to come, to go';

(n.) **ʔiy-a* 'approach, arrival; path, way'

Note also (Bomhard, no. 652):

(vb.) **ʔay-* 'to go, to proceed';

(n.) **ʔay-a* 'journey'

131. **ʔelʌ* 'to live': Hamito-Semitic **ʔ(j)l* 'to be, to exist; settlement' ~ Uralic **elä-* 'to live' ~ Dravidian **il/(?)* **el-* 'dwelling, abode' ~ Altaic **ēl* 'settlement, peaceful life'. Possible.

Comments:

1. The Altaic material should be removed. Starostin—Dybo—Mudrak (2003:501) reconstruct Proto-Altaic **ēlV* 'peace'.
2. Aikio (2020:43—44) reconstructs Proto-Uralic **elkio* 'to live / to go, to visit'

Bomhard (no. 667) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Uralic:

Proto-Nostratic root **ʔil-* (~ **ʔel-*):

(vb.) **ʔil-* 'to live, to be alive; to be, to exist';

(n.) **ʔil-a* 'dwelling, habitation, house'; (adj.) 'living, alive, existing'

132. * $\mathcal{P}esA$ ‘to settle a place, to be at a place’: Hamito-Semitic * $\mathcal{P}j\check{s}/*\mathcal{P}j\check{l}$ ‘to arrive at a place, to be at a place, to be’ ~ Indo-European * $\check{h}es-$ ‘to be’, * $\check{h}\check{e}\check{s}-$ ‘to sit’ ~ Uralic * $\check{e}\acute{s}A$ ‘to settle a place; place, site’. Possible.

Comments:

1. The Afrasian material cited by Illič-Svityč should be removed. Too many ad hoc explanations are required to try and make it fit in.
2. Rédei (1986—1988:18—19) reconstructs Proto-Uralic * $a\acute{s}e$ ‘to put, to place, to set’, while Aikio (2010:48—49) reconstructs Proto-Uralic * $\acute{e}\acute{c}i$ ‘to set’, * $\acute{e}\acute{c}i-w-$ ‘camp’. See also Collinder 1944:26; Joki 1973:252—253. I prefer the traditional reconstruction (Rédei, Collinder, Joki; etc.).
3. The Proto-Indo-European form * $\mathcal{P}ies-$ ‘to be’ probably does not belong here, while * $\mathcal{P}i\check{e}s-$ ‘to put, to place, to set; to sit, to be seated’ does. It is universally agreed that the Proto-Indo-European laryngeal involved is */ $\mathcal{P}i/$ (= */ $H_1/$, */ $h_1/$). The semantic range assigned to the Proto-Indo-European form here is reflected in Hittite (3rd sg. pres.) $e-\check{e}\acute{s}-zi$, $a-a\check{s}-zi$ ‘to set, to sit, to beset, to do’. In the other Indo-European daughter languages, it has been specialized in the meaning ‘to sit, to be seated’: Greek ἵσται ‘to sit, to be seated’; Sanskrit $\acute{a}ste$ ‘to sit, to sit down’; Avestan $\acute{a}ste$ ‘to sit’.

Bomhard (no. 646) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, and Uralic:

Proto-Nostratic root * $\mathcal{P}as^y-$ (~ * $\mathcal{P}\partial s^y-$):

(vb.) * $\mathcal{P}as^y-$ ‘to put, to place, to set; to sit, to be seated’;

(n.) * $\mathcal{P}as^-a$ ‘place, seat’; (adj.) ‘put, placed, set, established’

133. * $\mathcal{P}EmA$ ‘to seize, to take’: Hamito-Semitic * $\mathcal{P}m-$ ‘to seize, to take’ ~ Indo-European * $\check{h}em-$ ‘to take’. Strong.

Comment: The Proto-Indo-European laryngeal involved is */ $\mathcal{P}i/$ (= */ $H_1/$, */ $h_1/$). This laryngeal is commonly interpreted as a glottal stop */ $\mathcal{P}/$ (cf. Bomhard, Chapter 4, §4.1). Thus, the Proto-Indo-European form is better reconstructed as * $\mathcal{P}em-/*\mathcal{P}\eta-$ ‘to take, to obtain’. This is supported by the following evidence from the Indo-European daughter languages (with references):

Proto-Indo-European * $\mathcal{P}em-/*\mathcal{P}\eta-$ ‘to take, to obtain’: Latin $em\bar{o}$ ‘to purchase, to buy’; Umbrian (past. ptc.) $emps$ ‘taken’; Old Irish $-em-$ in $ar-f\acute{o}-em-at$ ‘they take’; Lithuanian $im\grave{u}$, $i\check{m}ti$ ‘to take, to accept, to receive, to get’; Old Church Slavic $im\grave{o}$, $j\acute{e}ti$ ‘to take’. Pokorny 1959:310—311 * $em-$, * $\acute{e}m-$ ‘to take’; Walde 1927—1932.I:124—125 * $em-$; Rix 1998a:209—210 * h_1em- ‘to take’; Mann 1984—1987:240 * $em\bar{o}$ (* $\check{i}m\bar{o}$, * $\eta\bar{o}$) ‘to take, to get’; Watkins 1985:17 * $em-$ and 2000:23 * $em-$ ‘to take, to distribute’; Mallory—Adams 1997:564 * h_1em- ‘to take, to distribute’; Gamkrelidze—Ivanov 1984.II:754 * $em-$ and 1995.I:187,

I:194, I:657 **em-* 'to take, to have'; De Vaan 2008:188—189; Walde—Hofmann 1965—1972.I:400—402 **em-* 'to take'; Ernout—Meillet 1979:195—196; Derksen 2008:158 **h₁m-* and 2015:200—201 **h₁m-*; Smoczyński 2007.1:220—221 **h₁em-/h₁m-*; Fraenkel 1962—1965.I:184—185.

Bomhard (no. 629) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Indo-European:

Proto-Nostratic root **ʔam-* (~ **ʔəm-*):

(vb.) **ʔam-* 'to seize, to grasp, to take, to touch, to hold (closely or tightly)';
(n.) **ʔam-a* 'grasp, hold, hand(ful)'; (adj.) 'seized, grasped, touched, held, obtained'

134. **ʔi*/(?) **ʔe* demonstrative pronoun (indicating nearby object: 'this'): Hamito-Semitic **j* demonstrative pronoun, verbal indicator of 3rd singular masculine subject ~ Kartvelian *(*h*)/*i-* demonstrative pronoun indicating distant object, *(*h*)/*e* demonstrative pronoun ~ Indo-European **hei-/he-* demonstrative pronoun, 3rd person pronoun ~ Uralic **i-/e-* demonstrative pronoun indicating nearby object ~ Dravidian **i/*e* demonstrative pronoun indicating nearby object ~ Altaic **i* demonstrative pronoun, indicator of 3rd singular subject; **e* demonstrative pronoun indicating nearby object. Strong.

Comments:

1. The Proto-Afrasian form reconstructed by Illič-Svityč is incorrect. Based upon data from Cushitic (Southern Cushitic, Beja / Beḍawye, and Agaw), the following demonstrative stems should be reconstructed for Proto-Afrasian: (A) proximate **ʔi-* 'this'; (B) intermediate **ʔu-* 'that'; (C) distant **ʔa-* 'that yonder, that over there'. These could also be used as suffixes as in Southern Cushitic: (A) **-i* nearness marker, (B) **-a* farness marker, (C) **-o* marker of reference (indefinite distance).
2. The reconstructions for the individual branches need to be updated.
3. The Proto-Nostratic pattern of **ʔa-* (distant) ~ **ʔi-* (proximate) was changed to **a-* (proximate) ~ **i-* (distant) in Kartvelian.

Bomhard (no. 614) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, Indo-European, Uralic, Altaic, Gilyak / Nivkh, and Etruscan (see above, no. 121):

Proto-Nostratic demonstrative stems (originally deictic particles):

Proximate:	* <i>ʔi-</i> (~ * <i>ʔe-</i>) 'this';
Intermediate:	* <i>ʔu-</i> (~ * <i>ʔo-</i>) 'that';
Distant:	* <i>ʔa-</i> (~ * <i>ʔə-</i>) 'that yonder, that over there'

Note: These stems regularly combined with other deictic particles: **ʔa/i/u+na-*, **ʔa/i/u+ša-*, **ʔa/i/u+ma-*, **ʔa/i/u+tḥa-*, **ʔa/i/u+kʰa-*, **ʔa/i/u+ya-*, etc.

135. **ʔili* ‘deer’: Hamito-Semitic [**ʔil* ‘deer’] ~ Indo-European **h̥el-n-* ‘deer’ ~ Dravidian **il-* ‘deer’ ~ Altaic **ili* ‘deer, wild goat’. Strong.

Comments:

1. The Afrasian material does not belong here.
2. Illič-Svityč based his Proto-Altaic reconstruction primarily on the Mongolian forms he cites: cf. Written Mongolian *ili*, *eli* ‘a young deer, fawn’. Starostin—Dybo—Mudrak (2003:501) reconstruct Proto-Altaic **ǝlV(-kʰV)* (= **ǝlV(-kʰV)*) ‘deer’.

Bomhard (no. 614) reconstructs the following Proto-Nostratic form based upon evidence from Dravidian, Indo-European, Yukaghir, and Altaic:

Proto-Nostratic (n.) **ʔil-a* (~ **ʔel-a*) ‘deer’

136. **ʔitā* ‘to eat’ ~ Hamito-Semitic **t(j)ʔ/*ʔjt* ‘to eat’ ~ Indo-European **h̥ed-* ‘to eat’ ~ Altaic [**ida-* ‘to eat’]. Possible.

Comments:

1. The Afrasian material cited by Illič-Svityč must be removed. It should be replaced by the following, with medial ejective **/tʰ/*:

Proto-Afrasian **ʔit-*, **ʔet-* ‘to eat, to bite into’: Proto-Semitic **ʔatʰ-am-* ‘to bite into’ > Arabic *ʔatama* ‘to bite into’; Ugaritic *uṭm* ‘bite, mouthful, morsel’. (?) Ancient Egyptian *idbw* ‘of the mouth’ (medical term). Berber: Tawlemmet *əttəd* ‘to suck’, *sudəd* ‘to suckle, to nurse, to breast-feed’; Nefusa *tadḍa* ‘leech’; Mzab *əttəd* ‘to suck’, *ssəttəd* ‘to suckle, to nurse, to breast-feed’; Wargla *əttəd* ‘to suck’; Tamazight *əttəd* ‘to suck’, *ssuṭṭəd* ‘to suckle, to nurse, to breast-feed’, *tiḍitt* ‘leech’; Tashelhiyt / Shilha *əttəd* ‘to suck’; Riff *əttəd* ‘to suck’, *uḍuḍ* ‘nursing, breast-feeding’; Kabyle *əttəd* ‘to suck’, *tutṭda* ‘sucking’; Chaouia *əttəd* ‘to suck, to be sucked’, *timsudḍət* ‘wet-nurse’; Zenaga *ḍuḍ* ‘to suck’, *sudduḍ* ‘to suckle, to nurse, to breast-feed’, *əḍəd* ‘to bite’. (?) Chadic: Fyer *et-* ‘to eat’; Tangale *edi-* ‘to eat’. (?) East Cushitic: Burji *it-* ‘to eat’; Gedeo / Darasa *it-* ‘to eat’; Hadiyya *it-* ‘to eat’; Kambata *it-* ‘to eat’; Sidamo *it-* ‘to eat’; Galla / Oromo *it-o* ‘food’.

2. According to the glottalic model of Proto-Indo-European consonantism, the Proto-Indo-European form is to be reinterpreted as **ʔet-* ‘to eat’.
3. Starostin—Dybo—Mudrak (2003:594) reconstruct Proto-Altaic **ite* (~ **eti*) ‘to eat’. Proto-Altaic unaspirated **/-t-/* is from Proto-Nostratic **/-tʰ-/*.

Bomhard (no. 672) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, and Altaic:

Proto-Nostratic root **ʔit-* (*~ *ʔet-*):

(vb.) **ʔit-* 'to chew, to bite, to eat, to consume';

(n.) **ʔit-a* 'the act of eating; that which is eaten: food, nourishment'

137. **ʕalʼa* 'to cross (a mountain)': Hamito-Semitic **ʕl-* 'to cross a mountain, to climb up; summit' *~ (?)* Indo-European **hel-* 'on the other side' *~* Altaic **ālʼa* 'to cross a mountain'. Weak.

Comments:

1. The Indo-European material must be removed. This is another case where Illič-Svityč's rudimentary understanding of the Proto-Indo-European laryngeals has led him to propose a false cognate. The semantics are also not a good match.
2. Bomhard (no. 747) reconstructs Proto-Afrasian **ʕal-* '(vb.) to be high, exalted; to rise high; to ascend; (particle) on, upon, on top of, over, above, beyond'.
3. Starostin—Dybo—Mudrak (2003:292) reconstruct Proto-Altaic **āla* 'to cross (a mountain)'. They base their reconstruction of a Proto-Altaic medial palatalized **/-lʲ-/* on the Turkic forms they cite. They also note: "TM [Tungus-Manchu] cannot be explained as borrowed < Mong[olian]."
4. Dolgopolsky (2008:205—207, no. 126) reconstructs Proto-Nostratic **ʕalV* (= **ʕalE* or **ʕālī*) 'height, top; to climb, to go up', with medial unpalatalized **/-l-/*. Bomhard agrees and does not reconstruct a Proto-Nostratic medial palatalized **/-lʲ-/* here.
5. Medial palatalized **/-lʲ-/* is absent from Uralic (cf. Rédei 1986—1988:24 Proto-Uralic **ālʒ-* 'to lift, to raise'; Collinder 1977:27; Décsy 1990:98 Proto-Uralic **ālā-* 'to lift, to carry'; Janhunen 1977:26 **ilš-*, with different initial vowel but also without medial palatalized **/-lʲ-/*).

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 747) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Uralic, and Altaic:

Proto-Nostratic root **ʕal-* (*~ *ʕəl-*):

(vb.) **ʕal-* 'to be high, tall, elevated, exalted; to rise high; to ascend';

(n.) **ʕal-a* 'highest point: peak, summit, mountain';

(particle) **ʕal-* 'on, upon, on top of, over, above, beyond'

138. (Descriptive) **ʕ/e/bU* 'breast': Hamito-Semitic **ʕb(w)* 'breast, bosom' *~* Kartvelian **ub-e* 'bosom, breasts' *~* Altaic [**e/bü* 'breast, bosom']. Possible.

Comment: The Altaic material does not match phonetically, though the semantics are sound. Consequently, it should be removed. Starostin—Dybo—Mudrak (2003: 513) reconstruct Proto-Altaic **épʼá* (= **épʰá*) ‘breast, rib’, which is an even poorer fit here than Illič-Svityč’s reconstruction.

Bomhard (no. 764) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian and Kartvelian:

Proto-Nostratic (n.) **ʕub-a* ‘bosom, breast’

139. **ʕEKu* ‘water’: Hamito-Semitic **ʕq(w)* ~ Indo-European **hékʷ-* ‘water’. Rejected.

Comment: This is an impossible comparison. The initial laryngeals do not match, and Proto-Afrasian ejective **/-kʷ-/* (Illič-Svityč writes **/-q-/*) does not correspond to Proto-Indo-European **/-kʷ-/*.

140. (?) **ʕALA* ‘to burn (sacrificial offerings)’ ~ Hamito-Semitic **ʕl* ‘to burn offerings; flame’ ~ Indo-European **Hel-* ‘to burn offerings, to blaze’. Strong.

Bomhard (no. 748) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian and Indo-European:

Proto-Nostratic root **ʕal-* (~ **ʕəl-*):

(vb.) **ʕal-* ‘to make a fire, to light a fire, to ignite, to kindle, to burn’;

(n.) **ʕal-a* ‘fire, torch’

141. **ʕAʕA* ‘branch’: Hamito-Semitic **ʕd* ‘tree, branch’ ~ Indo-European **H/o/sd-o-* ‘branch’. Rejected.

Comment: This is also an impossible comparison. The putative cognates do not match phonetically, though the semantics are similar. The initial laryngeal in Proto-Indo-European has to be **/ǵ₂-/* (= **/H₂-/*, **/h₂-/*) based upon the Hittite evidence: (nom.-acc. sg.) *ḫa-aš-du-e-er* ‘twig(s), brushwood’. This is traditionally compared with Greek ὄζος ‘twig, branch’; Arm. *ost* ‘twig, branch’; Goth. *asts* ‘branch’ (this comparison is cautiously rejected by Kloekhorst 2008:326—327, but his counter-proposal is not convincing).

142. **ja* ‘which, who’ (interrogative and relative): Hamito-Semitic **ja/*ʔaj* ‘which, who’ (interrogative-relative) ~ Kartvelian [**ja* ‘who’] ~ Indo-European **jo-* ‘which’ (relative) ~ Uralic **jo-* ‘who, some kind of’ (relative and indefinite) ~ Dravidian **jā-* ‘which, what’ (interrogative) ~ Altaic **ja* ‘which’ (interrogative). Strong.

Comment: This is a particularly strong etymology, with reflexes in nearly every branch of Nostratic.

Bomhard (no. 651) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, Indo-European, Uralic, and Altaic:

Proto-Nostratic interrogative-relative pronoun stem **ʔay-*, **ʔya-* '(relative) who, which, what; (interrogative) who?, which?, what?'

Note: According to Bomhard (no. 650), this is a derivative of the following interrogative verb stem (reconstructed based upon evidence from Dravidian, Indo-European [Anatolian and Tocharian], and Altaic):

Proto-Nostratic root **ʔay-* (*~ *ʔay-*):
(vb.) **ʔay-* 'to do what?, to act in what manner?'

143. **jaHU* (or **joHΛ*) 'bandage, girdle': Indo-European **ieh^us-* 'belt, girdle' *~* Uralic **jōγΛ* 'belt, tourniquet for bandaging' *~* Dravidian **jā-* 'to tie up'. Strong.

Comment: Though this is a valid etymology, the phonology needs to be completely revised to bring it into alignment with current research.

Bomhard (no. 785) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian (Ancient Egyptian), Dravidian, Indo-European, Uralic, and Yukaghir:

Proto-Nostratic root **yaʔ-* (*~ *yəʔ-*):
(vb.) **yaʔ-* 'to tie, to bind, to gird';
(n.) **yaʔ-a* 'binding, bond, bandage; belt, girdle'

144. (?) **jamΛ* 'water': Hamito-Semitic **jam* 'water, sea' *~* Uralic [**j/a/mΛ-* 'sea'] *~* (?) Dravidian [**amm-* 'water']. Possible.

Comment: The Dravidian evidence provisionally included by Illič-Svityč does not belong here and must be removed.

Bomhard (no. 785) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Uralic (Samoyed), and Chukchi-Kamchatkan:

Proto-Nostratic (n.) **yam-a* 'water, sea'

145. (?) **jara* ‘to shine’: Dravidian **ēr-/eri-* ‘to shine, to blaze’ ~ Altaic **jaru-* ‘to shine’. Rejected.

Comment: Starostin—Dybo—Mudrak (2003:1512—1513) reconstruct Proto-Altaic **zēra* ‘light; moon, moon cycle (year)’ to account for the Altaic forms listed by Illič-Svityč. This is clearly a poor match with Dravidian.

146. **jana* ‘to talk’ ~ Hamito-Semitic **jn* ‘to talk’ ~ Dravidian **jana-* ‘to talk’. Strong.

Comment: Illič-Svityč provided very sparse documentation for this etymology. However, Bomhard (no. 787) has greatly expanded the Afrasian documentation with examples from Berber and Highland East Cushitic.

Bomhard (no. 787) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian and Dravidian:

Proto-Nostratic root **yan-* (~ **yən-*):
(vb.) **yan-* ‘to say, to speak’;
(n.) **yan-a* ‘saying, word, expression’

147. (?) **jānTΛ* ‘to stretch, to extend, to pull’: Uralic **jāntΛ-* ‘to pull tight’ (**jāntΛ-š*, **jāntΛ-ŋ* [etc.] ‘bowstring, tendon, sinew’) ~ Dravidian [**ēnt-* ‘to extend hands, to seize with hands’]. Rejected.

Comment: The Dravidian documentation cited by Illič-Svityč is very sparse. He also hesitatingly mentions possible Altaic cognates, but these are not convincing. It is best to abandon this etymology.

148. **jela* ‘light, bright’: Kartvelian **el-* ‘to sparkle (of lightning)’ ~ Uralic **jela* ‘light, bright, clear, day’ ~ Dravidian **el(a)-* ‘light, bright, shining’. Possible.

Comments:

1. The Uralic material should be removed. The Proto-Nostratic form reconstructed by Illič-Svityč should be modified accordingly.
2. Bomhard (no. 660) has proposed a slightly different Nostratic etymology, based upon evidence from Afrasian and Dravidian (see below). The Kartvelian material cited by Illič-Svityč should be added to Bomhard’s etymology (cf. Klimov 1964:78—79 **el-* ‘сверкать (о молнии)’ and 1998:46—47 Proto-Kartvelian **el-* ‘to sparkle [of lightning]’).

Bomhard (no. 660) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian (Arabic and Highland East Cushitic) and Dravidian:

Proto-Nostratic root **ʔel-*:

(vb.) **ʔel-* 'to shine, to radiate, to glitter, to glisten';

(n.) **ʔel-a* 'luster, splendor, light

149. **-jE* formant of optative: Indo-European **-i-*, **-jeĥ-* suffix of optative ~ Altaic **-jE-* suffix of optative (volitive). Rejected.

Comment: The optative is commonly considered to be a later development in Proto-Indo-European (cf. Bomhard, vol. 1, Chapter 19, §19.16, with references) — it is missing in the Anatolian branch.

150. **-ja* suffix of denominal and deverbative adjectives: Hamito-Semitic **-ij* suffix of relative adjectives and participles ~ Indo-European **-jo-/*-ijo-* suffix of denominal and deverbative adjectives ~ Uralic **-j(ɹ)* adjective suffix, **-ja/* **-jä* suffix of agent nouns and participles ~ Dravidian **-i* suffix of indeclinable participle ~ Altaic *-i* suffix of deverbative nouns and participles. Possible.

Comments:

1. Bomhard (vol. 1, Chapter 16, §16.40) reconstructs a Proto-Nostratic derivational suffix **-y-* and suggests that it "may have been used to form deverbative nouns — it may also have been added to nouns to form attributes", similar to the functions assigned to this suffix in Afrasian by Ehret (1995:16).
 2. It appears that Illič-Svityč has confused several different suffixes here, and it is questionable whether this entry can stand as written. Nonetheless, I have given him the benefit of the doubt and rated this entry as "possible".
151. **-ja* diminutive-endearing suffix of nouns used in addressing: Hamito-Semitic **-(a)j* suffix of endearing and diminutive nouns ~ Kartvelian **-ia* diminutive-endearing suffix (chiefly in addressing) ~ Uralic **-j* diminutive-endearing suffix (often in addressing) ~ Altaic **-j* diminutive-endearing suffix (usually in addressing). Possible.

Comments:

1. Not in Bomhard (this book).
 2. Here again, I am giving Illič-Svityč the benefit of the doubt.
152. **-j(ɹ)* affix of oblique form of plural nouns: Hamito-Semitic **-aj* suffix of plural nouns (originally oblique form) ~ Indo-European **-i* formant of plural (originally with the stem of demonstrative pronoun in oblique case) ~ Uralic **-j* affix of the oblique form of plural nouns. Rejected.

Comment: According to Bomhard (vol. 1, Chapter 16, §§16.20—16.26, and Chapter 17, §17.83), Proto-Nostratic had the following dual and plural markers:

Dual: **k^{hi}(-nV)*

Plural: **-t^ha*

Plural: **-ri*

Plural: **-k^{hu}*

Plural: **-s^ya*

Plural/collective: **-la*

Plural: **-nV*

153. (?) **-ja-(š[ʌ])* formant of comparative degree: Kartvelian **-e-(is_l)*, **-a-* affix of comparative degree of the type **(h)u-e-is_l* ~ Indo-European **-jes-/*-is-* suffix of comparative degree. Rejected.

Comment: According to Bomhard (vol. 1, Chapter 17, §17.8.1) adjectives did not exist as an independent grammatical category in Proto-Nostratic. Instead, he notes that intransitive verbs could function as “adjectives”. Bomhard further claims that “adjectives” were differentiated from nouns by syntactical means — a noun placed before another noun functioned as an attribute to the latter.

154. (?) **kala* ‘vessel’: Hamito-Semitic **kl* ‘vessel, pot’ ~ Dravidian **kala* ‘vessel made of leaves; pot’ ~ Altaic [**kala-* ‘cauldron’]. Weak.

Comments:

1. Starostin—Dybo—Mudrak (2003:638—639) reconstruct Proto-Altaic **kałpa* (= **kal^vpa*) ‘a kind of vessel’ to account for the Altaic forms cited by Illič-Svityč. Proto-Altaic initial **k-* reflects Proto-Nostratic initial ejective **k’-*. Moreover, Starostin—Dybo—Mudrak reconstruct a medial palatalized liquid **-l’-* (= **-ly-*), which does not agree with the unpalatalized medial liquid **-l-* required by the forms from the other branches of Nostratic. Therefore, the Altaic forms should be removed.
2. Inasmuch as Bomhard (no. 359) includes the Dravidian forms (together with Afrasian forms) in the following Proto-Nostratic etymology, Illič-Svityč’s proposal is suspect:

Proto-Nostratic (n.) **gal-a* ‘pot, vessel’

155. **kal^ʌ* ‘fish’: Hamito-Semitic **kl-* ‘fish’ ~ Uralic **kala* ‘fish’ ~ Altaic [**kali-ma* ‘whale’]. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:637) reconstruct Proto-Altaic **kalu* ‘a kind of fish’. Proto-Altaic initial **k-/* is derived from a Proto-Nostratic initial ejective **k’-/*, which means that this form cannot be included here.
2. Starostin—Dybo—Mudrak (2003:848) also reconstruct Proto-Altaic **k^hula* (= **k^hula*) ‘a kind of big fish’. This may belong here, if we assume that an original initial labiovelar has left a trace in the coloring of the vowel of the first syllable: **k^{wh}a-/* > **k^hu-/*. This is, however, extremely speculative. Note: According to Starostin—Dybo—Mudrak (2003:848), this is the source of the Mongolian forms cited by Illič-Svityč. They consider the Tungusic forms cited by Illič-Svityč to be borrowed from Mongolian.
3. Furthermore, Starostin—Dybo—Mudrak (2003:789) reconstruct Proto-Altaic **k^hile* (= **k^hile*) ‘a kind of fish or lizard’. This definitely does not belong here.
4. Bomhard (no. 518) adds the following Proto-Indo-European form to this etymology: **k^{wh}alo-* ‘large fish’ (traditional reconstruction = **k^walo-* or **q^ualo-*). This requires that an initial labiovelar be reconstructed in the Proto-Nostratic form.

Bomhard (no. 518) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, (?) Altaic, and Chukchi-Kamchatkan:

Proto-Nostratic (n.) **k^{wh}al-a* ‘a large fish’:

156. **kal’^h* ‘to strip bark, to skin’: Indo-European **gol-* ‘bare, bald’ ~ Uralic **kal’^h* ‘film, thin skin; bare, smooth’ ~ **kal-* ‘to strip skin’ ~ Altaic **kal’/i-* ‘to strip; bark; bare’. Strong.

Comments:

1. Starostin—Dybo—Mudrak (2003:660—661) reconstruct Proto-Altaic **kel’žo* (= **kel’žo*) ‘bald; bald spot’. Bomhard (no. 468) prefers the traditional Proto-Altaic reconstruction **kal^y-* ‘bald-headed; white spot, blaze on the forehead of an animal’ (cf. Street 1974:16).
2. The evidence from Indo-European and Altaic require that an initial ejective be reconstructed in Proto-Nostratic: **k’-/*. It may be noted that Dolgopolsky (2008:1010—1011, no 1061) correctly reconstructs an initial ejective: **Kāl’šû* ‘bare, naked’. However, when it comes to the Indo-European material he cites, he erroneously compares forms from Latin, Sanskrit, and Farsi (New Persian) and reconstructs Proto-Indo-European **k^hHwo-*.
3. Illič-Svityč incorrectly based his reconstruction of the Proto-Indo-European form on the evidence of the Slavic forms he cites. A better reconstruction would be (following the glottalic model of Proto-Indo-

European consonantism): Proto-Indo-European **k'al-wo-*, **k'al-Ho-* 'bald, naked' (traditional **gal-*: **galu-o-s*, **galuā* [cf. Pokorny 1959:349]).

Bomhard (no. 468) reconstructs the following Proto-Nostratic form based upon evidence from Indo-European and Altaic.

Proto-Nostratic (Eurasianic only) (n.) **k'alʷ-a* 'bald spot'; (adj.) 'bald, bare':

Derivative of:

(vb.) **k'alʷ-* 'to separate, to remove, to strip off or away: to pluck, tear, or pull off or out';

(n.) **k'alʷ-a* 'separation, removal, stripping off or away, etc.'

Bomhard (no. 467) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, and Indo-European:

Proto-Nostratic root **k'alʷ-* (~ **k'əʷ-*):

(vb.) **k'alʷ-* 'to separate, to remove, to strip off or away: to pluck, tear, or pull off or out';

(n.) **k'alʷ-a* 'separation, removal, stripping off or away, etc.'

Derivative:

(n.) **k'alʷ-a* 'bald spot'; (adj.) 'bald, bare'

Note: For the semantic development, cf. Buck 1949:4.93 bald; 4.99 naked, bare.

157. **kamu* 'to seize, to squeeze': Hamito-Semitic **km-* 'to seize, to take, to squeeze' ~ Indo-European **gem-* 'to seize, to take, to squeeze' ~ Uralic **kama-lʷ/*koma-rʷ* (< **kamo-*) 'hand; handful' ~ Dravidian **kamʌ* 'to seize, to take hold' ~ Altaic **kamu-* 'to seize, to take, to squeeze'. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:639—640) reconstruct Proto-Altaic **kama* 'to unite together' as the source of the Altaic forms cited by Illič-Svityč. This points to an initial ejective in Proto-Nostratic **/k'-/*. Hence, the Altaic evidence should be removed.
2. Proto-Indo-European **gem-* would be **k'em-* according to the glottalic model of Indo-European consonantism. It does not belong here. A better comparison would be with the form reconstructed by Gamkrelidze—Ivanov (1995.I:747) as **kʰm̥tʰ-* 'hand (with outstretched fingers)'; Kroonen (2013:207—208) Proto-Germanic **handu-* 'hand'; etc.
3. Rédei (1986—1988:137—138) reconstructs Proto-Finno-Ugrian **käme* (-*ne*) 'hand; palm, flat of the hand'.
4. Even though this etymology contains numerous errors, enough can be salvaged to give it a "possible" rating.

Bomhard (no. 413) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Uralic:

Proto-Nostratic root **k^ham-* (~ **k^həm-*) or **q^ham-* (~ **q^həm-*):
 (vb.) **k^ham-* or **q^ham-* 'to seize, to grasp, to grip, to clutch';
 (n.) **k^ham-a* or **q^ham-a* 'grip, hold, hand(ful); bond, fetter'

158. **kanpa* 'soft outgrowth': Hamito-Semitic **knPr* 'lip' ~ Indo-European **gemb-* 'outgrowth, lip, mushroom' ~ Uralic **kampA* 'mushroom'. Rejected.

Comment: The sound correspondences are profoundly flawed and the semantics are unconvincing. This etymology must be disqualified.

159. (Descriptive) **karA*/**kura* 'crane': (?) Hamito-Semitic [**k(w)rk* 'crane'] ~ Indo-European **gerH-* 'crane' ~ Uralic **karke*/**kurke* 'crane' ~ Dravidian **kor-*/**kur-* 'crane' ~ (?) Altaic [**kara*/**kura-* 'crane']. Possible.

Comments:

1. The Afrasian forms cited here must be removed from consideration due to faulty sound correspondences.
2. Starostin—Dybo—Mudrak (2003:652) reconstruct Proto-Altaic **kārV* 'a kind of bird'. This points to an initial ejective in Proto-Nostratic **/k'-/*, which agrees with the Proto-Indo-European form. Several of the Altaic forms cited by Illič-Svityč are listed at the end of their entry for Proto-Altaic **gérki* 'a kind of pheasant' by Starostin—Dybo—Mudrak (2003:542), but without any proposals concerning their derivation.

Bomhard (no. 493) reconstructs the following Proto-Nostratic form(s) based upon evidence from Afrasian, Dravidian, Indo-European, and Uralic:

Proto-Nostratic (n.) **k'or-a* or **k'ar-a* 'crane'

160. **Kājwa* 'to chew': Indo-European **gieu-*/**gieu-* 'to chew' ~ Altaic **kāb/ä-* 'to chew'. Rejected.

Comments:

1. Faulty sound correspondences.
2. Starostin—Dybo—Mudrak (2003:667) reconstruct Proto-Altaic **kēpu* 'to chew'. This points to Pre-Altaic **k'ēp-* (< Proto-Nostratic **k'ep-* [see below]).

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 488) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, and Altaic:

Proto-Nostratic root **k'ep'-*:

(vb.) **k'ep'-* 'to cut, chop, split, or break into small pieces; to munch, to chew';

(n.) **k'ep'-a* 'the act of cutting, chopping, splitting, or breaking into small pieces, the act of mincing; chewing (the cud), rumination'

161. **kā/lH/Λ* 'to go, to wander': (?) Hamito-Semitic **klh* 'to wander, to step' ~ Uralic **kālā* 'to ford, to wander' ~ Dravidian **kāl-* 'to go' ~ Altaic [**kālu-* 'to arrive']. Rejected.

Comments:

1. Faulty sound correspondences
2. Orël—Stolbova (1995:310, no. 1418) reconstruct Proto-Afrasian **kal-* 'to go' and (1995:310, no. 1420) **kalah-* 'to go'.
3. Bomhard (no. 513) reconstructs Proto-Afrasian **k^wal-* 'to go, to walk, to move about' based upon evidence from Berber, Cushitic (Saho-Afar), and Chadic.
4. Bomhard (no. 513) rejects the Dravidian evidence adduced by Illič-Svityč and replaces it with the following:

Tamil *kulavu* (*kulavi-*) 'to walk, to move about'; Toda *kwal-* (*kwaḍ-*) 'to go round and round (millet in a mortar pit, buffaloes in a pen), to frisk about, to run about wasting time'.

5. Bomhard (no. 513) includes the following Indo-European evidence:

Proto-Indo-European **k^{wh}el-/k^{wh}ol-/k^{wh}l̥-* 'to go, to walk, to move about': Sanskrit *cāratī*, *calatī* 'to move one's self, to go, to walk, to move, to stir, to roam about, to wander'; Avestan *carāiti* 'to go, to move'; Greek *πολέω* 'to go about, to range over', *πολεύω* 'to turn about, to go about'.

6. Bomhard (no. 513) rejects the Uralic evidence adduced by Illič-Svityč and replaces it with the following:

Proto-Uralic **kulke-* 'to ramble about, to move about, to roam or wander about': Finnish *kulke-/kulje-* 'to go, to walk, to travel, to stroll, to ramble'; Estonian *kulg* 'course, process, run, motion, going', *kulgema-* 'to proceed, to take one's course, to run, to pass'; Lapp / Saami *gol'gâ-* 'to float (with the current), to run; to shower down; to leak very much; to ramble, to roam, to wander about'; Mordvin *kolge-* 'to drip, to run; to leak, to be leaky'; Ostyak / Xanty *kogəl-* 'to walk, to stride'; Zyrian / Komi *kylal-* 'to float, to drift (on water); to flood; to swim; to travel or drift downstream', *kylt-* 'to drift or swim with the current'; Hungarian *halad-* 'to depart, to proceed, to move forward'; Yurak Samoyed / Nenets *huuly-* 'to swim; to move by ship; to travel downstream'.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 513) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, and Chukchi-Kamchatkan:

Proto-Nostratic root **k^{wh}al-* (~ **k^{wh}əl-*):

(vb.) **k^{wh}al-* 'to go, to walk, to move about';

(n.) **k^{wh}al-a* 'walking, walk, wandering, roaming'

Probably identical to:

(vb.) **k^{wh}al-* 'to revolve, to go around, to roll';

(n.) **k^{wh}al-a* 'circle, circuit'

162. **kālU* 'female relation': (?) Hamito-Semitic [**kl(l)* 'daughter/sister-in-law, bride'] ~ (?) Kartvelian [**kal-* 'woman'] ~ Indo-European **ǵloy-* 'brother's wife' ~ Uralic **kālī* 'female relation' ('husband's sister, brother's wife, etc. '); 'sister's husband' ~ Dravidian [*kal-* 'wife of father's brother, aunt'] ~ Altaic **kālī(n)* 'wife of younger brother or son; sister's husband'. Possible.

Comments:

1. Faulty sound correspondences. The etymology cannot stand as written.
2. The Indo-European evidence adduced by Illič-Svityč must be removed. Proto-Indo-European **/ǵ-/* (= **/k'-/* according to the glottalic model of Proto-Indo-European consonantism) does not come from Proto-Nostratic initial **/k-/*.
3. Starostin—Dybo—Mudrak (2003:659) reconstruct Proto-Altaic **kele* (~ *-i, -o*) 'daughter-in-law, bride'.
4. Bomhard separates this entry into two separate etymologies, based upon their phonology: (1) Proto-Nostratic (n.) **k^hal-a* 'female in-law' and (2) Proto-Nostratic (Eurasian only) (n.) **k'el-a* 'female in-law: husband's sister, sister-in-law; daughter-in-law' (see below).

Bomhard (no. 407) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Dravidian, Kartvelian, and Uralic:

Proto-Nostratic (n.) **k^hal-a* 'female in-law':

Note also:

(n.) **k'el-a* 'female in-law'

Bomhard (no. 486) also reconstructs the following Proto-Nostratic form based upon evidence from Indo-European and Altaic:

Proto-Nostratic (Eurasian only) (n.) **k'el-a* 'female in-law: husband's sister, sister-in-law; daughter-in-law':

Note also:

(n.) **k^hal-a* 'female in-law'

163. **kEN*Λ ‘to know’: Hamito-Semitic **k(j)n* ‘to know, to recognize’ ~ Kartvelian **gen-* ‘to understand, to recognize, to feel’ ~ Indo-European **ġenh^u-*/**ġneh^u-* ‘to know’. Rejected.

Comment: Faulty sound correspondences.

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 475) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Indo-European:

Proto-Nostratic root **k’an^v-* (~ **k’an^v-*):

(vb.) **k’an^v-* ‘to observe, to perceive’;

(n.) **k’an^v-a* ‘the act of observing, perceiving; that which observes, perceives: eye; perception, observation, recognition, comprehension’.

164. (Descriptive) **k/iH*Λ ‘to sing’: Indo-European **g/eiH-* ‘to sing, to scream’ ~ Uralic **kīγΛ-* ‘to make a mating call, to sing’. Rejected.

Comment: Faulty sound correspondences.

165. (?) **kirH*Λ ‘old’: Indo-European **ġerH-* ‘old, decrepid’ ~ Dravidian [**kīr(a)* ‘old’]. Rejected.

Comment: Illič-Svityč has confused two separate, unrelated Proto-Nostratic stems here: (A) Proto-Nostratic **k’er-* ‘to decay, to wear out, to wither, to waste away, to become old’; (B) Proto-Nostratic **gir^v-* ‘to be or become old’ (see below). The first is the source of the Indo-European form he cites, while the second is the source of the Dravidian form.

- A. As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 489) reconstructs the following Proto-Nostratic forms based upon evidence from Indo-European and Altaic:

Proto-Nostratic root (Eurasianic only) **k’er-*:

(vb.) **k’er-* ‘to decay, to wear out, to wither, to waste away, to become old’;

(n.) **k’er-a* ‘old age, old person’; (adj.) ‘decayed, worn out, withered, wasted, old’

- B. As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 487) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and (?) Indo-European:

Proto-Nostratic root **g^hr^y-* (~ **ger^y-*):
 (vb.) **g^hr^y-* 'to be or become old';
 (n.) **g^hr^y-a* 'old age, old person'; (adj.) 'old'

Note: Bomhard (no. 487) suggests that the following Indo-European evidence (from Germanic) may belong here:

Proto-Indo-European **g^hr-eH-* (> **g^hr-ē-*) 'gray-haired, old': Proto-Germanic **grēwaz* 'gray, gray-haired' > Old Icelandic *grár* 'gray, gray-haired'; Faroese *gráur* 'gray'; Norwegian *graa* 'gray'; Danish *graa* 'gray'; Old Swedish *grā* 'gray' (Modern Swedish *grå* 'gray'); Old English *græg* 'gray'; Old Frisian *grē* 'gray'; Dutch *grauw* 'gray'; Old High German *grāo* 'gray' (New High German *grau* 'gray').

166. **kiwi* 'stone': (?) Hamito-Semitic [**kw* 'stone'] ~ Kartvelian **kw-a* 'stone' ~ Uralic **kiwe* 'stone'. Strong.

Comment: The Afrasian evidence proposed by Illič-Svityč should be removed.

Bomhard (no. 445) reconstructs the following Proto-Nostratic form based upon evidence from Kartvelian and Uralic:

Proto-Nostratic (n.) **k^hi^w-a* 'stone'

167. **koja* 'moth, caterpillar': Uralic **koja* 'moth' ~ Altaic **kuja* 'moth, larva of gadfly'. Rejected.

Comment: Starostin—Dybo—Mudrak (2003:741) reconstruct Proto-Altaic **kúⁿé* (= **kún^ve*) 'moth, worm'. Given the revised Proto-Altaic reconstruction proposed by Starostin—Dybo—Mudrak, based upon more copious data from the Altaic daughter languages, this entry must be disqualified.

168. **kojHa* 'fatty, plump' health': Indo-European **g^uei^h-*/**g^uje^h-* 'to be healthy, to live' ~ Uralic **kōja* 'fat, fatty'. Rejected.

Comments:

1. Faulty sound correspondences. The semantics are also problematic.
2. The alleged Proto-Indo-European cognate requires an initial labiovelar ejective **/k^w-/* in Proto-Nostratic (taking into consideration the glottalic model of Proto-Indo-European consonantism).

169. (?) **kojHa* 'skin, leather, bark': Indo-European **g^uei^h-* 'skin, leather' ~ Uralic **koja* 'bark, rind, crust'. Strong.

Comments:

1. Though the semantics are quite good, the sound correspondences are faulty.
2. The alleged Proto-Indo-European cognate requires an initial labiovelar ejective **/kʷ-/* in Proto-Nostratic (taking into consideration the glottalic model of Proto-Indo-European consonantism).
3. This entry is a prime example of how Illič-Svityč's etymology can be essentially correct but the Proto-Nostratic reconstruction is wrong.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 552) reconstructs the following Proto-Nostratic form (with initial labiovelar ejective) based upon evidence from Indo-European and Uralic:

Proto-Nostratic (Eurasianic only) (n.) **kʷoy-a* 'outer covering: skin, hide, leather; bark (of a tree), shell, crust'

170. (?) **kojw/a/* 'birch': Uralic **kojwA* 'birch' ~ Altaic **kīb(a)* 'birch'. Rejected.

Comments:

1. Faulty sound correspondences — Proto-Uralic medial **/-oj-/* does not correspond to Proto-Altaic medial **/-ī-/*, and Proto-Uralic medial **/-w-/* does not correspond to Proto-Altaic medial **/-b-/*. Acceptable semantics.
2. Starostin—Dybo—Mudrak (2003:676) reconstruct Proto-Altaic **kība* 'a kind of foliage tree'. They note: "The reflexes point to a tree with distinct bright bark, probably birch."

171. (?) **koλA* 'to skin, to strip': Uralic **koδ'A/*kuδ'A* 'to skin, to strip' ~ Altaic [**koLa* 'to skin']. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:851) reconstruct Proto-Altaic **k'ula* (= **k'ulʷa*) 'bark, scales; scab'. They point out that Manchu *qola-* 'to skin' and Evenki *kūlū-* 'to skin' are loanwords from Mongolian.
2. If this entry is a valid etymology, the lack of cognates in Afrasian, or Kartvelian, or Dravidian means that this can only be reconstructed as far back as Proto-Eurasianic, not Proto-Nostratic.
3. According to Bomhard's system, this form should be reconstructed as follows (with medial lateralized affricate ejective **/-tɬ'-/*): Proto-Eurasianic (vb.) **kʰutɬ'-* (~ **kʰotɬ'-*) 'to skin, to remove bark', (n.) **kʰutɬ'-a* 'tree bark'.
4. Not in Bomhard (this book).

172. **kora* 'anger, spiritual pain': Hamito-Semitic **k(w)r* 'to be angry, to suffer' ~ Dravidian **kora* 'to be angry' ~ Altaic **kōra* 'anger, shame, pain'. Possible.

Comments:

1. This is another case of where I am giving Illič-Svityč the benefit of the doubt.
2. The Altaic forms cited by Illič-Svityč imply a Proto-Altaic **k'ō/ra* (= **k^hō/ra*) with initial voiceless velar aspirate **/k^h-/*, which means that the comparison with Afrasian **k(w)r* is possible.
3. Orël—Stolbova (1995:323—324) reconstruct Proto-Afrasian **kor-* 'to be angry'.
4. Not in Bomhard (this book).

173. (?) **kOr'i* 'lamb, sheep': Hamito-Semitic **kr* 'lamb, young ram' ~ Dravidian **korīl/*kuri* 'sheep' ~ Altaic **kur'i-/*kor'i-* 'lamb'. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:808—809) reconstruct Proto-Altaic **k'jōro* (= **k^hjōr^{yo}*) 'lamb, deer'.
2. The Altaic evidence (medial **/-ř-/*) points to a medial **/-r^y-/* in Proto-Nostratic. This means the expected reflex in Dravidian should be **korīl/*kuri* 'sheep'. Such a form is not found in Burrows—Emeneau 1984, though the forms cited by Illič-Svityč are listed under entry no. 2165. The Dravidian material is not an exact match and is, therefore, suspect.
3. The reconstruction of initial **/k'-/* (= **/k^h-/*) in Proto-Altaic by Starostin—Dybo—Mudrak means that the comparison with the Afrasian (Semitic, Berber, and Chadic [Angas]) evidence presented by Illič-Svityč is possible.
4. Not in Bomhard (this book).

174. **küda* 'male relation': Uralic **küδü* 'wife's husband, husband's or wife's brother' ~ Altaic **küdä/*kuda* (< **küda*) 'relationship by marriage, father of son/daughter-in-law, brother/son-in-law'. Rejected.

Comment: Faulty sound correspondences. Proto-Uralic medial **/-δ-/* does not correspond to Proto-Altaic medial **/-d-/*.

175. (?) **küjñA* 'to bend at the joints': Indo-European **ĝenu-/*ĝneu-* 'knee' ~ Uralic **küjñä-(rä)* 'elbow, bone, forearm' ~ Dravidian **kūn-* 'hump'. Rejected.

Comments:

1. Faulty sound correspondences. Erroneous Proto-Nostratic reconstruction.
2. In accordance with the glottalic model of Indo-European consonantism, the Proto-Indo-European form points to an initial ejective **/k'-/* in Proto-Nostratic.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 487) reconstructs the following Proto-Nostratic form based upon evidence from

Dravidian, Indo-European, and Altaic (cf. Starostin—Dybo—Mudrak [2003: 664—665] Proto-Altaic **kēŋa* [= **kēnʷa*] ‘front leg, armpit, angle’):

Proto-Nostratic (n.) **kʷenʷ-a* ‘knot, joint’.

176. **külʷa* ‘freeze, cold’: (?) Kartvelian **kwer-/kwel-* ‘to cool’ ~ Uralic **külmä* ‘cold, frost, freeze’ ~ Dravidian [**kuʎa-* ‘cold’] ~ Altaic **Kölʷ(a)* ‘freeze’. Possible.

Comments:

1. The Kartvelian material should be removed. Proto-Kartvelian initial **/kw-/* points to an initial labiovelar in Proto-Nostratic **/kʷh-/*.
2. Starostin—Dybo—Mudrak (2003:716—717) reconstruct Proto-Altaic **kolʷi* (= **kolʷi*) (~ **kʷ-, *-i-, *-e*) ‘to freeze’. Proto-Altaic initial **/k-/* points to Proto-Nostratic initial **/kʷ-/*.
3. Rédei (1986—1988:663) reconstructs Proto-Finno-Permian **kilmä* (**külmä*) ‘cold; frost, coldness; to become cold, to freeze, to be frozen’; Sammallahhti (1988: 552) reconstructs Proto-Finno-Permian **külmä* ‘cold’

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 499) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Indo-European, Uralic, and Altaic:

Proto-Nostratic root **kʷulʷ-* (~ **kʷolʷ-*):

(vb.) **kʷulʷ-* ‘to be or become cold; to freeze’;

(n.) **kʷulʷ-a* ‘cold, coldness, chill, frost’

177. **kütä* ‘small lake, reservoir’: Hamito-Semitic **kwl* ‘reservoir, lake, river’ ~ Uralic **k/ä/ta* ‘lake, river, bay’ ~ Dravidian **kUʎa-* ‘reservoir, pond’. Rejected.

Comments:

1. Faulty vowel correspondences — Proto-Uralic **/ä/* does not correspond to Proto-Dravidian **/u/*.
2. Rédei (1986—1988:134—135) reconstructs Proto-Finno-Ugrian **kälz* ‘bay, (marshy) lake’.
3. Krishnamurti (2003:13, 526) reconstructs Proto-Dravidian **kuʎ-am/-Vnc-* ‘lake’.

178. **küni* ‘wife, woman’: Hamito-Semitic **k(w)n/*knw* ‘one of the wives in polygamy’ ~ Indo-European **gʷen-* ‘wife, woman’ ~ Altaic **küni* ‘one of the wives in polygamy’. Possible.

Comments:

1. Faulty sound correspondences: Proto-Afrasian initial */k-/ does not correspond either to Proto-Indo-European initial */g^u-/ (this would be */k^w-/ under the glottalic model of Proto-Indo-European consonantism) or to Proto-Altaic initial */k-/ (< Proto-Nostratic */k'-/ or */k^w-/).
2. Starostin—Dybo—Mudrak (2003:739—740) reconstruct Proto-Altaic **kune* (~ g-) 'one of several wives'.
3. The Afrasian forms should be removed.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 539) reconstructs the following Proto-Nostratic form based upon evidence from Indo-European and Altaic:

Proto-Nostratic (Eurasianic only) (n.) **k^wan-a* 'woman, wife'

Derivative of:

(vb.) **k^wan-* 'to suckle, to nurse; to suck'; (n.) **k^wan-* 'udder, bosom, breast'

In addition, Bomhard (no. 538) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian and Dravidian:

Proto-Nostratic root **k^wan-* (~ **k^wan-*):

(vb.) **k^wan-* 'to suckle, to nurse; to suck'; (n.) **k^wan-a* 'udder, bosom, breast'

Derivative:

(n.) **k^wan-a* 'woman, wife'

179. **küta* 'snake, worm': Hamito-Semitic [**kwl* 'snake, worm'] ~ (?) Kartvelian **gwel-* 'snake' ~ Altaic [**kuli-* 'snake, worm']. Rejected.

Comments:

1. Faulty sound correspondences. Proto-Kartvelian initial */gw-/ does not correspond to Proto-Afrasian initial */k-/ . Proto-Kartvelian initial */gw-/ points to Proto-Nostratic initial */g^w-/.
2. Starostin—Dybo—Mudrak (2003:736) reconstruct Proto-Altaic **kulV* (~ -o-, -ĭ-) 'snake, worm'. Proto-Altaic initial */k-/ points to Proto-Nostratic initial ejective */k'-/.
3. Illič-Svityč bases the reconstruction of Proto-Afrasian **kwl* 'snake, worm' exclusively on material from Chadic. Orël—Stolbova (1994:326, no. 1495), on the other hand, reconstruct Proto-Afrasian **kulup-* 'worm, crocodile', based upon material from Semitic and Ancient Egyptian — it must be admitted, however, that their etymology seems a bit contrived from a semantic point of view. Ehret (1995) does not have a comparable entry.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 507) reconstructs the following Proto-Nostratic form based upon evidence from Kartvelian and Uralic:

Proto-Nostratic (n.) **g^wal-a* 'snake'

180. (?) **ka_{MA}* 'biting insect': Hamito-Semitic **km-/gm-* 'biting insect (louse, flea, tick)' ~ Altaic [**kōmi* 'biting insect (louse, ant, beetle)']. Rejected.

Comment: Starostin—Dybo—Mudrak (2003:738—739) reconstruct Proto-Altaic **kumi* 'a kind of insect'. Proto-Altaic initial **/k-/* points to Proto-Nostratic initial ejective **/k'-/*, which does not yield either Proto-Afrasian initial **/k-/* or **/g-/* — the expected reflex in Proto-Afrasian is initial **/k'-/*.

181. (?) **kačA* 'to advance with effort' (> 'to run, to crawl'): Uralic **k/a/če-* 'to run, to crawl' ~ Altaic [**Kača-* 'to crawl']. Rejected.

Comments:

1. Rédei (1986—1988:667—668) reconstructs Proto-Finno-Permian **koče-* 'to go slowly, to crawl'.
2. Starostin—Dybo—Mudrak (2003:751—752) reconstruct Proto-Altaic **k'āču* (= **khāču*) 'to run, to drive' as the source of some of the Altaic forms cited by Illič-Svityč. For the meaning 'to crawl', they reconstruct the following Proto-Altaic forms: (1) **iōmke* 'to crawl, to move' (2003:606) and (2) **p'ōba* (= **phōba*) 'to crawl, to squat' (2003:1164).
3. Considering all of the Uralic evidence cited by Rédei, on the one hand, and all of the Altaic evidence cited by Starostin—Dybo—Mudrak, on the other hand, the semantics are too divergent to support Illič-Svityč's etymology.

182. **KejA* 'to do': Dravidian **kej-* 'to do' ~ Altaic **kī-* 'to do'. Strong.

Comment: Even though the evidence cited by Illič-Svityč from Dravidian and Altaic fully support his etymology, the Proto-Nostratic form he reconstructs needs to be revised to reflect the additional material cited by Bomhard (see below).

Bomhard (no. 527) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Altaic:

Proto-Nostratic root **k^whey-*:

(vb.) **k^whey-* 'to do, to make, to create; to form, to fashion'

(n.) **k^whey-a* 'act, deed, creation'

183. (?) **Koki* 'to track, to follow': Uralic **koke-* 'to look around, to notice, to find' ~ Altaic [**Koga* 'to track, to follow, to pursue']. Rejected.

Comments:

1. Lax semantics.
2. Rédei (1986—1988:171) reconstructs Proto-Uralic **koke-* 'to see, to notice, to find'.
3. Starostin—Dybo—Mudrak (2003:554) reconstruct Proto-Altaic **gið[k]ó* 'to run, to send' as the source of the Altaic evidence cited by Illič-Svityč.

184. **Kumä* 'overturned': Uralic **kuma* 'overturned' ~ Altaic **Köm(ä)* 'overturned'. Rejected.

Comments:

1. Faulty sound correspondences. Proto-Uralic medial **/-u-/* does not correspond to Proto-Altaic medial **/-iō-/* reconstructed by Starostin—Dybo—Mudrak (see below).
2. Rédei (1986—1988:201—202) reconstructs Proto-Uralic **kuma* 'bent (down), bowed (down); inverted position; to be bent (down)'.
3. Starostin—Dybo—Mudrak (2003:504—505) reconstruct Proto-Altaic **k'ōme* (= **k^hiōme*) 'to throw (upside down)' as the source of the Altaic material cited by Illič-Svityč. Note that they reconstruct Proto-Altaic initial **/k^c-/* (= **/k^h-/*) here.

Even though this etymology is not in Bomhard (this book) in the form proposed by Illič-Svityč, Bomhard (no. 502) proposes a different etymology with similar, though not quite identical, meaning based upon evidence from Afrasian, Dravidian, Uralic, Chukchi-Kamchatkan, and Eskimo-Aleut (Bomhard does not include Altaic — the initial **/k^c-/* [= **/k^h-/*] reconstructed by Starostin—Dybo—Mudrak for Proto-Altaic [see above] cannot be derived from the Proto-Nostratic initial **/k'-/* required on the basis of the evidence from the other Nostratic daughter languages [especially from Afrasian: Semitic, Berber, and North Omotic, which points to Proto-Afrasian **k'um-* 'to bend', to judge by the North Omotic vowel]):

Proto-Nostratic root **k'um-* (~ **k'om-*):

- (vb.) **k'um-* 'to bend, to curve; to bend the head or body, to bow or stoop down'
 (n.) **k'um-a* 'bend, curve; the act of bending, bowing, stooping'

Identical to:

- (n.) **k'um-a* 'a bent or curved object: hollow, cavity; knob, lump, hump; etc.'

Bomhard (no. 503) also reconstructs the following Proto-Nostratic form based upon evidence from Indo-European, Uralic, and Altaic (different from the Altaic evidence adduced by Illič-Svityč):

Proto-Nostratic (n.) **k'um-a* ‘a bent or curved object: hollow, cavity; knob, lump, hump; etc.’

185. **KuPśa* ‘to put out, to extinguish’: Indo-European **g^ues-* ‘to go out’ ~ Uralic **kupsa-/kopsa-* ‘to go out’. Rejected.

Comment: Faulty sound correspondences. Proto-Indo-European medial **/-s-/* does not correspond to Proto-Uralic medial **/-ps-/*.

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 545) reconstructs the following Proto-Nostratic forms based upon evidence from (?) Afrasian, Dravidian, Kartvelian, and Indo-European:

Proto-Nostratic root **k'was-* (~ **k'wəs-*):
 (vb.) **k'was-* ‘to strike fire, to put out (fire)’
 (n.) **k'was-a* ‘spark, fire’

186. (?) **Ku/s/i* ‘to fall’: Uralic **ku/ś/e-* ‘to fall’ ~ Dravidian **kuc(i)-* ‘to fall; lower’. Rejected.

Comments:

1. Collinder (1960:410) reconstructs Proto-Finno-Ugrian **kuśō-* or **kućō-* as the source of Lapp / Saami *gáč'čâ-* ‘to fall’, and this no doubt served as the basis for Illič-Svityč’s Proto-Uralic reconstruction. The Lapp / Saami form is not listed in either Rédei 1986—1988 or Sammallahti 1988. The Uralic documentation is very limited. This seems to indicate that this is probably not a credible Uralic etymology.
2. I would like to give Illič-Svityč the benefit of the doubt here, but there are just too many uncertainties involved, and it is better to err on the side of caution.

187. (?) **KümTä* ‘fog’: Uralic **kümtä* ‘fog, smoke’ ~ Altaic **küda-* ‘fog’. Rejected.

Comments:

1. Faulty sound correspondences. Proto-Uralic medial **/-mt-/* does not correspond to Proto-Altaic medial **/-d-/*. Moreover, Proto-Uralic medial **/-ü-/* does not correspond to Proto-Altaic medial **/-ě-/* (according to Starostin—Dybo—Mudrak’s Proto-Altaic reconstruction — see below).
2. Starostin—Dybo—Mudrak (2003:771) reconstruct Proto-Altaic **k'ědō* (= **k^hědō*) ‘wind, fog’.

188. **Kūt*Λ ‘to tie up, to bind’: Uralic **kūtke*- ‘to tie, to bind’ ~ Dravidian **kut*Λ ‘to tie, to tighten’. Rejected.

Comment: Based upon the evidence cited by Illič-Svityč, there is absolutely no justification for reconstructing Proto-Nostratic medial */-t-/ (= */-t’-/).

189. *-*k*- nominal diminutive suffix: Kartvelian *-*k*- (*-*ak*-, *-*ik*-) diminutive suffix ~ Indo-European *-*k*- diminutive suffix ~ Uralic *-*kka*/*-*kkä* diminutive suffix ~ Altaic *-*ka*/*-*kä* diminutive suffix. Possible.

Comments:

1. Faulty sound correspondences. Questionable morphological analysis — the derivational suffixes cited by Illič-Svityč typically are multi-functional in the various Nostratic daughter languages, and those functions do not systematically correspond when compared across languages. This makes it difficult to ascertain the precise functions of the derivational suffixes in Proto-Nostratic. Nonetheless, there is enough here to warrant further examination. For a comprehensive discussion of Nostratic derivational morphology, cf. Bomhard, vol. 1, Chapter 18.
 2. Aikio (to appear, pp. 36—37), as the latest treatment of the subject, lists various derivational suffixes, together with their functions, that are probably to be reconstructed for Proto-Uralic. The Uralic diminutive suffix cited by Illič-Svityč is not included by Aikio. However, it is mentioned by Raun (1988:565) and, of course, Collinder (1960:258—259).
 3. The phonology of the Uralic forms is ambiguous.
 4. The Proto-Indo-European diminutive suffix cited by Illič-Svityč cannot be compared with the Kartvelian diminutive suffix. The Proto-Indo-European suffix points to Proto-Nostratic */-kʰ-/ , while the Proto-Kartvelian suffix points to Proto-Nostratic */-k’-/ . Or, to put it another way, Proto-Indo-European */-k-/ is not the regular reflex of Proto-Nostratic */-k-/ (= */-k’-/).
 5. Starostin—Dybo—Mudrak (2003:173—220, summary on p. 220) identify the following Proto-Altaic derivational suffixes that should be considered here: (A) *-*k*- = (a) denominative nominal; (b) suffix of small animals; (B) *-*k*˘- (= *-*kʰ*-) = (a) attributive (> denominative nominal), (b) diminutive, and (c) deverbative verbal. Proto-Altaic */-k-/ points to Proto-Nostratic */-k-/ (= */-k’-/), while Proto-Altaic */-k˘-/ (= */-kʰ-/) points to Proto-Nostratic */-kʰ-/.
 6. Of the two competing derivational suffixes joined together by Illič-Svityč in this entry, namely, (A) Proto-Nostratic */-k-/ (= */-k’-/) and (B) Proto-Nostratic */-kʰ-/ , Bomhard (vol. 1, Chapter 16, §16.44) only very tentatively assigns diminutive function to the former (A).
190. (Descriptive) **qaba*/**qap*’a ‘to seize’: Hamito-Semitic **qb*- ‘to seize, to take, to bite’ ~ Kartvelian **qb*- ‘to bite’ ~ Indo-European **ghabh*-/**kap*- ‘to seize,

to take, to hold' ~ Uralic **kappλ-* 'to seize' ~ Dravidian **kavv-/kapp-* 'to seize (with the mouth), to grab' ~ Altaic **k'aba-/k'apa-* 'to seize'. Possible.

Comments:

1. I do not understand why this entry is labeled as “descriptive” (дескрипт.).
2. Illič-Svityč has confused three separate, but semantically-similar, Proto-Nostratic stems here — they are:

- A. Bomhard (no. 353) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Indo-European:

Proto-Nostratic root **gab-* (~ **gəb-*):

(vb.) **gab-* 'to grasp, to seize'

(n.) **gab-a* 'hand, arm'

- B. Bomhard (no. 419) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Elamite, Indo-European, Uralic, Altaic, and Eskimo:

Proto-Nostratic root **k^haph-*:

(vb.) **k^haph-* 'to take, seize, or grasp with the hand; to press or squeeze with the hand'

(n.) **k^haph-a* 'hand'

- C. Bomhard (no. 455) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Kartvelian:

Proto-Nostratic root **k'ab-* (~ **k'əb-*):

(vb.) **k'ab-* 'to seize, to take hold of; to seize with the teeth, to bite'

(n.) **k'ab-a* 'seizure, grasp, grip, hold; bite'

191. **kačλ* 'man, youth': Kartvelian **kac₁-* 'man, husband' ~ Uralic **k/a/Čλ* 'youth, man'. Possible.

Comments:

1. Klimov (1998:86—87) and Fähnrich (2007:224) reconstruct Proto-Kartvelian **kac₁-* 'man, male, husband'.
2. Rédei (1986—1988:110) reconstructs Proto-Uralic **kača* 'young, unmarried man'.
3. I am rating this entry as “possible” instead of “strong” because there is a problem with the phonology. Proto-Kartvelian **/c₁/* usually corresponds to Proto-Uralic **/č/* rather than Proto-Uralic **/ć/*. Nonetheless, the semantics are a good match.
4. Not in Bomhard (this book).

192. **kaɖa* 'to weave, to plait (with twigs)': Hamito-Semitic **qd-* 'to form pots; to build' ~ Kartvelian **ked-* 'to build' ~ Indo-European **ket-* '(plaited) structure, vessel' ~ Dravidian **kaṭṭ-* 'to tie, to build; plaited structure, vessel'. Strong.

Comments:

1. The Proto-Indo-European form should be removed from this entry. Proto-Indo-European */k/ does not correspond either to Proto-Afrasian */q/ (= */k'/) or to Proto-Kartvelian */k/ (= */k'/). Likewise, Proto-Indo-European */t/ does not correspond to Proto-Afrasian */d/, Proto-Kartvelian */d/, or Proto-Dravidian */t/. The Proto-Indo-European form is best derived from the following Proto-Nostratic forms reconstructed based upon evidence from Afrasian, Dravidian, Kartvelian, and Indo-European (cf. Bomhard, no. 433):

Proto-Nostratic root **kʰath-* (~ **kʰəth-*):

(vb.) **kʰath-* 'to plait, to weave, to twist';

(n.) **kʰath-a* 'that which is plaited, woven, twisted: mat, net, knot'

Derivative:

(n.) **kʰath-a* 'rag, cloth'

2. The following Proto-Altaic form should be added to this etymology: **kādū* 'a kind of harness (bridle)' (cf. Starostin—Dybo—Mudrak 2003:629).

Bomhard (no. 458) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, and Altaic:

Proto-Nostratic root **kʰad-* (~ **kʰəd-*):

(vb.) **kʰad-* 'to tie, to fasten; to build, to construct';

(n.) **kʰad-a* 'tie, band, fastening'

193. (Descriptive) **kaHPa* 'to chop, to dig': (?) Hamito-Semitic **kHP* 'to dig, to chop, to cut' ~ Kartvelian **kāp-/kēp-* 'to chop, to cut' ~ Indo-European **ke(h)p-* 'to chop, to cut'. Rejected.

Comment: Faulty sound correspondences. Neither Proto-Afrasian initial */k-/ nor Proto-Indo-European initial */k-/ correspond to Proto-Kartvelian initial */k-/ (= */k'-/). Elsewhere (see entries no. 192 above and no. 195 below, for example), Illič-Svityč (correctly) compares Proto-Afrasian initial */q-/ (= */k'-/) with Proto-Kartvelian initial */k-/ (= */k'-/).

194. **kaɭa* 'to depart, to leave, to abandon': (?) Kartvelian [**kel-* 'to depart, to remain'] ~ Uralic **kaδ'a-* 'to abandon' ~ Dravidian **kaṭṭ-/kaṭa-* 'to go by, to pass, to cross over, to abandon' ~ Altaic **kʰala-* 'to remain, to wait'. Rejected.

his adherence to his own sound laws. As an aside, it may be noted that Dolgopolsky is even less methodologically rigorous (see Bomhard 2009 for details). From this point on, I am just going to note “faulty sound correspondences”, without repeating what has already been discussed. However, I will mention particulars when there is something new or important to note.

2. The Proto-Indo-European form should be removed from this etymology. It belongs with the following Nostratic etymology instead (cf. Bomhard, no. 431), reconstructed based upon evidence from Afrasian, Dravidian, Indo-European, and Altaic:

Proto-Nostratic root **k^has-* (~ **k^həs-*):

(vb.) **k^has-* ‘to cut or break off, to divide, to separate’;

(n.) **k^has-a* ‘cut, separation, division, break; cutting, clipping, fragment, piece, bit’

197. **kāra* ‘to tie tightly’ ~ (?) Hamito-Semitic **kr* ‘to tie, to wrap’ ~ Kartvelian **kar-/ker-* ‘to tie’ ~ Indo-European **ker-* ‘to tie’ ~ Uralic **kar^Λ* ‘to tie tightly, to wrap up’ ~ Dravidian [**kaɭ-* ‘to tie tightly, to tighten’] ~ Altaic **k^ʰar^Λ* ‘to tie tightly, to tighten’. Possible.

Comments:

1. Faulty sound correspondences.
2. Illič-Svityč has confused two separate Proto-Nostratic stems in this etymology (see below for details).
3. Starostin—Dybo—Mudrak (2003:669—670) reconstruct Proto-Altaic **kēra* (~ *-r*) ‘to bind, to wind around’. Proto-Altaic initial **/k-/* points to Proto-Nostratic initial **/k’-/*.
4. The Proto-Indo-European form cited by Illič-Svityč should be removed, since it points to Proto-Nostratic **k^har-*, with an initial aspirated velar, instead of the Proto-Nostratic initial ejective **/k̥-/* (= **/k’-/*) reconstructed by Illič-Svityč. A better Indo-European comparison here would be the following (cf. Bomhard, no. 481):

Proto-Indo-European **k’er-/k’or-/k’r-* (vb.) to twist, to turn, to bend, to wind; to tie (together), to bind; (adj.) curved, bent, crooked; tied, bound; (n.) that which is tied or bound together: bunch, bundle’: Sanskrit *grathna-h* ‘bunch, tuft’, *granth-*, *grathnāmi*, *granthāyati* ‘to fasten, to tie or string together’, *grantha-h* ‘tying, binding, stringing together, knot’, *granthi-h* ‘a knot, tie, knot of a cord; bunch or protuberance’; Prakrit *gamṭhaī*, *gamṭhaī* ‘to tie, to knot’, *gamṭhi-* ‘knot, joint, bundle’, *gamṭhilla-* ‘knotted’; Assamese *gāṭhi-* ‘knot, joint, protuberance’, *gāṭhiba-* ‘to string together’; Greek γρῦπός ‘hook-nosed’; Latin *grūmus* ‘a little heap, hillock (of earth)’; Old Irish *grinne* ‘bundle’; Old Icelandic *krá*, *kró* ‘nook, corner’, *kring*

‘round’, *kringja* ‘to encircle, to surround’, *kringr* ‘circle, ring’, *krókr* ‘hook, barb’, *kryppil* ‘cripple’, *krækja* ‘to hook’; Old English *crampiht* ‘crumpled, wrinkled’, *crumb*, *crump* ‘crooked’, *crymbing* ‘curvature, bend, inclination’, *crympan* ‘to curl’, *cranc-stæf* ‘weaving implement, crank’, *cryppan* ‘to bend, to crook (finger)’, *crymban* ‘to bend’, *cradol* ‘cradle’; Old Saxon *krumb* ‘crooked, bent, curved, twisted’; Dutch *krom* ‘crooked, bent, curved, twisted’; Old High German *kratto* ‘basket’ (New High German [dial.] *Kratten*, *Kretten*), *krezzo* ‘basket’ (New High German *Krätze*), *krumb* ‘crooked, bent, curved, twisted’ (New High German *krumm*); Lithuanian *gárbana*, *garbanà* ‘curl, lock, ringlet’, *grandis* ‘ring, link (of a fence)’.

5. The Proto-Afrasian form should also be removed. Both it and the Proto-Indo-European form, together with evidence from Dravidian and Uralic, are derived from the following Proto-Nostratic forms instead (cf. Bomhard, no. 424):

Proto-Nostratic root **k^har-* (~ **k^hər-*):

(vb.) **k^har-* ‘to twist, turn, spin, or wind around’;

(n.) **k^har-a* ‘ring, circle, curve’; (adj.) ‘round, curved, twisted’

Possible derivative:

(n.) **k^har-a* ‘edge, side, bank’

Bomhard (no. 481) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, Indo-European, Uralic, and Altaic:

Proto-Nostratic root **k’ar-* (~ **k’ər-*):

(vb.) **k’ar-* ‘to twist, to turn, to bend, to wind; to tie (together), to bind’;

(n.) **k’ar-a* ‘that which is tied or bound together: bunch, bundle’; (adj.) ‘bent, curved, crooked; tied, bound’

Possible derivative:

(n.) **k’ar-a* ‘protuberance, lump, hump, breast’

198. **kel* ‘to be insufficient’: Kartvelian **kel-/k^hal-* ‘to be insufficient, to need’ ~ Uralic **kelke* ‘to be insufficient, to be needed’. Strong.

Comments:

1. The sound correspondences are perfect here.
2. Klimov (1998:85) reconstructs (A) Proto-Kartvelian **kal-/k^hl-* ‘to lack, to be short of’ and (B) (1998:89) Proto-Kartvelian **kel-/k^hl-* ‘to lack, to be short of’, while Fähnrich—Sardshweladse (1995:189) reconstruct Proto-Kartvelian **kel-/k^hl-*, and Fähnrich (2007:228) reconstructs **kel-/k^hl-*, with the same meaning. In addition, Klimov (1998:123) reconstructs Proto-Kartvelian **m-k^hl-e-* ‘missing, deprived’, while Fähnrich—Sardshweladse

(1995:241—242) reconstruct Proto-Kartvelian **mkle-*, and Fähnrich (2007: 292—293) reconstructs Proto-Kartvelian **mkle-*, with the same meaning. See also Schmidt 1962:124—125.

3. Rédei (1986—1988:145) reconstructs Proto-Finno-Ugrian **kelke-* ‘to be in need; must, shall’, while Sammallahti (1988:543) reconstructs Proto-Finno-Ugrian **kelki-* ‘must’.

Bomhard (no. 463) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, and Uralic:

Proto-Nostratic root **k'al-* (~ **k'əl-*):

- (vb.) **k'al-* ‘to take away, to remove, to deprive of; to decrease, to diminish, to reduce; to be or become reduced or diminished’;
- (n.) **k'al-a* ‘littleness, small quantity, scarcity; few things; lack, want, poverty, deficiency, insufficiency’; (adj.) ‘little, scanty, sparse, meager, insufficient, lacking, short of, wanting, needy’

199. (Descriptive) **kerjä* ‘to scream’: Hamito-Semitic **qr(j)* ‘to scream, to call’ ~ Kartvelian **kīr-/kīl-* ‘to scream’ ~ Uralic **kerjä-* ‘to ask’ ~ Dravidian **kīr-* ‘to scream, to call’ ~ Altaic **[k'Ēri-* ‘to call’]. Rejected.

Comments:

1. Faulty sound correspondences. In addition to the usual problems, the vowels do not match in this entry.
2. Starostin—Dybo—Mudrak (2003:781—782) reconstruct Proto-Altaic **k'ēro* (= **k'hēro*) ‘to shout, to speak’.
3. Proto-Altaic initial **/k'-/* (= **/k'h-/*) points to Proto-Nostratic initial **/k'h-/*, not to Proto-Nostratic initial **/k-/* (= **/k'-/*) reconstructed by Illič-Svityč.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 479) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Indo-European:

Proto-Nostratic root **k'ar-* (~ **k'ər-*):

- (vb.) **k'ar-* ‘to shout, to screech, to call (out to), to cry (out)’;
- (n.) **k'ar-a* ‘call, cry, invocation, proclamation; roar, lamentation’

200. **kErda* ‘breast, heart’: Kartvelian **m-kerd-* ‘breast’ ~ Indo-European **kērd-* ‘heart’. Rejected.

Comment: Faulty sound correspondences. Lax semantics.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 482) suggests that the Proto-Kartvelian form is to be derived from the following

Proto-Nostratic form, reconstructed based upon evidence from Dravidian, Kartvelian, and Indo-European:

Proto-Nostratic (n.) **k'ar-a* 'protuberance, lump, hump, breast':

Possibly derived from (in the sense 'curved shape, swelling'):

(vb.) **k'ar-* 'to twist, to turn, to bend, to wind; to tie (together), to bind';

(n.) **k'ar-a* 'that which is tied or bound together: bunch, bundle'; (adj.) 'bent, curved, crooked; tied, bound'

As for the Proto-Indo-European word for 'heart', which Illič-Svityč gives as **kērd-*, it is descended from the following Proto-Nostratic form (cf. Bomhard, no. 430), based upon evidence from Dravidian and Indo-European:

Proto-Nostratic (n.) **k^har-a* 'heart, core, essence'

201. **k/o/* post-positional intensifying and conjoining particle: Hamito-Semitic **k(w)* conjoining particle ~ Kartvelian **kwe* intensifying and affirming particle ~ Indo-European **k^ue* conjoining and intensifying particle ~ Uralic **-ka/*-kā* intensifying and conjoining particle ~ Altaic **-ka* intensifying particle. Strong.

Comment: There is absolutely no basis whatsoever for reconstructing a Proto-Nostratic initial ejective **k̥-/* (= **k'-/*). All of the evidence cited by Illič-Svityč from the Nostratic daughter languages points to original **k^w-/* (= **k^{wh}-/*). Note, in particular, Proto-Kartvelian **kwe* and Proto-Indo-European **k^ue*.

Bomhard (no. 512) reconstructs the following Proto-Nostratic form based upon evidence from Elamite, Kartvelian, Indo-European, Uralic, Altaic, Etruscan, and (?) Chukchi-Kamchatkan:

Proto-Nostratic **k^{wh}a-* (~ **k^{wh}ə-*) post-positional intensifying and conjoining particle

202. **kol'ʌ* 'round': Hamito-Semitic **q(w)l* 'round; to rotate' ~ Kartvelian **kwer-/kwal-* 'round' ~ Indo-European **k^uel-* 'round; to rotate' ~ (?) Uralic **kol'a* 'circle' ~ Altaic **Kol'ʌ-* 'to mix, to revolve'. Weak.

Comments:

- Several of the forms cited by Illič-Svityč do not belong here due to faulty sound correspondences or faulty reasoning: (A) There is no basis for reconstructing Proto-Kartvelian **kwal-* — it is merely a dissimilated variant of **kwer-* in Zan (cf. Klimov 1964:110 and 1998:93: Proto-Kartvelian [reduplicated] **kwer-kwer-* 'round object' > Mingrelian *kvarqvalia-* 'round'; Laz *korqol-a* 'curls, sheep's excrement'; cf. also

Fähnrich 2007:239). (B) Moreover, the final */-r-/ in Proto-Kartvelian **kwer-* does not correspond to */-l-/ or */-l̥-/ (= */-ly-/) found in the other forms cited by Illič-Svityč. (C) Both the Proto-Indo-European and Proto-Altaic forms (see below) point to Proto-Nostratic initial */k^w-/ (= */k^{wh}-/) and, as a result, should be removed from this etymology.

2. Starostin—Dybo—Mudrak (2003:850) reconstruct Proto-Altaic **k'ulo* (= **k^hulo*) (with initial */k^c-/ [= */k^h-/] and medial */-l-/ instead of */-l̥-/ [= */-ly-/]) 'to roll, to turn'.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 514) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Altaic:

Proto-Nostratic root **k^{wh}al-* (~ **k^{wh}əl-*):

(vb.) **k^{wh}al-* 'to revolve, to go around, to roll';

(n.) **k^{wh}al-a* 'circle, circuit'

Probably identical to:

(vb.) **k^{wh}al-* 'to go, to walk, to move about';

(n.) **k^{wh}al-a* 'walking, walk, wandering, roaming'

Derivative:

(n.) **k^{wh}al-a* 'that which turns, rolls, revolves, or goes round and round' (> 'wheel' in the daughter languages)

Bomhard (no. 484) includes Proto-Kartvelian (reduplicated) **kwerkwer-* 'round object' under the following Proto-Nostratic forms, reconstructed based upon evidence from Afrasian, Dravidian, Kartvelian, Indo-European, Yukaghir, and Chukchi-Kamchatkan:

Proto-Nostratic root **k'aw-* (~ **k'əw-*):

(vb.) **k'aw-* 'to bend, twist, curve, or turn round; to rotate';

(n.) **k'aw-a* 'any round object'; (adj.) 'bent, curved, round'

Here is the complete Kartvelian etymology (with references):

Proto-Kartvelian **k'w-er-*, (reduplicated) **k'wer-k'wer-* 'round object': Georgian *k'ver-* 'flat cake, cookie (round)', *k'verk'ver-a-* 'round pie'; Mingrelian *k'var-* 'small round loaf, cookie (maize)', *k'vark'valia-* 'round'; Laz *k'var-*, *nk'var-* 'cookie (round, for children)', *k'ork'ol-a-* 'curls, sheep droppings'; Svan (Lower Bal) *k'urp'i* 'round', *k'wāši* (< **k'wāl-*) 'cornbread' (Mingrelian loan). Schmidt 1962:119; Klimov 1964:110 **kwer-*, 110 **kwer-kwer-* and 1998:92 **kwer-* 'flat cake, cookie (round)', 93 **kwer-kwer-* 'round object'; Fähnrich—Sardshweladse 1995:198 **kwer-*; Fähnrich 2007:239 **kwer-*. Note: I write the initial velar ejective as */k'-/ — this is traditionally written */k̥-/.

203. **kudi* ‘tail’: Kartvelian **kwad-/kud-* ‘tail’ ~ Altaic **k^hudi-rga* ‘tail’. Rejected.

Comments:

1. Faulty sound correspondences. Proto-Altaic initial **/k^c-/* (= **/k^h-/*) does not correspond to Proto-Kartvelian initial **/k^c-/*. Here, as elsewhere, Proto-Altaic initial **/k^c-/* (= **/k^h-/*) points to Proto-Nostratic initial **/k^h-/*, while Proto-Kartvelian initial **/k^c-/* points to Proto-Nostratic initial **/k^c-/*.
2. Starostin—Dybo—Mudrak (2003:814) reconstruct Proto-Altaic **k^húdo-(rgV)* (= **k^hiúdo(rgV)*) ‘tail’.

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 533) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, (?) Dravidian, and Kartvelian:

Proto-Nostratic (n.) **k^wad-a* ‘hind part, end, tail’

204. **kula* ‘secret; to steal’: Hamito-Semitic [**q(w)l* ‘to steal, to deceive’] ~ (?) Kartvelian [**kwel-* ‘to hide, to cover’] ~ Dravidian **kutt-* ‘secret’ ~ Altaic **k^hula-/k^cola-* ‘to steal, to lie’. Weak.

Comments:

1. Faulty sound correspondences. Proto-Dravidian medial **/-tt-/* does not correspond to the medial **/-l-/* found in the other languages cited by Illič-Svityč.
2. Starostin—Dybo—Mudrak (2003:696) reconstruct Proto-Altaic **k^hol^a* (= **k^hol^ha*) ‘to steal, to deceive’.
3. The alleged Proto-Kartvelian form is not listed in Klimov 1964 or 1998, nor in Fähnrich 2007, nor in Fähnrich—Sardshweladse 1995, nor in Schmidt 1962.

205. **kUłA* ‘small’: Hamito-Semitic **q(w)t/*k(w)t/*kt* ‘small’ ~ Kartvelian **kūt-/kōt-* ‘small’ ~ Dravidian **kuḍḍ-* ‘small’. Strong.

Comment: The Proto-Dravidian form is obviously mistaken. It can only have been **kutt-* ‘small’ (cf. Tamil *kuttam* ‘smallness, young of a monkey’; etc. [cf. Burrow—Emeneau 1984:153, no. 1670]).

Bomhard (no. 506) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Dravidian, Kartvelian, and Altaic:

Proto-Nostratic (n.) **k^wut^a-a* ‘shortness, smallness’; (adj.) ‘short, small’

206. (?) **karpA* ‘to gather fruit’: Kartvelian **kerb-/kreb-* ‘to gather’, **krep-* ‘to gather fruit’ ~ Indo-European **Kerp-* ‘to gather fruit’. Rejected.

Comment: Faulty sound correspondences.

Bomhard (no. 490) includes the Proto-Kartvelian form under the following Nostratic etymology, proposed based upon evidence from Afrasian, Elamite, Dravidian, Kartvelian, Indo-European, and Uralic:

Proto-Nostratic root **k'er-*:

(vb.) **k'er-* 'to gather, to collect; to take a handful, to pick, to pluck';

(n.) **k'er-a* 'collection, gathering, handful'

207. **Ka* particle inciting to action (with verbal forms): Indo-European **-ke* particle inciting to action ~ Uralic **-k*, **-k(k)Λ* suffix of imperative and optative (originally a particle) ~ Dravidian **-k(k)Λ* suffix of optative-imperative (originally a particle) ~ Altaic **-kΛ* suffix of imperative. Possible.

Comment: Once again, there is no basis whatsoever for reconstructing a Proto-Nostratic initial ejective **/k̥-/* (= **/k'-/*). All of the evidence from the daughter languages points to Proto-Nostratic initial **/k^h-/* instead, especially when the following Afrasian evidence is taken into consideration (quoted here in full from Bomhard, vol. 1, Chapter 16, §16.50):

A second person personal pronoun stem **kV-* is widespread in Afrasian (cf. Diakonoff 1988:74—75, table of Suffixed Object Pronouns, and 76—77, table of Suffixed Possessive Pronouns; Lipiński 1997:308, §36.19; Ehret 1995:194, 195, and 198: **ki* 'you' [f. sg. bound pron.]; **ku*, **ka* 'you' [m. sg. bound pron.]; **kuuna* 'you' [pl. bound pron.] [= **ku* + old Afrasian pl. in **-n*]). In Semitic, this stem appears as the second person singular and plural personal pronoun suffix (table taken from Moscati 1964:106, §13.14; see also Lipiński 1997:308 and 362—363; Gray 1934:64 Proto-Semitic affixed personal pronouns: 2nd sg. m. **-k-ā*, 2nd sg. f. **-k-ī*; O'Leary 1923:153—155; R. Stempel 1999:80—81; Bergsträsser 1983:8; Gragg—Hoberman 2012:191, table 4.23; Barth 1913:43—48):

	Akkadian	Ugaritic	Hebrew	Syriac	Arabic	Geez
m. sg.	<i>-ka</i>	<i>-k</i>	<i>-k</i>	<i>-k</i>	<i>-ka</i>	<i>-ka</i>
f. sg.	<i>-ki</i>	<i>-k</i>	<i>-k</i>	<i>-k</i>	<i>-ki</i>	<i>-ki</i>
m. pl.	<i>-kunu</i>	<i>-km</i>	<i>-kem</i>	<i>-kōn</i>	<i>-kum(u)</i>	<i>-kəmmū</i>
f. pl.	<i>-kina</i>	<i>-kn</i>	<i>-ken</i>	<i>-kēn</i>	<i>-kunna</i>	<i>-kən</i>
dual		<i>-km</i>			<i>-kumā</i>	

In Akkadian, this stem is also found in the genitive/accusative and dative second person singular and plural independent pronouns: (m. sg. gen.-acc.) *kāti/a*, (f. sg. gen.-acc.) *kāti*, (m. pl. gen.-acc.) *kunūti*, (f. pl. gen.-acc.) [*kināti*]; (m. sg. dat.) *kāšim*, (f. sg. dat.) *kāši(m)*, (m. pl. dative) *kunūši(m)*, (f. pl. dat.) [*kināši(m)*]. In Egyptian, the second person singular masculine suffix pronoun is *k* ‘thou, thy, thee’, while it appears as *k-* [k-] and *-k* [-k] in Coptic. Also, the following are found in East Cushitic: Proto-East Cushitic (m.) **ku*, (f.) **ki* second person singular personal pronoun (object) ‘thee’ > Saho *ku*; Afar *ko-o*; Burji *šee*; Somali *ku*; Rendille *ki*; Boni *ku*; Dasenech *kuu-ni* ‘thou’, *ko* ‘thee’; Galla / Oromo *si*; Konso *ke*; Gidole *he(dē)*; Sidamo *hee*; Hadiyya *ke(e)s*; Dullay *ho-* ~ *he-*. In Southern Cushitic, the following forms occur: Proto-Southern Cushitic **ki* second person singular feminine personal pronoun ‘your’ > Iraqw *ki*, *kiŋ* ‘you’ (f. sg.), *-k* in *-ok* ‘your’; Burunge *igi* ‘you’ (f. sg.), *-g* in *-og* ‘your’; Alagwa *ki* ‘you’ (f. sg.), *-k* in *-ok* ‘your’; Dahalo *ki* ‘your’ (cf. Ehret 1980:243). Proto-Southern Cushitic **ku* second person singular masculine personal pronoun ‘your’ > Iraqw *ku*, *kuŋ* ‘you’ (m. sg.), *ku-* in *kunga* ‘you’ (pl.), *-k* in *-ok* ‘your’; Burunge *ugu* ‘you’ (m. sg.), *-g* in *-og* ‘your’; Alagwa *ku* ‘you’ (m. sg.), *ku-* in *kungura* ‘you’ (pl.), *-k* in *-ok* ‘your’; K’wadza *-ku* ‘your’; Asa *-ku* ‘your’; Dahalo *-ku* ‘your’ (cf. Ehret 1980:245–246). Diakonoff (1988:75) lists the following Chadic second person object pronouns (suffixes in Musgu and Logone, but not in Hausa and Mubi): (a) singular: Hausa (m.) *ka*, (f.) *ki* ‘you, your’; Musgu *-ku(nu)*; Logone *-kú*, *-ku*, *-kəm*; Mubi *ka*, *ki*; (b) plural: Hausa *ku* ‘you, your’; Musgu *-ki(ni)*; Logone *-kún*; Mubi *kan*. Note also Ngizim: *ka(a)* ‘you’, second person singular (m. or f.) used as subject pronoun in verbal and locative sentences (cf. Schuh 1981:89); *kəm* ‘you’, second person feminine singular pronoun used as: (1) independent pronoun, (2) indirect object pronoun, (3) associative pronoun, and (4) independent associative pronoun (cf. Schuh 1981:87); *kún* ‘you’, second person plural pronoun used as: (1) independent pronoun, (2) indirect object pronoun, (3) bound suffix pronoun, and (4) independent associative pronoun (cf. Schuh 1981:98); *cì* ‘you’, second person singular masculine pronoun used as: (1) independent pronoun, (2) indirect object pronoun, (3) bound suffix pronoun, and (4) independent associative pronoun (cf. Schuh 1981:31).

Notes:

1. For more information on the references cited in this quotation, cf. Bomhard, vol. 4, References.
2. Bomhard uses “Afrasian” in this quotation, and in this book. As previously noted, Illič-Svityč uses “Hamito-Semitic” (Семитохамитский) to refer to the same language family.

Bomhard (vol. 1, Chapter 16, §16.50) reconstructs a Proto-Nostratic imperative marker **k^hV* based upon evidence from Afrasian, Indo-European, Uralic, Yukaghir, and Altaic. He notes:

The vowel is difficult to pin down — the evidence from the daughter languages points to proto-forms **k^ha*, **k^hi*, and **k^hu*. This leads me to suspect that we may ultimately be dealing here with the deictic stems **k^ha* (~ **k^hə*), **k^hi* (~ **k^he*), and **k^hu* (~ **k^ho*) (see above) used adverbially. Used in conjunction with a verb, their original function was to reinforce the imperative: GO+**k^ha* = 'go here (close by)!', GO+**k^hi* 'go over there (not too far away)!', GO+**k^hu* 'go yonder (far away)!'. When so used, **k^ha*, **k^hi*, and **k^hu* were interpreted as imperative markers in Uralic, Altaic, and, in relic forms, in Indo-European. In Afrasian, however, **k^ha*, **k^hi*, and **k^hu* were interpreted as second person markers: GO+**k^ha* = 'you go (here)!', GO+**k^hi* 'you go (over there)!', GO+**k^hu* 'you go (yonder)!'.

208. **Kajla* 'hot; to burn': Hamito-Semitic [**ql-* 'to burn, to fry'] ~ Indo-European **kel-* 'hot; cold' ~ Dravidian **kāl-* 'to burn' ~ Altaic **k'iala-* 'hot; to burn, to kindle'. Weak.

Comments:

1. Faulty sound correspondences. There is no basis whatsoever for reconstructing a medial diphthong **/-aj-/* in the Proto-Nostratic form. This reconstruction is undoubtedly due to a misinterpretation of the Altaic evidence.
2. Starostin—Dybo—Mudrak (2003:796) reconstruct Proto-Altaic **k'jāla* (~ *-ĭ-*) (= **k^hjāla*) 'hot, ashes'. Proto-Altaic initial **/k'-/* (= **/k^h-/*) does not come from Proto-Nostratic initial **/k-/* (= **/k'-/*). Here, as elsewhere, Proto-Altaic initial **/k'-/* (= **/k^h-/*) points to Proto-Nostratic initial **/k^h-/*.
3. This Nostratic etymology cannot stand as written.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 464) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Yukaghir:

Proto-Nostratic root **k'al-* (~ **k'əl-*):

(vb.) **k'al-* 'to burn, to warm, to cook, to roast';

(n.) **k'al-a* 'cooking, roasting, baking; glowing embers'

209. **Kajwa* 'to dig': Indo-European **keiū-/ *keu-* (< **k^hieu-*) 'hole' ~ Uralic **kajwa-/ *kojwa-* 'to dig, to draw (to ladle), to throw'. Strong.

Comments:

1. There is no basis whatsoever for reconstructing Proto-Nostratic initial **/k^h-/*.
2. Rédei (1986—1988:117—118) reconstructs (A) Proto-Uralic **kaj3* (**koj3*) 'spoon, ladle, shovel' and (B) (1986—1988:170—171) Proto-Finno-Permian **kojwa-* 'to dig, to scoop'.

Bomhard (no. 440) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Indo-European, and Uralic:

Proto-Nostratic root **k^hay-*:

(vb.) **k^hay-* ‘to scoop out’;

(n.) **k^hay-a* ‘spoon, ladle’

Extended form:

(vb.) **k^hay-V-w-* ‘to dig’;

(n.) **k^hay-w-a* ‘cave, pit, hollow’

210. **KaLi* ‘to raise, to rise’: Hamito-Semitic **ql-* ‘to rise, to raise, summit’ ~ Indo-European **kelH-* ‘to rise, to raise; mountain, hill’ ~ Altaic **k^ʿali-* ‘to rise’. Rejected.

Comments:

1. Faulty sound correspondences.
2. Starostin—Dybo—Mudrak (2003:658—659) reconstruct Proto-Altaic **kela* (~ *k^ʿ*, *-o*) ‘to rise, to jump up, to soar’. Due to the uncertainty regarding the reconstruction of the initial consonant in Proto-Altaic, it is perhaps best to omit the Proto-Altaic form from this etymology, at least until a more secure Proto-Altaic reconstruction can be established.

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 442) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian (Egyptian and Highland East Cushitic), Dravidian, Indo-European, and Yukaghir:

Proto-Nostratic root **k^hilʷ-* (~ **k^helʷ-*):

(vb.) **k^hilʷ-* ‘to rise, to ascend, to lift up’;

(n.) **k^hilʷ-a* ‘hill, height’; (adj.) ‘raised, high’

211. **Kaṇa* ‘to give birth to, to be born’: Hamito-Semitic **qn-* ‘to give birth to’ ~ Indo-European **ken-* ‘to be born; young’ ~ Dravidian **kan-* ‘to give birth to’. Possible.

Comments:

1. Faulty sound correspondences.
2. The Proto-Indo-European form does not belong here. It should be replaced with the following Indo-European evidence (cf. Bomhard, no. 459):

Proto-Indo-European **k^ʿen-/k^ʿon-/k^ʿḡ-* ‘to beget, to produce, to create, to bring forth’: Sanskrit *jánati* ‘to beget, to produce, to create; to assign, to procure’, *jánas-* ‘race’; Avestan *zan-* ‘to beget, to bear; to be born’, *zana-* ‘people’; Greek γίγνομαι ‘to be born’, γεννάω ‘to beget, to bring forth, to

bear', γένος 'race, stock, kin', γέννα 'descent, birth'; Armenian *cnanim* 'to beget', *cin* 'birth'; Latin *genō*, *gignō* 'to beget, to bear, to bring forth', *genus* 'class, kind; birth, descent, origin', *gēns*, *-tis* 'clan; offspring, descendant; people, tribe, nation'; Old Irish *gainethar* 'to be born', *gein* 'birth'; Welsh *geni* 'to give birth'; Gothic *kuni* 'race, generation'; Old Icelandic *kyn* 'kin, kindred; kind, sort, species; gender', *kind* 'race, kind'; Old English *cynn* 'kind, species, variety; race, progeny; sex, (grammatical) gender', *ge-cynd*, *cynd* 'kind, species; nature, quality, manner; gender; origin, generation; offspring; genitals', *cennan* 'to bear (child), to produce'; Old Frisian *kinn*, *kenn* 'race, generation; class, kind'; Old Saxon *kunni* 'race, generation; class, kind'; Dutch *kunne* 'race, generation'; Old High German *chunni* 'race, generation', *kind* 'child; (pl.) children, offspring' (New High German *Kind*).

Bomhard (no. 459) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Indo-European:

Proto-Nostratic root **k'an-* (~ **k'an-*):

(vb.) **k'an-* 'to get, to acquire, to create, to produce, to beget';

(n.) **k'an-a* 'birth, offspring, child, young, produce'; (adj.) 'born, begotten, produced'

212. **Kap'a* 'to cover': Hamito-Semitic **kp-/qp-* 'to cover, to close' ~ Dravidian **kapp-/kavA-* 'to cover' ~ Altaic **k'apa-* 'to close'. Possible.

Comments:

1. Faulty sound correspondences. The Afrasian material points to two separate stems. The Altaic material admits to two possible interpretations.
2. Starostin—Dybo—Mudrak reconstruct: (A) (2003:646) Proto-Altaic **k[ā]p'á* (= **k[ā]p'há*) 'to cover; sack' (> Proto-Tungusic **kup-* 'to cover; cloth, sheath, boxing, sack, knee covering, hat, cover, wadded coat'; Proto-Mongolian **kabt-* 'bag, sack'; Proto-Turkic **Kāp-* 'to surround; sack'); and (B) (2003:765—766) Proto-Altaic **k'āp'ù* (= **k'hāp'hù*) 'barrier' (> Proto-Tungusic **xapki-* 'to block; partition'; Proto-Mongolian **kaya-* 'to hinder, to close'; Proto-Turkic **Kap-* 'cover; gate, door; to close').

Bomhard (no. 478) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, and Altaic:

Proto-Nostratic root **k'aph-* (~ **k'əph-*):

(vb.) **k'aph-* 'to cover; to shut, to close';

(n.) **k'aph-a* 'covering'

213. **Ķar/ä/* ‘black, dark colored’: Indo-European **ker-*, **ker-s-* ‘black, dark’ ~ Dravidian **kar/***kār/***kār* ‘black, dark’ ~ Altaic **Karä* ‘black’. Strong.

Comment: Faulty Proto-Nostratic reconstruction. There is no evidence from any of the Nostratic daughter languages to justify positing an initial velar ejective */*ḱ-/* (= */*k’-/*) in Proto-Nostratic. However, even though the Proto-Nostratic reconstruction is wrong, the etymology, as a whole, is solid.

Bomhard (no. 429) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian (Egyptian and Omotic), Dravidian, Indo-European, and Altaic:

Proto-Nostratic (n.) **khar-a* ‘blackness, darkness’; (adj.) ‘black, dark’

214. **Ķarb/i/* ‘abdomen, viscera’: Hamito-Semitic **qrb* ‘viscera, abdomen’ ~ Indo-European (**Kerp-/*)**Krep-* ‘abdomen, body’ ~ Dravidian **kara* ‘fetus, womb’ ~ Altaic **k’arbi-* ‘abdomen, belly fat’. Possible.

Comments:

1. Faulty sound correspondences. Proto-Indo-European medial */*-p-/* does not correspond with either Proto-Afrasian or Proto-Altaic medial */*-b-/*, and, needless to repeat, Proto-Indo-European initial */*K-/* (better */*k-/*) does not correspond to Proto-Afrasian initial */*q-/* (= */*k’-/*).
2. Starostin—Dybo—Mudrak (2003:800—801) reconstruct Proto-Altaic **ḱǎrme* (= **ḱǎrʸme*) ‘fat’ as the source of the Altaic forms cited by Illič-Svityč. Assuming that this is a valid reconstruction, it means that the Altaic material must be removed from this entry.

Bomhard (no. 543) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Dravidian, and Indo-European:

Proto-Nostratic (n.) **k’war-b-a* ‘the inside, the middle, interior, inward part’

As for the Proto-Indo-European form posited by Illič-Svityč, Bomhard (no. 530) reconstructs Proto-Indo-European **k^{wh}rep^h-*/**k^{wh}ḡp^h-* ‘body, belly’ and derives it from the following Proto-Nostratic form, reconstructed based upon evidence from Afrasian, Indo-European, and Uralic:

Proto-Nostratic (n.) (?) **k^{wh}ur-a* ‘body, belly’

The following evidence (and references) provides the basis for the reconstruction of Proto-Indo-European **k^{wh}rep^h-*/**k^{wh}ḡp^h-* ‘body, belly’:

Sanskrit (instr. sg.) *kṛpā* 'shape, beautiful appearance'; Avestan *kəhrp-* 'body, corpse'; Latin *corpus* 'body'; Old Irish *crí* 'body, shape, frame'; Old English *hrif* 'womb, stomach', also *-(h)rif* in *mid(h)rif* 'diaphragm, entrails'; Old Frisian *href*, *hrif* 'stomach', also *-ref* in *midref* 'diaphragm'; Old High German *href* 'belly, womb, abdomen'. Pokorny 1959:620 **krep-*, **kṛp-* (or **kʷerp-* ?) 'body, abdomen, belly, shape'; Walde 1927—1932.I:486—487 **qrep-*, **qṛp-* (or **qʷerp-* ?); Watkins 1985:34 **kʷrep-* and 2000:46 **kʷrep-* 'body, form, appearance'; Mallory—Adams 1997:76 **kréps* 'body'; Mayrhofer 1956—1980.I:260; Ernout—Meillet 1985:144 **kṛp-*; de Vaan 2008:137—138 **kṛp-*, **kṛp-os-*; Walde—Hofmann 1965—1972.I:277—278.

215. **Kara* 'to burn, to fire': Hamito-Semitic **qr(r)* 'to burn, to fire' ~ Indo-European **ker-* 'to burn, to fry; fire' ~ Dravidian **kar(ʌ)-* 'to fire, to be scorched, to burn'. Weak.

Comments:

1. Faulty sound correspondences.
2. I have rated Illič-Svityč's etymology as "weak" rather than completely rejecting it. The reason for this is that the comparison of the Afrasian and Dravidian material may still be valid. However, this is difficult to judge based upon the rather meager evidence presented from the Afrasian daughter languages (single forms from Akkadian, Egyptian, and Tuareg), which does not provide enough information to be able to determine the vowel to be reconstructed for Proto-Afrasian.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 603) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, (?) Dravidian, Kartvelian, Indo-European, (?) Uralic, and Altaic:

Proto-Nostratic root **tʰher-*:

(vb.) **tʰher-* 'to burn, to roast';

(n.) **tʰher-a* 'ash(es), charcoal, burnt wood; firewood'; (adj.) 'burned, heated, roasted, charred, parched'

Note: The Indo-European evidence in Illič-Svityč's entry is included by Bomhard in an alternative etymology. Bomhard lists the following forms from the Indo-European daughter languages:

Proto-Indo-European **kʰer-/kʰy-* (secondary *o*-grade form: **kʰor-*) 'to burn, to roast': Latin *carbō* 'burning or burnt wood', *cremō* 'to burn, to consume by fire'; Welsh *crasu* 'to bake'; Gothic **hauri* 'coal'; Old Icelandic *hyrr* 'fire'; Swedish (dial.) *hyr* 'glowing ashes'; Old English *heorð* 'hearth', *hierstan* 'to fry, to roast, to scorch'; Old Frisian *herth*, *hirth*, *hird* 'hearth'; Old Saxon *herth*

‘hearth’; Dutch *haard* ‘hearth’; Old High German *herd* ‘hearth’ (New High German *Herd*), *herstan* ‘to roast’; Lithuanian *kárštas* ‘hot’.

216. **Kar*_Λ ‘cliff, steep elevation’: Afrasian **qr* ‘cliff, mountain, hill’ ~ Indo-European **ker-* ‘cliff, stone’ ~ Dravidian **kar(a)-* ‘bank, edge’. Possible.

Comments:

1. Faulty sound correspondences.
2. The Proto-Afrasian form must be removed.

Bomhard (no. 425) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, and Altaic:

Proto-Nostratic (n.) **khar-a* ‘edge, side, bank’:

Perhaps a derivative of:

(vb.) **khar-* ‘to twist, turn, spin, or wind around’;

(n.) **khar-a* ‘ring, circle, curve’; (adj.) ‘round, curved, twisted’

217. **Kar*’(ä) ‘bark, crust, rind’: Hamito-Semitic **qr(m)* ‘bark, rind, crust’ ~ Indo-European **ker-* ‘bark, skin’ ~ Uralic **köre*/**kere* ‘bark, crust’ ~ Altaic **kʼE/ʼä*/**Kär*’ ‘bark, crust’. Possible.

Comments:

1. Faulty sound correspondences.
2. The Proto-Afrasian form must be removed.
3. Starostin—Dybo—Mudrak (2003:782—783) reconstruct Proto-Altaic **kʼérʼä* (= **kʼéryä*) ‘bark’. Proto-Altaic initial */kʼ-/ (= **kʰ-/*) (together with Proto-Indo-European initial */k-/ points to Proto-Nostratic initial */kʰ-/ and not to the Proto-Nostratic initial velar ejective */*Ḳ-/* (= */kʼ-/)) reconstructed by Illič-Svityč.

Bomhard (no. 423) reconstructs the following Proto-Nostratic form based upon evidence from Indo-European and Uralic (Bomhard does not include Altaic in his etymology):

Proto-Nostratic (n.) **khar-a* ‘skin, hide; bark, rind’:

Derivative of:

(vb.) **khar-* ‘to cut, to cut into, to cut off’;

(n.) **khar-a* ‘cut, incision’

218. **Kaś*_Λ ‘to scrape, to scratch’: Hamito-Semitic [**qś-* ‘to scrape, to fleece’] ~ Indo-European **kes-* ‘to scratch’ ~ Dravidian **kažž-* ‘rash, itch’. Rejected.

Comments:

1. Faulty sound correspondences.
2. The Proto-Dravidian reconstruction proposed by Illič-Svityč is impossible. Proto-Dravidian did not have the sound */ʒ/, though, in fairness, Illič-Svityč (1981—1984.I:343, no. 218) does provide an explanation. I cannot give a reference here, since, to my knowledge, no Dravidian linguist, from Caldwell to Krishnamurti to Andronov to Subrahmanyam to Steever to Burrow to Emeneau, and so on and so forth, has ever seriously considered such a proposal. The only possible Proto-Dravidian reconstruction would be **kacc-* 'itch, scab' (for reflexes in the Dravidian daughter languages, cf. Burrow—Emeneau 1984:103, no. 1104), if this even goes back to Proto-Dravidian. Such a reconstruction is supported by the following lexical parallels in Indo-Aryan: Sanskrit *kacchú-ḥ* 'itch, scab, cutaneous disease'; Pāli *kacchu-* 'the plant *Carpopogon pruriens*, the fruit of which causes itch when applied to the skin; itch, scab, cutaneous disease', usually used in the phrase *kacchuyā khajjati* 'to be eaten by itch'; etc. For more information, cf. Turner 1966—1969.I:130, no. 2621; Mayrhofer 1956—1980.I:139. Some scholars have speculated that the "lexical parallels" between Dravidian and Indo-Aryan are loanwords from Dravidian into Indo-Aryan, while other scholars have assumed the reverse. Perhaps, even, these are loanwords into each from another source altogether. In any case, the Dravidian form must be removed from this etymology.
3. Illič-Svityč only provides Semitic material from Afrasian. The */š/ in the Proto-Afrasian (actually, Proto-Semitic) reconstruction he gives (**qš-* 'to scrape, to fleece') represents either a lateralized affricate or a fricative-lateral (cf. Steiner 1977), which does not correspond to either Proto-Indo-European */s/ or (the alleged) Proto-Dravidian */ʒ/.

219. **ḲaSa* 'bone': Hamito-Semitic **qš* 'bone' ~ Indo-European **Kos-t-* 'bone, rib'. Possible.

Comments:

1. This is a possible etymology, but only if we assume that Proto-Indo-European initial */K-/ is from earlier */k'-/. However, though by no means impossible, this suggestion seems rather ad hoc. Furthermore, the suggestion that Proto-Indo-European initial */K-/ might be from an earlier laryngeal (cf. Derksen 2008:239) also seems rather ad hoc. Thus, the source of Indo-European initial */K-/ remains unresolved.
2. The putative Mordvin cognates cited by Illič-Svityč do not belong here — they go back to Proto-Finno-Permian **kask3* 'sacral region, lumbar region, small of the back' (cf. Rédei 1986—1988:648).
3. The evidence from the Indo-European daughter languages comes mainly, if not exclusively, from Slavic:

Old Church Slavic *kostъ* ‘bone’; Russian *kost’* [кость] ‘bone’; Polish *kość* ‘bone’; Czech *kost* ‘bone’; Bulgarian *kost* ‘bone’; Serbo-Croatian *kôst* ‘rib’; Macedonian *koska* ‘bone’.

Though some scholars have also suggested that Latin *costa* ‘rib’ is a cognate of the Slavic forms (cf. Derksen 2008:239), this is rejected by Ernout—Meillet (1985:146) and de Vaan (2008:140), who notes:

Costa has been compared with Slavic **kost-i-* ‘bone’, yet it is unlikely that it is cognate. In Slavic, *kostъ* may be the reflex of PIE **Host-* ‘bone’, since there is no other word which qualifies for this. This would then be a unique case of *kV-* < **HV* in Slavic. Yet in Latin, PIE **Host-* is reflected by *os*, *ossis*, so that *costa* cannot reflect the same etymon. Since it also does not mean ‘bone’ but ‘rib’, which may have different semantic roots, we must regard *costa* as an isolated word without etymology.

Bomhard (no. 494) tentatively accepts Illič-Svityč’s etymology and reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Dravidian, and (?) Indo-European:

Proto-Nostratic (n.) **k’os-a* ‘bone’

Notes:

1. Bomhard includes Latin *costa* ‘rib’ as part of the Indo-European supporting material he cites, as does Illič-Svityč.
2. Here is the Dravidian evidence added by Bomhard:

Proto-Dravidian **kōcc-* ‘bone’: Kuṛux *xōcol* ‘bone’; Malto *qoclu* ‘bone’. Burrow—Emeneau 1984:197, no. 1288.

220. **Ḳawing*λ ‘armpit, underarm’: Uralic **kaj̥a-la* ‘armpit, underarm’ ~ Dravidian **kavũk̥a* ‘armpit, underarm’ ~ Altaic **k’awi̯ŋi* ‘armpit, underarm’. Rejected.

Comments:

1. Here yet again, there is no justification for reconstructing Proto-Nostratic initial **/Ḳ-/* (= **/k’-/*).
2. Starostin—Dybo—Mudrak (2003:830) reconstruct Proto-Altaic **k’òbàni* (= **kʰòbàni*) ‘arm-pit’. Proto-Altaic initial **/k’-/* (= **/kʰ-/*) points to Proto-Nostratic initial **/kʰ-/*.
3. Rédei (1986—1988:178) reconstructs Proto-Finno-Ugrian **kon̩z* (**kana*), (?) **kon̩z* (**kana*) + *ala* ‘armpit, underarm’. Sammallahti (1988:543) reconstructs Proto-Finno-Ugrian **koni* ‘armpit’.

4. When more modern Proto-Uralic and Proto-Altaic reconstructions are taken into consideration, there is little to support this etymology.

221. **Ḳä/H/ä* 'tongue': Uralic **kēle* 'tongue' ~ Altaic **k'āla-* 'tongue; to talk'. Strong.

Comments:

1. Here, for the umpteenth time, there is no justification for reconstructing Proto-Nostratic initial */Ḳ-/ (= */k'-/).
2. Starostin—Dybo—Mudrak (2003:796—797) reconstruct Proto-Altaic **k'ǎli* (= **k'ǎli*) 'tongue'.
3. Rédei (1986—1988:144—145) reconstructs Proto-Uralic **kele* (**kēle*) 'tongue, language'.

Bomhard (no. 441) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Uralic, Altaic, and (?) Eskimo:

Proto-Nostratic root **kʰil-* (~ **kʰel-*):

(vb.) **kʰil-* 'to make a sound or a noise; to say, to speak, to talk';

(n.) **kʰil-a* 'sound, noise; tongue, speech, language'

222. **Ḳäp'ä* 'paw': Hamito-Semitic **qp/*kp/*qb* 'foot, sole, hoof; palm' ~ Indo-European **kepH-* 'hoof, paw' ~ Uralic **käppä* 'paw'. Rejected.

Comments:

1. The plethora of Proto-Afrasian variants listed by Illič-Svityč cannot possibly all belong to the same etymology.
2. Bomhard (no. 419) includes both Proto-Afrasian **kp* 'palm, hand' (note, for example, Šheri / Jibbāli *kef* 'paw, claw, palm of the hand'; Ḥarsūsi *kef* 'flat of the hand, claw, paw'; Mehri *kaf* 'palm of the hand, paw, claw') and Proto-Uralic **käppä* 'paw' under the following etymology (see above, entry no. 190):

Proto-Nostratic root **kʰaph-*:

(vb.) **kʰaph-* 'to take, seize, or grasp with the hand; to press or squeeze with the hand';

(n.) **kʰaph-a* 'hand'

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 404) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian and Indo-European:

Proto-Nostratic (n.) **kʰab-a* 'foot, hoof'

Note: Bomhard explains the development of the Proto-Indo-European cognate as follows: Proto-Indo-European **k^hab-* > (with progressive voicing assimilation and with the addition of a laryngeal suffix, as suggested by Mallory—Adams 1997:272 and Watkins 2000:43) **k^hāp^h-Ho-* ‘hoof’.

223. **Ķe* ‘who’: Uralic **ke-* ‘who’ (stem of oblique case ?) ~ Altaic **k^ʕe-* ‘who’. Strong.

Comment: Even though this is rated as a strong etymology, the Proto-Nostratic reconstruction proposed by Illič-Svityč is erroneous.

Bomhard (no. 528) treats this entry and entry no. 232 (see below) together and reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, Uralic, Altaic, and Eskimo:

Proto-Nostratic relative pronoun stem **k^{wh}i-* (~ **k^{wh}e-*); interrogative pronoun stem **k^{wh}a-* (~ **k^{wh}ə-*)

224. **ĶEĉa* ‘summer heat’: Hamito-Semitic **q(j)ṭ* ‘summer heat’ ~ Uralic **kEĉa* ‘summer heat, summer’. Rejected.

Comments:

1. Proto-Afrasian **/ṭ/* (= **/t^ʕʏ/* [Bomhard, vol. 1, Chapter 7, §7.6, following proposals by André Martinet, David Cohen, Jean Cantineau, and others] or **/c^ʕ/* [Ehret 1995:251—254] or still other interpretations) does not correspond to Proto-Uralic **/č/*. It corresponds to Proto-Uralic **/ć/* (= **/ty/* [Bomhard, vol. 1, Chapter 12, §12.6, table of sound correspondences]) instead.
2. Rédei (1986—1988:114) reconstructs Proto-Finno-Ugrian **kačz* ‘warmth; to become warm’.

225. **Ķeta* ‘to fall’: Indo-European (?) **Keid-/***kad-* ‘to fall’ ~ Dravidian **keṭa-* ‘to fall, to collapse’. Rejected.

Comments:

1. Faulty sound correspondences. Mistaken Proto-Nostratic reconstruction.
2. Proto-Indo-European initial **/K-/* ~ **/k̂-/* point to Proto-Nostratic **/k^h-/*, not to **/K̂-/* (= **/k^ʕ-/*).
3. Proto-Indo-European **/-d-/* (= **/-t^ʕ-/* according to the glottalic model of Proto-Indo-European consonantism) points to Proto-Nostratic **/-t^ʕ-/*, not to **/-t-/* (= **/-t^h-/*).

226. **ĶEñU* ‘empty, light (weight)’: Indo-European **ken-* ‘empty’ ~ Uralic [**kEña-* ‘light’] ~ Altaic **k^ʕäñü* ‘light’. Possible.

Comments:

1. Rédei (1986—1988:862) reconstructs Proto-Ugric **kšn3* 'light'.
2. Starostin—Dybo—Mudrak (2003:776—777) reconstruct Proto-Altaic **k'ěńó* (= **k^hěń^vó*) 'light, thin'.
3. Proto-Indo-European **ken-* 'empty' does not match the Proto-Uralic and Proto-Altaic forms semantically. It should be removed.
4. Not in Bomhard (this book). Nevertheless, the comparison of the Proto-Uralic and Proto-Altaic forms allows us to reconstruct Proto-Eurasiatic **k^hen^v-a* 'light (of weight)' (no initial ejective!).

227. **KerA* 'horn': Hamito-Semitic **qr-* 'horn' ~ Indo-European **ker-* 'horn; head, top, summit'. Rejected.

Comment: This proposal has been around for a very long time — Illič-Svityč was by no means the first to suggest it. However, it is false — a mere chance resemblance. Proto-Afrasian initial **/q-/* (= **/k'-/*) does not correspond to Proto-Indo-European initial **/k-/*, which points to Proto-Nostratic **/k^h-/*.

In order to account for the Proto-Indo-European form cited by Illič-Svityč (**ker-* 'horn; head, top, summit'), Bomhard (no. 443) reconstructs the following Proto-Nostratic form based upon evidence from Dravidian, Indo-European, Afrasian, Altaic (Mongolian and Turkic), and Chukchi-Kamchatkan:

Proto-Nostratic (n.) **k^hir-a* 'uppermost part (of anything): horn, head, skull, crown of head; tip, top, summit, peak'

In order to account for the Proto-Afrasian form cited by Illič-Svityč (**qr-* 'horn'), Bomhard (no. 591) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Dravidian, Kartvelian, Indo-European, and (?) Altaic:

Proto-Nostratic (n.) **q^war-a* 'edge, point, tip, peak'

The Indo-European evidence adduced by Bomhard to support this etymology is as follows:

Proto-Indo-European **k^wer-/k^wor-/k^wr-* 'hill, mountain, peak': Greek *δερᾶς* (Cretan *δηράς*) (probably < **δεϛF-αδ-*) 'the ridge of a chain of hills'; Sanskrit *giri-h* 'mountain, hill, rock'; Avestan *gairi-* 'mountain'; Lithuanian *girė*, *girià* 'forest'; Old Church Slavic *gora* 'mountain'; Russian *gorá* [ropá] 'mountain'; Serbo-Croatian *gòra* 'mountain'; Albanian *gur* 'rock'; Hittite (acc. sg.) *gur-ta-an* 'citadel', *Kuriwanda* the name of a mountain in south-western Anatolia.

The Afrasian evidence adduced by Bomhard to support this etymology is as follows:

Proto-Afrasian **q^war-* ‘highest point, top, peak, summit, hill, mountain, horn’: Proto-Semitic **k’arn-* ‘horn, summit, peak’ > Akkadian *ḫarnu* ‘horn’; Ugaritic *ḫrn* ‘horn’; Hebrew *ḫeren* [ḫṛn] ‘horn; corner, point, peak’; Phoenician *ḫrn* ‘horn’; Aramaic *ḫarnā* ‘horn’; Palmyrene *ḫrn* ‘horn, corner’; Arabic *ḫarn* ‘horn, top, summit, peak (of a mountain)’, *ḫurna* ‘salient angle, nook, corner’; Ḥarsūsi *ḫōn/ḫerōn* ‘horn, hill, top’, *ḫernēt* ‘corner’; Mehri *ḫōn/ḫarūn* ‘horn, peak, spur; tall narrow-based hill; hilt of a dagger; pod (of beans)’, *ḫernēt* ‘corner’; Šheri / Jibbāli *ḫun/ḫérūn* ‘horn, hilt of a dagger, pod, peak’; Geez / Ethiopic *ḫarn* [ḫCṛ] ‘horn, trumpet, tip, point’; Tigre *ḫār, ḫärn* ‘horn’; Tigrinya *ḫärni* ‘horn’; Harari *ḫār* ‘horn’; Gurage *ḫār* ‘horn’; Amharic *ḫänd* (< **k’arn-*) ‘horn’; Argobba *ḫänd* ‘horn’. Geez / Ethiopic *ḫardu* [ḫCṛ] ‘hill’. Egyptian *q33* ‘hill, high ground, high place’, *q3q3* ‘hill, high place’, *q3y-t* ‘high ground, arable land’, *q3-t* ‘high land, height’, *q3y-t* ‘high ground, arable land’, *q3, q3y* ‘to be high, exalted’, *q3i* ‘tall, high, exalted’, *q3w* ‘height’; Coptic (Sahidic), *koie* [koie], *koeie* [koie], (Bohairic) *koi* [ko] (< **qy* < **q3y*) ‘field’, *kro* [kpo] (Demotic *qr* ‘shore’, *qrr3* ‘embankment’) ‘shore (of sea, river), limit or margin (of land), hill, dale’. Proto-East Cushitic **k’ar-* ‘point, peak, top’ > Galla / Oromo *k’arree* ‘peak’; Somali *qar* ‘hill higher than *kur*’; Gedeo / Darasa *k’ar-* ‘to sharpen’, *k’ara* ‘sharp (of knife)’, (reduplicated) *k’ark’ará* ‘edge, blade’; Burji *c’ar-i* ‘point, top, peak, pointedness’ (loan, probably from Oromo); Hadiyya *k’ar-ess-* ‘to whet’, *k’are?alla* ‘edge, blade’, *k’ar-ees-aanco* ‘whetstone, rasp, file’; Sidamo *k’ara* ‘point, edge, blade’. Omotic: Gonga **k’ar-* ‘horn’ (Mocha *qáro* ‘horn’); Aari *k’ari* ‘tusk’, *k’armi* ‘sharp’.

228. **Ḳila* ‘stem, stalk, hair’: Indo-European **kel-* ‘(prickly) stem, stalk’ ~ Uralic **kalke* ‘hair, combings, flocks’ ~ Dravidian [**kel* ‘feather, hair’] ~ Altaic **k’ila* ‘thick hair’. Rejected.

Comments:

1. Erroneous Proto-Nostratic reconstruction. The vowels do not match in the forms cited from the Nostratic daughter languages.
2. Starostin—Dybo—Mudrak (2003:789—790) reconstruct Proto-Altaic **k’ilo* (= **k’hílo*) ‘stalk, stem’. Except for the Korean form cited by Starostin—Dybo—Mudrak, the data from the Altaic daughter languages do not support positing a meaning ‘thick hair’ for Proto-Altaic.
3. Rédei (1986—1988:644) reconstructs Proto-Finno-Volgaic **kalke* ‘hair; stalk’.

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 411) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, and Altaic:

Proto-Nostratic (n.) **kʰalʷ-a* 'reed, stalk, stem, blade of grass, haulm'

The Altaic evidence adduced by Bomhard to support this etymology is as follows:

Proto-Altaic **kʰälʷo* 'reed, a kind of grass': Proto-Mongolian **kal-* 'reed, feather-grass' > Written Mongolian *qaltalži* 'reed, feather-grass'; Khalkha *χaltalž* 'reed, feather-grass'; Buriat *χalaχan* 'reed, feather-grass'. Proto-Turkic **KAlʷak* 'bulrush, reedmace' > Karakhanide Turkic *qašaq* 'bulrush, reedmace'; Kirghiz *qašaq* 'bulrush, reedmace', *qašeq* 'aftergrass'. Cf. Starostin—Dybo—Mudrak 2003:758 **kʰälʷo* 'reed, a kind of grass'.

229. **Kin/u/* 'to be angry, to be jealous': Hamito-Semitic **qn-* 'to be jealous, to be angry' ~ Dravidian **kina* 'to be angry' ~ Altaic **Kin/u/-* 'to be angry, to be jealous'. Weak.

Comments:

1. I could not locate the Altaic evidence cited by Illič-Svityč in Starostin—Dybo—Mudrak 2003, though I did locate most of the individual forms in dictionaries for the individual languages.
 2. Not in Bomhard (this book).
 3. The Afrasian evidence cited by Illič-Svityč points to Proto-Nostratic initial **/k̥-/* (= **/kʰ-/*).
 4. Proto-Semitic **kan-aʔ-* 'to be jealous, to be envious' is well-represented in the Semitic daughter languages. However, there does not appear to be any justification for assigning the meaning 'to be angry' as well.
 5. The Dravidian evidence points to Proto-Dravidian **kin-* 'to be angry, enraged, furious, irritated, etc.' (cf. Krishnamurti 2003:129; Burrow—Emeneau 1984: 147, no, 1600). There is no trace of the meaning 'to be jealous' parallel to what is found in the Afrasian and Altaic forms cited by Illič-Svityč.
 6. Though I would like to be able to give Illič-Svityč the benefit of the doubt here, there are simply too many uncertainties concerning this etymology.
230. **Kira* 'hoarfrost': Hamito-Semitic **qr-* 'ice, hoarfrost, cold' ~ Indo-European **ker-* (in derivatives) 'hoarfrost, crust (of ice on snow)' ~ Uralic **kirte*, **kira* 'crust (of ice on snow)' ~ Altaic **kʰir(a)-* 'hoarfrost, new snow'. Possible.

Comments:

1. Faulty sound correspondences. Proto-Afrasian initial **/q-/* (= **/kʰ-/*) does not correspond to Proto-Indo-European initial **/k̥-/* (= **/kʰ-/*) or to Proto-Altaic initial **/kʰ-/* (= **/kʰ-/*). Consequently, the Afrasian material should be removed.
2. Starostin—Dybo—Mudrak (2003:793) reconstruct Proto-Altaic **kʰirma* (~ *-u, -o*) (= **kʰirma*) 'snow, hoar-frost'.

3. The Proto-Indo-European form is reconstructed as **kreus-* ‘to begin to freeze, to form a crust’ by Watkins (2000:44) (see also Beekes 2020.I:786: Proto-Indo-European **kreus-* ‘to shiver’ > Greek κρύος ‘icy cold, frost’; etc.).
4. Rédei (1986—1988:150) reconstructs Proto-Uralic **kerte* (**kirtē*) ‘thin snow, crust (of ice)’.

Bomhard (no. 444) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Kartvelian, Indo-European, Uralic, Altaic, and Eskimo:

Proto-Nostratic root **k^hir-* (~ **k^her-*):
 (vb.) **k^hir-* ‘to freeze, to be cold’;
 (n.) **k^hir-a* ‘frost, cold’

231. (Descriptive) **K_{ir}Λ* ‘to scrape’: Hamito-Semitic **qr-* ‘to scrape, to wound’ ~ Proto-Indo-European **k_{er}H-* ‘to destroy, to break’ ~ Dravidian **k_{ir}Λ-/k_{er}Λ-* ‘to scrape, to shave’ ~ Altaic **k^hir(a)-* ‘to scrape, to plane, to cut’. Weak.

Comments:

1. Faulty sound correspondences.
2. Starostin—Dybo—Mudrak (2003:679—680) reconstruct Proto-Altaic **k_{iro}* ‘to cut, to mince’.

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 491) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, Indo-European, and Altaic:

Proto-Nostratic root **k^hir-* (~ **k^her-*) or **k^hur-* (~ **k^hor-*):
 (vb.) **k^hir-* or **k^hur-* ‘to cut, to cut into, to incise, to engrave, to notch; to cut off, to sever, to nip off, to clip; to cut in two, to split’;
 (n.) **k^hir-a* or **k^hur-a* ‘cut, slit, notch; chip, piece cut off’

Bomhard includes the following Indo-European evidence in this etymology:

Proto-Indo-European **k^her-/k^hor-/k^hir-* (extended form: **k^herb^h-/k^horb^h-/k^hir^h-*) ‘to cut, to carve, to notch’: Greek γράφω ‘to write’; Old Icelandic *krota* ‘to engrave’, *kurfr* ‘chip, cut-off piece’; Old English *ceorfan* ‘to cut’, *cyrf* ‘cutting’; Old Frisian *kerva* ‘to cut’; Dutch *kerven* ‘to cut’; Middle High German *kerban* ‘to cut, to notch’ (New High German *kerben*).

232. **K_o* ‘who’: Hamito-Semitic **k(w)/q(w)* ‘who’ (stem of interrogative pronoun) ~ Indo-European **k_{uo}-* ‘who’ (**k_u-i-* ‘what’ and other interrogative pronouns)

~ Uralic **ko-/ku-* 'who' ~ Altaic **k'a-/k'o-* stem of interrogative pronoun. Strong.

Comment: Even though this is a solid etymology, the Proto-Nostratic reconstruction is erroneous — there is no justification for reconstructing an initial ejective **/Ḳ-/*.

Bomhard (no. 528) treats this entry and entry no. 223 (see above) together and reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, Uralic, Altaic, and Eskimo:

Proto-Nostratic relative pronoun stem **k^{wh}i-* (~ **k^{wh}e-*); interrogative pronoun stem **k^{wh}a-* (~ **k^{wh}ə-*)

233. **Ḳoja* 'to rest': Hamito-Semitic **qwj* 'to remain, to rest' ~ Indo-European **k^{uei}(h)-* 'to rest' ~ Uralic **koja-* 'to lie, to rest' ~ Dravidian **kē-* 'to rest, to lie'. Weak.

Comments:

1. Faulty sound correspondences. Proto-Afrasian initial **/q-/* (= **/k'-/*) does not correspond to Proto-Indo-European initial **/k^u-/* (= **/k^{wh}-/*). Consequently, the Afrasian material should be removed.
2. Rédei (1986—1988:197) reconstructs Proto-Finno-Ugrian **kuj3-* 'to lie'.
3. The Indo-European material should also be removed.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 438) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and (?) Uralic:

Proto-Nostratic root **k^hay-* (~ **k^həy-*):

(vb.) **k^hay-* 'to put, to place, to set, to lay; to be placed, to lie';

(n.) **k^hay-a* 'resting place, abode, dwelling; cot, bed'

234. **Ḳora* 'to gnaw; worm': Indo-European **k^uymi-* 'worm', (?) **k^{ue}r-* 'to chew up, to break up' ~ Altaic **Kora* 'worm'. Strong.

Comments:

1. This is another case where the evidence from the Nostratic daughter languages is solid, but the Proto-Nostratic reconstruction proposed by Illič-Svityč is erroneous. There is nothing from either Proto-Indo-European or Proto-Altaic to justify positing an initial ejective **/Ḳ-/* in Proto-Nostratic.
2. Starostin—Dybo—Mudrak (2003:807—808) reconstruct Proto-Altaic **k^uǰoro* (= **k^hǰoro*) 'worm, gad-fly'.

Bomhard (no. 531) reconstructs the following Proto-Nostratic form based upon evidence from Dravidian, Indo-European, and Altaic:

Proto-Nostratic (n.) **k^{wh}ur-a* ‘worm, grub, maggot, insect’

235. **Kul^Λ* ‘to fall, to subside’: Uralic **kul^Λ-* ‘to fall out, to fall, to wear out’ ~ Altaic **k^uul^Λ-* ‘to fall, to collapse’. Rejected.

Comments:

1. Erroneous Proto-Nostratic reconstruction.
2. Rédei (1986—1988:200) reconstructs Proto-Finno-Ugrian **kul³-* ‘to detach, to come loose; to be separated from; to go out; to fall out, to fall away’ (‘sich ablösen; ausgehen; aus-, abfallen’).
3. Lax semantics. The underlying meaning of the Altaic forms cited by Illič-Svityč is ‘to fall down, to collapse’, while that of the Uralic forms is ‘to be separated from; to detach, to come apart’.

236. **Kur^Λ* ‘to plait, to tie, to bind’: Indo-European **k^uer-* ‘to build, to make’ ~ Uralic **kur^Λ-*/**kor^Λ-* ‘to plait, to tack together, to fasten’ ~ Dravidian **kur^Λ-* ‘to plait, to tie, to spin’ ~ Altaic **Kur^Λ-* ‘to adjust (to), to build, to arrange’. Weak.

Comments:

1. Erroneous Proto-Nostratic reconstruction.
2. Starostin—Dybo—Mudrak (2003:745—746) reconstruct Proto-Altaic **kuri* ‘wattle, fence, enclosure, building’.
3. Proto-Altaic initial **/k-/* (< Proto-Nostratic **/k’-/*) does not match Proto-Indo-European initial **/k^u-/* (= **/k^{wh}-/*) (< Proto-Nostratic **/k^{wh}-/*). Thus, either one or the other of them has to be removed from this etymology.

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 529) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, and Uralic:

Proto-Nostratic root **k^{wh}ir-* (~ **k^{wh}er-*):

(vb.) **k^{wh}ir-* ‘to twist or twine together, to tie together, to bind, to fasten’;

(n.) **k^{wh}ir-a* ‘twist, tie, bundle, rope; the act of twisting or twining together: work, craft, act, action’

The Indo-European evidence adduced by Bomhard to support this etymology is as follows:

Proto-Indo-European **k^{wh}er-/k^{wh}ḡ-* (secondary *o*-grade form: **k^{wh}or-*) ‘to do, to make, to build’: Sanskrit *karóti*, *kṛṇóti* ‘to do, to make, to perform, to cause,

to accomplish, to effect, to prepare, to undertake; to execute, to carry out; to manufacture, to work at, to elaborate, to build; to form or construct one thing out of another; to employ, to use, to make use of', *krtá-h* 'done, made, accomplished, performed, prepared, made ready; obtained, gained, acquired, placed at hand', *kará-h* 'doing, making', *kárman-* 'act, action, performance, business', *kṛtyā* 'act, action, deed, performance, achievement; enchantment, magic'; Avestan *kərənaoiti* 'to do, to make'; Old Persian *kar-* 'to do, to make, to build'; Lithuanian *kuriù, kùrti* 'to make, to create, to build'.

The Afrasian evidence adduced by Bomhard to support this etymology is as follows (the vowel reconstructed for Proto-Afrasian is based upon the Southern Cushitic evidence):

Proto-Afrasian **k^wir-* 'to twist or twine together, to tie together, to bind, to fasten': Proto-Semitic **kar-as-* 'to tie, to fasten' > Akkadian *karāsu* 'to tie, to fasten', *kurussu* (*kursū*) 'strap (of leather or metal)'. Proto-Semitic **kar-ab-* 'to twist or twine together' > Arabic *karaba* 'to tighten one's bonds, to twist a rope'; Ḥarsūsi *kerōb* 'to screw, to screw up'; Mehri *kərūb* 'to screw, to screw a rifle butt tight through the muzzle'; Šheri / Jibbāli *kórōb* 'to screw, to screw a rifle butt tight (through the muzzle)'; Geez / Ethiopic *karabo* [ክረቦ] 'woven basket, pouch'; Tigrinya *karibbo* 'small skin used as a bag'; Amharic *kārābo* 'basket'. Leslau 1987:290. Proto-Semitic **kar-ak-* 'to twist or twine together, to tie together, to bind, to fasten' > Hebrew *kāraḥ* [כָּרַח] 'to encircle, to twine around, to embrace, to wrap', *kereḥ* [כֶּרֶח] 'twining; scroll, volume; bundle'; Aramaic *kəraḥ* 'to enwrap, to surround', *kəriḫā* 'bundle; scroll'; Akkadian *karāku* 'to intertwine; to obstruct, to dam; to immerse, to soak; to do promptly (?)'; Geez / Ethiopic *k^wark^wada* [ክረከደ] 'to embrace, to take in one's arms'; Amharic *k^wärkk^wädä* 'to tie up, to shackle'. Klein 1987:287; Leslau 1987:291; Murtonen 1989:239. Egyptian *k3-t* 'work, construction; craft, profession', *k3wty* 'workman, laborer, artisan, craftsman, *weaver'. Hannig 1995:874—875 and 875; Gardiner 1957:597; Faulkner 1962:283; Erman—Grapow 1921:193 and 1926—1963.5:98—101, 5:102. Berber: Tuareg *kurət* 'to wind or wrap several times (as a turban around the head)', *takārut* 'turban'; Ghadames *akraru* 'stick used to stir sauces'; Wargla *sskur* 'to wind into a ball, to wrap', *akur* 'large ball, ball of wool', *takurt* 'ball'; Mzab *sseçur* 'to wind into a ball', *açur* 'ball', *taçrart* 'skein'; Tamazight *kur* 'to be wrapped, to be wound into a ball', *tikurin* 'ball, spool of thread'; Riff *skur* 'to wind into a ball', *takurt* 'ball (of thread, wool)'; Kabyle *k^wər* 'to be wound into a ball', *akur* 'large ball'; Zenaga *kurer* 'to be round, circular; to walk in a circle'. Proto-Southern Cushitic **k^wirih-*, **k^wirih-* 'to turn (intr.)' > Ma'a *-kiri'i* 'to come back', *-kiri'ti* 'to turn (something); to give back; to ask'; Iraqw *kwirihis-* 'to twist (something)'. Ehret 1980:266. Ehret 1995:207, no. 346, **k^wir-* 'to turn'.

Note: The Dravidian material (cf. Burrow—Emeneau 1984:161, no. 1779) cited by Illič-Svityč may belong here.

237. (?) **Ḳur*Λ ‘blood’: Indo-European **kreuH-* ‘coagulated blood, bloody meat’ ~ Dravidian **kuruti* ‘blood’. Strong.

Comment: Erroneous Proto-Nostratic reconstruction.

Bomhard (no. 453) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian (Ancient Egyptian), Dravidian, and Indo-European:

Proto-Nostratic (n.) **ḵur-a* ‘blood’

238. **ḲūjnA* ‘wolf, dog’: (?) Afrasian **k(j)n/*k(j)l*, **k(w)l* ‘dog, wolf’ ~ Indo-European **ḱuōn/*kun-* ‘dog’; Uralic **ḱūjnä* ‘wolf’. Strong.

Comments:

1. Erroneous Proto-Nostratic reconstruction.
2. The Afrasian material cited by Illič-Svityč pointing to Proto-Afrasian **k(j)l*, **k(w)l* should be removed.
3. Though not in Rédei (1986—1988), I was able to verify the Uralic forms cited by Illič-Svityč (cf. Napolskikh [Напольских] (2001:370—371).

Bomhard (no. 454) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Dravidian, Indo-European, and Uralic:

Proto-Nostratic (n.) **ḵuwan-a* or **ḵun-a* originally a generic term meaning ‘young (especially of animals)’; later specialized as ‘young dog, puppy’ (as in Kannaḍa and Kolami within Dravidian) and then simply ‘dog’.

Note: This term may be an early borrowing.

239. **Ḳülä* ‘community, clan’: Hamito-Semitic [**q(w)l* ‘tribe’] ~ Indo-European **ḵ^uel-* ‘clan, family’ ~ Uralic **ḱülä* ‘agricultural community, village; dwelling, house’ ~ (?) Dravidian [**ḱūl* ‘family, crowd’] ~ Altaic [**Ḳülä* ‘house, house servants’]. Rejected.

Comments:

1. Starostin—Dybo—Mudrak (2003:735) reconstruct Proto-Altaic **ḱūlV* ‘servant, slave’. Semantically, this really has nothing to do with any of the forms from the other Nostratic daughter languages and, therefore, should be removed.
2. I have had difficulty verifying the Semitic forms cited by Illič-Svityč. Even the reference he gives to Cohen seems problematic — Illič-Svityč refers to

Cohen (1947:124, no. 223). There, Cohen lists Hebrew *kahal* 'assemblée' / 'assembly gathering' (this should be *kāhāl*) and refers to Arabic *kulla* 'foule' / 'crowd, multitude', referring further to item no. 233. But the meaning he gives for the Arabic form under no. 223 is not the same as the meaning he gives under no. 233. Instead, under no. 233, he lists Arabic *kulla* 'cime, sommet de la tête, tête' and 'cruche' / 'highest point; top, summit, head; apex; vertex' and 'pitcher, jug', not 'foule' / 'crowd, multitude'. As for Hebrew *kāhāl* 'assembly, gathering', the only Semitic cognates Klein (1987:564) lists are Aramaic *kahal* 'to assemble, to gather' (note also Aramaic *kāhālā* 'congregation, community, assembly') and Akkadian *qu'ulu* 'to assemble, to gather'. In my opinion, the Semitic material is far too uncertain to be included in this entry.

3. Beekes (2010.II:1463—1464) rejects comparison of Sanskrit *kūla-h* 'generation, family, crowd' with Greek τέλος in the meaning 'division of an army' as well as derivation from Proto-Indo-European **k^wel-*. Moreover, this is not even the primary meaning of Greek τέλος. Needless to say, other scholars disagree with Beekes here. Thus, on deeper investigation, the Indo-European material cited by Illič-Svityč is also fraught with uncertainties.

240. **Küpā* 'to boil, to swell up': Indo-European **keup-/ *keuHp-* 'to boil, to evaporate' ~ Altaic **k'öpā-* 'to swell up, to foam'. Possible.

Comments:

1. Erroneous Proto-Nostratic reconstruction.
2. Starostin—Dybo—Mudrak (2003:841) reconstruct Proto-Altaic **k'öp'i* (~ *-e*) (= **k'hóphi*) 'foam'.

Bomhard (no. 436) would include Proto-Indo-European **keup-/ *keuHp-* 'to boil, to evaporate' under the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, Yukaghir, and Chukchi-Kamchatkan — he does not include the Altaic material listed by Illič-Svityč:

Proto-Nostratic root **k^haw-* (~ **k^həw-*):

- (vb.) **k^haw-* 'to swell, to expand, to inflate, to grow, to increase';
 (n.) **k^haw-a* 'accumulation, inflation, expansion, growth; heap, pile; height'

241. **KUčA* 'woven basket': (?) Hamito-Semitic **qws/ *k(w)s* 'woven basket' ~ Indo-European **k^uos-* 'woven basket, woven article' ~ Uralic **kuča-/ *kočA* 'birch basket, birch vessel'. Rejected.

Comment: Though the semantics are acceptable, this etymology is deeply flawed on many levels when it comes to sound correspondences.

242. **ḲUm* ‘to swallow, to devour’: Hamito-Semitic **q(w)m* ‘to devour, to eat’ ~ Indo-European **kʷem-* ‘to swallow, to gulp down’. Rejected.

Comment: Faulty sound correspondences.

243. **ḲUp/a* ‘pile, heap’: Indo-European **keup-/keub-* ‘pile’ ~ Dravidian **kupp(a)-/kuvA-* ‘pile; to pile up’. Rejected.

Comments:

1. Erroneous Proto-Nostratic reconstruction. There is nothing from the material cited from the Nostratic daughter languages to justify reconstructing a Proto-Nostratic initial ejective */*Ḳ-* (= */*k’-*).
2. I would include the Proto-Indo-European form under entry no. 240 (see above) but not the Proto-Dravidian form.

244. **ḲUr* ‘short’: Hamito-Semitic **q(w)r/*kr* ‘short’ ~ Dravidian **kuṛ* ‘short, small’ ~ Altaic **k’or/u-* ‘short; to lessen’. Possible.

Comments:

1. Faulty sound correspondences. Erroneous Proto-Nostratic reconstruction.
2. Proto-Afrasian **q(w)r* should be removed, while **kr* can stay.
3. Starostin—Dybo—Mudrak (2003:843—844) reconstruct Proto-Altaic **k’oru* (= **kʰoru*) ‘short; to diminish, to grow less’.

Bomhard (no. 521) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Altaic:

Proto-Nostratic root **kʷhar-* (~ **kʷhər-*):

(vb.) **kʷhar-* ‘to cut short, to reduce, to decrease, to diminish, to lessen’;

(n.) **kʷhar-a* ‘shortness’; (adj.) ‘short’

Derivative of:

(vb.) **kʷhar-* ‘to cut’;

(n.) **kʷhar-a* ‘piece cut off; knife’

245. **ḲA* directive particle: Hamito-Semitic **k(//q ?)* directive particle ~ Uralic *-*kkA*/*-*kA* suffix of lative, a postpositional directive particle ~ Dravidian *-*kkA*/*-*kA* suffix of dative-lative ~ Altaic *-*kA* postpositional directive particle, suffix of dative-lative. Strong.

Comment: Erroneous Proto-Nostratic reconstruction.

Bomhard (vol. 1, Chapter 16, §16.31) reconstructs the following directive particle based upon evidence from Afrasian, Dravidian, Elamite, Kartvelian (Svan), Uralic, Altaic, Chukchi-Kamchatkan, Gilyak / Nivkh, and Eskimo:

Proto-Nostratic **-k^ha* relational (directive) particle meaning 'direction to or towards; motion to or towards'.

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246. (?) **-l/a/* suffix of collective nouns: (?) Uralic **-la* collective suffix ~ Dravidian **-l* plural suffix ~ Altaic **-l(a)* collective suffix. Strong.

Bomhard (vol. 1, Chapter 16, §16.25) reconstructs the following plural/collective marker based upon evidence from Afrasian, Dravidian, Uralic, Altaic, and Chukchi-Kamchatkan:

Proto-Nostratic **-la* plural/collective marker.

247. (Descriptive) **lak_A* 'to lick': Hamito-Semitic **lq* 'to lick' ~ Kartvelian **lōk-* / **lak-* 'to lick' ~ Indo-European **lak-* 'to lick, to lap' ~ Uralic **lakka-* 'to lick, to lap' ~ Dravidian **nakk-* / **nāk-* 'to lick'. Possible.

Comments:

1. Faulty sound correspondences.
2. The Proto-Indo-European form should be removed. It should be replaced by **lik'-* (traditional reconstruction **liĝ-* 'to lick', found in Germanic [cf. Kroonen 2013:337]) (see below).
3. The Proto-Dravidian form should be removed.
4. Based upon the evidence from Afrasian and Kartvelian, reconstructing Proto-Nostratic medial **-/k-/* (= **-/k'-/*) is fully justified here.
5. There appear to have been several similar words for 'to lick' beginning with **/l-/* in Proto-Nostratic.

Bomhard (no. 951) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian (**lak'-* ~ **lik'-* ~ **luk'-* 'to lick, to lap, to gulp down, to swallow'), Kartvelian (**lok'-* 'to lick'), and Indo-European (**lik'-* 'to lick'):

Proto-Nostratic root **lak'-* (~ **lak'-*), **lik'-* (~ **lek'-*), **luk'-* (~ **lok'-*) (onomatopoeic):

(vb.) **lak'-*, **lik'-*, **luk'-* 'to lick';

(n.) **lak'-a*, **lik'-a*, **luk'-a* 'licking'

248. **-la* suffix of denominative verbs: Uralic **-la* 'suffix of denominative verbs ~ Altaic **-lā* / **-lā* suffix of denominative verbs. Strong.

Comment: Starostin—Dybo—Mudrak (2003:186—190) reconstruct a Proto-Altaic derivational suffix **-l-* with the following functions: (A) deverbative nominal and (B) denominative nominal (attributive). They note (p. 190):

It seems in fact possible to unite both usages of PA **-l-*, by assigning it a general original attributive (denominative or deverbative) meaning. But we must stress that only with the latter meaning did the suffix become a part of the Common Altaic inflectional paradigm. In some daughter branches it has penetrated the nominal paradigm as well ...

Bomhard (vol. 1, Chapter 16, §16.43) reconstructs the following Proto-Nostratic “nominalizer” based upon evidence from Afrasian, Dravidian, Kartvelian, Indo-European, Uralic, Altaic, and Eskimo. Bomhard (vol. 1, Chapter 18, §18.12) speculates that this derivational suffix may have been used to form deverbative nouns.

Proto-Nostratic **-l-* nominalizer.

249. **lAsA* ‘to rub, to damage’: Kartvelian **les-* ‘to rub, to damage’ ~ Indo-European **les-* ‘weak, destroyed, bad’ ~ Dravidian **nac-* ‘to wear out; to cause disease; to weaken’. Possible.

Comments:

1. The Proto-Dravidian form should be removed. Proto-Dravidian initial **/n-/* does not correspond either to Proto-Kartvelian initial **/l-/* or to Proto-Indo-European initial **/l-/*.
2. Klimov (1998:109) reconstructs Proto-Kartvelian **les-* ‘to rub, to sharpen’ — see also Fähnrich 2007:269 and Fähnrich—Sardshweladse 1995:220.
3. In view of the alleged Germanic (cf. Gothic *lasiws* ‘weak’, etc.) and Slavic cognates (cf. Serbo-Croatian *lōš* ‘poor, bad, evil’, etc.), the Proto-Indo-European form should be reconstructed as **les-/*los-*, and this is, indeed, discussed by Illič-Svityč. However, even though the Germanic ~ Slavic comparison is accepted by Derksen (2008:285—286), he rightly notes that it has been rejected by others (such as Trubačev) on semantic grounds.
4. Illič-Svityč also brings in Latin *les-tu-s* in *sub-lestus* ‘slight, weak, trivial’. This form is not in De Vaan (2008), but it is in Ernout—Meillet (1985:661), who declare that it is of uncertain etymology (“étymologie incertaine”).
5. Although Illič-Svityč has done an excellent job of discussing the Kartvelian and Indo-European evidence, there are too many uncertainties involved within Indo-European to make this a totally convincing Nostratic etymology. Nonetheless, it is not without merit. Consequently, I am giving Illič-Svityč the benefit of the doubt here.

250. (?) **l/e/pʼA* 'spleen': Hamito-Semitic **lp* 'spleen' ~ Uralic **l/e/ppä* 'spleen'. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:875) reconstruct Proto-Altaic **l̥iapʼV* (= **l̥iapʰV*) 'spleen'.
2. Rédei (1986—1988:242) reconstructs Proto-Finno-Ugrian **läpp3* (**δäpp3*) or **lepp3* (**δepp3*) 'spleen'.
3. It is difficult to reconstruct a common Proto-Indo-European word for 'spleen'. For example, Mayrhofer (1956—1980.II:385—386) lists the following variants: **sphl-gh-*, **sphl-i-gh-*, **sphl-i-ə-gh-*, **sphl-ŋ-gh-*.
4. There are two variants of this stem in Afrasian, as follows:

Proto-Afrasian **pal-* ~ **lap-* (metathesis from **pal-*) 'spleen': Proto-Highland East Cushitic **hifella* 'spleen' (prefix **hi-*, secondary **-e-*) > Hadiyya *hilleffa* 'spleen'; Kambata *efeella* 'spleen'; Sidamo *efelegg'o* 'spleen'. East Cushitic: Afar *aleefu* 'spleen' (prefix **ʔa-*, secondary **-e-*). West Chadic **lap-* 'spleen' > Sura *llap* 'spleen'; Angas *lap* 'spleen'; Kulere *ma-laf* 'liver'. Orël—Stolbova (1995:358, no. 1651) reconstruct Proto-Afrasian **lap-* 'spleen'

Bomhard (no. 86) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, and Altaic:

Proto-Nostratic (n.) **pʰal-a* (metathesized variant **lapʰ-a* in Uralic, Altaic, and part of Afrasian) 'spleen'

251. (?) **lewdä* 'to search, to find': Uralic **Lewdä-* 'to find' ~ Dravidian [**nēt-* /**nāt-* 'to search for']. Rejected.

Comments:

1. Faulty sound correspondences. Proto-Uralic medial **-δ-* is not a reflex of Proto-Nostratic medial **-d-*. Proto-Uralic initial **L-* does not correspond to Proto-Dravidian initial **n-*. Proto-Dravidian initial **n-* is not a reflex of Proto-Nostratic initial **l-*.
 2. Questionable semantics.
252. **lipʼa* 'sticky': Hamito-Semitic **lP-* 'to smear with grease/fat; fat' ~ Kartvelian **lap-/*lp-* 'dirt, clay' ~ Indo-European **leip-* 'to stick to, to smear with grease/fat; sticky' ~ Uralic **Lipa-* 'slippery, sticky' ~ Dravidian **nīv-* 'to smear with grease/fat, to stroke' ~ Altaic **lipa-* 'to stick to; sticky, viscous'. Possible.

Comments:

1. Faulty sound correspondences. Proto-Dravidian initial */n-/ is not a reflex of Proto-Nostratic initial */l-/.
2. Starostin—Dybo—Mudrak (2003:861) reconstruct Proto-Altaic **lāj̥p*ʷ (= **lāj̥p^hV*) ‘to glue, to stick to’.

253. *-*la* adjectival suffix: Kartvelian *-*l*-/*-*el*-/*-*il*- suffix of participles and deverbative nouns; *-*il*-/*-*ol*- diminutive suffix ~ Indo-European *-*l*- suffix of denominative and deverbative adjectives ~ Uralic *-*la*-/*-*lä* suffix of adjectives, nouns, and diminutives ~ Altaic *-*l* suffix of deverbative nouns. Strong.

Comments:

1. Starostin—Dybo—Mudrak (2003:186—190) reconstruct a Proto-Altaic derivational suffix *-*l*-, which has two functions: (A) deverbative nominal and (B) denominative nominal (attributive). It is not listed in Robbeets 2015.
2. The Proto-Uralic derivational suffix reconstructed by Illič-Svityč is not in the list presented by Aikio (to appear, pp. 35—41, §1.4.5 Word Formation), but it is in Collinder (1960:259—260 [272—273, 276—277]).
3. Klimov (1998:46) reconstructs Proto-Kartvelian *-*el* affix of noun derivation and (1998:81) Proto-Kartvelian *-*il*- an affix producing participles.

Bomhard (vol. 1, Chapter 16, §16.43) reconstructs a Proto-Nostratic derivational suffix *-*l*- “nominalizer”, which may have been used to form deverbative nouns.

254. (Descriptive) **l'ama* ‘to knead, to mash, to soften’: Hamito-Semitic **lm* ‘soft, tender’ ~ Indo-European **lem*- ‘to break; weak’ ~ Uralic **l'ama* ‘to knead, to mash, to crush; weak’ ~ Dravidian **ñam*Λ- ‘to squeeze, to knead, to mash, to break’. Possible.

Comments:

1. The Proto-Dravidian form should be removed. Proto-Dravidian initial */ñ-/ is not a reflex of Proto-Nostratic initial */l'-/ (= */ly-/).
2. Rédei (1986—1988:684) reconstructs Proto-Finno-Permian **lama* ‘weakness; weak’. This appears to rule out the need to reconstruct Proto-Nostratic initial */l'-/ (= */ly-/).
3. The Afrasian evidence presented by Illič-Svityč is rather limited: a single, questionable form from Semitic (Akkadian *lamāmu* ‘to chew’), a single form from Berber (Tashelhiyt / Shilha *ilmaḍ* ‘to be soft’), and a handful of forms from Central Cushitic, all meaning ‘to be soft’. Though limited, the evidence from Afrasian is more than adequate — both the sound

correspondences and the semantics match what is found in the other Nostratic daughter languages.

4. The Proto-Indo-European form is solid (cf. Pokorny 1959:674).
5. Not in Bomhard (this book).

255. **l/a/Kʌ* 'leg': Hamito-Semitic **lq-/lk-* 'leg, foot' ~ Indo-European **lek-* 'leg' ~ (?) Uralic **lakʌ-* 'leg' ~ (?) Dravidian **tāk* 'to walk'. Possible.

Comments:

1. Faulty sound correspondences — the Dravidian form does not belong here.
2. There is no basis whatsoever for reconstructing a Proto-Nostratic medial ejective **-/Kʌ-/* (= **-/kʰ-/*).
3. Illič-Svityč has confused two separate Proto-Afrasian stems.

Bomhard (no. 949) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Elamite, and Indo-European:

Proto-Nostratic **lakʰ-* (~ **ləkʰ-*):

(vb.) **lakʰ-* 'to go on foot, to travel on foot';

(n.) **lakʰ-a* 'leg, foot'

Here is the Afrasian evidence Bomhard includes in his etymology:

Proto-Afrasian **lak-* (~ **lik-* ~ **luk-*) 'leg, foot': Berber: Tuareg *alkəm* 'to follow, to pursue, to accompany on a trip, to follow on foot'; Tamazight *alkəm* 'to reach, to arrive at, to reunite with, to overtake'; Tashelhiyt / Shilha *alkəm* 'to arrive at, to reunite with, to reach'. Proto-East Cushitic **lak-/lik-/luk-* 'leg, foot' > Saho *lak* 'leg, foot'; Somali *lug* 'leg, foot'; Arbore *luk-a* 'leg, foot'; Sidamo *lekk-a* 'leg, foot'; Bayso *luk-i* 'leg, foot'; Galla / Oromo *luk-a* 'thigh'; Burji *lukk-a* 'leg'; Gedeo / Darasa *lekka-* 'leg, foot'; Hadiyya *lokko* 'leg, foot'; Kambata *lokka-ta* 'leg, foot'; Elmolo *luk* 'leg, foot'; Gidole *lukk-et* 'leg, foot'; Alaba *lokk-a* 'leg, foot'; Tsamay *luk-te* 'leg, foot'; Gawwada *lux-ti* 'leg, foot'.

Note: The Cushitic forms require the reconstruction of multiple vowels in Proto-Afrasian. Yet, all of these forms clearly belong together.

256. **lapʰa* 'flat': (?) Hamito-Semitic **lP-* 'flat, palm' ~ Indo-European **lep-* 'palm, paw' ~ Uralic **lappa/*lapa* 'flat, paw, shoulder blade' ~ Altaic **lapʌ-* 'flat, leaf'. Possible.

Comments:

1. Rédei (1986—1988:236) reconstructs Proto-Uralic **lapa* 'flat surface; leaf, page (of a book), etc.' Rédei (1986—1988:237) also reconstructs Proto-

Uralic **lapp3* ‘flat; flat surface’. These reconstructions eliminate the need to posit a Proto-Nostratic initial **/l-/*.

2. Starostin—Dybo—Mudrak (2003:867—868) reconstruct Proto-Altaic **lápʔi* (= **lapʰi*) ‘flat, broad’.
 3. The Afrasian material cited by Illič-Svityč is rather limited and somewhat uncertain.
 4. Not in Bomhard (this book).
257. **lA* locative particle: Hamito-Semitic **l* locative-directive particle ~ (?) Kartvelian **-la* locative suffix ~ Uralic **-la/*-lä* locative suffix ~ (?) Dravidian **-u/* locative suffix ~ Altaic [**-lā/*-lā̃* locative suffix]. Strong.

Comments:

1. Originally, this was an independent particle in Afrasian. It shows up as a directive prefix in Semitic and as a directive suffix in Cushitic. Diakonoff (1988:61) reconstructs an Afrasian directive **-l* and notes:

-l: directive (in the Cushitic Bilin, Saho); the Semitic ‘dative’ and ‘directive’ preposition *l/*- (also > prefixed accusative marker in the later Aramaic dialects), and the Egyptian preposition *n* (< **l*-).

2. Starostin—Dybo—Mudrak (2003:859) reconstruct Proto-Altaic **la*- ‘on this side, near’. They note: “Originally a monosyllabic deictic root with directive affixes.”
3. Collinder (1960:291—292) notes:

In western FU and in Samoyed, the local cases are mostly formed by means of a coaffix (**l*, **s*, **ś*, **k*), i.e., the primordial case ending (**-na* ~ **-nä*, for instance) is added to a derivative, not immediately to the word stem.

Collinder then goes on to discuss the developments in the various Uralic daughter languages. Illič-Svityč has done a good job of summarizing the Uralic developments. The only disagreement I have is with the reconstruction of Proto-Uralic initial **/l-/*. The evidence points to Proto-Uralic initial **/l-/* instead. This means that the Proto-Nostratic form should be reconstructed as **lA*.

4. The Dravidian form should be removed.
 5. Not in Bomhard (this book).
258. **lejna* ‘soft, weak’: Hamito-Semitic **ljn* ‘soft, weak’ ~ Indo-European **lei-* ‘soft, weak, thin’ ~ Uralic **lejna* ‘weak’. Rejected.

Comments:

1. Rédei (1986—1988:246) reconstructs Proto-Uralic **leña* (= **lenʷa*) 'weak, slack'. Rédei's reconstruction makes it impossible to compare the Proto-Uralic form with the Proto-Afrasian and Proto-Indo-European forms cited by Illič-Svityč and, consequently, it must be removed from this etymology.
2. The reconstruction of the Proto-Afrasian form is questionable. Egyptian *nnj* 'to be weary, inert' most certainly does not belong here. It cannot be separated from *nnw* 'weariness, inertness' and *nnjw* 'the dead' (that is, 'the inert ones').

259. **liwa* 'mud, silt': Indo-European **leu(H)-* 'mud, silt' ~ Uralic **liwa* 'mud, sand, bog'. Rejected.

Comments:

1. Rédei (1986—1988:250) reconstructs Proto-Finno-Ugrian **liwa* 'sand'. It is becoming increasingly evident that there is no justification whatsoever for reconstructing Proto-Nostratic initial **/l-/*. All of the instances in which Illič-Svityč posited such a sound should be reinterpreted as having had initial **/l-/* instead.
2. Beekes (2010.I:878) derives Greek *λῦμα* 'dirt, waste, garbage' from Proto-Indo-European **luH-* 'dirt; to pollute, to contaminate'. According to Beekes:

This verb lives on in Lat. *pol-luō* < **por-luō* and led to the verbal noun Lat. *lutum* = OIr. *loth* 'excrements, dirt'. Other derivatives are Lat. *lustrum* 'puddle, marsh' and German river names like *Lune* and *Lienz* (from **Luantia*), cf. *Λύμαξ*.

3. In view of the more restricted meaning assigned by Rédei to the Proto-Uralic form he reconstructs and taking into consideration the meaning assigned to the Proto-Indo-European ancestor of Greek *λῦμα* reconstructed by Beekes, the comparison with Proto-Indo-European seems unlikely.
260. **lonKa* 'to bend': Indo-European **lenk-* 'to bend' ~ Uralic **loŋka* 'to bend, to chip off; to droop, to dangle' ~ Dravidian **toŋk-* 'to bend, to dangle' ~ Altaic **loŋa-* 'to bend, to incline, to bow'. Weak.

Comments:

1. The Proto-Dravidian form should be removed from this etymology. Proto-Nostratic initial **/l-/* (rather **/l-/* see above, comments to no. 259) does not yield Proto-Dravidian initial **/t-/*.
2. Rédei (1986—1988:256) reconstructs Proto-Finno-Ugrian **lɣŋk3-* 'to be split apart' as the ancestor of the Uralic forms cited by Illič-Svityč.

3. Starostin—Dybo—Mudrak (2003:1458) reconstruct Proto-Altaic **tʰoŋe* (~ *-i*) (= **tʰoŋe*) ‘to bow, to bend’ to account for the Altaic evidence cited by Illič-Svityč. Though a comparison of the Proto-Altaic form reconstructed by Starostin—Dybo—Mudrak with the Proto-Dravidian form reconstructed by Illič-Svityč may still be a possibility, the comparison with the alleged Proto-Indo-European and Proto-Uralic forms cannot be maintained.
261. **lūkʌ* ‘to pierce, to insert’: Uralic **lökkʌ* ‘to pierce, to insert’ ~ Dravidian [**tukk-* ‘to insert, to push’ ~ Altaic **lūkä-* ‘to pierce’. Rejected.

Comments:

1. Here, again, there is no justification, based upon the evidence from the Nostratic daughter languages cited by Illič-Svityč, for reconstructing a Proto-Nostratic medial ejective **/-k̟-/* (= **/-kʰ-/*).
 2. The Proto-Dravidian form must be removed due to faulty sound correspondences.
 3. Starostin—Dybo—Mudrak (2003:880) reconstruct Proto-Altaic **lúkʲ* (~ *-o-*) (= **lúkʰi*) ‘to break through’ to account for the Altaic forms cited by Illič-Svityč.
 4. Rédei (1986—1988:248—249) reconstructs Proto-Uralic **likkä-* (**lökkä-*) ‘to push, to shove, to thrust’.
 5. The Proto-Uralic and Proto-Altaic vowels do not match. The semantics are slightly off as well.
262. **Labʌ* ‘to seize, to acquire’: Hamito-Semitic **lb-* ‘to seize, to acquire’ ~ Indo-European **/e/bh-* ‘to seize, to acquire’ ~ Altaic [**labʌ-* ‘to grab with the teeth’]. Strong.

Comment: Bomhard separates this entry into two Proto-Nostratic etymologies:

Bomhard (no. 942) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian and Indo-European:

Proto-Nostratic root **lab-* (~ **lʌb-*):

(vb.) **lab-* ‘to take hold of, to grasp’;

(n.) **lab-a* ‘taking, grasping’

Possible derivative:

(vb.) **lab-* ‘to eat greedily, to lap (up), to suck milk’;

(n.) **lab-a* ‘eating, sucking’

Bomhard (no. 943) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian and Altaic:

Proto-Nostratic root **lab-* (~ **lɔb-*):

(vb.) **lab-* 'to eat greedily, to lap (up), to suck milk';

(n.) **lab-a* 'eating, sucking'

Possibly related to or derived from:

(vb.) **lab-* 'to take hold of, to grasp';

(n.) **lab-a* 'taking, grasping'

263. **LaHm/u/-* 'swamp': (?) Kartvelian [**lam-* 'silt, dampness'] ~ Indo-European **lehm-* 'swamp, puddle' ~ Uralic **Lampe* 'swamp, small lake' ~ Altaic **lāmu* 'swamp, sea'. Weak.

Comments:

1. Klimov (1964 and 1998) does not reconstruct a Proto-Kartvelian **lam-* 'silt, dampness', nor do Fähnrich (2007) or Fähnrich—Sardshweladse (1995). The only Kartvelian form that Illič-Svityč cites is from Georgian: *lami* (ლამი) '(river, etc.) silt, sand; black loam; dew, dampness'. This does not appear to be particularly close semantically to the forms from the other Nostratic daughter languages cited by Illič-Svityč.
2. Illič-Svityč bases the reconstruction of the Proto-Indo-European form on the evidence of several marginal forms from Latin and Balto-Slavic. However, De Vaan (2008:324) questions the nature of the relationship between Latin *lāma* 'marshy place, bog' and the Balto-Slavic forms cited by Illič-Svityč:

In theory, Latv. *lāma* and Latin *lāma* may both go back to **leh₂-mo-*, but the isolated position of *lāma* and the possibility that the Baltic words derive from the root **lem-* 'to break' render the connection rather uncertain.

3. Rédei (1986—1988:235) reconstructs Proto-Uralic **lampe* 'puddle, pool, bog, swamp'. This is essentially the same as Illič-Svityč's reconstruction.
 4. Starostin—Dybo—Mudrak (2003:866—867) reconstruct Proto-Altaic **lāmò* 'sea, wave'. The Mongolian forms cited by Starostin—Dybo—Mudrak do, in fact, mean 'marsh, swamp' (болото), but the putative cognates from the other Altaic daughter languages point to 'sea, wave'.
 5. The most secure forms supporting this etymology come from Uralic and Altaic, and even these are a bit shaky. I would like to give Illič-Svityč the benefit of the doubt here, but there are just too many uncertainties involved.
 6. See also the comments for the next entry (no. 264).
264. **Lamd/i/* 'low, depression': Indo-European **lendh-* 'valley, plain' ~ Uralic **Lamte* 'low, depression'. Strong.

Comments:

1. Rédei (1986—1988:235—236) reconstructs Proto-Uralic **lamte* ‘low; low-lying ground, lowland’, while Décsy (1990:102) reconstructs Proto-Uralic **lamta* ‘deep, low; lowlands’.
2. The Proto-Nostratic form reconstructed by Illič-Svityč is an extended form, that is, **lam-d-a* ‘lowland, low-lying ground, any piece of land’. The unextended Proto-Nostratic stem would be **lam-a* (n.) ‘lowland, low-lying ground, any piece of land’; (adj.) ‘low’, which may be preserved in Indo-European in the following Balto-Slavic forms (cf. Bomhard, no. 952):

Lithuanian *lomà* ‘hollow, valley, plot, lump’; Latvian *lāma* ‘hollow, pool’; Russian (dial.) *lam* [лам] ‘(Pskov) meadow covered with small trees and bushes that is occasionally flooded; (Novgorod) wasteland’; Slovenian *lam* ‘pit; (dial.) quarry’; Polish (obsolete) *lam* ‘quarry, bend’; Serbo-Croatian *lām* (dial.) ‘knee-joint, underground passage’.

These are the very Balto-Slavic forms that Illič-Svityč tried to include under the preceding entry (no. 263).

3. The extended stem is preserved in Indo-European in the following forms from the daughter languages (cf. Bomhard, no. 952):

Proto-Indo-European **lendh-/londh-/l̥ndh-* ‘low-lying ground, lowland, any piece of land’: Old Irish *land* ‘open place’; Middle Welsh *llan* ‘enclosure, yard’; Breton *lann* ‘heath’; Cornish *lan* ‘piece of land’; Gothic *land* ‘land, country’; Old Icelandic *land* ‘land (as opposed to sea), country’; Old English *land* ‘earth, land, soil’; Old Frisian *lond, land* ‘land’; Old Saxon *land* ‘land’; Old High German *lant* ‘land’ (New High German *Land*); Old Prussian (acc. sg.) *lindan* ‘valley’; Russian *ljadá* [ляда] ‘overgrown field’; Czech *lada* ‘fallow land’.

4. Dolgopolsky (2008:1225—1226, no. 1303) reconstructs Proto-Nostratic **lam[V]d V* ‘low’. Note: The Altaic forms included by Dolgopolsky are rejected by Bomhard (no. 952).

Bomhard (no. 952) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, and Altaic:

Proto-Nostratic root **lam-* (~ **lām-*):

(vb.) **lam-* ‘to bend down, to stoop down, to sink down, to lie down, to duck down; to be or become bent down, curved down; to be low’;

(n.) **lam-a* ‘lowland, low-lying ground, any piece of land’; (adj.) ‘low’

Extended form:

(vb.) **lam-V-d-* ‘to bend down, to stoop down, to sink down, to lie down, to duck down; to be or become bent down, curved down; to be low’;

(n.) **lam-d-a* 'lowland, low-lying ground, any piece of land'; (adj.) 'low'

265. **L/a/ta* 'damp': Kartvelian **ltw-* 'to moisten' ~ Indo-European **lat-* 'damp, moist soil'. Rejected.

Comment: Faulty sound correspondences. Proto-Kartvelian medial **-/t-/* (= **-/t'-/*) does not correspond to Proto-Indo-European medial **-/t-/* (= **-/th-/*).

266. **Lawša* 'weak, limp': Indo-European **leus-* 'weak, limp' ~ Uralic **Lawša* 'weak, limp'. Weak.

Comments:

1. Rédei (1986—1988:685) reconstructs Proto-Finno-Volgaic **lawča* (**lawša*) 'weak, limp'.
2. There are several problems involved in this etymology. First, the Uralic material is only from Finno-Volgaic — it is not more widely attested in Uralic. Next, the reconstruction of the Proto-Finno-Volgaic form is uncertain. Therefore, it is prudent to withhold judgment until more evidence can be presented to support this etymology.

267. **L/ä/ja* 'water; to pour': Hamito-Semitic **lj* 'water' ~ Indo-European **leiH-* 'to pour' ~ (?) Uralic **Läja* 'liquid, river'. Rejected.

Comments:

1. Rédei (1986—1988:248) reconstructs Proto-Uralic **lij3* 'sap (of a tree)' as the source of the Uralic forms listed by Illič-Svityč. Collinder (1977:51) lists the following: Votyak / Udmurt *li* 'sap'; Zyrian / Komi *l'i* 'sap'; (?) Kamassian *leeji* 'sap'. The semantic distance between the Uralic forms and the alleged cognates in the other Nostratic daughter languages cited by Illič-Svityč is far too great.
2. The Egyptian form (*nwj-t* 'water') cited by Illič-Svityč cannot be separated from *nnw* 'primordial waters', which shows up in Coptic as *nun* [𓂏𓏏𓏏] 'the depths of Hell, Hell; the depths of the ocean; the abyss'. Note also Egyptian *n'w* 'primordial waters'. The Coptic form makes it clear that we are dealing with initial /n-/ here and not **/l-/*. Thus, there is no basis for deriving *nwj-t* 'water' from a putative Proto-Afrasian **lj*.
3. The ancestor of the Berber forms cited by Illič-Svityč is better reconstructed as Proto-Berber **lw* (cf. Haddadou 2006—2007:117, no. 453).
4. Altogether, there is little justification for this etymology.

268. (?) **Lop'a* 'peeled bark (rind), thin layer of plant material': Hamito-Semitic **lp-* 'peeled rind' ~ Indo-European **leup-/leub-/lep-* 'peel; peeled bark, leaf' ~ Uralic **Lop'a* 'skinned bark, leaf'. Rejected.

Comment: Faulty sound correspondences. The vowels/diphthongs do not match.

269. **Lub*_Λ ‘to thirst’: Hamito-Semitic **lwb* ‘to thirst’ ~ Indo-European **leubh-* ‘to desire passionately’. Weak.

Comments:

1. The Egyptian, Berber, and Cushitic forms cited by Illič-Svityč do not belong here — Illič-Svityč was right to preface the Berber and Cushitic forms with a question mark (?).
2. Arabic *lāba* (root *lwb*) ‘to be thirsty’, *lawb* ‘thirst’ is a respectable match for Proto-Indo-European **leubh-* ‘to desire passionately’, but it is isolated within Semitic and may be a borrowing.

270. **Lu*_κ_Λ ‘small carnivore’: Kartvelian **lekw-* ‘young of carnivore, puppy’ ~ Indo-European **luk-/lunk-* ‘lynx’ ~ Uralic **LuK*_Λ ‘fox, marten’ ~ Altaic **loka/luka* ‘lynx, fox, dog’. Rejected.

Comments:

1. Faulty sound correspondences. Lax semantics.
2. Starostin—Dybo—Mudrak (2003:880) reconstruct Proto-Altaic **l[ù]k[ʷ]* (= **l[ù]k[ʰ]*) ‘lynx, wild cat’.

271. **La*_g_Λ ‘to lie’: Kartvelian **lag-/lg-* ‘to lay, to plant’ ~ Indo-European **leg-* ‘to lie, to lie down’. Strong.

Bomhard (no. 944) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, and Indo-European:

Proto-Nostratic root **lag-* (~ **lag-*):

(vb.) **lag-* ‘to put, place, lay, or set down’;

(n.) **lag-a* ‘the act of putting, placing, laying, or setting down’

272. (?) **La*_h_Λ ‘to be ill’: Hamito-Semitic **l/h-* ‘to be ill’ ~ Kartvelian [**le/x-* ‘to be ill’]. Weak.

Comment: The evidence from the daughter languages adduced to support this etymology is very sparse. Accordingly, the Afrasian and Kartvelian proto-forms cannot be reliably reconstructed.

273. (Descriptive) **La*_š_Λ ‘to lick’: Hamito-Semitic **lš-* ‘to lick’, **liš-* ‘tongue’ ~ Proto-Kartvelian **laš-* ‘lip’, **lš-wn-* ‘to lick’. Strong.

Comments:

1. Orël—Stolbova (1995:361, no. 1666) reconstruct Proto-Afrasian **les-* 'tongue'; Ehret (1995:406, no. 827) reconstructs Proto-Afrasian **lis-* 'to lick' (Proto-Semitic **lisn-* ~ **lasn-* 'tongue'). In my opinion, an ejective sibilant should not be reconstructed for Proto-Afrasian.
2. Klimov (1964:120 and 1998:107) reconstructs Proto-Kartvelian **laš-* 'lip' and (1964:122 and 1998:111) **lš-wn-* 'to eat (rudely)'. See also Schmidt 1962:222; Fähnrich 2007:265; Fähnrich—Sardshweladse 1995:216—217.

Bomhard (no. 953) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, and (?) Indo-European:

Proto-Nostratic root **las^y-* (~ **ləs^y-*), **lis^y-* (~ **les^y-*), **lus^y-* (~ **los^y-*) (?) (onomatopoeic):

(vb.) **las^y-*, **lis^y-*, **lus^y-* 'to lick, to lap (up)';

(n.) **las^y-a*, **lis^y-a*, **lus^y-a* 'tongue; lip'

Note: The Proto-Nostratic medial vowel is uncertain.

274. (?) **la/mH/u* 'bird-cherry': Uralic **δ'ōme* 'bird-cherry' ~ Altaic **d/imu* 'bird-cherry, buckthorn'. Rejected.

Comments:

1. Faulty sound correspondences. Neither the initial consonants nor the vowels match in the forms cited from the Nostratic daughter languages. The semantics, however, are perfect.
2. Not in Starostin—Dybo—Mudrak 2003.
3. Rédei (1986—1988:65) reconstructs Proto-Uralic **δ'eme* (**δ'ōme*) 'bird-cherry' (cf. Finnish *tuomi* 'bird-cherry').

275. **magu* 'bad': Hamito-Semitic **mgw/*mwg* 'bad' ~ Altaic [**magu* 'bad']. Rejected.

Comments:

1. The evidence from the daughter languages adduced to support this etymology is very sparse.
2. Poppe (1955:83) reconstructs Proto-Mongolian **mayu* 'bad, evil'.
3. Starostin—Dybo—Mudrak (2003:894—895) include the Mongolian forms cited by Illič-Svityč under Proto-Altaic **maja* 'to miss, to fail; bad luck'.

276. **majλ* 'honey, nectar': Indo-European **mel-* 'honey' ~ Uralic **majδ'λ* 'nectar' ~ Dravidian [**maṭṭ-/*miṭṭ-* 'honey, toddy'] ~ (?) Altaic [**m/ala* 'honey']. Possible.

Comments:

1. Faulty sound correspondences. Proto-Indo-European medial */-l-/ does not correspond to Proto-Uralic medial */-jδ'-/ or Proto-Dravidian medial */-t̪t̪-/-.
2. Rédei (1986—1988:697) reconstructs Proto-Finno-Permian **majδʒ* ‘nectar’. While the semantics are good, the phonology does not correspond to anything found in the other Nostratic daughter languages.
3. Eliminating the Proto-Uralic form means that the Proto-Nostratic reconstruction is erroneous.
4. The Proto-Indo-European form is universally reconstructed as **melit* ‘honey’ (cf. Pokorny 1959:723—724; Watkins 1985:41; Mallory—Adams 1997:271; Kloekhorst 2008b:580—581; etc.).
5. The Proto-Dravidian forms (**maṭṭ-/*miṭṭ-* ‘honey, toddy’) go back to Proto-Nostratic **mad-w-a* ‘honey, mead’ (cf. Bomhard, no. 849).
6. Starostin—Dybo—Mudrak (2003:897—898) reconstruct Proto-Altaic **male* ‘honey; plant oil’.
7. Thus, the only possible cognates in this etymology are Proto-Indo-European and Proto-Altaic.

Bomhard (no. 861) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Indo-European, and Altaic:

Proto-Nostratic (n.) **mal-a* ‘honey’.

277. **majra* ‘young male’: Hamito-Semitic **m(j)r* ‘man, young male animal (cub, whelp, etc.)’ ~ Indo-European **mer-* (**mer-jo-*) ‘young man’ ~ Dravidian **māṛ-/*mār-* ‘young male animal’ ~ Altaic [**miarä-* ‘to marry’]. Strong.

Comments:

1. The Proto-Nostratic reconstruction is erroneous.
2. Starostin—Dybo—Mudrak (2003:923) reconstruct Proto-Altaic **m̄iàrà* (~ *-r̄-*) ‘male, mature’.
3. Orël—Stolbova (1995:377—378, no. 1740) reconstruct Proto-Afrasian **mar-/*maraʔ-* ‘man’.

Bomhard (no. 878) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Dravidian, Kartvelian (Svan), Indo-European, and Altaic:

Proto-Nostratic (n.) **mar-a* ‘(young) man, male (human or animal)’

278. **malā* ‘numerous, abundant’: (?) Hamito-Semitic **ml-* ‘good’ ~ Indo-European **mel-* ‘numerous, abundant’ ~ Dravidian **mal* ‘abundant’. Strong.

Comment: The Proto-Afrasian form reconstructed by Illič-Svityč does not belong here. Instead, it belongs under the following Nostratic etymology, reconstructed by Bomhard (no. 860) based upon evidence from Afrasian, Dravidian, Indo-European, Etruscan, and Chukchi-Kamchatkan:

Proto-Nostratic root **mal-* (~ **məl-*):

(vb.) **mal-* 'to be favorably disposed towards, to care about, to be devoted to, to like';

(n.) **mal-a* 'goodness, pleasantness'; (adj.) 'good, pleasant, pleasing'

Bomhard (no. 859) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Altaic:

Proto-Nostratic root **mal-* (~ **məl-*):

(vb.) **mal-* 'to fill, to be or become full, to increase';

(n.) **mal-a* 'fullness, abundance'; (adj.) 'full, filled, abundant, numerous, many'

279. (?) **mana* 'to stop, to detain': Hamito-Semitic [**mnʕ* 'to detain, to hinder'] ~ Dravidian **mān-* 'stop' ~ Altaic [**mana-* 'to finish, to destroy']. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:902) reconstruct Proto-Altaic **mān[u]* 'useless, insufficient' as the source of the Altaic forms cited by Illič-Svityč.
2. The Arabic form cited by Illič-Svityč has the following semantic range (cf. Wehr 1976:926—927): Arabic *manaʕa* (vb.) 'to stop, to detain, to keep from entering or passing; to hinder, to prevent; to keep, to restrain, to hold back; to bar, to block, to obstruct; to withdraw, to take away, to deprive; to forbid, to interdict, to prohibit; to decline to accept, to declare impossible or out of the question; to refuse, to deny, to withhold; to stop, to cease; to abstain, to refrain; to ward off, to avert, to keep away; to protect, to guard; to defend', *manʕ* (n.) 'hindering, obstruction; prevention, obviation, preclusion; prohibition, interdiction, ban, injunction, impeding; stop, closure, discontinuation, embargo; withdrawal, dispossession, deprivation; detention, withholding', and the rest of the Semitic cognates are also as varied.
3. Bomhard (no. 875) includes some of the material cited by Illič-Svityč in his alternative etymology (see below), plus he adds new material.
4. Dolgopolsky (2008:1360, no. 1437) reconstructs Proto-Nostratic **mæñʕV* (= **mæñyV* ?) 'to hold, to carry' and (2008:1360—1361, no. 1438) Proto-Nostratic **mañy[ú]* 'paw, foot/leg of animals'.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 875) reconstructs the following Proto-Nostratic forms based upon evidence from

Afrasian, Dravidian, Indo-European, Yukaghir, Chukchi-Kamchatkan, and Altaic:

Proto-Nostratic root **man^y-* (~ **mən^y-*):

(vb.) **man^y-* ‘to hold, to take’;

(n.) **man^y-a* ‘hand, paw’

280. **manga* ‘strong’: Hamito-Semitic [**mΛ(n)g-* ‘strong, heavy, abundant’] ~ (?) Kartvelian [**mag-* ‘strong’] ~ Indo-European **mengh-/m(e)negh-* ‘abundant, numerous’ ~ Altaic [**maŋa* ‘hard, strong, stable’]. Possible.

Comments:

1. Faulty sound correspondences. The Proto-Kartvelian form does not belong here. Illič-Svityč was right to add a question mark (?).
2. Bomhard (no. 872) includes the following Cushitic evidence in his version of this etymology:

East Cushitic: Afar *mango-* ‘to be much, many’; Saho *mango* ‘many’, *mang-* ‘to be full, numerous’. Central Cushitic: Awngi / Awiya *ménč* ‘much, many’, *minč^y-* ‘to be many’.

3. Starostin—Dybo—Mudrak (2003:903) reconstruct Proto-Altaic **manga* ‘big, strong’.

Bomhard (no. 872) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, and Altaic:

Proto-Nostratic root **man-* (~ **mən-*):

Extended form:

(vb.) **man-V-g-* ‘to swell, to expand, to grow, to increase’;

(n.) **man-g-a* ‘great number, large amount; abundance; multitude, crowd’; (adj.) ‘many, numerous, copious, abundant; swollen, big, fat, strong’

Related to:

(vb.) **man-* ‘to swell, to expand, to grow, to increase’;

(n.) **man-a* ‘multitude, crowd, herd, flock’

281. **manu* ‘to think’: Hamito-Semitic **mn-* ‘to think, to understand, to desire, to count’ ~ Indo-European **men-* ‘to think, to recall, to mention’ ~ Altaic **manΛ/*monΛ* (< **mano-*) ‘to guess, to conjure, to say’ ~ (?) Dravidian **manΛ-* ‘request, word’. Possible.

Comments:

1. There are at least two, possibly three, separate stems confused here: (A) to count, to reckon’ (> ‘to consider, to think’), (B) ‘to say, to speak’, and (C)

'to desire'. The first two may ultimately be related, but the third is totally distinct.

2. Starostin—Dybo—Mudrak (2003:901) reconstruct Proto-Altaic **mána* (~-o) 'to learn, to try'.

Bomhard (no. 868) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, (?) Dravidian, Indo-European, Uralic, and Altaic:

Proto-Nostratic root **man-* (~ **mən-*):

(vb.) **man-* 'to count, to reckon' (> 'to consider, to think' > 'to recount' > 'to say, to speak');

(n.) **man-a* 'counting, reckoning'

Additionally, Bomhard (no. 873) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, and Chukchi-Kamchatkan:

Proto-Nostratic root **manʷ-* (~ **mənʷ-*):

(vb.) **manʷ-* 'to lust after, to desire passionately, to copulate with, to have sexual intercourse, to beget';

(n.) **manʷ-a* 'ardent desire, passion, lust'

Derivative:

(n.) **manʷ-a* 'progenitor, begetter, man, male; penis'

Note: We flatter ourselves when we derive **manʷ-a* 'progenitor, begetter, man, male; penis' from 'to consider, to think', as 'man, the thinking animal'. There is little justification for this based upon our behavior. A more likely derivation is from 'to lust after, to desire passionately, to copulate with, to have sexual intercourse, to beget', again, based upon our behavior.

282. **marja* 'berry': Kartvelian **mar-čq̃w-* 'strawberry' ~ Indo-European **mor-* 'black-berry, mulberry' ~ Uralic **marja* 'berry' ~ (?) Altaic [**mür̥a* 'berry']. Weak.

Comments:

1. Faulty sound correspondences — the vowels do not match.
2. The forms assembled by Illič-Svityč may be Wanderwörter. Consequently, this etymology cannot stand as written.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 875) reconstructs the following Proto-Nostratic (better, Proto-Eurasiatic) form based upon evidence from Indo-European and Uralic:

Proto-Nostratic (Eurasianic only) (n.) **mur-a* 'mulberry, blackberry'

Note: Bomhard includes the following Uralic material in his etymology:

Proto-Uralic **mura* ‘Rubus chamaemorus, berry (Rubus)’: Finnish *muura*, *murraim*/*muuraim*- ‘cloudberry, Rubus chamaemorus’; Vogul / Mansi *morah* ‘Rubus chamaemorus’; Ostyak / Xanty (Tremyugan) *mōrəŋk*, (Southern) *murəh* ‘Rubus chamaemorus’; Tavgi Samoyed / Nganasan *muraʔka* ‘Rubus chamaemorus’; Yenisei Samoyed / Enets (Hatanga) *moḍagga*, (Baiha) *moragga* ‘Rubus chamaemorus’; Yurak Samoyed / Nenets *marajga* ‘Rubus chamaemorus’. Cf. Rédei 1986—1988:287 **mura*; Collinder 1977:56; Sammallahti 1988:538 **murā* ‘berry (Rubus)’; Décsy 1990:103 **mura* ‘Rubus chamaemorus’.

283. **marA* ‘tree’: Uralic **m/a/re* ‘tree’ ~ Dravidian **mara(m)* ‘tree’. Strong.

Comments:

1. Illič-Svityč also mentions Arabic *marw*- ‘a kind of tree (silex, macrura)’ and Egyptian *mrw* ‘Lebanese cedar’ as possible comparisons. Both are included by Dolgopolsky (2008:1393—1394, no. 1472) under Proto-Nostratic **m[a]rwē* ‘tree’, while Bomhard just includes the Egyptian form.
2. Rédei (1986—1988:281) reconstructs Proto-Finno-Ugrian **mor3* ‘a kind of tree’.

Bomhard (no. 884) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian (Egyptian), Dravidian, and Uralic:

Proto-Nostratic (n.) **mar-a* ‘tree, wood’

Note: Bomhard agrees with Illič-Svityč in the reconstruction of the vowel of the Proto-Nostratic form. Dolgopolsky is more uncertain.

284. **mA* formant with nominal function in relative constructions: Hamito-Semitic (**ma-*, **mi-*)/**-m* derivational nominal formant ~ Kartvelian **me-/m-/ma-* derivational nominal prefix ~ Indo-European **-mo-* derivational nominal suffix ~ Uralic **-ma/*-mä* derivational nominal suffix ~ Dravidian **-mai* derivational nominal suffix ~ Altaic **-ma/*-mä* derivational nominal suffix. Strong.

Comments:

1. Though there is room here for refinement and interpretation here, Illič-Svityč has done a good job in supporting this Proto-Nostratic derivational formant.
2. See Robbeets (2005:965) for a discussion of the Altaic evidence.

Bomhard (vol. 1, Chapter 16, §16.39) reconstructs Proto-Nostratic **-m-* “nominalizer” (derivational suffix) based upon evidence from Afrasian, Dravidian, Elamite, Kartvelian, Indo-European, Uralic, and Altaic. He (vol. 1, Chapter 18, §18.12) further speculates that this derivational suffix may have been used to form abstract nouns.

285. **-mA* suffixal formant of the marked direct object ~ Indo-European **-m* suffix of accusative singular of animate nouns ~ Uralic **-m* suffix of definite object ~ Dravidian **-m* suffix of marked object ~ Altaic [**-ba/*-bä* suffix of marked/definite object]. Strong.

Comment: According to Bomhard (vol. 1, Chapter 16, §16.27), the Altaic evidence points to Proto-Altaic **-m* accusative marker. See also Greenberg 2000:129.

Bomhard (vol. 1, Chapter 16, §16.27) reconstructs Proto-Nostratic **-ma* (together with **-na*) marker of direct object based upon evidence from Afrasian, Dravidian, Indo-European, Uralic, Altaic, Chukchi-Kamchatkan, and Etruscan.

286. **mALA* ‘mountain’: Indo-European **mel-* ‘mountain, elevation’ ~ Dravidian **mal-* ‘mountain’. Strong.

Bomhard (no. 858) reconstructs the following Proto-Nostratic form based upon evidence from Dravidian and Indo-European:

Proto-Nostratic (n.) **mal-a* ‘hill, mountain’

287. **mAnA* ‘to remain in place, to stand firmly’: Hamito-Semitic **mn* ‘to remain, to be firm’ ~ Indo-European **men-* ‘to remain in place’ ~ Dravidian **man-* ‘to remain in place, to stand firmly’. Strong.

Bomhard (no. 869) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, (?) Yukaghir, and Altaic (Tungusic):

Proto-Nostratic root **man-* (~ **mən-*):

(vb.) **man-* ‘to stay, to remain, to abide, to dwell; to be firm, steadfast, established, enduring’;

(n.) **man-a* ‘dwelling, house, home’

288. **mAra* ‘spot, dirty’: Indo-European **mer-* ‘dirty, dark’ ~ Dravidian **mar-* ‘dark spot’. Strong.

Bomhard (no. 882) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Indo-European, and (?) Chukchi-Kamchatkan:

Proto-Nostratic root **mar-* (~ **mər-*):

(vb.) **mar-* ‘to soil, to stain’;

(n.) **mar-a* ‘spot, stain, dirt’; (adj.) ‘dark, dirty, soiled’

289. **mä* 1st person plural inclusive pronoun: Hamito-Semitic [**m(n)* 1st person plural inclusive pronoun] ~ Kartvelian **m-* marker of object of 1st person plural inclusive ~ Indo-European **me-s* 1st person plural ~ Uralic **mä-/me-* 1st person plural ~ Dravidian **mā* stem of 1st plural pronoun ~ Altaic **bE* (oblique **mE-n*) 1st person plural exclusive (secondary function). Strong.

Comments:

1. There is room for interpretation here.
2. The Afrasian evidence comes from Chadic.
3. According to Krishnamurti (2003:246—249), Proto-Dravidian had one 1st person singular form, **yān-/yan-* ‘I’, and two 1st person plural forms, (A) **yām-/yam-* ‘we (exclusive)’ and (B) **ñām-/ñam-* ‘we (inclusive)’.
4. Starostin—Dybo—Mudrak (2003:341—342) reconstruct Proto-Altaic **bĭ* 1st person pronoun: Proto-Tungusic **bi*; **bue*, **mü-n-* ‘I; we’; Proto-Mongolian **bi*, **min-*; **ba-*, **man-* ‘I; we’; Proto-Turkic **be-* ‘I; we’.

Bomhard (no. 892) treats the 1st person personal pronouns, singular and plural (inclusive), together and reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, Indo-European, Uralic, Altaic, Chukchi-Kamchatkan, Etruscan, Eskimo-Aleut, and Gilyak / Nivkh:

Proto-Nostratic first person singular **mi* (~ **me*) ‘I, me’, first person plural (inclusive) **ma* (~ **mə*) ‘we, us’

Note: See no. 299 below.

290. **mä* prohibitive particle: Hamito-Semitic **m(j)* prohibitive and negative particle ~ Kartvelian **mā/*mō* prohibitive and negative particle ~ Indo-European **mē* prohibitive particle ~ Dravidian **ma-* stem of prohibitive and negative elements ~ Altaic **mä-/bä-* prohibitive and negative particle. Strong.

Comments:

1. There does not seem to be any basis for reconstructing **j/* at the Proto-Afrasian level, the alleged variant **mj* notwithstanding. Ehret (1995:301, no. 572) reconstructs Proto-Afrasian **ma-* ‘to not have’. See also Diakonoff 1988:83, §4.4.3.

2. Bomhard (no. 846) does not include the Dravidian evidence cited by Illič-Svityč. Burrow—Emeneau (1984:420, no. 4743) list the following:

Kurux *mal* 'not', *malā* 'no; not', *malnā* 'not to be (so)', *mal'ā* 'no! (when the negation falls on one single word which is being opposed to another word); no', *malkā* 'deprived of, lacking'; Malto *mala* 'no, not', *mal-* (past *mall-*) 'to be not'. (?) Tamil *-mal* in negative adverbial suffix *-āmal*. (?) Telugu *malayu* 'to appear, to happen, to be'.

This is probably a chance resemblance and should be removed from this etymology.

3. Starostin—Dybo—Mudrak (2003:893) reconstruct Proto-Altaic **ma* a negative particle. They note:

A monosyllabic root, but, unlike the 1st p. pron. or the accusative particle, it did not undergo denasalization in P[roto]-A[ltaic]. This may be explained by the fact that it was in most cases already incorporated into the verbal form as a suffix. It is interesting to note Mong[olian] **būi*, **bu* 'neg. particle' — which may be originally the same morpheme, but functioning as a separate word and thus subject to the rule **mV* > **bV*.

Bomhard (no. 846) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Kartvelian, Indo-European, and Altaic:

Proto-Nostratic negative/prohibitive particle **ma(?)*- (~ **mə(?)*-) 'no, not'

291. (?) **mālgi* 'breast, udder': Hamito-Semitic **m/g* 'breast, udder; to suck' ~ (?) Indo-European **melǵ-* 'to milk' ~ Uralic **mäl̥ye* 'breast, chest, cavity'. Strong.

Comments:

1. Faulty sound correspondences. Proto-Afrasian **/-g-/* does not correspond to Proto-Indo-European **/-ǵ-/* (= **/-k'-/* according to the glottalic model of Proto-Indo-European consonantism). This, in itself, does not necessarily invalidate the etymology — it just means that we are dealing with different root extensions.
2. That the **/-g-/* reconstructed in the Proto-Afrasian form by Illič-Svityč is a root extension is shown by the unextended root represented in Cushitic:

Proto-Afrasian **mal-* 'to draw (out), to squeeze (out), to suck (out); to give suck, to suckle, to nurse': Semitic: Arabic *malaġa* (inf. *malǧ*) 'to suck (the mother's breast)', *malaġa* (inf. *ʔimlāġ*) 'to give suck'. Arabic *malaḥa* 'to give suck'. Cushitic: Proto-Sam **maal-* 'to milk' > Somali *maal-* 'to milk'; Rendille *maal-* 'to milk'.

Note: Orël—Stolbova (1995:392, no. 1815) reconstruct Proto-Afrasian **mVlog-* ‘bosom; to suck’. However, they do not include the Cushitic forms in their etymology.

Bomhard (no. 862) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Uralic, Eskimo, and Indo-European:

Proto-Nostratic root **mal-* (~ **məl-*):

(vb.) **mal-* ‘to draw (out), to squeeze (out), to suck (out); to give suck, to suckle, to nurse’;

(n.) **mal-a* ‘milk; breast’

292. **mān*_A ‘man, male’: Hamito-Semitic **mn-* ‘male, man, person’ ~ Indo-European **m/o/n-* ‘man’ ~ Uralic **māńće* ‘man, person’ ~ Dravidian **mañ* ‘husband, lord’. Strong.

Comments:

1. The Proto-Indo-European form is better reconstructed as **manu-s* (cf. Pokorny 1959:700 **manu-s* [or **monu-s*] ‘man, mankind’; Walde 1927—1932.II:266; Watkins 1985:38 **man-* [also **mon-*] ‘man’; Gamkrelidze—Ivanov 1995.I:396 and I:661 **manu-* ‘person, man’; etc.). The often-repeated derivation of the Proto-Indo-European word for ‘man’, **manu-s*, from **men-* ‘to think’, as ‘the thinker’, is nothing more than self-flattery. More likely, especially in view of the forms from the other Nostratic daughter languages, is derivation from a root meaning ‘to lust after, to desire passionately, to copulate with, to have sexual intercourse, to beget’ (see above, no. 281).
2. The Proto-Uralic (and Proto-Dravidian) form points to **-/ń-/* (= **-/nʲ-/*) in Proto-Nostratic. Note: Illič-Svityč does not include Dravidian.
3. Dolgopolsky (2008:1341—1343, no. 1421) reconstructs Proto-Nostratic **mañU* ‘man, male’ and (2008:1362, no. 1440) Proto-Nostratic **mañV* or **mañV* ‘genitalia; to copulate’.

Bomhard (no. 874) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian, Dravidian, Indo-European, and Uralic:

Proto-Nostratic (n.) **manʲ-a* ‘progenitor, begetter, man, male; penis’:

Derivative of:

(vb.) **manʲ-* ‘to lust after, to desire passionately, to copulate with, to have sexual intercourse, to beget’;

(n.) **manʲ-a* ‘ardent desire, passion, lust’

293. **m/ä/rA* 'to be ill, to die': Hamito-Semitic **mr-* 'to be ill' ~ Indo-European **mer-* 'to die' ~ Uralic **m/e/rA* 'wound, pain'. Possible.

Comments:

1. The Uralic forms cited by Illič-Svityč are mentioned in Rédei (1986—1988:576) under Proto-Uralic **wire* 'blood', though no proto-form is reconstructed. Janhunen (1977:93) reconstructs Proto-Samoyed **merâjâj* 'wound'. The Uralic forms do not really fit in semantically with the evidence from the other Nostratic daughter languages (cf. Buck 1949:304—306, §4.85 wound [sb.]: "The words for 'wound' are mostly from roots denoting 'strike' or other actions [as 'pierce' or 'tear'] from which the wound resulted."). Consequently, the Uralic forms should be removed from this etymology.
2. Hittite (3rd sg. pres.) *mi-ir-zi*, *me-ir-zi* 'to disappear, to vanish' shows that the Proto-Indo-European form originally meant something like 'to perish, to disappear, to vanish' rather than 'to die', as traditionally assumed. Here, I have followed Kloekhorst (2008b:577—578) in assigning the meanings 'to disappear, to vanish' to the Hittite verb and reinterpreted the meaning of the Proto-Indo-European verb accordingly to accommodate the revised meaning of the Hittite form. This indicates that the meaning 'to die' found in the cognates in the non-Anatolian Indo-European daughter languages is an innovation.

Bomhard (no. 885) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and (?) Eskimo:

Proto-Nostratic root **mar^y-* (~ **mər^y-*):

- (vb.) **mar^y-* 'to be weakened, to wither away, to decay; to be or become sick, to fall ill; to die (from a fatal disease), to perish';
 (n.) **mar^y-a* 'sickness, illness, fatal disease, malady, ailment; death'

294. **mār'ä* 'moisture, damp': Hamito-Semitic **mr* 'damp; rain, reservoir' ~ Kartvelian **mar-(ei)* 'lake, moist soil; cloud' (< 'damp') ~ Indo-European **mor-* 'swamp, reservoir' ~ Dravidian [**maṛ-ai* 'rain'] ~ Altaic **mōRä-* / **müRä-* 'sea, river, water'. Possible.

Comments:

1. Illič-Svityč has confused two separate Proto-Nostratic stems here:
 - A. Proto-Nostratic **mar-a* 'marsh, swamp' (cf. Bomhard, no. 883, reconstructed based upon evidence from Indo-European, Altaic, and Eskimo);
 - B. Proto-Nostratic **mor-a* 'any body of water: sea, lake, flood, stream, pool, cistern, reservoir, basin, canal, channel' (cf. Bomhard, no. 900,

reconstructed based upon evidence from Afrasian, Kartvelian, Indo-European, and Altaic).

Thus, this entry cannot stand as written. Nevertheless, even taking the above qualifications into consideration, I have given this entry a positive rating, inasmuch as both stems are valid Proto-Nostratic etymologies.

2. Dravidian **maṛ-ai* ‘rain’ does not belong here. This eliminates the need to reconstruct Proto-Nostratic medial **/-r’-/* (= **/-rʸ-/*).

295. (?) **mene* ‘to step’: Indo-European **men-* ‘to trample, to step on, to crumple’ ~ Uralic **mene-* ‘to go’. Rejected.

Comments:

1. Lax semantics.
2. Pokorny (1959:726) reconstructs Proto-Indo-European **men-* ‘to step or tread on, to trample, to press together’ (‘treten, zertreten, zusammen-drücken’).
3. Rédei (1986—1988:272) reconstructs Proto-Uralic **mene-* ‘to go’.

296. (?) **mer’A* ‘fat; to smear with grease/fat’: Hamito-Semitic [**mr-* ‘greasy; to smear with grease/fat’] ~ Dravidian **meṛA-* ‘to smear with grease, to coat’. Rejected.

Comment: The Dravidian forms cited by Illič-Svityč do not belong here. Instead, Bomhard (no. 881) substitutes the following Dravidian (and Elamite) forms (cf. Burrow—Emeneau 1984:416, no. 4709):

Elamo-Dravidian: Middle Elamite *mi-ir-ri-* ‘to rub or smear oneself with fat or oil’. Dravidian: Parji *mer-* ‘to rub oneself’, *merpip-* (*merpit-*), *mercip-*, (*mercit-*) ‘to rub another with the hand’; Gadba *mar-* ‘to rub (oil, etc.) on oneself’, *marup-* (*marut-*) ‘to rub (oil, etc.) on another’; Gondī *marehtānā* ‘to rub’, *marahhtānā*, *marehtānā* ‘to smear’, *marehtālle* ‘to apply’.

As an alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 881) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Elamite, and Indo-European:

Proto-Nostratic root **mar-* (~ **mər-*):

- (vb.) **mar-* ‘to smear, to anoint, to rub (with grease, oil, fat, ointment)’;
 (n.) **mar-a* ‘grease, oil, fat, ointment, unguent’

297. **meta* ‘to feel, to realize’: Indo-European **med-* ‘to think over, to ponder’ ~ Altaic **medä-* ‘to feel, to know’. Rejected.

Comments:

1. Faulty sound correspondences.
2. Starostin—Dybo—Mudrak (2003:937—938) reconstruct Proto-Altaic **m[ɨu]ti* 'to know, to believe'.
3. According to Bomhard (no. 887), Proto-Indo-European **med-* 'to measure, to measure out, to estimate, to reckon' (= **met-* according to the glottalic model of Proto-Indo-European consonantism) is to be derived from the following Proto-Nostratic forms:

Proto-Nostratic root **mat-* (~ **mæt-*):

(vb.) **mat-* 'to stretch, to expand, to lengthen, to draw out, to measure out';

(n.) **mat-a* 'measure, measurement, amount; extent, limit'

298. **mEwa* 'water, moisture': Hamito-Semitic **mw* 'water, moisture' ~ Indo-European **meu-* 'moist; to moisten' ~ Altaic [**mō-* 'water']. Strong.

Comment: Starostin—Dybo—Mudrak (2003:935—936) reconstruct Proto-Altaic **m̄iūri* 'water', based upon evidence from Tungusic, Mongolian, Japanese, and Korean. However, Dolgopolsky (2008:1305—1307, no 1382) is probably correct in rejecting the comparison of the Tungusic forms with those from Mongolian, Japanese, and Korean. Starostin—Dybo—Mudrak reconstruct Proto-Tungusic **mū* 'water' (for information on the Tungusic forms, cf. Tsintsius 1975—1977.1:548—549):

Proto-Tungus **mū* 'water' > Evenki *mū* 'water'; Lamut / Even *mō* 'water'; Negidal *mū* 'water'; Manchu *muke* 'water; river, stream'; Jurchen *mo* 'water'; Ulch *mū* 'water'; Orok *mū* 'water'; Nanay / Gold *muke* 'water'; Oroch *mū* 'water'; Udihe *mu-de* 'inundation'; Solon *mū* 'water'.

Bomhard (no. 889) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, and Altaic (Tungusic):

Proto-Nostratic root **maw-* (~ **məw-*):

(vb.) **maw-* 'to be wet';

(n.) **maw-a* 'water, liquid, fluid'

299. **mi* 1st person singular personal pronoun: 'I' (oblique **mi-na*): Kartvelian **me/*mi* 'I' (oblique stem: **me-n-*) ~ Indo-European **me-* 'me' (oblique stem: gen. sg. **me-ne-*) ~ Uralic **mi* 'I' (oblique stem: **mi-na*) ~ Altaic **bi* 'I' (oblique stem: **min-a*). Strong.

Comment: This form was discussed under no. 289 above.

Bomhard (no. 892) treats the 1st person personal pronouns, singular and plural (inclusive), together and reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, Indo-European, Uralic, Altaic, Chukchi-Kamchatkan, Etruscan, Eskimo-Aleut, and Gilyak / Nivkh:

Proto-Nostratic first person singular **mi* (~ **me*) ‘I, me’, first person plural (inclusive) **ma* (~ **mə*) ‘we, us’

300. **mi* ‘what?’: Hamito-Semitic **m(j)* ‘what?, who?’ ~ Kartvelian *maj* ‘what?’ ~ Indo-European **mo-* stem of interrogative adverbs ~ Uralic **mi* ‘what?’ ~ Altaic [**mi-* ‘what?’, interrogative particle]. Strong.

Comments:

1. Klimov (1964:124 and 1998:112), Fähnrich—Sardshweladse (1995:226—227), and Fähnrich (2007:276) reconstruct Proto-Kartvelian **ma-* ‘what’. Klimov (1964:135) reconstructs Proto-Kartvelian **mi-n-* ‘who?’, but he changes the Proto-Kartvelian reconstruction to **win-* ‘who?’ in the later revised edition of his *Etymological Dictionary of the Kartvelian Languages* (1998:53). A similar reconstruction is given by Fähnrich—Sardshweladse (1995:135), Proto-Kartvelian **wi-* ‘who?’, and Fähnrich (2007:162—163), Proto-Kartvelian **wi-* ‘who?’. Taking into consideration the evidence from the other Nostratic daughter languages, it seems that Klimov’s earlier (1964) reconstruction (**mi-n-* ‘who?’) is the more likely.
2. Starostin—Dybo—Mudrak (2003:958) reconstruct Proto-Altaic **mŭ* interrogative root.
3. This stem only survives in relic forms in Celtic, Tocharian, and Hittite in Indo-European:

Proto-Indo-European **me-/mo-* interrogative and relative pronoun stem: Cornish (conjunction) *ma*, *may* ‘that’; Breton (conjunction) *ma*, *may*, Middle Breton *maz* (from *ma+ez*) ‘that’; Tocharian B *mäksu* (a) interrogative pronoun: ‘which?, who?’, (b) interrogative adjective: ‘which?, what?’, (c) relative pronoun: ‘which, who’, B *mäkte* (a) interrogative pronoun: ‘how?’, (b) comparative: ‘as’, (c) causal: ‘because’, (d) temporal: ‘as, while’, (e) final: ‘so, in order that’, (f) manner: ‘how’, A *mänt*, *mät* ‘how?’; Hittite *maši(ya)-* ‘how much?, how many?; as many as, as much as’, *ma-a-an*, *ma-an* (adverb and conjunction) ‘how, whether, like, (even) as, if’.

Bomhard (no. 891) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, Indo-European, Uralic, Altaic, Chukchi-Kamchatkan, and Eskimo:

Proto-Nostratic interrogative pronoun stem **mi-* (~ **me-*) 'who?, which?, what?', relative pronoun stem **ma-* (~ **mə-*) 'who, which, what'

301. **mīñä* 'woman, female relative': Hamito-Semitic **m(j)n* 'woman, female relative' ~ Uralic **mīñä* 'daughter/sister-in-law' ~ Dravidian **mīñ(t)-* 'female, woman; wanton woman'. Rejected.

Comments:

1. Sasse (1982:25—26) lists Burji *am-á* ~ *aam-á* (pl. *am-m-ána*) 'adult woman, wife, mother' and compares it with the following forms: Sidamo *am-a* 'woman', Alaba *am-a* 'mother', and Hadiyya *am-a(ti)* 'mater familias'. Obviously, the Highland East Cushitic evidence cited by Illič-Svityč does not belong here.
 2. The primary meaning of the Dravidian forms seems to be 'a lewd, dissolute or licentious person (man or woman), lecher, whoremonger, debauchee, libertine, rake, etc.' Semantically, this really does not fit in with the forms from the other Nostratic daughter languages included by Illič-Svityč.
302. **moL* 'to smash': Hamito-Semitic [**ml-* 'smash, break, dismember'] ~ Indo-European **mel-* 'to smash, to grind' ~ Uralic **moL/a/* 'to break, to break up'. Strong.

Comment: Illič-Svityč confuses two separate Proto-Nostratic stems here:

1. Bomhard (no. 890) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Chukchi-Kamchatkan:

Proto-Nostratic root **mel-*:

(vb.) **mel-* 'to rub' (> 'to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary');

(n.) **mel-a* 'smoothness, softness; weakness'; (adj.) 'smooth, soft, tender, weak, worn out, tired, weary'

2. Bomhard (no. 899) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, Uralic, Altaic, and (?) Eskimo:

Proto-Nostratic root **mol-*:

(vb.) **mol-* 'to rub' (> 'to rub into, to crush, to grind down; to rub smooth, to polish, to wipe; to wear out, to soften; to become worn out, weak, tired, weary');

(n.) **mol-a* ‘crumb, piece, morsel; mortar’; (adj.) ‘crushed, ground, worn out or down’

Note: It is uncertain whether the Proto-Indo-European form cited by Illič-Svityč is descended from the first (A) or the second (B) Proto-Nostratic form.

303. **mu* demonstrative pronoun: ‘this, that’: Kartvelian **m(a)-* demonstrative stem: ‘this, he’ ~ Uralic **mū/*mō* ‘other’ ~ Altaic **bū* (oblique **mu-n*) ‘this’. Strong.

Comment: This stem is only preserved in Indo-European in relic forms in Celtic:

Welsh *yma* (poetical *yman*) ‘here’; Breton *ama*, *amañ*, *-ma*, *-mañ* ‘here’, (Vannetais) *ama*, *amann*, *amenn* ‘here’; Cornish *yma*, *omma*, *-ma*, *-man* ‘here’.

Bomhard (no. 844) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Kartvelian, (?) Indo-European, Uralic, and Altaic:

Proto-Nostratic indefinite pronoun stem **ma-* (~ **mā-*), **mi-* (~ **me-*), **mu-* (~ **mo-*) ‘one, someone, somebody, anyone, anybody; other, another’:

Note: This may originally have been a demonstrative stem (as suggested by Illič-Svityč), with three degrees of distance:

Proximate: **ma-* (~ **mā-*) ‘this’;
Intermediate: **mi-* (~ **me-*) ‘that’;
Distant: **mu-* (~ **mo-*) ‘that yonder’

As in the stems:

Proximate:	<i>*k^ha-</i> (~ <i>*k^hā-</i>) ‘this’;	<i>*t^ha-</i> (~ <i>*t^hā-</i>) ‘this’;
Intermediate:	<i>*k^hi-</i> (~ <i>*k^he-</i>) ‘that’;	<i>*t^hi-</i> (~ <i>*t^he-</i>) ‘that’;
Distant:	<i>*k^hu-</i> (~ <i>*k^ho-</i>) ‘that yonder’	<i>*t^hu-</i> (~ <i>*t^ho-</i>) ‘that yonder’

304. **muçλ* ‘to wash’: Hamito-Semitic **m(w)š* ‘to wash’ ~ Indo-European **mesg-* ‘to wash, to dive’ ~ Uralic **muśλ*, **muśke-* ‘to wash’ ~ Dravidian **muc(c)-* ‘to wash’. Possible.

Comments:

1. Erroneous Proto-Nostratic reconstruction.
2. The Afrasian evidence does not belong here.
3. Rédei (1986—1988:289) reconstructs Proto-Uralic **muśke-* (**mośke-*) ‘to wash’.

Bomhard (no. 909) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Indo-European, and Uralic:

Proto-Nostratic root **mus^y-* (~ **mos^y-*):

(vb.) **mus^y-* 'to immerse, dip, or plunge in water, to bathe';

(n.) **mus^y-a* 'immersion, dip, plunge, bath'

Extended form (Indo-European and Uralic):

(vb.) **mus^y-V-k'-* 'to immerse, dip, or plunge in water, to bathe';

(n.) **mus^y-k'-a* 'immersion, dip, plunge, bath'

Note: Bomhard (no. 909) reconstructs Proto-Indo-European **mosk'-* (secondary *e*-grade form: **mesk'-*) 'to immerse in water, to dip or plunge in water' (traditional **mezg-* 'to dip, to plunge' — cf. Pokorny 1959: 745—746; Watkins 2000:56) based upon the following evidence from the Indo-European daughter languages:

Sanskrit *májjati* 'to sink, to dive, to plunge, to perish'; Latin *mergō* 'to dip, to plunge into liquid, to immerse'; Lithuanian (denominative) *mazgóju*, *mazgóti* 'to wash, to wash up, to scrub'; Latvian *mazgāju*, *mazgāt* 'to wash'.

305. **muč^λ* 'spoilage, shortage': Uralic **muč^λ* 'shortage, fault, illness' ~ Dravidian **mucc-* 'to spoil; to lose consciousness, to weaken'. Possible.

Comments:

1. The Dravidian forms (cf. Burrow—Emeneau 1984:438, no. 4903) point to a primary meaning 'to wear out, to decay, to fall apart', from which are derived the meanings (A) 'to be or become weak, faint, tired, weary' and (B) 'to spoil'.
2. The Uralic forms (cf. Rédei 1986—1988:283) point to a general term applied to 'any illness, sickness in general' ('irgendeine Krankheit').
3. As noted by Buck (1949:302—304, §4.84 sick; sickness), "[m]any of the words [for sick] are from the notion of 'weak, without strength or power' ..., so there could be a connection between the Dravidian and Uralic forms after all, though, on the surface, the semantics are not overly compelling. No doubt, evidence from other Nostratic daughter languages would go a long way to strengthening this etymology. Here, I am giving Illič-Svityč the benefit of the doubt.
4. Not in Bomhard (this book).

306. **muda* 'to end': Hamito-Semitic [**md* 'to end'] ~ Dravidian **mūt-* 'to end' ~ Altaic [**muda-* 'end']. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:946—947) reconstruct Proto-Altaic **mude* ‘soon, finally’ as the source of the Altaic forms cited by Illič-Svityč.
2. According to Haddadou (2006—2007:124), the Berber terms cited by Illič-Svityč mean (vb.) ‘to finish, to achieve; to be complete, to be finished, to be whole, etc.’ (‘finir, achever, être fini, être complet, être entier, etc.’), (n.) ‘achievement, totality, all’ (‘achèvement, totalité, tout’). Haddadou sets up a consonantal root *mdw* as the source of the Berber forms.
3. The Dravidian forms cited by Illič-Svityč point to Proto-Dravidian **mūt-* (short stem vowel) (vb) ‘to end, to terminate; to be completed, effected, accomplished; to be destroyed; to perish, to die; etc.’, (n.) ‘end, ruin, destruction, death, etc.’ rather than **mūt-* (long stem vowel) (cf. Burrow—Emeneau 1984:441, no. 4922).
4. It seems that only the Afrasian (Berber) and Dravidian forms can be included here with certainty.
5. Not in Bomhard (this book).

307. (?) **muña* ‘egg’: Uralic **muña* ‘egg, testicles’ ~ Dravidian [**muṭṭai* ‘egg’]. Strong.

Comments:

1. The Proto-Dravidian form is to be reconstructed as **muṭ-ay* ‘egg, testicle’.
2. Rédei (1986—1988:285—286) reconstructs Proto-Uralic **muna* ‘egg, testicle’. Thus, there is no basis for reconstructing Proto-Nostratic medial **-ñ-/-*.
3. Illič-Svityč also mentions the possibility that several forms from Slavic within Indo-European might be related:

Common Slavic **mōdo* (< **mon-d^h-*) ‘testicle’ > Russian *mudo* [мудо] ‘testicle’; Czech *moud* ‘testicle’; Polish *mudo* ‘testicle’ (Russian loan).

These should have, indeed, been included.

Bomhard (no. 903) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Indo-European, and Uralic:

Proto-Nostratic (n.) **mun-a* ‘egg, testicle’:

Extended form (Dravidian and Slavic, within Indo-European):

(n.) **mun-d-a* (~ **mon-d-a*) ‘egg, testicle’

308. **mu(n)kA* ‘heavy, difficult’: Kartvelian **mak-/mank-* ‘heavy’ ~ Dravidian **mukk-* ‘to exert oneself’ ~ (?) Altaic [**m/uy-/m/ukA-* ‘torment, suffering’]. Rejected.

Comment:

1. Faulty sound correspondences. Lax semantics.
2. Starostin—Dybo—Mudrak (2003:935) reconstruct Proto-Altaic **m̥iuno* 'suffering'.

309. **muri* 'to twist': Hamito-Semitic **mr-* 'to rotate, to twist, to turn' ~ Uralic **mura* 'to turn, to dislocate' ~ Dravidian **muri-* 'to twist, to revolve, to bend', **mur̥a* 'to twist, to rotate' ~ Altaic **muri-* 'to turn, to twist, to bend'. Strong.

Bomhard (no. 906) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Altaic:

Proto-Nostratic root **mur-* (~ **mor-*):

(vb.) **mur-* 'to turn, to twist, to bend';

(n.) **mur-a* 'bend, curve'

Note: The Indo-European forms cited by Bomhard either belong here or under the following Nostratic etymology (cf. Bomhard, no. 879):

Proto-Nostratic root **mar-* (~ **mər-*):

(vb.) **mar-* 'to turn: to overturn, to turn round, to turn over, etc.; to twist, to whirl, to roll; to bend';

(n.) **mar-a* 'the act of turning, turning over, turning round, etc.; rope, coil, string, cord'

310. **mura* 'to break, to smash': Hamito-Semitic **m(w)r* 'to crumble, to smash, to cut' ~ Indo-European **mer-* 'to smash, to grind, to crumble' ~ Uralic **mura* 'fragile, brittle; fragment' ~ Dravidian **mura*/**mur̥a* 'to break, to cut' ~ Altaic [**mura*/**mora* 'fragile, brittle']. Possible.

Comments:

1. The Afrasian forms cited by Illič-Svityč do not belong here.
2. Starostin—Dybo—Mudrak (2003) do not list the Altaic forms cited by Illič-Svityč. The closest they come is (2003:929) Proto-Altaic **m̥iore* 'to hurt, to damage, to wound'. This should be substituted for the Proto-Altaic form cited by Illič-Svityč.

Bomhard (no. 905) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Indo-European, Uralic, and Eskimo:

Proto-Nostratic root **mur-* (~ **mor-*):

(vb.) **mur-* 'to crush, to break, to destroy';

(n.) **mur-a* 'break, breach, rupture, fracture'; (adj.) 'crushed, broken, destroyed, ruptured, mutilated; weakened'

311. (?) **mūda* ‘to think’: Hamito-Semitic **m(w)d* ‘to understand, to think, to say’ ~ Indo-European **meudh-* ‘to think, to say’. Rejected.

Comment: Erroneous Proto-Afrasian reconstruction. The Proto-Semitic root is **mVd-*, with various “triconsonantizers” (Militarëv’s [2005] terminology). Notice also Egyptian *mdw* ‘to speak; speech, word, plea’ (also *mwdw*), *mdt* ‘speech, words’, *mdwtj* ‘speaker’, all with the same structure — root **mVd-* with “triconsonantizers” **/-w-/ ~ */-w/*.

312. (?) **maṭa* ‘worm’: Kartvelian **maṭ-ḷ-* ‘worm’ ~ Indo-European **mot-* ‘worm, insect’. Rejected.

Comment: The Proto-Kartvelian form is incorrectly reconstructed. It should be reconstructed as “a nominal derivative with a prefix *ma-*”, thus: **ma-ṭl-* ‘worm’ (cf. Klimov 1998:117; also see Fähnrich 2007:405).

313. **ma/ž/ḷ* ‘light, bright, sun’: Hamito-Semitic **mš* ‘sun, morning, fire’ ~ Kartvelian **mzi-e* ‘sun’. Rejected.

Comment: Faulty sound correspondences. Proto-Afrasian **/š/* does not correspond to Proto-Kartvelian **/zḷ/*.

314. **-n* suffix of oblique form of nouns and pronouns: Kartvelian **-n* suffix of oblique form of nouns and pronouns ~ Indo-European **(e)n* suffix of oblique form of nouns ~ Uralic **-n* suffix of oblique form of nouns and pronouns (> suffix of genitive) ~ Dravidian **(i)ṇ* suffix of oblique form of nouns (> suffix of genitive) ~ Altaic **-n* suffix of oblique form of nouns and pronouns. Possible.

Comments:

1. Greenberg reconstructs various Proto-Eurasiatic case markers/suffixes in **/N/*: (2000—2002.1:118—120) Personal N, (2000—2002.1:120—123) Absolutive N, (2000—2002.1:130—137) Genitive N, and (2000—2002.1:150—152) Locative N.
2. Bomhard also reconstructs various Proto-Nostratic relational markers containing **/-n-/*:
 - A. Direct object **-na* (Bomhard, vol. 1, Chapter 16, §16.27);
 - B. Genitive **-nu* (Bomhard, vol. 1, Chapter 16, §16.28);
 - C. Locative **-ni* (Bomhard, vol. 1, Chapter 16, §16.29); and
 - D. Dative **-na* (Bomhard, vol. 1, Chapter 16, §16.30).

According to Bomhard (vol. 1, Chapter 16, §16.29), in due course, **-n* became generalized as the oblique marker *par excellence* (cf. also Greenberg 2000—

2002.1:130). Thus, Bomhard's reconstructs an earlier stage of development than Illič-Svityč, in which the individual relational markers containing */-n-/ were still functionally distinct.

315. **nat/o/* 'female relative': Uralic **nato* 'sister-in-law' ~ Dravidian **nātt-/*natā-* 'sister's husband, brother's wife'. Strong.

Comment: Bomhard (no. 926) adds the following Southern Cushitic forms:

Proto-Southern Cushitic **nat'a* 'woman' > Ma'a *naseta* 'woman'; Iraqw *natsatsa* 'smooth'; Dahalo *nāt'a* 'woman'.

Bomhard (no. 926) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian (Southern Cushitic), Dravidian, and Uralic:

Proto-Nostratic (n.) **nat'a* 'woman, female relative'

316. **ne/rH/i* 'front of head, forehead': Hamito-Semitic [**njr(H)* 'forehead'] ~ Uralic **nēre* 'front of head, cheek, snout' ~ Dravidian **nerri* 'forehead, front'. Possible.

Comments:

1. Rédei (1986—1988:303—304) reconstructs Proto-Uralic **nere* (**nēre*) 'nose, snout, beak' ('Nase, Schnabel, Schnauze, Rüssel').
2. The Proto-Afrasian form should be removed.
3. Bomhard (no. 928) adds the following Indo-European forms:

Proto-Indo-European **ner-* '(the foremost) man or person, hero': Sanskrit *nár-* 'a man, hero (used also of gods), person; mankind, people (mostly plural)', *nárya-h* 'manly, strong'; Pāli *nara-* 'man; (pl.) people'; Avestan *nar-* 'man'; Greek ἀνὴρ 'a man (as opposed to a woman)'; Albanian *njeri* 'human being, man'; Latin (Sabinian) *Nērō* a family name; Umbrian (acc. pl.) *nerf* 'elders, chief citizens'; Oscan *ner* 'man'; Old Irish *nert* 'strength'; Welsh *ner* 'hero'.

For the semantic development, cf. Selkup Samoyed *hárnej* 'the foremost person' within Uralic.

Bomhard (no. 928) reconstructs the following Proto-Nostratic form based upon evidence from Dravidian, Indo-European, and Uralic:

Proto-Nostratic (n.) **ner-a* 'the highest, foremost, or most prominent person or thing'

317. **nimi* 'name': Indo-European **nōm-* 'name' ~ Uralic **nime* 'name'. Rejected.

Comments:

1. For the a detailed discussion of the Proto-Indo-European word for ‘name’ and its various possible reconstructions, cf. Mallory—Adams 1997:390.
 2. The terms involved here are best seen as early borrowings (cf. Campbell—Poser 2008:253; Joki 1973:291), though the direction of the borrowing cannot be determined.
318. **naʃra* ‘young, newborn’: Hamito-Semitic [**nʃr* ‘young; youth’] ~ Indo-European **iehr-* ‘spring, year’ ~ Uralic **ñōre* ‘young, newborn; spring’ ~ Dravidian **ñāḷ-* ‘young plant; to germinate’ ~ Altaic **ñā/r/ʌ* ‘young, newborn; spring’. Possible.

Comments:

1. Faulty sound correspondences — Proto-Nostratic initial */*ñ-*/ (= */*nʏ-*/) does not become Proto-Indo-European initial */*ī-*/ (= */*y-*/). Consequently, the Proto-Indo-European form should be removed.
2. According to Rédei (1986—1988:331), the vowels to be reconstructed for the Proto-Uralic (Proto-Ugrian) form are uncertain. He reconstructs **ñšr3* (**ñʃr3*, **ñʃrk3*). Décsy (1990:104) reconstructs Proto-Uralic **ñjārä* ‘twig, switch’, and Janhunen (1977:108) reconstructs Proto-Samoyed **ñer-*.
3. Starostin—Dybo—Mudrak (2003:1013—1014) reconstruct Proto-Altaic **ñjārī* (= **nʏiārʏi*) ‘man, young man’. They (2003:988—989) reconstruct a totally different stem (**ñjār[ä]*) as the ancestor of the forms from the Altaic daughter languages meaning ‘young, new, fresh; new-born; spring, summer; etc.’
4. See below (no. 331).

Bomhard has reworked this etymology and divided it into two distinct, though closely-related, Proto-Nostratic forms:

- A. Bomhard (no. 937) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian and Uralic:

Proto-Nostratic root **nʏaʃ-* (~ **nʏəʃ-*):

Extended form:

(vb.) **nʏaʃ-V-r-* ‘to appear, to arise, to sprout, to come into being; to grow (up), to mature’;

(n.) **nʏaʃ-r-a* ‘shoot, sprout, seedling’

Derivative:

(n.) **nʏaʃ-r-a* ‘young man, boy, youth’

- B. Bomhard (no. 938) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian and Altaic:

Proto-Nostratic (n.) **nʷaʃ-r-a* 'young man, boy, youth':

Derivative of:

(vb.) **nʷaʃ-V-r-* 'to appear, to arise, to sprout, to come into being; to grow (up), to mature';

(n.) **nʷaʃ-r-a* 'shoot, sprout, seedling'

319. **ńamʌ* 'to squeeze, to seize': Indo-European **ǵem-* 'to hold tightly, to bridle' ~ Uralic **ńomʌ-/(?) *ńamʌ-* 'to squeeze, to seize' ~ Dravidian **ńamʌ* 'to squeeze, to press'. Possible.

Comments:

1. The Proto-Indo-European form should be removed.
2. Starostin—Dybo—Mudrak (2003:1011—1012) reconstruct Proto-Altaic **ńǵáme* (= **nʷǵámi*) 'to curse, to harm'. Bomhard (no. 939C) reinterprets the meaning of the Proto-Altaic form as 'to crush, to destroy; to cripple, to maim; to be crushed, destroyed, weakened', based mainly upon the evidence from Turkic. Bomhard then includes the Altaic forms in this Nostratic etymology.

Bomhard (no. 939) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Uralic (Finno-Ugrian), and Altaic:

Proto-Nostratic root **nʷam-* (~ **nʷəm-*):

(vb.) **nʷam-* 'to press, to squeeze';

(n.) **nʷam-a* 'pressing, squeezing'

320. **ńara* 'fire, blaze': Hamito-Semitic [**nr* 'fire, blaze, sparkle'] ~ Dravidian **ńarʌ-* 'fire, blaze' ~ Altaic [**NaRa-* 'sun']. Rejected.

Comments:

1. Faulty sound correspondences.
2. The Afrasian (Semitic) material presented by Illič-Svityč is far too uncertain, though it may ultimately belong here. Orël—Stolbova (1995:410, no. 1906) reconstruct Proto-Afrasian **nVwur-* 'light', but this reconstruction is hardly compelling. The Semitic evidence does, indeed, point to Proto-Semitic **nVr-* '(vb.) to shine, to beam, to be bright; (n.) light, daylight', extended by various "triconsonantizers": **n/w/r-*, **n/h/r-*, **n/y/r-* (cf. Militarev 2005). Comparative data from other Afrasian daughter languages is needed to confirm the original biconsonantal root structure, to determine the original initial nasal, and to be able to ascertain the Proto-Afrasian root vowel.
3. Starostin—Dybo—Mudrak (2003:1028) reconstruct Proto-Altaic **ńǵérá* 'day, sun, light'.

321. (Descriptive) **ńām* ‘soft’: Uralic **ńamak*/**ńimak* ‘soft’ ~ Altaic **ńim*/**ńām* ‘soft’. Rejected.

Comments:

1. Rédei (1986—1988:314) reconstructs Proto-Finno-Ugrian **ńām* (= **nʷām*) ‘weak’.
2. Starostin—Dybo—Mudrak (2003:992—993) reconstruct Proto-Altaic **ńūmà* ‘warm; soft, mild’. This is not a good match for the Proto-Uralic form.

322. (?) **ńā/wH/a* ‘hair’: Uralic **ńāwa* ‘hair, down’ ~ Dravidian [**navir* ‘hair’]. Rejected.

Comments:

1. Faulty sound correspondences. Proto-Uralic initial **/ń-/* does not correspond to Proto-Dravidian **/n-/*. We would expect Proto-Dravidian **/ńāw-ir-/*, or the like.
2. The Uralic forms cited by Illič-Svityč are not in Rédei (1986—1988).

323. (?) **ńāž* ‘moist, damp’: Hamito-Semitic **nq-* ‘moist; to ooze out, to splash’ ~ Uralic **ńāč*/**ńäč* ‘moist, damp’. Rejected.

Comment: Faulty sound correspondences. Proto-Afrasian medial **-/q-/* (= **-/tʃ-/* ~ **-/tʰ-/* — cf. Steiner 1977) does not correspond to Proto-Uralic medial **-/č-/* ~ **-/ć-/*.

324. **ńida* ‘to tie, to bind’: Indo-European **nedh-* ‘to tie, to bind’ ~ Uralic **ńiḍa-* ‘to tie, to tack together, to join’. Rejected.

Comment: Faulty sound correspondences. Proto-Indo-European medial **-/dh-/* does not correspond to Proto-Uralic medial **-/ḍ-/*.

325. (Descriptive) **ńila* ‘slippery and moist (inner layer of rind, skin)’: Uralic **ńila* ‘inner layer of rind’ ~ Altaic **ńila* ‘slimy (surface)’. Rejected.

Comments:

1. Rédei (1986—1988:318—319) reconstructs Proto-Finno-Ugrian **ńila* (= **nʷila*) ‘slippery and moist, slimy’.
2. Starostin—Dybo—Mudrak (2003:865) reconstruct Proto-Altaic **lālè* ‘sticky substance’ as the source of the Altaic forms cited by Illič-Svityč.

326. **ńohra* ‘moist; to flow’: Hamito-Semitic [**nhr* ‘river; to flow’] ~ Uralic **ńora*/**ńōra*/**ńōru* ‘moist; swamp; to flow’ ~ (?) Dravidian **ńīr-* ‘moisture, water’ ~ Altaic **ńōru* ‘moist; swamp; to get soaked’. Rejected.

Comments:

1. Faulty sound correspondences. Proto-Dravidian medial */-ī-/ does not correspond to either Proto-Uralic or Proto-Altaic medial */-ō-/ ~ */-ö-/ , according to the reconstructions proposed by Illič-Svityč.
2. Rédei (1986—1988:324—325) reconstructs Proto-Uralic **ńor3* (= **nʷor3*) ‘swamp, bog, marsh, fen’.
3. Starostin—Dybo—Mudrak (2003:994) reconstruct **ńjúr̥e* (= **ńjúr̥e*) ‘to become wet, to soak’.

327. **ńowda* ‘to move quickly’: Hamito-Semitic **nwd-* ‘to move quickly’ ~ Indo-European **ǵeudh-* ‘to move quickly, to do battle’ ~ Uralic **ńowδa-* ‘to pursue, to follow’. Rejected.

Comment: Faulty sound correspondences. Lax semantics.

328. (?) **ńūkλ* ‘to shake, to pull at’: Uralic **ńūka* ‘to pull at, to jerk’ ~ Dravidian [**nuk-* ‘to shake’]. Rejected.

Comment: Faulty sound correspondences. Lax semantics.

329. **ńūλλ-* ‘to tear out, to scrape off’: Uralic **ńūlke-* ‘to skin, to tear out hair’ ~ (?) Dravidian **null̥-* ‘to pinch, to pinch off, to tear off’ ~ Altaic **ńūli-/ńöli-* ‘to strip, to tear out, to scrape off’. Rejected.

Comments:

1. Faulty sound correspondences. Proto-Dravidian medial */-l̥(l̥)-/ does not correspond to either Proto-Uralic medial */-l-/ or Proto-Altaic medial */-l̥-/.
2. Rédei (1986—1988:319) reconstructs Proto-Finno-Volgaic **ńilke-* (**ńūlke-*) (= **n̥vilke-* [**n̥vilke-*]) ‘to skin, to pull out hair’.
3. Starostin—Dybo—Mudrak (2003:1019—1020) reconstruct Proto-Altaic **ńölo* (~ -u-) (= **n̥ölo*) ‘to pluck, to pick out’.

330. **ńiKλa* ‘neck vertebra, neck’: Uralic **ńika* ‘vertebra, joint, neck, nape of neck’ ~ Altaic **ńika-* ‘neck vertebra, neck, collar’. Rejected.

Comments:

1. The Uralic forms cited by Illič-Svityč are not in Rédei (1986—1988).
2. Starostin—Dybo—Mudrak (2003:983—984) reconstruct Proto-Altaic **ńj̥ake* ‘neck, vertebra’.

331. **NajRλ* ‘man, male’: Indo-European **ner-* ‘man, male, male strength’ ~ Altaic [**niarλ* ‘man, person’]. Rejected.

Comments:

1. Erroneous Proto-Nostratic reconstruction.

2. The Indo-European evidence was covered above (no. 316).
 3. The Altaic evidence was covered above (no. 318).
332. **NA* demonstrative pronoun: Hamito-Semitic **n(j)* demonstrative pronoun ~ Kartvelian **-n* marker of 3rd singular subject ~ Indo-European **ne-*/**no-* stem of demonstrative pronoun ~ Uralic **nA-* stem of demonstrative pronoun ~ Dravidian **nā-* demonstrative pronoun. Strong.

Bomhard (vol. 1, Chapter 16, §16.18; no. 913) reconstructs the following Proto-Nostratic deictic particle based upon evidence from Afrasian, Kartvelian, Indo-European, Uralic, and Altaic:

Proto-Nostratic deictic particle **na* (~ **nə*), **ni* (~ **ne*) ‘this, that’

Here is the supporting evidence presented by Bomhard:

- A. Afrasian: Proto-Semitic demonstrative stem/deictic particle **na*/**-n* (cf. Akkadian *annū* ‘this’; Sabaean *-n* definite article; Hebrew *-n* deictic element). Egyptian (dem. neuter and pl.) *nʒ* ‘this, these’, (dem. pronoun) *nw* ‘this, these’; Coptic *n-* [**N-**], *nen-* [**NEN-**] plural of definite article, *nai* [**NAI**] ‘these’, *nē* [**NH**] ‘those’. Berber: Kabyle *-nni* ‘this, that; these, those’, *-inna/-yinna* ‘that, those’ (a person or thing at a distance but usually within sight). East Cushitic: Afar **n-a*, Saho **n-i/u*. Sasse further notes that this stem is attested in combination with *k/t* demonstratives in Galla / Oromo and Saho-Afar. Proto-Agaw **-n-* in **ʔə-n-* ‘this’ > Bilin *ʔəna* ‘this’, *ʔən* ‘the’; Xamtanga (suffix) (m.) *-in* ‘that’.
- B. Kartvelian: Found in verb endings in Kartvelian. Proto-Kartvelian third person singular present iterative (subjective conjugation) **-n* > Old Georgian *-n*; Mingrelian *-n*; Laz *-n*. Proto-Kartvelian third person plural present (subjective conjugation) **-en* > Georgian *-en*, *-n*; Mingrelian *-an*, *-a*, *-n*; Laz *-an*, *-n*.
- C. Indo-European: Proto-Indo-European demonstrative stem **ne-*, **no-*; **ʔe-no-*, **ʔo-no-* > Sanskrit (instr.) *anēna*, *anāyā* ‘this, these’; Avestan *ana-* ‘this’; Greek *ἐν* ‘the last day of the month’; Latin (conj.) *enim* ‘indeed, truly, certainly’; Lithuanian *añs*, *anàs* ‘that, that one’; Old Church Slavic *onъ* ‘that, he’; Hittite *an-ni-iš* ‘that, yonder’; Armenian *na* ‘that; he, she, it; him, her’. This stem may occur in the third plural verb ending **-n* as well. This was later extended by **-tʰ* to form a new third plural ending **-ntʰ*. Later still, this was further extended by a deictic **-i* to form the so-called “primary” third plural ending **-ntʰi*.
- D. Uralic: Proto-Uralic **nā* (~ **ne* ~ ? **ni*) ‘this; this one’ > Finnish *nämä/nä-* (pl. of *tämä/tä-*) ‘these’, *ne/ni-* (pl. of *se*) ‘these, those’, *näim* ‘so, like this’, *niin* ‘so, thus’; Lapp / Saami *navt*, *na* ‘like this, in the same way as this’;

Mordvin *ne* (pl. of *te* 'this' and *se* 'that') 'these, those'; Zyrian / Komi *na*, *najō* 'she'; Selkup Samoyed *na* 'that', *nyy* 'thither'.

- E. Altaic: Proto-Tungus third person possessive suffix **-n* > Evenki *-n* (*-in* after consonants); Lamut / Even *-n* (*-an* after consonants); Udihe *-ni*; etc.

333. **-NA* suffix of plural animate nouns: Hamito-Semitic **-ān* suffix of plural animate nouns ~ Kartvelian **-en/*-n* suffix of plural nouns (originally animate) in direct case ~ (?) Uralic **-NA* suffix of plural nouns ~ Altaic **-na/*-nā* suffix of plural animate nouns. Strong.

Bomhard (vol. 1, Chapter 16, §16.26) reconstructs the following Proto-Nostratic plural marker based upon evidence from Afrasian, Kartvelian, Indo-European, Uralic, Altaic, and Chukchi-Kamchatkan:

Proto-Nostratic **-nV* plural marker

334. **NEga* 'to stab': Hamito-Semitic **ng-* 'to stab, to pierce' ~ Indo-European **neǵh-* 'to stab, to pierce'. Rejected.

Comment: Faulty sound correspondences.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 921) reconstructs the following Proto-Nostratic form based upon evidence from Afrasian and Indo-European:

Proto-Nostratic root **nag-* (~ **nəg-*):
(vb.) **nag-* 'to strike, to split, to pierce, to stab';
(n.) **nag-a* 'stroke, blow, wound'

Bomhard includes the following Indo-European evidence:

Proto-Indo-European **neǵh-/*nogh-* 'to strike, to split, to pierce': Old Irish *ness* 'wound'; Old Church Slavic *nožb* 'knife', *pro-noziti* 'to pierce through'.

335. **Nüga* 'now': Indo-European **nuH-* 'now' ~ Uralic **Nüka* 'now'. Strong.

Comment: Erroneous Proto-Nostratic reconstruction.

Bomhard (no. 936) reconstructs the following Proto-Nostratic particle based upon evidence from Afrasian (Egyptian/Coptic), Indo-European, and Uralic:

Proto-Nostratic (adv.) **nuw-* 'now, at present, currently'

336. (?) **pal* ‘swamp’: Indo-European **bolH-/pelH-* ‘swamp’ ~ Altaic [**pal-* ‘swamp’]. Rejected.

Comments:

1. Faulty sound correspondences.
2. According to Bomhard (vol. 1, Chapter 21, no. 137), the Proto-Indo-European forms may be borrowings from Northwest Caucasian (Abkhaz):

Common Abkhaz **p’əlhata* ‘swamp, mud’: South Abkhaz *a-p’əlhát* ‘abyss, quagmire, mud’.

3. Bomhard (vol. 1, Chapter 21, no. 137) cites the following Indo-European forms as possible borrowings from Northwest Caucasian:

(?) Illyrian **balta* ‘swamp’ (> Albanian *baltë* ‘mud, clay, earth; swamp, marsh’, *Balti* ‘mud’, *baltomë* ‘mud, filth’; Romanian *baltă* ‘swamp’; Modern Greek *βάλτος* ‘swamp’); Old Church Slavic *blato* (< **bolto-*) ‘quagmire, swamp’; Russian *bolóto* [болото] ‘marsh, bog, swamp’; Serbo-Croatian *blāto* ‘mud, swampy terrain’; Czech *blāto* ‘mud’; Bulgarian *blāto* ‘mud, swamp’; Lithuanian *balà* ‘swamp’.

Note: According to the glottalic model of Proto-Indo-European consonantism, the sound traditionally reconstructed as **/b/* was the bilabial ejective **/p’/*.

337. **pelHi* ‘to shake, to fear’: Indo-European **pelH-/pleH-* ‘to shake, to fear’ ~ Uralic **pele-* ‘to fear’ ~ (?) Dravidian [**pīɻ-* ‘to shake, to fear’] ~ Altaic **pēli-* ‘to be frightened’. Possible.

Comments:

1. The Proto-Dravidian form should be removed. Proto-Dravidian medial **/-ɻ-/* does not correspond to medial **/-l-/* in the other Nostratic daughter languages.
2. Rédei (1986—1988:370) reconstructs Proto-Uralic **pele-* ‘to fear, to be afraid’.
3. Starostin—Dybo—Mudrak (2003:238—239) include the Altaic forms cited by Illič-Svityč under Proto-Altaic **belV* ‘hysterics, panic, mourning’. Therefore, the Altaic evidence should be removed from this etymology.

Bomhard (no. 116) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, and Uralic:

Proto-Nostratic root **p^hel-*:

(vb.) **p^hel-* ‘to tremble, to shake; to be frightened, fearful, afraid’;

(n.) **p^hel-a* ‘fright, fear’

338. (?) **pūrčΛ(gΛ)/*pülčΛ(gΛ)* ‘flea’: Hamito-Semitic **p₁rgt/*brgt/(?)* **p₁lgt* ‘mosquito, flea’ ~ Indo-European **bhlus-/*plus-* ‘flea’ ~ Altaic **püragä/* **bürägä/(?)* **pürčä* ‘flea’. Rejected.

Comment: Faulty sound correspondences. There is even a single fragment of this etymology that can be salvaged.

339. (Descriptive) **p^här/a/* ‘to tear, to break, to split’: Hamito-Semitic **p/r-* ‘to split, to destroy, to cut’ ~ Kartvelian **p₁r-eç-/p₁r-iç-* ‘to tear’ ~ Indo-European **(s)per-* ‘to tear, to break’ ~ Uralic **pärä-* ‘to break’ (derived form **pärek* ‘broken off piece’) ~ Dravidian **pari-/p₁ari-* ‘to tear, to break, to split’ ~ Altaic **p^hör’ül/*p^hür’ü-* ‘to tear, to smash, to grind’. Possible.

Comments:

1. Rédei (1986—1988:366) reconstructs Proto-Finno-Ugrian **päre* ‘small piece, bit, fragment’.
2. Starostin—Dybo—Mudrak (2003:1158) reconstruct Proto-Altaic **p^hö^hre* (~ **p^hě^hro*) (= *p^hiö^hrye* [~ **p^hě^hryo*]) ‘to screw, to carve, to scratch’. This should be removed from this entry — the vowels do not match those from the other Nostratic daughter languages.
3. Removing the Altaic forms means that there is no basis for reconstructing Proto-Nostratic medial **/-r’-/* (= **/-ry’-/*).

Bomhard (no. 99) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Kartvelian, Indo-European, Uralic, Altaic, and Chukchi-Kamchatkan:

Proto-Nostratic root **p^har-* (~ **p^hər-*):

(vb.) **p^har-* ‘to separate, to divide, to break (apart)’;

(n.) **p^har-a* ‘part, portion, share’

340. (Descriptive) **p^hisΛ* ‘to splash’: Kartvelian **ps-* ‘to urinate’ ~ Uralic **piSa-* ‘to drip, to drizzle’ ~ Dravidian **picΛ* ‘to drizzle, to rain’ ~ Altaic **p^hisü-/p^hüsü-* ‘to splash’. Weak.

Comment: This is one of the few times that an entry is labelled “descriptive” (дескрипт.) (onomatopoetic) by Illič-Svityč where the label is actually warranted. Even though this is probably a valid etymology in one form or another, it cannot be used to establish genetic relationship.

341. **p^hoʒga/*p^hodga* ‘hip’: Hamito-Semitic **pΛxd/*pΛxd/*xpd* (< **pΛdx-/pΛdx-* with metathesis) ‘hip’ ~ Indo-European **bhe/dh/-* ‘hip’ ~ Uralic **pōč₁ka* ‘hip,

calf, meaty bulge’. Doubtful correspondences in Kartvelian and Altaic. Rejected.

Comment: Impossible sound correspondences. Erroneous Proto-Nostratic reconstruction.

342. (?) **P/ä/Hja* ‘pain’: Indo-European **pehi-* ‘to cause pain, to scold’ ~ Altaic [**Pöjä* ‘wound’]. Weak.

Comments:

1. Erroneous Proto-Nostratic reconstruction. Lax semantics.
2. Starostin—Dybo—Mudrak (2003:1165) reconstruct Proto-Altaic **p’oje* (~ *-ju-*, *-jo-*, *-i*) (= **p^hoje*) ‘pain, sore’.
3. Pokorny (1959:792—793) reconstructs Proto-Indo-European **pē(i)-*, **pī-* ‘to hurt, to scold, to shame’.

343. **qoṭi* ‘to ignite; fire’: Hamito-Semitic **xt-/xt-* ‘to ignite, to blaze up’ ~ Indo-European **Hēt-* ‘fire, hearth’ ~ (?) Dravidian [**ota* ‘to kindle’] ~ Altaic **ōti* ‘spark, fire’. Rejected.

Comments:

1. Faulty sound correspondences. Erroneous Proto-Nostratic reconstruction.
2. Proto-Indo-European **Hēt-* ‘fire, hearth’ cannot possibly come from Proto-Nostratic **qoṭi* ‘to ignite; fire’.
3. Starostin—Dybo—Mudrak (2003:1067) reconstruct Proto-Altaic **ōt’a* (~ *-t-*) (= **ōt^ha*) ‘fire; hot, warm’. Proto-Altaic medial **/-t’-/* (= **/-t^h-/*) points to Proto-Nostratic medial **/-t^h-/*. Proto-Nostratic initial **/q-/* does not become Proto-Altaic initial **/Ø-/*.
4. Proto-Nostratic initial **/q-/* does not become Proto-Dravidian initial **/Ø-/*.

344. **qura* ‘edge, tip; to cut’: Hamito-Semitic **qwr* ‘to cut, to dig; opening’ ~ Kartvelian **qwer-* ‘to castrate’ ~ Uralic **kur_Λ* ‘knife’ ~ Dravidian [**kūr* ‘sharp’] ~ Altaic [**Kur-ča* ‘sharp’]. Rejected.

Comment: Faulty sound correspondences. Erroneous Proto-Nostratic reconstruction.

As a partial alternative proposal to Illič-Svityč’s etymology, Bomhard (no. 519) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Uralic:

Proto-Nostratic root **k^{wh}ar-* (~ **k^{wh}ar-*):

(vb.) **k^{wh}ar-* ‘to cut’;

(n.) **k^{wh}ar-a* ‘piece cut off; knife’

Derivatives:

- (vb.) **k^{wh}ar-* 'to cut a groove, to hollow out, to dig';
 (n.) **k^{wh}ar-a* 'cut, hole, hollow, digging, excavation, pit, groove, trench'
 (vb.) **k^{wh}ar-* 'to cut short, to reduce, to decrease, to diminish, to lessen';
 (n.) **k^{wh}ar-a* 'shortness'; (adj.) 'short'

Note: Bomhard includes Proto-Uralic **kur3* 'knife' (cf. Rédei 1986—1988:218—219) in his proposal but not the other forms included by Illič-Svityč.

345. (?) **q̣^h* particle of collective meaning: Kartvelian [**-qe* marker of plural of 2nd/3rd person oblique object] ~ (?) Indo-European **-k^h* suffix of collective ~ Uralic **-k* suffix of plural (in pronominal markers of 1st and 2nd plural) ~ Dravidian **-k(k)* suffix of noun plural. Possible.

Comment: Erroneous Proto-Nostratic reconstruction. There is nothing in the data cited from the Nostratic daughter languages to justify reconstructing a Proto-Nostratic initial postvelar ejective **/q̣-/* (= **/q̣'-/*).

Bomhard (vol. 1, Chapter 16, §16.23) reconstructs the following Proto-Nostratic plural marker based upon evidence from Afrasian, Dravidian, Uralic, Gilyak / Nivkh, and Eskimo:

Proto-Nostratic plural **-k^hu*

346. (?) **rEʃ^h* 'daylight': Hamito-Semitic **rjʃ* 'sun, daylight' ~ Kartvelian [**r/h/* 'to dawn, to shine']. Rejected.

Comments:

1. Faulty sound correspondences.
2. Not listed in Klimov (1998). Svan (Upper Bal) has the following forms: *lirhāl* 'to dawn', *lirhe* 'to light something; to be lit up; to dawn', *lirhi* 'to stay awake during the night', *rəhi* 'clear (light)', *rəhijburi* (idiomatic) 'life' (that is, 'light and dark').

347. **SAl^h* 'favorable': Hamito-Semitic **šl-* 'favorable, fortunate' ~ Indo-European **selh-/sleh-* 'favorable'. Rejected.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 287) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, and Indo-European:

Proto-Nostratic root **s^{vo}l-*:

- (vb.) **s^{vo}l-* 'to be safe, well, sound';

(n.) **sʷol-a* ‘safety; health, welfare’; (adj.) ‘safe, well, sound’

348. **šehr’a* ‘to be awake’: Hamito-Semitic [**šhr* ‘to be awake’] ~ Indo-European **se/Hr/-* ‘to guard (vigilantly)’ ~ Uralic [**š/era* ‘to be awake’] ~ Altaic **Ser’ä* ‘to be awake, to awaken, to notice’. Rejected.

Comment: Faulty sound correspondences. Lax semantics.

349. (Descriptive) **taph(a)* ‘to beat’: Hamito-Semitic **tp̣h* ‘to beat, to trample, to break’ ~ Indo-European **tep-* ‘to beat, to crush’ ~ Uralic **tappa-* ‘to beat, to trample, to kick’ ~ Dravidian **tabb-* ‘to beat’ ~ Altaic **t’api-* ‘to beat, to hammer’ / **t’äpi-* ‘to beat, to kick’. Possible.

Comments:

1. Faulty sound correspondences.
2. Proto-Dravidian **tabb-* is not a valid reconstruction. Instead, it should be Proto-Dravidian **tapp-* ‘to strike, to beat, to kill, etc.’ (cf. Burrow—Emeneau 1984: 367, no. 3075).
3. Starostin—Dybo—Mudrak (2003:1355—1356) reconstruct Proto-Altaic **tāp’V* (= **tāpʰV*) ‘to stamp, to press’.
4. Illič-Svityč has confused two separate Proto-Nostratic stems here.

Bomhard reconstructs two distinct Proto-Nostratic forms as follows:

- A. Bomhard (no. 193) reconstructs the following Proto-Nostratic forms based upon evidence from Dravidian, Indo-European, and Uralic:

Proto-Nostratic root **thapʰ-* (~ **thəpʰ-*):

(vb.) **thapʰ-* ‘to strike, to knock, to hit, to beat, to pound; to trample’;

(n.) **thapʰ-a* ‘stroke, slap, blow, hit’

- B. Bomhard (no. 228) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Indo-European, and Altaic:

Proto-Nostratic root **t’apʰ-* (~ **t’əpʰ-*):

(vb.) **t’apʰ-* ‘to strike, to beat, to pound’;

(n.) **t’apʰ-a* ‘stroke, blow’

350. **wola* ‘big’: (?) Afrasian **w/l/-* ‘big’ ~ Indo-European **uel-* ‘big’ ~ Uralic **wola* ‘many, surplus’ ~ Dravidian **val* ‘big, strong’ ~ Altaic **ola* ‘many’. Rejected.

Comments:

1. Starostin—Dybo—Mudrak (2003:1494) reconstruct Proto-Altaic **ulu* (~-o) 'big, many; good'.
2. Rédei (1986—1988:543—544) reconstructs Proto-Uralic **ulʒ* (-jʒ) 'many, big; very'.

As an alternative proposal to Illič-Svityč's etymology, Bomhard (no. 797) reconstructs the following Proto-Nostratic forms based upon evidence from Afrasian, Dravidian, Indo-European, and Yukaghir:

Proto-Nostratic root **wal-* (~ **wəl-*):

(vb.) **wal-* 'to be or become strong';

(n.) **wal-a* 'strength, power'

Note: The revised Proto-Uralic form may be related to the revised Proto-Altaic form (though not to the Afrasian, Indo-European, and Dravidian forms). More research is needed.

351. **woṭa* 'to get, to obtain, to overtake': Uralic **wotta-* 'to bag game, to overtake (when hunting)' ~ Dravidian **ott-* 'to extract, to bring'. Rejected.

Comments:

1. Faulty Proto-Nostratic reconstruction. There is not a shred of evidence, based upon the forms cited from the Nostratic daughter languages, to justify reconstructing a medial dental ejective **-/t̪-/* (= **-/t'-/*) in Proto-Nostratic.
 2. Lax semantics.
352. **zap'a* 'to take into one's hands, to hold': Indo-European **sep-* 'to hold, to be occupied with something' ~ Altaic **žapa-* 'to take into one's hands, to make, to arrange'. Rejected.

Comments:

1. Faulty sound correspondences. Erroneous Proto-Nostratic reconstruction.
 2. Starostin—Dybo—Mudrak (2003:1528) reconstruct Proto-Altaic **žapʷu* (= **žapʰu*) 'to hold, to connect'.
353. **ž/a/ñʌ* 'fetus, fruit, pregnancy, descendants': Hamito-Semitic **ḡn-* 'to get pregnant; descendants; brother, sister' ~ (?) Kartvelian **zɪm-a* 'brother' ~ Dravidian **can-ai* 'fetus, pregnancy'. Rejected.

Comments:

1. Faulty sound correspondences. Proto-Afrasian initial **/ḡ-/* (= **/tʰ-/* ~ **/t'-/* — cf. Steiner 1977) does not correspond to Proto-Kartvelian initial **/zɪ-/* or Proto-Dravidian initial **/c-/*.

2. Erroneous Proto-Nostratic reconstruction.

SUMMARY / CONCLUSIONS

Based upon this review, it should be clear that Illič-Svityč's work is riddled with faulty sound correspondences ("non-corresponding sound correspondences" [cf. Campbell—Poser 2008:247—248]), rather lax semantics ("semantically non-equivalent forms" [cf. Campbell—Poser 2008:249, §9.4.1.6]), and impossible Proto-Nostratic reconstructions ("typological problems" [cf. Campbell—Poser 2008:250, §9.4.1.8]). It is also apparent that Illič-Svityč had a rather superficial understanding of Afrasian, at best, though his handling of the Uralic and Altaic data was much better. Even here, however, he has not escaped criticism (cf. especially Campbell—Poser 2008:243—264, §9.4; to be fair, see here also the reviews of Campbell—Poser [2008] by George Starostin [2009] and Václav Blažek [2010]). Given the time period during which he worked (mid-1960s), Illič-Svityč's handling of the Afrasian data he cites is understandable and forgivable, considering the state of the field at the time. There have been tremendous advances in Afrasian scholarship over the past fifty years, much of it by Russian scholars. Unlike Campbell—Poser (2008:249, §9.4.1.5), however, I do not fault "short forms" when pronouns and particles are involved. Though I mostly agree with Campbell—Poser's (2008:246—247) criticism of Illič-Svityč's inclusion of so-called "descriptive" forms ("onomatopoetic, affective, expressive, ideophonic, or sound-symbolic forms"), Illič-Svityč's use of the label "descriptive" (дескрипт.) often seems rather arbitrary to me, and I would remove the label from most of the forms where it occurs. Even though the inclusion of such forms, when correctly identified as such, cannot be used to establish genetic relationship, I do not have any problem including such forms whenever the cumulative evidence from the daughter languages shows that they were part of the primordial vocabulary. But, to repeat and re-emphasize, onomatopoeia, nursery words, chance resemblances, and the like must never be used as evidence to try to establish a genetic relationship among languages — reconstruction, yes; evidence, no.

Another point must be emphasized, since it has characterized Russian scholarship on Nostratic from the beginning right up to the present day (cf., for example, Starostin—Kassian—Zhivlov 2015). Illič-Svityč (as well as Dolgopolsky) gives far too much weight to Uralic. To anyone who has seriously studied the subject, it is blatantly obvious that Proto-Uralic is not the most conservative Nostratic daughter language. Rather, it belongs, as Joseph Greenberg (2000—2002) tried to show, to the Eurasiatic sub-branch of Nostratic. Consequently, attempts to reconstruct Proto-Nostratic based upon Proto-Uralic can only lead to gravely flawed results. No doubt, the overreliance on Uralic is the reason that several contemporary Russian scholars are confused about whether Afrasian should or should not be included within the Nostratic macrofamily. Afrasian is most definitely a branch of

Nostratic — indeed, the oldest branch —, as originally shown by Illič-Svityč and confirmed by the work of Dolgopolsky and Bomhard.

As an aside, yet another problem I see with contemporary Russian scholarship on distant linguistic relationship is the careless use of lexicostatistics, Swadesh lists, and glottochronology — to his credit, Illič-Svityč did not use these methodologies. For example, a careful reading of a recent (2015) article published in the *Journal of Indo-European Studies* by the Russian scholars George Starostin, Alexei Kassian, and Mikhail Zhivlov (all highly competent linguists in their own right) entitled “Proto-Indo-European-Uralic Comparison from the Probabilistic Point of View” unambiguously exposes the shortcomings of these methodologies, namely, assumptions based upon assumptions based upon assumptions masquerading as methodological rigor (note here especially Roger Blench’s 2014 paper “Language Levelling Challenges All Mathematical Methods of Language Classification” available for free download on academia.edu; note also the comments on the 2015 paper by Starostin—Kassian—Zhivlov by Don Ringe, Brett Kessler, and Petri Kallio). Typically, the authors try to conceal the shortcomings of these methodologies through the use of highly specialized technical jargon, statistics, and sophisticated logic. However, one of these scholars inadvertently disclosed the legerdemain going on by freely admitting in print that he kept changing the input data used in one of his models until he achieved the desired results. The scientific name for this kind of activity is “fudging”. These tactics notwithstanding, the use of lexicostatistics, glottochronology, and Swadesh lists falls far short of what might be considered as reasonable standards of scientific rigor and precision. As is to be expected, the continued use of discredited methodologies (cf. Dixon 1997:36) does not inspire confidence in the results achieved or the conclusions reached. Perhaps, Roy Andrew Miller (1980:86) said it best:

For the historical linguist, the entire proposition of “basic vocabulary,” including both the idea that some words in a language are, or should be, more resistant to historical change than others, and the idea that certain kinds of words are of special importance in helping to demonstrate a genetic relationship of languages in a convincing fashion, is unsupported, undemonstrable, and unscientific...

The damage that has been done to historical linguistics because of the mistaken application of the essentially erroneous thesis of “basic vocabulary,” particularly when some scholars have attempted to employ it for quasi-statistical purposes (“glottochronology” or “lexicostatistics”), has been immense.

A recent issue of *Diachronica* was devoted to a discussion of these methodologies: Søren Wichmann and Anthony Grant (eds.), *Quantitative Approaches to Linguistic Diversity: Commemorating the Centenary of the Birth of Morris Swadesh*. (= *Diachronica* XXVII/2, 2010.) Amsterdam and Philadelphia, PA: John Benjamins. In closing, we may note that these methodologies are only as good as the

assumptions upon which they are based — astonishingly, those assumptions keep changing as scholars struggle to refine these methodologies in response to criticisms and to correct inherent flaws. Sadly, the flaws are both too numerous and too deep-rooted to be overcome, some heroic efforts in that direction notwithstanding (cf. George Starostin 2010). Furthermore, the results achieved by the use of these methodologies are dependent upon the quality of the input data. In this regard, the Global Lexicostatistical Database (GLD) initiated by the late Russian scholar Sergej Starostin may be mentioned. The quality of the data included in this database is notoriously unreliable, and several scholars have commented on this and urged extreme caution in using this resource.

At the beginning of this review, I laid out the criteria for evaluation and proposed a scale consisting of four categories: “strong”, “possible”, “weak”, and “rejected”. Now, we can summarize our findings in terms of those categories, applied to the 353 entries in the first two volumes of Illič-Svityč’s Nostratic dictionary:

Category	Number of Items	Percentage
Strong	85	24%
Possible	86	24%
Weak	28	8%
Rejected	154	44%
Totals	353	100%

My overall assessment is that we should truthfully acknowledge and graciously abandon what Illič-Svityč got wrong in his Nostratic dictionary, we should be thankful for what he got right, and we should build on the foundation of what he got right. The valid entries in Illič-Svityč’s dictionary are more than what we had before, and they provide a good basis for further research.

POSTSCRIPT

Due to highest respect and admiration I have for the body of work on Nostratic produced by Vladislav Markovič Illič-Svityč, this is not a review that I really wanted to prepare, and I have resisted the temptation to do so for many, many years. However, for over 35 years, I have stood (mostly) silently by and read and listened to comments by a small clique of Russian colleagues on how great (unassailable/sacrosanct) Illič-Svityč’s version of Nostratic is and how inferior my own endeavors in the field are in comparison. Saying that something is so does not make it so, no matter how many times it is repeated. As noted by Anatole France: “If fifty million people believe a foolish thing, it is still a foolish thing”. This arrogance and condescending attitude on the part of the Russians is not only baseless, it continues

unabated to the present day (June 2020). Part of the adulation of Illič-Svityč's work is due to the "Slava Cult" mentioned at the beginning of this Appendix. Well, enough is enough!

To illustrate the kind of behavior I am talking about here, I would like to mention a single example — a review (in both Russian and English) written in 1987 by the late Eugene Helimski of my 1984 book *Toward Proto-Nostratic*. I have chosen this example because it is still being cited by Russian scholars, who have claimed that I have ignored the concerns raised by the Helimski in my subsequent work. My answer to that criticism is that they are correct — I have, indeed, intentionally ignored Helimski's criticism. The reason for this is that I disagreed with most of Helimski's review when it was published, and I still do. Some of the criticisms raised by Helimski fall into the category of "straw man arguments". To quote Wikipedia:

A *straw man* is a common form of *argument* and is an informal fallacy based on giving the impression of refuting an opponent's *argument*, while actually refuting an *argument* that was not advanced by that opponent. One who engages in this fallacy is said to be 'attacking a *straw man*'.

Another problem with Helimski's review is "cherry picking". Again, quoting Wikipedia:

Cherry picking, suppressing evidence, or the fallacy of incomplete evidence is the act of pointing to individual cases or data that seem to confirm a particular position, while ignoring a significant portion of related cases or data that may contradict that position. It is a kind of fallacy of selective attention, the most common example of which is the confirmation bias. Cherry picking may be committed intentionally or unintentionally. This fallacy is a major problem in public debate.

That Helimski has engaged in "cherry picking" is so obvious that it almost does not even need to be pointed out. In those (relatively few) cases where I felt Helimski raised legitimate concerns, I have, as a matter of fact, made the appropriate corrections in subsequent works. For what it is worth, I must say that Helimski (and several others, who will remain unnamed) is actually quite adept at subtly misrepresenting what I have written and then attacking the misrepresentation as though it were an accurate account of my views. This kind of deliberate misrepresentation of my work on the part of contemporary Russian scholars (one in particular) is still going on (2020), and the time is long overdue to start calling them out on their dishonesty.

I have prepared this review to show that the work of Illič-Svityč on Nostratic is neither as flawed (total rejection) as his critics have claimed, on the one hand, nor as flawless (unqualified acceptance) as his supporters have claimed, on the other hand. Illič-Svityč was a careful and knowledgeable scholar, and he did the best he could with what was available to him at the time. At its best, his work was of the highest

quality. However, his research on Nostratic was a pioneering effort, and, as such, it has both its strengths and its weaknesses, the latter becoming increasingly more pronounced and more apparent with the passage of time. I am hoping that this review will help give a more objective and balanced appreciation of the contribution that Illič-Svityč made to Nostratic studies and that it will mitigate the reprehensible arrogance and condescending attitude on the part of the Russians.

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APPENDIX 2

A CRITICAL REVIEW OF THE VOLUME 3 OF:
ОПЫТ СРАВНЕНИЯ НОСТРАТИЧЕСКИХ ЯЗЫКОВ (СЕМИТО-ХАМИТСКИЙ, КАРТВЕЛЬСКИЙ, ИНДОЕВРОПЕЙСКИЙ, УРАЛЬСКИЙ, ДРАВИДИЙСКИЙ, АЛТАЙСКИЙ) [AN ATTEMPT AT A COMPARISON OF THE NOSTRATIC LANGUAGES (HAMITO-SEMITIC, KARTVELIAN, INDO-EUROPEAN, URALIC, DRAVIDIAN, ALTAIC)]. 3 VOLS. MOSCOW: NAUKA (1971—1984), BY VLADISLAV MARKOVIČ ILLIČ-SVITYČ

INTRODUCTORY REMARKS

Appendix 1 contains a critical review of volumes 1 and 2 of Vladislav Markovič Illič-Svityč's *Опыт сравнения ностратических языков (семитохамитский, картвельский, индоевропейский, уральский, дравидийский, алтайский) [An Attempt at a Comparison of the Nostratic Languages (Hamito-Semitic, Kartvelian, Indo-European, Uralic, Dravidian, Altaic)]* (1971—1984). Now, I would like to turn my attention to the third, and final, volume of this work. The Introductory Remarks included in my review of the first two volumes should also be consulted.

I have purposely chosen to review this volume separately. The reason for this is that the first two volumes were either prepared by Illič-Svityč himself or by a team of scholars working from Illič-Svityč's notes, while the third volume forms an independent, later (1984) adjunct to the first two volumes (1971 and 1976). It was not based upon Illič-Svityč's notes but was prepared instead by a group of Russian scholars, under the general editorship of Vladimir A. Dybo. The Proto-Nostratic reconstructions used by the scholars who prepared this volume still follow Illič-Svityč's system. Nonetheless, the supporting evidence is far richer, and more recent publications are cited. I will be referring to "the authors" throughout this review, inasmuch as Illič-Svityč did not prepare this volume.

CRITERIA FOR EVALUATION

I will use the same scale here that I used in my review of Dolgopolsky's *Nostratic Dictionary* and in my review of the first two volumes of Illič-Svityč's *Опыт сравнения ностратических языков (семитохамитский, картвельский, индоевропейский, уральский, дравидийский, алтайский) [An Attempt at a Comparison of the Nostratic Languages (Hamito-Semitic, Kartvelian, Indo-European, Uralic, Dravidian, Altaic)]*:

Strong:	This is a solid etymology, without major problems.
Possible:	This is a plausible etymology, but there are problem areas. Quite often, one of the putative cognates in the daughter languages (at the macro level, not individual cited forms) does not belong or is questionable, while the remaining cognates do, indeed, fit together quite well. There may also be minor problems with the semantics or with the phonology, but these can usually be explained in terms of widely-attested semantic shifts or phonological processes.
Weak:	There are major problems with this etymology, usually either with the semantics or the phonology or with the quality or quantity of the supporting material from the daughter languages. Nonetheless, this etymology is not to be rejected outright. Typically, there are parts that can be salvaged, though the etymology cannot stand as written.
Rejected:	There are so many problems with this etymology that it must be fully disqualified. Some of these etymologies may involve borrowings.

Each entry was evaluated exclusively in terms of the material cited from the daughter languages to determine the extent to which viable comparisons were proposed, that is to say, whether they had a chance of being true cognates or whether they were merely specious. Moreover, the validity of the reconstructed forms posited by the authors was also evaluated. Finally, the etymologies were further judged both in terms of the sound correspondences proposed by Illič-Svityč (and extracted and formatted into tables by Vladimir Dybo) and the alternative set proposed by Bomhard (this book). As noted in my review of the first two volumes, some of the sound laws proposed by Illič-Svityč are simply wrong.

In evaluating the individual etymologies, the vowels were given as much weight as the consonants. If there was not a perfect or nearly perfect match in *both*, or if the authors failed to give a convincing explanation for exceptions to the expected correspondences, the etymology was rejected, even if the semantics were solid. In like manner, even though the correspondences may have been flawless, an etymology was rejected or evaluated as “weak” if the semantics were not perfect or nearly perfect. In spite of all of these conditions, whenever there were uncertainties, the authors of the present volume were always given the benefit of the doubt. I also tried to be mindful that the authors based their proposals on the best material that was available to them at the time (1984). Needless to say, there have been many advances since then in each of the languages/language families which the authors (and Illič-Svityč) included in their version of Nostratic. Newer works are cited in this review where appropriate.

ILLIČ-SVITYČ'S NOSTRATIC DICTIONARY: VOLUME 3

Illič-Svityč's transcription has been retained (note: the authors use Illič-Svityč's symbol /Λ/ to indicate a vowel of indeterminate quality). I have mostly used Mark Kaiser's English translations from the original Russian. Where they exist, I provide references to the alternative Nostratic etymologies I have proposed (cf. Bomhard, this book) but not to those proposed by Dolgopolsky, unless relevant to the discussion, inasmuch as he, the authors of the present volume, and Illič-Svityč follow essentially the same system and inasmuch as I have already evaluated Dolgopolsky's work. Finally, I have retained the older term "Hamito-Semitic" as the translation for "семитохамитский" when citing Illič-Svityč's work, as well as the work of the authors of the present volume, inasmuch as this is the term they preferred. Elsewhere, I use "Afrasian" in this review.

354. **luŋe* 'snow': Uralic **luŋe* 'snow' ~ Altaic [**luŋä* 'wet snow']. Rejected.

Comments:

1. Faulty sound correspondences.
2. Rédei (1986—1988:253—254) reconstructs Proto-Finno-Permian **lume* 'snow'.
3. Starostin—Dybo—Mudrak (2003:891) reconstruct Proto-Altaic **lūni* (~ -e) (= **lūnʷi*) 'snow'.

355. **maHj/e/* 'to rock, to wave': Indo-European **meh(i)-* 'to rock, to shake, to wave, to nod', (figuratively) 'to lure, to summon, to show' ~ Dravidian *maya* 'to sway, to reel (physically and emotionally)' ~ Altaic **maji* 'to rock, to shake, to sway, to bend, to wave'. Rejected.

Comments:

1. Faulty sound correspondences. The Altaic and Dravidian vowels do not match (see comment 2).
2. Starostin—Dybo—Mudrak (2003:907) reconstruct Proto-Altaic **meju* 'to shake, to sway'.
3. Rix (2001:425) reconstructs Proto-Indo-European **meh₂-* 'to give a sign'. Rix includes Lithuanian *móju, móti* 'to wink; to give (or make) a sign; to wave; to beckon'. Derksen (2015:324) also reconstructs Proto-Indo-European **meh₂-* and mentions possible Slavic and Germanic cognates, while Pokorny (1959:693) reconstructs Proto-Indo-European **mā-* 'to wave the hand, to beckon'. Thus, in Proto-Indo-European, **-/i-/* is an extension and is not part of the root.

356. **maHjΛ* 'to lose strength, to weaken, to disappear, to perish': Indo-European **meH₂i-* (> **mā(i)-* or **mō(i)-*) 'to tire' ~ Dravidian **mājΛ-* 'to disappear, to

perish, to be finished, to die; to destroy, to finish' ~ Altaic **majA-* 'to weaken, to be lost'. Rejected.

Comments:

1. The Dravidian forms really do not fit that well here semantically (cf. Burrow—Emeneau 1984:428, no. 4814).
 2. Pokorny (1959:746) reconstructs Proto-Indo-European **mō-* 'to become tired', while Rix (2001:425) reconstructs Proto-Indo-European **meh₃-* 'to tire, to make tired'. As in the preceding entry, **/-j-/* is an extension and is not part of the root in Proto-Indo-European.
 3. Starostin—Dybo—Mudrak (2003:894) reconstruct Proto-Altaic **maja* 'to miss, to fail; bad luck' as the ancestor of the Altaic forms cited by the authors.
357. (?) **mena* 'to miss, to pass by; to be futile, in vain; to be reckless' ~ Indo-European **men-t-/*mḡ-t-* 'to be futile, useless, false; to lie' ~ Uralic **mentä* 'to pass by, to miss the mark, to be mistaken' ~ Altaic **mun-u-* 'to get lost; to go insane', **men-* 'to become blunt, dull; to become cloudy (consciousness)', **mej-de-* 'to be shocked, lost; to become confused'. Rejected.

Comments:

1. Faulty sound correspondences. Lax semantics.
 2. De Vaan (2008:372) derives Latin *mentiōr* 'to lie, to utter that which is not true; to deceive, to mislead' from Proto-Indo-European **mn-ti-* 'thought, mind', as follows: "The meaning 'to lie' derives from a semantic change 'to have second thoughts, to be inventive' > 'to conjure up, to lie'." See also Ernout—Meillet (1985:396—397) (denominative from *mēns*, *mentis* 'mind, opinion') and Walde—Hofmann (1965—1972.II:68—69) (under *mendāx*), from Proto-Indo-European **mḡ-tis* 'thought, mind'. None of the traditional Latin etymological dictionaries appear to support the derivation of the Latin term proposed by the authors.
 3. Three different Proto-Altaic forms are confused here: (A) **mūnu* 'wrong, mad, uneasy' (cf. Starostin—Dybo—Mudrak 2003:953); (B) **mĩāni* 'to be confused, to hesitate' (cf. Starostin—Dybo—Mudrak 2003:922—923); and (C) Proto-Altaic **mēḡa* 'to run, to trot' (> Proto-Mongolian **meḡde-* 'to hurry, to scurry') (cf. Starostin—Dybo—Mudrak (2003:914).
 4. Rédei (1986—1988:272—273) reconstructs Proto-Finno-Ugrian **mentä-* 'to be missing, wanting; to lack; to make a mistake, error, blunder'.
358. (?) **munE* 'shortage, defect, deformity': Indo-European **men-d-* 'defect, shortage, deformity' ~ Altaic **munE* 'shortcoming, defect, shortage'. Possible.

Comments:

1. Starostin—Dybo—Mudrak (2003:952) reconstruct Proto-Altaic **mùne* ‘defect, lack’.
2. De Vaan (2008:372) reconstructs Proto-Italo-Celtic **m(e)nd^h-o-* as the ancestor of Latin *mendum* ‘physical blemish or fault, error’; Old Irish *mind* ‘mark, sign’, *mennar* ‘blemish’. Matasović (2009:265, 265—266) reconstructs Proto-Celtic **mendu-* ‘mark, sign’.
3. The following Anatolian cognates can be added to the Indo-European evidence: Hittite *mant-* ‘something harming’ (nom. sg. *ma-an-za*) (hapax legomenon), (adj.) *mantalli-* ‘venomous (?)’, ‘poisonous (?)’, ‘rancorous (?)’ (note: this may be of Luwian origin); Lycian *mēte* ‘harm’; Lydian *mētli* ‘something negative’ (cf. Kloekhorst 2008:555; Puhvel 1984— .6:59—61). Kloekhorst tentatively derives the Anatolian forms from Proto-Indo-European **mond-* (?), and this is also mentioned by Puhvel as a possibility, both citing work by Rieken.
4. The meaning of the Proto-Indo-European form is uncertain. Nonetheless, in view of the Anatolian data, we may venture a guess that the original meaning may have been something like ‘harm, injury, wound’ (cf. Buck 1949:1183—1184, §16.76 fault, guilt — assuming semantic development as in Latin *noxā, noxia* ‘harm, injury’, hence also ‘fault, offense, guilt’). There is enough semantic overlap among the forms cited by Buck to accommodate the Altaic semantic developments as well. Consequently, I am giving the authors the benefit of the doubt here.

359. **ñajgu-* ‘to bow, to bend, to hand’: Indo-European **kneigh^u-* ‘to bow, to bend’ ~ Uralic **ñ/ik/u/* (< **ñajgu-* ?) ‘to bow, to bend’ ~ Altaic **ñajgu-* ‘to bend, to hang, to droop, to rock’. Rejected.

Comment:

1. Faulty sound correspondences.
2. Rédei (1986—1988:317—318) reconstructs Proto-Uralic **ñik3-* (= **n^vik3-*) ‘to bend down, to be bent down’. Janhunen (1977:101) reconstructs Proto-Samoyed **ñikâ-* ‘to bend (the head), to nod (the head)’.
3. Starostin—Dybo—Mudrak (2003:872) reconstruct Proto-Altaic **leña* (= **len^aa*) ‘to incline, to sway, to shake’ as the ancestor of the Altaic forms cited by the authors.

360. **Nuq/üi-* ‘to bend, to rock, to lower’: Hamito-Semitic **nwx* ‘to bend, to lower, to lay’ ~ Kartvelian **nqw* ‘to bring down, to overturn’ ~ Indo-European **neuH-* ‘to bend, to bow, to rock’ ~ (?) Dravidian [**nūka* ‘to bend, to bow’] ~ Altaic **nugu/*nükü* ‘to bend, to bow’. Rejected.

Comments:

1. Faulty sound correspondences.

2. Starostin—Dybo—Mudrak (2003:879) reconstruct Proto-Altaic **lúke* ‘to bend, to bow’ as the ancestor of the Altaic forms cited by the authors.
 3. The Proto-Indo-European forms does not belong here.
 4. Proto-Afrasian **/x/* (= **/ħ/* in traditional transcription) does not correspond to Proto-Dravidian **/k/*.
361. **pal'qa* ‘foot’: Kartvelian **p₁erq-* (> **perq-/berq-*) ‘leg, foot, step’ ~ Uralic **p/ä/l'kä* ‘foot’ ~ Altaic **p/al'ka* ‘leg, foot, step’. Rejected.

Comments:

1. Faulty sound correspondences: Proto-Kartvelian medial **/-r-/* does not correspond to either Proto-Uralic medial **/-l'-/* (= **/-ly-/*) or Proto-Altaic medial **/-l'-/* (= **/-ly-/*).
 2. Starostin—Dybo—Mudrak (2003:284—285) reconstruct Proto-Altaic **älak'u* (= **älak^hu*) ‘to walk, to step’ as the ancestor of the Altaic forms cited by the authors.
362. **p/a/r/ä* ‘(finger) nail’: Hamito-Semitic **p₁r-*, **p₁r-s-* ‘nail, finger’ ~ Kartvelian **p₁c/xa* ‘nail, claw’ ~ (?) Indo-European **per-*, **perst-* ‘finger’ ~ (?) Dravidian **ver-ał* (< **p₁er-ał*) ‘finger’ ~ Altaic **para-(ŋa)/p'ärä-(ŋä)* (< **pare-(ŋa)*) ‘thumb’. Rejected.

Comments:

1. Faulty sound correspondences.
 2. Ad hoc sound law — Proto-Dravidian initial **/v-/* does not come from Proto-Nostratic initial **/p-/* ~ **p₁-/* (cf. Burrow—Emeneau 1984:490, no. 5409). Krishnamurti (2003:483) reconstructs Proto-Dravidian **wir-al* ‘finger’.
 3. Starostin—Dybo—Mudrak (2003:1138) reconstruct Proto-Altaic **p'erV* (= **p^herV*) ‘thumb’. Note especially the discussion of the developments in the individual Altaic daughter languages.
 4. Several different stems are confused and/or improperly analyzed in the Afrasian material cited by the authors.
 5. Wodtko—Irslinger—Schneider (2008:552) reconstruct a compound form, that is, Proto-Indo-European **p(e)r-sth₂-* ‘something sticking or standing out’, as the source of the Indo-European forms cited by the authors.
363. **p/äsA* ‘root’: Kartvelian **pasw-* ‘root’ ~ Dravidian [**vaca* (< **p₁aca*) ‘type of edible root’] ~ Altaic **P/ä/sA* ‘trunk, stem; handle’. Rejected.

Comments:

1. Faulty sound correspondences. Lax semantics.
2. As already pointed out (no. 362, comment 2), Proto-Dravidian initial **/v-/* is not from Proto-Nostratic initial **/p-/* ~ **p₁-/*.

3. Startostin—Dybo—Mudrak (2003:1086—1087) reconstruct Proto-Altaic **pěsá* ‘handle’. Proto-Altaic initial **/p-/* (< Proto-Nostratic initial **/p’-/*) does not correspond to Proto-Kartvelian initial **/p-/* (< Proto-Nostratic initial **/p^h-/*).
364. **per/e/* ‘rind, skin, peel’: Hamito-Semitic **p₁r-* ‘rind, skin, peel’ ~ Uralic **pere* ‘skin, rind, film’ ~ Dravidian **p₁er_Λ* ‘rind, skin, peel’. Possible.

Comments:

1. There does not appear to be any justification for reconstructing Proto-Afrasian initial **/p₁-/*. The forms cited from the Afrasian daughter languages by the authors point to Proto-Afrasian initial **/f-/* (cf. the table of Afrasian sound correspondences in Bomhard (Chapter 7).
 2. Likewise, there is no justification for reconstructing Proto-Dravidian initial **/p₁-/*. All of the forms listed by Burrow—Emeneau (1984:391, no. 4417) point to Proto-Dravidian initial **/p-/*, including Telugu *beraḍu* ‘bark, rind, shell’ and *baraḍu* ‘bark of a tree’.
 3. Rédei (1986—1988:374) reconstructs Proto-Uralic **per₃* ‘skin, rind’.
 4. Not in Bomhard (this book).
365. **/p/uncē* ‘body hair’: Kartvelian [**pačw-/*(?) **poč-* (< **pawč-* ?) ‘body hair’] ~ Indo-European **pus-*, **pous-* ‘(body) hair, down’ ~ Uralic **punče* ‘down, feathers’ ~ Dravidian **p₁occu* ‘hair, down’. Rejected.

Comment: Faulty sound correspondences. Everything about this etymology is just wrong.

366. **/p/u/ñ/a* ‘hair, fur, feathers’: Uralic **puna* ‘hair, fur, feathers’ ~ Dravidian **p₁ūṭ_Λ* ‘hair, fur, down, small feathers’ ~ Altaic **Puñ_Λ* ‘hair, fur, feathers’. Rejected.

Comments:

1. Faulty sound correspondences. Proto-Dravidian medial **/-ṭ-/* does not correspond either to Proto-Uralic medial **/-n-/* or to Proto-Altaic medial **/-ñ-/* (= **/-n^y-/*). Proto-Uralic medial **/-n-/* does not correspond to Proto-Altaic medial **/-ñ-/* (= **/-n^y-/*).
 2. Rédei (1986—1988:402) reconstructs Proto-Uralic **puna* ‘hair’.
 3. Starostin—Dybo—Mudrak (2003:1186) reconstruct Proto-Altaic **p’úñe* (= **p^hun^ye*) ‘hair; feather’.
367. **p’ad_Λ* ‘to fall’: Hamito-Semitic [**pdH* ‘to fall, to lie down’] ~ Indo-European **ped-* ‘to fall’ ~ Dravidian **paṭ_Λ* ‘to fall, to lower (oneself), to sit, to lie down’. Rejected.

Comments:

1. Faulty sound correspondences. Proto-Indo-European */-d-/ (= */-t'-/ according to the glottalic model of Proto-Indo-European consonantism) does not correspond either to Proto-Afrasian */-d-/ or to Proto-Dravidian */-t-/ (< Proto-Nostratic */-d-/).
 2. The Afrasian material cited by the authors points to Proto-Afrasian medial ejective */-t'-/ (cf. Hausa *fāḍā* 'to fall into, to fall onto, to descend on; to throw oneself into, onto; to attack', *fāḍi*; to fall, to descend; to set [of sun]'; etc.).
368. **p'alga* 'fortified settlement': Hamito-Semitic **bl(H)* (< **p'lg* ?) 'settlement, dwelling' ~ Indo-European **p'lH-* 'fortified settlement, fortress, city' ~ Uralic **palγ* 'settlement, dwelling' ~ Dravidian **paḷli* 'settlement, building, temple' ~ Altaic **palag* (> Mongolian *balaya-*) 'city, fortress, building'. Possible.

Comments:

1. Erroneous Proto-Nostratic reconstruction.
2. Faulty sound correspondences. Proto-Afrasian initial */b-/ does not correspond to initial */p-/ found in the other Nostratic daughter languages.
3. Ad hoc sound law — Proto-Afrasian **bl(H)* does not come from **p'lg*.
4. Starostin—Dybo—Mudrak (2003:1093) reconstruct Proto-Altaic **piǎlagV* 'fortress, group of houses'. Strictly speaking, Proto-Altaic initial */p-/ is from Proto-Nostratic initial ejective */p'-/.
5. Rédei (1986—1988:351) reconstructs Proto-Ugrian (? Finno-Ugrian) **palγ* 'village', while Sammallahti (1988:548) reconstructs Proto-Finno-Ugrian **pālwa* 'village; idol'.

Bomhard (no. 92) reconstructs the following Proto-Nostratic form on the basis of evidence from Dravidian, Indo-European, Uralic, and (?) Altaic:

Proto-Nostratic (n.) **p^hal-a* 'settlement, settled place'

369. **p'aliHma* 'palm': Indo-European **p̄lmā* (< **p'lHma*) 'palm' ~ Uralic **p/el'/ḡa* 'handful, palm' ~ Altaic **p'aliḡa* 'palm'. Possible.

Comments:

1. Erroneous Proto-Nostratic reconstruction.
2. Watkins (1985:490) reconstructs Proto-Indo-European **p̄l₂-mā*; Mallory—Adams (1997:255) reconstruct Proto-Indo-European **pólhaṃ* 'palm of the hand'; Wodtko—Irslinger—Schneider (2008:562) reconstruct Proto-Indo-European **p̄lh₂-mo/ah₂-* 'palm'.
3. Rédei (1986—1988:384) reconstructs Proto-Uralic **piḡa* 'flat of the hand' as the ancestor of the Uralic forms cited by the authors of the current volume. Clearly, this does not belong here.

4. Starostin—Dybo—Mudrak (2003:1121—1122) reconstruct Proto-Altaic $*p\bar{a}l\eta a$ ($\sim -e$) ($= *p^h\bar{a}l^y\eta a$, perhaps $< *p^h\bar{a}li-\eta a$) ‘palm’.

Bomhard (no. 90) reconstructs the following Proto-Nostratic form on the basis of evidence from Indo-European and Altaic:

Proto-Nostratic (n.) **p^hal-a* ‘flat of the hand, palm’

Derivative of:

(vb.) **p^hal-* to spread, to extend’;

(n.) **p^hal-a* ‘that which is wide, flat, level, broad, open: expanse, open space or surface’; (adj.) ‘wide, flat, level, broad, open’

370. **p^hala* ‘tooth’: Dravidian **pala* ‘tooth’ ~ Altaic [**Pala* ‘(molar) tooth’].
Strong.

Comments:

1. Krishnamurti (2003:46, 108, 196, and 484) reconstructs Proto-Dravidian **pal* ‘tooth’.
2. Starostin—Dybo—Mudrak (2003:1075) reconstruct Proto-Altaic **pala* (~ **p^ɮ*) ‘tooth’. This points to Proto-Nostratic initial **p’-*.
3. Not in Bomhard (this book). I would reconstruct Proto-Nostratic **p’al-a* ‘tooth’.

371. **p/a/se* ‘penis’: Indo-European **pes-*, **pes-os*, **pes-n-* ‘penis’ ~ Uralic **p/a/še* ‘penis’. Strong.

Comments:

1. Erroneous Proto-Nostratic reconstruction.
2. Rédei (1986—1988:345) reconstructs Proto-Finno-Ugrian **pačs* ‘penis’, but Sammallahti (1988:548) reconstructs Proto-Finno-Ugrian **pā/o/ooši* ‘penis’.
3. Pokorny (1959:824) reconstructs Proto-Indo-European **pes-*, **pesos-* ‘penis’.

Bomhard (no. 110) reconstructs the following Proto-Nostratic form on the basis of evidence from Dravidian, Indo-European, Uralic, and Altaic (Old Uyghur):

Proto-Nostratic (n.) **phasʷ-a* ‘sperm, semen; male genitals, penis; descendant, offspring’

372. **p*/**ä*/*jl* ‘to fall’: Hamito-Semitic **pl*- ‘to fall’ ~ Indo-European *(*s*)*phōl*- ‘to fall’ ~ (?) Dravidian **vēl*- (< **p*₁*ajl*- ?) ‘to fly, to lower oneself’ ~ Altaic **PEjl*- ‘to fly, to soar; to rush downward; to fall (leaves)’. Weak.

Comments:

1. Erroneous Proto-Nostratic reconstruction.
2. Ad hoc sound law — Proto-Dravidian **vēl-* does not come from **p₁ajl-*.
3. Faulty sound correspondences. The Proto-Dravidian and Proto-Altaic (see below) forms should be removed.
4. Starostin—Dybo—Mudrak (2003:1142) reconstruct Proto-Altaic **p̣īle* (~ *-i*) (= **p̣hīle*) ‘to fly, to soar, to flap’.

As an alternative to the etymology proposed by the authors of this volume, Bomhard (no. 125) reconstructs the following Proto-Nostratic forms on the basis of evidence from Afrasian, Dravidian, Kartvelian, and Indo-European:

Proto-Nostratic root **p^hul-* (~ **p^hol-*) stem indicating downward motion:

(vb.) **p^hul-* ‘to fall, to fall down, to collapse, to ruin, etc.’

(n.) **p^hul-a* ‘fall, collapse, ruin’; (adj.) ‘fallen, ruined, weakened; low, base, vile, mean’

373. **p/eHña* ‘to shepherd, to defend, to take care of’: Indo-European **pō-/pī-* (< **pōi-* < **pe/h₁i-*) ‘to shepherd, to defend, to protect, to take care off’ ~ Uralic **pīña* (< **pēña* ?) ‘to shepherd, to defend, to maintain, to take care of’ ~ Dravidian **pēñā-* ‘to defend, to take care of’. Possible.

Comments:

1. Erroneous Proto-Nostratic reconstruction.
2. The Proto-Indo-European form cited by the authors does not belong here.
3. Rédei (1986—1988:413—414) reconstructs Proto-Uralic **p̣ñʒ-* (= **p̣ñʒʒ-*) ‘to watch over, to take care of (reindeer herds)’.

Bomhard (no. 118) reconstructs the following Proto-Nostratic forms on the basis of evidence from Dravidian, Indo-European, and Uralic:

Proto-Nostratic root **p^hin^y-* (~ **p^hen^y-*):

(vb.) **p^hin^y-* ‘to watch (over), to protect, to nourish, to nurture’;

(n.) **p^hin^y-a* ‘protection, care; feeding, nourishing, nourishment’

Note: Bomhard (no. 118) includes the following Indo-European forms:

Proto-Indo-European **p^hen-* ‘food, protection’: Latin *penus* ‘food supplies, provisions’; Lithuanian *pėnas* ‘food’, *penù*, *penėti* ‘to feed, to fatten’; Gothic *fenea* ‘barley-groats, porridge’; Farsi *panāh* ‘refuge, protection’.

374. **p̣iṛka* ‘to ask’: Hamito-Semitic **brk* (< **pṛk* ?) ‘to ask, to pray, to bless’ ~ Indo-European **prek-* ‘to ask’ ~ Altaic **p̣ir/u/* ‘to ask, to pray (for, against), to bless, to damn, to inquire of divinity, to conjure’. Possible.

Comments:

1. This is incorrectly numbered 373 — it should be no. 374.
2. Erroneous Proto-Nostratic reconstruction. There is no justification whatsoever for reconstructing Proto-Nostratic medial velar ejective */-ḱ-/ (= */-k'-/).
3. Ad hoc sound law — Proto-Afrasian **brk* does not come from **pṛḱ*. The Afrasian evidence should be removed.
4. Starostin—Dybo—Mudrak (2003:1144—1145) reconstruct Proto-Altaic **pʷiru* (= **pʰiru*) 'to pray, to bless'.

Bomhard (no. 135) reconstructs the following Proto-Nostratic forms on the basis of evidence from Afrasian (Southern Cushitic), Indo-European, and Altaic:

Proto-Nostratic root **pʰir-* (~ **pʰer-*):

(vb.) **pʰir-* 'to ask, to request, to entreat, to beseech, to pray';

(n.) **pʰir-a* 'request, entreaty, prayer'

Note: Bomhard (no. 135) includes the following Afrasian (Southern Cushitic) forms:

Proto-Southern Cushitic **fīr-* 'to pray, to ask for (something)' > Iraqw *fīrim-* 'to pray, to ask for (something)'; Burunge *fīrim-* 'to pray, to ask for (something)'; Alagwa *fīrim-* 'to pray, to ask for (something)'; Ma'a *-fī* 'to perform (a ceremony)'.

375. **pʰokwe* 'cattle': Hamito-Semitic **bḱr* (< **pʰḱr*) 'large horned cattle, bull' ~ Indo-European **peḱu* '(small) cattle' ~ Altaic **pʰoke-ṛ* 'bull, large horned cattle'. Possible.

Comments:

1. Erroneous Proto-Nostratic reconstruction.
 2. Ad hoc sound law — Proto-Afrasian **bḱr* does not come from **pʰḱr*. The Afrasian evidence should be removed.
 3. Starostin—Dybo—Mudrak (2003:1168—1169) **pʰōkʰi* (*-ṛV*) (~ *-e*) (= **pʰōkʰi*) 'ox, cow'.
 4. Not in Bomhard (this book).
376. (?) *qama* 'to seize': Hamito-Semitic **ḥm-* 'to seize, to take, to gather', **m-* 'to take' ~ Indo-European **hem-*, **meH-* 'to seize, to take' ~ Dravidian **am-* 'to squeeze'. Rejected.

Comment: Faulty sound correspondences. Lax semantics.

As an alternative to the etymology proposed by the authors of this volume, Bomhard (no. 413) reconstructs the following Proto-Nostratic forms on the basis of evidence from Afrasian, Dravidian, Indo-European, and Uralic:

Proto-Nostratic root **k^ham-* (~ **k^həm-*) or **q^ham-* (~ **q^həm-*):
 (vb.) **k^ham-* or **q^ham-* ‘to seize, to grasp, to grip, to clutch’;
 (n.) **k^ham-a* or **q^ham-a* ‘grip, hold, hand(ful); bond, fetter’

Note: Bomhard (no. 413) includes the following evidence from the Nostratic daughter languages:

- A. Proto-Afrasian **kam-* ‘to seize, to grasp, to grip, to clutch’: Proto-Semitic **kam-* (**kam-a~*, **kam-aw/y-*) ‘to seize, to grasp, to grip, to clutch’ > Arabic *kamaša* ‘to seize, to grasp, to grip, to clutch’, *kamša* ‘a handful’; Akkadian *kamū* ‘to capture, to overcome, to ensnare’, *kamū* ‘fetters’, *kamū* ‘captured, captive’, *kāmū* (f. *kāmītu*) ‘ensnaring’, *kamītu* ‘bonds, captivity’, *kimītu*, *kimūtu* ‘captivity’. Berber: Tuareg *əkməm* ‘to hold on tightly to something vertical; to clench, to press, to squeeze (for example, to weigh down, to bother, to annoy, to worry, to cause difficulties or problems)’, *takmant* ‘a muzzle’; Mzab *takmant* ‘a muzzle’; Kabyle *kəm*, *kəmməm* ‘to muzzle, to suffocate, to stop someone from speaking’, *takmant* ‘a muzzle’. Proto-Southern Cushitic **kam-* ‘to hold’ > Iraqw *kom-* ‘to have’; Burunge *kom-* ‘to have’; Asa *kom-* ‘to have’; K’wadza *komos-* ‘to grip’; Dahalo *kam-* ‘to hold’.
- B. Dravidian: Koraga *kamḍi* ‘to steal’; Telugu *kamucu* ‘to hold, to seize’.
- C. Proto-Indo-European **k^hem-t^h-*/**k^hom-t^h-*/**k^hṃ-t^h-* ‘(vb.) to seize, to grasp, to grip, to clutch; (n.) hand’: Gothic *handus* ‘hand’, *-hinþan* ‘to seize’ (used only in compounds: *fra-hinþan* ‘to capture, to imprison’, *fra-hunþans* ‘prisoner’), *hunþs* ‘booty’; Old Icelandic *hönd* ‘hand’, *henda* ‘to catch with the hand’; Old Swedish *hinna* ‘to obtain’; Swedish *hand* ‘hand’; Norwegian *hand* ‘hand’; Danish *haand* ‘hand’; Old English *hand* ‘hand’, *ge-hendan* ‘to hold’, *hentan* ‘to try to seize, to attack, to seize’, *hūþ* ‘plunder, booty’, *huntian* ‘to hunt’; Old Frisian *hand*, *hond* ‘hand’; Old Saxon *hand* ‘hand’; Dutch *hand* ‘hand’; Old High German *hant* ‘hand’ (New High German *Hand*), *-hunda* in *herihunda* ‘spoils of war’.
- D. Uralic: Proto-Finno-Ugrian **käme(-ne)* ‘hand; palm, flat of the hand’ > Finnish *kämmen* ‘palm, flat of the hand; paw’; Vote *čämmäl* ‘palm, flat of the hand’; Estonian *kämmal*, *kämmel* ‘palm, flat of the hand’; (?) Lapp / Saami (Kola) *kiem* ‘flat of the hand, hand’; Ostyak / Xanty (Eastern) *kömən* in *kömənkäγər* ‘the hollow hands as a measure’.

377. **qowe* ‘opening’: Hamito-Semitic **ḥw* ‘opening, door’ ~ Uralic **owe-* ‘door’ ~ (?) Dravidian **āv-* ‘to gape, to yawn; to open the mouth’. Rejected.

Comment: Faulty sound correspondences. Lax semantics.

378. **qurE* 'to love': Kartvelian **qwar-* 'to love' ~ Dravidian **kūr*_{LA} 'love, desire' ~ Altaic **k'uri* 'to desire intensely, to love'. Rejected.

Comments:

1. Faulty sound correspondences.
2. Klimov (1998:239—240) reconstructs Proto-Kartvelian **qwar-* 'to love'.
3. Starostin—Dybo—Mudrak (2003:569—570) reconstruct Proto-Altaic **gǔjře* (= **gǔjɾʲe*) 'to love' as the ancestor of the Altaic forms cited by the authors of this volume.

SUMMARY / CONCLUSIONS

One of the main reasons why I chose to review volume 3 separately should now be apparent — including it in the review of the first two volumes would have distorted the final statistics resulting from the evaluation of the Nostratic etymologies actually prepared by Illič-Svityč. The reason for this is that the etymologies in volume 3 are uniformly substandard (inferior to those prepared by Illič-Svityč) — even those that were judged to be acceptable almost always had problems.

At the beginning of this review, I laid out the criteria for evaluation and proposed a scale consisting of four categories: “strong”, “possible”, “weak”, and “rejected”. Now, we can summarize our findings in terms of those categories, applied to the 25 entries in the third, and final, volume of Illič-Svityč's Nostratic dictionary:

Category	Number of Items	Percentage
Strong	2	8%
Possible	7	28%
Weak	1	4%
Rejected	15	60%
Totals	25	100%

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APPENDIX 3

A CRITICAL REVIEW OF AHARON DOLGOPOLSKY'S *NOSTRATIC DICTIONARY*

OVERALL ASSESSMENT

From the early 1960s until his death, Aharon B. Dolgopolsky (Арон Борисович Долгопольский / אהרון דולגופולסקי) (1930—2012) had been gathering material for a new Nostratic dictionary. The results of his labor resulted in the publication on-line (2nd edition 2008; revised version 2012 [3rd edition]), by the McDonald Institute for Archaeological Research, Cambridge University, of Dolgopolsky's massive *Nostratic Dictionary*. Dolgopolsky's *Nostratic Dictionary* is an important contribution to the growing body of literature on the Nostratic macrofamily. With 3,033 entries, spanning some 3,000 pages, it is a monumental achievement, rich in data and in the number of works referenced.

The following is a review of the 2nd edition (2008) of Dolgopolsky's *Nostratic Dictionary*. This review was originally prepared in 2008 at the request of the McDonald Institute for Archaeological Research, Cambridge University — this is a slightly revised version of that review. Comments will be directed primarily towards problem areas. They are offered as constructive suggestions to improve the work.

FORMAT

The format could benefit from a complete overhaul. Everything is so densely packed together that it is difficult to read. The major entries could have been separated by a blank line, for example, to make them stand apart from one another. Within each entry, the different language families could have been more clearly distinguished, perhaps by a paragraph indentation. Moreover, the entries themselves are rather tersely written — Ron Coleman said it best in the paper he delivered at the Nostratic Centennial Conference held in Pécs, Hungary, in August 2003: "... a wealth of valuable scholarship is buried in a swamp of poor graphic page design". This is not a "user-friendly" book.

Another major drawback of the book is the excessive use of abbreviations. One cannot assume that readers of this dictionary will be familiar with all of the languages cited or with all of the works referenced, especially since one is dealing with multiple language families. Most readers will be specialists in a particular language or language family. The situation is exacerbated by the fact that many of the individual languages are referred to in the literature by more than one name. It is inconvenient to have to refer constantly to the lists of abbreviations. There are so many abbreviations used that it is impossible to remember them all.

The use of cover symbols is also a drawback as is the idiosyncratic transcription system used in many of the individual forms cited. Fortunately, one quickly figures out the system of cover symbols, and Dolgopolsky does give an explanation in the Introduction (§8.3. Capital Letters [pp. 36—37]). However, when one is accustomed to working with a standard method of transcription within each language family or individual language, it is a needless distraction to have to decipher a non-standard transcription system (as in, for example, Arabic here), especially when a layer of interpretation underlies the choice of particular symbols. Consequently, the conventions followed within each discipline should have been left pretty much intact. In fairness, there are often conflicting methods of transcription found in the literature, even in such a well-established language family as Indo-European. But, as a general rule, one should not complicate the matter by introducing yet another transcription system. If one feels compelled to do so, say, in order to have a common system throughout a book, one should make as few changes as possible, and any such changes should be clearly spelled out. At the end of the book, Dolgopolsky does, indeed, list all of the abbreviations used, he does explain the transcription system utilized for each language, and he devotes a whole section (§13. On Transcription [pp. 45—47]) to defending his use of special symbols. However, even in the explanations at the end of the book, the style is so terse — everything is jammed together without breaks — as to make it tedious to have to work through this material to find what one is looking for.

The format changes recommended here would, of course, increase the length of the book. However, they would also greatly improve the clarity and, therefore, the usability of the work.

FOREWORD (pp. 3—5)

Page 3, point 4: “[in spite of methodological drawbacks (cf. AD rTPN) and partially untenable hypotheses of sound correspondences]”: Dolgopolsky briefly mentions the alternative set of sound correspondences proposed by Allan R. Bomhard. A comprehensive explanation of why Bomhard’s views are untenable should have been included here. Merely dismissing his views without further explanation gives the impression that Bomhard’s objections to the sound correspondences proposed by the Moscow School (Dolgopolsky and Illič-Svityč) have a degree of validity. That is to say that Dolgopolsky is giving the impression that he has not refuted Bomhard’s views because they cannot be refuted. For more information on Bomhard’s views, cf. Bomhard 2008.1:22—26, §1.5.

Page 4, point 5: Dolgopolsky writes: “The only comparative dictionary of Chukchee-Kamchadal (by O. Mudrak) was only published shortly before the present dictionary was submitted, and hence could not be used.” It should be noted that another comparative Chukchi-Kamchatkan dictionary has recently been published — Michael Fortescue, *Comparative Chukoto-Kamchatkan Dictionary* (Berlin and New York, NY: Mouton de Gruyter [2005]).

INTRODUCTION (pp. 7—83)

§2.1. Consonants (pp. 8—16)

Placing lines between the columns would have greatly increased clarity in the table of sound correspondences (pp. 9—15).

It is not clear why Semitic, Egyptian, and Berber are given separate treatment in the table of sound correspondences. These are merely three branches of Afrasian. The other branches (Cushitic, Omotic, Chadic) are not listed. It is the reconstructed Proto-Afrasian phonemes that should have been compared instead.

The interpretation of the third consonant series as “emphatic” requires a better explanation. Emphatics of the type found in Arabic and Berber, for example, are unlikely to have yielded the reflexes in the Nostratic daughter languages proposed by Dolgopolsky (for one thing, emphatics are notoriously prone to have assimilatory effects on adjacent vowels, and no such effects are observable in the Nostratic reconstructions proposed by Dolgopolsky or, for that matter, in any of the data from the daughter languages). Far more probable is the interpretation of this series as glottalics (ejectives), as originally proposed by Illič-Svityč and supported by Dolgopolsky himself until recently. The evidence for such an interpretation comes from Afrasian and Kartvelian, and that evidence is fairly solid. One suspects that Dolgopolsky has modified his views, at least in part, in an attempt to overcome the objections raised by Bomhard to the sound correspondences proposed by him and Illič-Svityč. Therefore, we come back to the point raised above about the need to give a comprehensive explanation of why Dolgopolsky considers Bomhard’s views to be untenable. Once that has been successfully dealt with, there will be no need to offer the highly unlikely interpretation of the third consonant series as “emphatic”.

Some of the proposed correspondence sets, such as those involving the postvelars, the fricative laterals/lateralized affricates, and the voiced dental (ʒ), palatalized dental (ʒ̟), and palato-alveolar (ʃ) affricates, for example, are not convincing and need to be thoroughly reworked (the corresponding voiceless and glottalized affricates fare only slightly better). Most of the etymologies involving these sounds were rejected as a result of my evaluation (see below). At least some of the examples involving postvelars can be better explained by positing earlier laryngeals (such as no. 1875 **qañtV* ‘forehead, front’, which is better reconstructed as **HañtV*, or no. 1876, **qapV* ‘to stream, to flow’, which is better reconstructed as **HapV*, etc.), while others are simply erroneous.

The entire section on phonology gives the impression that it was hastily thrown together. Moreover, parts are based upon outdated or questionable scholarship within each branch — the Proto-Indo-European phonological system, to cite one example, is based exclusively upon Neogrammarian views with the addition of laryngeals. Recent scholarship is entirely ignored. The vast majority of Indo-Europeanists posit either three or four laryngeals for the Indo-European parent language, while Dolgopolsky posits a multitude of controversial phonemes here, most conveniently subsumed under cover symbols, without further explanation as to their phonetic make-up, their vowel-coloring or vowel-lengthening effects, or their development in

the individual Indo-European daughter languages. The evidence of Afrasian plus the judicious use of linguistic typology provide useful tools for a more accurate specification of the Proto-Indo-European laryngeals and their probable development. A good model is the 1969 paper by Joseph H. Greenberg entitled “Some Methods of Dynamic Comparison in Linguistics”, in which Greenberg examines the development of similar sounds in Coptic and then draws upon his findings to explain developments in Indo-European.

§2.2. Comments and Additional Explanations (pp. 16—20)

The table of sound correspondences contains many assumptions that are not adequately addressed in the accompanying notes. To cite a single example again, the Proto-Indo-European laryngeals are not discussed. Opinions differ among specialists as to the exact number and phonetic make-up of the laryngeals (cf. Winter [ed.] 1965). Dolgopolsky should have taken the time to explain his views. This is one area where the other Nostratic languages can clarify the question of the number of laryngeals to be reconstructed, their prehistoric development within the Indo-European parent language, and their probable phonetic make-up. Dolgopolsky has missed a critical opportunity to show that the Nostratic Hypothesis can offer explanations that are not available on the basis of Indo-European data alone. There are many other such missed opportunities from the other Nostratic daughter languages as well. It is just this sort of thing, namely, the ability to offer credible solutions to hitherto intractable problems within each branch, that will lend credibility to the Nostratic Hypothesis.

At least passing mention should have been made concerning the Glottalic Theory of Proto-Indo-European consonantism proposed by Thomas V. Gamkrelidze, Vjačeslav V. Ivanov, and Paul J. Hopper and why Dolgopolsky rejects their views.

There is still no consensus concerning major parts of the reconstruction of the Proto-Afrasian consonant system. Though some series (labials, dentals, velars, etc.) are fairly well established, the sibilants, affricates, and fricative laterals, in particular, are far from being fully understood, and the reconstruction of labiovelars and postvelars is hotly contested. Thus, any assumptions made by those using Afrasian data are going to be controversial. Dolgopolsky’s failure to lay out his own views here greatly diminishes the viability of the Nostratic etymologies based upon the sounds in question — again, most of the etymologies involving these sounds were rejected as a result of my evaluation (see below).

Likewise, the treatment of the emphatics in the individual Afrasian daughter languages requires a more detailed explanation. Dolgopolsky previously published (1977) an excellent paper on the development of the emphatics within Semitic, and the conclusions from that paper could easily have been incorporated into the *Nostratic Dictionary*. Moreover, this could have been another opportunity for Dolgopolsky to show how and why Bomhard’s views on Nostratic sound correspondences are not valid, since Bomhard specifically uses the Afrasian (and Kartvelian) “emphatics” (glottalics / ejectives) to support his views. It may be noted here that Bomhard also accepts the glottalic model of Proto-Indo-European consonantism.

Older views of Altaic / Transeurasian phonology (Ramstedt, Poppe, Street, etc.) held that the Proto-Altaic consonant system was characterized by a two-way contrast of voiceless (aspirated) vs. voiced members. More recent views (Illič-Svityč, Starostin, A. Dybo, Mudrak, etc.) propose a three-way contrast of plain voiceless vs. voiceless aspirated vs. voiced members. Even though Dolgopolsky prefers to treat Mongolian, Manchu-Tungus, and Turkic (the core Altaic / Transeurasian languages) as three independent branches of Nostratic, an explanation of the prehistoric development of their phonology is an absolute necessity, inasmuch as these languages are among the most contentious areas in Nostratic studies (not to mention Altaic studies).

§2.3. Structure of N[ostratic] Words (p. 20)

The root structure patterning is discussed far too superficially. Not only should the root structure patterning be given a fuller explanation, the development of that patterning in each daughter language needs to be discussed as well. This is important because it provides the basis for the reconstructions that form the bulk of this work. The same may be said about derivational morphology, which Dolgopolsky briefly discusses a little later on (§5. Derivation [pp. 27—28]).

§2.4. Vowels (pp. 20—24)

Dolgopolsky's reconstruction of the Proto-Nostratic vowels appears to be mainly correct except for **ā* and **ū*, which are highly speculative. As noted by Dolgopolsky, the Proto-Nostratic vowels were at least partially preserved in initial syllables in Uralic, Dravidian, and Altaic. However, they appear to have been originally preserved in Proto-Afrasian as well. Within Afrasian, Cushitic and Omotic are particularly conservative in their vocalism, while the vowel systems found in Semitic, Egyptian, and Berber exhibit a wholesale reduction of the inherited system. Thus, notions of what Proto-Afrasian vocalism might have been like based upon the Semitic model are likely to be wrong. It turns out that Proto-Afrasian vocalism was highly archaic and, consequently, has an important role to play in the reconstruction of Proto-Nostratic vocalism.

The system of ablaut found in Semitic, Egyptian, and Berber initially arose through morphological processes. It appeared quite early in verbal stems and derivative nominal stems, though primary root nouns continued to maintain stable vocalism right up to the emergence of the individual daughter languages. Once established, the system of ablaut was greatly expanded, especially in Semitic.

The inherited vowel system underwent a thorough restructuring in both Proto-Indo-European and Proto-Kartvelian as a result of a complicated series of changes initiated by the phonemicization of a strong stress accent in the early prehistory of these branches. As rightly pointed out by Dolgopolsky, these developments diminish the importance of Kartvelian and Indo-European for ascertaining the Proto-Nostratic vowel system.

A chart, similar to the one prepared for the consonants, detailing the development of the vowels in the individual Nostratic daughter languages would have been helpful.

§3. Grammar (pp. 24—26)

The treatment of Proto-Nostratic morphology is far too superficial to be of benefit. Both Allan R. Bomhard (2004) and Vladimir Dybo (2004) published papers in the proceedings of the Nostratic Centennial Conference held in Pécs, Hungary, in August 2003 in which Proto-Nostratic morphology is discussed in great detail. Dybo's paper reflects the views of Illič-Svityč. There are many points of agreement between these two papers, as well as some differences — Bomhard's paper is the more detailed of the two. These papers should be consulted, as should Vol. 1: Grammar of Joseph H. Greenberg's *Indo-European and Its Closest Relatives: The Eurasiatic Language Family*, and the entire section on Proto-Nostratic morphology should be entirely rewritten and greatly expanded.

Dolgopolsky posits an analytic morphological structure for Proto-Nostratic, but in his point 6 (p. 24), he says: "Case markers follow the noun". Given the type of structure he is positing, it would be more accurate to say: "Relational markers follow the noun". The same may be said of his claim under C: Auxiliary words (pp. 25—26) that **mA* and **tA* represent particles of marked accusative. Rather, these were relational particles indicating marked direct object. It is not just a matter of semantics here but of typological consistency. Using terms such as "case" and "accusative" implies a more synthetic structure, which is quite a bit different from the analytic morphological structure Dolgopolsky claims existed in the Nostratic parent language. Eventually, the so-called "auxiliary words" (relational particles) became bound relational markers, first agglutinative and then inflectional (fusional) in the individual daughter languages, as the case may be, just as Dolgopolsky outlines a little later on in §4. Grammatical Typology (pp. 26—27): "In the descendant languages most of these grammatical auxiliary words and some pronouns turned into synthetic affixes [agglutinative in Early U and A, inflectional (fusional) in IE and to a certain extent in HS and K]". Agglutination is also the rule in Dravidian.

Likewise, the pronouns are treated superficially. Dolgopolsky published a rather long analysis of Nostratic pronouns in the *Gedenkschrift* for Björn Collinder in 1984, and that paper should have been used as a model. This section, too, should be entirely rewritten and greatly expanded.

§4. Grammatical Typology (pp. 26—27)

Though Dolgopolsky seems to be implying that nominative-accusative structure was found in Proto-Nostratic, grammatical typology is actually not discussed. Some of the branches do, indeed, exhibit nominative-accusative structure (Indo-European, Uralic, and Altaic), but others exhibit ergative-absolutive structure (Kartvelian, Eskimo-Aleut, and Chukchi-Kamchatkan), and still others stative-active structure (Afrasian

and probably Elamo-Dravidian [definitely Elamite]), with each of these different grammatical structures requiring a different type of clause alignment. No mention is made of how the inherited system was transformed into the systems found in the different branches. Nor is there any discussion of non-Nostratic languages or language families to show that the morphological structure being posited by Dolgopolsky for the Nostratic parent language has typological parallels in attested languages.

In actual fact, the type of grammatical structure that seems to be able to account best for the circumstances found in the Nostratic daughter languages is not nominative-accusative but, rather, stative-active (cf. Bomhard 2004 and 2008.1: 387—415). Stative-active structure has been convincingly posited for an early form of Proto-Indo-European by a number of distinguished scholars (Gamkrelidze, Ivanov, Lehmann, et al. [for details, cf. Bomhard 2008.1:417—529]).

§5. Derivation (pp. 27—28)

A better delineation of root structure patterning and syntax in both Proto-Nostratic and the various daughter languages would have made it easier to account for some of the derivational patterning Dolgopolsky discusses. Dravidian is agglutinative and strictly suffixal, while prefixes are found, for example, in Kartvelian and Afrasian. The order of meaningful elements within a clause is determined by syntactical rules. (S)OV implies one type of order, while (S)VO implies another. A change of type — for example, from (S)OV to (S)VO — in the early prehistory of some of the daughter languages would have changed the order of meaningful elements, and this would be reflected in the daughter languages. This is, indeed, exactly what is found, but Dolgopolsky does not provide any explanation as to why there are discrepancies in the placement of derivational elements in the different branches beyond just taking note; for example: “Thus the etymon *mA (that underlies affixes of nomina actionis and nomina agentis in the descendant languages) was a separate word, which is evidenced by its position: in HS and K it is found both in front of the verb and after it (while in IE, U, D and A its position in the word is always final).”

Dolgopolsky (p. 28) notes that: “Of course we cannot rule out an ancient synthetic origin of some enigmatic ‘root extensions’ ... that have lost their former meaning in IE, HS and other lgs. and are represented by an additional consonant at the end of roots or by synonymous roots that differ in their final (usually third) consonant. These ‘root extensions’ need serious investigation”. It should be mentioned that, for Afrasian, Christopher Ehret has investigated and attempted to explain the origin and development of these “root extensions”. His earliest paper on the subject (“The Origin of Third Consonants in Semitic Roots: An Internal Reconstruction [Applied to Arabic]”, *Journal of Afrasian Languages* 2.2:109—202 [1989]) deals primarily with Semitic, especially Arabic, while Afrasian as a whole is dealt with in his 1995 book *Reconstructing Proto-Afrasian (Proto-Afrasian): Vowels, Tone, Consonants, and Vocabulary*. These works, among others, should have been consulted.

§6. The Place of Hamito-Semitic (pp. 28—33)

Some scholars would like to remove Afrasian (Hamito-Semitic) from Nostratic proper and make it a sister (“coordinate”) language, while others, including Dolgopolsky, Illič-Svityč, and Bomhard, see it as a full-fledged branch of Nostratic. However, this is not necessarily an “either/or” issue. Another explanation is possible, namely, the recognition that not all branches of Nostratic are on an equal footing. Afrasian can be seen as the first branch to have become separated from the main speech community, followed first by Dravidian, then by Kartvelian, and, finally, by Greenberg’s Eurasiatic, which was the last branch to become differentiated into separate languages and language families.

Thus, by adopting this scenario, Dolgopolsky’s conclusion that “... the traditional Nostraticist view considering HS as a branch of N is still valid” can be maintained, while the objections raised by Greenberg, Ruhlen, and Starostin can also be accommodated. Thus, Greenberg’s Eurasiatic is to be seen as a valid linguistic taxon that was a branch of a larger macrofamily, namely, Nostratic.

In the paragraph beginning “J. Greenberg’s opinion ...” (p. 29), the Sanskrit word for ‘to eat’ is incorrectly given as *at-*; it should be *ad-* (cf. 1st sg. pres. act. *ádmi*). Likewise, the Latin word is given as *edo*; it should be *edō*. Finally, the Hittite word is given as *it-*; it should be *ed-* (in plene writing, the 1st sg. pres. act. form is *e-id-mi*), or even *ed-/ad-* to reflect ablaut variants.

§8.3. Capital Letters (pp. 36—37)

Dolgopolsky (p. 36) claims that “... the velar **k* and the uvular **q* has survived in Kartvelian only...” The distinction between velar and uvular stops also survived in Chukchi-Kamchatkan, though the original contrast between voiced ~ voiceless ~ and “emphatic” (to use Dolgopolsky’s terminology) was lost (Proto-Nostratic **g*, **k*, and **k̥* have merged into **k* in Proto-Chukchi-Kamchatkan, while **g* [IPA *g*], **q*, and **q̥* have merged into **q*). A little later (p. 37), he further claims that “... [t]he distinction between the reflexes of **r* or **ř* has survived in Turkic and Dravidian only.” This distinction may also have survived in Chukchi-Kamchatkan, where Proto-Nostratic **r* > **r̥*, and **ř* > **R*.

§8.5. Isolated Cognates (pp. 39—41)

In the paragraph beginning “The Nostratic word **qant̪V* ...” (p. 40), Dolgopolsky mentions Ferdinand de Saussure’s “sonantic coefficients”. This term is usually left untranslated from the French: “coefficients sonantiques”. The English rendering makes no sense.

§12. Was Nostratic a root-isolating or a stem-isolating language? (pp. 44)

This whole section would have been unnecessary had Dolgopolsky done a more thorough analysis of root structure patterning and derivational morphology. My own findings indicate that root structure patterning in the Nostratic parent language was as follows (this patterning is consistent with what one would expect in a language with active-stative grammatical typology):

1. There were no initial vowels in Proto-Nostratic. Therefore, every root began with a consonant.
2. Originally, there were no initial consonant clusters either. Consequently, every root began with one and only one consonant. Medial clusters were permitted, however.
3. Two basic root types existed: (A) **CV* and (B) **CVC*, where *C* = any non-syllabic, and *V* = any vowel. Permissible root forms coincided exactly with these two syllable types.
4. A stem could either be identical with a root or it could consist of a root plus a single derivational morpheme added as a suffix to the root: **CVC+CV-*. Any consonant could serve as a suffix.
5. A stem could thus assume any one of the following shapes: (A) **CV-*, (B) **CVC-*, (C) **CVC+CV-*, or (D) **CVC-CVC-*. As in Proto-Altaic, the undifferentiated stems were real forms in themselves and could be used without additional suffixes or grammatical endings. However, when so used, a vowel had to be added to the stem (unless the stem already ended in a vowel or in a semivowel, nasal, or liquid), thus: (A) **CV-* > **CV* (no change), (B) **CVC-* > **CVC+V*, (C) **CVC+CV-* > (no change), or (D) **CVC-CVC-* > **CVC-CVC+V*. Following Afrasian terminology, this vowel may be called a “terminal vowel” (TV). Not only did terminal vowels exist in Proto-Afrasian, they were also found in Dravidian, where they are called “enunciative vowels”. As in Proto-Dravidian, the terminal vowel was only required in stems ending in obstruents, which could not occur in final position.

On the basis of the evidence of Proto-Indo-European, Proto-Kartvelian, Proto-Afrasian, Proto-Dravidian, and Proto-Altaic, it may be assumed that there were three fundamental stem types in Proto-Nostratic: (A) verbal stems, (B) nominal and adjectival stems, and (C) pronominal and indeclinable stems. Some stems were exclusively nominal. In the majority of cases, however, both verbal stems and nominal stems could be built from the same root. In Proto-Nostratic, only pronominal and indeclinable stems could end in a vowel. Verbal and nominal stems, on the other hand, had to end in a consonant, though, as noted above, when the undifferentiated stems were used as real words in themselves, a “terminal vowel” had to be added to the stem (but only when the stem ended in an obstruent). The terminal vowels were morphologically significant. Adjectives did not exist as an independent grammatical category in Proto-Nostratic.

COMMENTS ON INDIVIDUAL ENTRIES

Dolgopolsky has done a good job of reconstructing Proto-Nostratic roots of the shape *CVCV and *CV as well as the first syllable (*CVC-) of polysyllabic stems. Additional extensions, however, are often reconstructed on the basis of flimsy evidence, sometimes even on the basis of the evidence of a single branch. Such reconstructions are highly questionable. It is more probable that these longer forms arose in the prehistory of the individual branches. Consequently, they should not be projected back into Proto-Nostratic. It is not helpful to speculate that something may have been lost when corroborating evidence is missing. Lack of evidence should be taken at face value unless there are compelling reasons to think otherwise. An example here would be entry 75, *ʔerq[i] ‘ruminant’, where the only evidence (and weak at that) for *-q[i] comes from Afrasian. There is absolutely nothing whatsoever in the data from the other languages being compared (Indo-European and Dravidian) to suggest that *-q[i] should be reconstructed as part of the Proto-Nostratic form.

Harold C. Fleming has observed (personal correspondence): “... the actual contribution that [Dolgopolsky’s] immense output makes to the scientific problem is much less than the ostensibly overwhelming mass of data and sources suggests. For example, an awful lot of space is taken up with secondary reconstructions that are not really needed to make a point. And sometimes the strings of this came from that, which came from that, which came from something else becomes almost literally unbelievable. A string of suppositions masquerading as evidence!”

In general, the methodology appears to be rather lax compared to Illič-Svityč. This is not to say that there are not some brilliant etymologies — there are. However, there are simply too many unexplained violations of the sound laws, there are too many dubious reconstructed forms, and there is too wide a latitude in the semantics of many of the supporting forms from the daughter languages. Dolgopolsky even includes entries (such as no. 475, no. 528, no. 1321, no. 1892, no. 1912, no. 2109, no. 2753, etc.) that he, himself, calls “doubtful”, “highly doubtful”, “questionable”, “ambiguous”, etc. Such entries should not have been included — they severely weaken the case. Moreover, there are far too many forms that have more than one possible Nostratic etymology. A fair number of these forms require ad hoc explanations to make them “fit in”, no matter where they are placed — only the best of the best of such forms should have been included. Any endeavor to establish a higher-level linguistic taxon such as Proto-Nostratic is going to be controversial to begin with. Consequently, in order to be even moderately credible, it is imperative that the highest methodological standards be observed in the choice of the material being compared, in the meanings assigned to reconstructed forms, in only assigning meanings that take into consideration the cultural, environmental, and social setting at the time that the proto-language is alleged to have been spoken, in the strict adherence to sound laws, in providing clear, convincing explanations for any exceptions to the established sound laws, in eliminating borrowings and/or *Wanderwörter*, in respecting and staying within the bounds of the established scholarship within each of the languages/language families being compared, etc.

In his effort to reconstruct the greatest number of forms possible for the Nostratic parent language, Dolgopolsky fails to identify underlying stems. For example, it is clear that all of the entries given below are related (assuming here, for the sake of argument, that each is a valid etymology in its own right) — they are all derivatives of an underlying *PaL[V] ‘to split, to divide’, to which various extensions have been added:

- 1716. *paĻUḲü ‘axe, hammer’.
- 1717. *Pä[Ļ]VḵV ‘to split lengthwise, to divide’.
- 1718. *pal[V]tV ‘to split’, ‘axe’.
- 1720. *PVLhE[ʒ]V and/or *PVLhE[ç/ć]V ‘to split, to separate’.

In this case, it is the underlying stem *PaL[V] ‘to split, to divide’ that should have been reconstructed as entry no. 1716 (or whatever the actual number turns out to be after all of the entries have been properly renumbered [note the comments below]). The remaining entries should then have been identified as derivatives of this stem and numbered 1716a, 1716b, 1716c, and 1716d.

Each of the entries in Dolgopolsky’s dictionary were evaluated according to the following scale:

- Strong: This is a solid etymology, without major problems.
- Possible: This is a plausible etymology, but there are problem areas. Quite often, one of the putative cognates in the daughter languages (at the macro level, not individual cited forms) does not belong or is questionable, while the remaining cognates do, indeed, fit together quite well. There may also be minor problems with the semantics or with the phonology, but these can usually be explained in terms of widely-attested semantic shifts or phonological processes.
- Weak: There are major problems with this etymology, usually either with the semantics or the phonology or with the quality or quantity of the supporting material from the daughter languages. Nonetheless, this etymology is not to be rejected outright. Typically, there are parts that can be salvaged, though the etymology cannot stand as written.
- Rejected: There are so many problems with this etymology that it must be rejected. Some of the rejected etymologies involve borrowings.

Each entry was evaluated exclusively in terms of the material cited from the daughter languages to determine the extent to which viable comparisons were proposed, that is to say, whether they had a chance of being true cognates or whether they were merely specious. No attempt was made to judge the validity of the reconstructed forms, which, by their very nature, are highly speculative and totally dependent upon the quality and quantity of the material being compared. Moreover, the etymologies were judged in terms of the sound correspondences proposed by Dolgopolsky, not the alternative set proposed by Allan R. Bomhard.

In evaluating the individual etymologies, the vowels were given as much weight as the consonants. If there was not a perfect or nearly perfect match in *both*, or if Dolgopolsky failed to give a convincing explanation for exceptions to the expected correspondences, the etymology was rejected, even if the semantics were solid. It is particularly troublesome, for instance, when there are irreconcilable differences among those languages (Dravidian, Uralic, and Altaic) in which the vowels of the initial syllable are alleged to be particularly well preserved. In fairness, Dolgopolsky does, indeed, attempt to explain exceptions to the established correspondences. However, many of his explanations give the impression of being rather ad hoc. “Ad hoc” does not constitute a law. In like manner, even though the correspondences may have been flawless, an etymology was rejected or evaluated as “weak” if the semantics were not perfect or nearly perfect. Dolgopolsky simply needs to offer better explanations when there are wide discrepancies in the semantics in the forms cited from the daughter languages. In spite of all of these conditions, whenever there were uncertainties, Dolgopolsky was always given the benefit of the doubt.

It took a little over seven months to prepare the original review of Dolgopolsky’s *Nostratic Dictionary*, entry by entry. Every single entry was carefully evaluated in accordance with the criteria listed above. Though the numbers only go up to 2805, my count found 3,033 entries due to the fact that letters were added after the numbers when new entries were inserted (see below). The results of my evaluation are as follows:

Category	Number of Items	Percentage
Strong	177	5.8%
Possible	1,011	33.3%
Weak	508	16.8%
Rejected	1,337	44.1%
Totals	3,033	100%

Some final comments are in order: Dolgopolsky should have made the effort (albeit tedious) to renumber the entries whenever a new etymology was inserted. Adding the letters “a” or “b” after a number implies that there is some sort of relationship to the preceding, like-numbered entry, which is never the case (I only found one exception, namely, nos. 1354, 1354a, and 1354b, which do, indeed, form a natural grouping). There are also far too many typographical errors, both in the text and in the forms cited.

DOLGOPOLSKY'S PROTO-NOSTRATIC VOCABULARY

Note: Dolgopolsky's transcription has been retained.

1. *ʔa particle of plurality: rejected.
2. *ʔa 'to become, to be': rejected.
- 2a. *ʔA a marker of the male sex: rejected.
3. *ʔe (~ ? *ʔä) 'not': strong.
4. *ʔaʔV 'female' → marker of femininity: rejected.
5. *ʔaba ~ *ʔapa 'daddy, father': strong.
6. *ʔoH₂bV (= *ʔohbV) 'clan': rejected.
7. *ʔ[a]bV 'water': strong.
8. *ʔibrE 'fig tree': rejected.
9. *ʔVç|çVhV 'back (dorsum)': possible.
10. *ʔačPv ± leaf-bearing tree' ('aspen' or the like): possible.
11. *ʔačV 'low place, depression, wadi, pond': possible.
12. *ʔA[d]V (= *ʔA[d]V) 'foot': strong.
13. *ʔuHdV(RV) 'breast': possible.
- 13a. *ʔu[χ|ʁ]dV (or *ʔuħdV) 'one': weak.
14. *ʔediNV 'pater familias': possible.
15. *ʔaga 'uncle, elder person': possible.
- 15a. *ʔægVRV 'bone of the leg': rejected.
16. *ʔa[h]a 'thing(s)': rejected.
17. *ʔ[a]kê 'to chase, to drive away, to take away': rejected.
18. *ʔäka 'to be evil, to hate': possible.
19. *ʔ[o]kE (= *ʔ[o]kü) 'self' (→ 'myself'): weak.
20. *ʔo[k]aLV 'to eat': weak.
21. *ʔaKa 'elder relative, grandfather': possible.
22. *ʔäla pc. of negation and categorical prohibition: strong.
23. *ʔelV 'clan, tribe' (→ 'all', pronoun of plurality): weak.
24. *ʔE[V] dem. prn. of collectivity: rejected.
25. *ʔêlV 'deer': possible.
26. *ʔil[A] 'to stand, to stay; place to stay': possible.
27. *ʔilV 'eye': possible.
28. *ʔ[o]lV 'that (visible)': strong.
29. *ʔ[o]LV (or *ʔoyilV ?) 'bough, hook' (→ 'to hang on a hook'): possible.
30. *ʔulV 'soil, foundation, earth': possible.
31. *ʔü]LûdV 'to grow': rejected.
32. *ʔ[E]l[i]mA 'tree' ('elm' or the like): possible.
33. *ʔ[a]a 'food': possible.
34. *ʔuh[V]V 'hut': weak.
35. *ʔ[ü]ul[g]a 'cold': possible.
36. *ʔamV (= *hamV ?) demonstrative pronoun ('iste') 'now': strong.
37. *ʔemA 'mother': strong.
38. *ʔemV 'to seize, to hold': possible.

39. *ʔ[ɔ]mV ‘kin, clan, everybody’: weak.
40. *ʔamga ‘dry, thirsty’: possible.
41. *ʔämPV ‘wolf’: rejected.
42. *ʔam[V]RV (or *ʔam[ɔ](-RV) ?) ‘morning, daylight’: possible.
43. *ʔ[ʔ][ɔ]mrE ‘burn’ (intr.), ‘to shine, to be bright, to dawn’: rejected.
44. *ʔ[ʔ]omśa ‘flesh, meat’: possible.
45. *ʔiñ[A] ‘place’ ([in descendant languages] → ‘in’): strong.
46. *ʔoñV ‘self, the same’: possible.
47. *ʔäyñâ (or *ʔ[äy]Eñâ) ‘nothing, there is no’: possible.
48. *ʔAN̄sV (*ʔaN̄sV ?) ‘foot’: weak.
49. *ʔañ[V]sV ‘friendly, favorable, useful’: possible.
50. *ʔiñVšê ‘person, man’: possible.
51. *ʔVntV (or *ʔVntV ?) ‘he’, relative ‘he who, that which’: rejected.
52. *ʔaŋo ‘snake’: rejected.
53. *ʔayŋo ‘marrow, brain, soft fat of animals’ (→ ‘to smear, to anoint’):
rejected.
54. *ʔäŋ[ɟ]qV ‘chin’: weak.
55. *ʔaŋq[i] ‘to breathe’: rejected.
56. *ʔaŋga ‘to open’: possible.
57. *ʔ[ɔ]ŋKa ‘to pant, to sigh, to groan’: possible.
58. *ʔ[a]PV ‘to take, to seize’: possible.
59. *ʔêpV ‘mouth’ (→ ‘to speak’): rejected.
60. *ʔoɸa ‘powder, dust, small pieces of earth’: possible.
61. *ʔVpV ‘monkey’: rejected.
62. *ʔäP[h]i ‘to bake, to cook food on hot stones’: possible.
63. *ʔVqV ‘thing(s)’ and pronoun/noun of plurality: rejected.
64. *ʔ[ʔ]ü[u]q]yê ‘night, dark hours’: weak.
65. *ʔarV ‘earth, land, place’: possible.
66. *ʔaRV ‘member of one’s clan/family’: strong.
67. *ʔerV ‘to divide; one share, one, single’: possible.
68. *ʔuRE (or *ʔüRV) ‘to drink, to swallow’: possible.
69. *ʔurV ‘to gather’ (→ ‘everyone belonging to...’, ‘clan, relatives; multitude’):
weak.
70. *ʔUrV ‘squirrel’: possible.
71. *ʔV[r]V (→ *rV ?) theme-focalizing (tropicalizing) particle: rejected.
72. *ʔ[V]rV ‘towards’ (→ ‘in’): possible.
- 72a. *ʔi[ʔ]y[r]a ‘to drag, to pull, to push’: possible.
73. *ʔu[w]rV (or *ʔü- ?) ‘light (lux), fire’: possible.
74. *ʔir[Eʔ]û ‘intestines’: weak.
75. *ʔerq[i] ‘ruminant’: possible.
76. *ʔu|orVqV (or *ʔu|orVqV[ʔ]V ?) ‘path, way’: weak.
77. *ʔaRba ‘to lie in ambush, to scheme evil to someone’, (?) ‘to use magic tools’:
possible.
78. *ʔArčA (or *ʔAč[V]RA) ‘trace’ (→ ‘sign’, ‘to choose’): possible.
79. *ʔar[V]ka (or *yar[V]ka ?) ‘to see, to observe’: weak.

80. * $[\text{?}]aRH_2VmV$ ($H_2 = *h$?) 'upper arm, part of limb': weak.
81. * $\text{?or}[u]$ 'antelope, deer, mountain goat': possible.
82. * $\text{?ür}V$ (or * $\text{?ur}E$) 'top': possible.
83. * $[\text{?}][\text{ü}]\text{fVw}V$ 'large feline': weak.
84. * $[\text{?}][\text{ä}]\text{ś}[o]$ 'to stay, to be' (Illič-Svityč ← 'to settle'): strong.
85. * $\text{?is}V$ (or * $\text{?i?}sV$?) 'to sit', 'seat (the part of the body that bears the weight in sitting)' (→ 'foundation, basis'): strong.
86. * $\text{?üs}V$ 'fire': weak.
87. * $[\text{?}]V\text{ś}V$ 'they': rejected.
88. * $\text{?i}[\text{ü}]\text{ś}[U]\text{t}V$ 'to sweep, to rake': rejected.
89. * $[\text{?}V]\text{ś}[\text{ü}]H_2V$ 'wild boar': strong.
90. * $[\text{?}]\text{at}V$ 'female, woman': possible.
91. * ?itê 'to eat': possible.
92. * $\text{?at}[\text{?}]V$ 'to come', (?) 'to walk': possible.
93. * $\text{?Etû}RV$ 'day, noon': possible.
94. * $[\text{?}][e]\text{t}V$ 'to make' (→ causativizing morpheme): possible.
95. * $\text{?ey}[V]\text{t}V$ 'to reach, to obtain': weak.
96. * $[\text{?}][a]wû$ 'whether?' (particle of general question), 'or': strong.
97. * $\text{?VwV}yV$ 'island, seashore': possible.
98. * ?ûXi 'egg': possible.
99. * $\text{?}[a]yV$ 'to say, to speak, to call': possible.
100. * $\text{?}[a]yV$ 'mother': strong.
101. * $\text{?äy}V$ (= * ?äya ?) 'which': possible.
102. * $\text{?}[e]yV$ 'to come, to arrive': possible.
103. * $\text{?æ}žEkU$ (= * $\text{?æ}žikU$?) 'thorn, hook' (→ 'tooth'): rejected.
104. * $[\text{?}][\text{ü}]\text{ž}V$ (or * $[\text{?}][\text{ü}]h\text{ž}V$?) 'throat; to swallow': rejected.
105. * $\text{?û}\text{ž}V$ 'to hear' (→ 'ear'): rejected.
106. * $\text{?}[Γa]V$ (= * $\text{?}[g]yaV$) 'to grow, to become': weak.
107. * $\text{?}[æ]bU$ 'female breast, bosom': possible.
108. * $\text{?}VC\text{ü}[\text{?}V]PV$ (or * $\text{?}VCy\text{ü}[\text{?}V]PV$) 'salt': weak.
109. * $\text{?}A\text{ç}V$ (= * $\text{?}A\text{ç}[U]$??) 'to blow, to yawn': rejected.
110. * $\text{?}V\text{ç}VLV$ 'guts': weak.
111. * $\text{?}aw\text{ç}V$ (or * $\text{?}a\text{çw}V$) 'light of the sun before/on the horizon': rejected.
112. * $\text{?}ä\text{ç}V$ 'bush, shrubs, forest': weak.
113. * $\text{?}u\text{ç}E$ (or * $\text{?}ü\text{ç}V$) 'to exchange, to compensate; compensation' (→ 'trade', 'revenge'): weak.
114. * $\text{?}adV$ 'limit, edge' ? (→ 'up to, until, towards'): possible.
115. * $\text{?}[o]dU$ 'to go': weak.
116. * $\text{?}udV$ 'to follow, to pursue' (→ 'to repeat, to continue'): possible.
117. * $\text{?}[æ]go$ 'to drink': rejected.
118. * $\text{?}æ[ya]gV$ 'fat': weak.
119. * $[\text{?}]\text{ogUIV}$ (or * H_2oqUIV) 'offspring, child, young': possible.
120. * $\text{?}okV$ (or * $\text{?}o\text{K}V$?) 'to listen' or 'ear': possible.
121. * $\text{?}ayka$ 'to move (quickly), to jump': weak.
122. * $\text{?}a\text{K}o$ 'water': possible.

123. * $\text{[}\text{ʃ}\text{]o}\text{ḳi}$ ‘sharp point/edge’: possible.
 124. * $\text{ḡu}\text{Ḳa}$ (or * $\text{ḡuk}\text{V?a}$ or * $\text{ḡAwu}\text{Ḳa}$ or * $\text{ḡAwu}\text{ḲV?a}$) ‘to see’, ‘eye’: weak.
 125. * $\text{ḡE}\text{ḲV}[\text{ḡ}]\text{V}$ ‘to peck, to prick (of birds and other animals)’: rejected.
 126. * $\text{ḡAl}\text{V}$ (= * ḡalE or * ḡäli) ‘height, top’, ‘to climb, to go up’: strong.
 127. * $\text{ḡ[a]}\text{I}\text{V}$ ‘to burn (esp. sacrifices), to use magic means (sacrifices, magic formula, etc.) to produce a particular result’: possible.
 128. * $\text{ḡ[ä]}\text{I}\text{U}$ ‘to know’: possible.
 129. * $\text{ḡo}\text{I}\text{V}$ (= * $\text{ḡo}\text{I}\text{ü ?}$) ‘to starve, to die; dead’: possible.
 130. * $\text{ḡ[g]}\text{[æ]}\text{I}[\text{?}]\text{u}$ (or * $\text{ḡ[æ]}\text{I}[\text{?}]\text{u}$) ‘reddish, yellow, brown’: possible.
 131. * $\text{ḡul}\text{ḡê}$ ‘recent’ (→ ‘young, new’): rejected.
 131a. * $\text{ḡgol}[\text{V}]\text{y}\text{V}$ ‘leaf’: possible.
 131b. * $\text{ḡ[ʃ]a}\text{L[o]P}\text{V}$ ‘weak, exhausted’: rejected.
 132. * $\text{ḡal}|\text{I}\text{ü}$ ‘a liliaceous plant (garlic, onion, aloë, or sim.)’: possible.
 133. * $\text{ḡal}\text{V}\text{ḡV}$ ‘to bend’, ‘a bend, a joint in the limb’: possible.
 134. * $\text{ḡim}[\text{ê}]\text{V}$ ‘to suck, to swallow’: strong.
 135. * ḡ[o]mdE ‘to stand upright, to rise’: strong.
 136. * $\text{ḡom}\text{Kê}$ ‘(part of the) neck’: rejected.
 137. * $\text{ḡ[ʃ]om}\text{ḡn}\text{V}$ ‘to sleep, to lose consciousness/remembrance of’: weak.
 138. * $\text{ḡôy}\text{ḡn}\text{V}$ ‘to see, to look; eye’: possible.
 138a. * $\text{ḡin}[\text{V}]\text{q}\text{V}$ ‘to live’: possible.
 139. * $\text{ḡon}\text{ḡV}$ ‘fang, stake’ → ‘weapon (dart, javelin, or the like)’: possible.
 140. * $\text{ḡup}\text{V}$ ‘to take wing’, ‘up’: possible.
 141. * $\text{ḡVPVR}\text{V}$ ‘(river-)bank’: rejected.
 142. * $\text{ḡVp}\text{VR}\text{V}$ ‘wild boar’: possible.
 143. * $\text{ḡAr}\text{V}$ ‘dry, arid’: possible.
 144. * $\text{ḡiR}[\text{i}]\text{V}$ ‘(male, young) big ungulate’: weak.
 145. * $\text{ḡVR}\text{V}$ ‘run’: rejected.
 146. * $\text{ḡarH}_2|\text{wu} \sim \text{ḡaH}_2\text{ru}$ ‘back, loins’: possible.
 147. * $\text{ḡur}\text{V}\text{ḲV}$ ‘to flee’: strong.
 148. * $\text{ḡa}[\text{f}]\text{V} \sim \text{ḡaRi}$ ‘without, no’: weak.
 148a. * $\text{ḡge}\text{f}\text{V}$ ‘raincloud, rain’: strong.
 149. * $\text{ḡar}\text{Ḳ}[\text{u}]\text{V}$ ‘sinew’ ([in descendant lgs.] → ‘bowstring, bow’): possible.
 150. * $\text{ḡEw}\text{VS}\text{V}$ ‘grass’: rejected.
 151. * $\text{ḡe}\text{ḡ}[\text{i}]\text{V}$ ‘to make, to do’: rejected.
 152. * $\text{ḡo}\text{ḡV}(-\text{Ḳa})$ ‘tree’: strong.
 153. * $\text{ḡa}\text{t}\text{U}$ ‘fish’: weak.
 154. * $\text{ḡa}\text{t}\text{V}$ ‘to throw, to cast’: possible.
 155. * $\text{ḡo}\text{t}\text{V}$ ‘to breathe, to blow’: possible.
 155a. * $\text{ḡu}\text{t}\text{V}$ ‘hand’ (‘palm of the hand with fingers’?): possible.
 156. * $\text{ḡaw}\text{y}\text{V}$ ‘to shout, to speak’: possible.
 157. * $\text{ḡaw}[\text{oy}]\text{V}$ ‘to spend the night, to sleep’: possible.
 158. * $\text{ḡuy}[\text{h}]\text{V}$ ‘to bend’: possible.
 159. * $\text{ḡäz}\text{V}[\text{ḡ}]\text{V}$ ‘wedge’: rejected.
 160. * $\text{ḡi}\text{ḡV}$ ‘strong, healthy’: rejected.
 160a. * $\text{ḡa}\text{ḡV}$ ‘white, bright’: strong.

161. *bA adjectival particle forming compound (→ derived) names of quality bearers, nomina possessoris, and animal names: possible.
162. *bV particle forming compound (→ derived) nomina abstracta: possible.
163. *boʔV 'to go': strong.
164. *bũfV 'to blow, to inflate', (→ ?) 'to swell': strong.
165. *biçV ~ *biĉV 'small, little': possible.
166. *bVĉ[V]RV 'to cut': rejected.
167. *boĉa '(young) deer': possible.
168. *biĉV 'to cut, to crumble, to crush': weak.
169. *bVg[ĉ]V 'bad, wicked': rejected.
170. *b[u]ĉfV 'to tear to pieces': weak.
- 170a. *bAdV 'many, multitude': strong.
171. *bed[ĉ] 'to pierce, to prick': possible.
172. *[b]edV 'back of something': possible.
173. *bodV 'body, belly': possible.
174. *bud[V]fV 'to be thick': possible.
- 174a. *bud[h]ʔE 'to plait' (→ 'net'): rejected.
- 174b. *bad[V]XV 'to be open': possible.
175. *bũd[V]X|qV 'to be away; to feel, to pay attention; to be excited, cheerful': rejected.
176. *baHgü (= *bah|hgü) 'forearm': weak.
177. *bũ[y]gE (more plausible than *bũHgE) 'stinging insect': rejected.
- 177a. *bAga (or *bAġa) 'to be(come) visible, to appear': weak.
178. *b[i]gĉ 'much': rejected.
179. *beha (or *bäha) 'to shine, to be bright': strong.
180. *baH₂V 'to tie, to bind': strong.
181. *buHi 'to grow, to appear, to become': strong.
182. *b[o]ka 'to put out, to throw out' (→ 'to sweep out'): possible.
183. *buk[o] (or *buk[o]fV ?) 'to run, to run away': weak.
184. *b[o]ka 'to heat, to roast, to burn': weak.
185. *bukEfV 'billy goat, ram': possible.
186. *baĶa (or *bag[k[V]ʔa ?) 'stick, sprout; (?) to sprout': possible.
187. *baĶV 'to look': possible.
188. *buĶa 'bovines': possible.
189. *buĶV (or *büĶV ?) 'cheek': weak.
190. *büĶa 'a stinging insect' ('gadfly, gnat'): possible.
191. *büĶ[a] 'to bend; bent': possible.
192. *b[ôhi]ko 'to be bright, white, light; to shine white': weak.
193. *bUĶĉE (or *bUH₂aĶĉE ?) 'to tie', 'rope, tie': weak.
194. *baL[ü] 'bad, harm': possible.
195. *biĹU 'to be warm, to burn; warm': possible.
196. *buLV 'to stir up (liquid); turbid': strong.
197. *b[ü]||ÍV 'a shoot': rejected.
- 197a. *bVLV 'dove': rejected.
198. *biLuʔĉ (= *biĹuʔĉ ?) 'cloud': possible.

199. *bVLVʔa ‘to blow, to inflate’: strong.
 200. *baLʃV ‘blind’: strong.
 201. *ba[ɪ]ʃa (or *ba[ɪ]ʃ[U] ?) ‘to swallow; throat’: strong.
 202. *bVL[h]V ‘leaf, leaves, green plants’: strong.
 203. *beLkVgV (= *beLkVgV ?) ‘belly, waist’: possible.
 204. *ba[ɪ]ka ‘to shine’: strong.
 205. *bVliʔ[ʃ[V]kü ‘to beat, to strike’: strong.
 206. *ba[L̥]V ‘to wash, to immerse’: rejected.
 207. *bEIV ‘to boil, to cook’: rejected.
 208. *bihl̥[V] ‘to shout, to call, to speak’: weak.
 209. *baHIV ‘pain, wound’: possible.
 210. *b[oʔi]l̥[V] ‘to swell’: possible.
 211. *bóIX[a] ‘tail, penis’: strong.
 212. *beñh̥V ‘younger relative’: possible.
 213. *bVhæñyV ‘bone (especially bone of limb)’: rejected.
 214. *bæñtV (~ *bæñdV ?) ‘to tie’: possible.
 215. *boŋE ‘bosom, breast (front of body)’: rejected.
 216. *ben[ʃ[X]i ‘head’: rejected.
 217. *buŋä ‘thick; to swell’: strong.
 217a. *bEPtV ‘lip(s), mouth’: rejected.
 218. *bVqâ (= *boqâ ?) ‘side of body, side’: possible.
 219. *bArV ‘earth, land, dust’: possible.
 219a. *beRV ‘mud, swamp’: possible.
 219b. *borV ‘mountain, hill’: strong.
 220. *buRu (or *buRü) ‘to break’: strong.
 221. *bUrV ‘to turn round, to rotate’: possible.
 222. *buRV (or *bürV) ‘flint’ (→ ‘to cut/carve with a flint’): strong.
 223. *buRV, *buR[V-][K]V ‘storm, stormy wind’: strong.
 224. *ba[ʔ]eri ‘to hold, to take’: possible.
 225. *bUʔRV (probably *boʔRV) ‘to dig; a pit, well’: possible.
 225a. *b[A]ʃVrV ‘ungulate’: weak.
 225b. *bohrV ‘loose earth, dust’: rejected.
 226. *bUhRV ‘to be light (of color)’: rejected.
 227. *bV[h]RV ‘to blow, to inflate, (→ ?) to swell’: possible.
 228. *b]uXrV ‘back, rear’: possible.
 229. *bärʔV ‘to give’: strong.
 230. *berEʔa ‘to give birth to; child’: strong.
 231. *bu|ür[ʔ]V ‘lock of hair, down’: strong.
 232. *bärʃâ ‘leaf, bud’: possible.
 233. *borûʃV (or *baRûʃV) ‘trunk’ (→ ‘log’): weak.
 234. *bôri[ʃ]U ‘loose earth, dust, (?) sand’: strong.
 235. *bArh[ê] ‘to shine’: strong.
 235a. *bAr[h]V ‘to be hungry, to want’: rejected.
 236. *borHû ‘belly, internal organs’: rejected.
 237. *bûrûHV ‘eyebrow, eyelash’: strong.

238. *barqV (~ *barXV) 'to go, to go away, to step': strong.
 239. *büryi 'to cover': strong.
 240. *bVRġûčV 'belly': rejected.
 241. *bAR[V]dV 'to pass; way, road': weak.
 242. *bur[u]dV[g]V (~ *bar[u]dV[g]V ?) 'facial hair, animal's body hair, down': weak.
 243. *b[i]rVgE 'high, tall': strong.
 244. *b[E]RV[k]V 'knee': strong.
 244a. *b[i]Rk|gV (~ *p[i]Rk|gV ?) 'to dig': possible.
 245. *buR[u]k|gV 'to run, to jump': rejected.
 246. *bôraĶE (or *bôra ĶE) 'to fall, to fell, to throw': weak.
 247. *bVR[V]kæ 'to flash, to shine': strong.
 248. *baRmV 'a stinging insect': possible.
 249. *baRġV 'to be uneven, rough; to bristle': possible.
 250. *b[A]fV 'old': possible.
 250a. *bofV or *buřV 'sun, day': possible.
 251. *bôř[a] 'to pierce, to bore': strong.
 252. *buřu(-ĶU) [or *buřü(-ĶU)] 'to spurt, to gush forth, to boil, to seethe': strong.
 253. *b[u]Xfa 'watercourse, river': possible.
 254. *bar?V 'big, much, thick': weak.
 255. *boř[?]û 'brown, yellow': strong.
 256. *bV[ř][V]dV 'hail' (and 'snow'?): weak.
 257. *b[i]ř[üw]qa (or *b[i]ř[uw]qa ?) 'edible fruit': possible.
 258. *bUš|čV 'to rub, to grind': rejected.
 259. *bu?[V]šV 'bad': possible.
 260. *bušV 'to uncover, to peel', 'bare': weak.
 261. *bUšřV (or *bUšyV) 'breath': rejected.
 262. *b[a]tV '= luck, good': rejected.
 262a. *botV 'dust' or 'ashes': weak.
 262b. *b[æ]gUtV 'thigh, (calf of) leg': possible.
 263. *bit[V]?[V] 'to hold': possible.
 264. *bôt[ř]V 'to grow' (intr.), 'to sprout': possible.
 265. *bařV 'cold; to feel cold, to freeze': strong.
 265a. *biřV 'louse': 'louse' '= parasitic insect': possible.
 266. *buřV 'to cut, to cut off, to cut into pieces': possible.
 267. *buřV 'pistachio (and terebinth) tree/nut': possible.
 268. *bař|guřV 'to kick, to push': rejected.
 268a. *bağ[V]ř[i] 'to be quick; sudden': weak.
 269. *b[ü][g]âřV 'to hunt, to try to catch': weak.
 270. *bu[w]řV 'lower part of the body': possible.
 271. *b[i]řa (or *b[i]qa, *büyř|qa ?) 'to beat, to strike': rejected.
 272. *bayV 'place', 'to be somewhere': possible.
 273. *bVyV (or *bVyřV) 'bee': strong.
 274. *beřyV 'body, self' ([in descendant languages] → 'soul'): possible.

275. *baXyV \rightarrow *baXi ‘abundant’: weak.
 276. *b[e]yXV ‘to tear, to cut to pieces’: weak.
 277. *b[e]ʃVhyV ‘to pour’: weak.
 278. *bûzV ‘insect’: possible.
 279. *b[a]hʒV ‘to strike, to thump’: possible.
 280. *bažê ‘to ripen, to be cooked’, ‘to cook, (?) to prepare’: possible.
 281. *bUyžV ‘fur-bearing animal’: rejected.
 281a. *boʒV ‘hair, feather’: rejected.
 282. *bêžU(-[qV]) \rightarrow *bêž[V]qV ‘big, high’: weak.
 283. *bEΓ[V]žV ‘ungulate animal’ (later ‘deer’ and sim.): rejected.
 284. *ćE ‘that’: possible.
 285. *ćuqbE or *ćuqbV ‘to carry away, to throw away’: rejected.
 286. *coΓ|χčV or *čoΓ|χcV ‘to sweep, to rub/scrape away/off’: possible.
 287. *ć[ü]dV ‘outstretched hand, span’: possible.
 288. *ćodʃU ‘defect, evil deed’: possible.
 289. *CegV ‘breast, milk’: rejected.
 290. *ćokV ‘shelter, primitive house’: possible.
 291. *Co[k][ü] ‘small, little’: rejected.
 292. *ć[ç]KaKa ‘to tickle’: rejected.
 293. *cikP̄V ‘branch, shoot of a plant’: rejected.
 294. *C[a]l̄V (= *ć[a]l̄V ?) ‘cold’: rejected.
 295. *ćelê ‘to peel’: rejected.
 296. *ćEĪV ‘to be quiet, to wait’: rejected.
 297. *co||ĪV ‘to be/make empty’: rejected.
 297a. *ćaXol̄V (or *čoXal̄V ?) ‘to wind (round something), to tie’: weak.
 298. *ćil̄XV ‘to defecate’: possible.
 299. *ćoLK̄V (~ *čoLk̄V) ‘to advance with effort (to creep, to crawl, to climb, etc.)’: rejected.
 300. *ćäl̄q̄V ‘thin, lean; reduced (as body)’: rejected.
 301. *ćal̄[Eʃ]o ‘to split, to cut’: weak.
 302. *c[i?A]mV (or *ciyAmV) ‘grass’: weak.
 303. *ć[o]mH₂E ‘to smear’: rejected.
 303a. *ćVm̄q̄U ‘fruit, berry’: rejected.
 304. *c[u]ñčV or *č[u]ñcV ‘to crawl’: rejected.
 305. *C|C̄ündV ‘mouse’: possible.
 306. *cuñV ‘to know’ (← ‘to have seen’ ?), ‘to see’: rejected.
 307. *ćün̄šV ‘finger, knuckle’: possible.
 308. *ć[ç]ä]ñKV ‘to break’: possible.
 309. *cVp̄V ‘to cover’, ‘roof, plated cover’: rejected.
 310. *ćEäq̄V (= *ćäq̄V ?) ‘to jump’: weak.
 310a. *ciq̄U ‘small rodent (mouse ?)’: rejected.
 311. *ćarV (or *çarV) ‘hard/firm, hardened crust, hard/rough surface’: possible.
 312. *ćERV ‘small, little’: possible.
 313. *cURV ‘to move (go, swim, fly) away (or from one place to another)’: rejected.

314. *c[awe]rV 'finger, hand': rejected.
315. *cæſRV 'to burn something': rejected.
316. *cōH₂[V]rV 'to drip, to flow; drops': possible.
317. *cVR[V]ŷV – *cVŷRV 'to freeze, to feel cold', 'fever': rejected.
- 317a. *cûR[k]a 'to watch, to watch over': rejected.
318. *c[ä]fV 'dirt, dung, rubbish; to defecate (cacare), to excrete': possible.
319. *cEtV 'to cover': rejected.
320. *cowV 'to look at, to look after, to protect/guard': possible.
321. *caw[h]V 'to cover, to dress, to put/hang (on)': possible.
322. *ca|oxû 'to mix, to deal with each grain (one by one), to separate them': rejected.
323. *c[i]χE 'to sweep, to rub/scratch away': possible.
324. *ça or *ca (= *Hiçça ?) a marker of relative constructions (in the descendant languages → suffix of adjectives and singulatives [→ diminutives]): rejected.
325. *cæ 'away, downward': rejected.
326. *ç|çi or *ç|çi a marker of verbal frequentivity/iterativity: rejected.
327. *cōXibV 'belly': rejected.
328. *cû|ub[V]gV 'dip in' ([in descendant languages] → 'to dye'), to immerse': rejected.
329. *çûdV 'to point with a finger' → 'true, just': rejected.
330. *ça[?E]dV 'to hunt for, to wish': rejected.
331. *çaſ[i]dV 'to advance with effort (run, climb, etc.), to step': rejected.
332. *çuyyă 'thorn': weak.
333. *çak[E]ſV 'snow, ice-crust, hoarfrost': weak.
334. *çEkV 'small': possible.
335. *çEĬV (*çeyĬV ?) 'to jump': rejected.
336. *çûĬV 'stalk, stick': rejected.
337. *ç[ü]ĬU (or *çiĬU ?) 'entire, intact, pure': weak.
338. *çVLV 'to bend, to incline': rejected.
- 338a. *çûſ[V]ĬĬV 'small': rejected.
339. *çûĬĬŷV 'to prick, to wound': rejected.
340. *çiĬHA (= *çiĬhA ?) 'to be wet/moist', 'moisture (water, etc.)': possible.
- 340a. *ç[i]LhV '(char)coal, soot': rejected.
341. *çEmV (= *çEmV ?) 'to maim, to torment': rejected.
342. *ç[i]mV 'eyelid', 'to blink (eyes)': weak.
343. *çamgV 'cold': rejected.
344. *çEmpV (or *ç- ?) 'bent, crooked': rejected.
345. *çeñV 'to tie, to bind, to plait': weak.
346. *ç|çan|ñV 'to be of a shining white', 'to be bright', 'moon': rejected.
347. *çaP̄V (or *çaP̄K̄V, *çaK̄P̄V ?) 'stalk, pointed stick, spear': rejected.
348. *ç[i]p̄V 'navel': rejected.
349. *çip̄u(-fV) 'small bird': weak.
350. *cōP̄V 'to watch, to look out, to spy': rejected.
351. *çap̄[ſ]a 'to beat, to strike, to chop': weak.
352. *çEp̄ſV ([as.] > *çEbſV) 'finger': weak.

353. *čVqV ‘to make dirty; to revile’: rejected.
 354. *čoq[a]ſE ‘to beat/hit (someone), to hurt; pain’: weak.
 355. *čaſ[a][l]V (or *čaſV) ‘elbow, part of a limb’: rejected.
 356. *č[A]RV (= *č[A]RV ?) ‘to cross’, ‘across, over’: rejected.
 357. *čorV (¬ *čawrV ¬ *čarwV ?) ‘tip, top, edge’: rejected.
 358. *čUrV ‘narrow’: weak.
 359. *čæſrV ‘to be in pain, to feel hurt, to resent’: rejected.
 360. *č[ŭ]grV ‘to be small, to diminish’: rejected.
 361. *čä[h]ŭ|urV ‘to circle, to twist’: rejected.
 362. *čUyrV ‘to rot, to stink, to be spoiled/bitter’: rejected.
 363. *č[e]r[a]ſV ‘(stinging) insect’: weak.
 364. *čiryâ ‘to scratch/chisel, to scrape (an object), to fashion’: possible.
 365. *čâR[i]pV (~ -b- ?) ‘to scratch/chisel, to hew, to cut’: rejected.
 366. *čorV (or *čorV) ‘to drop, to trickle’: weak.
 367. *čUſrV ‘to squeeze out (liquid), to strain, to sift’: rejected.
 368. *čotV ‘drop’: rejected.
 369. *č[ŭ]tV (or *č[ŭ]tV ?) ‘to throw, to fling, to pour’: rejected.
 370. *čAHtV ¬ *čAHdV (= *čAſ|htV ¬ *čAſ|hV ?) ‘red’: rejected.
 371. *čoQtV ‘dark, darkness’: rejected.
 372. *čowV ‘to inform, to make know/hear’: rejected.
 373. *čVχU ‘to be alive/healthy’: rejected.
 374. *ča dem. pronoun stem of distant deixis: strong.
 375. *č[ŭ] ‘that of ..., that which’: rejected.
 376. *č[čibV ‘stem of a tree, log’: rejected.
 377. *čûbV ‘to bend, to turn, to turn back, to give back’: rejected.
 378. *č[aʔu]ba ‘cloth, sack’: rejected.
 379. *čayVd[V]yV ‘female breast’: rejected.
 380. *čEgV ‘to prick’ (→ ‘to butt’): rejected.
 381. *ča[h]a ‘to stop, to stand (up)’ (→ ‘to raise’): rejected.
 382. *čika ‘to prick, to split’: rejected.
 383. *čikU ‘the laterally projecting part of the base of limbs (shoulder, hip)’ (→ ‘thigh’): possible.
 384. *čAk[U] ‘to prick, to gouge’: weak.
 385. *č[o]K̄V ‘much, heavy’: rejected.
 386. *čAIV ‘stalk’: weak.
 387. *čalV ‘to beat, to knock down, to fell’: strong.
 388. *čAIV (= *čAIU ?) ‘to plait’: rejected.
 389. *čelV ‘to pull away, to take away/out, to rob’: weak.
 390. *čûLV ‘stalk, branch, twig’: weak.
 391. *č[V]ſLV(-bA) ‘canine’: rejected.
 391a. *čAIVmV ‘orifice, pit’, or ‘breach’: strong.
 392. *čal[U]gV ‘snow’ or ‘hoarfrost’: rejected.
 393. *č[i]mâ ‘to be(come) quiet, silent’: rejected.
 394. *čoma ‘wild bovine’: strong.
 395. *čamVčV ‘to get sour/foul’: rejected.

396. *čīnV 'other': possible.
397. *č[a]ndV 'to rise, to emerge, to jump (up)': rejected.
398. *čūŋV 'smoke, smell': rejected.
399. *č|čəŋ[k]â 'to push, to kick, to stumble': rejected.
400. *čo[ŋt]V 'to step, to tread': rejected.
401. *čapa 'sack, vessel': weak.
402. *čEqV (or *čEχV) 'to chop, to cut': rejected.
403. *čaqyV (or *čaxyV ?) 'to shine': rejected.
404. *čU[?]RV 'to stand, to stand up': rejected.
405. *č[i]gRV (~ *č[i]R[g]V ?) 'to stop up, to thrust, to plug up, to dam': weak.
406. *čAr[h][û] 'to spread, to scatter': weak.
407. *čERH₂V (= *čERfV ?) 'to stick in, to gouge, to chisel': rejected.
408. *čVRuqV (or *čVRüqV ?) 'to pile up, to put /lay, on/over': rejected.
409. *č[i]RkV 'pus, rotten/filthy liquid': rejected.
410. *č[a]w[û][ry]V 'bull, calf': rejected.
411. *či[t]V 'to clean, (?) to wipe': rejected.
412. *čit[h]a 'small bird': rejected.
413. *čAyV 'to bring, to give': rejected.
414. *čæ|abV[y]V 'horned animal': rejected.
415. *čVčχ|χV 'to be born; young of an animal': rejected.
416. *čaydV 'to strike, to beat': rejected.
417. *čuka (or *čuk[V?]V ?) 'to shut, to stop up, to cover': rejected.
418. *č|čikV 'to cut (fine)': possible.
419. *čEŋkV (or *čäŋkV ?) 'to squeeze, to make tight': rejected.
420. *čä|V (or *čä?|V ?) 'feeble, lean; to shrink, to diminish': rejected.
421. *č[o]l[w]V 'shadow, shade, dark': rejected.
422. *čVŋ|h|hmV 'to taste, to eat': rejected.
423. *čäm[V]χV 'sour, bitter': possible.
424. *čiwnV(-čV) 'smell, stench, malodorous sweat': rejected.
425. *čeñ?V 'narrow, thin': weak.
426. *č[ä]ñčV (or *č[ä]ñčV) 'tip, (back) end': rejected.
427. *čUpV(RV) 'fingernail, claw': possible.
428. *čVpV(-tV) 'thong': weak.
429. *čiŋPâ 'branch, bough, rod': rejected.
430. *čE[y]pV 'to sink, to immerse; to swim; to flow': rejected.
431. *č[a]rV 'to cut': strong.
432. *čERV 'to look after, to guard': weak.
433. *čûrV 'to take, to seize, to carry': rejected.
434. *č[u]RV 'to soil, to stain; dirty': weak.
435. *čVRV 'flintstone, knife': possible.
436. *čohrV 'vessel', (← ?) 'basket': weak.
437. *čûh[V]rV 'top, edge, highest point': rejected.
438. *čVR?V 'hoarfrost', (→) 'frozen, soil': weak.
439. *čER[hæ] 'heavy, hard, stiff, difficult': rejected.
440. *čûrtV 'soot': rejected.

441. *čûŕŕV ~ *čûŕŕV ‘to see, to look’: possible.
 442. *čawχV ‘to cry, to exclaim’ (→ ‘to praise’, ‘fame’): rejected.
 443. *čüçV (or *š- ?) ‘clean; to clean’: rejected.
 444. *čEčkV ‘to crush, to split’: rejected.
 445. *čUdV ‘to be weak, to be damaged, to be weary’: rejected.
 446. *čVd[i](-ka[?V]) ‘to wait, to stay, to have leisure’: weak.
 447. *čodhV ‘to break (especially a body part), to strike’: weak.
 448. *čVd[V]qV – *čVqVdV ‘to tear, to split’: rejected.
 449. *čih[i] ‘to carry, to bring’ (→ ‘to give’): weak.
 450. *čEkŕV – *čEkŕV, (?) *-rV ‘to step, to tramp, to trample down’: weak.
 451. *čuKŕV ‘thorn, point (→ blade), summit’: possible.
 452. *čalV ‘to pour (out)’: weak.
 453. *čo[h]V ‘similar, as; alone, one of two’: rejected.
 453a. *čumV ‘to lift, to raise’: rejected.
 454. *čiχmV ‘fat’: weak.
 455. *č[i]ŕ[ä]nâ ‘to recognize, to know’: rejected.
 455a. *č[ç]uñ[?]V ‘to sound, to utter’: rejected.
 456. *ča|EñçV ‘large’ (→ ‘high, broad’): rejected.
 457. *č[e]pV ‘heel, foot, part of leg’: rejected.
 458. *č[ay]P̄V ‘vegetation, leaves’: rejected.
 459. *čiP[V]ŕæ (= *čib[V]ŕæ ?) ‘to eat one’s fill, to feed to satiety’: rejected.
 460. *čä[ŕU]RV ‘the calf of the leg, shank’: rejected.
 461. *čuŕV ‘vulva, vagina’: rejected.
 462. *čUŕV (or *čUry[?V] ?) ‘to twist, to twine’: rejected.
 463. *čatV ‘to separate, to scatter’: rejected.
 464. *či[w]tV (or *čütV ?) ‘to split’: rejected.
 465. *ča|o[t]V ‘to deviate from the right path, to incline, to be lame/crooked’: rejected.
 466. *č[ç][û]w[?]V ‘meat’: rejected.
 467. *čVχV ‘to burn (trans.)’: possible.
 468. *čVy[ŕ]V ‘girl, (younger) sister’: rejected.
 469. *čAŕV ‘to perish, to die’: rejected.
 470. *č[a]ŕbV ‘fish’: rejected.
 471. *čabV?V ‘war’, ‘warriors, host’: rejected.
 472. *čæbŕV ‘shoulder’: rejected.
 473. *č[i]bVŕV (or *č[i]bVŕV) ‘hyena’: rejected.
 474. *čôbVRV ‘to press together, to squeeze (as in a fist)’: rejected.
 475. *čV[C][V]qV (possibly *čVč[V]qV ~ *čVçqV) ‘to squeeze, to press’: rejected.
 476. *čVhwV ‘to burn’ (vt.) [→ ‘to warm (of the sun)’, ‘heat of the day’]: rejected.
 477. *čôKŕE (= *čogŕE ?) ‘to sink to a kneeling/squatting/lying position’: rejected.
 478. *čiKŕV ‘tight, narrow, dense’: weak.
 479. *čUŕ[il][w]V ‘little, small’: rejected.
 480. *č[ç]VhLV ‘to be compassionate, to have mercy’: rejected.
 481. *č[i]l[V]ŕV ‘side of body’ (→ ‘rib’), ‘hip’ (→ ‘thigh’): rejected.

482. *ĉVH₂[V]mV 'daylight': weak.
 483. *ĉVm[V][s]V 'to interlace, to plait/tie/wrap together': weak.
 484. *ĉ[a]n?V 'to give birth': rejected.
 485. *ĉEN[V]qV 'to press, to squeeze': rejected.
 486. *ĉUñtV 'mucus': rejected.
 487. *ĉaŋU 'to jump, to skip': rejected.
 488. *ĉapV 'clay, mud; to smear, to moisten': rejected.
 488a. *ĉaPv 'to grasp, to take': rejected.
 489. *ĉipâ (or *ĉüpâ ?) 'to be narrow, to be compressed': rejected.
 490. *ĉapVſE 'filth, dung', 'rubbish': rejected.
 491. *ĉVPRV 'to twist, to plait': rejected.
 492. *ĉEPtV 'to close, to shut, to hide': rejected.
 492a. *ĉehrV 'back': rejected.
 493. *ĉärſV (or *ĉärUſV ?) 'female breast, udder': rejected.
 494. *ĉer[V]XV 'wing, feather': weak.
 495. *ĉoſV 'mud': rejected.
 496. *d[i] marker of imperfective: possible.
 497. *diſê (~ *dVHU) 'to put, to place': possible.
 498. *dûbV 'edge, end': possible.
 498a. *dVbV 'hill': rejected.
 499. *dub[?]V 'back, hinder part, tail': strong.
 500. *dAdV 'thick, fat, large': possible.
 501. *didV 'large, big': strong.
 502. *dod[H₂]V 'point, nipple; to suck (mother's breast)': rejected.
 503. *d[ü]ga 'suitable, fit, good': rejected.
 504. *dähgU 'to watch, to look at': weak.
 505. *dagorV 'shoulder-blade as part of the back': rejected.
 506. *dVwg|ſV 'sun, day, morning' (→ 'to be bright as sun'): weak.
 507. *di[h]a 'to look at': possible.
 508. *d[E]H₁a 'with', 'together with': possible.
 509. *de[?o]He 'to make, to do': possible.
 510. *daka 'back [dorsum], back [rear], behind': rejected.
 511. *d[A]k[o] (~ *d[A]g[o] ?) 'to burn' (trans.): rejected.
 512. *dûk[U] 'to strike, to beat': rejected.
 513. *dEHik[a] (= *dEſika ?) 'to pierce, to dig': rejected.
 514. *dak[V]?U '(young of an) equid': rejected.
 515. *dik[E]ſ[U] 'to rumple, to knead, to press': weak.
 516. *daKv 'small, thin, short': possible.
 517. *dikV 'edible cereals/fruit': rejected.
 518. *doKê 'to observe, to learn': possible.
 519. *d[U][K]V 'to approach; near': rejected.
 520. *daſV 'tasty, sweet': weak.
 521. *d[i]ſa (= *d[i]ſa ?) 'sunshine, daylight, bright': strong.
 522. *dulî 'fire, heat': strong.
 523. *daHſV ~ *daſHV 'to lick': possible.

524. *dũ|u[H|w|y]lV ‘itching, lust’: rejected.
 525. *dũ|UhV ‘to be mad, to be stupid’: possible.
 526. *dalqa|U ‘wave’: strong.
 527. *dæLbV ‘to gouge, to dig, to cut through’: strong.
 528. *dæL[k]a ‘to prick’: weak.
 529. *deL[V]P̄V ‘to flap, to wave, to fly’ (← ‘to flap wings’?): rejected.
 530. *dVlqâ ‘feather’: rejected.
 531. *dEgîâ (= *dũgîâ ?) ‘bush(es), shrubs, thicket’: rejected.
 532. *dũHî|lV ‘dust’: possible.
 533. *deqî|lV ‘(to be) thin’: rejected.
 534. *do|Aî[V]fV (= *dAîoV or *dAî[V]fo ?) ‘to push, to press, (?) to squeeze’: weak.
 535. *damV or *damVdV ‘to cover, to close’: possible.
 536. *dAmV ‘steam, mist, dust’: possible.
 537. *dũmV ‘to be motionless, to be silent, to be quiet’: strong.
 537a. *dVmV (= *dimV ?) ‘to breathe, to blow’: rejected.
 538. *d[û]hmV ~ *d[û]mhV ‘(to be) dark’: strong.
 538a. *dUm[?]û (= *d[o]m[?]û ?) or *dUŋwV (= *d[o]ŋwV ?) ‘big tree’: weak.
 539. *dim[V]ŋa|æ ‘rubbish, dirt, animal feces’: possible.
 540. *dVmPV (= *dVm̐V ?) ‘back, rear part, tail’: rejected.
 541. *d[o]ñV ‘flat, low’, (→ ?) ‘lowland’: weak.
 542. *dônV ‘to cut’: strong.
 543. *duñV (or *dũñV) ‘to stream, to flow’: strong.
 544. *doñcE ‘large, heavy’ (of load): rejected.
 545. *doŋa ‘to cover’: weak.
 546. *dũŋ[g]â ‘to be quiet, silent’: possible.
 547. *daPV(KV) ‘to stick (adhere), to glue’: possible.
 548. *dũpV ‘to squat, to hide’: rejected.
 549. *d[ã?i]pV ‘to wave, to flap, to wave the wings, to fly; wing’: rejected.
 550. *dap[V]ŷV ~ *dayopV ‘to push’: rejected.
 551. *dEqV ‘earth’: possible.
 552. *duqV or *dũqV ‘to blow, to breathe, to shake’ (→ ‘to smoke’): rejected.
 553. *diqa ‘goat’ (or ‘ruminant’): rejected.
 554. *dArV ‘to have a suitable size (to be just right), to have enough room for’: rejected.
 555. *duri (or *dori ?) ‘to go, to walk’: rejected.
 556. *durV (or *dũrV) ‘hole, hollow’: possible.
 557. *dũRV ‘log, stick’: rejected.
 558. *dURV ‘deaf’: rejected.
 558a. *d[û]rV ‘woods, bush(es)’: weak.
 559. *dũrV or *dUrE ‘intestines, heart’: rejected.
 560. *da?urV ‘to stand, to stay’: rejected.
 560a. *degarV ‘hill, summit’: rejected.
 561. *dã[y]RV ~ *da[y]RE ‘to be(come) stiff, firm’: possible.
 562. *der?[i] ‘to thrust back, to drive away’: possible.

563. *d[û]r[?]V 'dirt': possible.
 564. *dar[VH]V 'to hold, to hold fast, to fasten': strong.
 565. *dûr[Vh]V 'to deceive, (?) to outwit': rejected.
 565a. *darHV or *daHrV 'path, way': strong.
 566. *der[?]ûbV 'way, path': possible.
 567. *daRuga or *darûga 'to tremble, to shake': weak.
 568. *dæR[h]Vga ~ *dæR[h]VkV 'to walk, to run; road': possible.
 569. *dVR[H₂]Vg|KV 'sediment (in food), refuse': rejected.
 570. *doRkæ (~ *doRgæ ?) 'to bend, to turn, to wrap': strong.
 571. *duřV 'camping site, abode': rejected.
 572. *dû[r]V[g|qV] 'lamb, kid (of wild ram, etc.)': possible.
 573. *d[o]ř[V]kV 'to tread, to trample': possible.
 574. *dVštV 'moon': rejected.
 575. *doTgiřû 'fish': possible.
 576. *daXwV (~ *dawXV ?) 'to press, to push': rejected.
 577. *d[æ]wVŹ|gV 'wolf or jackal': rejected.
 578. *dVw[V]yV 'to be ill/weak, to die': possible.
 579. *d[oy]a (> *da) 'place': strong.
 580. *dă[ž]V (or *dăř[ž]V ?) 'to strike': rejected.
 581. *g[U] 'we' (incl.): weak.
 582. *gaři or *gařyV 'high': rejected.
 583. *guřa (or *güřa) 'to butt, to stab, to strike': rejected.
 584. *gařû 'to catch, to take, to receive': possible.
 585. *guřV 'to perceive, to care': rejected.
 586. *gabV(-|ÍV) 'head' (→ 'top', 'skull'): possible.
 587. *gobV 'plain, (?) earth': possible.
 588. *gü|ub|pE 'heap, hump, hunchback': rejected.
 589. *gařbV 'thick, dense; large': rejected.
 590. *gu[řb]V 'to bend': rejected.
 591. *gařbV (or *gařbV ?) 'to hold, to seize; to collect': possible.
 592. *g[uy]bV 'to heat' (→ 'to cook, to roast, to burn, to dry'): possible.
 593. *g[U]břV(LV) 'hill, mountain': possible.
 594. *g[ab]hE ~ *-hb- 'blunt, weak': rejected.
 595. *gub[V]RE ~ *guRbV 'back, back side, nape (of neck)': rejected.
 596. *gičV 'to injure, to irritate': rejected.
 597. *gi[č]V (or *gičV ?) 'hip, thigh': rejected.
 598. *gad[a] 'bank, shore, side of something': weak.
 599. *gadV '(to be) suitable/good; luck': possible.
 600. *gædi 'back part; occiput, nape of neck': weak.
 601. *gudV (or *güdV ?) 'to cut, to tear': weak.
 602. *gudV ~ *gutV 'belly, middle': weak.
 602a. *gu[ř]dE ~ *gü[ř]dV (or *gu[ř]žE ~ *gü[ř]žV) 'to guard, to watch, to be on the watch for': rejected.
 603. *ga[y]di (~ *ga[y]ti ?) 'kid, young goat', (?) 'antelope': weak.
 603a. *ge[d]üşV 'late, evening' (→ 'yesterday'): rejected.

604. *gaṣügæ ‘to covet, to long for’, (→ ?) ‘mate; to copulate’: rejected.
605. *gEhōwyV ‘to go away, to drive away’: weak.
606. *gokE (= *goki ?) ‘to track’ (→ ‘way’), ‘to follow the tracks of’: rejected.
607. *gaKt[ä] ‘couple, one of a pair’: weak.
608. *g|koḲE (rV) ‘chest, breast’ [→ (in descendant languages) ‘belly’, ‘heart’]: rejected.
608a. *gawḲV ‘long, high, far’: rejected.
609. *gaLE ‘shout, cry’ (→ ‘weep’, ‘ask for’): possible.
610. *galü|u (→ *ga[ya]Lü|u) ‘tortoise’: weak.
611. *gElV (or *gE?alV) ‘stalk, twig’ (→ ‘stick’, ‘trunk of a tree’): weak.
612. *giL[U] ‘illness, pain, distress’: possible.
613. *goLu (or *goyVLu ?) ‘skull’ (→ in descendant languages: ‘sphere, ball’): possible.
614. *goIV ‘to look, to look for, to wish’: possible.
615. *goLV ‘foetus, baby’: rejected.
615a. *goLV ‘tail’: strong.
615b. *go||V ‘to weep’: possible.
616. *gûLE ‘to go (away), to start (going away), to set out’: possible.
617. *gûLA ‘dwelling, house’: possible.
618. *gûLâ ‘to bend, to be crooked’: rejected.
619. *gohlV ‘fire, glow of coal’, ‘to burn’: possible.
620. *gowlu (or *gowlü ?) ‘deep; valley’: possible.
621. *gü|u[?]IV [= *gü|u[?]IV(-mV) ?] or *gü|u[?]LV(-mV) ‘roe deer, antelope, (?) goat’: rejected.
622. *gol[?]V ‘belly, entrails’: weak.
623. *go[yV]l̥V ‘pudendum muliebre’: rejected.
624. *gil[h]o ‘to shine, to glitter, to sparkle’: strong.
625. *gU|[E]hU ‘to be smooth’: strong.
626. *gûL̥V ‘to bend, to twist’: strong.
626a. *gAl||V ‘wind’: possible.
627. *g[U]IV ‘season without vegetation’ (‘drought, dry season’, ‘winter’): rejected.
627a. *gUh̥E ‘canine animal’: rejected.
628. *gi[V#]?V[d]V ‘ice, frost; to freeze’ (and *giV ‘ice, frost’): strong.
629. *g[A]mV (and *g[A]m̥V ?) ‘altogether, full’: strong.
630. *g[e]mV ‘strong, firm’: possible.
630a. *gUmV ‘heavy’: possible.
631. *goḥmV → *gomḥV ‘hand, fist’: possible.
632. *gumbV ‘back, (?) hump’, (→ ?) ‘hill’: possible.
633. *gim[V]çV ‘to make a grimace with one’s mouth and/or nose’ ([in some descendant languages] → ‘to grin, to smile, to mock, to laugh’): rejected.
634. *g[u]m[V]çV ‘to incline, to bow, to bend’: possible.
635. *g[ä]m[V]ša ‘waterfowl, bird (a shore bird ?)’: possible.
636. *gAn|nV ‘to see, to perceive’: strong.
637. *genû ‘jaw, cheek’: strong.

- 637a. *g[oʔa]nV 'much, big': possible.
 638. *g[o]ʔiñV 'to beat, to strike': strong.
 639. *gAHnV 'to lie, to sleep': rejected.
 640. *guñ[h]i – *gu[h]ñi (or *guñ[ʔ]i – *gu[ʔ]ñi) 'to think': possible.
 641. *gāñhV 'side (of something), width': possible.
 642. *gVñ[V]bV or *gVñ[V]bʔV 'side, edge': rejected.
 643. *gæñdû 'male': possible.
 643a. *gondV 'ant': possible.
 644. *gän[V][p]V (or *gän[V]pV ?) 'stem, stalk, stake, stick, picket': rejected.
 645. *gañtV 'to hold, to carry': possible.
 646. *guñV or *guñV 'male genitalia': possible.
 646a. *gañV (or *gaʔoñV ??) 'flesh of leg, thigh, buttocks': rejected.
 647. *güñañ[o] 'voice; to produce a sound': rejected.
 648. *g[ä]ñ[X]a 'to step, to climb': weak.
 649. *guñ[K]E – *güñ[K]V 'nape' (→ 'neck'), 'rear part of the head': rejected.
 649a. *goñ[H]älV – *gol[H]VñV 'forearm': rejected.
 650. *guþ[û] 'hollow, empty, hole': weak.
 651. *gæ[ʔ]UpV body': rejected.
 652. *goPKa 'tooth, hook, sharp stick': rejected.
 653. *gä[p]sA 'paw, hand': weak.
 654. *gEqû 'to pour, to flow': rejected.
 655. *gArV 'hand': strong.
 655a. *gERV 'entrails': possible.
 656. *geRV 'throat': possible.
 657. *g[i]rV to hate, to be hostile': possible.
 657a. *giRV 'leg, bone of the leg': rejected.
 657b. *guRV 'belly, body': possible.
 657c. *guRV 'forest': possible.
 658. *gURV 'to roll': strong.
 659. *güRV 'beast': possible.
 659a. *gE[ʔ]orV (or *gEworV ??) 'grain': rejected.
 659b. *gi[ʔ]orV 'grass': rejected.
 660. *ge[ʔV]rV 'to fence around, to encircle; enclosed place': rejected.
 661. *g[ü]ñrV 'to look, to look for': rejected.
 662. *gæhRV – *gæRhV 'sunshine, day, light': strong.
 662a. *gaHrV (= *gaʔrV ?) 'fish': possible.
 663. *gû[w]rV '(roof of a) hut/house; to dwell': possible.
 664. *gar[ʔ]i 'old': rejected.
 665. *gArʔV 'belly, inside': possible.
 666. *girʔV 'to cut': strong.
 667. *goRʔV 'hill, (small ?) mountain': possible.
 668. *gVRæʔû 'to fell, to strike; to fall in': weak.
 669. *garHä 'sharp bough, sharp stick, sharp point': strong.
 670. *gErHV 'to belch, to erupt': weak.
 671. *gorho 'to be(come) big/long, to grow': possible.

- 671a. *goRHæ ‘to track (game), to smell, to hear; ear’: rejected.
 672. *gārĥV ‘to try to obtain, to wish, to need’: weak.
 673. *gur[E]wV(-TV) ‘young (carnivorous) animal’: rejected.
 673a. *g[o]RVHwV ‘to pound, to scrape, or similar’: possible.
 674. *gur[X]a ‘antelope, male antelope’: possible.
 675. *gorVb|pV ‘to scratch, to scrape’: possible.
 676. *garû[ĉ]a ‘to crush, to break to pieces’ (or *gVRûs|ĉV ‘to crush’): strong.
 676a. *gVRĉVċV or *gVRċVĉV ‘stinging insect’: rejected.
 677. *gäRdV ‘to encircle, to surround, to fence in’: rejected.
 678. *gE|aRdV ‘to plait, to tie, to gird (to wear something around one’s waist)’:
 strong.
 679. *guR[k][U] ‘throat’: possible.
 680. *gAr?AmV ‘to scrape, to pound to small pieces, to grind’: possible.
 681. *gUrandV ‘log, trunk of a tree’: weak.
 682. *gERsV (probably *gäR[s|š]V) ‘to congeal, to grow numb, to stiffen’ (→ ‘to
 freeze’): weak.
 683. *gaRžV ‘to stretch’: rejected.
 684. *g[o]Ržæ ‘to feel’: rejected.
 684a. *gAfV([ŋ]V) ‘to thunder’: possible.
 685. *geŕa or *geRya ‘to step, to walk’: rejected.
 686. *goŕæ ‘hot; to heat; embers’: weak.
 687. *guŕV(dV) (or *gurVyV(dV)-) ‘hip, side’: rejected.
 688. *g[e][y]ŕâ (or *g[e]?irâ) ‘fire, hearth’: rejected.
 688a. *guŕŕE or *gürŕV ‘throat, neck’: weak.
 689. *gEyVŕV ‘to cast (spear); spear’: rejected.
 690. *g[ä]yŕV?a ‘to be frightened/sorrowful, to worry’: rejected.
 691. *g[u]ŕVŕa (~ *g[u]ŕV?V) ‘to belch, to vomit’: rejected.
 692. *gA?itV ‘body, flesh’: rejected.
 693. *gû[t][H]V ‘small, little’: rejected.
 694. *gäŕâ ‘to grasp, to take, to possess’: strong.
 694a. *gôŕV ‘ant, (?) worm’: possible.
 695. *gôŕV ‘to pull, to draw’: rejected.
 696. *gaŕŕE ‘to pass through/over, to get through, to cross’: weak.
 697. *gäwŕV (or *gäwyV ?) ‘to call’: weak.
 698. *gayV ‘side, outside’: weak.
 699. *goyV ‘man, people’: rejected.
 700. *gâ[?]yV ‘to wave one’s hand, to point with one’s hand/finger’ ([later] → ‘to
 wave to someone, to beckon’): possible.
 701. *gähya ‘to throw, to leave, to let’: weak.
 702. *goXeyV ‘light, sunshine, dawn, daybreak, aurora’: weak.
 703. *gažV ‘slanting, skew, bent’: rejected.
 704. *g[a]žV ‘to go; way, path’: rejected.
 705. *gæžV ‘hair, wool’: possible.
 706. *gü[ž]V – *gu[ž]E ‘tracks, path; to go, to pass’: weak.
 707. *gUžlû (– *gUžlû) ‘to laugh, to amuse’: rejected.

708. *gUʒʒV 'to wish, to be hungry': rejected.
709. *gûbV 'to plait, to interlace, to wattle' ([in descendant languages] → 'to weave'): rejected.
- 709a. *ga[ç]V (or *gaʔicV ?) '(leafy) branch, bough': rejected.
710. *[g]oK̄V§|çV(-RV) 'canine': rejected.
711. *g[e][l]V(-wV) 'to rise in waves (of water)': weak.
712. *gûLV (= *gûlV ?) 'to destroy, to fight; war': weak.
713. *gi[l]U 'boy, young man': possible.
714. *g[o]Lpa (or *guLpa ?) 'weak, small': rejected.
715. *gaÍV 'cereals, crops': rejected.
716. *[g]amV 'mouth', (?) '(inside of) cheek': rejected.
717. *gVmV 'darkness, night': possible.
718. *geñ[ä] 'to be large, to be copious': possible.
719. *[g]ûñV (or *ʒûñV) 'to drink, to eat': possible.
720. *gar[i] 'valley, hollow in the ground, cave': weak.
721. *gorV 'to cry, to speak, to produce vocal sounds': weak.
722. *gUrV 'skin': rejected.
723. *garHV 'to crush, to grind': weak.
724. *gVRVbV (or *-p-) 'dark': possible.
725. *gu[rir]V (or *gufV → *gufVrV → **gurVfV) 'skill, ruse, deceit; to deceive': weak.
726. *gotK̄V 'popliteal space (back of the knee), armpit': rejected.
727. *gužê 'sheep, goat': weak.
728. *gUʒV 'to feel, to smell something': rejected.
729. *ʒ[a]çV 'to bite, to chew': possible.
730. *Γäç[U] (= *Γäço or *gäʔiç[U] ?) 'grass': rejected.
731. *yoçV 'bone', (?) 'backbone': rejected.
- 731a. *ʒay[e]çV 'to seek, to look for': rejected.
732. *ʒAçV 'to cut, to cut into pieces': rejected.
733. *ΓûdV 'to tie; thong': rejected.
734. *ΓULV 'knee, elbow': weak.
735. *ΓuñV 'to bend, to be bent, to sink, to fall': rejected.
736. *Γoñ[V]ga 'fingernail, claw' (→ 'thorn, hook'): rejected.
737. *Γañ[ç]U 'cheek': rejected.
738. *ΓoñtV 'heat; to heat': rejected.
739. *Γûrû 'to flow, to stream': possible.
740. *ΓVRV 'wild boar': rejected.
741. *ʒerʔV 'eagle' or similar: possible.
742. *ʒERgE 'big beast, beast of prey': rejected.
743. *ʒ[o]rkô 'to bend, to be bent/crooked': rejected.
744. *ʒVR[V]PV 'cloud': rejected.
745. *ʒVR[V][ç]V 'to gnaw': weak.
746. *ΓVRΓVH₂TV (= *gVRgVH₂TV ?) 'waterbird': rejected.
747. *ʒ[ü]šV 'to live': rejected.
748. *ʒ[iš]VbV 'to grow; vegetation': weak.

749. *ȝ[o]wV ‘wild sheep/goats’: possible.
750. *ΓoyV ‘to carry, to bring’: possible.
751. *ha deictic pronominal particle (‘ille’, distal deixis): strong.
751a. *[h]a particle of collectedness: possible.
752. *[h]æ ~ *[h]U dual particle (for nomina animata): rejected.
753. *h[e] ‘this’: strong.
754. *[h]i ‘iste’ (or ‘hic’): strong.
755. *[h]u ‘iste’, demonstrative particle (intermediate deixis ?): strong.
756. *hedV ‘to break’: possible.
757. *hūdi ‘to rot, to dissolve (by boiling), to boil’: possible.
758. *hu|od[V]?V ‘to be motionless, to sleep’: weak.
759. *hakV ‘slow, inactive’: possible.
760. *h|X[ä]kä ‘to need, to lack’: possible.
761. *[h]awk[a] ‘light; bright’: rejected.
762. *hUwäkê ‘to move, to walk’: rejected.
763. *hakʕV ‘to stand, to stop, to stay, to be’: weak.
764. *hoḲU ‘to copulate’: possible.
765. *halV ‘to call out, to call, to pronounce magic words, to rejoice’: possible.
766. *halV ‘this’: possible.
767. *hAlV ‘to shine; bright’: possible.
768. *hiLV (or *hEyLV ??) ‘new heavenly light’: rejected.
769. *hiL[U] ‘to stand, to be, to exist’: possible.
770. *hūLV ‘to push, to butt, to pierce’: weak.
770a. *[h]al[V]?E ‘on the other side’: strong.
770b. *[h]ali[w]V ‘elephant’: possible.
771. *haLVḲ[u] ‘to step, to walk’: possible.
772. *hAlUḲ[a] ‘to be in need (hungry, thirsty), to covet’: weak.
773. *[h]VmP[i] ‘venomous vermin/(?) reptile’: rejected.
774. *hanV ‘head’ → ‘top’ → ‘on, on the surface, towards’: possible.
775. *hEñV ‘iste’: possible.
776. *hû?En|ḡV ‘wave’: rejected.
777. *hAwḡV ‘sense, mind, soul’: rejected.
778. *hUPU ‘bad’, ‘error, sin’: rejected.
779. *herV ‘to disintegrate, to fall to pieces’: possible.
780. *hoR[i] ‘to conceive’, ‘newborn, young’: possible.
781. *he[ʔ|y]r[E] ‘male’: rejected.
782. *h[o]RVbV ‘to run’: rejected.
783. *hüRêV ‘to wrinkle, to rumple, to crush, to tear down’: rejected.
784. *hirVgV ‘to kill’ or ‘to die’: rejected.
785. *haRḲa ‘to hold/grasp, to keep, to keep in one’s possession’: rejected.
786. *[h]aš[o] ‘to burn (of fire)’: rejected.
787. *hišE ‘to break’: possible.
788. *[h]otV ‘to smell (to get the odor of)’, ‘to smell (to have an odor/scent)’: rejected.
789. *hawtV ‘to call, to speak’: rejected.

790. *hawV 'to desire, to love': strong.
 791. *how[i] 'to become, to appear': rejected.
 792. *h[o]wV 'pit, depression': rejected.
 793. *hæ[?]w[U] 'to fall, to sink': rejected.
 794. *ho[w]ſa (or *hoſwa) 'to flow, to stream; a stream': rejected.
 794a. *hVya 'for, for the sake of', directive-designative particle: rejected.
 795. *H₂i particle of past (preterite): possible.
 796. *H₁içχV → *-ç- → *H₁içΓ|hV 'father, head of family' (→ or ← 'master, lord'): rejected.
 797. *Haç|ç[i] (or *X|Q|haç|ç[i] ?) 'father, ancestor': possible.
 798. *H₂eç[U] (or *H₂eH₂iç[U] ??) 'to sink': rejected.
 799. *H₂UdV (or *hUdV ?): 'sister', 'female relative': rejected.
 800. *HüwdV (= *ΓüwdV ?) 'evening, night': rejected.
 800a. *HogE 'top, above': rejected.
 800b. *HAkV 'leaf', (?) 'branch': weak.
 801. *H[o]kE (= *H[o]kü or *H[o]kæ ?) 'goat': rejected.
 802. *[H₂]ôkU 'head': rejected.
 803. *H[i]kæ 'to eat': weak.
 803a. *[H₂]elV 'sprout, twig': strong.
 804. *H₃iL[i] (= *hiL[i] ?) (or *H₃i[?y]L[i] ??) 'intestines': rejected.
 804a. *H[ä]ÍV (= *χq[ä]ÍV ?) 'female': rejected.
 805. *H₃am[U] 'to be or become quiet, to enjoy': possible.
 805a. *Homg[ü] 'breast': possible.
 806. *H[e]mVñV (= *?[e]mVñV ?) 'oak, tree': rejected.
 807. *HañV 'other': possible.
 808. *HinV (= *XinV ?) 'other': rejected.
 809. *Han[g]V(tV) (or *Hañ[g]V(tV) ?) 'duck': strong.
 810. *Hoñka (= *Hoñka ?) 'angle, joint/bend (of limb, etc.)': weak.
 811. *HEñomV (= ? *hEñomV or ?? *χEñomV) 'to take hold of, to have, to seize': rejected.
 812. *H[ä]ñtV 'kernel': rejected.
 813. *Huñ[d]V 'root': possible.
 814. *HäñkU 'fire': rejected.
 815. *HUþV-(tV)k|gV or *HU[P]tVkv ~ *-VgV (*H = *h or *h ?) 'stalk (of a tree)', (?) 'haft': rejected.
 816. *H[æ]RV 'goat, sheep': possible.
 817. *H₁erU 'to go upwards, to rise': possible.
 818. *H|WurV 'male person/animal': possible.
 819. *H₁â?VfV (= *?a?VfV ?) 'long, big': rejected.
 820. *Ha[wV]šV (= *ſawišV ?) 'male, male person': weak.
 821. *Haya 'to pursue': possible.
 822. *H₂oyV (= *hoyV ?) 'by me, my': possible.
 823. *hU[w]çV (or *hUwVçV) 'loins, lap': rejected.
 824. *haLû (or *haLwV) 'a leaf-bearing tree': possible.
 825. *hVLiLV 'flower, a plant with flowers': rejected.

826. *hEmVdV ‘to desire, to covet’: rejected.
827. *[h]oNca (or *χoNca) ‘(front) end, extremity, edge, tip’: rejected.
828. *[h]aṇdV (or *χαṇdV) ‘shade, darkness’: rejected.
829. *hU[n|m]pV?V ‘navel’: rejected.
830. *(hiñV-)rimPV or *(himV-)rimPV ‘eyelid, eyelash’: rejected.
831. *hop[V]lE ‘to flow, to drown’: rejected.
832. *h[ü]rχVĉV ‘to scratch, to comb’: rejected.
833. *h[U]re||ÍV ‘reed’: rejected.
834. *hE[y]sU ‘feces, filth’: rejected.
835. *hUžE(-qV) ‘to look, to see’: weak.
836. *ko ‘whereas, but, also’ (adversative-thematic and reminding enclitic conjunction): weak.
837. *kU particle of plurality: strong.
838. *kV ‘out of, from’: weak.
839. *kV ~ *gV ‘thee, thy’: weak.
840. *ko?[i] ‘to call’: rejected.
840a. *kefi (or *k|KeyV ?) ‘to make, to do’: weak.
841. *kEŷû ‘to pour, to flow’: rejected.
842. *kuŷa ‘to go, to advance, to follow’: rejected.
843. *kabV ‘sheep, goat’: possible.
844. *kabV ‘to rise, to stand up’: rejected.
845. *kabV ‘calabash, gourd’: possible.
846. *kibV ‘hump, bend; to bend’: rejected.
847. *kobV ‘to hew, to cut’ (→ ‘to plane’): possible.
847a. *koH₂[ä]bV (→ *koH₂[ä]pV ?) ‘frog, toad’: rejected.
848. *k[ä]ĉU ‘skin’: rejected.
849. *kEĉ[U] ~ *k[ü]ĉ[U] (or *-ĉ-) ‘knife’: weak.
850. *k[u]ĉV or *K[u]ĉV ‘ant’: possible.
851. *k[a]d|tV ‘rock’: possible.
852. *kudV (of *KudV) ‘to plait’: possible.
853. *küd[a] ‘male person of the opposite exogamous moiety’ (→ ‘male relative in-law’): weak.
854. *koŷdV ~ *kodŷV ‘filth, dirt; abominable’: weak.
855. *k|KedV[š|ć]û ‘to sneeze’: rejected.
856. *k|gog[U]žE[?V] ‘to set fire, to burn (something)’: rejected.
857. *kaḵE [= *kaḵi ?] (or *k- ?) ‘angry, bad’: rejected.
858. *k[Eho]ka ‘green/blue, green plants’: rejected.
859. *k[a]la (or *kaliya ~ *kalaya ?) ‘vessel, boat’: possible.
860. *kaV ‘to lie’ (→ ‘to spend the night’): possible.
861. *ka||ÍV ‘to bark (a tree), to remove vegetation’; → ‘bare, naked’: possible.
862. *kälû ‘a woman of the opposite exogamous moiety’ (→ ‘female relative-in-law’, ‘bride’): possible.
863. *k[o]lV ‘bough, stick’: weak.
864. *k[o]Li (or *k[o]Li?u ?) [= *k[o]||li (or *k[o]||li?u ?)] ‘to smear’: weak.
865. *kulV (or *kuwælV ?) ‘to work’: weak.

866. *kUḷV (or *kVhōḷV ?) 'snake, worm': possible.
 867. *kûḷV 'glowing coals; to heat/roast/fry/cook': possible.
 868. *ka[h]ḷV 'power, force; to be able': possible.
 869. *kal[?]V 'to approach, to come': possible.
 870. *kolʔa 'to die; end': possible.
 871. *kol[V]ḷV (or *koḷ[V]ḷV ?) 'to peel, to bark': rejected.
 872. *kāl[h]V 'to walk, to make one's way (with an effort), to wade': possible.
 873. *kalwV 'together, whole': possible.
 874. *k[a]ḷX[o] 'to call, to shout': rejected.
 875. *kVl[V]yV 'lumbar region': rejected.
 876. *kaLčV 'voice; to speak, to cry, to weep': possible.
 877. *koḷu 'to fly; wing': weak.
 877a. *kuḷV 'to flow, to gush, to leak': possible.
 878. *küḷV or *kuḷE 'cold; to freeze': possible.
 879. *koḷʔV 'pair, one of a pair': possible.
 880. *koḷHa 'oak': possible.
 881. *kama 'to peel' (→ 'dandruff, scab'): possible.
 882. *kamV 'to grasp, to press': possible.
 883. *kamV 'full, whole, all': possible.
 884. *kāmê (or *kamê) 'blood': possible.
 885. *kEmV (or *kEmho) 'to give birth' (→ 'kin, family'): weak.
 886. *komV 'something hollow': possible.
 887. *k[u]mV(LV) '(stinging) insect': weak.
 888. *kümâ (or *küHmâ) 'man, person': possible.
 889. *kVmçV (or *ḲVmçV) 'to jump': rejected.
 890. *kamçV (or *ḲamçV) '(something connected with) hand/arm': rejected.
 891. *kom[V]dE 'basket, vessel': possible.
 892. *kom[V]ṭV 'to cover; lid, cover': possible.
 893. *kañV 'pair, couple; one of a pair, comrade': possible.
 894. *kañ[h]V(-ṭV) 'stalk, trunk of a tree': weak.
 895. *[k]onE 'to touch' ([in Kartvelian] → 'to knead, to work up'): possible.
 896. *koñi (or *kuñi) 'woman, wife': possible.
 897. *kuñä 'hair': possible.
 898. *k[ay]ñV (or *kañV ??) (often in compounds) 'wing, feather': weak.
 899. *kü[y]ñûʔA 'a joint in a limb (knee, elbow); to bend in a joint': weak.
 900. *känhæ 'to give birth': possible.
 901. *kiñho ~ *kihño 'to see, to observe, to examine, to trace, to know': rejected.
 902. *kän[y]u (or *känVy) 'cheek, side of the face': weak.
 903. *ken[V]çVdV 'joint (articulation), shoulder joint': possible.
 904. *koñdE 'to harm, to spoil', (← ?) 'to touch': rejected.
 905. *Kuñ[y]aHÍE ~ *K[u]yñaHÍE – *K[u]ñaHÍE 'sunshine, daybreak': rejected.
 906. *kañ[m]pV 'a soft excrescence (lip, mushroom)': rejected.
 907. *kuñčê (or *kuñčê [probably = *kuñči or *kuñči]) '(finger)nail, claw': rejected.
 908. *kaṅga 'to wrap, to tie': possible.

909. *kaŋV ‘waterfowl’: possible.
 910. *koŋ[ʒ]V ‘crotch (of body)’: possible.
 911. *kohpV ‘cave, pit’: weak.
 912. *ko[q]pV ‘mucus, slime’ ([in some B lgs.] → ‘saliva’), ‘filth, dirt on the surface (mould, soot)’: rejected.
 913. *keypV (¬ *küypV ?) ‘light (not heavy)’: rejected.
 914. *kep[H₂]V (= *kepʃV ?) ‘jaw, chin’: possible.
 915. *kopVrV (or *-b- ?) ‘many, big’: possible.
 916. *kuṖsa ‘to extringuish, to exhaust’: rejected.
 917. *karV ‘to twist, to turn around, to return’: strong.
 918. *kaRV ‘to rise, to get up, to jump up, to wake up’: weak.
 919. *kirâ or *girâ ‘to scratch’: possible.
 920. *korê ‘deer, antelope’: possible.
 921. *kurV ~ *karV ‘crane’: possible.
 922. *ku|orV ‘thick, fat’: possible.
 923. *k[o]ṡRV ¬ *k[o]Rṡ[û] (probably *k[o]ṡRV ¬ *k[o]Rṡ[û]) ‘to be heavy, to be stout/thick’: rejected.
 924. *ko[w]rV ‘embers, hearth’: rejected.
 925. *koyRV ‘male animal’: rejected.
 926. *kür[ʔ]V ‘to shine; flame’ → ‘to produce heat’: weak.
 927. *korṡV ‘to eat (greedily), to drink, to swallow’: possible.
 928. *kor[V]hV ‘to be angry, embittered’: possible.
 929. *kur[Vh]V ‘hill, mountain’: possible.
 930. *kuRhV ‘to shout, to cry’: rejected.
 931. *kôri[h]û ‘throat, neck’: possible.
 932. *korVwa ‘to fade, to rot, to decay’, ‘to coagulate (blood, etc.)’, ‘to get sour/rancid /bitter’ (of food): rejected.
 932a. *kor[Vw]V ‘a gallinacean’: possible.
 933. *ka[ry]V ‘to dig’: strong.
 934. *ka|æR[ç]V ‘to tie together, to plait’: weak.
 935. *kURcV ‘scales, bark; to remove scales, to peel’: possible.
 936. *kiRû[H]gæ ‘to gnaw’: rejected.
 937. *k[a]Rka or *k[a]RṲa ‘to turn, to plait, to wrap’: rejected.
 938. *kärEmV ‘wall, walled/fenced enclosure’: possible.
 938a. *kiRVṖV ‘fish’: possible.
 939. *kärRtV ‘to cut (off), to notch’: possible.
 940. *keRtV ‘to tie, (?) to plait’: possible.
 941. *kVRTV (or *gVRdV ?) ‘to scratch, to scrape’: rejected.
 942. *kuʔrVt[d]V ‘worm, parasitic insect’: rejected.
 943. *kaŕo (or *k[o]ŕo ?) ‘onager, wild ass (?)’: weak.
 944. *k[a]fV (= *k[a]fU ?) ‘hawk, bird of prey’: weak.
 945. *koŕû ‘stick, log’: rejected.
 946. *koŕV ‘fig tree’: possible.
 947. *kUfV (or *kuŕV ?) or *kuŕyV ‘young of an animal, child’: rejected.
 948. *kuhrV (or *kührV ?) ‘rain clouds, rainy weather, rainy season’: possible.

949. *kírHa 'old': possible.
 950. *ko[r̥][w]V 'external ear': possible.
 951. *[k]ü|uSV 'mouse': possible.
 952. *k|geHsV 'warm, hot; hot season': rejected.
 953. *kaswV 'to grow, to increase; (to become) big': rejected.
 954. *k[ü]š?V 'gravel, (coarse) sand': rejected.
 955. *käššV 'vexation, anger, quarrel': rejected.
 956. *kiš[?]V 'to tear (off), to pinch, to pluck': rejected.
 957. *katV 'to speak, to think': rejected.
 958. *k[i]t[U] ~ *k[i]t[U] 'to tickle', ? 'to itch': rejected.
 959. *k[ä]ʔitV (or *kæʔitV ?) 'to suck, (?) to eat liquid food': rejected.
 960. *koytV 'filthy liquid, filth': rejected.
 961. *ku[t]HE (or *kü[t]HV) 'to rise; (?) high place': weak.
 962. *k[o]tê 'belly': possible.
 963. *koʔû 'to drip, to exude liquid' → 'sap, pitch': possible.
 964. *koʔV ~ kuʔV 'magic utterance and its results': rejected.
 965. *k[ü]ʔa (or *k- ?) 'fingernail, claw, nail': rejected.
 966. *kaʔtV 'hard, dry': rejected.
 967. *kawV 'to call (exclaim), to shout': possible.
 968. *kiw[V]h[ê] 'stone': possible.
 969. *koyV ~ *kayV 'to draw', 'scoop, spoon': possible.
 970. *kä[?]yU '(small) bird': possible.
 971. *kô[ʔ]y[û] (most probably *ko[ʔ]y[û]) 'larva, worm' (→ 'moth'): possible.
 972. *koyʔ[o] (or *kuyʔ[o]) 'fat, healthy': rejected.
 973. *koyHV 'skin, bark': possible.
 974. *koyhV 'to be strong, to overpower, to take possession of': rejected.
 975. *käywV 'to chew': rejected.
 976. *koyw[a] 'birch tree': rejected.
 977. *kežʔê 'skin; to skin': rejected.
 977a. *kužmV (or *kužVmV) 'smoke, ashes': possible.
 978. *kaʔV '(young) dog': weak.
 979. *Ka a particle of request: rejected.
 980. *Ka substantivizing, singulative, or distinctive (singling out) pronoun, name of quality bearers: rejected.
 981. *Ko 'who?': strong.
 982. *K[ü] demonstrative pronoun (animate ?): strong.
 983. *KV (= *kV ?) 'towards', directive particle: strong.
 983a. *k[Aʔi]bV or *k[iʔA]bV 'cold, ice': rejected.
 984. *koʔbE 'to fill; whole': rejected.
 985. *[k]u[ʔ]bE 'thorn': weak.
 986. *Kab[Eʔ]V 'wickerwork, bag, vessel': rejected.
 987. *käbʔâ 'to bite' (→ 'to eat'): strong.
 988. *KæbLV (or *-Lb- ?) 'to support, to lean': rejected.
 989. *k[ä]éU or *k[ä]éVwV 'wild goat', 'antelope': rejected.
 990. *kecV 'to cut': rejected.

- 990a. *kēcV ‘clay, earth’: weak.
 991. *kīcV (or *KīcV ?) ‘thigh, muscle’: possible.
 992. *koćV (or *qoćV) ‘to shorten by cutting’: possible.
 993. *koʔacV ‘basket, wickerwork’ ([in descendant languages] → earthen vessel): rejected.
 994. *ka[H₂]c|cV ‘young man’ (→ [grown-up] man): possible.
 995. *KawcV ‘share’ (→ ‘lot, fate’): rejected.
 996. *KayCä ‘hair’: weak.
 996a. *KäcV ‘to be cold, to freeze’: possible.
 997. *Kēc[a] ‘tip, end (extremity)’: possible.
 998. *kUçV ‘to cut/chop into small pieces’: strong.
 999. *k[o]çV (or *k[o]çV ?) ‘bone’: possible.
 1000. *KaſcV ‘to advance with effort’: rejected.
 1001. *Kâ[ſ]ç|tV ‘ram, sheep’: weak.
 1002. *KayeçV ‘heat, summer heat’: rejected.
 1003. *ka[ç]U ‘to scratch, to scrape off scales’: possible.
 1004. *KâcſV (= *kaçſV ?) ‘young dog/wolf’: rejected.
 1005. *kAcV (= *käcV ?) ‘to burst, to crack; to split’: rejected.
 1006. *kadV ‘wickerwork, wattle’: possible.
 1007. *k[ä]d[i] ‘to take, to hold’: rejected.
 1008. *k[ç]ôdV ‘to destroy, to break, to cut’: possible.
 1009. *kudV ‘to die’: rejected.
 1010. *KA[?]ûdV or *KûtV ‘neck, (?) nap, shoulder’: rejected.
 1011. *koſ[a]dV ‘to be deprived of; to deprive of’: rejected.
 1012. *KaHdV ‘grief, sorrow, anxiety’ [→ (in some Indo-European languages) ‘care’]: rejected.
 1013. *K[ç]oHadV ‘to dip, to plunge, to descend’: rejected.
 1014. *ka[h]dê ‘to cover’: rejected.
 1014a. *kawudV (r...) (or *kawüdV) (r...) ‘tail’: rejected.
 1015. *KôXadV ‘to scold’, (??) ‘to shout at’: rejected.
 1016. *ku|od[a]hV (~ *kad[a]hV ?) ‘to pierce’: weak.
 1016a. *KAdXV ‘to strike fire, to kindle’: possible.
 1017. *Kud[V]XV ‘to draw (water), to ladle out’: weak.
 1018. *K[a]dKudV ‘tip, top’: possible.
 1019. *kakU (or *kokU ?) ‘hook’, ‘tooth, fang’: weak.
 1020. *kUkE ‘dark, black’: rejected.
 1021. *KaKa ‘penis’: possible.
 1022. *KaKu ‘stalk, stick, cudgel’: weak.
 1023. *KoKe ‘to look, to see’: rejected.
 1024. *k[o]kV ‘beak’, ‘to peck (of a bird)’: possible.
 1025. *KaIV(-mV) ‘spot, stain; to be spotty’: possible.
 1026. *Kêla (= *Kela ?) ‘stalk, a hair’: possible.
 1026a. *K[e]lA ‘to speak, to say’: possible.
 1027. *KelV (or *KeſIV) ‘to lack, to be insufficient’: possible.
 1028. *Ko||la ‘to beat, to strike’: possible.

1029. *Ḳolä (or *Ḳol[y]ä ?) 'long, far': possible.
1030. *ḲolV 'big fish' (or *ḲolV and *kalV ?): weak.
1031. *ḲôlV (bA) (or *Ḳ- ?) 'dog/wolf, whelp': possible.
1032. *Ḳul[ä] 'clan, village' (→ 'everybody'): possible.
1033. *Ḳ[u]lV 'brown': rejected.
1034. *Ḳu|olV 'raven, crow': possible.
- 1034a. *ḲûlV 'to fall, to fall apart': possible.
1035. *Ḳ[eʔhi]lê 'tongue': possible.
- 1035a. *ḲôHlâ ÷ *ḲôlHä 'lake, small body of water': possible.
1036. *ḲeHu[h]lûHê 'to hear': possible.
1037. *ḲEHUyl[ü] 'testicles': possible.
1038. *Ḳaw[hE]LV 'outgrown, inflation, abcess, hernia': rejected.
1039. *ḲoXla 'to be dry': rejected.
1040. *ḲayLa 'to shout, to cry': possible.
1041. *ḲE[yʔ]a|a 'to burn' (intr.), 'to burn (something)', 'to heat, to be heated, to roast': weak.
1042. *Ḳalṣa (or *Ḳaṣlā ?) 'to throw, to leave' ([in descendant languages] → 'to remain, to wait'): rejected.
1043. *ḲaLṣa 'to cut, to hew, to chop, to stab' (→ [in descendant languages] 'to slaughter'): possible.
1044. *ḲalṣV 'rock, hill, stone': possible.
1045. *Ḳ[ü]lV (or *Ḳ[ü]lṣV ?) 'dirt, mud': rejected.
1046. *Ḳal[h]i 'high; to be high': possible.
1047. *Ḳ[ä]l|l[h]û 'stick, hook, bar' (→ [in descendant languages] 'bar for locking'): possible.
1048. *ḲEL[H]V 'cold': weak.
1049. *Ḳa[L]VhV 'to shout, to cry, to weep, to make noise': possible.
1050. *Ḳol|lqa 'to knock, to strike, to hit': possible.
1051. *Ḳal[w]V 'thick': possible.
1052. *ḲalyV '(lock of) hair, eyebrow, eyelash': weak.
1053. *ḲôlyV (= *ḲôlyV ?) 'round; to turn, to turn around, to roll (something)': possible.
1054. *ḲaLḱa (~ *ḱaLḱa ?) 'to wind, to twist': weak.
1055. *ḱoLPV (or *ḲoLPV) 'middle; inside, lap, something within an angle': rejected.
1056. *Ḳal[ü]u (= *ḱal[ü]u ?) 'skin, film, bark': possible.
1057. *Ḳa[l]V '(to be) few, (to be) too small/thin/light': possible.
1058. *Ḳ[ü]l|lV 'short, (?) low': rejected.
1059. *Ḳohlü 'to hide, to deceive, to tell a lie': weak.
1060. *Ḳiy[V]li (or *Ḳiy[V]lṣi ?) 'to bend, to bow': weak.
1061. *Ḳalṣû 'bare, naked': possible.
1062. *Ḳôlṣ[ü] 'track(s), way; to go, to travel': possible.
1063. *Ḳ[ä]m[o] 'to cover': rejected.
1064. *ḲemV 'to bite': possible.
1065. *ḲomV(-bA) (or *ḲumV(-bA) ?) 'forehead, front part': rejected.

1066. *ḲumV ‘sand’: weak.
 1066a. *ḲUmV ‘black, dark’: strong.
 1067. *ḳümV(-Tä)/(-RV) ‘fog, mist; cloud’: possible.
 1068. *ḲU?ämV(-nV) ‘a hand with five fingers’: weak.
 1068a. *Ḳum?V ‘(to be) hot; to smolder’: strong.
 1069. *Ḳ[o]mhV (or *Ḳ[o]mχV ?) ‘to eat, to swallow’: rejected.
 1070. *ḳamč[o] ‘to bend; bend, corner’: weak.
 1071. *ḲU[y]mVçV (or *-ç- ?) ‘shin, thigh’: rejected.
 1072. *Ḳäm[U]řV ‘shoulder, shoulder-blade’: rejected.
 1073. *ḳam[t]V ‘to burn (be on fire)’, ‘to shine’: possible.
 1074. *Ḳ[an[E] ‘young, child’: possible.
 1075. *ḳañ[o] (or *ḳañy[o] ??) ‘to tie’: possible.
 1076. *ḲanV ‘to sing, to sound’: possible.
 1077. *ḲanV ‘to begin, to originate, to be new’: possible.
 1078. *Ḳeñ[η[û] ‘empty’: possible.
 1078a. *Ḳ[o]ñV ‘back, rear’: possible.
 1078b. *ḲuñV ‘belly, chest’: possible.
 1079. *ḳuñV(řV) ‘small carnivore (marten, polecat, wild cat, or similar)’: weak.
 1080. *ḲüñV – *ḲuñE ‘sun, day’: possible.
 1081. *Ḳa[g]Eña ‘to be hungry/thirsty, to desire, to long for’: rejected.
 1082. *ḲûyñV ‘bucket, basket’: rejected.
 1083. *Ḳüy[a]ñV ‘wolf, dog’: weak.
 1084. *Ḳañ?i ‘to hasten, to endeavor’: possible.
 1085. *Ḳin?u (> as. *Ḳün?[ü]) ‘to exercise magic, to exercise magic against someone, to hate’ ([in descendant languages] → ‘to be jealous, to envy’): weak.
 1086. *Ḳon[h]V ‘yellow’ (or ‘a yellow substance’?): rejected.
 1086a. *Ḳ[U]ñ[H]V or *Ḳ[U]ñ[V] ‘bee’: strong.
 1087. *ḳanyV ‘skin, film, bark’: possible.
 1088. *Ḳän[y]û ‘light, thin’: rejected.
 1089. *ḲuñyV ‘ashes, dust’: weak.
 1090. *ḳoñčV ‘to scratch (someone’s body or something), to wound, to make suffer’ (→ ‘to suffer’): rejected.
 1091. *Ḳ[unig]U (= *Ḳ[unig]U ?) ‘to bend, to incline, to bow’: possible.
 1092. *Ḳan[K]E ‘to singe, to glow’: possible.
 1093. *Ḳ[E]ñitV ‘louse, nit’: possible.
 1094. *ḲAnřV ‘genitalia; gland (especially of genitalia: glans penis, clitoris)’: possible.
 1095. *ḲEnřV ‘to be angry, to be in despair’: possible.
 1096. *ḲEnV or *ḲENyV ‘nest’: possible.
 1097. *Ḳ[ü]ñV ‘to burn’ (intr.): rejected.
 1098. *Ḳoñ[č]V ‘bark of trees’: possible.
 1099. *Ḳu[ñ]čV ‘worm’: rejected.
 1100. *ḲuñžV – *-ńć-, *-ńś- (or *g|kuñžV – *-ńć-, *-ńś- ?) ‘star’: rejected.
 1101. *Ḳ[üwa]ñi ‘blood vessel (with blood), blood, or similar’: rejected.

1102. *k_oŋčV 'part of leg': weak.
 1103. *k_E[ŋ]čV [or *k_EmčV ?] (~ *k_EŋčV ?) 'gravel, pebble(s), coarse sand': rejected.
 1104. *k_{aw}ŋV 'shoulder, joint, armpit': possible.
 1105. *k_äŋk_a[hV] 'shell, conch': rejected.
 1106. *k_[k]a_pa 'to cover, to close': possible.
 1107. *k_{ap}V ~ *k_apV 'to seize': possible.
 1108. *k_ap[ä] 'palm of hand, sole of foot; hoof': weak.
 1109. *k_APV 'leaf': weak.
 1109a. *k_[a]p[U] 'bird': rejected.
 1110. *k_opV 'trunk, log': possible.
 1111. *k_{up}E 'to boil' (intr.), 'to swell, to bubble': rejected.
 1112. *k_{up}E (or *k_{üp}V) 'to bend (a joint of the limbs: elbow, etc.)': 'elbow': rejected.
 1113. *k_[u]pV, *-lV 'bubble, pustule, blister': possible.
 1114. *k_uPV 'heap, hill; cone, protuberance': weak.
 1115. *k_uPV 'box, basket': rejected.
 1116. *k_aH₂æPV (= *k_ahæPV ?) 'to chop, to dig': weak.
 1117. *k_oH₂ap[U] (= *k_o?[ʃap[U] ?) 'bark', (?) 'skin': rejected.
 1118. *k_[a]w[o]pE or *k_[a]w[o]pVyV 'skull; occiput': possible.
 1119. *k_[ä]yapV (or *q- and *-p-) 'sharp stone/rock/cliff': possible.
 1120. *k_aPVLV 'occiput, skull': rejected.
 1121. *k_[u]PVfV 'hump': possible.
 1122. *k_aP[V]Sa 'box': possible.
 1123. *k_EPVzV (= *k_EPVzV ?) 'paw, hoof': rejected.
 1124. *k_{ar}V 'to curse, to scold, (?) to be hostile', (?) 'to punish': possible.
 1125. *k_aRV 'to bend; crooked': rejected.
 1126. *k_[a]RV 'to hang': rejected.
 1127. *k_aRV 'to fight; war, troop': possible.
 1128. *k_{är}E 'trunk, (piece) of wood': possible.
 1129. *k_{är}V 'rope; to tie': possible.
 1130. *k_æRV (or *k_{ERV}) 'horn': possible.
 1131. *k_{är}V(-k_a) (= *k_{är}U(-k_a) ?) 'small stone': possible.
 1132. *k_æRV 'pod, fruit of a leguminous plant': rejected.
 1133. *k_{ER}ü 'deer, roe': possible.
 1134. *k_{ERV} 'to grow, to be(come) big': rejected.
 1135. *k_{ERV} (= *k_{ERU} ?) 'hair': rejected.
 1136. *k_{ir}V 'edge, end, (?) bank': possible.
 1137. *k_{or}[a] (or *k_oRa and [k_[]orü ?) 'to flay, to bark', 'crust': possible.
 1138. *k_{oru} (or *k_{orü}) 'to bite, to gnaw, to chew, to eat away': possible.
 1139. *k_[o]rV 'rock, isolated mountain': possible.
 1140. *k_ôR[E] (or *k_ôR[V]wE ?) 'worm, maggot': weak.
 1141. *k_{ur}E(-čV) 'to run, to run away': possible.
 1142. *k_ûr[U] (= *k_{ur}[U] ?) 'foot, hoof' (→ 'hand'): weak.
 1143. *k_{ur}V (= *k_{urü} ?) 'to plait/wattle/tie together': possible.

1144. *Ḳ[u]rV ‘short’: possible.
 1145. *ḲoHri ‘to cover, to protect, to guard’: possible.
 1145a. *Ḳa[H₂]rV ‘sharp’: possible.
 1146. *Ḳu[w]r[E] ‘(severe) cold’: possible.
 1147. *ḲayerV ‘film, bark’: weak.
 1148. *ḲuyrV ‘wood, log’: weak.
 1149. *ḲaR[V?]V ‘point, peak, rock, steep mountain’: possible.
 1150. *Ḳeri?A ‘to cry, to shout, to call’: possible.
 1150a. *ḲarûṣV (or *ḲarûgV) ‘female breast, milk’: possible.
 1151. *Ḳ[i]rûṣV ‘to strike, to hit’: possible.
 1152. *ḲirVṣV ‘to tear, to break’: possible.
 1153. *Ḳur[Vṣ]û ‘to hammer, to pound’ ([in Indo-European] → ‘to grind’): possible.
 1154. *Ḳû|urṣV ‘sharp’: possible.
 1155. *ḲarhA ‘black’: possible.
 1156. *ḲarH₂[U] (= *Ḳarh[u] ?) ‘to burn (something), to heat’: weak.
 1157. *ḲirHV (= *ḳ[i]rṣV ?) ‘top, summit, crown (of head)’: possible.
 1158. *Ḳir[U]qa ‘ice, hoarfrost; to freeze’: possible.
 1159. *ḲaR[iwu] ‘to come into contact (to meet, to come across, to touch)’: possible.
 1160. *ḲürwV – *ḲurwE ‘hard roe, young of fish’: possible.
 1161. *ḲarXV ‘bank, edge’: possible.
 1162. *Ḳir[X]V ‘to scratch, to scrape’: rejected.
 1163. *Ḳur[Xû] ‘blood’: strong.
 1164. *Ḳor[üy]V (or *Ḳorí) ‘lamb’: possible.
 1165. *Ḳur[y]V ‘to sprout from a root’ (→ ‘sprout’, ‘root’): possible.
 1166. *Ḳ[arb]p[i] ‘belly, inside’: weak.
 1167. *Ḳ[i]RûCâ (= *Ḳ[i]Rûçâ ?) ‘to strike’: weak.
 1168. *Ḳ[ü]rû-ṣVcV ‘thin’: weak.
 1169. *ḲuRVçV ‘sharp’: rejected.
 1170. *Ḳ[u]RVçV ‘hard; to dry up, to harden’: possible.
 1171. *ḲVr[V]çV (= *ḲarUçV ?) ‘to scratch’: weak.
 1172. *ḲERVçV ‘prickly/rough hair/object, bristle’: rejected.
 1173. *ḲVRçV ‘to cut’: strong.
 1174. *ḲärdV ‘breast, chest’ ([in descendant languages] → ‘heart’, ‘internal organs’): possible.
 1175. *ḲiRdV ‘to scrape’ ([in descendant languages] → ‘to scratch’ → ‘to comb’): rejected.
 1176. *Ḳ[û]r[d]V ‘monkey’: rejected.
 1177. *Ḳ[û]R[ṣV]dV – *ḲûRṣVṣV ‘stinging insect’: rejected.
 1178. *ḲiRgV (or *ḲiRḳV) ‘stinging insect’: rejected.
 1179. *Ḳ[i]R[g]V or *Ḳ[e]R[g]V ‘bird of prey’: possible.
 1180. *Ḳorg[kU] ‘dirt, dung’: rejected.
 1181. *ḲVRVḳE ‘skin, bark’: weak.
 1182. *ḲâRḲub[pV] ‘top, summit, crown (of the head)’: rejected.

1183. * $\text{\text{K}uRmV}$ 'wurm, insect': rejected.
1184. * $\text{\text{K}uRm[E]}$ (or * $\text{\text{K}oRm[E]}$?) 'to cover': weak.
1185. * $\text{\text{K}ERVpV}$ 'to cover' (\rightarrow 'roof'): possible.
1186. * $\text{\text{k}oRu\text{p}V} \sim$ * $\text{\text{k}aRu\text{p}V}$ 'bark of trees', (?) 'skin': rejected.
1187. * $\text{\text{K}üRpV}$ 'to turn (round, towards)': possible.
1188. * $\text{\text{k}[ü]ryVpV}$ 'sack, wicker basket': weak.
1189. * $\text{\text{K}VrHVpV}$ 'piece of leather (used especially as footwear)': weak.
1190. * $\text{\text{K}äR[?]üs\text{š}V}$ 'to congeal': rejected.
1191. * $\text{\text{k}[ü]RV} \text{š}u[1]V$ 'bottom [bone] of the foot': rejected.
1192. * $\text{\text{k}urtV}$ 'belt; to gird' (\rightarrow [in descendant languages] 'garment'): rejected.
1193. * $\text{\text{k}VR[V]tV}$ 'summit, top': rejected.
1194. * $\text{\text{k}æRtV}$ 'to crumble, chop/cut into small pieces': possible.
1195. * $\text{\text{K}[o]RtV}$ 'flame': possible.
1196. * $\text{\text{k}ERH}_2\text{V}\text{ž}V$ (= * $\text{\text{k}ERhV}\text{ž}V$?) 'hornet, wasp': rejected.
1197. * $\text{\text{k}ôR[V]ž[V\text{χ}]V}$ 'oak': rejected.
1198. * $\text{\text{k}æRž[i]V}$ 'to cut into pieces, to split, to divide': possible.
1199. * $\text{\text{K}a\text{r}V}$ '(sharp) stick, peg': weak.
1200. * $\text{\text{k}[A]fV}$ 'to be full, to fill': rejected.
1201. * $\text{\text{K}ôf[i?]E}$ 'a gallinacean': rejected.
1202. * $\text{\text{K}oya\text{r}[w]i}$ 'fat, tallow': rejected.
1203. * $\text{\text{K}U\text{š}E}$ 'grown-up man, old (person)': rejected.
1204. * $\text{\text{K}uSV}$ 'nut': possible.
1205. * $\text{\text{K}UsV}$ 'to bend, to bow': rejected.
1206. * $\text{\text{k}üsV}$ 'to breathe heavily' ([in descendant languages] \rightarrow 'to pant, to sigh, to moan'): rejected.
1207. * $\text{\text{K}ü[y]\text{š}V} \rightarrow$ * $\text{\text{K}ü?i\text{š}V}$ 'to look for, to desire': rejected.
1208. * $\text{\text{K}as[?]V}$ 'to be hungry, to wish': rejected.
1209. * $\text{\text{k}o\text{ś}[H}_2\text{]V}$ 'to kindle': rejected.
1210. * $\text{\text{k}U\text{š}dV}$ 'to chop, to cut': rejected.
1211. * $\text{\text{K}e\text{š}U}$ (\neg * $\text{\text{K}[ü]\text{š}V}$?) 'to skin, to tear': rejected.
1212. * $\text{\text{K}u\text{š}V}$ or * $\text{\text{K}u\text{ç}V}$ 'to compensate' (\rightarrow 'to pay'): rejected.
1213. * $\text{\text{k}u[y]\text{š}V}$ 'tree' [\rightarrow 'wood'], 'trunk of a tree': rejected.
1214. * $\text{\text{k}üs[ʃ]V}$ 'to fell, to fall': rejected.
1215. * $\text{\text{k}atV}$ (or * $\text{\text{k}a?[V]tV}$) 'to mix, to adjoin, to gather': possible.
1216. * $\text{\text{K}ätV}$ 'hand': weak.
1217. * $\text{\text{K}otV}$ 'tip, end, sharp point; cutting instrument/weapon': rejected.
1218. * $\text{\text{K}otV}$ 'to finish': rejected.
1219. * $\text{\text{K}otV}(-RV)$ 'smoke' (\rightarrow 'soot'): possible.
1220. * $\text{\text{K}[aho]t[o]}$ 'to bite, to chew, to eat': rejected.
1221. * $\text{\text{K}ey[a]tV}$ 'to fall': rejected.
1222. * $\text{\text{K}ut\text{š}V}$ (or * $\text{\text{K}ut\text{š}V}$?) [probably * $\text{\text{K}ut[t\text{χ}]V}$] 'to cut off, to tear (off)': possible.
1223. * $\text{\text{K}ü[y]t[V]pV}$ 'shoulder': possible.
1224. * $\text{\text{k}[a]tV}$ (or * $\text{\text{k}a?itV}$?) 'to kill, to wage a war': possible.
1225. * $\text{\text{K}o\text{ta}}$ (\sim * $\text{\text{K}o\text{ta}}$?) 'fence, wall' \rightarrow 'hut, house, settlement': possible.

1226. *Ḳôṭ[E] (or *koʔUṭE) ‘membrum muliebre, anus’ (→ ‘male genitalia’): possible.
1227. *ḲUṭV ‘small’: possible.
1228. *ḲäwV ‘cavity, hole’: possible.
1229. *Ḳ[aʔe]wV ‘to hear, to notice’ ([in descendant languages] → ‘ear’): weak.
1230. *Ḳ[oha]w[i] – *Ḳ[oha]w[i]yV ‘sinew, thread’ ([in descendant languages] → ‘bowstring’): rejected.
1231. *ḲAḥwV ‘to seize, to grasp, to hold’: possible.
1232. *Ḳaxü – *ḲaxyU ‘to strike, to push’ ([in descendant languages] → ‘to hew’, ‘to touch’): rejected.
1233. *ḲayV ‘to look, to look for’: rejected.
1234. *Ḳ[E]yû ‘person of the same clan’ ([in descendant languages] → ‘friend’): weak.
1235. *ḲoyV ‘to compensate, to take revenge’: rejected.
1236. *Ḳuya ‘manner’ (→ ‘like, as’): possible.
1237. *ḲuyE ‘to be hungry, to desire, to want’ ([in descendant languages] → ‘to be in heat’): possible.
1238. *Ḳæ[h]uyV (or *Ḳæ[h]üyV ?) ‘to heat, to singe, to burn (something)’ ([in descendant languages] → ‘to boil, to cook’): rejected.
1239. *Ḳay[ʔ]V ‘wilderness, desert, woods (especially in the mountains)’: rejected.
1240. *ḲuyhV ‘to rest (from work, etc.), to repose, to be comfortable’: possible.
1241. *Ḳay[i]wa ‘to dig’: possible.
1242. *ḲüZ|3V(-rV) ‘neck’: weak.
1243. *ḲVwzV – *ḲVʔûzV (or *ḲVwz3V – *ḲVʔû3V) ‘to draw, to ladle, to dig out’: rejected.
1244. *ḲežE ‘warm, warm weather’: rejected.
1245. *ḲożV ‘to skin, to bark (wood)’: rejected.
1246. *Ḳa3iχV (or *-ž-) ‘to scold’: possible.
1247. *Ḳo3ʕV ‘tree trunk’: weak.
1248. *lA particle of verbal constructions: possible.
1249. *lA analytical ([in descendant languages] → synthetic) marker of collectivity: possible.
1250. *lA locative particle: possible.
1251. *lV particle with diminutive meaning ([in descendant languages] suffix of diminutives): possible.
1252. *le[ʔV] (or *le[ʔV] ?) ‘being, having’, analytical adjectivizer ([in descendant languages] → formative of adjectives and quality-bearing nouns): possible.
1253. *luʔV – *l[iʔuw]V ‘bovine’: rejected.
1254. *LVʔa ‘to hide, to lie hidden, to lie in wait’: possible.
1255. *LabV ‘to grasp, to get, to obtain’: possible.
1256. *LabV (or *LayibV ?) ‘to be soft’: weak.
1257. *LibV ‘heart’ ([in descendant languages] → ‘life, middle’): rejected.
1258. *L[o]bV ‘grass’ ([in descendant languages] → medicinal or poisonous grass ?): rejected.

1259. *LûbV 'to be thirsty, to be hungry' ([in descendant languages] → 'to wish, to love'): rejected.
1260. *LibhV (= *libhV ?) 'wet; to get wet': weak.
1261. *L[i]čV(-tV) 'jaw': rejected.
1262. *LawčV 'weak, soft': rejected.
1263. *LičV 'to pass, to go away': rejected.
1264. *IewdA (or *žewdA ?) 'to look for, to find': rejected.
1265. *IEga 'to lie, to lie down; to lay, to put': possible.
1266. *LaXga (= *LaHgV ?) 'to cut, to chop': possible.
1267. *Lig[ɣ]æ 'to lick, to sip, to suck': possible.
1268. *LagurV 'body of water': rejected.
1269. *LV[ɣ]U 'fig tree': rejected.
1270. *luΓV 'to wash, to rinse': rejected.
1271. *L|žagU[yV] 'fat meat': rejected.
1272. *|AkU 'circle': possible.
1273. *LikV 'to be ill, to suffer disaster': rejected.
1274. *Luka 'to bend'; 'flexible twig': rejected.
1275. *lukê 'to gather': possible.
1276. *lükê 'to beat, to strike, to break': weak.
1277. *Ii?Vku 'to let, to let go', 'to move' (trans.): rejected.
1278. *Lo[ʔ]ika 'cutting instrument': rejected.
1279. *Lu[ʔä]ka 'valley, low-lying lands, plain': rejected.
1280. *Lukä?V 'flexible rod, thong': rejected.
1281. *lük[V]?A (or *lūkA ?) 'to push, to shove, to thrust, to fasten to': rejected.
1282. *lüksV 'needles of conifer trees': rejected.
- 1282a. *LaKa (= *laKa ?) 'leg': possible.
1283. *laK[u] 'body of water (lake, river, etc.)': possible.
1284. *lak[U] 'to lick, to lap': possible.
1285. *LûKa 'to shine': possible.
1286. *Lûka 'to swallow': rejected.
1287. *lūk[æ] 'canine' (→ 'lynx'): rejected.
1288. *LähaKo 'to grow; sprout, twig': rejected.
1289. *LEHĶæ (= *LEĶæ ?) 'to make one's way with effort (to crawl, to climb)': rejected.
1290. *lūHĶa (~ *l|lūKaĶV ?) 'to jump': rejected.
1291. *IowĶVĶV 'hole, opening': rejected.
1292. *LeqEĶa 'to cut, to tear': weak.
1293. *LûK[a]HV 'to see, to know': rejected.
1294. *LVĶ[V]hV (~ *LVX[V]Ka|æ) 'to grasp, to catch': rejected.
1295. *IuĶUžV 'twig, strap, lash, whip': rejected.
1296. *LiLV 'water, sea': rejected.
1297. *L|ži||ÍV (= *L|žiÍV ?) 'reed, water-plant': rejected.
1298. *IumV 'magic, spell, fortune': possible.
1299. *Iä?[V]m[U] 'crust, scab': weak.
1300. *I[E(g)]umê (= *Ii[g]umê ?) 'wet/cold weather, dew': rejected.

1301. *l̄ahm[U] ‘swamp; body of water’: possible.
 1302. *L[U]mʔV ‘lion’: rejected.
 1303. *l̄am[V]dV ‘low’: possible.
 1304. *L̄ümVgV ‘to eat, to swallow’: rejected.
 1305. *L|žañV ‘side (of body)’: rejected.
 1306. *l̄eyña (or *l̄eyña ?) ‘soft, weak’: strong.
 1306a. *l̄ENdV ‘to fly’ (→ ‘bird’): possible.
 1307. *L̄ü|uŋ[gæʔ]V ‘beast of prey’: rejected.
 1308. *LAŋK̄V ‘tongue, (?) palate’: rejected.
 1309. *l̄[o]ŋK̄a ‘to bend’ ([in descendant languages] → ‘a bow’): possible.
 1310. *LaP̄V ‘to stick to; to mold’: rejected.
 1311. *l̄[æ]p̄A ‘spleen’: possible.
 1312. *LipV ‘fat; to smear with fat’: possible.
 1313. *LiP̄V ‘to crawl, to clamber’: weak.
 1314. *LaʔpV ‘to gulp, to eat (especially liquid food), to eat greedily’: rejected.
 1315. *l̄e[ʔ]äpa ‘leaf, foliage’: possible.
 1316. *LahPV ‘flame; to glow’: possible.
 1317. *l̄a[q]p̄a ‘palm of hand, sole of foot; something flat’: possible.
 1318. *LayP̄V ‘good, beautiful’: rejected.
 1319. *l̄up[V]ʔa ‘bast, bark, film (of a plant)’: weak.
 1320. *L[ü]piʔV (~ *Lip[ü]ʔV) (> later *L[ü]pyV ?) ‘to slip’: weak.
 1321. *L[a]p[H]V ‘to lick’: rejected.
 1322. *LiP[h]a ‘to stick, to stick to; sticky, glue; to make earthenware’: weak.
 1323. *laPTV ‘flat, low’: possible.
 1324. *LVqU ‘to be moist/liquid, to flow’: weak.
 1325. *LAqû ‘tender, mild’ (→ ‘sweet’): rejected.
 1326. *l̄arwV ‘together, many’: rejected.
 1327. *LV[r]kV ‘stem, stick, club’: rejected.
 1328. *LASV ‘to be weak, worn out’: possible.
 1329. *LisV ‘to gather’: rejected.
 1330. *LiSâ ‘small, little, thin’: rejected.
 1330a. *l̄išV ‘to eat; food’: possible.
 1331. *l̄üşV ‘weak’: possible.
 1332. *LVšV ‘to lick’ ([in descendant languages] → ‘to taste’, ‘tongue’): possible.
 1333. *luhašV or *laḥušV ‘lip, mouth’: weak.
 1334. *L[a]t̄V ‘skin/leather, bark’: possible.
 1335. *l̄[ʔ]liʔV ‘to exercise magic forces against someone, to detest, to suffer from’: rejected.
 1336. *Lu[ʔV]t̄V ‘mud’: rejected.
 1337. *l̄iwʃ|ḥa ‘dirt, silt’: rejected.
 1338. *L[a]χV ‘to strike, to fight’: possible.
 1339. *Lexqo ‘to be ill; to ache’: rejected.
 1340. *LawXV ‘board, plank’ (← ‘bough’ ?): possible.
 1341. *L[o]yχiʔa ‘cheek’ ([in descendant languages] → ‘face’): rejected.
 1342. *l̄a[ʔ]yV – *l̄ay[ʔ]V ‘not; to disappear’: rejected.

1343. * $\bar{I}VyhV$ 'to pour; water': possible.
 1343a. * $L[a|æ]yw[Ey]V$ 'crooked', 'to bend, to twist': possible.
 1344. * $Lizû$ 'saliva, mucus', (?) 'slime': rejected.
 1345. * $LV\check{z}V$ (or * $LVw\check{z}V$) 'nut', 'nut-tree/bush': rejected.
 1346. * $I\check{V}$ (< * $?âI\check{V}$?) particle in deverbal nominal constructions, nominalizing the verbal action ([in descendant languages] \rightarrow nomina actionis): possible.
 1347. * $lih\check{c}V$ (or * $I-$?) 'to press, to squeeze': rejected.
 1348. * $[ü]k[?]V$ 'thick' (of liquids), 'dense': weak.
 1349. * $[ayU]V$ (= * $layU\check{V}$?) 'to sleep; time to sleep': rejected.
 1350. * $[']lam[X]V$ 'to be weak/soft; to make soft, to knead': weak.
 1351. * mA particle of marked accusative: strong.
 1352. * mA a marker of nominalized syntactic constructions (\approx subordinate sentences), nominalizer (originally a pronoun) that formed analytic equivalents of nomina actionis, nomina agentis, and other derived nouns: strong.
 1353. * $mä \neg mäh[o]$ 'do not' (prohibitive particle) and 'not' (negative): strong.
 1354. * mi 'I': strong.
 1354a. * $mi ?a$ 'we': possible.
 1354b. * $mi t[ü]$ 'we' (inclusive): possible.
 1355. * mi 'what': strong.
 1356. * $ma[?]a(-yV)$ 'mother': strong.
 1357. * $mA?V$ 'ruminant (deer, antelope ?)': rejected.
 1358. * $mU?æ$ (probably * $mu?e$) 'to cut, to reap' (\rightarrow 'to mow'): strong.
 1359. * $ma\check{g}a$ 'good': possible.
 1360. * $mU\check{c}V$ 'to press, to squeeze': possible.
 1361. * $mu\check{c}V(-kV)$ 'to immerse, to wash': possible.
 1362. * $mV\check{c}VwV$ 'rodent': rejected.
 1363. * $me\check{c}XA$ 'forest, tree, wood': weak.
 1364. * $mu\check{c}[ç]V$ 'damage, (physical) defect, illness': possible.
 1365. * $mô[\check{c}][V]V$ 'to cut, to cut into pieces, to tear off': weak.
 1366. * $mu\check{c}V$ 'cupped/clenched hand': possible.
 1367. * $mu\check{c}V$ 'end': possible.
 1368. * $m[A]\check{c}VgV$ 'to be foolish, mad, intoxicated': possible.
 1369. * $mAdû$ 'honey': strong.
 1370. * $mAdU$ 'lake, pond': possible.
 1371. * $mudV$ 'to finish': possible.
 1372. * $mæ[h]ûdV$ 'to speak': rejected.
 1373. * $med[V]XV$ 'fig tree': weak.
 1374. * $magê$ 'earth, land': strong.
 1375. * $magU$ 'bad': possible.
 1376. * $migV$ 'to make a present': strong.
 1377. * $mU[\check{ç}]igV$ (= * $mU\check{ç}igV$?) 'snake': rejected.
 1378. * $mæhgæ$ 'young, small': rejected.
 1379. * $müyga$ 'mist, fog, cloud': rejected.
 1380. * $mag[i]za$ 'liver': rejected.

1381. *magy[E] ‘to swing, to wave, to sway’: rejected.
 1382. *mûhi (or *mûhyi ?) ‘water, fluid’: possible.
 1383. *mākê, *mākê-tE ‘top, head, hill’: rejected.
 1384. *mi[k]o ‘to carry, to bring, to give in exchange’: rejected.
 1384a. *mukV ‘top, head, hill(ock)’: possible.
 1384b. *mô[?]kV ‘tree, (piece of) wood’: possible.
 1385. *moſkE ‘to press’: rejected.
 1386. *me[h]kê ‘to make, to work’: possible.
 1387. *mEkfæ (or *mEfkæ) ‘big’: rejected.
 1388. *mâk[V]ha ‘nape, back’: rejected.
 1389. *mAks[a] ‘to give, to reward’: possible.
 1390. *muks[a] – *mugz[a] (or *ma|oH₂uks[a] – *ma|oH₂ugz[a] ?) ‘rodent (mouse, mole, or similar): rejected.
 1391. *maḲU (= *maḲU ?) ‘baby, son’, (?) ‘to be pregnant’: rejected.
 1392. *moḲV ‘blunt’: strong.
 1393. *müḲV or *muḲE ‘a bend, corner, hump’: possible.
 1394. *m[a]ʔ[V]ḲV ‘to cry’: rejected.
 1395. *mVſḲa|æ or *m[a]Ḳa|æ ‘plain, steppe, field’: rejected.
 1396. *mæHaḲV ‘to bend, to turn’: possible.
 1397. *mU[Ha]Ḳa ‘frog’: rejected.
 1398. *ma[X]Ḳæ ‘thin/lean and long’: rejected.
 1398a. (1) *muḲ[V]HV ‘mouth’: possible.
 (2) *muḲ[V]ſV ‘to eat/drink (greedily, in large mouthfuls)’: possible.
 1399. *muḲç[Vh]V ‘to arrive’: rejected.
 1399a. *m[a]ḲVRV ‘big, long’: rejected.
 1400. *maIṼ ‘another, second’ or ‘two’: strong.
 1401. *maIṼ ‘to incline, to bend’: possible.
 1402. *mæLV (= *mæIṼ ?) ‘to hide’: possible.
 1403. *m[æ]LV ‘eye’: rejected.
 1404. *moIṼ (or *molhV ??) ‘to pound, to gnaw/smash into pieces’: strong.
 1405. *m[a]HṼ (or *m[a]yṼ) ‘little, young’: rejected.
 1406. *mUhLV (~ *-Lh-) ‘slow, quiet’: rejected.
 1406a. *meH[a]IṼ ‘a person (of ego’s generation ?) from the other exogamous moiety’: rejected.
 1407. *mihLi – *miLhi ‘to be weak’: rejected.
 1408. *mU[w]IṼyV ‘animals, meat’: rejected.
 1409. *me[y]IṼ ‘mind; to be clever’: weak.
 1410. *mäl?V ‘full, much’: strong.
 1411. *maI[ſ]V ‘hill, mountain, something protruding’: possible.
 1411a. *mæLVxḲV ‘lizard, small reptile, or similar’: weak.
 1412. *mel[H_i]V ‘soft’: strong.
 1413. *m[a]LdV ‘young, tender’: possible.
 1414. *mälgê (or *mälkê ?) ‘breast, udder’: possible.
 1415. *mUIVkā (= *muLVkā ?) ‘to think, to deliberate, to come to a decision’: weak.

1416. *mVLKâ 'to erase, to undo, not to do': rejected.
 1416a. *mVlAŋkV 'eel', (?) 'worm, snake': rejected.
 1416b. *mVÍV 'small predator': rejected.
 1417. *mAÍHo 'head', (?) 'skull': possible.
 1418. *mAŋV 'herd/flock, gregarious animal(s)': possible.
 1419. *mañV 'house, dwelling': strong.
 1420. *mãña 'to remain, to stay': strong.
 1421. *mañU 'man, male': strong.
 1422. *m[æ]ñV 'front': possible.
 1423. *menê 'to go, to walk': rejected.
 1424. *meŋV 'to tear, to tear into pieces, to divide': rejected.
 1425. *mENV (= *mEñV ?) 'from': rejected.
 1426. *mEñV 'to tell a lie, to deceive': possible.
 1427. *moñV 'many, much': possible.
 1428. *moñV 'to test, to think': possible.
 1429. *muŋV(-t|dV) 'egg' (→ 'testicle'): possible.
 1430. *mûñV 'defect, damage, deformity': possible.
 1431. *mu|oñV (or *mu|oñ[V]TV ?) 'mountain, hill': possible.
 1432. *mVñi 'fish': possible.
 1433. *mAyñV 'to ask, to desire': rejected.
 1434. *me[y]ñû 'oneself, one's own', 'body' (→ 'alone, one'): weak.
 1435. *m[ã]ñ[?]V 'to rumple, to bend' (trans.): possible.
 1436. *mañŋa 'to cease, to delay' (trans.), 'to finish': rejected.
 1437. *mæñŋV (= *mæŋŋV ?) 'to hold, to carry': rejected.
 1438. *maŋy[û] 'paw, foot/leg of animals': possible.
 1439. *mañ[Vy]V 'to speak, to call, to invoke magic forces': possible.
 1440. *mAŋVyV or *mAñV 'genitalia; to copulate': strong.
 1441. *miñ[i]yã (or *miñã) 'woman, female relative': possible.
 1442. *mañdV 'excitement, wish, desire': strong.
 1443. *mañVga (or *maŋga ?) 'strong, numerous': strong.
 1444. *miñt[û] 'to jump, (?) to run away': rejected.
 1445. *m[o]ntV ÷ *mVtñV 'to last, to be slow': rejected.
 1446. *mAñtV 'jaw, skull, chin': rejected.
 1447. *meñ[t][ã] (or *meŋ[t][ã]) 'to miss one's aim' ([in descendant languages] → 'to be mistaken, to forget'): weak.
 1448. *m[o]wE[ñ]V 'intestines, belly': rejected.
 1449. *mE?awuñV (or *mUñV ?) 'breast, chest, heart' (→ 'middle'): rejected.
 1450. *moyAŋV 'neck, nape': rejected.
 1451. *mAŋ[g]V ÷ *mAN[i][g]V 'monkey': possible.
 1452. *mVŋKV 'beaver, mole': rejected.
 1453. *muŋḲa|û (= *muŋḲa|û ?) 'to make great efforts, (?) to be heavy': rejected.
 1454. *muŋi[H]ořḲV (or *muŋi ŋařḲ[u] ?) 'gristle, horn, muscle, sinew': rejected.
 1455. *miqU[?V] 'to push, to fell': rejected.
 1456. *maqa (or *maKa ?) 'humid, wet': rejected.
 1457. *mæqURV 'frog, toad': rejected.

1458. *maRV ‘sand, dust, earth’: rejected.
 1459. *mAr[û] ‘trace, path; to follow, to trace’: possible.
 1460. *merV ‘to flash, to sparkle, to shine’: possible.
 1461. *moRE (= *moRi ?) ‘body of water’: strong.
 1462. *murV ‘to twist, to roll, to turn round’: possible.
 1463. *murV ‘to break, to crush, to cut’: possible.
 1464. *muRV (= *murV ?) ‘to go away, to perish, to die’: possible.
 1465. *mVRû ‘ant’: possible.
 1466. *mVRV ‘hollow hand; to grasp’: possible.
 1467. *muΓra ‘to emit vocal sounds (to shout, to sing)’: possible.
 1468. *muhrV ‘part, piece’: possible.
 1469. *mari?V ‘young man, young male’: possible.
 1469a. *maRi?V (or *mafi?V) ‘animal fat’: possible.
 1470. *mæR[h]V (= *mæf[h]V ?) ‘to be wounded, ill’: possible.
 1471. *mariqV ‘spot, stain, (?) dirt’: possible.
 1472. *m[a]rwê ‘tree’: possible.
 1473. *maR[y]V (mul-, black-)berries’: possible.
 1473a. *mAr[y]V ‘horned animal’: possible.
 1474. *mVR[V]CV ‘to crumble, to crush’: possible.
 1475. *m[ä]R[V]çV ‘to be ill, wounded’: possible.
 1476. *mur[?]VgE (probably *mur[?]Vgæ) ‘animal fat, brain, (?) marrow’: rejected.
 1476a. *mäR[k]V ‘to think, to believe, to be clever’: possible.
 1477. *mar?[o]kE ‘side (of body), side, edge’: possible.
 1478. *m[u]rkV(-ŋK̄V) ‘root, root-crops, edible roots’, (→ ?) ‘sinew’: rejected.
 1479. *mVR[V]K̄a ‘moist, liquid; to moisten’: rejected.
 1480. *mafV ‘rain’ [← or → ‘to drop’ ?], ‘cloud’: possible.
 1481. *mA[f]V ‘to pluck out hair, to make bald/bare’: possible.
 1482. *meV ‘hoe’: possible.
 1483. *m[u]fV ‘to make loud noise’: possible.
 1484. *mûq[E]fi ‘shoulder’: rejected.
 1485. *meVûqV ‘to smear’: possible.
 1486. *mäfVÇV ‘contents of animals’ stomach/intestines’: rejected.
 1487. *mušV ‘to cover, to clothe, to conceal’: weak.
 1488. *mûšV (= *mûsV ?) ‘insect, fly, ant’: rejected.
 1489. *mašisV ‘to rub, to polish’: rejected.
 1489a. *mA[HV]SV ‘snake’: rejected.
 1490. *mVš[š]Cka[h]V ‘marrow, brain’: rejected.
 1491. *me?išV ‘hide’, (→) ‘clothes’: rejected.
 1492. *mætV ‘to feel, to realize’: possible.
 1493. *mUtV (or *mUt̄V) ‘man, person’ (→ [in Altaic] ‘people, tribe’): rejected.
 1494. *mûtV ‘to die’ (← ‘to go away, to be removed’ ???): rejected.
 1495. *mat?V ~ *ma[?]tV ‘to approach’ ([in descendant languages] → ‘to meet, to enter’): rejected.
 1496. *matV[?]V ‘moisture’: possible.

1497. *metVha 'head, top, summit': possible.
 1498. *matVdV \rightarrow *madVtV 'to stretch, to measure': possible.
 1499. *matRV \rightarrow *maRtV 'midday': rejected.
 1500. *maṭV 'to bend': weak.
 1501. *mAṭV 'to increase, to make long/broad': possible.
 1502. *moṭE 'sprout, stem, penis, genitals': rejected.
 1503. *môṭE 'whole, complete': possible.
 1503a. *mUṭV 'man, person, a young [one]': rejected.
 1504. *mûṭV (or *mûKṭV ?) 'drop, tear(s)': rejected.
 1505. *mV[t]V 'to pull, to pull out (a plant), to uproot, to reap': rejected.
 1506. *m[aʔi]ṭV (or *m[oʔi]ṭV ?) 'larva, worm, (?) small insect': rejected.
 1507. *mû[ʃ]ṭV 'woman, female': rejected.
 1508. *m[äy]ṭV 'earth, land, place, place of residence': rejected.
 1509. *meyṭV 'to throw': weak.
 1510. *mu[wV] 'this, that': possible.
 1511. *moyV 'to give, to give back, to restore': possible.
 1512. *mu|oyV 'to touch, to feel (by sense of touch)': rejected.
 1513. *mVyV 'to come' or 'to go, to pass': possible.
 1514. *maXyV 'to lose force, to weaken, to disappear, to be worn out': possible.
 1515. *meXAžV 'male': weak.
 1516. *m[E]χažV 'berry, fruit': rejected.
 1517. *miž[w]V-(kV) 'to mix, to stir': rejected.
 1518. *mižṡV (or *miṡžV) 'sheep, goat': rejected.
 1519. *muž[V]ṡV 'fist, fingers; to squeeze/hit with a fist, to give a blow with a fist on the head': rejected.
 1520. *mežV 'sun, light; to shine': weak.
 1521. *mayžV 'tasty beverage, sap of trees' ([in descendant languages] \rightarrow 'honey, milk'): rejected.
 1522. *ñ[ä] pronoun of collectivity and plurality: possible.
 1523. *nE dual demonstrative pronoun, 'they (two)': possible.
 1524. *ni 'not': possible.
 1525. *nu (or *nü ?) postposition and preverb 'from', postposition 'of': possible.
 1526. *ñV 'we' (exclusive): strong.
 1526a. *ñV a marker (pronoun) that formed analytic equivalents of passive participles ([in descendant languages] \rightarrow derived passive verbs): possible.
 1527. *ñaṡE 'to go' (\rightarrow 'to go to do something'): rejected.
 1528. *ñaX[V]bV (or *ñaṡbV ?) 'hungry and thirsty; not to drink' (\rightarrow 'to be sober'): weak.
 1529. *ñVXibV 'thin, meager' ([in descendant languages] \rightarrow 'weak'): rejected.
 1529a. *ñečV 'to plait, to tie together': rejected.
 1530. *N[a]čV 'falcon': rejected.
 1531. *ñAdV '(the whole) clan': rejected.
 1532. *ñidV 'eye; to look': possible.
 1533. *ñi[ʔU]da or *ñi[ʔU]da 'to tie': rejected.

1534. **naHgo* (or **naɡV?o* ?) ‘hungry, thirsty’: rejected.
 1535. **nig[E]Xä* ‘to butt, to push’: rejected.
 1536. **nigESV* (= **nigEšV* ?) ‘to butt, to pierce’: rejected.
 1537. **nüH₁[æ]* – **nüw[æ]* ‘now’: possible.
 1538. **n[i]hwV* (or **n[i]hwV*, **n|ŋohiwV* ?) ‘to lead, to direct (oneself) towards’
 [→ ‘to carry somewhere’]: rejected.
 1538a. **nAkV* ‘woman’: weak.
 1539. **nEko* ‘to open (?), to bare, to uncover’: rejected.
 1540. **nuk* (= **nuk[u]* ?) (or **nAk[V?]V* ??) ‘darkness, night’: possible.
 1541. **nükV* – **nükE* ‘now’: possible.
 1542. **naḲa* ‘fell, skin’: possible.
 1543. **naḲæ* ‘to pursue (the enemy), to wage war, to kill’: rejected.
 1544. **naḲ[ü]* ‘to bring, to carry’: possible.
 1545. **naḲV* ‘to plait, to tie’: possible.
 1546. **neḲU* ‘relative(s) of a younger generation’: rejected.
 1546a. **niḱu* ‘small, little’: rejected.
 1547. **nUḲV* ‘to strike, to peck, to hit’: rejected.
 1548. **nüḲV* – **nüḲE* ‘hole’: rejected.
 1549. **näḲ[V]hê* ‘to see, to perceive’: rejected.
 1550. **nohlV* ‘to walk/lead; way’: rejected.
 1551. **nôḶmV* ‘pleasant, gentle, fine’: weak.
 1552. **‘nim?V* ‘name, word’: possible.
 1553. **nVNêV[?V]* ‘high, big, strong’: rejected.
 1554. **niŋ[u]* ‘hair (of animals)’: rejected.
 1555. **nəpV* ‘to move to and fro, to sway’: rejected.
 1556. **nop[E]* ‘to breathe, to blow’: possible.
 1557. **nop[V][h][i]* ‘fog, cloud’: rejected.
 1557a. **NVpVRV* ‘bank, shore, edge’: rejected.
 1558. **nûqV* ‘to bend, to swing, to sink’: rejected.
 1559. **nVqa* ‘to assist (to help, to protect)’: weak.
 1560. **nar[û]* ‘thin, narrow’: possible.
 1560a. **no[Ḷ]rV* ‘moist, mud; (?) to gush’: possible.
 1561. **naheV* ‘day, sun, daylight’: possible.
 1562. **neq[V]rV* ‘forehead, front of the head, (?) nose’: rejected.
 1563. **niXRV* ‘hollow, cave, pit’: weak.
 1564. **nûrV* ‘to penetrate’: possible.
 1565. **nVyäfV* ‘man, male animal’: possible.
 1566. **nusV* ‘to breathe’: rejected.
 1567. **nûs[y]V* ‘woman (general term), woman of the opposite exogamous moiety’: possible.
 1568. **nišu* ‘to smell, to breathe heavily’: possible.
 1569. **naṭ[o]* ‘to bend, to bow, to incline’ (intr.): rejected.
 1570. **naH₂t[o]* ‘woman (of ego’s generation) belonging to the opposite exogamous moiety’ (→ ‘sister-in-law’): possible.
 1571. **naṭH₁V* ‘to seek, to seek help’: rejected.

1572. *ñā[h]w[E] 'vessel': rejected.
1573. *ñæw[y]V 'new': rejected.
1574. *nayE (probably = *nayı) 'woman': weak.
1575. *ñiz[ɣ]U 'female': possible.
1576. *ñeʒ[i] 'finger, toe; (?) knuckle of a finger': rejected.
1577. *ñab[ʔ]V 'to warm, to heat': possible.
1578. *ñačχV 'wet, moist': rejected.
1579. *ñačV[qV] 'to moisten, to be moistened; to sprinkle': rejected.
1580. *ñugV 'deer, antelope': weak.
1581. *ñahæg[ü] (or *ñah[V]gE ?) 'to drive, to chase': rejected.
1582. *ñogü[V] (or *ñogü[V] ?) 'to tear out/asunder, to pinch': weak.
1583. *ñägoRV (or *ñägoRV) 'groin, small abdominal organs (kidneys, pancreas, and similar)': rejected.
1584. *ñukV 'to shake, to swing, to tremble': possible.
- 1584a. *ñaKō 'to laugh, to be amused': weak.
1585. *ñok[V]XV 'to be in front, to take the lead, to precede, to be first': possible.
1586. *ñ[a]Kō 'soft parts of the animal's body (liver, marrow, suet)': rejected.
1587. *ñuK̄V (+ an additional root/suffix) 'small fur-bearing animal': rejected.
- 1587a. *ñōK̄V or *ñaΓōK̄V 'canine': weak.
1588. *ñ[ü]K̄[ü] 'to lie down, to sink, to bow (down)': weak.
1589. *ñ[ow|Ha]K̄i (= *ñoqaK̄i ?) 'to bend, to be crooked': rejected.
1590. *ñüK̄V (or *ñük̄V ?) 'to tear, to tear out': possible.
1591. *ñälV 'tongue': rejected.
1592. *ñoʃlê (or *ñaʃlê) 'sinew' ([in descendant languages] → 'bow' → 'arrow'), 'to tie together' ([in Hamito-Semitic] → 'to put on footwear'): rejected.
1593. *ñüʃV 'to pluck, to pull out, to tear out (hair, branches), to pinch': weak.
1594. *ñaqlV (or *ñaqlV ?) 'to fade, to be worn out, to be spoiled': rejected.
1595. *ñog[ä]l[y]V 'slime, tears (?), moisture, fluid; raw': rejected.
1596. *ñihla 'moist, slippery': rejected.
1597. *ñ[eq][a]lV 'bed of a torrent, valley': rejected.
1598. *Regional* *ñ[ä]lyV 'four': weak.
1599. *ñülun[K]V (= *ñülun[K]V ?) 'marrow, brain': weak.
1600. *ñVÍV (or *ñVÍV) 'insect': rejected.
1601. *ñiqUÍV 'to scrape, to scrape off, to polish': rejected.
1602. *ñam[o] 'to squeeze, to seize': possible.
1603. *ñäʃmV 'soft': possible.
1604. *ña[n]ččV 'grass': rejected.
1605. *ñunV 'to rest, to slumber, to sleep': rejected.
1606. *ñayn[i] 'coniferous tree': rejected.
1607. *ñ[e]nHV 'woman' (and 'woman from the opposite exogamous moiety'): weak.
1608. *ñoṇuda (or *ñoṇüda ?) 'to follow in the traces, to hunt, to pursue': rejected.
1609. *ñaṅgü 'tongue': weak.
1610. *ñæns[i] 'dirt, dirty liquid': rejected.
1611. *ñ[a]pa 'face, (?) nose': rejected.

1612. *hápVrV ‘tender, delicate, beautiful’: rejected.
 1613. *híq[u] ‘to grind, to crush, to rub down/off, to rub to powder’: rejected.
 1614. *hóqa ‘lowland, depression’: possible.
 1615. *háRU ‘swamp’: possible.
 1616. *híRV ‘to rub, to scratch, to draw/make a sign’: possible.
 1617. *húRV ‘to become very not, to shine’: rejected.
 1618. *háʔRä (or *háʔRA ?) ‘pungent, strong (of sensations, feelings, etc.)’: rejected.
 1619. *hE[Γ]ArV ‘sprout’: weak.
 1620. *híhr[a] ‘to stream; a stream, liquid’: possible.
 1621. *he[H]rV ‘plain, ground’: rejected.
 1622. *háX[i]rU(-k|gê) ‘cartilage’ ([in descendant languages] → ‘cartilage in the vertebra, backbone’: rejected.
 1623. *härH₂ê ‘unripe, tender, weak’: possible.
 1624. *h[a]RĶæ (= *h[a]Rqæ ?) ‘deer’: rejected.
 1625. *háʃrE ‘young, new-born’: possible.
 1626. *hítûrV[q]V ‘fist, knuckles of fingers; to strike with the fist/knuckles, to hold in the hand’: rejected.
 1627. *hetV ‘stalk, stem, trunk’: possible.
 1628. *hó[ʃ]wV (or *hóɣwV ?) ‘to hunt, to pursue’: weak.
 1629. *háwga ‘hair, down’: possible.
 1630. *h[é]ɣa ‘to see’: possible.
 1631. *hE[yU](-ŋV) (= *h[äyU](-ŋV) ?) ‘larvas, worms, nit(s)’: rejected.
 1632. *háʒirV ‘sun’, ≈ ‘sunshine, heat (hot weather)’: possible.
 1633. *h[U] (1) ‘thing’, (2) ‘what?’: possible.
 1634. *hib|pV (or *hæyb|pV) ‘to bend down, to sink’: rejected.
 1635. *hUc|çV (= *hUc|çV ?) ‘late, evening, night; to delay’: rejected.
 1636. *hUC□V ‘small, few’: rejected.
 1637. *ha[ʔ]igu ‘to bend, to bow (down), to hang (by something), to hang down’: rejected.
 1638. *hiĶa (more probable than *hiĶa) ‘jugular vertebra, neck, nape of the neck’: possible.
 1639. *h[iwo]lV ‘to extend, to stretch, to become long’: rejected.
 1640. *hVlV[h]VmP[i] ‘gnat, mosquito’: rejected.
 1641. *h[ŋ]amlV ‘to give’: rejected.
 1642. *hæñE ‘to go (away)’: possible.
 1643. *hañV ‘to take someone with oneself, to lead’: rejected.
 1644. *h[Vw]añV ‘sky, cloud’: rejected.
 1645. *heh[U]r[i] ‘light, fire’: weak.
 1646. *hāqaša ‘nose’: rejected.
 1647. *h[i]Hat[a] ‘sharp instrument, sharp tooth; to bite/cut’: rejected.
 1647a. *hitû ‘worm(s), maggot(s), nit’: rejected.
 1648. *haʃw[i] ‘dead, dead person’: possible.
 1649. *hûwäyV ‘long hair’: rejected.
 1650. *huhy[a] ‘to rest, to lie, to repose’ (→ ‘to sleep’): possible.

1651. *p[ä] 'ille, another (animate)': possible.
 1652. *P[i]?V 'sharp edge, blade': rejected.
 1653. *pu?i (~ *bu?i ?) 'tree, bush': possible.
 1654. *poŋgyV 'wooded bank (of waterway)': possible.
 1655. *p[oŋyû 'small', 'child', 'young (of animal)': possible.
 1656. *pA?içV 'axe, hammer': weak.
 1656a. *PaCk|K̄V (= *paCk|K̄V ?) 'hand' (→ 'handful, handbreadth'): rejected.
 1657. *Puç[V]ŷV 'to press, to squeeze, to crush by squeezing': possible.
 1658. *P[i]čV 'stalks of plants (fibers) used for plaiting': rejected.
 1659. *počV 'to plait' (→ 'something plaited, cloth'): weak.
 1660. *puč[V]ñV 'worm, snake': rejected.
 1661. *PuçV 'to fall': possible.
 1662. *p[e?y]içû (or *pi?eçû) 'coniferous tree': rejected.
 1663. *pacV 'to open': possible.
 1664. *Pûç[o] 'hair': rejected.
 1665. *pa[g]dV 'leg' (or 'part of a leg'), 'foot': rejected.
 1665a. *pU[h][V]dV(-RV) 'long, spacious, far': possible.
 1666. *PuqdV 'leather bag, scrotum': weak.
 1667. *Ped[V]gV 'to break, to tear, to wound': rejected.
 1668. *p[i]gV 'to pour; rain': rejected.
 1669. *pU[gi]ñV (or *p- ?) 'dirt, feces': rejected.
 1670. *Poŋi 'cavity, valley' (→ 'lowland'), 'to hollow out': rejected.
 1671. *p[ä]ŷüwA 'fire' (→ 'heat' → 'daylight, day'): possible.
 1672. *pa[H(V)?][ü] (= *paqV?ü ?) 'to strike, to split, to chop': rejected.
 1673. *puhV 'to blow': strong.
 1674. *pik[ü] 'to press' (→ 'to crush'): weak.
 1675. *poka 'side of the body, side': rejected.
 1676. *Pa[h]kV 'spring of water; to spout': rejected.
 1677. *P[ä]HakV (= *P[ä]qakV ?) 'hut, village': rejected.
 1678. *p[a]k[V]?V (= *pakU?V ?) 'to split': possible.
 1679. *pākô 'to heat (on fire)', 'to be hot' (→ 'to cook, to bake, to dry'): weak.
 1680. *P[o]K̄V 'to scratch, to comb': weak.
 1681. *poK̄ü '(herds of) ruminant animals, wild cattle': weak.
 1682. *po[k̄]V 'bladder, blister': weak.
 1683. *pEçkV 'to rub, to scrape': possible.
 1684. *p[E]K̄yV (or *pV̄K̄yV) 'to track (game), to follow the tracks of': rejected.
 1685. *p[ô]K̄[V]dV (of *p-) 'to run': weak.
 1686. *PiK̄žV 'sticky liquid, pitch': weak.
 1687. *PalV 'tooth': possible.
 1688. *pāl[A] 'time, once, one': possible.
 1689. *pāl[o] 'open ground, plain': possible.
 1690. *pālV 'internal, intestines, liver': possible.
 1691. *PilV 'a hair, tuft of hair, feather': rejected.
 1691a. *pUIE 'to be much/big, to increase': rejected.

1692. *puļu (or *puļü ?) ‘to spring forth’ (→ ‘to flow’), ‘to plunge in water’: possible.
- 1692a. *pûlV ‘to blow’: possible.
1693. *pVLu (or *pVLü ?) ‘lungs, pluck’: possible.
1694. *p[i][?]LV ‘strong’: weak.
1695. *p[U?E]IV (or *p- ?) ‘stinging insect’: weak.
1696. *P[Ey]LV ‘to fly, to soar’: possible.
1697. *p[iy]lâ (or *pil[y]â ?) ‘to fall’: possible.
1698. *Peļ?ê – *Pe?lê ‘side of body, side’: weak.
- 1698a. *PuL[V]βV ‘tree (poplar or similar)’: weak.
- 1698b. *pōliŋE (or *pōliyE ?) ‘to split’: weak.
1699. *[p]ulŋhu (or *[p]ulŋha) ‘red, yellowish, pale’: possible.
1700. *palV[g]V ‘settlement, home, wall’: possible.
1701. *paļyV ‘mud, swamp, lake’: weak.
1702. *pUIHV ‘to be liquid, to be wet’: rejected.
- 1702a. *PûlV[Hû] ‘grass’: possible.
1703. *PālqA ‘half, part’: possible.
1704. *pelqê ‘to tremble, to fear’: possible.
1705. *PiLEqi (= *Pi||ĪEqi ?) ‘open, uncovered, bare’: weak.
1706. *p[a]XV ‘spade; to dig; pit (something dug)’: possible.
1707. *pal[iX][ä] ‘fish’: possible.
1708. *[p]ôlχq|Γa ‘broad and flat’: possible.
1709. *PolXæ ‘to fill’: rejected.
1710. *palyû ‘much, superfluous’: strong.
1711. *peL[i]yV ‘to split, to separate’: possible.
1712. *puLyV ‘bubble, blister, round swelling’: possible.
1713. *[p]ül[ûy]V ‘to wash’: rejected.
1714. *paLuCV (or *paLüCV ?) ‘stinging insect (flea, mosquito, tick)’: rejected.
1715. *P[û]i[ç]V (or *P[û]i[ç]V ?) ‘gray, gray-haired’: possible.
- 1715a. *pA[ly]ak|gV ‘foot’ (and ‘sole of foot’ ?): rejected.
1716. *palUKü ‘axe, hammer’: weak.
1717. *Pä[||]VķV ‘to split lengthwise, to divide’: possible.
1718. *pal[V]tV ‘to split’, ‘axe’: possible.
1719. *PaLtVqV ‘broad and flat’: weak.
1720. *PVLhE[š]V and/or *PVLhE[ç|ç]V ‘to split, to separate’: possible.
1721. *Pe||ĪV (= *pe||ĪV ?) ‘pigeon’: possible.
1722. *polV ‘hollow, empty’: rejected.
1723. *pe[?]lû(-nE) ‘dust, ashes’: possible.
1724. *p[i?û]ĪV ‘slit’: rejected.
1725. *pal||H[ä] ‘to burn’ (intr.), ‘to be heated on fire’: possible.
1726. *pālχyV ‘thumb, big toe; (?) finger’: possible.
1727. *pAl[V]gæ – *pal[V]gæ ‘spleen’: possible.
1728. *pa[Ī]Hiŋa ‘palm of hand’: possible.
1729. *p[u]yAmV ([b]V) (with the component *bA of animal names) ‘snake’: rejected.

1730. **peñV* (or **peñ[iy|H₂]|V*) 'small dog, whelp': possible.
 1731. **p[i]ñV* 'piece of wood, trunk' ([in descendant languages] → 'beam, board, pole, bar'): possible.
 1732. **P[o]ñV* 'path, ford': possible.
 1733. **Puñ[ä]* or **Püña* 'red color, (?) fox': weak.
 1734. **pa[?V]nê* 'to put, to lay': weak.
 1735. **Pu?[V]NV* (= **Pu?[V]ñV* ?) 'meat, (?) blood (as food)': rejected.
 1736. **Pun[E]ya* 'hair': possible.
 1737. **Pun[V]ya* (i.e., **pun[V]ya* ~ **p-* ?) 'to turn, to twist, to tie' (→ 'to plait'): possible.
 1738. **[p]uñ|nyû* 'to breathe; wind, smoke': possible.
 1739. **Pü|uñyE* ~ **Pü|uñi* 'smell': possible.
 1740. **pVñçV* 'nose': rejected.
 1741. **[p]on[d]V* 'leg, foot': possible.
 1742. **PVn[V]-šV* (~ **-šV* ?) 'insect': rejected.
 1743. **PañtVhV* 'belly': weak.
 1744. **PûNžV* 'part of the leg of animals' ('knee, foot' ?): rejected.
 1745. **p[A]ñV* (= **pāñV* ?) 'hollowed-out vessel': weak.
 1746. **pEX|Qña* 'to keep, to protect': possible.
 1747. **piñ[V]ya* 'to turn, to spin, to plait': weak.
 1748. **PayñV[qV]* 'to press, to squeeze, to close': rejected.
 1749. **Puñ|ñčê* 'body hair, down, feathers': rejected.
 1750. **[p]añV* 'forehead' ([in descendant languages] → 'face, head'): possible.
 1751. **Piñû* (or **PüñE*) 'a game bird of medium size (grouse or similar)': weak.
 1752. **[p]Vñiñ[U]* (= **[p]oñiñ[U]* ?) 'palm of hand, (sole of) foot': rejected.
 1753. **pAñ[i]kV* 'joint, shoulder joint': rejected.
 1754. **PonšV* 'dust': rejected.
 1755. **poqi* 'to cover, to close': rejected.
 1756. **PuqV* (or **PüqV* ?) 'to let out air/gas', (?) 'to emit a smell': rejected.
 1757. **[p]aqE?V* or **[p]aq[V]?E* 'skin, film, bark': rejected.
 1758. **parV* 'to fly, to jump': strong.
 1759. **PARV* 'finger' and **PAR[V]ñakV* 'finger, thumb': possible.
 1760. **PArû* 'stone, rock': strong.
 1761. **p[e]rV* ~ **pûHrV* (both from **pû?[e]rV* ?) 'fruit': possible.
 1762. **PeRV* 'ground, earth': possible.
 1763. **perV* (= **per[o]* ?) 'lip, edge': weak.
 1764. **PerV* 'bottom, buttocks': possible.
 1765. **piRo-(Kæ)* 'to ask': weak.
 1766. **pôr[i]* (or **pôHar[i]* ?) 'child, offspring': possible.
 1767. **porV* 'leaf': possible.
 1768. **PVRV* 'to cross, to pass through': possible.
 1769. **[p]ärE* (= **[p]ährE* ?) 'to look', 'to be seen': possible.
 1770. **PogUrV* 'hollow', 'to gap', 'to be open' (a hollow): rejected.
 1771. **pi[h|X|Q]RE* 'around': weak.
 1772. **PeyRV(čV)* 'belly, stomach, contents of the intestines': rejected.

1773. *Par[?]V ‘to bring forth, to give birth’ (of animals), ‘to breed’, ‘young of animals’: strong.
1774. *pAri[?V] ‘to take out, to pull out/off’: rejected.
1775. *päri[?]E (or *päryE ?) ‘to tear, to split’: strong.
1776. *par[V]š[i] ‘stinging insect(s)’: weak.
1777. *pAri[f]V ‘to strew, to spread, to extend’: possible.
1778. *por[f]û ‘to heat with fire, to burn’: strong.
1779. *por[ä]fV ‘summit, top’: possible.
1780. *pürgU(-čV) ~ *pürčVgV ‘flea, gnat, mosquito’: weak.
1781. *para[h]i|ü (or *para?i|ü) ‘weak’: possible.
1782. *Per[w]V ‘skin, hide, bark’: possible.
1783. *p[o]r[w]V ‘female young ruminant’: possible.
1784. *PôRwV (= *pôrwV ?) ‘to turn, to revolve’: weak.
1785. *paR[a]Xi (= *pař[a]Xi ?) ‘happy, dear’: weak.
1786. *pAr[y]V ‘to run, to flee’: weak.
1787. *[p]ur[y]V (or *[p]ür[y]V ?) ‘wing, feather(s)’: possible.
1788. *PVRCV ‘to flee, to run (from, after somebody)’: possible.
1789. *PVRCV[-]ñV ‘heel’ or ‘(sole of) a foot’: rejected.
1790. *PVRVč[χ]V ‘fingernail, claw’: weak.
1791. *PVRiçV ‘to break through, to tear’: possible.
1792. *Pärga ‘to split, to crack’: possible.
1793. *pürVKV (or *pürVKV) ‘to be startled, to be scared, to fear’: possible.
1794. *PVR[V]Kæ ‘to tear out/asunder/off, to detach’: weak.
1795. *päRpVzV ~ *päRpVñV ‘butterfly’: rejected.
1796. *parTV ‘rock, hill’: rejected.
1797. *PUR[V]tV ‘moisture, water’: rejected.
1798. *pûRtV[χV] ‘to spit, to vomit, to fart’: rejected.
1799. *PVR[t]V ‘to jerk, to pull (out), to tear off’: weak.
1800. *[p][A]RtV[h]V ~ *[p][A]tRV[h]V ‘rod, young twig, shoot’: rejected.
1801. *PorfV ‘hair, locks’: weak.
1802. *pVfdV[χ|qV] ‘to quiver, to tremble, to start (from fear, from suddenness)’: weak.
1803. *pUf[û]gV ~ *pUf[û]kV ‘to jump’: rejected.
1804. *Per[V]Kü ‘bone, rib’: rejected.
1805. *përKV[fa] (or *PërKV[fV] ?) ‘to turn round, to twist’: rejected.
1806. *Päsü ‘root, stem of a plant’: rejected.
1807. *PisV ‘to remain, to stick’: rejected.
1808. *[p]isV ‘to spray, to drip’: possible.
1809. *poši ‘to be hot/warm’: weak.
1810. *posV (~ *bosV) ‘to fart (without noise)’: possible.
1811. *Pus|š[E] or *Püs|š[E] ‘to spit, to sprinkle’: possible.
1812. *PesV ‘grain, nut’: rejected.
1813. *piša ‘to get/make ready (cooked, ripe)’: possible.
1814. *pišV ‘gall’: weak.
1815. *PušV ‘to blow’: possible.

1816. *PûšV 'to rub, to smear': possible.
1817. *pVšqV ~ *Peqšê 'spear', (→) 'arrow': rejected.
1818. *Pa[y]šê 'penis': rejected.
1819. *p[äy]š[i] (¬ *piš[i] ?) 'to crush, to break to pieces': rejected.
1820. *patV 'ground, plain; bottom': weak.
1821. *p[atV 'basket, box': possible.
1822. *pätV 'to fall': possible.
1823. *pEtV 'to pass, to go out': weak.
1824. *PitA 'to hold, to grasp, to seize': possible.
1825. *PutV 'feather, hair': rejected.
1826. *pa[ʔi]tV (or *paʔetV ?) 'skin, bark': rejected.
1827. *PotK̄V 'to split, to cut': rejected.
1828. *paṭV 'to beat, to strike': possible.
1829. *p[ä]ṭV 'to pinch, to pluck': possible.
1830. *peṭV (or *pEṭV ?) 'to fly; bird': possible.
1831. *PVṭV 'fright, bewilderment': possible.
1832. *PAHṭV 'old man': rejected.
1833. *pV[h]tiʔV 'liquid secretions, sweat': rejected.
1834. *pu[w]tE (¬ *pu[w]tE ?) 'hole' ([in descendant languages] → 'vulva, anus'): weak.
1835. *paṭhV 'to be open; open': possible.
1836. *piχxyV 'sharp bone, sharp tool, (?) flintstone': rejected.
1837. *PayV 'fish': possible.
1838. *püH|QyV (= *pügyV ?) 'to boil, to get ready (food), to ripen': weak.
1839. *PûXyV 'to be sick; wound': weak.
1840. *pāzV 'to strain, to percolate': rejected.
1841. *P[EH|y]ažV 'wild galliform bird': rejected. [Note: there is a typographical error in the Proto-Nostratic form reconstructed by Dolgopolsky: *PEH|y]ažV — the first bracket is missing.]
1842. *Pož[V]ſV 'to become hard on the surface/top': rejected.
1843. *p[oqEžV ~ *p[ožVqV 'thigh, haunch': rejected.
1844. *qabʔV 'to scoop, to draw water': rejected.
1845. *qUbžV (< *qUp[V]žV ?) 'food made of ground cereals', 'flour' (→ 'bread'): rejected.
1846. *qEcV 'to wear out, to be weakened': rejected.
1847. *qičV 'shadow, shade': rejected.
1848. *q[o]čV[ʔV] 'to remove': rejected.
1849. *qičE 'to see': rejected.
1850. *q[ê]č[V]ſV 'to sink': rejected.
1851. *qV[č]V (= *qa[č]i ?) (or *qV[č]ſV ?) 'to conceive, to give birth': rejected.
1852. *qadV 'to hurry, to run': rejected.
1853. *q[A]dV 'belly': rejected.
1854. *qe|idV (¬ *g-) 'to speak': rejected.
1855. *q[A]d[V]ʔ[o] 'to step, to walk': rejected.
1856. *qag[ʔ]a 'to fear': possible.

1857. *q[a]i ‘to extend one’s hand, to seize, to take, to hold’: possible.
 1858. *qalV ‘bottom, down’: possible.
 1859. *qælV ‘hand’: rejected.
 1860. *qôlV (= *quV ?) ‘lizard, snake’: rejected.
 1861. *qVL[V]V ‘knee; to knee’: rejected.
 1862. *qæ[liy]V (= *qä[liy]V ?) ‘to melt, to dissolve, to be wet/moist’: rejected.
 1863. *qVLCV ‘to tear, to be torn’: rejected.
 1864. *qVL[V]Kæ ‘blister, pimple’: rejected.
 1865. *qälV ‘to strike, to pierce’: weak.
 1866. *qol|lV ‘fur, mane’ ([in Afrasian] → ‘wool’): rejected.
 1867. *qAmV ‘to cry, to make noise’: rejected.
 1868. *qAmV ‘to grasp, to seize’: weak.
 1869. *qE|amV ‘to dry’: weak.
 1870. *qumV ‘to pray, to ask for’: rejected.
 1871. *qumV ‘to drink; beverage’: rejected.
 1872. *qam|nbV ‘other, different, else, more (than)’: rejected.
 1873. *qVm[V]LV (= *qAm[V]LV ?) ‘fur, fell’: rejected.
 1874. *qEñ|K V ‘to strangle, to kill’: rejected.
 1875. *qañtV ‘forehead, front’: possible.
 1876. *qapV ‘to stream, to flow’: possible.
 1877. *qupV (or *qüpV ?) ‘to cover, to close; a lid, a cover’: rejected.
 1878. *q[a]p[?] ‘bank, shore’: rejected.
 1879. *q[æ]pV ‘to seize, to hold’: rejected.
 1880. *qapURV – *qapU(-RV) ‘to protect, to help’: rejected.
 1881. *qerV ‘(wild) ox’: weak.
 1882. *qUR[E] ‘to bend, to incline’: weak.
 1883. *qurV ‘to strike, to chop’: possible.
 1884. *q[u]rV ‘to pierce, to make a hole; hole, pit’: weak.
 1885. *qe[?]rV or *qer[?]V ‘brook, stream’: rejected.
 1886. *qaRPV ‘to harvest’ ([in Altaic] → ‘cereal’): possible.
 1887. *qor[V]tV ‘to cut into, to incise, to make a hole’: rejected.
 1888. *qAriV (or *qAŋriV ?) ‘filth, dirt, feces’: weak.
 1889. *q[ä]sV ‘to remember, to have in mind’: rejected.
 1890. *qatV ‘corn’: rejected.
 1891. *q[i]tV ‘to appear, to become visible’: rejected.
 1892. *qVtV (or *qVp[V]tV ?) ‘tail, hinder part’ (probably ‘tail of some animal’): rejected.
 1893. *q[a]tV ‘tree, stick’: rejected.
 1894. *qæt[i] ‘to turn back’, ‘to return’ (intr.) ([in Indo-European] → ‘again’): rejected.
 1895. *qætU (= *qætü ?) ‘to cross’, ‘over/through’ (direction): rejected.
 1896. *qo[ha]tâ ‘to burn’ (trans., intr.), ‘to kindle’, ‘fire, glowing coals’: rejected.
 1897. *qû[hE]tV ‘intestines, sinew, thread; to tie’: rejected.
 1898. *qow[i] (or possibly *qo?aw[i] or *qa?ow[i]) ‘orifice, hole; to make a hole’: rejected.

1899. *qæw[h]V 'to lack, to be empty/incomplete': rejected.
 1900. *qaw[V]yV \neg *qawi 'to protect, to defend, to help': rejected.
 1901. *[q]ûyV (or *[q]æwV ?) 'to wrap, to drape' ([in descendant languages] \rightarrow 'cloth'): weak.
 1902. *q̇V particle of collectivity ([in descendant languages] \rightarrow a marker of plurality): possible.
 1903. *q̇AbV 'jaw': possible.
 1904. *[q̇]æbV 'belly, stomach': rejected.
 1905. *q̇Ub̥[E] 'basket' ([in descendant languages] \rightarrow 'vessel'): rejected.
 1906. *q̇acV 'gray' (especially of hair), 'white': weak.
 1907. *q̇ûd[i] 'house, hut': possible.
 1908. *q̇UyignU (or *q̇ignU) 'cold': weak.
 1909. *q̇ûʃka|æ (or *q̇ûkʃa|æ) 'to squat': rejected.
 1910. *q̇aLV 'neck': weak.
 1911. *q̇ola 'to kill': possible.
 1912. *q̇UIU 'boy, child': rejected.
 1913. *q̇U[ʔ]V 'speak, call': weak.
 1914. *q̇awlV (or *q̇awElV) 'leg, bone of a limb': rejected.
 1915. *q̇A||Ab|pV (? 'to cover' \rightarrow 'to hide, to conceal': rejected.
 1916. *q̇[o]Lûp[ʔ]ü 'to gulp, to swallow': weak.
 1917. *[q̇]ulU (or *[q̇]uLyU) '(hollow) stalk, reed, hollow (tubular) bone': rejected.
 1918. *q̇U||E 'penis, (?) vulva': possible.
 1919. *q̇A||ʃV 'to break, to tear, to pluck': possible.
 1920. *q̇a||V]ʃV 'to urinate': rejected.
 1921. *q̇a||ü]P̥V 'to bark (a tree), to cut off; bark, peel': rejected.
 1922. *q̇om[i] (or *giʔom[i] ?) 'to be hungry/thirsty' ([in descendant languages] \rightarrow 'wish'): rejected.
 1923. *q̇a[h]ñV 'to dig': possible.
 1924. *q̇[o]ñtV 'to fall, to descend, to plunge': rejected.
 1925. *q̇u[ñ]éV 'to crawl, to climb': rejected.
 1926. *q̇oŋa(-PV) (or *q̇oʔaŋa(-PV) ?) 'nose': rejected.
 1927. *q̇upV 'to divide; a part': rejected.
 1928. *q̇ärV 'to smell': possible.
 1929. *q̇oRû (or *q̇uRV ?) 'to copulate': rejected.
 1930. *q̇oRV (or *q̇ôRV ?) 'frog, toad': possible.
 1931. *q̇UrV (or *q̇ihUrV \neg *q̇UhirV ?) 'to reach, to enter', (\rightarrow) 'to happen': rejected.
 1932. *q̇ôw[V]rV 'blind, one-eyed': possible.
 1933. *[q̇]o[w|ʔV]rV 'tooth, large/canine tooth, tusk': rejected.
 1934. *q̇uyVrV 'to love, to covet' (\rightarrow 'to prefer'): rejected.
 1935. *q̇V[yo]RV 'heap of stones, bank (rampart), stone wall, settlement': rejected.
 1936. *q̇oR[ʃ]V 'gourd': rejected.
 1937. *q̇ArûH₂V (= *q̇ArûhV ?) 'to keep (something) out of sight, to hide': weak.
 1938. *q̇ur[h]V 'to bark, to howl' (of canines), 'to cry, to shout': possible.
 1939. *q̇UR[w]V (= *q̇Uʃ[w]V ?) 'ear': possible.

1940. *qoRbV ‘hearth, stone; to bake (clay, etc.), to roast, to burn’: possible.
 1941. *qæRqUmV ‘weasel, ermine’: rejected.
 1942. *qVRVśV (= *qVRUśV ?) ‘to be(come) silent/dumb’: rejected.
 1943. *qaH₂fV ‘hard, firm’: weak.
 1944. *qu?[V]sê (or *quH₁[a]sê ?) ‘to vomit, to cough’: weak.
 1945. *qū?itV ‘bright; to shine’: rejected.
 1946. *qewV ‘bark, crust, shell’: weak.
 1947. *qūw[i][f]V ‘to shout, to cry, to utter sounds (*inter alia* of an animal)’: possible.
 1948. *qewyV ‘to stay, to lie, to rest motionless’: rejected.
 1949. *qoyV ‘to heap up, to build, to make’: possible.
 1950. *qaywE(-LV) ‘exclusively one’s own’ (→ ‘alone’, ‘entire’): possible.
 1951. *qE[ž]û ‘to shape (an object) by chopping, beating, etc.’: rejected.
 1952. *qu₃V ‘intestines, pluck’: rejected.
 1953. *rV (< *?V[r]V ?) theme-focalizing (topicalizing) particle: possible.
 1953a. *r[i] a particle of plurality/collectivity: possible.
 1954. *rû?V ‘to go, (?) to run’: possible.
 1955. *rV?i ‘to see’: possible.
 1956. *raŋV ‘to remain, to stay’: rejected.
 1957. *rabV ‘much, big’: rejected.
 1958. *ribV ‘to cover’: weak.
 1959. *rV[b]V (or *rVbhV ?) ‘to move, to shake’: rejected.
 1960. *r[a]hbV ‘to tremble ([in descendant languages] → [1] ‘to be disquiet, to fear’, [2] ‘to rage against someone’ → ‘to attack’): rejected.
 1961. *ričV ‘small pieces; to crush’: rejected.
 1962. *rVgVčV (= *rEgačV ?) ‘to add’: rejected.
 1963. *rečVqa ‘to tie, to plait, to knit’: rejected.
 1964. *račV ‘dirt’: rejected.
 1965. *rUčV ‘to run’: rejected.
 1966. *račê ‘to spread, to stretch’: possible.
 1967. *răčV ‘to break into pieces; piece, part’: weak.
 1968. *r[e]čV ‘to please, to be pleased; pleasing, acceptable’: rejected.
 1969. *rVč[V]χV (or *rVχ[V]čV ?) ‘to wash’: rejected.
 1970. *r[o]dE ‘to seek, to wish’: rejected.
 1971. *raydV ‘foot, track; to walk ([in descendant languages] → ‘to journey, to ride’): rejected.
 1972. *rVg[V]ŋV ‘to quake, to move in agitation’: rejected.
 1973. *rig[h]a (or *rigŋa ?) ‘a scratch, line’: weak.
 1974. *rVg[V]lV (or *lVg[V]lV ?) ‘foot, paw’: rejected.
 1975. *rogU ‘to incline towards’: rejected.
 1976. *rAwg[U] ‘to destroy, to tear’: rejected.
 1977. *rAŋ[i]?V ‘to follow, to accompany, to drive’: rejected.
 1978. *rVH₂i (= *rVh[ŋ]hi ?) ‘thing’: weak.
 1979. *r[i]kæ ‘straight row’, (?) ‘to arrange’: rejected.
 1980. *rVKE (or *rVkü?V ?) ‘moist’, ‘to contain/conduct water’: rejected.

1981. *rV_k[V?]V (or *rV_{wk}[V?]V ?) 'horn': rejected.
1982. *rV_kV?ô 'to speak, to shout, to say': possible.
1983. *r[a]Kâ 'time, term': possible.
1984. *r[o]kô 'shelled animal (e.g., tortoise, crayfish), shell (of an animal)': weak.
1985. *rV_kV 'to skip, to hop, to dance': weak.
1986. *ræ[w]Kæ 'sinew, cord, rope; to tie': rejected.
1987. *raK_aXV (= *raK_ahU ?) 'to arrange, to put in order': possible.
1988. *[']rômV 'quiet; to rest': possible.
1989. *rûmV (or *rûmVñV) 'vein, muscle, strap' ([in descendant languages] → 'string, rope'): weak.
- 1989a. *r[ü]mV 'ant(s), vermin': rejected.
1990. *r[ü]HmV (or *r[ü]gmV ?) 'dark': possible.
1991. *rāwmV 'to chew': rejected.
1992. *raXûmV 'womb, belly, stomach of ruminating animals': rejected.
1993. *rVyamV '(big) fish': rejected.
1994. *ri[n]êV '(tuft of) hair' ([in descendant languages] → 'eyebrow/eyelash, beard, stalk of grass'): rejected.
1995. *reṗV 'to tear off, to break': possible.
1996. *r[e]ṗṣV 'to make one's way with effort, to climb, to crawl': rejected.
1997. *riq_aæ 'to shake' (intr.), 'to be shaky': weak.
1998. *riq_û[z]V (= *riq_û[z]V ?) 'to tie, to tie (an animal) with a strap; loop': rejected.
1999. *rāsV 'to sprinkle'; (→ ?) 'dew, moisture': weak.
2000. *rV_hVṭV 'branch, stem, rod': rejected.
2001. *rowV (or *rowHV ?) 'to dig, to scratch, to carve': possible.
2002. *rVwV 'water, stream of water; to drink (one's fill)': weak.
2003. *rV[h]wV 'to mix, (?) to shake, (??) to turn round': possible.
2004. *rVwXV 'broad': strong.
2005. *rV yE (= *rV y[i] ?) a compound pronoun of plurality/collectivity: possible.
2006. *sE 'he/she': strong.
- 2006a. *ś[ü] (> **śi) 'thou': strong.
2007. *śV 'to, towards': possible.
2008. *SV?[y][û] 'to be full': rejected.
2009. *ś[i?]bV 'strap, thong': rejected.
2010. *śi[?u]bV (or *śi[?ü]bV ?) 'clean': weak.
2011. *śah[i]bV (or *śahüba ??) 'desert; saline earth': rejected.
2012. *śab[?]V 'clay': rejected.
2013. *sibVṡV 'beast of prey': rejected.
2014. *ś[o]b[V]ṭV (or *sVb[V]ṭV ?) 'stem, piece of wood': rejected.
2015. *[ś]A?[ç]V 'stinging insect': rejected.
2016. *Sač[u] (or *ś[ä]č[u]) 'to scatter, to spread about, to pour' ([in the prehistory of the descendant languages] → 'to winnow, to sift'): rejected.
2017. *s|śædV (or *s|śidV ?) 'lower part': rejected.
2018. *sidV 'to sprinkle, to pour': rejected.

2019. *sa[h]ida ‘to take aim’, ‘to direct (e.g., a weapon) straight to the aim’, (→ ?) ‘to hit the goal’: rejected.
2020. *Sid[ɣ]VrV (~ *SidVr[ɣ]V) ‘to shovel, to sweep’: rejected.
2021. *sagæ (= *sage ?) ‘to obtain, to hold’: possible.
2022. *sêg[k]V ‘to eat, to swallow’: rejected.
2023. *SûgV ‘back of the neck, back’: weak.
2024. *śûygV[V] ‘to produce sounds by voice or by blowing’: rejected.
2025. *SigirV ‘(part of a) leg’: rejected.
2026. *ś[Vy]ɣU ‘surface of water’: rejected.
2027. *sakV ‘to sit, to dwell’: rejected.
2028. *ś[ä]ka|æ ‘to strew, to spread’: rejected.
2029. *sahk[a] ‘to search, to find, to know’: rejected.
2030. *śäk[V]?U ‘to plait, to tie, to bind; wicker’: possible.
2031. *śVVRV ‘intoxicating drink’ ([in descendant languages] → ‘alcoholic drink’): rejected.
2032. *ś[o]Ko ‘to follow’: rejected.
2033. *SoKâ (= *ś[ś]soKâ) ‘blind’: possible.
2034. *ś[ś]oKV ‘to stick fast, to be stuck/motionless’: rejected.
2035. *śüK[a] (~ *śüka ?) ‘to drink, to suck’: rejected.
2036. *śVkv ‘honey’ or ‘bee’: possible.
2037. *śVkv ‘to carve, to chisel’: possible.
2038. *śuhKV ‘to wish, to covet’: rejected.
2039. *ś[a]hkV ‘thick, large’: rejected.
2040. *śiK[ɣ]V (or [less probably] *śiK[ɣ]V) ‘to sink’: rejected.
2041. *śiKâ[ɣV] ‘to pour’: rejected.
2042. *SûKüRV ‘parent-in-law’: rejected.
2043. *śal[a] ‘rope, bonds’ (later ‘chains’): rejected.
2044. *śal[a] ‘willow’: possible.
2045. *sAl[ê] ‘to put, to throw’: weak.
2046. *śalû ‘intact’ (→ ‘entire’), ‘in good condition, healthy’: possible.
2047. *SilV ‘hole’: possible.
2048. *śilî – *śilayV ‘smooth, slippery’: possible.
2049. *silV ‘to be(come) liquid, to melt, to flow’: rejected.
2050. *śul[û] ‘lax, loose, slack’: weak.
2051. *śû[l]V (= *śû[l]V ?) ‘heel, sole of the foot, bottom’: rejected.
2052. *śæ?[ü]LV – *śæ?w[ü]LV ‘to look for, to search, to ask’: rejected.
2053. *śi[?]LV ‘to roast, to fry, to cook’: weak.
2054. *SVHaLV ‘salt, spice’: rejected.
2055. *ś[û]wolV (= *śüwolV ?) ‘liquid, moisture’: possible.
2056. *ś[oyi]l[U] ‘intestines’: rejected.
2057. *sül[w]V ‘thread, string’: weak.
2058. *śalbV ‘to cut out, to pull out’: rejected.
2059. *śilkV (= *śilka ?) ‘to let out’ ([in descendant languages] → ‘to throw, to fall out’): rejected.

2060. *šalVmV 'to collect on the bottom' (of liquid), 'place (depression) where water collects': rejected.
2061. *šVLχitV ~ *-dV 'to slip': rejected.
2062. *šül|žü(-kê) – *šil|ži(-kê) 'mucus, slime, saliva; to spit': weak.
2063. *šæmi 'fat': possible.
2064. *šimV (= *simV ?) 'name (as a sign of identity), the same': rejected.
2065. *simV 'to be wet; moisture, liquid': rejected.
2066. *ššêHmV 'to swallow': weak.
2067. *sš[i]XmV 'to be dark/dim, to darken': weak.
2068. *šâymV(-tV) 'hips, loins': rejected.
2069. *š[i]mŋV 'to hear': possible.
2070. *šäm[V]gV '(lock of) hair, fine hair': weak.
2071. *s[o]m[V]gE – *s[o]gmE 'to enter, to penetrate': rejected.
- 2071a. *SomVdV (> *SondV) 'sand, small stone', (?) 'soil': rejected.
2072. *SämirV 'fat, grease': possible.
2073. *SEm[V]tV 'cold': possible.
2074. *šše[y]mVtA 'to tear, to break': rejected.
2075. *š[e]nV 'long time, year, old': possible.
2076. *ši|üñi(-kV) (= *ši|üñü ?) 'dark, night': possible.
2077. *šon[i] 'one, only; to be separated': possible.
2078. *ŠonV (= *šonV ?) 'to hear': possible.
2079. *šünæ (or *šüyñæ) 'to disappear, to finish': rejected.
2080. *s[ü]NV (= *sünV ?) 'to breathe, to take a rest, to calm': possible.
2081. *son[Vq][ü] (= *soni[q][ü] ?) 'sinew, tendon; root': possible.
2082. *s[ü]ñçVXV (= *s[ü]ñçVXV ?) 'worm, snake, (?) lizard': rejected.
2083. *šäN[ç]V 'knee, articulation': rejected.
2084. *ŠündV 'to dry up' (intr.): rejected.
2085. *S[ü]ñdū 'river, body of water': rejected.
2086. *šüN[V]RVŋV (or *šüRNVŋV) 'nasal mucus', (?) 'liquid': rejected.
2087. *[š]ä[ñ][z]â 'to be near, to approach': rejected.
2088. *šewVñzV 'bone': rejected.
2089. *sšänV 'tooth': rejected.
2090. *šünV 'to smell': possible.
2091. *šäñeXæ (or *šänAXæ) 'to plait, to twist, to tie': possible.
2092. *Šun[g][o] 'to produce loud vocal sounds (to call, to make an incantation, to weep)': weak.
2093. *šinKU 'to sink, to fall': possible.
2094. *ša?e[ŋ]kV – *še?a[ŋ]kV 'to be near, to approach': rejected.
2095. *šänqU 'shoulder, nape, back of neck': rejected.
2096. *ŠapV 'to taste, to be tasty': rejected.
2097. *saP[ü](-šV) 'thorn, pointed stake' ([in descendant languages] → 'needle'): possible.
2098. *šapV 'riverbank, river': rejected.
2099. *šipV 'to pour, to drop, to drizzle, to filter/screen': rejected.
2100. *šipV '(young of a) bird': rejected.

2101. *s[û]P̄V (or *sû?æP̄V ?) ‘to sleep’, (?) ‘to rest’: rejected.
 2102. *S[ü]p̄V ‘to sweep’: rejected.
 2103. *sEP[q]V ‘to cover, to bury’: possible.
 2104. *säq[i]yê ‘matter, pus, gall’: rejected.
 2104a. *saRV ‘top, hill’: possible.
 2105. *sARV(na) ‘to sing, to pronounce ritual/magic formulas, to make incantations’: weak.
 2106. *sär[u] (= *säRo ?) ‘sinew, fiber’: possible.
 2107. *sēRV ‘row’: possible.
 2108. *[š][E]rV ‘back, nape of the neck’: rejected.
 2109. *S[i]RV ‘red, yellow’: rejected.
 2110. *sürV ‘to rub, to scratch’: possible.
 2111. *suŕê ‘heavy, large’ (→ ‘full, whole’): rejected.
 2112. *sihrV ‘late’ ([in descendant languages] → ‘evening, night’): weak.
 2112a. *S[i]hûrV ‘person (man ?) of the other exogamous moiety’: rejected.
 2113. *SuH|wERV (= *suwERV ?) ‘sour, seasoned’: weak.
 2114. *[š]EXarV ‘bright; daybreak’: rejected.
 2115. *šsayiwVRV ‘nit’: rejected.
 2116. *ser[V]XV ‘grove, coppice; tree’: rejected.
 2117. *š[iy]ar[U]yV ‘beam, pole’: weak.
 2118. *siRbV ‘sinew; to sew’: rejected.
 2119. *S[ü]rbV – *S[ü]rbVRV ‘to swing, to sweep’: weak.
 2120. *sVRixka ‘cold’: rejected.
 2121. *sUrtV ‘dirt(y)’: weak.
 2122. *Saf[i] ‘to drip’: possible.
 2123. *Sufi ‘to squeeze out, to filter, to strain’: weak.
 2124. *SûrV (= *SurE ?) ‘to speak, to declare’: possible.
 2125. *sihaŕu, *-P̄V ‘dirt, earth’: weak.
 2126. *sirka ~ *si[r]ga ‘pain; to be ill/wounded, to pine, to languish’: possible.
 2127. *ššusšV ‘worm, snake’: rejected.
 2128. *sa[w]ûšV ‘to get dry, to harden’: possible.
 2129. *sitV ‘tooth’ ([in descendant languages] → ‘sickle’ ?): rejected.
 2130. *sitV ‘to tie’ ([in descendant languages] → ‘to spin’): possible.
 2131. *süt[y]V ~ *sü[y]tV ‘to drink, to suck (milk); milk’: rejected.
 3132. *sVtVLV ‘to set, to put, to collocate’: possible.
 2133. *sVTimV (= *sVŕimV ?) ‘to hear’ (←|→ ‘ear’), (?) ‘to feel’: rejected.
 2134. *sUtû ‘to beat, to strike’: possible.
 2135. *sšEwV ‘oneself, self’ (← ‘[human] body’ ??): ‘possible’.
 2136. *si[h]wV ‘sun’: rejected.
 2137. *[š]äw[š]V ‘to want, to beg’ ([in descendant languages] → desiderative, volitive): weak.
 2138. *siw[š]a (or *siwga) ‘to smear’: rejected.
 2139. *SuwH₁V ‘to push, to cause’ (→ ‘to ask for’ → causative): rejected.
 2140. *[s][ü]whâ – *[s]E?uwH₁V ‘moisture, water, wet, rain’: weak.
 2141. *sVwH₂V ‘to drink’: possible.

2142. *ś[ow]yV 'to sound': rejected.
 2143. *sižV 'stream, small body of water (lake and similar)': rejected.
 2144. *suŋ|qžV 'finger(s), hollow hand': rejected.
 2145. *sežA 'a relative from the opposite exogamous moiety' ('father/son-in-law', 'mother's brother', and similar): rejected.
 2146. *Si[ž]V 'to skin, to scratch': rejected.
 2147. *šubyV 'spike, spear; to pierce': weak.
 2148. *šUdV 'to fasten tightly, to strangle, to be violent to someone': rejected.
 2149. *šūšadV (= *šūšadV ?) 'good, happy, pleasant': rejected.
 2150. *š[ayü]dV 'to throw, (?) to leave (abandon)': rejected.
 2151. *š[ühi]?V 'to fade, to extinguish': weak.
 2151a. *š[a]q[Vg]aRV 'soot' (→ 'black'): rejected.
 2152. *šahKE 'to cover, to hide': weak.
 2153. *šoKo[ŋ]ê 'to say': weak.
 2154. *šiLV 'quiet': possible.
 2155. *šuŋl[ê] 'throat, mouth': rejected.
 2156. *šū|uqLV 'to knock down, to attack, to be hostile': rejected.
 2157. *šU[H₂]LV 'roe, deer': rejected.
 2158. *šalŋV 'to strike, to break': weak.
 2159. *šeŋV (or *šeŋV) 'to take off, to destroy, to pull off': possible.
 2160. *šVñ[V]ŋV 'to make, to build': weak.
 2161. *šünigo (or *šünjo ?) 'snow': possible.
 2162. *šUŋE 'to breathe' ([in descendant languages] → 'soul'): possible.
 2163. *šangV 'to wish, to like, to love': rejected.
 2164. *šaŋKa 'stalks, branches', (?) 'straw': rejected.
 2165. *šUŋKa (= *šünKa ?) 'to be tight (too narrow), to be heavy, to be difficult': weak.
 2166. *šijerV 'mouse': possible.
 2167. *šärV 'to spread': possible.
 2168. *šoRwV 'dry; to get dry': possible.
 2169. *ša[ri]XV 'to stream, to flow': possible.
 2170. *šūRdV 'fiber (used as thread)': possible.
 2171. *šēR[V]m[ü] 'sinew, root': possible.
 2172. *šehfE 'to be awake, to watch (over), to feel, to notice': possible.
 2173. *[š]ätV 'podex; to sit, to sit down': possible.
 2174. *š[i]tV 'thread (made of hair)': weak.
 2175. *š[ayu]tV (or *šaŋUyV ?) 'twig, rod': rejected.
 2176. *šawV '(in the) middle': rejected.
 2177. *šüwA – *šuwE 'fit, good': possible.
 2178. *šuw?V 'weak': rejected.
 2179. *š[e]whV 'to give birth, to be born': possible.
 2180. *šūwhV 'to loosen' ('to release', 'to let out', 'to melt', etc.): weak.
 2180a. *[š]a?EbV 'to rot; rotten': rejected.
 2181. *šVbŋV – *šVŋbV (= *šūbŋV – *šūŋbV ?) 'people, tribe': rejected.
 2182. *šab|pEh[i] 'log, piece of wood': rejected.

2183. *šæb[V]XV ‘tallow, animal fat’: weak.
 2184. *šadV ‘to tie’: rejected.
 2185. *šædVwV ‘tip, end’: weak.
 2186. *šägaRV ‘to cut, to pierce’: rejected.
 2187. *šVγV ‘ray’: weak.
 2188. *š[a]ka ‘to cover’ (→ ‘to clothe’): rejected.
 2189. *šokV ‘to be mad/stupid/intoxicated’: possible.
 2189a. *š[i]i?šUkV ‘flesh, meat’: rejected.
 2190. *šaḵa ‘to split, to cleave’: possible.
 2191. *šEKo ‘to look at, to watch, to see’: possible.
 2192. *šiK[U] ‘to be/get cold, to cool’: possible.
 2193. *š[š]u[ʔa]KV(fV) ‘resin, gum’: weak.
 2194. *šil[û] (or *šil[û] ?) ‘to take, to take away/off/up’: possible.
 2194a. *šilV (and *silV ?) ‘fat’: possible.
 2195. *š[š]ulV (= *šilV ?) ‘trunk, log’ ([in descendant languages] → ‘board’, ‘trough’, and similar): weak.
 2196. *š[ü]li ‘neck, nape’: rejected.
 2197. *š[aH][ü]LV ‘dew’: rejected.
 2198. *šäl[V]qU ‘to cleave, to cut asunder’: weak.
 2199. *šäl[i]wV (or *šäl[i]wVyV ?) ‘wild gallinaceous fowl’: possible.
 2200. *šiV(-ma) ‘eye; to look, to examine’: possible.
 2200a. *šišlá or *šišLV ‘tooth, fang’ ([in descendant languages] → ‘sharp stick’): rejected.
 2201. *ši[i]wV ‘shank, meat of a limb’: rejected.
 2202. *šélXâ ‘bough, twig, stick’: weak.
 2203. *š[š]añā ‘word; to say’ ([in descendant languages] → ‘to think’): possible.
 2204. *šæHñV ‘mushroom, fungus, sponge’: possible.
 2205. *šE[y]ontU ‘finger(s), fist’: rejected.
 2206. *šünV ‘milk; to suck(le)’: rejected.
 2207. *šonʔV ‘to wish’ (→ ‘to love’, ‘to wish evil to someone’, ‘to strive’ [→ ‘to reach’]): rejected.
 2208. *ša|onV ‘to run, to jump, to climb’: weak.
 2209. *š[ä]ñ[é]V ‘bark, skin’ (→ ‘vessel’): rejected.
 2210. *š[š]añKa ‘bough, inedible (or less valuable) parts of plants (straw, rind of fruit)’: rejected.
 2211. *šapV (or *šopV ?) ‘to sew (leather), leather’: rejected.
 2212. *šapE[h]ñV ‘log, trunk of tree’: rejected.
 2213. *šuqV ‘to breathe in, to smell something’: rejected.
 2214. *šarV ‘to be dry’: rejected.
 2215. *š[š]ERV ‘to roast’: possible.
 2216. *šiRV ‘skin (of an animal), rawhide’: possible.
 2217. *šürV ‘a herd, swarm (of wild animals)’: possible.
 2218. *še[ä]rV ‘to reach, to approach, to enter’: rejected.
 2219. *šoVrV → *šo[ä]fV ‘grain, (wild) cereal’: possible.
 2220. *šäyoy[i]RV ‘hair’: rejected.

2221. *sihrV 'gray, bright' ([in descendant languages] → 'dark'?): rejected.
 2222. *siX[U]RV 'side, edge': possible.
 2223. *šêrwV 'to insert, to thrust in': rejected.
 2224. *š[o]rUbV 'to drink, to gulp, to sup, to suck': possible.
 2225. *šE[?V]RbV 'coarse hair, eyebrow': rejected.
 2226. *šäRḲê 'to break, to split, to cut': possible.
 2227. *šErEḲ[a] 'red, yellow': rejected.
 2228. *šER[V]ḲV 'to plait, to wattle': possible.
 2229. *šVtVwV 'cold weather': possible.
 2230. *šoṭV 'to exercise magic' ([in descendant languages] → 'to curse, to bless'): possible.
 2231. *šĉûṭV 'vulva, anus': possible.
 2232. *šaṭ[ahi] 'to take away': weak.
 2233. *šVṭVRV 'rope; to twist (a rope)': weak.
 2234. *[š][o]wV 'feather, wing': rejected.
 2235. *šVwV 'to swell': weak.
 2235a. *š[ä]?iwE (or *ĉ[ä]?iwE ?) 'body of water', (??) 'wet/swampy ground': rejected.
 2236. *š[o]hyV 'to wish': weak.
 2237. *šVy?V 'thing': rejected.
 2238. *šüzŷA 'heart' (← 'breast'?): rejected.
 2239. *t[ä] 'away (from), from', ablative (separative) particle: possible.
 2240. *tV a postnominal marker (pronoun ?) of plurality ('together'): strong.
 2241. *ti?û 'to shine, to be bright, to be seen': rejected.
 2242. *to[?]i 'fig': rejected.
 2243. *tü?[o] 'two': possible.
 2244. *ta[ſ]i 'to tear': weak.
 2245. *tUbV (= *tüba ?) (or *tiba ?) 'grass, straw; to cut grass/plants': rejected.
 2246. *täbſV (= *täbſV ?) 'to follow, to run, to chase': rejected.
 2246a. *täb[V]šV 'heel; to trample, to kick with the heel': rejected.
 2247. *ta?æga 'rock, mountain; top': rejected.
 2248. *tu?[g]V (or *tu?[g]V ?) 'to listen, to hear': rejected.
 2249. *tiγV 'to flow' (? [in Indo-European] → 'to run quickly'): rejected.
 2250. *t[e]yaw[a] 'fire': weak.
 2251. *toH[ü] ~ *ta|æH[ü] (= *to[Γ][ü] ~ *ta|æ[Γ][ü] ?) 'to bring, to fetch, to give': possible (with reservations).
 2252. *tawikæ 'insect, vermine': rejected.
 2253. *tekſV 'to touch': weak.
 2254. *tAkU[ń|ñ]V (or *tAkU[HV] ?) 'bug': possible.
 2255. *tAḲæ 'to suit, to be appropriate, to fit': possible.
 2256. *t[e]Ḳæ 'to take, to carry' ([in descendant languages] → 'to get, to possess'): possible.
 2257. *tik[ü] 'to show' ([in descendant languages] → 'to say'): rejected.
 2258. *toḲE|a or *taḲE|a 'to tear': rejected.
 2259. *täyḲV 'finger' → 'one': rejected.

2260. *taLV ‘to shake, to wave’: possible.
 2261. *täLV ‘to cut (to split, to trim, to cleave)’: possible.
 2262. *tiĻV ‘to rough-hew, to chisel, to cut into pieces’: rejected.
 2263. *tulV ‘to tell (a story), to pronounce magic/ritual texts’: rejected.
 2264. *tULV ‘to line up’ ([in descendant languages] → ‘to count’): rejected.
 2265. *t|tVLV ‘to hang’: possible.
 2266. *toH₂ĪV (or *tolH₂V) ‘to fill, to pile up; full’: rejected.
 2267. *talſ[o] ‘(back of the) neck, shoulders’: rejected.
 2268. *tæLſE(-ga) ‘to be long’: possible.
 2268a. *tulſV ‘tip, sprout, something protruding, summit’: weak.
 2269. *t[a]lhV – *tahElV ‘to hit, to damage, to be damaged’: rejected.
 2270. *tæl[h][o] ‘to be/make foolish, to deceive’: rejected.
 2271. *tälUH₂A – *talUH₂ä ‘cold season, rain’: rejected.
 2272. *tAĪV ‘to tread, to pound’ ([in descendant languages] → ‘to thresh’): strong.
 2273. *tuĪĪV ‘to be bright/light’: possible.
 2274. *tVĪV (= *tA[y|H]iĪV or *ti[y|H]aĪV ?) ‘female’: rejected.
 2275. *ti[ʔa]Īlo ‘stone, heap of stones’: rejected.
 2276. *tel[H₂]V ‘to bore, to pierce’: possible.
 2277. *temV ‘full, complete’: possible.
 2278. *tVmV (= *tamV ?) ‘hair’: possible.
 2279. *tVmV ‘worm, snake’: rejected.
 2280. *t[a]h[V]mV ‘fire; to kindle; very hot’: rejected.
 2281. *tamH₁[û] (or *tāmH₁[û]) ‘earthen wall, house’: weak.
 2282. *tVm[V]ſV ‘to gather, to concentrate, to condense’: rejected.
 2283. *t[o]NV ‘to appear’ ([in descendant languages] → ‘to seem’): rejected.
 2283a. *tEngVĪĪV ‘heavenly light in the night [star(s), moon]’: possible (but may be a *Wanderwort*)
 2284. *tô[p]æ ‘head, top’: weak.
 2285. *tū|upV ‘to blow, to breathe’: weak.
 2286. *tupſV ‘tail, back’: rejected.
 2287. *ta[P]kV (or *tawkV ?) ‘to obstruct, to prevent, (?) to overpower’: rejected.
 2288. *teq[æ?U] ‘to say, to talk to’: weak.
 2289. *terV ‘to tear, to burst’: possible.
 2290. *tuRV ‘back, back side’: rejected.
 2291. *tūRV or *tuRE ‘to pierce’: rejected.
 2292. *tūwrV – *tuwrE ‘to roll, to turn round, to wind’: rejected.
 2293. *tūrſê – *turſê ‘full, filled’: possible.
 2294. *tarH₂V ‘to drink’: possible.
 2295. *tirHV ‘to be quiet, to lie’: possible.
 2296. *toRgæ (= *torgæ ?) ‘weak, loose’: possible.
 2297. *tæRpV (= *tæRPV ?) ‘to tremble, to shake’: possible.
 2297a. *tAſû ‘tree, log’: weak.
 2298. *toſV ‘bark; to remove bark, to peel’: rejected.
 2299. *tVſV ‘to suffer, to endure’: rejected.
 2300. *tAſqV ‘to make an incision, to dig’: rejected.

2301. *tusV or *tüsV 'against, in the opposite direction': rejected.
 2302. *[t]ûSV 'bush (shrub)': rejected.
 2302a. *tæŋsV (more probable than *dæŋsV) 'to track game, to follow the tracks of': rejected.
 2303. *tVH₂tV 'finger': rejected.
 2304. *tûwV 'rain; to sprinkle': weak.
 2305. *tVwV 'head' ([in descendant languages] → 'oneself'): rejected.
 2306. *tayhV (or *tagyV ?) 'to incline, to bend, to bend/move aside': rejected.
 2307. *ta[q]g]ayû 'relative-in-law (person of the opposite exogamous moiety)': possible.
 2308. *taqozi 'to plait, to wattle': rejected.
 2309. *tû[y]ʒ|ʒV (or *tû[w]ʒ|ʒV) 'part of an arm/leg': rejected.
 2310. *tä demonstrative pronoun of non-active (animate) objects (without distance opposition [proximate ↔ intermediate ↔ distal]): strong.
 2311. *ti syntactic particle; it is combined with words of verbal meaning to build analytical nomina actionis: strong.
 2312. *t[ü] (> *ti) 'thou': strong.
 2312a. *t[ü] ?a ~ *s[ü] ?a 'ye': rejected.
 2313. *tV a marker of passive participial constructions: strong.
 2314. *tV particle of marked (definite ?) accusative (→ accusative of pronouns): rejected.
 2315. *tEŋU 'to take': rejected.
 2316. *tabV 'fit, good': rejected.
 2317. *tabV 'head': rejected.
 2318. *tæbV 'to catch, to seize': rejected.
 2319. *[t]ebA (~ *tem[b]V ?) 'ruminant' ('antelope, cervid'): rejected.
 2320. *tobV 'teat': rejected.
 2320a. *tûbV 'thin, small, of short stature': possible.
 2321. *tûbV (or *tûbE ?) 'even, calm, quiet': weak.
 2322. *tuH₂ibV 'reed, stick': rejected.
 2323. *tæbŋ[U] 'to load, to fill': weak.
 2324. *tubŋV 'lake; natural depression filled with water': rejected.
 2325. *tUbŋV 'hoof, (finger-/toe-)nail, heel': rejected.
 2326. *tûbŋA 'deep': weak.
 2327. *täbHa or *tabHE 'to trample, to crumple, to press': weak.
 2327a. *tab[V]qa 'to hit, to strike' ([in descendant languages] → 'to kill'): possible.
 2328. *tVbV[L]V 'to dip in, to immerse': possible.
 2329. *tûH[ç]V ~ *dûHçV 'to glide, to slip': rejected.
 2330. *täwodV 'to be full': rejected.
 2331. *togæ 'dust, earth (substance)': rejected.
 2332. *togV 'straight' ([in descendant languages] → 'true'): rejected.
 2333. *tægwV 'to swell, to become thick/large/strong', (?) 'to become fat': rejected.
 2334. *teyV 'to ask (for), to beg': rejected.
 2335. *taka|æ (or *toka ?) 'to touch': weak.
 2336. *täkV (or *täkV ?) 'to attack': possible.

2337. *t[e]kE ‘to build, to shape, to make, to do’, (?) ‘to arrange’: possible.
 2338. *tiko ‘horror, fear’: weak.
 2339. *toku ‘large, thick’: rejected.
 2339a. *tokV ‘(palm of) hand (with fingers)’ ([later] → ‘span of hand’): rejected.
 2340. *te[h]aka?ê ‘to put, to set’: rejected.
 2341. *tokV?V ~ *to[h]ækV ‘to burn; fire’: rejected.
 2342. *tUkE (→ *tUkE) [or *tUkE] ‘wolf, jackal’: weak.
 2343. *täktV ‘louse’: weak.
 2344. *t[a]Kæ ‘to be/keep quiet, to be silent’: possible.
 2345. *tiKa ‘to be straight’: rejected.
 2346. *t[o]ko ‘to run away, to run, to leak’: rejected.
 2347. *tuKa ‘earth (substance), mud, dust’: possible.
 2348. *tuKV ‘offspring, young (of animal)’: weak.
 2349. *t[ü]Ka ‘to thrust, to stab, to push’: possible.
 2349a. *tüKV (or *tükV ?) ‘hair’: rejected.
 2350. *t[o?]äK[w]A ‘goat, sheep’: rejected.
 2351. *tag[V]K[a] ‘to stick/to be stuck to something’: rejected.
 2352. *towKa ‘germ’ ([in descendant languages] → ‘seed’): rejected.
 2353. *teLV ‘to shout, to call’: possible.
 2354. *t[i]lV(-Ko) (– *t- ?) ‘tongue, organs of speech’: possible (with reservations).
 2354a. *tülV ‘fire; to kindle (a fire)’: possible.
 2355. *t[ä]äla ~ *t[ä]älxa or *t[ä]älE ~ *t[ä]älxE ‘spleen’: rejected.
 2356. *talV ~ *tañV ‘shoot, sprout, twig’: weak.
 2357. *tolA(-kV) or *talV(-kV) ‘head, top, upper part, end, tip’: possible.
 2358. *tul[i]ñê ‘to come, to enter’: rejected.
 2359. *toLHV ‘crossing (of a river, mountain, range, etc.)’: possible.
 2360. *taLhV ‘flat’: possible.
 2361. *tal[Ey][o] ‘progeny; to give birth to’: possible (with reservations).
 2362. *talUya ‘skill, fell’: possible.
 2363. *talKa ‘to strike, to push’: weak.
 2364. *taLPV (= *taLbV ?) ‘vast; room’: possible.
 2365. *tüE (or *tæwüE ?) ‘to extend, to stretch, to be long’: weak.
 2366. *tUÍV (= *tülV ?) ‘to drip; drops of water, dew’: possible.
 2367. *tUÍEñV ‘breast, female breast’: weak.
 2368. *tal[g]V ‘to be quiet/calm’: possible.
 2369. *tul[V][g]V ‘to spread like a veil/net, to cover with a veil/net, to catch (fish, etc.) with a net’: weak.
 2370. *tal[h]a ‘to lift up, to carry’: possible.
 2371. *tAl[X]V or *tal[X]V ‘stem’, ‘tree’: possible.
 2372. *t[E]mV ‘to feel by touch’: rejected.
 2373. *tômV ‘to cut (off)’: possible.
 2374. *toyamV ‘to bite, to taste’: rejected.
 2375. *tæqmV (or *tæqUmV ?) ‘sinciput, crown of the head, top, tip’: rejected.
 2376. *tum[V]qV ‘dark’: possible.
 2377. *tVm[V]kaæ ‘to wet, to drip’: rejected.

2378. *tümK̶V – *t̶üŋ[K̶]V ‘leather sack’: rejected.
 2379. *t̶[i]m[V̆n]V ‘to be quiet, to be calm’: possible.
 2380. *tañV (= *tañû ??) ‘to draw, to stretch, to extend’: possible.
 2381. *tañV ‘to feel, to know’: weak.
 2382. *ti[n̆]E ‘strong; to strain’ (= ‘violence directed to oneself’): possible.
 2383. *ti[h̆]üñV ‘mud, silt, dirt’: rejected.
 2384. *tañXü – *tañXu (or *tañXü ?) ‘thin, short’: possible.
 2385. *t̶Aŋ|ñV ‘moisture’: possible.
 2385a. *t̶eŋ[U] ‘large body of water’: weak.
 2385b. *tiŋV ‘to hear, to listen’: weak.
 2386. *toŋE (or *t̶üŋV ?) ‘butt, lower end of the trunk’: possible.
 2387. *toŋV ‘to learn, to inform’: weak.
 2388. *t̶Uŋ[q]V ‘to swell, to swell up’: weak.
 2389. *t̶eŋQV ‘tree, forest’: rejected.
 2390. *taŋga|o ‘to draw, to stretch’: possible.
 2391. *t̶æŋKa ‘firm, dense’: rejected.
 2392. *tuŋK̶V ‘to press, to force oneself, to be too narrow, to be tight’: possible.
 2393. *ta[p̆]E ‘to squeeze, to press’: possible.
 2394. *ta[p̆]V ‘to hit (the target)’ ([in descendant languages] → ‘to succeed, to find, to find an answer, to identify, to recognize’): weak.
 2395. *t̶[a]p̆V (or *t̶[a]P̆V, *tŏp̆V, *tŏP̆V ?) ‘to wade, to cross, to go through’: weak.
 2396. *tap̆V (= *tap̆i ?) ‘to put’: weak.
 2397. *tap̆V(-LV) ‘to feel/touch with one’s fingers, to smear’: weak.
 2398. *t̶æ[p̆]V ‘to warm, to be warm’: possible.
 2399. *t̶ûp̆V ‘to spit, to drip’: possible (with reservations).
 2400. *tähipê ‘high place, top, hill’: rejected.
 2401. *t̶[a][p̆t̶]V ‘to plunge, to immerse’: weak.
 2402. *t̶[a]p̆[V̆]yV ‘dirt, mud’: rejected.
 2403. *taPh̆V ‘flat’: rejected.
 2404. *t̶V̆PRV ~ *t̶VR̆PV ‘part of the foot’, ‘foot’: rejected.
 2405. *teqV ‘to smear, to rub; fat, ointment’: weak.
 2406. *t̶û[q]i – *t̶û[q]yV ‘to hit, to strike’: rejected.
 2407. *t̶UqV ‘near; to be close to, to approach’: weak.
 2408. *t̶Vqa ‘to melt, to decay, to get spoiled’: rejected.
 2409. *t̶Aq̆U ‘to lie (to tell a lie), to deceive’: possible.
 2410. *tŏ[q̆]a ‘to plait, to bend’ ([in descendant languages] → ‘to build’, ‘to make earthenware’, ‘to web’), (?) ← ‘to twist’: weak.
 2411. *tŏ[?ü]q̆a ‘hide, skin’: weak.
 2412. *tarV ‘vermin, noxious insects’: possible.
 2413. *taRV, *taRV-HVgV, *taRV-t̶V ‘to drag, to pull’: possible.
 2414. *t̶æRV ‘else, more, other’: rejected.
 2415. *t̶era ‘to heat, to roast, to fry’: possible.
 2416. *teRV ‘to contain’: weak.

2417. *tor[ü] – *tor[yü] ‘to bring/come into existence (to create, to make, to bear/be born)’: rejected.
2418. *tURE ‘to start, to set in motion, to begin’: possible.
- 2418a. *tURV ‘to hold’: possible.
2419. *tūRV ‘hard-roē’: possible.
2420. *tehrV ‘clean, pure’: rejected.
2421. *tu|o[w]r[û] ‘to grow densely, to sprout forth, to thrive; thicket, thick bush/grass’ ([in descendant languages] → ‘to grow’): weak.
2422. *toχ|qUryV or *tUχ|qfV ‘dirt; to be dirty’: rejected.
2423. *torʔV ‘fresh, new, young, young animal, child’: rejected.
2424. *tar[iH]V ‘open, bald’: possible.
2425. *tar[V]H[û] ‘delicate, thin’: possible.
2426. *tor[Vh]a ‘to pass over, through’: rejected.
2427. *tūRHä ‘to bore, to drill’: possible.
- 2427a. *tōrXV ‘long, large, far’: weak.
2428. *tar[V]yi ‘to rub’: possible.
2429. *tir[y]V ‘to turn, to bend, to twist’ (trans.): weak.
2430. *tUr[V]yV ‘litter, dirt, dust’: rejected.
2431. *tūryV – *turyE or *tūrV – *tufE ‘row, line; to string’: weak.
- 2431a. *tVR[V]bV ‘inside of the body, belly’: rejected.
2432. *tiRga ‘force, strength, effort’: possible.
2433. *toRga ‘to hold, to prop up’: rejected.
2434. *terVḲV ‘tree, stick’: possible.
- 2434a. *tURḲV ‘to pierce through; through’: weak.
2435. *[t]arV[PV] ~ *[t]VPVrV ‘to tie together’: possible.
2436. *t[e]RPV ‘to devour (?), to be sated’ ([in descendant languages] → ‘to enjoy’): weak.
- 2436a. *t[o]R[P]V ‘to need, to suffer, to be moved (with sadness, joy)’: rejected.
2437. *tūRqV ‘firm, dense, strong’: possible.
2438. *t[u]R3|3V ‘dry, arid, hard’: possible.
2439. *tArV ‘entrails, liver’: weak.
2440. *t[U]fV ‘heavenly light in the night (moon, star)’: possible.
2441. *tū|urí ‘to turn round, to surround, to enclose’: weak.
2442. *tūſVfV ‘(part of) leg’ (‘calf of leg’, ‘thigh’, ‘knee’?): rejected.
2443. *tafXV ‘to throw, to disperse, to scatter’: possible.
2444. *tErgE ‘to run’ ([in descendant languages] → ‘running place’ → ‘road’): weak.
2445. *tūtV ‘(fore)arm’: weak.
2446. *tuṭE ‘clan/tribe, everybody, all’: possible.
- 2446a. *tūt[a] ‘dust, ashes’ ([in descendant languages] → ‘smoke’): weak.
2447. *toHtV ‘to run, to stream’: possible.
2448. *täwhV ‘to abandon, to leave, to get lost’: possible.
2449. *täyV ‘louse’: possible (with reservations).
2450. *tiyA ‘to be narrow’: possible.
2451. *tUhyV ‘to eat, to feed; food’: possible.

- 2451a. *tahyV 'to go away, to take away' ([in descendant languages] → 'to conceal'): possible.
2452. *wa 'also, same' ([in descendant languages] → 'and'): strong.
2453. *wV 'who?': possible.
2454. *wEcû 'fitting, good, beautiful': possible.
- 2454a. *wiç|çV (or *wEñç|çV ?) 'all': rejected.
2455. *waç[V]qV 'fluid' (especially 'dirty, fluid'), 'dirt, slime': rejected.
2456. *weçV (or *wiçV ?) 'to order, to require, to beg': possible.
2457. *weç[V]?V 'to go out': rejected.
2458. *w|?ü|uç[V]yV 'to put, to set, to lay': rejected.
2459. *wedV 'to hunt': weak.
2460. *wedV (or *we?VdV ?) 'to push, to strike, to cut (with weapon)': possible.
2461. *wVd[V]fV 'to walk, to go, to set out for': possible.
2462. *wedhA 'to cause to go' ('to drive, to lead'): possible.
2463. *w[i]g[?]ê 'to carry, to take (somewhere)': strong.
2464. *wäkſê (= *wäkſê ?) 'strong, vigorous; strength': possible.
2465. *wak[V]Xa (= *wak[V]ha ?) or *wak[V]fa 'to shout': possible.
2466. *w[a]ko (or *wæko, *woko) 'to call': weak.
2467. *wik[a] 'back part, behind, backwards': rejected.
2468. *woykV 'straight, even, fit': possible.
2469. *walV 'to be strong, to be able': possible.
2470. *wAla (or *wu|ola ?) 'big, large; multitude': possible.
2471. *w[i]lV 'to exchange': rejected.
2472. *woſ|glV (or *woſ|glV ?) 'to stay, to be': rejected.
2473. *waHlV 'to cry, to speak': possible.
2474. *weHlyLV (or *weLHV ?) [= *weH₁lyLV or *weLH₁V ?] 'hip, waist': rejected.
2475. *waLſæ 'to wish, to require': weak.
2476. *wVL[h]V 'to hit, to attack' (→ 'to wound, to kill'): possible.
2477. *wAl|l[V][h]V 'to turn, to roll, to revolve': possible.
2478. *w[e]||l[V]hV (or *wi||l[V]hV ?) 'field, plain': possible.
2479. *w[i]||i]qV 'liquid; moist, damp': rejected.
2480. *[']w[A]l[iy]V (or *[']wôl[iy]V ?) 'to draw, to pull (out, off)': possible.
2481. *wol[y]V 'to look, to see': weak.
2482. *waLdV 'to give birth': weak.
2483. *wi[||]ka?V 'wet, moist': rejected.
2484. *walK[a] 'to be bright/white, to shine': strong.
2485. *w[u]LKa (or *w[u]LKa?V) 'to remove, to dislocate': rejected.
2486. *wAlAtV (= *walAtV ?) 'to run, to flee': possible.
2487. *wVl[V]tV 'moist, mud': rejected.
2488. *w[e]lV 'to shine, to lighten': possible.
2489. *w[e]lV or *welVKV 'shoulder, upper part of the back': weak.
2490. *wVl[V]PE 'fur-bearing animal': rejected.
2491. *wVmo[?]i 'to use magical forces' ('to make magical signs, to pronounce magical incantations, to swear, to cause suffering, to torment'): possible.

2492. *wûmHV (or *hûmhV ?) ‘to spit out, to vomit’: possible.
 2493. *w|yUmVR[T]V or *w|yUmVrVnTV ‘egg’: rejected.
 2494. *wänV \rightarrow *[XV]wänV ‘relative (of a younger/the same generation) of the opposite exogamous moiety’ ([in descendant languages] \rightarrow ‘brother/sister-in-law, son-in-law’): possible.
 2495. *w[o]ñV ‘wish, love; luck’: possible.
 2495a. *wV[ʔV]NV ‘to stay’: possible.
 2496. *weñdV ‘to fight, to injure, to hurt’: rejected.
 2497. *weñdV ‘to be withered, to dry’: possible.
 2498. *wen[ʔV]dV ‘to turn’ ([in descendant languages] \rightarrow ‘to return’): possible.
 2499. *w[o]ntV ‘belly’: weak.
 2500. *wañVʒ[A] ‘belly’: weak.
 2501. *wañV ‘to squeeze, to press’ ([in descendant languages] \rightarrow ‘to make weak, to ram, to trample down, to make compact by pressing’): weak.
 2501a. *wEýñ|ñV \sim *wEñ|ñyV ‘daylight’: rejected.
 2502. *wañE ‘to hit, to injure’: possible.
 2503. *wäj[g]o ‘hook’ ([in descendant languages] \rightarrow ‘handle’): possible.
 2504. *wañKV \sim (> ?) *woñKV ‘hole, orifice’ (\rightarrow ‘pit’): possible.
 2505. *wäjka ‘to bend’: strong.
 2506. *woþV ‘to pour, to strew’: possible.
 2507. *w[a]qa ‘to hit, to hurt’: possible.
 2508. *wAr[i] ‘to burn, to heat’: strong.
 2509. *warV ‘stream of water’: possible.
 2510. *waRV ‘crow, raven’: possible.
 2511. *‘warV ‘to look, to watch’: possible.
 2512. *wäRE ‘to make, to do’ (\leftarrow ‘to plait’): possible.
 2513. *werV ‘to speak; communication’: strong.
 2514. *werV ‘without, not, void of, (?) empty’: possible.
 2515. *waʔrê ‘wooded hill/mountain’: weak.
 2516. *waHrV \sim *warHV ‘to comb, to scrape’: possible.
 2517. *w[a]qrV (or *w[a]rqV ?) ‘to rain, to drip, to trickle, to be strained’: possible.
 2518. *[']weXVrV ‘mad, dizzy, intoxicated’: weak.
 2519. *wiʔRV ‘male, man’: weak.
 2520. *we[y]r[V]?V ‘back’: rejected.
 2521. *warʔ[û] \rightarrow *waʔr[û] ‘rope, bonds’, ‘to bind’: possible.
 2522. *w[a]RʔV (\sim *w[a]ʔRV ??) ‘weak (of a person)’: possible.
 2523. *w[i]rh[û]u ‘to be wide/broad, to expand, to spread’: possible.
 2523a. *wAr[h]V ‘grain (of cereals)’: weak.
 2524. *wirʔV ‘tree’, ‘shoot’: possible.
 2525. *wVr[y][E] ‘another’: weak.
 2526. *woRdV ‘to grow’ (trans.), ‘to raise, to bring up (children/animals)’: rejected.
 2527. *woRkê ‘to make’: possible.
 2528. *werVʔV ‘branches, leaves of a tree’: rejected.
 2529. *weraH[V]tV ‘root, sinew’: rejected.
 2530. *w[i]RʒV ‘young herbivorous animal (calf, lamb, etc.)’: possible.

2531. *wVR3V \rightarrow *wV3VRV 'to pour, to flow': rejected.
 2531a. *wArV 'way, road': possible.
 2532. *'wûrû 'to scratch' ([in descendant languages] \rightarrow 'to plow'): possible.
 2533. *wArêV 'to rub, to scrape': possible.
 2534. *wASV (= *waSV ?) 'rainy weather, rainy season': weak.
 2535. *wä?[e]sV 'to get tired, to become weary/troubled': weak.
 2536. *wVS[ɣ]V (= *wUʃfV ?) 'wide, vast': weak.
 2537. *was[V]tV 'place inside': rejected.
 2538. *wišV 'green': possible.
 2539. *wiš?V 'to grow (especially of plants)': weak.
 2540. *weš|êfV 'to wind, to wrap, to clothe': rejected.
 2541. *wAtV 'belly': rejected.
 2542. *wAtV 'earth, ground, dirt': rejected.
 2543. *wätV 'gut, sinew': possible.
 2544. *'wetê '(flowing) water': possible.
 2545. *wAHtV 'to smell (something), to smell (of something)': rejected.
 2546. *witV?V 'to find': rejected.
 2547. *'wot[V?]E \rightarrow *'wot[E?]V 'to speak, to utter sounds; (?) organ of speech': weak.
 2548. *wêt[ɣ]V 'to look, to see': rejected.
 2549. *waɣV 'heavy, firm, strong': rejected.
 2550. *weɣV 'year' [and/or 'long time' (\rightarrow 'old') ??]: possible.
 2551. *wiɣV 'grain' ([in descendant languages] \rightarrow 'seed'): possible.
 2552. *waHtV 'cold (north) wind': possible.
 2553. *wAtVrV 'to speak': weak.
 2554. *'wayV 'to want, to wish, to strive for': weak.
 2555. *wVyV 'we': strong.
 2556. *wahyV '(to be) weak': possible.
 2557. *woy[ʔ]ê \rightarrow *wo[ʔ]yê 'power, ability': weak.
 2558. *wayHV 'to descend; below': rejected.
 2559. *wäžV 'little, young': weak.
 2560. *wižV 'gray, (?) withered': rejected.
 2561. *w[U]ž[E]Ko \sim *w[o]ḲVžV 'a canine': rejected.
 2562. *wiḥ[V]3V 'spring; to flow': rejected.
 2563. *Xeb3V 'breast': rejected.
 2564. *χUçV 'to peel, to bark, to scrape off (hair, etc.)': rejected.
 2565. *χ|qū[y]dV 'to separate' ([in descendant languages] \rightarrow 'to divide, to part'): rejected.
 2566. *[χ]ûd[V?]V 'to get (somewhere), to reach (some place), to clash (with something)': rejected.
 2567. *XagV 'dry, hard': possible.
 2568. *Xa[ʔü]gæ 'to lack, to want': rejected.
 2569. *XægVrV 'to gird, to tie around, to surround': possible.
 2570. *XakECV 'shoulder, armpit': rejected.
 2571. *XakERV 'plain' ([in descendant languages] \rightarrow 'field'): weak.

2572. *χaka|oRV ‘top part, tip, extremity’: rejected.
 2573. *χekV ‘to scratch, to scrape’: possible.
 2574. *[χ]oḲU (or *[χ]oḲi ?) ‘to call out, to speak (solemnly ?); incantations’: rejected.
 2575. *X[o]yEḲV ‘lap, lower front part of the belly’: rejected.
 2576. *XAḲArV ‘to need, to want, to be hungry’: weak.
 2577. *[χ]alV (or *h-, *ʕ-) (‘forehead’ → ‘front, edge’: possible.
 2578. *χalV ‘(to be/become) clean’: possible.
 2579. *χelV ‘to live, to dwell’: possible.
 2580. *χelV ‘fence, border; enclosure’: possible.
 2581. *Xili?V (black) dirt, soot’: possible.
 2582. *XaLbV (= *XalbV ?) ‘white’: weak.
 2583. *X[a]lmV ‘dream; to dream’: possible.
 2584. *χolV ‘middle; to be among’: rejected.
 2585. *XamV ‘womb, vulva’: possible.
 2586. *XEmV ‘warm’: rejected.
 2587. *XomV ‘raw, sour, inedible’: possible.
 2588. *XumV (= *χumV ?) ‘to wish, to covet’: possible (with reservations).
 2589. *XumV ‘old (of things), bad, miserable’: possible.
 2590. *χVmV ‘wall, wind-break’: rejected.
 2591. *χam[V]gê ‘tight, narrow; to constrain’: possible.
 2592. *[X]o[ʔa]mus|šV [¬ *[X]o[a[ʔa]mU(-š|šV)] ‘articulation between a limb and a trunk’ (→ ‘hip, joint, rump’), ‘collar-bone’, ‘bones of the shoulder’, or similar: weak.
 2593. *[χ]ānV (or *-ŋ-) ‘to bow, to bend down, to descend’: rejected.
 2594. *χinV ‘to be happy/glad, to love’: possible.
 2595. *XAñ[V]ʕV ‘together, with’: rejected.
 2596. *Xü[w]iñCV (or *X[ü]ñCV ?) ‘thin, narrow’: rejected.
 2597. *XāñṾkV (¬ *XāñkV ?) ‘jaw, palate’: possible.
 2598. *XVṆkV (= *XāṆka ?) ‘to loosen, to open, to remove’: possible.
 2599. *χ[q[a]ñ[V]ḲV (or *χ[q[a]ñḲV ?) ‘to bend’: possible.
 2600. *XāñṾtV ‘grain, kernel’: rejected.
 2600a. *Xayŋo (= *h|χayŋo) (a variant reconstruction instead of *ʔayŋo) ‘marrow, brain, soft fat of animals’ (→ ‘to smear, to anoint’): rejected.
 2601. *XuṇgV ‘throat’: weak.
 2602. *XupV ‘to press, to crush, to rub’: possible.
 2602a. *χArV ‘tracks, road’: possible.
 2603. *χ[aw[a]]rE (or *χawErV) ‘bright, white’: rejected.
 2604. *χor[V]wV ‘herd/pack of wild animals’ (→ ‘animal’ ?): possible.
 2605. *XaṚčV (= *χaṚčV ?) ‘to rub/scratch’: possible.
 2606. *[X]iṚgV ‘(horned) arteodactyl’: weak.
 2607. *χar[ü] ‘valley, depression, pit’: possible.
 2608. *χ[o]ṭ[A] ‘to scrape off’: rejected.
 2609. *X[o]ṭ[i] ‘fish’: rejected.
 2610. *XṾtV ‘quick’: rejected.

- 2610a. *XeṭVRV or *XiLṭVfV 'vein, sinew, root': rejected.
 2611. *χawV 'to spurt, to rain': rejected.
 2612. *χawi[?V] 'to drive, to chase, to pursue': possible.
 2613. *Xay[ü] 'to live': strong.
 2614. *XôyV 'to swim, to float, to flow': possible.
 2615. *Xažü?V, *XažU?E, *XažEwV, *Xaž[V]wE 'to cover, to spread', 'soft stuff spread on the ground as bedding' ([in descendant languages] → 'soft stuff [fell, feathers, hay]'): rejected.
 2616. *ya 'which?': strong.
 2617. *yE (= *y[i] ?) 'these, they' (deictic marker of animate plural): possible.
 2618. *yi 'he', (?) 'that' (anaphoric): weak.
 2619. *yi 'a couple' (inanimate) ([in descendant languages] → a marker of dual): weak.
 2619a. *yV particle of hypocoristic (?) address (vocative): weak.
 2620. *yabE (~ *yapE) 'to cover, to fence, to protect': rejected.
 2621. *yäd[a] (or *yadä ?) 'to go': rejected.
 2622. *y[o]dV 'claws (of a lobster/scorpion)', 'to hold between fingers/claws (e.g., of a lobster)': rejected.
 2623. *yugê (or *yukê ?) 'to drink': rejected.
 2623a. *yuHV 'to tie, to bind', 'something that binds/ties': rejected.
 2624. *yakV 'to pour, to cover with water': rejected.
 2625. *yäk[a] 'ice, cold': possible.
 2626. *yûka 'to attach, to tie/bind to': rejected.
 2627. *yaks[o] 'to loosen': rejected.
 2628. *yæKæ (or *yæKhæ ?) '(very) bright, white': weak.
 2629. *yoKE (or *?oKE ?) 'to catch, to seize': rejected.
 2629a. *yiLV 'to burn' (trans.), 'to kindle': weak.
 2630. *yel[ay]V 'to shine; light': rejected.
 2631. *y[a]mU (or *yomV) 'to go, to set out/off': rejected.
 2632. *y[a]mV (or *yoma) 'good/fit, right': weak.
 2633. *yämV 'body of water' ('sea, lake') → 'water': possible.
 2634. *yum[a] 'daylight' ([in the prehistory of descendant languages] → 'heaven, god'): weak.
 2635. *yän[h?]V (or *?änh[?V] ??) 'to speak, to say': possible.
 2636. *yæṇTV 'to stretch, to strain': rejected.
 2637. *ya?oŋ[y]E ~ *yo?aŋ[y]E (or *yawoŋ[y]E ~ *yowoŋ[y]E ?) 'sinew, tendon' ([in descendant languages] → 'bow (weapon)'): rejected.
 2638. *yän[g]ê 'ice; to freeze': possible.
 2639. *yVPŋi 'to rise; up': rejected.
 2640. *yUPχV 'leopard': rejected.
 2641. *yEqi or *y[u]qi 'both, two (persons)': rejected.
 2642. *yar[û] 'to shine, to burn': possible.
 2643. *yerV 'misfortune', 'to curse, to be angry': rejected.
 2644. *yoRV(-bV) 'firm, strong, hard': weak.
 2645. *ya?ûrU (= *yâ?ûro ?) 'body of water': weak.

- 2645a. *yVſ[ſ]gVrV ‘honeycomb’, {?} ‘behave’: rejected.
 2646. *yErſV ‘young of a (ruminant) animal’: rejected.
 2647. *yarV ‘to draw/scratch a sign’: possible.
 2648. *yah[V]fV ‘broad open place’: rejected.
 2649. *yAsV ‘bone, limb, joint (articulation)’: possible.
 2650. *yosV ‘to go/run, to go away’: rejected.
 2651. *yu[ſ]t[i] ‘with, beside’: rejected.
 2652. *yaHtV (= *yaʔtV ?) ‘stranger, foreigner’ ([in descendant languages] → ‘enemy’): weak.
 2653. *yuwV ‘tree’: possible.
 2654. *yowʔV ‘good, right, proper’: weak.
 2655. *[y]iyo ‘which’ (relative), (enclitic particle) ‘that which, related to’ (individuali-zation through relation): possible.
 2656. *zoʔa (or *zoʔya, *zoʔa) ‘to bear (a young); to be born, to grow’: weak.
 2657. *zig[o]dV ‘stake, peg’ ([in descendant languages] → ‘paling, fence’): rejected.
 2658. *zed[h]ü|u (or *zendV[h]ü|u ?) ‘to pull, to drag, to draw’: rejected.
 2659. *zôg[Vʔ]U – *zôgU[Vʔ] ‘hill’: rejected.
 2660. *zVgErV (or *zVrgV ?) ‘back’: possible.
 2661. *zEgUtV (= *zEgUtV ?) ‘thigh, leg’: rejected.
 2662. *zVķU ‘to tie (up)’: rejected.
 2663. *zûLV ‘to fall, to crush down’: rejected.
 2664. *ZaſĪE(-ſV) – ZäſĪa(-ſV) ‘awake, alive’: rejected.
 2665. *zoglE ‘back side’: weak.
 2666. *ziLV ‘to shove, to stir up’: rejected.
 2667. *zELqVpV ‘sorcery, witchcraft’ ([in descendant languages] → ‘calamities’): rejected.
 2668. *zēl[V]-(Ka) ‘back, back part of animal’s body’: rejected.
 2669. *z[u]g[V]ĪV (– *zVg[u]ĪV ?) ‘to flow, to pour’: rejected.
 2670. *zEngV ‘black, dirt-colored, dirty’: weak.
 2671. *zäſ[K]V ‘skin of animals’ ([in descendant languages] → ‘waterskin’, ‘sleeve’, etc.): rejected.
 2672. *zapV or *zapʔV ‘to strike’: possible.
 2673. *zoRV ‘foreign, hostile’: rejected.
 2674. *zUR[i] (= *zUf[i] ?) ‘to look at, to examine’ (or *zUR[i] ‘to watch, to spy’): rejected.
 2675. *zeſrV ‘to hate, to abhor, to be annoyed’: rejected.
 2676. *zoſRû (or *zoſRû) ‘line/boundary/strip of land between geographical objects/ areas’: rejected.
 2677. *z[a]hrV (– *z[a]hrV – *z[ʒ]a]hrV ?) ‘to shine, to be bright; light’: rejected.
 2678. *z[a][H]rV ‘low place, valley’: rejected.
 2678a. *z[e]hRV – *z[e]RʔV ‘to see, to know’: rejected.
 2679. *zaw[V]rV ‘young of beast’: rejected.
 2680. *zûrfE ‘to fear, to frighten’: rejected.
 2681. *z[ʒ]iR[H₂]V – *z[ʒ]i[H₂]RV ‘to be very cold’: rejected.

2682. * $\dot{z}\ddot{a}$ Rga 'to strike, to trample, to break': possible.
 2683. * \dot{z} [E]R \dot{z} V 'to set in motion, to incite, to make ready for fight' [or 'to be incited, to be ready for fight']: weak.
 2684. * \dot{z} [e]fdV 'to grow', 'to feed, to rear' ('to cause to grow'): weak.
 2685. * \dot{z} zityqa 'dirt, excrements': rejected.
 2686. * \dot{z} zew[h]V 'to mix': possible.
 2687. * \dot{z} ayH₂V or * \dot{z} aH₂yV 'summer' ([in the prehistory of the descendant languages] → 'year'): rejected.
 2688. * \dot{z} zæ[y|ʔ|ʃ]zV 'to fill, to overflow': rejected.
 2689. * \dot{z} zU \dot{h} EbV 'to swallow, to eat': rejected.
 2690. * \dot{z} omVñV 'to think (to remember, to have a dream)': rejected.
 2691. * \dot{z} om[V]RV 'to dream': rejected.
 2692. * \dot{z} [a]aP̄V (or * \dot{z} aP̄V ?) 'to make, to work': rejected.
 2693. * \dot{z} æšχ|qV 'blood': rejected.
 2694. * \dot{z} ašidV 'to cut': rejected.
 2695. * \dot{z} ä[Ki]dV 'to move, to go': rejected.
 2696. * \dot{z} U \dot{K} U (= * \dot{z} o \dot{K} U ?) 'juice': rejected.
 2697. * \dot{z} omV 'heat, sun', (?) 'flame': rejected.
 2698. * \dot{z} UN[g]V '(young ?) ungulate': rejected.
 2698a. * \dot{z} EH₂P̄V ⇢ * \dot{z} iH₂EP̄V [or *LEH₂p̄V ⇢ *LiH₂E \dot{p} V ?] 'spade, shovel': rejected.
 2699. * \dot{z} Uq̄U 'to putrefy, to turn sour, to spoil, to become turbid': rejected.
 2700. * \dot{z} æh[a]Ra 'moon': rejected.
 2701. * \dot{z} Vr[V]XV ~ * \dot{z} V[X][V]rV (= * \dot{z} a[X]ErV ?) 'to cut, to wound': rejected.
 2702. * \dot{z} [A][ʔ]V (= * \dot{z} [A][ʔ]o ?) 'to lie': rejected.
 2703. * \dot{z} ûgbV (or * \dot{z} ûgbV ?) 'fig tree': rejected.
 2703a. * \dot{z} e[H]bV 'bird' (probably 'gallinaceous' or 'waterfowl' ?): rejected.
 2704. * \dot{z} eybA 'tail, penis': rejected.
 2704a. * \dot{z} [V]Vc \dot{z} aLV 'fire; burning wood': rejected.
 2705. * \dot{z} Vç|çV 'willow': rejected.
 2706. * \dot{z} igU 'thorn': possible.
 2707. * \dot{z} ôgV 'shoulder' (or 'part of the shoulder'): rejected.
 2708. * \dot{z} Ug[U] 'to move somewhere' (intr., trans.): rejected.
 2709. * \dot{z} UgV 'mane, long hair (on animal's body)': rejected.
 2710. * \dot{z} û[ʔ]VgV (or * \dot{z} ûgV[ʔ]V) ('to bring' → 'to give, to give in exchange'): weak.
 2711. * \dot{z} eg|kVrV (= * \dot{z} Eg|kVrV ?) 'antelope': possible.
 2712. * \dot{z} ega 'to get/be sated': rejected.
 2713. * \dot{z} Vg[i] 'rancid, rank, fetid': possible.
 2714. * \dot{z} iH₁V 'to press, to knead, to rub': rejected.
 2715. * \dot{z} [ʃ][o]hE 'to scatter': rejected.
 2716. * \dot{z} oʃ[V]kV 'back, end, tail' ([in descendant languages] → 'behind', 'after', 'to follow, to follow [game] by the tracks'): rejected.
 2717. * \dot{z} ük[Vʔ]V ⇢ * \dot{z} uk[Vʔ]E 'edible cereals, harvest (of wild plants ?)': rejected.
 2718. * \dot{z} [a]kVñV 'elephant': rejected.

2719. *ǵalV (or *ǵalVǵV ?) ‘flame’: possible.
 2720. *ǵæLV ‘to swing, to wave, to be shaky’, (?) ‘to spring, to leap’: weak.
 2721. *ǵilV ‘to slip, to slide’: possible.
 2722. *ǵag[V]li (or *ǵag[V]layV) ‘secret[ly]’, ‘to deceive’: rejected.
 2723. *ǵAhUIV ‘(calf of) leg’, (?) ‘bone of leg’: rejected.
 2724. *ǵiXIV ~ *ǵilXV ‘to creep, to crawl’: rejected.
 2725. *ǵü[hV]ǵV (or *ǵu[hV]ǵE) ‘to smolder, to burn’ (intr.); ‘live coals’: rejected.
 2726. *ǵVL[i]Kæ ‘to slip, to slide’: possible (derived from no. 2721 *ǵilV ‘to slip, to slide’, just as Dolgopolsky suggests).
 2727. *ǵ[A]ÍV ‘to be weak’: rejected.
 2728. *ǵaHûV ‘light, sunshine, sun’: rejected.
 2729. *ǵAhilǵV (or *ǵAǵilǵV ?) ‘wolf, dog’: rejected.
 2730. *ǵalXV (or *ǵalHV) ‘dripping, fluid’: rejected.
 2731. *ǵomV ‘spice, pungent material, pungent food’: rejected.
 2732. *ǵæm[?]V (or *ǵ- ?) ‘together; to unite, to tie together’: rejected.
 2733. *ǵiwVm[V]gE ‘leopard’: rejected.
 2734. *ǵamaka ~ *ǵamVǵV ‘to cast, to throw’: rejected.
 2735. *ǵenV ‘ear/sheaf of cereal, head of grass’: rejected.
 2736. *ǵE|añV ‘to burn’ (intr.), ‘live coal (embers), fire’: possible.
 2736a. *ǵVñV ‘image, sign’: rejected.
 2737. *ǵEhNV ‘to lie down, to sleep’: rejected.
 2738. *ǵ|çixǵñV ‘young, ungulate’: rejected.
 2739. *ǵVñhV ‘to acquire, to seize, to increase’: rejected.
 2740. *ǵûwVNV (= *ǵûwV[ñ|h]V ?) ‘to copulate’, (?) ‘membrum virile’: rejected.
 2741. *ǵ[a]ñ[V]g|kU ‘antelope’: rejected.
 2742. *ǵiŋo ‘to sing, to produce musical sounds’: rejected.
 2743. *ǵoŋE (or *ǵoñE) ‘old’: rejected.
 2744. *ǵEŋqV ‘to seek, to try to obtain’: rejected.
 2745. *ǵoŋXV ‘to want, to wish’: weak.
 2746. *ǵ[ü]ŋka (or *ǵ[ü]ñika) ‘to bend’: rejected.
 2747. *ǵapV ‘to hold, to catch’: weak.
 2748. *ǵ|çaPV ‘to cover’: rejected.
 2749. *ǵipV ‘a pinch; to pinch’: rejected.
 2750. *ǵor[U] ‘to crawl, to climb’: possible.
 2751. *ǵ[o]rV ‘bird of prey’: possible.
 2752. *ǵ|zorV ‘hand (palm of hand and fingers), span’: rejected.
 2753. *ǵûrV ‘inside of body, heart’: rejected.
 2754. *ǵ[U]RV (= *ǵoRV) ‘female, being’: rejected.
 2755. *ǵaΓVRV ‘hedgehog’: rejected.
 2756. *ǵ[a]hRV ‘flower, blossom’, (?) ‘unripe berry’: rejected.
 2757. *ǵVRVmV ‘to stream, to flow, to pour’: rejected.
 2758. *ǵVRTV ‘pudenda muliebria’, ‘lewd’: rejected.
 2759. *ǵûf[û] ‘to stream’: rejected.
 2760. *ǵašV ‘bush (shrub), wood’: rejected.

2761. *žišV 'fire': rejected.
 2762. *ʒUwV 'to eat, to taste': possible.
 2763. *žiXV (or *ziXV) 'to come, to go (away)': weak.
 2764. *ʒ[U]χU 'to cause (someone, something) to move from one place to another' ('to lead, to drive'): rejected.
 2765. *ʒVχi 'to plait, to spin, to bind': weak.
 2766. *ʒüH,yV 'fiber, thick hair' ([in Indo-European] → 'to bind, to sew'): rejected.
 2767. *ʒüʒV ~ *ʒünʒA 'teat, female breast': weak.
 2768. *ʒa[y]ʒVχU 'leaf-bearing tree without berries and edible fruits (lime tree, Tilia, or similar)': rejected.
 2769. *ʒæʔVbV (= *ʒeʔVbV ?) 'beast of prey (wolf or similar)': rejected.
 2770. *ʒu[ʔ]bV 'to pour, to flow': possible (with reservations).
 2771. *ʒ[ü][bV]bV 'insect': rejected.
 2772. *ʒ[a]ʒ[dV] (or *ʒaHdV ?) 'to spread, to be flat': possible.
 2773. *ʒæw[ʔ]i 'bad, ugly' ([in descendant languages] → 'left'): rejected.
 2774. *ʒUh[i] 'to show; to learn, to get accustomed': rejected.
 2775. *ʒ[a]kU 'low', 'short and stocky' (of person): weak.
 2776. *ʒEχLV (or *ʒELχV ?) 'fox, weasel': rejected.
 2777. *ʒamV 'to be dying, to perish': possible.
 2778. *ʒEmV 'way [ʔ]' → 'manner of behavior' → 'blame, fault': rejected.
 2779. *ʒa[m]η]VKæ ~ *ʒ[a]KV[m]η]æ 'chin, beard': rejected.
 2780. *ʒemûqa[H₂ê] 'fog, smoke, hot/sultry air': rejected.
 2780a. *ʒUhNV 'to show; to understand, to be taught': rejected.
 2781. *ʒaŋ[V]bV 'tail, back': rejected.
 2782. *ʒUñ[ç]U (or *ʒUñçU ?) 'ant, stinging insect': rejected.
 2783. *ʒiqV 'shame, humiliation': rejected.
 2784. *ʒarE 'good, favorable, beneficial': possible.
 2785. *ʒuRV 'pole, stake, long piece of wood': rejected.
 2786. *ʒäʔ[ô]rV 'to blame, to scold, to accuse, to be angry, to be annoyed/disgusted': weak.
 2787. *ʒERVʒæ 'upper part of the leg/arm': rejected.
 2787a. *ʒER[u]V 'to flow, to stream; rapid current': rejected.
 2788. *ʒawV 'to have a changed taste (to get sour, to ferment, to fade)': rejected.
 2789. *ʒo[ʔ]awV or *ʒa[ʔ]owV 'of pour quality/appearance, weak, bad': rejected.
 2790. *ʒVχV 'to push, to strike': possible.
 2791. *ʒûhdV (or *ʒûhadV ?) 'sweet': rejected.
 2792. *ʒekV 'to be tight/crammed, to tighten': rejected.
 2793. *ʒokV 'to push': rejected.
 2794. *ʒælV 'tree': rejected.
 2795. *ʒuʒV 'to shine, to blaze; flame': rejected.
 2796. *ʒ[U]lh[û] 'to take, to take away, to pull out': rejected.
 2797. *ʒ[VmV] (or *ʒ[ç]ç[ç]ʒVmV) 'to put, to place': rejected.
 2798. *ʒo|aHEmU 'berries, tree with berries (Padus or similar)': rejected.
 2799. *ʒVmVʒV (or *ʒVmVʒV ?) 'wax': rejected.

2800. * \hat{z} apV ‘basket, vessel’: rejected.
 2801. * \hat{z} a[p?]V ‘lip’, (→) ‘edge, shore, riverbank’: rejected.
 2802. * \hat{z} eRgû ‘vein, sinew’: rejected.
 2803. * \hat{z} irwV or * \hat{z} ir[û] ‘root’: possible.
 2804. * \hat{z} aṭV ‘fluid, body of water’: rejected.
 2805. * \hat{z} æw[i] (or * \hat{z} æʔw[i] ?) ‘up, upper point, extremity’: rejected.

CLOSING REMARKS

Despite the rather critical tone of this review, Dolgopolsky’s *Nostratic Dictionary* is an invaluable resource. Anyone who takes the time to work through the etymologies contained in this dictionary cannot help but be impressed both by Dolgopolsky’s vast knowledge as well as by the amount of work that went into preparing this book. To be sure, many of the etymologies have problems. Nonetheless, those who have the patience to work through the book will be immensely rewarded.

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